

1 Q. Yep.

2 A. And I think there was never a time where  
3 either of us questioned that he needed to be on  
4 Canberra --

5 Q. Yeah.

6 A. -- during the first half of -- during the  
7 first half of IP while they were doing the  
8 (indiscernible) support.

9 Q. Sure.

10 A. And the question was, when -- when after  
11 that do we get him back?

12 Q. Yeah.

13 A. So we talked about that and decided that we  
14 would have him kind of serve as the senior Marine while  
15 they report --

16 Q. Okay.

17 A. -- in Manila. And then as the ship was  
18 steady sail, fly him back to -- to Darwin to kind of,  
19 you know, be able to focus back here while -- while  
20 they were -- while they were making the sail back.

21 Q. Okay.

22 A. But between, you know, him and -- and the  
23 OPSO being on camera, and the EXO and the AMO being --  
24 being back here, it felt like we had -- we had a pretty  
25 good spread.

1 Q. Okay.

2 A. We had things going on back here, but they  
3 were pretty fairly straightforward evolutions. And,  
4 you know, I -- I -- we -- I never discussed with him  
5 specifically the maintenance signature about whether he  
6 -- they were splitting either place, but he never -- it  
7 was never -- it was never a concern that -- that he  
8 raised with me.

9 Q. Okay, thank you. Last couple of questions  
10 here.

11 Force protection perspective, the mechanisms  
12 that are in place here, part D for CASEVAC, MEDEVAC  
13 while in -- in Australia, are they -- in your sense,  
14 are they appropriate for the training exercises of that  
15 year and everything that --

16 A. Yeah. I -- I think -- I think they're  
17 robust. The AME program is good, and I think -- I -- I  
18 frankly think that -- that the, you know -- the crash  
19 on -- on Melville Island demonstrates that it --

20 Q. Yeah.

21 A. -- it was -- it was an incredibly rapid  
22 shift from exercise control to crisis response. I -- I  
23 haven't heard anyone say anything about a deficiency  
24 there in any way, shape, or form. I felt like that was  
25 robust and very competently executed.



1 Q. Is that a requirement from the Australian  
2 side to have that, or would they allow you, if you  
3 wanted to, to have Marine VMM, if you will, or a  
4 reinforced squadron provide, you know -- conduct  
5 CASEVAC, maintain CASEVAC posture?

6 A. I -- I don't -- I don't know. It's never  
7 come up because --

8 Q. Yeah.

9 A. -- we have -- we have robust AME coverage.

10 Q. Yeah.

11 A. So that's -- that's never -- that's never  
12 come up. That's, you know -- that's a base component  
13 of -- of MRF-D operating out here.

14 Q. Yeah, okay.

15 A. One of the issues with operating in the  
16 Northern Territory is that all these locations are  
17 remote.

18 Q. Okay.

19 A. And you know, unlike Camp Pendleton or 29  
20 Palms, that has range control and medical support, you  
21 know, medical facilities reasonably close by, you don't  
22 have that with -- with Mount Bunday.

23 Q. Right.

24 A. Certainly don't have it with Bradshaw, so  
25 the AME is -- is a requirement. It's been an

(b) (6)

1 identified requirement, and that requirement is -- it -  
2 - it meets the requirement in -- in a fulsome manner.

3 Q. Okay. We already talked about that,  
4 discussed that.

5 Last question, and you kind of alluded to  
6 this, but I -- I kind of want to close on this from a  
7 command and control perspective.

8 For you -- you know -- I -- so you've got a  
9 -- a modified kind of joint operations center here at  
10 this facility.

11 As you're forward in Cebu and -- or other  
12 places that you've gone to for exercises, how -- how  
13 are you -- how are you exercising that command and  
14 control functionality?

15 A. Okay. So the -- the MAGTF C2 node here, at  
16 the JOR, is manned 24/7.

17 Q. Okay.

18 A. There's always -- you know -- the -- the  
19 watch floor always has a -- a chief, and there's always  
20 a -- a CDO that's -- that's, you know, postured to --  
21 to do those things. When we go out and -- and operate,  
22 like, for instance, with Talisman Sabre, for instance,  
23 the JOR is not doing, like, C2 of that exercise.

24 Q. Okay.

25 A. But they're maintaining broad cognizance of



(b) (6)

1 what's going on in --

2 Q. Okay.

3 A. -- Scherger, in -- in -- at Midge Point, at  
4 Timber Creek. They're keeping track of Marines that  
5 may be deployed off continent, and -- and so on and so  
6 forth. The C2 node that's engaged in the -- in the  
7 exercise are -- are doing, like, the actual, like --  
8 like, hard command control activities.

9 Q. Yeah.

10 A. In that case, there's a point in time when  
11 the -- when the GCE was the controlling C2 node, and  
12 then --

13 Q. Okay.

14 A. -- did a battle handover with -- with the  
15 command element when we deployed to -- to Talisman --  
16 to Scherger to -- to pick up that -- that C2  
17 functionality.

18 So the C2 node back here keeps broad SA  
19 (phonetic) on -- on what's going on, and then whichever  
20 C2 node is -- is actually the -- the prime mover in  
21 that -- in that exercise is the one that -- that has  
22 that -- that -- the -- the -- no shits, like tactical  
23 C2 that -- that we're used to. So --

24 Q. Yep.

25 A. -- in this case, the GCE was the -- was the

(b) (6)

1 primary MRF-D C2 node operating underneath 1st Brigade  
2 during this exercise.

3 Q. Okay.

4 A. And they were -- they were stood up and  
5 fully manned and -- and operational when -- when that -  
6 - when the crash occurred.

7 Q. Okay. All right, thank you. A lot of  
8 questions, a lot of time here.

9 Anything else that comes to mind that you  
10 might want to identify that might be relevant and --  
11 and pertinent to this investigation that I haven't  
12 asked about?

13 A. No.

14 Q. Okay.

15 A. No. I appreciate it.

16 Q. Yeah, absolutely.

17 All right, last closing, kind of, warning  
18 here. You're advised this is an ongoing investigation.  
19 You're directed not to discuss your testimony to anyone  
20 aside from duly pointed investigating officials.

21 And we're done.

22 A. Understood.

23 (End of Audio Recording.)

24

25



(b) (6)

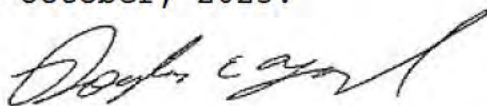
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of the parties to this action by blood or marriage and  
that I am in no way interested in the outcome of this  
matter.

IN WITNESS THEREOF, I have hereunto set my hand  
this 19th day of October, 2023.



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Transcript of Audio File:  
COMMAND INVESTIGATION RE: CLASS A AVIATION MISHAP  
INTERVIEW OF [REDACTED]  
TAKEN AT LARRAKEYAH DEFENCE PRECINCT  
11 SEPTEMBER 2023

Audio Runtime: 58 minutes 21 seconds

(b) (6)

1 (Beginning of Audio Recording.)

2 (b) (6) All right. All right.

3 This interview is being conducted on 11 September 2023,  
4 at 16:08 at Larrakeyah --

5 How -- what's the correct terminology for  
6 Larrakeyah?

7 THE WITNESS: Larrakeyah Defense Precinct.

8 (b) (6) Larrakeyah Defense  
9 Precinct inside of Darwin, of (b) (6)  
10 . The investigating officer, myself, (b) (6)  
11 .

12 I'm the Deputy Assistant Chief of Staff of 1  
13 MEF, and this command investigation was directed by  
14 Brigadier General -- excuse me, Major General Bradford  
15 J. Gering, CG 1 MEF, in response to a Class A aviation  
16 mishap resulting in the death of three service members  
17 and injury to several others.

18 I have a copy of that appointment letter, if  
19 you would like to review it, okay?

20 THE WITNESS: Okay.

21 (b) (6) An investigating officer,  
22 as in myself, in a command investigation, an impartial  
23 factfinder for the commander. Testimony taken by the  
24 investigating officer and reports based on the  
25 testimony may be used for official purposes.

(b) (6)

1           Access to normally restricted -- excuse me.  
2   Access is normally restricted to persons who clearly  
3   need the information to perform their official duties.  
4   In some cases, disclosures to other persons, such as  
5   the subjects or subject of an action that may be taken  
6   as a result of the information gathered in this  
7   investigation may be required by law or regulation or  
8   may be directed by a proper authority.

9           You might at a future date or may already  
10   have been interviewed as part of the Aviation Mishap  
11   Board. That is a separate inquiry from this command  
12   investigation. No statements that you made as part of  
13   the -- of that inquiry will be provided to the Command  
14   Investigation Team.

15           Statements made as part of the Aviation  
16   Mishap Board are privileged, and the Command  
17   Investigation Team does not have access to them. Those  
18   statements will be used for safety purposes only.

19           Prior to this interview, you were advised of  
20   your rights under the Privacy Act and if applicable,  
21   about your rights regarding origins of injuries, of  
22   which you don't have any.

23           Do you have any questions about the Privacy  
24   Act?

25           THE WITNESS: No, sir.



(b) (6)

1 (b) (6) It's important that you --  
2 that the information you provide is complete and  
3 truthful. It is a violation of the UCMJ to knowingly  
4 make a false statement under oath.

5 Do you have any questions regarding that?

6 THE WITNESS: No, sir.

7 (b) (6) Okay. And then please  
8 raise your right hand so that I may administer the  
9 oath.

10 THE WITNESS: Sure.

11 (b) (6),  
12 having first been duly sworn, testified as follows:

13 EXAMINATION

14 BY (b) (6)

15 Q. All right. Thank you. All right. If you  
16 could, just to kind of give context to who you are in  
17 this interview, can you just describe what you're doing  
18 currently here as -- at MRF-D, and also, because you  
19 have an aviation background, just give a little bit of  
20 background history on you as an aviator?

21 A. Yes, sir. I'm the MAGTF XO working for  
22 (b) (6) in the command element. In terms of  
23 my background, I was a CH-46 pilot with HMM-268, and  
24 then transitioned to the KC-130J community in 2012.  
25 Flew Frogs in Iraq, flew -- flew C-130s in Afghanistan.

(b) (6)

1 Did a Taxwo (phonetic) stint out there, as well as the  
2 Harvest Hawk, and then a joint tour.

3 And then went to third mall after that and  
4 worked in force deployment, and then as the COPSO  
5 before I joined 1 Marine Regiment to become the kind of  
6 aviation XO/advisor, like a -- like a MEU construct for  
7 (b) (6).

8 Q. Okay. Thank you. So in that, can we -- can  
9 -- have you had MEU experience before?

10 A. Just RIMPAC on the Bonhomme Richard in 2010.  
11 Never a full MEU, sir.

12 Q. Okay. So as you've talked about kind of a  
13 MEU construct, one of the questions that we've -- and  
14 things we've kind of been delving into in this part of  
15 the investigation right now is kind of the difference  
16 between a -- a MEU command element and a MRF-D command  
17 element. Do you --

18 A. Uh-huh.

19 Q. Do you feel confident being able to  
20 communicate what you know is the difference between a  
21 MEU command element and kind of what the MRF-D command  
22 element is?

23 A. Yes, sir. Just -- we are in no way as a  
24 MAGTF of PHIBRON. With that TACRON piece provided by  
25 the Navy for like -- not a PHIBRON, but like an ARG MEU



1 more -- more in that case. So the connective tissue  
2 there between an ARG MEU via the TACRON for really that  
3 aviation employment piece and generating sorties for  
4 the MEU.

5 Q. Okay.

6 A. Just -- it's -- it's resident really here,  
7 kind of in force design type constructs with the MAOC,  
8 which isn't fully fleshed out, but -- and then any  
9 aviation squadron, you know, generating a flight  
10 schedule in support of exercise tasking.

11 Q. Okay. So that's critically -- as you just  
12 said that, is exercise tasking. I'll -- let me circle  
13 back to that.

14 A. Yeah.

15 Q. If you could, just kind of describe, if you  
16 can the best, like, how do you see, like, the command  
17 elements roll up and out? Like, who are you reporting  
18 to on a daily basis within the MRF-D construct?

19 A. Yes, sir. So we are a direct line to -- to  
20 1 MEF through the -- the daily sit rep. Any CCIRs and  
21 CSNEs go to the MEF chief of staff and the 1 MEF CEO.

22 Q. Okay.

23 A. And that's -- that's really it.

24 Q. Okay. So from -- from a command on point of  
25 view, and that makes sense to me. Can you delve in, if

(b) (6)

1 you know, like, how the ACE is slightly different to  
2 that?

3 A. Yeah. So in the -- you know, when -- when I  
4 came on board in November, we did seal night, and then  
5 I came out of that, and there was no task org at MEF.  
6 And it was -- I refer to it as kind of a Spider-man  
7 meme of 33, 35, and 37 all looking at each other about  
8 time horizons --

9 Q. Okay.

10 A. -- and who was really in charge of us.

11 Q. Yeah.

12 A. But the 37, (b) (6), came into 1 MEF and  
13 was very open to feedback. And so they've established  
14 a -- a deployment support team to fix that for  
15 subsequent.

16 Q. Uh-huh.

17 A. To answer your question in terms of VMM 363,  
18 they are, I -- I like to say OPCON in name only, and  
19 that due to the -- the TYCOM nature of the tails, they  
20 go direct to MAG 24 and back up to -- to First MAW.

21 Q. Okay.

22 A. And then just reporting for them, they still  
23 send that -- you know, that daily roll-up back to MAG  
24 24 and up to First MAW and 3 MEF, and kind of copy us  
25 in that type of inclusion.



1 Q. Okay. And that same -- so from your vantage  
2 point as the XO, do you see issues with that, like,  
3 from a -- from a VMM perspective or through --

4 A. Yeah.

5 Q. -- the ACE or -- I should say the ACE  
6 through command element?

7 A. I think it's -- I mean, VMM 363 and 268 were  
8 force design cuts to go down to 14 VMMs. They were  
9 supposed to be already deactivated.

10 Q. Uh-huh.

11 A. And I think this is, you know, that kind of  
12 tenuous construct for them between 1 MEF as an OPCON,  
13 higher headquarters, and then 3 MEF. It just was never  
14 -- and then the 3 MEF move, MRF-D relocating from 3 MEF  
15 over to 1 MEF, I think it just it took a while to  
16 really get that fleshed out.

17 And they would like it to be OPCON. You  
18 would love to have that PTP with a SoCal VMM. You  
19 know, just -- just in terms of the composite date, that  
20 was a -- a struggle to get a composite date, like, to  
21 snap the line in terms of COMREL. It's a big struggle.

22 Finally kind of negotiated that for 15 April  
23 once the -- the ACE got on deck, but the EOTG, kind of  
24 37 perspective of, you know, a full PTP, it was, well,  
25 once you're -- once you're all on deck, you're -- and

(b) (6)

1 to me, it's -- where's -- where's the -- the buildup  
2 and readiness to that? And --

3 Q. Right.

4 A. And that -- we've been -- we've messaged  
5 that. We've had those discussions, both in DURs --

6 Q. Okay.

7 A. -- as comments, and then on ways in which we  
8 thought it -- there was room for improvement,  
9 especially exercise design for Steel Knight to --

10 Q. Yeah.

11 A. -- get at METS, and then we restructured  
12 METS a bit to include the command element, including  
13 the MACG-38 DET, which I think is a huge win --

14 Q. Okay.

15 A. -- for force design --

16 Q. Uh-huh.

17 A. -- to have the triad of fires, comm, and  
18 MACG-38 with the MAOC really working to centralize  
19 command and control. And then that way, the MAGTF  
20 commander can then take those niche capabilities, be it  
21 MMT, METOC, LAD, and put them out in DS of the entire  
22 MAGTF.

23 Q. Okay.

24 A. It worked out well for us.

25 Q. Yeah. Okay. Any nuance change once HMLA



1     showed up?

2           A.    More -- more reporting requirements --

3           Q.    Yeah.

4           A.    -- because now we have Third MAW reporting  
5 requirements with them.

6           Q.    Yeah.

7           A.    Right? And their interesting nature. And  
8 same with -- we -- we were already kind of prepared for  
9 that with VMGR 352.

10          Q.    Okay.

11          A.    So again, that's another one. They were DS  
12 to us only at the end of MASA/Northern Edge.

13          Q.    Uh-huh.

14          A.    So they supported us for Talisman Sabre, so  
15 a lot of unique command relationships to navigate, and  
16 reporting requirements that go with it, and the fact  
17 that we do not have a -- a UIC as MRF-D.

18          Q.    Uh-huh.

19          A.    So I am essentially TAD to 1 Mar Reg  
20 personally, and then TAD kind of on a UDP  
21 administratively. There's a lot of tentacles in the  
22 programs of record from AAC accounts and GCSS --

23          Q.    Yeah.

24          A.    -- to DTS to government travel credit cards,  
25 that without our own UIC is complicating all those

(b) (6)

1 reporting relationships as well.

2 Q. Yeah. So this circles back to my original  
3 kind of question here, that -- that -- that this is not  
4 a MEU command element.

5 A. No, sir.

6 Q. The MAGTF -- MRF-D, MAGTF command element,  
7 it is dramatically different. As I hear you say this  
8 to me, in construct, whether it's reporting  
9 requirements --

10 A. Uh-huh.

11 Q. -- just smoothness of -- of who owns  
12 aircraft, who doesn't own an aircraft. There's some  
13 very unique challenges within MRF-D that, as it stands  
14 right now, have not been resolved. And -- and -- and  
15 hopefully, as -- separately, as we go down the road --

16 A. Yeah.

17 Q. -- hopefully those things can be smoothed  
18 out and simplified.

19 A. Yes, sir. I -- I think -- I think that's  
20 feasible. Last year, they didn't have an XO until, I  
21 think, April-ish.

22 Q. Who didn't have an XO?

23 A. MAGTF.

24 Q. Okay.

25 A. The MAGTF didn't. And that was for personal



(b) (6)

1 reasons. Coming out of the wing, there was some just  
2 non-deployability issues going on.

3 Q. Uh-huh.

4 A. But it's a -- it's a -- it's a beast of kind  
5 of experience and understanding to just navigate all  
6 those --

7 Q. Uh-huh.

8 A. -- command relationships. So the HMLA -- to  
9 answer your question, the HMLA fell under the ACE. You  
10 know, as soon as they were here, VMM-363, you know,  
11 took them in. They're part of VMM-363.

12 Q. Yeah.

13 A. Reinforced.

14 Q. Right.

15 A. And I think that was very cleanly done.

16 Q. Okay.

17 A. Yeah. No issues with that.

18 Q. Okay. Kind of pulling the thread on that,  
19 you know, with all these extra reporting requirements,  
20 did you get a sense that that had an impact on  
21 operations tempo within the organization -- within the  
22 MRF-D organization?

23 A. I don't. I don't, sir. I think -- working  
24 with headquarters NORCOM, we had an incident management  
25 response drill while I was on deck early in March,

(b) (6)

1 before even the CO was on deck. And I think it's just  
2 educating the XO's and the commanders and the MSEs of  
3 the reporting thresholds being so low for the ADF. So  
4 the CJOPs, CCIRs --

5 Q. Uh-huh.

6 A. -- have a much lower threshold for reporting  
7 --

8 Q. Okay.

9 A. -- from significant reputation risk --

10 Q. Okay.

11 A. -- to kind of liability considerations and  
12 how the parliament here legislates workplace health and  
13 safety much, much higher level of standard in -- like  
14 their OSHA, but even more strict.

15 Q. Okay.

16 A. Yeah.

17 Q. Wow.

18 A. And it is in everything.

19 Q. Okay. So not only do you have -- that's  
20 great. I was going to get to this eventually, but this  
21 helps me kind of shape it in my mind. Not only do you  
22 have administrative reporting requirements of multiple  
23 chains within MARFORPAC through two different MEFs and  
24 two different wings, but now you also have to -- as you  
25 integrate with the Australian Defense Force folks --



(b) (6)

1 A. Yes, sir.

2 Q. -- even more things that, from an  
3 administrative point of view, are distracting?

4 A. Yes, sir. I mean, the -- the -- the Chief  
5 of Staff for Headquarters NORCOM, we talk all the time.

6 Q. Yeah.

7 A. And while they are our partners in this, in  
8 enabling MRF-D, there's also a base construct as well.  
9 And so when we talk about persistence presence here  
10 and, like, a head resident unit, you know, I think that  
11 limited some of my employability, because I'm  
12 essentially running a garrison across four bases --

13 Q. Uh-huh.

14 A. -- whenever the command element's gone.

15 Q. Okay.

16 A. And so you have senior ADF officers -- call  
17 them SADFOs -- one at each base --

18 Q. Uh-huh.

19 A. -- here. So there's one for Larrakeyah  
20 Defense Precinct, and then defense staff in Baramet  
21 (phonetic). That's a Navy captain.

22 Q. Okay.

23 A. And I -- we go to his base management  
24 forums, his security meetings, and his workplace health  
25 and safety meetings, which are three big wickets. Two

(b) (6)

1 include the security and estate group, which is SEG,  
2 which is essentially a fourth service in the ADF.

3 Q. Yeah.

4 A. They are a civilian service that run all the  
5 contracting and all the base services and life support.

6 Q. Uh-huh.

7 A. So you have that, and that's just for those  
8 two. You also have one for RAF Base Darwin, and you  
9 also have one for Robertson Barracks through 1 Brigade.  
10 And so the Chief of Staff of 1 Brigade I know well.  
11 The XO at RAAF Base Darwin, 13 Squadron, I know well as  
12 well, just because we have to.

13 Q. Yeah.

14 A. And all the XOs as well.

15 Q. Okay. All the XOs, all the --

16 A. Yeah.

17 Q. -- MSEs?

18 A. Yes. So the RAAF -- like, RAAF Base Darwin  
19 knew Major Lewis very well.

20 Q. Got you. Okay.

21 A. Yes, sir.

22 Q. Okay. Well, a lot to unpack there --

23 A. Yeah.

24 Q. -- with relationships and COMREL and --

25 A. I understand it. I'm happy to -- I can



(b) (6)

1 probably unpack that for you in a product of some sort,  
2 but I would need to create it.

3 Q. Not a need to do that right now. I think  
4 we're -- I think we're good, (b) (6) (phonetic) on that.  
5 So circling back here a little bit with the COMREL  
6 between -- and you kind of talked about a little bit of  
7 the up and out.

8 How was the relationship between the MRF-D  
9 command element and all the -- all the reporting  
10 entities that are out there that you have to respond  
11 to?

12 A. I think it was great, sir. I think -- I  
13 think early on -- you know, I think the CO was down in  
14 Canberra for a visit, and CJOPS had gotten notified  
15 for, I think, some -- some incident that ended up being  
16 minor, but it was, in initial inception, was thought to  
17 be much more serious. But at least he knew about it,  
18 and he thought that that was good.

19 Q. Okay.

20 A. And that's just the nature of -- so CJOPS,  
21 (b) (6) has a direct line to  
22 (b) (6), so if we are slow in our  
23 response, things seem to escalate quickly --

24 Q. Okay.

25 A. -- and come back to us, to include items

1 from the embassy because of NCIS --

2 Q. Okay.

3 A. -- is tied in there. And so their -- their  
4 DAO and then their law enforcement arm representatives  
5 in the embassy, I think, keep them in daily reporting  
6 as well.

7 Q. Okay.

8 A. So unlike other probably MEUs or forces, you  
9 know, it's not uncommon to get calls from the embassy.

10 Q. So in that regard, and we talked about the  
11 amount of reporting, is that strictly in your  
12 bailiwick, or is that what you've been focused on, to  
13 kind of ease the burden from the commander, or is this  
14 a lot of the commander involved in that as well?

15 A. It's -- it's just kind of the water in which  
16 we're swimming. It doesn't -- I -- I wouldn't say it's  
17 unusual or overwhelming.

18 Q. Uh-huh.

19 A. I think we just got efficient at it, and  
20 it's all about relationships.

21 Q. Yeah.

22 A. So -- and trust.

23 Q. Okay.

24 A. And I -- I can't -- I don't think that was  
25 burdensome in any way.



1 Q. Right.

2 A. It was just normal day-to-day operations.

3 Yeah.

4 Q. That's critical for me to understand. So  
5 not burdensome?

6 A. No.

7 Q. There's a lot of reporting, a lot of  
8 interaction, whether it's you and the CO --

9 A. Uh-huh.

10 Q. -- but not enough to -- to impend and  
11 distract so much that you can't focus on --

12 A. Oh, no. I wouldn't -- no. I wouldn't say  
13 that at all, sir. No, it's --

14 Q. Cool.

15 A. Yeah.

16 Q. It's critical for me to understand.

17 A. Yeah. No, I get it. That -- that's --  
18 those are good questions.

19 Q. Okay. Okay. So that's the up and out kind  
20 of relationships you had. What about -- what was the  
21 relationship from your point of view between the  
22 command element and the GCE?

23 A. It was really good, sir.

24 Q. Yeah?

25 A. Yeah. I think -- I think the relationships

(b) (6)

1 with all the MSEs were really --

2 Q. Okay.

3 A. -- good again. Strong XO's, strong  
4 commanders.

5 Q. Yeah.

6 A. Unity of effort. We had a solid battle  
7 rhythm, gave them space to maneuver.

8 Q. Uh-huh.

9 A. Yeah. I think -- I think just the biggest  
10 hurdle overall was to understand how low the threshold  
11 was on the ADF side for reporting.

12 Q. Okay.

13 A. And once I got that and -- like, I'm not --  
14 I'm not pushing that. I'm not in your business because  
15 I'm being intrusive. I'm -- I'm in your business  
16 because I need to know information to pass to our --  
17 our partners.

18 Q. Who are gracious enough to let us stay in  
19 their --

20 A. Yes, sir.

21 Q. -- in their -- on their training.

22 A. Yes, sir. Yep. And I'm talking, like, you  
23 know, Marines setting off fire extinguishers, right?  
24 Which is a workplace health and safety issue.

25 Q. Yeah.



1           A.    It's a -- it's a hazardous material cleanup  
2    issue.

3           Q.    Okay.

4           A.    It's -- this -- the fourth service -- like,  
5    it's a SEG-NT, and that's a base issue --

6           Q.    Uh-huh.

7           A.    -- whereas if you're in Camp Horno, you can  
8    clean that up yourself probably and --

9           Q.    Yeah.

10          A.    -- and litigate accordingly.

11          Q.    Yeah.

12          A.    Not the case here.

13          Q.    Okay.

14          A.    Just for knowledge.

15          Q.    Yeah.

16          A.    Just for kind of a base reference.

17          Q.    That's -- that's a great way to put -- it's  
18    a good context for me. Okay. Let's see. What am I --  
19    so I didn't miss anything there. You -- we covered all  
20    the command relationships I kind of wanted to talk to  
21    and through.

22          A.    Uh-huh.

23          Q.    We talked a little bit earlier -- I kind of  
24    asked -- so none of that really had -- had anything to  
25    -- to do with, you know, the impact to the operational

1 tempo?

2 A. No.

3 Q. You weren't distracted, weren't slowed down?

4 A. No.

5 Q. You talked through doing a really good  
6 assessment on the front side. Can you expand on that a  
7 little bit of, you know, before you got out here --  
8 just kind of go back to that thing that I kind of put a  
9 pin in from the -- one of your earlier comments as kind  
10 of supporting exercises.

11 A. Yeah. So the TEEP was busy, but there were  
12 a few opportunities there that hadn't fully been formed  
13 --

14 Q. Uh-huh.

15 A. -- like MASA Northern Edge. And then we  
16 were late adds to Balikpapan, which ended up being super  
17 frustrating because their STRAT lift was canceled, and  
18 there were all sorts of access issues into PI, so they  
19 never did deploy to PI, and they ended up with  
20 frustrated cargo, trying to get a lift all the way down  
21 here for Talisman Sabre, and did not make it in time  
22 really.

23 Q. Okay.

24 A. And then --

25 Q. Who in particular was that? Who was --

(b) (6)

1 A. That was MACG-38.

2 Q. Okay.

3 A. The -- the TPS-80, the MAOC.

4 Q. So just to recap, that MAOC was supposed to  
5 support Balikpapan --

6 A. Uh-huh.

7 Q. -- in the PI?

8 A. Well, it was a late ad in their final  
9 planning conference.

10 Q. Understand.

11 A. Yeah.

12 Q. Yep.

13 A. So that -- that's the issue, is that we have  
14 our TEEP, but we are still in mid and final planning  
15 conference prep while in execution. So when -- when I  
16 got here in March, we were sending people to do  
17 Southern Jackaroo, all -- essentially, all our  
18 remaining TEEP, final planning conferences or mid  
19 planning conferences.

20 Q. Uh-huh.

21 A. We're sending personnel all over the place  
22 to do that, from Manila to Jakarta to Townsville. It's  
23 just -- it's just the nature of the beast, and that's -  
24 - I've requested more ops officers for next year --

25 Q. Yeah.



(b) (6)

1           A.    -- because I think we need that to just  
2 manage the planning conference stuff.

3           Q.    Yeah.  So again, this hearkens back that  
4 this isn't a MEU, and it's not even treated in the same  
5 regards --

6           A.    Uh-huh.

7           Q.    -- to a MEU with regards to TEEP.  Part of  
8 the -- I understand from a MEU construct, right, is  
9 you're -- you're attached to ships, which are attached  
10 to Seventh Fleet or Third Fleet or whatever fleet --

11          A.    Yeah.

12          Q.    -- through PAC Fleet.  And there's very  
13 distinct things you're going to go -- so when you sail,  
14 you know exactly what you're going to do.

15          A.    Yes, sir.

16          Q.    What you're describing here is, when you  
17 deploy here, you have a general idea, probably an 80,  
18 85 percent solution --

19          A.    Uh-huh.

20          Q.    -- but it's still a movement to contact, if  
21 you will --

22          A.    Yes, sir.

23          Q.    -- through new things?

24          A.    Yes, sir.  And the -- especially MASA --

25          Q.    Yeah.

(b) (6)

1           A.    -- which was a great opportunity. It was a  
2   great rep to get up there.

3           Q.    **Sure.**

4           A.    The -- and -- yeah, and Northern Edge.  
5   Talisman Sabre was a fantastic rep. Pred Run, same.  
6   But the IPE was a -- was a late add, as well, in that  
7   same. So you have lots of countries who want  
8   participation trophies, in my opinion, to -- to, you  
9   know, tag certain exercises --

10          Q.    **Uh-huh.**

11          A.    -- but we also found that most of the --  
12   there's a lot of fruit to be found in local  
13   relationships and local units. So between 1 Brigade,  
14   Fifth RAR --

15          Q.    **Uh-huh.**

16          A.    -- the A-12 Artillery -- First Sisby  
17   (phonetic) is kind of the sister to CLB1.

18          Q.    **Okay.**

19          A.    JLU (phonetic) North has been fantastic.  
20   All of these units here supporting 1 Brigade provide  
21   kind of ULT opportunities.

22          Q.    **Uh-huh.**

23          A.    And so we did that a lot to fill in white  
24   space and -- and do training locally, and it was huge.

25          Q.    **Yeah.**



1           A.    It's kind of like, you know, an arrow or --  
2   and a battalion calling a -- an A squatter back in  
3   SoCal and setting up training --

4           Q.    Uh-huh.

5           A.    -- to continue to push their -- their prep.  
6   We did Pred Walk at the beginning.

7           Q.    Uh-huh.

8           A.    We did Thunder Walk with 812. All those  
9   types of training were not really on the big TEEP.  
10   That's more like INDOPACOM MARFORPAC directed.

11          Q.    Got you.

12          A.    But the two that were additions was MASA  
13   Northern Edge and then Indo-Pacific Endeavour.

14          Q.    And when -- do you remember when Indo-  
15   Pacific Endeavour was added?

16          A.    They -- we started discussions with that  
17   through the Amphibious -- Australian Amphibious Force  
18   in the spring.

19          Q.    Okay.

20          A.    Yeah. But great opportunity again to do  
21   that.

22          Q.    Sure. So as you talk through exercises that  
23   were designed kind of into your team versus ULT, I'm  
24   going to kind of segue real quickly into confirmation  
25   briefs.

1 A. Uh-huh.

2 Q. So much like, you know, it's a movement of  
3 contact TEEPs are going to constantly -- not  
4 constantly. There's -- there's going to be refinement  
5 as you go through the, you know, your -- your UDP, if  
6 you will, for MRF-D.

7 What things were directed, like, you're  
8 going to have a confirmation brief to the commander,  
9 and what things were, like, that's -- doesn't need to  
10 rise?

11 A. Yes, sir.

12 Q. You probably just need to push a CONOP to  
13 me.

14 A. Yeah. We -- everything that was on the TEEP  
15 was a confirmation brief with a deliberate plan-to-plan  
16 planning cycle, IPR every time. It was a matter of --  
17 of timeliness and -- and delivering it --

18 Q. Uh-huh.

19 A. -- with plan -- with -- with adjustments.  
20 And, you know, a lot of the time, either CTC or  
21 headquarters JOC hadn't fully formed their plans as  
22 well.

23 Q. Yeah.

24 A. Or, for instance, hey, we're just going to  
25 use the MRF-D for aeromedical and, you know, support.



1 Q. Okay.

2 A. I think that happened during -- what was it?  
3 I think it was Talisman. It might have been Southern  
4 Jack of -- it wasn't necessarily, I would say, a fully  
5 formed aeromedical evacuation plan, because they were  
6 just going to capitalize on their -- on our contract.

7 Q. Okay.

8 A. Which is -- and -- and there's another thing  
9 with -- with exercises as well. These training areas  
10 are huge, so you have a Director of Practice --

11 Q. Uh-huh.

12 A. -- who is the -- an ADF person who owns the  
13 entire range, regardless of activity.

14 Q. Okay.

15 A. And so everything is funneled through the  
16 Director of Practice. So the ADF, even if they may not  
17 be directly involved in, say, a -- a unit level  
18 training --

19 Q. Uh-huh.

20 A. -- that's unilateral --

21 Q. Okay.

22 A. -- they're still on the range for, say, a  
23 live fire down at Mount Bunday.

24 Q. Yeah.

25 A. And they're still overseeing that exercise



(b) (6)

1 to offer it support, deconfliction, all those things.

2 Q. Okay.

3 A. In terms of items that required CO review,  
4 any of the live fires, especially, like, geometries --

5 Q. Uh-huh.

6 A. -- involved in those live fires, would at a  
7 minimum get a death side and if needed for more  
8 fidelity on CONOPS, we'd pull that thread. And that  
9 was pretty standard -- that's pretty standard  
10 expectation across all the MSEs, from EOD with LCE, any  
11 of the -- the CLC companies doing any sort of training  
12 --

13 Q. Okay.

14 A. -- to the, you know, weapons -- weapons  
15 company or any of the -- any of the line companies over  
16 in the -- in the battalion. Yeah, I never -- it seemed  
17 -- it seemed standard. And -- and there were  
18 definitely -- you know, there were -- not definitely,  
19 there were times at which, you know, in terms of a  
20 clean MEU confirmation brief --

21 Q. Uh-huh.

22 A. -- like, we're going to go do this raid,  
23 and, you know, that six-hour planning, you just -- you  
24 didn't have that -- that mission certitude --

25 Q. Uh-huh.

1           A.    -- as things were still developing, and as  
2    you're relying on lots of other entities and the ADF to  
3    get their own resourcing in line so we can package in a  
4    threaded skew and maneuver in support of the commander.

5           Q.    So that's critical to -- to kind of, again,  
6    tee -- tee up as a conversation piece and help to give  
7    context, is -- because much in a MEU construct or --  
8    let's say it's amongst one brief --

9           A.    Uh-huh.

10          Q.    -- or anything from -- like, once you slap  
11   the table, a confirmation brief is given, it's been  
12   thumbs-up approved by the commander --

13          A.    Uh-huh.

14          Q.    -- assuming that risk, the MRF-D construct,  
15   for how I understand it, is you can have a confirmation  
16   brief, everyone's been -- this is good, but there's  
17   also -- there's going to be changes post-confirmation  
18   brief.

19          A.    Yes, sir.

20          Q.    And -- and what I understand after a couple  
21   interviews, today in particular, is a lot of that is --  
22   is really reliant or caused by -- cause is not the  
23   right word, right? Is things are being developed and  
24   finalized from the Australian side of things. It's --  
25   there -- there's unknowns that are being resolved --



1 A. Uh-huh.

2 Q. -- post-confirmation brief. So to call it a  
3 confirmation brief in the traditional Marine Corps MEU  
4 --

5 A. Yes, sir.

6 Q. -- sense is not an accurate statement.

7 A. I would agree.

8 Q. Okay. So if things occurred post  
9 confirmation brief, or things change post-confirmation  
10 brief, how was that communicated up to the commander?

11 A. Yeah, those are open door -- OPSO commander.

12 Q. Okay.

13 A. The MSC, CO, me, just having those  
14 conversations on changes, reassessing of risk --

15 Q. Okay.

16 A. -- especially. Like, I think it's very  
17 clear, hey, the commanders own all the risk.

18 Q. Okay.

19 A. And if there are certain lines that are  
20 triggered that require an update on that risk --

21 Q. Uh-huh.

22 A. -- then go to the boss.

23 Q. Okay. Is there ever a time that you can  
24 recall that changes were made prior to the Predator Run  
25 mishap, or the Predator Run mission planning --

1 A. Uh-huh.

2 Q. -- on everything else you've been here --  
3 was there ever a time that you can recall that  
4 something had been changed but not communicated, that  
5 ended up kind of piquing the -- the CO's interest?

6 A. Not that -- not that I recall, sir. I just  
7 -- I know that the C27 support, right, fell out, and so  
8 there was a -- a reorientation in terms of mission  
9 analysis and how to do that assault support to  
10 establish those EABs. And in talking to the ACE, it  
11 was -- that was really a question of capacity for  
12 generating those sorties for the commander --

13 Q. Yeah.

14 A. -- who -- GCE commander in -- in that case,  
15 right?

16 Q. Uh-huh.

17 A. I don't recall it -- so they had an OA, they  
18 had a node at 1 Brigade, and then the -- the C2 node  
19 for the battalion were all over at Robertson Barracks.  
20 I don't remember anything coming up that I recall --

21 Q. Okay.

22 A. -- that piqued my interest and made sense,  
23 assault support asset for assault support asset.

24 Q. Okay.

25 A. Okay?



1 Q. Yeah.

2 A. Yeah. Mission planning with -- with proper  
3 instructors, kind of all those ORM conditions that --  
4 that you would do to -- to set yourself up for a -- a  
5 section going in for an assault.

6 Q. Yeah.

7 A. Yeah.

8 Q. From that in particular, was there -- do you  
9 recall the ACE, you know, balking or saying, I don't  
10 have the right personnel, I don't have enough time?

11 A. I -- I don't recall that, sir.

12 Q. Okay.

13 A. Yeah.

14 Q. Okay. Nobody cried uncle from the ACE  
15 saying that?

16 A. Yeah, I don't -- I don't.

17 Q. Okay.

18 A. I don't recall it. I'm trying to think the  
19 run for that week. Yeah, because the CO -- all those  
20 guys were coming back from CBU. They got back on,  
21 like, I want to say Wednesday, Thursday.

22 Q. Uh-huh.

23 A. Then we hosted the MARFORPAC CG --

24 Q. Okay.

25 A. -- then dropped him off at the airport an

(b) (6)

1 hour before the mishap.

2 Q. Okay.

3 A. Yeah.

4 Q. Okay.

5 A. We hosted a congressional delegation that  
6 Tuesday. That was my first day back.

7 Q. Okay. So just to be clear, MARFORPAC was on  
8 deck the night prior?

9 A. The same day.

10 Q. And left -- but he left that -- that --

11 A. He left that morning. Yes, sir. He left.  
12 Took him to the airport around 7-ish, 7:30, to go to  
13 Perth.

14 Q. Uh-huh.

15 A. I think it was for the Chief of Army  
16 Symposium.

17 Q. Okay. Let's see. What else did I want to  
18 talk about from an operational kind of point of view?  
19 You talked about OP tempo. I think I've got a good  
20 understanding of that and how -- just a little bit more  
21 of a movement and a contact based on TEEP?

22 A. Yeah. That's a good way to put it --

23 Q. Yeah.

24 A. -- sir.

25 Q. How do you -- command and control from the



1 MRF-D Constructs --

2 A. Uh-huh.

3 Q. -- how can you, you know, best describe it  
4 from your perspective on -- not necessarily during a  
5 mission or ULT kind of things going on, but, you know,  
6 more holistically from a -- like, the -- a higher  
7 level?

8 A. I think we evolved the command-and-control  
9 aspect significantly.

10 Q. Uh-huh.

11 A. I -- I do not think last year's rotation had  
12 any sort of -- kind of COR in the JOR, and so our --  
13 our daily -- that has been a goal of ours since we got  
14 on deck, was, hey, let's get a combined joint COF --

15 Q. Yeah.

16 A. -- capability --

17 Q. Uh-huh.

18 A. -- to build situational awareness across the  
19 MAGTF. And then that way you have better unity of  
20 effort, economy of force, since we're using assets in  
21 direct support across the MAGTF. So I think, was it  
22 maybe March, April, we established the daily CUB at 9,  
23 and con ops briefs, accountability. So every staff  
24 section goes through, and we do a CUB every day at 9:00  
25 --

1 Q. Okay.

2 A. -- especially during Ops on weekends, and  
3 then take breaks sometimes on the weekends. But we  
4 always have a watch O and a watch chief on the watch  
5 floor in there with our numbers, and the chat  
6 capability is -- is Nipper Chat (phonetic) server is  
7 really it --

8 Q. Okay.

9 A. -- because it's not a -- the big LIMFAC in  
10 developing the confined joint COP is we do not own that  
11 space, nor is Australia a NATO country, so no CENTRIXS,  
12 no BISEs, none of the stuff that we can to share, no  
13 REL AUKUS. If we would get a REL 5I, we would have to  
14 have it piped from 613th AOC, the NO PACOM.

15 Q. Yeah.

16 A. And we can't run anything out of our vault  
17 in there because they're SIPR lines into a shared  
18 space. And you -- you know, even with firewalls --

19 Q. Yeah.

20 A. -- we're talking to DIA. We're talking to  
21 DSA.

22 Q. Yeah.

23 A. Like, national level things to try and make  
24 this a combined joint COP.

25 Q. Can't do it.



(b) (6)

1           A.    And so -- no. And so when we were doing  
2   Talisman Sabre, so with 1 Mar Div forward, we  
3   established -- before we went up to Cebu, we were doing  
4   our COC operations out of Building 512 --

5           Q.    Okay.

6           A.    -- because it's a SIPR space.

7           Q.    Yeah.

8           A.    So we kind of set up an ad hoc CTO there  
9   with the CUBs and the full battle staff, conducting  
10   reps supporting the battle rhythm, and all the  
11   reporting up to 1 Mar Div. And then they displaced to  
12   Cebu, came back, reestablished, and then indexed. And  
13   we did that two, three times.

14          Q.    Okay. Well --

15          A.    Staff process is pretty well -- pretty well-  
16   developed and agile to --

17          Q.    Yeah.

18          A.    -- displace as needed, but we just don't  
19   have the ability to do that on SIPR in here. For,  
20   like, HADR or --

21          Q.    Uh-huh.

22          A.    -- an unclassified neo with partners, we could  
23   do that. And we did that with CROC response early on  
24   with -- where do we do that? At CPX over at the REL  
25   center in Robertson --

1 Q. Okay.

2 A. -- with ADF in the room, and Indonesians,  
3 most importantly.

4 Q. Okay. With all the -- the quality of  
5 training you guys got out, I guess I'll -- I'll just --  
6 less about the -- this conversation, but more, I guess,  
7 anecdotally.

8 A. Uh-huh.

9 Q. Good SOP coming out of that thing for the  
10 future?

11 A. Yes, sir. Matter of fact, SOP is a work in  
12 progress. I don't think -- you know, I came into this  
13 job in November.

14 I wasn't really sure of the vision and the  
15 formation of it, and seeing the CO drive the staff  
16 towards a campaign plan is the first of its kind -- is  
17 kind of incredible, because he knew very early on that,  
18 in order to do what we were doing, we were planning to  
19 do, we had to have TEEP alignment conferences.

20 Q. Uh-huh.

21 A. So I think we had four of them where we  
22 brought all the commanders together.

23 Q. Okay.

24 A. We're taking a look at the TEEP and our  
25 supportability, and no -- in no way would you go into



(b) (6)

1 that without kind of recalibrating your resourcing for  
2 the task at hand --

3 Q. Uh-huh.

4 A. -- be it MASA run into Talisman Saber, hey,  
5 let's send the VMM back early so they can reset and  
6 recalibrate for -- for Talisman Saber, and also for  
7 IPE, because we're embarking for them.

8 Q. Uh-huh.

9 A. So I think in terms of deliberate RM,  
10 especially with IPE and getting dirt and the team down  
11 to talk to (b) (6), and then making those risks  
12 known, getting deck landing quals ready so those guys  
13 were prepared. I think, you know, you're really self-  
14 generating what a MEU EOTG would do.

15 Q. Yeah.

16 A. And we managed to do it, I think, in pretty  
17 effective fashion.

18 Q. Yeah. Got them all. That's -- that's good  
19 information. I really appreciate it, and I think that  
20 -- would you say, in that regard -- I -- I want to pull  
21 this a little bit here --

22 A. Uh-huh.

23 Q. -- IPE, do -- was that -- what I get a sense  
24 of from the conversation with you today was much more  
25 so than I think that I had before, and maybe I'm -- I'm

(b) (6)

1 -- I'm mistaken in this, again, answer, as --  
2 especially being here. Main effort for the ACE during  
3 this time frame of the mishap was IPE?

4 A. I would -- I would say yes, sir, due to the  
5 -- due to the -- the risk calculus there.

6 Q. Sure.

7 A. Ship ops for a Hawaii squadron that doesn't  
8 get MEUS or any sort of deck support --

9 Q. Yeah.

10 A. -- especially 363 -- yes, I would say that  
11 was -- that was the main -- and -- and you could -- you  
12 wait -- you wait man for the commander, right? So Dirt  
13 -- Dirt was up there --

14 Q. Yeah.

15 A. -- with their OPSO --

16 Q. Yeah.

17 A. -- and (b) (6) .

18 Q. Yeah. Okay.

19 A. Yeah.

20 Q. Switching gears a little bit back to more  
21 overarching things here, from a force protection  
22 perspective, mechanisms for Casevac, Medevac in  
23 Australia, how are those generally done? You kind of  
24 alluded to something about them.

25 A. Yes, sir. Yeah. So there's an air medical



(b) (6)

1 evacuation contract is how that's done in it.

2 Q. Okay.

3 A. I think last year it was much more  
4 affordable, and this year it was into the millions of  
5 our budget.

6 Q. Okay.

7 A. But CareFlight is on the hook to do  
8 helicopter support down to Mount Bunday for most of our  
9 exercises, and we just extended another one as needed  
10 as -- since we have people out on Melville for the  
11 mishap.

12 Q. Right. So that's out of the MRF-D funds?

13 You have a contract -- MRF-D?

14 A. It -- it is. It is. It's paid. Yes, sir.

15 Q. Okay.

16 A. Yep.

17 Q. So is that a requirement from Australian  
18 Defense Force or Australian government?

19 A. I think it's just -- I -- I -- I don't even  
20 know. I just think it's --

21 Q. Okay.

22 A. -- something that we owe the Marines as --

23 Q. Yeah.

24 A. -- as leaders, to have a casualty plan for  
25 them. They're -- they -- they do have ground

(b) (6)

1 transportation as well as the helicopters.

2 Q. Okay.

3 A. You know, weird things like antivenom --

4 Q. Yeah. For snake bites.

5 A. -- for snakes.

6 Q. Yeah.

7 A. Yeah. Some -- some helicopters have them.  
8 Some don't. You know, our Role 2 -- we have a lot of  
9 capability in Role 2, but it's a -- it's a credential  
10 thing.

11 Q. Yeah. Yeah.

12 A. They can't work in the hospitals.

13 Q. Right. Okay.

14 A. I mean, they can do absolutely, like, point  
15 of injury BAS --

16 Q. Yeah.

17 A. -- you know, one level care for sure, but if  
18 -- if you need something urgent to Royal Darwin  
19 Hospital, it's going to be either, like, vehicle or --

20 Q. Yeah.

21 A. -- CareFlight. And so yeah, CareFlight,  
22 they were the main effort in getting those 20 marines  
23 off --

24 Q. Yeah.

25 A. -- Melville Island.

1 Q. So any concerns prior to that, you know,  
2 through any of the other exercises throughout the TEEP  
3 or even ULT, the coverage of the -- that -- that  
4 contract that you guys had signs or, I guess,  
5 established?

6 A. None -- none that I -- I mean, it -- it was  
7 a -- the concern was making sure it was in place in a  
8 timely manner for CROC response.

9 Q. Okay.

10 A. And -- and that ended up happening. It was  
11 a bit delayed, negotiating. I'm not really privy to  
12 that part of it, but --

13 Q. Okay.

14 A. -- it was reported to us that we had it in  
15 place by this time and --

16 Q. Okay.

17 A. -- good to go. Satisfied Headquarters,  
18 NORCOM as well.

19 Q. Okay.

20 A. That was -- that's what counted the most.

21 Q. All right. Cool. We already kind of talked  
22 about MRF-D Australian Defense Force elements training,  
23 like, interaction there. I think I've got a good  
24 understanding of that.

25 A. Okay.



(b) (6)

1 Q. We talked about confirmation briefs.

2 A. Yes, sir. Yeah, those are good questions.

3 Yeah.

4 Q. Let's switch topics here to a couple things  
5 that happened. In particular, I guess, you can go back  
6 to the first -- and I don't know -- how much  
7 interaction did you have with (b) (6)

8 [REDACTED] ?

9 A. I mean, we -- (b) (6) would come to the -- we  
10 had weekly command and staffs --

11 Q. Okay.

12 A. -- and a commander's huddle every Friday.  
13 And if they were around, they were there, or they were  
14 sending a representative. We flew Frogs together way  
15 back in the day. I didn't really know him.

16 Q. Yeah.

17 A. I would say weekly interaction, but, you  
18 know, and I would also go direct to him if I needed to.  
19 No issue on -- on anything for the boss.

20 Q. Okay.

21 A. Yeah.

22 Q. General sense of, from your point of view,  
23 his attitude, his leadership style, what he could see?

24 A. (b) (6) a unique guy. He's been in -- in  
25 command. This is his second time. I think my biggest

(b) (6)

1 thing to the boss as an outsider coming into the MAGTF  
2 was just to be cautious of complacency in that regard.  
3 I don't think I ever really saw that materialize.

4 Q. Uh-huh.

5 A. And we pushed them towards, you know, the  
6 very deliberate PTP plan and deck landing quals and  
7 31st MEU integration before going on to IPE.

8 Q. Yeah.

9 A. I think one of (b) (6) big concerns too, and  
10 rightfully so, it goes back to 363 and 268 being on the  
11 chopping block for force design and the manpower  
12 adjustments. I mean, that's why 164 ended up not going  
13 to East Africa, was to swap out, because they were  
14 hurting so much for manpower. So I mean, there --  
15 that's years' long effects in the manpower pipeline  
16 from MMIB and --

17 Q. Uh-huh.

18 A. -- MMOA and MMEA. So I -- I think he -- he  
19 was very transparent and upfront about -- about that  
20 and had a plan to do it and would in no way, I would  
21 say, pencil whip anything in terms of readiness or  
22 METs.

23 Q. Uh-huh.

24 A. Yeah. I've been impressed with (b) (6). You  
25 know, working -- had the ACE working six days a week.



(b) (6)

1 Yeah. I think my only regret is I didn't get over  
2 there to fly with Major Lewis, because he would have  
3 been my instructor.

4 Q. Yeah.

5 A. But I -- I would have -- I would have done  
6 it. Just --

7 Q. Yeah.

8 A. -- one of those things where the boss is  
9 gone a lot, because he's away, like, six, seven weeks.  
10 So that's where it comes into the head resident unit  
11 stuff that I was talking about.

12 Q. Yeah.

13 A. There's a lot to manage here.

14 Q. Yeah, absolutely.

15 A. Yes, sir.

16 Q. Yeah. Thank you for the context there with  
17 --

18 A. Yes, sir.

19 Q. -- (b) (6). I appreciate that. Let's  
20 talk about -- what'd you get a sense from his -- the  
21 command climate over at 363, both, you know --

22 A. Yeah.

23 Q. -- before, I guess, HMLA shows up, and if  
24 there's a difference that happens after HMLA shows up?

25 A. No. I -- I think they were always on a good

(b) (6)

1 -- I -- I didn't have to worry about the ACE.

2 Q. Yeah.

3 A. Like, Major Lewis took care of the SADFO  
4 stuff that -- you know, whenever he -- whenever there  
5 were weird things, I think -- you know -- what was it?  
6 One time somebody at the FROB (phonetic) backed, like,  
7 GSE over, like, a hydrant that causes, like, flooding  
8 situation, which involved SEG --

9 Q. I remember that. Yep.

10 A. -- and all those guys, right?

11 Q. Okay. Yeah.

12 A. So that involves me, because I got to tell  
13 NORCOM, because that's -- that's going to be money and  
14 cleanup and workplace health and safety. And now that  
15 facility doesn't have a workplace health and safety  
16 hydrant for activities, so it just -- it spreads.

17 Q. Okay.

18 A. Just as an example. So outside of that, I -  
19 - you know, I didn't really worry much about the ACE.

20 Q. Okay.

21 A. Their briefs were always very good. The IPE  
22 confirmation brief was really good.

23 Q. Yeah.

24 A. Always, you know, working and -- and clear  
25 about getting deck landing quals --



1 Q. Uh-huh.

2 A. -- and getting the -- the time for their  
3 crews to make them proficient. Yeah. Yeah. And then  
4 even, like, the -- the air show initially wasn't  
5 supported, but I felt -- we felt it was important to  
6 try and make that happen, and --

7 Q. Uh-huh.

8 A. -- I think huge dividends, strategic  
9 messaging for them to get to Brisbane to do -- to do  
10 the Pacific -- Pacific Air Show Gold Coast, I think is  
11 what it's called formally.

12 Q. Okay.

13 A. And that was really good. And everyone knew  
14 that that was kind of a nice to have --

15 Q. Uh-huh.

16 A. -- and the mission was IPE and then Pred Run  
17 support --

18 Q. Okay.

19 A. -- sir.

20 Q. On that -- in that regard then, did you get  
21 a sense from the ACE that they were more focused on the  
22 air show?

23 A. No.

24 Q. Okay.

25 A. Not at all. No. It was IPE, and then --

1 Q. Yeah.

2 A. -- prepping for Pred Run. Yeah, I didn't --  
3 I'm not trying -- trying to imply that at all.

4 Q. Okay.

5 A. It was just kind of thinking back to the  
6 sequence of events and how the --

7 Q. Yeah.

8 A. -- MV-22s were employed. That was one of  
9 those -- if we get an aircraft down there, great. If  
10 we don't, you know, our -- our regrets.

11 Q. Uh-huh.

12 A. Yes, sir.

13 Q. No, that's good to understand, because --  
14 I'll leave it at that.

15 A. Okay.

16 Q. I understand. Did you happen to know about  
17 a Class Echo mishap that the VMM had where they had,  
18 like, a -- they struck something on the ground and  
19 smashed up a little bottom of the aircraft?

20 A. That I don't know.

21 Q. Okay.

22 A. Was that the hydrant? No, it was an  
23 aircraft?

24 Q. Yeah. They had landed on something, and  
25 they ended up puncturing part of the aircraft, the

1 belly of it. That happened on August 9th.

2 A. Here?

3 Q. Uh-huh. Yeah. While doing training.

4 A. This is where it goes into the COMREL thing.  
5 You know what I mean?

6 Q. Yeah.

7 A. Because it's below -- probably below the  
8 threshold of a CCIR and a CSNE for 1 MEF.

9 Q. Yeah.

10 A. But I don't recall being informed of that.

11 Q. Okay.

12 A. And normally that would happen, and so that  
13 kind of surprises me, especially because we're briefing  
14 aircraft readiness every day.

15 Q. Yeah.

16 A. Let me look at a calendar.

17 Q. Yeah, absolutely.

18 A. Man. I don't know why -- I don't know why I  
19 wouldn't have been told about that.

20 Q. Okay. I mean, yeah, you know, it's not -- I  
21 mean, as an Osprey guy, myself, I've had the same  
22 thing, called a crunch, when I was in Djibouti. You  
23 land on a rock and --

24 A. Yeah.

25 Q. -- and then you got to -- you know, you got



1 to make a repair because it's, you know, fricking  
2 carbon fiber, and that's just a pain in the butt.

3 A. Yeah.

4 Q. Just wondering if that -- how that was  
5 reported, if it was reported.

6 A. Yeah.

7 Q. Not to you? So from your point of view, you  
8 don't -- don't know, don't recall?

9 A. I don't. I don't.

10 Q. Yeah.

11 A. And I don't -- the one that I didn't get  
12 good fidelity on either was the one that happened on  
13 Canberra.

14 Q. So that was the next question I was asked.  
15 So you didn't -- what about the Class Charlie on  
16 Canberra?

17 A. Yeah. So I found out about that on -- man,  
18 the 23rd from the boss --

19 Q. Oh, okay.

20 A. -- when he got back, which was a huge  
21 surprise to me.

22 Q. Yeah.

23 A. I was, to be fair, on leave in Sydney from  
24 the 16th through the 21st.

25 Q. Okay. Okay.



1           A.    So --

2           Q.    Yeah, it happened on the 16th, so --

3           A.    It did.

4           Q.    Yeah.

5           A.    Yeah. But I was still at my phone.

6           Q.    Yeah.

7           A.    I was still doing XO things.

8           Q.    Sure.

9           A.    And I was very surprised when the CO told me

10       that --

11          Q.    Uh-huh.

12          A.    -- that I had not had details on -- on it.

13       I did have a call -- and this is in retrospect. I did

14       have a call from the embassy, sir.

15          Q.    Okay.

16          A.    He was like, oh, we heard, you know,

17       something -- and I was like, oh, I think it was, like,

18       a -- a landing gear issue.

19          Q.    Yeah.

20          A.    Yeah. I was like, I don't think it's really

21       anything to worry about, so --

22          Q.    Yeah. Okay.

23          A.    But I now realize -- or when the CO told me,

24       I realized that's what he was talking about, the --

25          Q.    Yeah.

(b) (6)

1           A.    -- impact on the water, from my  
2 understanding, with a pass.

3           Q.    Uh-huh.  Yeah, yeah.

4           A.    After, like, a fuel calculation or adding  
5 fuel, not redoing your weight and balance, and --

6           Q.    Yeah.

7           A.    -- getting in a power exceeding situation.

8           Q.    Yep.  Absolutely right.

9           A.    Yes, sir.

10          Q.    So I guess with that in mind, you know, if  
11 you would have known -- no, not what you would have  
12 known.  So with the Class Charlie in mind, was there  
13 ever a thought in your mind talking to the CO that  
14 maybe, you know, BMM needs to take a pause or kind of -  
15 -

16          A.    Yeah.

17          Q.    -- take a step back?  Was that ever  
18 discussed amongst the two of you or within the -- like,  
19 with you and the triad, if you will between --

20          A.    Yes, sir.

21          Q.    -- XO, CO?

22          A.    If it -- if it did happen or come up, I was  
23 managing the MARFORPAC CG visit.

24          Q.    Okay.

25          A.    So if it did happen, it probably was an OPSO

(b) (6)

1 to --

2 Q. Okay.

3 A. -- to CO thing. But he would normally bring  
4 me in on that for an aviation discussion.

5 Q. Got it.

6 A. And it also depended on, like, the readiness  
7 briefs at that point, because I remember (b) (6)  
8 was in our -- he was in our CUB on that Friday, the  
9 25th --

10 Q. Okay.

11 A. -- for the full CUB --

12 Q. Yeah.

13 A. -- with aircraft readiness, everything  
14 briefed --

15 Q. Yeah.

16 A. -- and everything going on, because we had  
17 people in what, like, five, six countries or something?

18 Q. Yeah.

19 A. Maybe four countries at that point. Very  
20 non-MEU like. I guess anymore, maybe the MEU does do  
21 that more, especially in Africa, but --

22 Q. Yeah.

23 A. -- it's an expansive AO regardless of the  
24 analogy. But I don't remember that coming up.

25 Q. Okay. Okay.



(b) (6)

1           A.    Yeah.  Or a demand signal for relief from  
2   the RBE ACE.  I don't recall hearing that.

3           Q.    Okay.

4           A.    Yeah.

5           Q.    Ever -- did you recall them ever doing -- I  
6   guess, prior to -- you know, prior to what you -- when  
7   you found out about this, anything prior to operations,  
8   you know, since you guys got on deck, since VMM got on  
9   deck?  Any pauses, anything that kind of, from your,  
10   you know, aviation experience, you would have been  
11   like, hey, boss, maybe they -- they need to take a  
12   break?

13          A.    I mean, their maintenance days were pretty  
14   regular.

15          Q.    Okay.

16          A.    I mean, they're regularly briefed.  
17   Holidays, you know, we -- we tried to honor the 1 MEF  
18   holiday 96s to the best of our ability.

19          Q.    Yeah.

20          A.    I would say more -- more for the MSEs to do  
21   that than the command element.  We were just kind of  
22   chugging along regardless of the day of the week --

23          Q.    Yeah.

24          A.    -- or the 96.  But I think -- I mean, they  
25   generally tried to honor that as well, at least -- if



(b) (6)

1 not a 96, at least, like, maybe three days off or a  
2 couple days off.

3 Q. Okay.

4 A. Yeah. I don't know. I don't know. The --  
5 that's interesting on the reporting piece, though, that  
6 --

7 Q. Uh-huh.

8 A. -- especially my perception of, well, they -  
9 - they take care of things. Well, I don't know if  
10 that's a keep it close. I don't know.

11 Q. Yeah, I don't know either. That's kind of -  
12 -

13 A. Yeah, those are good questions, sir. I --  
14 yeah, in retrospect, I'm like, hmm.

15 Q. Last couple questions here, (b) (6). Prior  
16 to the mishap, any -- any suspicion, belief from your -  
17 - your gut -- your feeling, of kind of watching VMM  
18 operate, they were doing any unsafe maintenance  
19 practices, anything, you know, you hear a scuttlebutt  
20 or just any rumors, anything like that? Again --

21 A. Yeah.

22 Q. -- to the best of your knowledge?

23 A. Not that I recall, sir. Not like -- if they  
24 were taking quals from people or disciplining people,  
25 it didn't come up to our level.

(b) (6)

1 Q. Uh-huh.

2 A. Or instances of second opinion. Like,  
3 sometimes they'd be like, hey, (b) (6), is this -- in  
4 your experience, is this something? And I don't recall  
5 -- wouldn't recall, like, for that --

6 Q. Okay.

7 A. -- regarding quals or maintenance  
8 malpractice.

9 Q. Okay.

10 A. Yeah.

11 Q. And the last question I got for you: Ever  
12 get a sense that VMM, as things were kind of rolling --  
13 wrapping up here in MRF-D, and their operations had a -  
14 - you know, you already -- you said that you don't  
15 think (b) (6) had complacency.

16 Did you get a sense that maybe the -- the --  
17 like, the rest of the command had -- was starting to  
18 get focused more on returning home and kind of shifting  
19 focus?

20 A. Yeah, I don't -- I don't think so, sir. I  
21 mean, I think they were -- they were all in on IPE and  
22 the -- and coming back and recovering --

23 Q. Yeah.

24 A. -- for that. And then I think, especially  
25 with the -- the HMLA on deck, like, supporting Pred Run



1 was a big deal.

2 Q. Yeah.

3 A. Not to, you know, relegate that to the  
4 supporting effort, but --

5 Q. Uh-huh.

6 A. -- you know, we forget about the HMLA.  
7 Like, that -- that's their primary purpose here, is to  
8 -- to do the support of Pred Run.

9 Q. Yeah.

10 A. And 1 Brigade, I think, got more, like, JTAC  
11 quals two years ago than they -- than they ever get in,  
12 like, a year with the HMLA debt. So the idea there is  
13 to make that fruitful training on both sides and -- and  
14 make the HMLA's time worth it.

15 So I think -- I think the ACE was focused  
16 through the HMLA pretty adeptly at -- at Pred Run. I  
17 think September was where everyone was aiming for with  
18 the end of Super Garuda Shield of, like, all right,  
19 this is our time to -- to reset, rehash --

20 Q. Yeah.

21 A. -- for redeployment at that point.

22 Q. Okay. Okay.

23 A. Yeah, I didn't -- I didn't get a -- I didn't  
24 get a complacent vibe from them.

25 Q. Okay. Good.

(b) (6)

1 A. Yeah.

2 Q. And I lied. I guess I do have one last  
3 question. Do you happen to -- do you recall if you had  
4 any conversations with Major Lewis, you know, the last  
5 48, 72 hours before this -- this happened?

6 A. I mean, I -- I was with him when we were  
7 with the general --

8 Q. Okay.

9 A. -- talking about the air show and --

10 Q. Yeah.

11 A. -- on his tour of the FROB (phonetic) that  
12 was led by Tobin.

13 Q. Okay. So --

14 A. Yeah. Like, I'm trying to think of e-mails  
15 or texts or --

16 Q. Was that on Friday he was giving (b) (6)  
17 a tour of the FROB?

18 A. He was, yeah. And then he flew with the  
19 HMLA on Saturday.

20 Q. Okay.

21 A. So (b) (6) went down to Mount Bunday  
22 and kind of Darwin, Robinson Barracks, closed training  
23 areas tour.

24 Q. Yeah.

25 A. There -- it was a Huey for that one.



(b) (6)

1 Q. Uh-huh.

2 A. I think it was a mixed section that went  
3 with him. And then yeah, we dropped him off at the  
4 airport. So on Friday, we had a command brief and then  
5 went through -- what did we do? LCE and the ACE, and  
6 then the LCE.

7 Q. Okay.

8 A. And then on Saturday, it was a GCE  
9 engagement --

10 Q. Okay.

11 A. -- after his flight.

12 Q. Got it. Okay.

13 A. Yeah. So that -- the -- yeah, the last time  
14 I talked to Smeagle (phonetic) was --

15 Q. Yeah.

16 A. That's Friday. I don't -- unless there -- I  
17 don't recall chatting with him Saturday.

18 Q. Uh-huh. Do you recall his general demeanor?

19 A. Yeah. He seemed really good spirits. Yeah.  
20 He was -- you know --

21 Q. Yeah.

22 A. -- he's an XO talking to the commander of  
23 MARFORPAC --

24 Q. Yeah.

25 A. -- showing off his flight line. And, you

(b) (6)

1 know, he had an ADF1 star there and (b) (6) ,  
2 who was at the air show.

3 Q. Okay.

4 A. You know?

5 Q. Yeah.

6 A. Yeah, he was in good Spirits. I got -- I  
7 got photos of them together I sent to him.

8 Q. Yeah, that's cool.

9 A. Yeah.

10 Q. Okay.

11 A. I sent to -- yeah, I sent to (b) (6)  
12 after the mishap --

13 Q. Uh-huh.

14 A. -- his aide and said, hey, if you want to  
15 get these to the boss.

16 Q. Okay. All right. Anything that comes to  
17 mind that you, you know, from the kind of questions  
18 that I've asked you, anything else --

19 A. No, sir.

20 Q. -- that you can think of that might be  
21 worthy of me knowing and understanding as I go through  
22 this investigation?

23 A. No, sir. I mean, the -- the -- those are  
24 very good questions in the command relationship, and it  
25 takes experience -- experience to -- to navigate the

(b) (6)

1 complexity there. And I think a lot of comfort in  
2 talking to GOs and chiefs of staff that -- I'm not sure  
3 many people have that --

4 Q. Okay.

5 A. -- comfort. I mean, I was on a signal chat  
6 with (b) (6) most -- most weekends on stuff.

7 Q. Okay.

8 A. And we go way back to -- I think he was at  
9 Newport at the same time. We were both in Africa at  
10 the same time. So there's -- there's a bit of, like,  
11 preexisting relationships. If you're thinking, like,  
12 plug and play for building, it's not necessarily that -  
13 - that easy.

14 Q. Yeah.

15 A. And then same with coming from a COPSO where  
16 I was briefing (b) (6) every week. Pretty  
17 comfortable there.

18 Q. Yeah.

19 A. So I don't know if in the future that --  
20 that could be an intimidating factor. I -- I think the  
21 info flow was -- was frankly pretty good, sir. And I  
22 think it sounds daunting as -- as you're, like, writing  
23 these notes and you're like, shit, Jackal, this is  
24 daunting.

25 Q. Yeah.



(b) (6)

1           A.   Well, again, it was just the water in which  
2   we were swimming, sir.

3           Q.   Yeah.

4           A.   And it -- it wasn't -- we had it down, I  
5   think, in terms of reporting and comfort, especially  
6   with the ADF, the embassy --

7           Q.   Uh-huh.

8           A.   -- and then MEF up to MARFORPAC. Yeah, even  
9   if it meant pushing stuff to the watch officers  
10  directly or going to the COM MARFORPAC watch officer --

11          Q.   Yeah.

12          A.   -- to clarify RFIs, we would do that.

13          Q.   And I just understand that's a huge weight -  
14  - weight lifted off a commander and decompressing, you  
15  know, taking all that and being able to keep it managed  
16  --

17          A.   Yes, sir.

18          Q.   -- allows the commander to focus on  
19  commander business.

20          A.   And that -- I mean, and that to me was my  
21  job here --

22          Q.   Yeah. Yeah.

23          A.   -- is to indicate to the MSE commanders,  
24  these are the -- these are the red lines in terms of  
25  reporting thresholds.



(b) (6)

1 Q. Uh-huh.

2 A. But you get me -- you get me what you need,  
3 and I'll take that off your plate.

4 Q. Okay.

5 A. And we'll back brief you if we need anything  
6 else.

7 Q. Yeah.

8 A. Op reps, anything. I mean, and that's --  
9 that's what we did during the mishap --

10 Q. Uh-huh.

11 A. -- was took that right from the ACE, like --

12 Q. Yeah.

13 A. -- to the point where I think the  
14 commandant's office thought I was the ACE XO --

15 Q. Oh, really?

16 A. And was calling me to offer condolences  
17 because my name was the POC on the op rep --

18 Q. Okay.

19 A. -- not understanding that we subsumed that  
20 because their -- their XO was out --

21 Q. Yeah.

22 A. -- and their commander and Sergeant Major  
23 and OPSO are all on the camera --

24 Q. Yeah.

25 A. -- in, like, an MCON situation.

(b) (6)

1 Q. Jesus.

2 A. So --

3 Q. And they have one other field grade on deck  
4 there?

5 A. Yes, sir, who was best friends with the  
6 deceased.

7 Q. Yeah. Yeah.

8 A. Yeah. Figure it out. They're resilient.

9 Q. Yeah. Yeah. All right. Thanks, (b) (6).  
10 One last comment here before we stop tape here. Just  
11 one last little bit here.

12 A. Uh-huh.

13 Q. You're advised that this is an ongoing  
14 investigation, please?

15 A. Yes, sir.

16 Q. You're directed not to discuss the testimony  
17 you've given here today with anyone aside from a duly  
18 appointed investigating official?

19 A. Yes, sir. Understood.

20 Q. All right. Thank you for your time.

21 A. Yes, sir.

22 (End of Audio Recording.)

23

24

25

(b) (6)

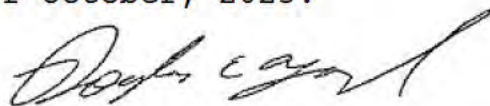
CERTIFICATE OF TRANSCRIPTIONIST

I, Doug Yarborough, a transcriptionist  
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That the foregoing is a complete and accurate  
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proceeding in the above-entitled matter, all to the  
best of my skills and ability.

I further certify that I am not related to any  
of the parties to this action by blood or marriage and  
that I am in no way interested in the outcome of this  
matter.

IN WITNESS THEREOF, I have hereunto set my hand  
this 23rd day of October, 2023.



(b) (6)



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Transcript of Audio File:  
COMMAND INVESTIGATION RE: CLASS A AVIATION MISHAP  
INTERVIEW OF [REDACTED]  
TAKEN AT LARRAKEYAH DEFENCE PRECINCT  
SEPTEMBER 12, 2023

Audio Runtime: 1 hour, 20 minutes, 40 seconds

(b) (6)

1 (Beginning of Audio Recording.)

2 (b) (6) All right. This interview  
3 is being conducted on 12 September, 2023 at 13:16 at  
4 Larrakeyah Defence Establishment (sic). I got that  
5 right?

6 (b) (6) Precinct.

7 (b) (6) Precinct.

8 LT. COLONEL (b) (6) LDP.

9 (b) (6) The Larrakeyah Defence  
10 Precinct in Darwin, Australia, with (b) (6)  
11 (b) (6) the investigating officer, which is  
12 me, from I MEF. I've been directed by Major General  
13 Bradford J. Gering, commanding general of I MEF, to --  
14 in response to a Class A aviation mishap resulting in  
15 the death of three service members and injury to  
16 several others. As the investigating officer, my  
17 command team, and my command investigation, I'm  
18 supposed to be an impartial fact finder for the  
19 commander, General Gering.

20 Testimony taken by myself and those who are  
21 working for me and reports based on the testimony may  
22 be used for official purposes. And then access is  
23 normally restricted to persons who clearly needed the  
24 information to perform their official duties from  
25 today's interview. In some cases, disclosure to other



(b) (6)

1 persons, such as the subject or subjects of an action  
2 that may be taken as a result of the information  
3 gathered through our investigation, may be required by  
4 law or regulation or may be directed by a proper  
5 authority.

6 And if -- you might, in -- at a future date  
7 or may already have been, interviewed by the Aviation  
8 Mishap Board. That is a separate inquiry from this  
9 command investigation. No statements that you made as  
10 part of that inquiry will be provided to the -- my  
11 team, my command investigation team. So statements  
12 made as part of the Aviation Mishap Board are  
13 privileged, and the command investigation team does not  
14 have access to those whatsoever. Now, those statements  
15 you made to the Aviation Mishap Board or might make to  
16 that board will be used for safety purposes only.  
17 Prior to the beginning of this interview, you were  
18 advised of your rights on the Privacy Act.

19 Are there any questions for that document  
20 that you signed?

21 (b) (6) No questions, sir.

22 (b) (6) It's important that the  
23 information you provide today is complete and truthful.  
24 It is a violation of the Uniform Code of Military  
25 Justice to knowingly make a false statement under oath.

(b) (6)

1 Do you have any questions of that?

2 (b) (6) No questions, sir.

3 (b) (6) Okay. Then, please raise  
4 your right hand. And then after me, just say yes or  
5 no.

6 (b) (6) (b) (6)  
7 having first been duly sworn, testified as  
8 follows:

9 EXAMINATION

10 BY (b) (6)

11 Q. Okay. Thank you. All right. (b) (6)  
12 (b) (6) if you could just, kind of, give a --  
13 who you are and what you do here at MRF-D and a little  
14 bit of your background, please?

15 A. Sure. So my name is (b) (6)  
16 (b) (6) I'm the Marine Rotational Force, Darwin,  
17 Operations Officer. I'm an infantry officer by trade.  
18 And I transitioned when we deployed from the 1st Marine  
19 Regiment Operations Officer to the MRF-D Operations  
20 Officer when I deployed on 15 February as part of the  
21 future operations planning cell.

22 Q. Okay. If you could take me back to when you  
23 joined 1st Marine Regiment, and then, kind of, take me  
24 -- lead me through when you guys finally were assigned  
25 to be the MRF-D for Darwin? If that was ahead of your



(b) (6)

1 time, that's fine, just let us know that. And then,  
2 kind of, talk me through the time that you joined until  
3 you -- you showed up here in Australia.

4 A. Sure. So I checked in to 1st Marine  
5 Regiment in mid-July 2022. I knew we were taking the  
6 mission for MRF-D.

7 Q. Okay.

8 A. That -- that was part of the -- the  
9 expectation and the deal of me taking that job. So the  
10 entire workup was based off training towards core METs  
11 and then preparing for Steel Knight which was -- which  
12 is a -- now, MEF, at the time, division certification  
13 exercise that prepares us for -- prepares us as a  
14 command element for MRF-D. And then, specifically, for  
15 maritime fires and sea denial.

16 Q. Okay. So is that the only prescribed PTP,  
17 or Pre-Deployment Training Plan or Program, event for  
18 you, as MRF-D?

19 A. It is. Well, right now there is no formal  
20 MRF-D PTP. There has been a -- a -- a number of  
21 working groups to, eventually, develop one similar to  
22 what -- what you would encounter or what you would  
23 expect for AMU. But as of now, there is no formal MRF-  
24 D PTP.

25 Q. Okay. Give me one second, here.

(b) (6)

1 A. Sure. And to -- to answer your question --

2 Q. Yeah.

3 A. -- a little bit clearer.

4 Q. Yeah. Sure.

5 A. There were two events that were directed --

6 Q. Okay.

7 A. -- by higher headquarters. The first one  
8 was Fish J down in Coronado, which was a two-week --

9 Q. Okay.

10 A. -- planning exercise and simulation, battle  
11 simulation, with two carrier strike group staffs.

12 Q. Wow.

13 A. And then the other one was Steel Knight.

14 Q. Okay. Okay. So can you explain -- talk to  
15 me about what units participated in, let's say -- and -  
16 - and understand what Fish J is -- so it's -- it's a  
17 simulated constructed world that you're operating in.

18 From a MRF-D command element perspective,  
19 what units participated and their key leaders  
20 participated that are now part, and before, deployed  
21 with you here in Australia?

22 A. Sure. So for Fish J, from memory, the  
23 entire staff, all primaries were there.

24 Q. Okay.

25 A. Our MACG-38 was represented, but the DET OIC



(b) (6)

1 wasn't physically participating --

2 Q. Okay.

3 A. -- in the -- in that constructive exercise.  
4 Our fires and effect cell was there. And outside of  
5 that, it was really just limited to -- to the primary  
6 staff and the commander.

7 Q. Okay. And what -- what time was that? Was  
8 that before Steel Knight?

9 A. It was, sir.

10 Q. Okay.

11 A. So that -- that was -- I don't have the  
12 exact dates, but it was August --

13 Q. Okay.

14 A. -- of 2022.

15 Q. Approximately, August?

16 A. Yeah. It was.

17 Q. Got it.

18 A. I -- I remember it was before PDSS and we --  
19 we came out here --

20 Q. Okay.

21 A. -- in early September.

22 Q. Copy. Okay. So then moving to Steel  
23 Knight, what MSCs, if you will, participated in the  
24 Steel Knight that you also are working with out here in  
25 Australia?

(b) (6)

1 A. Yes, sir. So two out of the three MSCs --

2 Q. Okay.

3 A. -- participated. So CLB-1 with their entire  
4 team. And then Victor 3-1 also participated. The ACE  
5 was supported by 3rd MAW in MAG-39.

6 Q. Okay.

7 A. But nobody from -- V O-9 and 3-63  
8 participated.

9 Q. Okay. So they didn't even come out? No one  
10 from 363 came out to at least observed, kind of,  
11 interact at all?

12 A. No, sir. We tried.

13 Q. Yeah.

14 A. We knew that was going to be value added  
15 going into the exercise. And then that was captured in  
16 our after action --

17 Q. Okay.

18 A. -- for Steel Knight.

19 Q. Copy.

20 A. And that was also discussed recently with  
21 the Fifth Marines, PDSS.

22 Q. Okay. Any Australian Defense Force folks  
23 out there to, kind of, participate at the -- at the  
24 higher -- maybe at the -- you know, commander-to-  
25 commander, O-6 command element levels, participate in

(b) (6)

1 Steel Knight?

2 A. No ADF, as far as I recall, participating at  
3 the O-6 level.

4 Q. Do you recall any conversation about them  
5 participating at all as you were, kind of, working  
6 through?

7 A. I think that was discussed in passing. And  
8 -- and then a couple months ago, (b) (6)  
9 (phonetic) and I had discussed recommending to -- to 1F  
10 of actually inserting an exchange officer --

11 Q. Yeah.

12 A. -- within -- potentially, within each one of  
13 the regiments that are oscillating back-and-forth for  
14 MRF-D.

15 Q. Okay.

16 A. But at that time, no.

17 Q. Yeah. Okay. And the HML/A DET that you  
18 have on deck here now in Australia, did they  
19 participate with you-all in Steel Knight? Or is it a  
20 separate HML/A?

21 A. They did actually. And that was just  
22 complete chance.

23 Q. Okay.

24 A. So (b) (6) (phonetic) (b) (6),  
25 was one of the lead planners. I think he was MAG-39's



(b) (6)

1 OPSO at the time.

2 Q. Okay.

3 A. So I had a preexisting professional  
4 relationship with him --

5 Q. Okay.

6 A. -- up and through Steel Knight --

7 Q. Yeah.

8 A. -- so it was very easy to integrate those  
9 guys.

10 Q. Okay. Okay. Thank you for that. All  
11 right. So Steel Knight is completed and for you guys  
12 it's, probably, like, mid-December of last year --

13 A. Yes, sir.

14 Q. -- if I'm correct? What do you -- what does  
15 the command element do between then and when you  
16 finally deploy here? And I believe that that's an  
17 April time frame; am I correct --

18 A. The -- the --

19 Q. -- in that?

20 A. Yes, sir. The bulk of the command element  
21 deployed between early March --

22 Q. Okay.

23 A. -- and mid-April.

24 Q. Okay.

25 A. We closed the force with the ACE, they were



(b) (6)

1 the last ones to deploy based off black bottom ship  
2 availability. So their deployment was delayed by about  
3 10 days. I think we closed the force around April 21st  
4 of this year.

5 Q. Okay.

6 A. And to go back to your question, between end  
7 of Steel Knight, we executed some holiday block leave  
8 for two weeks, came back in January. That's when we  
9 rolled out our -- our PTP just based off the  
10 consolidated requirements across INDOPACOM, 1-MEF. And  
11 we did pre-deployment, individual, and collective  
12 training. Hewitt (phonetic), and then our account  
13 turnover took a lot of time.

14 Q. Okay.

15 A. And just getting ready for DAF inspections.  
16 That's --

17 Q. DAF being?

18 A. That's Department of Agricultural and  
19 Fisheries --

20 Q. Okay.

21 A. -- I believe.

22 Q. And that's the Australian Department of  
23 Agricultural and Fishing?

24 A. It is, sir.

25 Q. Okay.

(b) (6)

1           A.    So they actually sent -- the Marine Corps  
2   pays to host inspectors in California.

3           Q.    Okay.

4           A.    And then before everything gets loaded on to  
5   the black bottom ship, everything has to get dismantled  
6   --

7           Q.    Jesus.

8           A.    -- cleaned, put back together, inspected,  
9   reinspected, loaded. So that took about a month.

10          Q.    Wow. Okay.

11          A.    And then I deployed again with 18 other  
12   PACs, for a total of 19 PACs, on February 15th.

13          Q.    For Darwin?

14          A.    For Darwin? Yes, sir.

15          Q.    Okay. Let's talk really quick about UET --  
16   the UET availability training that -- that from your  
17   level, what we are seeing. Because it will come out to  
18   play during the planning process for this, the mishap  
19   mission, that UET -- there was issues with the folks  
20   who were not qualified, all that kind of stuff. So  
21   this, kind of, is that, kind of, that -- that mark in  
22   the sand.

23                And the PTP, that, kind of, leads us to  
24   something that occurs later on, you know, as part of  
25   this missed episode. If you can, you know, as best as



(b) (6)

1 you can remember, just, kind of, talk me through, like,  
2 availability for the UET. I -- and -- and I'm not,  
3 necessarily, like, into-the-weeds details, but just a  
4 general sense of the availability of it and --

5 A. Yes, sir.

6 Q. -- and challenges associated with it.

7 A. Yeah. I can definitely shed some light on  
8 that.

9 Q. Okay.

10 A. That -- that became an emotional roller  
11 coaster --

12 Q. Yeah.

13 A. -- an emotional issue.

14 Q. Yeah.

15 A. There are -- there are quarterly UET sinks -  
16 -

17 Q. Yep.

18 A. -- where spaces are negotiated --

19 Q. Yeah.

20 A. -- and allocated --

21 Q. Yeah.

22 A. -- via the -- the I MEF training officer.

23 It became such a focus for 1st Marine Regiment that I  
24 decided to -- to attend one of these things. One, to  
25 understand who the key personnel are.

1 Q. Yeah.

2 A. And -- and really fight for seats along with  
3 my ops chief. So I think that's something every single  
4 unit and I MEF struggles with. There are just not  
5 enough facilities.

6 Q. Yeah.

7 A. And there's -- it's -- it's a math problem.  
8 It's a throughput problem.

9 Q. Okay.

10 A. So we went from trying to get the most  
11 amount of people trained for -- just to maintain  
12 agility and flexibility in our TEEP.

13 Q. Yeah.

14 A. Because we knew our TEEP was about 80  
15 percent confirms --

16 Q. Okay.

17 A. -- by the time I deployed.

18 Q. Okay.

19 A. But ultimately, we made the call of key  
20 leaders and then GCE who would, obviously, have the  
21 highest probability of riding in the back of an Osprey  
22 over water.

23 Q. Got you.

24 A. And in parallel, engaging, we were very  
25 aggressive about engaging TECOM who -- who was in



(b) (6)

1 parallel, validating a contracted pool here.

2 Q. Okay.

3 A. The TECOM CG was supposed to approve that  
4 back in May. We've requested updates for the last  
5 several months --

6 Q. Yeah.

7 A. -- to the point of nagging.

8 Q. Yeah.

9 A. And we -- we haven't -- we haven't received  
10 any -- any feedback. Well, we received updates, but no  
11 approval. I should clarify that.

12 Q. Okay. All right. We'll leave it at that.  
13 Thank you for that. So you made a comment there that I  
14 was going to get to later, but now that you've brought  
15 it up there, can we -- can we talk about -- first,  
16 before I ask this question, have you had MEU  
17 experience? I forget if you brought that up or not.

18 A. I've been a BLT 3 Alpha --

19 Q. Okay.

20 A. -- for the 15th MEU.

21 Q. So yes. The answer is yes.

22 A. Yes, sir.

23 Q. You've been on a MEU before, and you --

24 A. Yes, sir.

25 Q. You have MEU experience. So what I took a

(b) (6)

1 note of is you said, roughly, the TEEP for -- once you  
2 departed in February time-frame from southern  
3 California for Darwin, the TEEP as you knew it as the  
4 operations officer for MRF-D MAGTF was about 80 percent  
5 complete.

6 A. Uh-huh.

7 Q. So can you explain a little bit of why it  
8 wasn't 100 percent complete?

9 A. Yes, sir. So that's the whole reason why we  
10 decided to deploy a FOB cell that early --

11 Q. Okay.

12 A. -- was to integrate in a very robust Joint  
13 Exercise Lifecycle.

14 Q. Yeah.

15 A. I'll -- I'll just use JEL from here on out.

16 Q. Okay.

17 A. The -- the two that required a significant  
18 amount of planning were Northern Edge, were MASA --

19 Q. Yeah.

20 A. -- which was not originally on our TEEP.

21 Q. Okay.

22 A. But for the -- the D minus 30 brief to  
23 Lieutenant General Smith --

24 Q. Okay.

25 A. -- which was after I deployed --



(b) (6)

1 Q. Okay.

2 A. -- it was on our TEEP, we felt good about it

3 --

4 Q. Okay.

5 A. -- via coordination with 3rd MAW who was the  
6 OCE. The other one was IPE. So the MPC for IPE was in  
7 mid-March.

8 Q. Okay.

9 A. With the ADF being the OC on that.

10 Q. Got you.

11 A. So those were -- when I say 80 percent --  
12 because those -- because of the complexity and the size  
13 compared to every other exercise --

14 Q. Yeah.

15 A. -- there was, by that 20 percent, Delta in  
16 fidelity. But we were able to close that gap very  
17 quickly.

18 Q. Okay. Let me ask you this question now as  
19 opposed to continuing on with once you got on deck,  
20 here. The -- the size of the -- before I ask that  
21 question, let me go back, here. So compare and  
22 contrast, as best you can, a new TEEP, if you will,  
23 getting out the door on deployment day for a new --  
24 compared to, MRF-D TEEP.

25 From your perspective, from your experience,

(b) (6)

1 the -- the -- what's the -- what are the major  
2 differences or difference?

3 A. I think a MEU TEEP is -- well, I would -- I  
4 would cage my comments with going back to the PTP. I  
5 think the -- the systematic approach to a MEU in terms  
6 of the D minus 180 and a CHOP brief is better  
7 forecasted and more predictable. The command element,  
8 I've never served on a command element of a MEU.

9 Q. Yeah.

10 A. I would say from my understanding of what a  
11 MEU goes through, everything is just very mechanical  
12 and easily repeatable. And we've been doing MEUs as  
13 long as we can remember.

14 Q. Yeah.

15 A. With MRF-D being nascent, in the sense that  
16 this is the second rotation with a regimental  
17 headquarters as part of an overall combat credible  
18 MAGTF, there is -- I would -- my opinion is I -- I  
19 would say it's more dynamic. So we had a number of  
20 TEEP events that were directed to us by MARFORPAC and I  
21 MEF --

22 Q. Okay.

23 A. -- in our DEP board. However, there was  
24 still a lot of white space. And we -- for good  
25 reasons, we were very aggressive to get off continent



(b) (6)

1 to validate some FD 2030, some OPLAN 5076 concepts on  
2 operationally relevant terrain. And that's -- that's  
3 what -- that's what birthed or spawned the Northern  
4 Edge participation.

5 Q. Okay.

6 A. And IPE participation.

7 Q. Got you.

8 Okay. So talk me through -- large scale --  
9 these larger exercises. From your perspective, what  
10 risk are we -- are -- are we starting to gather as we,  
11 you know -- from a -- from -- again, from a MEU  
12 perspective, the risk is, kind of, brought down to us.  
13 One, because we've been doing it for a long time. You  
14 build up, through a PTP, relationships and -- and TTPs  
15 and -- and experience wholistically across a new ARP  
16 team. And so that, from my experience on multiple MEUs  
17 now, okay, that's pretty tight. So then you add in --  
18 you may add in an ally or a partner and a bilat. And  
19 so the risk is, kind of, managed, you know, because  
20 there's only, kind of, one other thing there.

21 So as you get -- as you talk through, like,  
22 these larger exercises, from your perspective, again,  
23 what -- what risks are we -- are starting to assume  
24 that maybe not be -- may not be what we're used to  
25 assuming? Does that make sense?

(b) (6)

1 A. The -- It does, sir.

2 Q. Yeah.

3 A. So I think with -- with Northern Edge,  
4 specifically, the risk, specifically, for MRF-D was --  
5 was assessed as low. Because we only deployed 44 PACs  
6 as part of the command element.

7 Q. Okay.

8 A. Set up a -- a COC forward on a -- on a  
9 Filipino base, MILAIR both ways. No flight ops for us,  
10 specifically. Obviously, 3rd MAW had a -- had a number  
11 of activities across the Philippines, but our  
12 involvement was very straightforward.

13 Q. Okay.

14 A. For IPE, we assessed -- of all the things  
15 that we were going to execute, we assessed at the  
16 beginning, in our problem framing, and again, in our  
17 campaign plan. And then throughout all of our IPE  
18 planning. That -- doing flight operations on an  
19 Australian LHD was assessed as the highest relative  
20 risk that we were going to execute.

21 Q. Yeah. Okay. All right.

22 A. And then to -- to, kind of, close out your -  
23 - for your question, anytime you're integrating new  
24 folks, new units that you don't have habitual  
25 relationships and that you haven't had a chance to --



(b) (6)

1 to validate SOPs, you are, obviously, incurring more  
2 risk.

3 Q. Yeah.

4 A. We brought down that risk quite a bit by a  
5 very methodical and incremental approach to integrating  
6 the MAGTF. And we used Croc Response as our -- what we  
7 called our FOC on-ramp.

8 Q. Okay.

9 A. So we didn't -- (b) (6) was very  
10 deliberate about, we will not be FOC until we complete  
11 a list of -- a list of tasks and events that we're --  
12 that we use Croc Response's vehicle to achieve.

13 Q. Okay.

14 A. And ultimately, we -- we assessed ourselves  
15 to be FOC on 26 May which was at the conclusion of --  
16 of Croc Response.

17 Q. And to be clear, on 26 May the HML/A DEP was  
18 not here yet?

19 A. No, sir.

20 Q. Okay. So you were able to clear FOC with  
21 forces that you had available to you as part of MRF-D?

22 A. That would be a better way to -- to capture  
23 that. Yes, sir.

24 Q. I just want to make sure I understand.

25 A. Yes, sir.

1 Q. Okay. Prior -- so prior to the end of Croc  
2 Response and the -- the, kind of, the establishment of,  
3 we're fully operation capable in -- in May, was there a  
4 ramp-up period? Was there a -- a -- a, if you will,  
5 we'll call it a PTP inside of the MRF-D family?

6 A. There was, sir.

7 Q. Yeah. Okay.

8 A. So we -- we took a look at all of our TNR  
9 codes that we were not able to achieve. A lot of them  
10 were tied to assignments.

11 Q. Sure.

12 A. Because Steel Knight -- Steel Knight was a -  
13 - a readiness generator, but it was very focused on EAB  
14 operations.

15 Q. Yeah.

16 A. So we knew we were deficient in HADR, NEO,  
17 embassy reinforcement. So we -- when we designed the  
18 exercise in conjunction with -- with HQ NORCON --

19 Q. Okay.

20 A. -- we, essentially, just laid out all of our  
21 training objectives and then built the -- the exercise  
22 around that.

23 Q. Okay. Okay. And from -- from the MSEs,  
24 were they doing ULT solely by themselves? Or were they  
25 starting to do cross -- cross-coordination, you know,



(b) (6)

1 like, up-down drills on a -- V-22s, lapse in the  
2 pattern, that kind of stuff?

3 Was that going on below decks?

4 A. Yes, sir.

5 Q. Okay.

6 A. Absolutely. There's about a month of ULT  
7 for all three MSEs.

8 Q. Okay. Okay.

9 A. And as -- as you're well aware, VMMS coming  
10 out of Hawaii is -- are in a precarious position  
11 because there -- there's not a lot of opportunity to  
12 train --

13 Q. Yeah.

14 A. -- in Hawaii.

15 Q. Yeah.

16 A. So they use MRF-D to -- to generate a ton of  
17 readiness.

18 Q. Yeah. All right. So you get done with Croc  
19 Response through the rest of the TEEP until the mishap.  
20 Just talk me through what your -- your assessment --  
21 sense of the operation's tempo across the -- the whole  
22 MRF-D if you can?

23 A. The OPTEMPO was high.

24 Q. Yeah.

25 A. Especially from my -- my position --

(b) (6)

1 Q. Yeah.

2 A. -- as -- as the MRF-D OPSO. Everything was  
3 heel-to-toe.

4 Q. Okay.

5 A. So with that being said, where we brought  
6 down risk was we identified MSC leads for each one of  
7 the exercises and retained it at the command element  
8 when it made the most sense. So for example, Croc  
9 Response which was executed here locally and the bulk  
10 of those training objectives belong to the CLB's TNR  
11 codes. They were the -- they were the lead for  
12 planning and -- and took the lead for the confirmation  
13 brief. Southern Jackaroo, which, the preponderance of  
14 the force was from the GCE, same thing, the GCE owned  
15 that.

16 Q. Okay.

17 A. And we were able to carve out a -- a role in  
18 participation for a -- for four MV-22s in Townsville to  
19 conduct ground threat reaction training.

20 Q. Okay.

21 A. Again, generating readiness, opportunity  
22 they don't have in Hawaii. For Northern Edge, we  
23 retained that. I was the lead -- lead planner for  
24 that. And then IPE because again, the preponderance of  
25 the force came from the ACE embarking on the ship. The



1 ACE took the lead on that.

2 Q. Okay. Who -- so I understand from the  
3 deployment order that MARFORPAC had directed certain  
4 events. Are there events outside of that? I -- I  
5 think you've told me this already. I just want to make  
6 sure, the, kind of, two big ones, where did I write  
7 this thing down, was Northern Edge MASA and then IPE  
8 were the two, kind of, add-ons?

9 A. Yes, sir. So in the end, IPE was -- was on  
10 our DEP board.

11 Q. Okay. Okay.

12 A. Where we added additional training  
13 opportunities was deploying the command element up to  
14 Cebu for the second time.

15 Q. Got it. Okay.

16 Trying to get a sense then, too, of, you  
17 know, ACE, OPTEMPO from their point of view, OPTEMPO  
18 from your point of view of the ACE. Did they ever get  
19 a sense -- did you ever -- from, you know, who you were  
20 working with down at the OPSO, I'm going to imagine,  
21 was there any frustration or like, hey, we need to take  
22 a break or this is just too much?

23 Was there any pushback at all, OPSO to OPSO?

24 A. No. No pushback. We had identified months  
25 prior that between sending two aircraft to the air

(b) (6)

1 show, having four aircraft on the HMAS Canberra, and  
2 then preparing for, at the time, Hilcomlac (phonetic)  
3 which was going to be two aircraft doing high altitude  
4 training --

5 Q. Okay.

6 A. -- in PNG --

7 Q. Yeah.

8 A. We just knew that that -- that was going to  
9 be a focus area --

10 Q. Yeah.

11 A. -- for us.

12 Q. And then PNG frag mission went away?

13 A. It actually was canceled --

14 Q. Okay.

15 A. -- during IPE by the ADF due to another  
16 task.

17 Q. Okay. Got you. And then also, now you also  
18 have Predator Run as part of that, right --

19 A. Yes, sir.

20 Q. -- and in around the same time frame?

21 A. Yes, sir.

22 Q. But again, so the question being: Did the  
23 ACE ever say, like, hey, we just need a break, here?  
24 Or were they -- were they -- we'll -- we'll-work-the-  
25 problem kind of attitude?



(b) (6)

1           A.   Definitely the latter. And (b) (6) (phonetic)  
2   and (b) (6) (phonetic), the entire deployment, are --  
3   we're here to support. We want to support. We want to  
4   train. So that was always their -- their philosophy.  
5   Specifically, for Pred Run, the -- the only  
6   conversation that resembled to that was -- just it came  
7   back to -- it wasn't that we were too busy. It was  
8   more, we -- we were concerned with supporting anything  
9   more than two aircraft due to readiness which is a  
10  valid concern.

11           Q.   Okay. And they say, maintenance readiness  
12  or personnel readiness?

13           A.   I think it was maintenance readiness.

14           Q.   Okay.

15           A.   Because we were hovering around 60 percent  
16  readiness the entire deployment.

17           Q.   Okay.

18           A.   But with Hilcomlac being canceled -- so that  
19  changed the calculus a bit.

20           Q.   Okay.

21           A.   And that was canceled -- I want to say that  
22  was canceled, probably, 10 days prior to Pred Run.

23           Q.   Okay.

24           A.   And the ACE still wanted to -- they still  
25  wanted to deploy to PNG. We were negotiating back-and-

1    forth.  So there -- there was a couple factors that  
2    played into this conversation.  There was the -- from  
3    1st MAW and MAG-24, there was the desire of TRANSPAC-  
4    ing two aircraft --

5            Q.    Okay.  Yep.

6            A.    -- from PNG back to Hawaii.  So our decision  
7    of whether or not -- committing to PNG was somewhat  
8    contingent on the TRANSPAC and the asset, the C-130  
9    refueling assets, to be able to support that.

10          Q.    Why?

11          A.    Once we started getting indications and  
12    warnings that MARFORPAC couldn't support, my take was,  
13    do we still want to do this?  And ultimately, if the  
14    ACE wanted to do it, we would've supported it.  And so  
15    that decision was still pending --

16          Q.    Okay.

17          A.    -- as we entered into Pred Run.

18          Q.    Okay.  So dig in, here, a little bit deeper  
19    into Pred Run.  Where were you, and -- were you here in  
20    Darwin for Pred Run planning?

21          A.    I was here for the bulk of Pred Run  
22    planning.  I was here for the confirmation brief.  I  
23    think it was on the 10th --

24          Q.    Yep.

25          A.    -- of August.



(b) (6)

1 Q. It was on the 10th.

2 A. I departed on the 15th of August --

3 Q. Okay.

4 A. -- for IPE. And then I returned on the 24th  
5 of August --

6 Q. Okay.

7 A. -- prior to execution.

8 Q. Okay. And you were on Cebu?

9 A. I was, sir.

10 Q. Okay. So let's dig into a little bit of the  
11 confirmation brief here. So confirmation brief to the  
12 commander, on the Australian side, was there a -- an  
13 equal, like, commander being -- anything being  
14 confirmed to --

15 Was it solely MRF-D, this confirmation  
16 brief?

17 A. So that specific confirmation brief, there  
18 was -- there were no ADF leaderships or leader  
19 representative.

20 Q. Okay. And during that confirmation brief,  
21 just to be clear, that I -- what I understand is one by  
22 V-22 was the plan. The Australian -- Royal Australian  
23 Air Force was going to provide one C-27.

24 A. Correct, sir.

25 Q. Okay. So that's what was confirmed on -- on

1 10 August?

2 A. Yes, sir.

3 Q. Okay. What changed from 10 August to  
4 execution day? Can you, kind of, explain that, unpack  
5 that, for me a little bit when it comes to VMM support?

6 A. Yes, sir. So I -- I don't have the exact  
7 dates memorized, but I -- I want to say it was within -  
8 - within a week of execution, we got word that C-27s  
9 were grounded.

10 Q. Okay.

11 A. The ACE said they could support with a  
12 section and that they wanted to.

13 Q. Okay.

14 A. And that was -- that was, essentially, the  
15 same crew, the -- the two aircraft that came back from  
16 the air show around the 19th of August if I recall. So  
17 they were happy to support. They were -- they were  
18 ready. There were some e-mails back-and-forth between  
19 my ERO. I'm pretty sure I was CC'd. The GC OPSO and  
20 the ACE OPSO all coming to an agreement that, yes, we  
21 can support with -- with the section. And at that  
22 point, the plan changed --

23 Q. Okay.

24 A. -- to get the entire assault force into  
25 Melville Island.



(b) (6)

1 Q. Via V-22?

2 A. Via V-22.

3 Q. Okay.

4 A. Yes, sir. There was --

5 Q. Are -- go ahead.

6 A. There was also some discussion of ADF  
7 personnel and, going back to the Hewitt conversation,  
8 tying it all together.

9 Q. Yeah.

10 A. We set a hard no. and that's the precedence  
11 we set early on, that we were not going to entertain.

12 I didn't -- I didn't even want to tee it up to (b) (6) 1

13 --

14 Q. Okay.

15 A. -- to put him in a position where he has to  
16 sign a waiver for non-UET qualified ADF on the back of  
17 an Osprey.

18 Q. Got you. Makes sense. So the e-mail  
19 traffic coming back-and-forth, did you know for a fact  
20 or did you assume that that had been validated -- that  
21 desire from the VMM had been validated by their CO?

22 A. I mean, that's a good question. I,  
23 personally, never spoke to Dir.

24 Q. Okay. Okay. When you found out about it,  
25 what was your communication methodology to -- to

(b) (6)

1 (b) (6) ?

2 A. I don't recall how I reported it directly to  
3 him.

4 Q. Okay.

5 A. Typically, I meet with him every single  
6 morning, and I do give him a CUB every morning. I'm  
7 sure he either came up at the CUB --

8 Q. Okay.

9 A. -- days prior -- I do remember reporting to  
10 him that C-27s had fallen out --

11 Q. Okay.

12 A. -- that we were looking at a -- a MRF-D  
13 organic solution.

14 Q. Okay. And did he have any issues with the  
15 increase in V-22 support?

16 A. Not that I recall, sir.

17 Q. Okay. Copy. So let's -- I want to pause  
18 there for a second and -- and unpack confirmation  
19 briefs in the MRF-D construct. And then we'll, kind  
20 of, parallel that to, again, confirmation brief and the  
21 new mindset, right? We, kind of, already hit on it. I  
22 just want to hit it one more time.

23 A. Yes, sir.

24 Q. So was this a common occurrence from a post  
25 confirmation brief, that things would change from what



(b) (6)

1 was confirmed to -- between the time it was confirmed  
2 and the time it was executed?

3 A. Yes, sir. I wouldn't say it was a common  
4 occurrence --

5 Q. Yeah.

6 A. -- but it -- it has happened. It happened  
7 with Super Garuda Shield --

8 Q. Okay.

9 A. -- where we're operating in very complex and  
10 dynamic environments with either joint partners on the  
11 U.S. side or you know, combined regional or host-nation  
12 partners. I think the big -- going back to one of your  
13 earlier questions about the differences between MRF-D  
14 and a MEU, is -- that -- that's a huge difference in  
15 terms of, in a unit concept, everything is organic and  
16 you're confirming, you know, through the R2P2 process  
17 either hours before execution or the night before  
18 execution.

19 Q. Yeah.

20 A. Whereas here, we are plan-to-plan. And then  
21 in this specific example, we chose, deliberately, to  
22 confirm the plan prior to the CO's departure knowing  
23 that he would be off-deck for the next two weeks.

24 Q. Okay.

25 A. And then anything -- any changes to that

(b) (6)

1 plan is a conversation via -- via phone or via SITREP  
2 from commander-to-commander. And then, obviously,  
3 OPSO-to-OPSO are -- are working the details of that  
4 plan.

5 Q. Okay. Is there any final thing that has  
6 pushed down from the Colonel -- CO down to the MSCs  
7 saying, I -- I acknowledge it all, I'm good with the  
8 revised plan, that you're aware of?

9 A. I don't believe so, sir.

10 Q. Okay. I know -- because I -- I understand  
11 you guys do ASRs, JTAARs, Warning Orders, FRAGOs, that  
12 kind of thing. But there's no final documentation of  
13 like, okay, copy, with -- this is the plan?

14 A. You're saying, any modification from the  
15 confirmation brief?

16 Q. Yeah. Yeah.

17 A. Everything -- everything was either verbal  
18 or you know, there are times where that -- either  
19 battalion or squadron commander would come back and do  
20 a desk-side --

21 Q. Okay. Okay.

22 A. -- with the CO -- with --

23 Q. Copy.

24 A. -- myself in his -- in his -- in his office.

25 Q. Yeah. Okay. Okay. Was -- so in that



(b) (6)

1 regard, was there any discussion with the CO with  
2 regards to this change, post confirmation brief?  
3 Because the C-27 falls out, V-22s are now going to  
4 support, did I need a desk-side for anything else  
5 associated with this -- this mission?

6 A. No. I -- that I know for a fact. There  
7 wasn't an additional desk-side. (b) (6) left on the 14th  
8 with the -- with (b) (6) --

9 Q. Yep?

10 A. -- (b) (6) (phonetic). So again, our  
11 assessment of risk was --

12 Q. Understood. Yeah.

13 A. -- IPE.

14 Q. Yeah.

15 A. And we -- we weighted that main effort with  
16 the squadron CO.

17 Q. Okay. If there was an opportunity to do a  
18 desk-side, I guess the challenge would be how can the  
19 CO do a desk-side if he's in Cebu? The -- the ACO and  
20 officer are on a ship. The planners who are making  
21 those changes are back here in -- in Darwin --

22 A. Uh-huh.

23 Q. -- trying to work through the challenges.  
24 Okay. I'm just trying to put myself in the context of  
25 that -- that moment in time.

(b) (6)

1 A. Yes, sir.

2 Q. Okay.

3 A. So in terms of -- once we were at -- let's  
4 see -- we were FOC in Cebu on the 16th. So between the  
5 16th and when the CO went to Palawan for a DV day on  
6 the 21st, we executed our battle rhythm as normal, CUBs  
7 every day. If anything, he had -- he had better  
8 conductivity just based off having SIPR all day.  
9 Communication between us and the ship was limited to e-  
10 mail --

11 Q. Okay.

12 A. -- and phone.

13 Q. Okay.

14 A. But I want to say he talked to (b) (6) daily.

15 Q. Okay. Okay. So you're back, now, from  
16 Cebu. Final resolve, V-22s. Were you -- did you  
17 happen to be down at Robertson Barracks when they were  
18 doing the final coordination planning, at all, for this  
19 thing?

20 A. No. I'm trying to remember what my -- let's  
21 see -- I got back on the 24th. Can I just look at my  
22 planner?

23 Q. Absolutely.

24 A. Because I want to say I met with the GC  
25 OPSO, and the GC had the lead on planning. Yeah. From



(b) (6)

1 memory, I -- I can't confirm that.

2 Q. Okay.

3 A. I -- I know --

4 Q. That's fine.

5 A. Let's see, Thursday -- I know I saw the --  
6 the two commanders that were here and their OPSOs at  
7 the Command and Staff on the 25th.

8 Q. Okay.

9 A. And that was -- that was -- that was our  
10 last touch point with commanders in the room --

11 Q. Okay.

12 A. -- and OPSOs before the 27th.

13 Q. Copy. And that's also the day that  
14 MARFORPAC commanding general was on deck as well?

15 A. Uh-huh.

16 Q. Okay.

17 A. Yeah.

18 Q. Was it routine -- okay. So let's put it in  
19 the context of, would you have normally been down at --  
20 at the level? You know, as they were working through  
21 one of these things, in your position as the OPSO,  
22 would you normally, kind of, touch base or be down in  
23 that kind of mission planning area?

24 A. Yes, sir.

25 Q. Okay.

(b) (6)

1           A.    So I've been -- typically, if the GCs taking  
2   the lead, Southern Jack was a perfect example, I would  
3   show up, at least, to one of their detailed planning --

4           Q.    Okay.

5           A.    -- events in a -- in a two-week cycle. And  
6   then I would make it -- I made it to -- yeah. I made  
7   it to every single pre-confirmation brief rehearsal.

8           Q.    Okay.

9           A.    That's when they just -- the battalion  
10  commander or the squadron CO or the OPSO, that's their  
11  last opportunity to review the brief and identify any  
12  pending issues going into the confirmation brief just  
13  so I can give the CO a heads-up --

14          Q.    Okay.

15          A.    -- prior to --

16          Q.    Copy. But that was all done before you guys  
17  left to -- for Philippine Islands whether via aircraft  
18  or via ship?

19          A.    That's correct.

20          Q.    Okay. Copy and -- and so you don't remember  
21  being there. Do you remember one of your air officers  
22  -- or your air officer being down there or directing  
23  them to be down there to -- to make sure planning was  
24  going well?

25          A.    I am fairly confident that Zodiac (phonetic)



(b) (6)

1 was -- was down at the planning cell.

2 Q. Okay.

3 A. But I can't confirm.

4 Q. Okay. Well, I'll talk to him later at this  
5 point and get to him. But I just wanted to see if you  
6 remember.

7 A. Yes, sir.

8 Q. Okay. Did you get any sense as they were  
9 going through that -- got it, they rogered up for two  
10 22s. As we get closer to execution day, were you  
11 getting any traffic over e-mail or voice from VMM  
12 proper about issues or concerns as things -- as they,  
13 kind of, started to refine that mission planning?

14 A. No concerns.

15 Q. Okay. Okay. So no tipper at all that  
16 something, potentially, may happen?

17 A. No, sir.

18 Q. Okay. Got it. And no -- no one crying  
19 uncle, or anything like that?

20 A. No, sir.

21 Q. Yeah. Okay. Okay. All right. Did you  
22 ever have any conversations with the -- the EXO down  
23 there, Major Lewis (phonetic)?

24 A. Yes, sir.

25 Q. Yeah. Do you remember talking to him in the

1 couple days prior to this mishap?

2 A. We didn't talk about -- no. I never talked  
3 to him, specifically, about Pred Run.

4 Q. Okay.

5 A. And there was -- there was really no -- no  
6 hesitation from his end.

7 Q. Yeah. Okay. Let me ask you this, kind of,  
8 shifting gears and focusing a little bit on operations,  
9 so -- and I missed asking this, and I apologize, having  
10 you go back.

11 When did HML/A show up?

12 A. They arrived through -- ADVON arrived in  
13 late June. And I think their main body was here first  
14 week of July.

15 Q. Okay. When would you say that they  
16 considered themselves FOC to you?

17 A. When were they considered --

18 Q. Yeah.

19 A. -- FOC, sir?

20 Q. Yeah.

21 A. I think it was -- it was, probably, mid --  
22 mid to late July.

23 Q. Okay. And so prior to Predator Run, was  
24 there any time that you recall H-1s and V-22s training  
25 together?



(b) (6)

1           A.    Nothing specific comes to mind.  I think  
2   they did some ULT.

3           Q.    Okay.

4           A.    The -- I'm trying to go through the timeline  
5   here.  Yeah.  Because the -- the bulk of the VMM was  
6   supporting Talisman Sabre as they were ramping up to  
7   FOC back here in the rear.

8           Q.    Okay.  Is it easier just to -- if we have --  
9   do you guys keep documentation on, like, what -- what  
10   events were happening ULT-wise within the command home  
11   and ops?

12          A.    Yes, sir.  We have archives of our CUBs and  
13   then their -- obviously, we -- we have all of their  
14   flight schedules.

15          Q.    Okay.  I think that'd, probably, be good if  
16   we could get that after the -- after this interview  
17   just to, kind of, collect that data.  Because one of  
18   the things I'm interested in finding out is how much  
19   interaction was occurring in objective areas --

20          A.    Uh-huh.

21          Q.    -- between H-1s and V-22s.

22          A.    That makes sense, sir.

23          Q.    I think there's -- there's some -- some  
24   things that we need to make sure we understand, so we  
25   can rule out in regards to that, okay?

(b) (6)

1 A. Yes, sir.

2 Q. All right. All right. I'll pause there on  
3 that. My concern for you, brother, is I told you 1415.  
4 I think we're, probably, another --

5 A. I -- I've cleared --

6 Q. Okay.

7 A. I've cleared out my --

8 Q. Okay. We're good?

9 A. -- my schedule, sir.

10 Q. All right. I just want to make sure. All  
11 right. Let's talk relationships. How -- what was your  
12 sense of -- can you, kind of, explain your perspective  
13 -- command -- your relationship with your higher  
14 headquarters?

15 A. To I MEF?

16 Q. Tell me how many higher headquarters you  
17 have. Let's -- let's start with that.

18 A. So my higher headquarters is I MEF --

19 Q. Okay.

20 A. -- and then MARFORPAC. We oftentimes, for  
21 specific requests, just based off time zones -- it  
22 would be ran to MARFORPAC with I MEF on the CC line.  
23 But I had -- I have a very healthy and -- and  
24 professional relationship with -- with the I MEF G3.

25 Q. Okay.



(b) (6)

1 A. You know, via text, e-mail we, probably,  
2 talk once a week.

3 Q. Okay. Was that the former -- is that  
4 (b) (6) (phonetic) or is that (b) (6)  
5 (phonetic)?

6 A. That's (b) (6), sir.

7 Q. Okay. All right. And now, hopefully,  
8 (b) (6) (phonetic).

9 A. (b) (6).

10 Q. Yeah. Cool. So just to make sure, division  
11 is out of -- out of the -- the chain of command when  
12 you're out here in MRF-D?

13 A. Yes, sir. For the most part.

14 Q. Okay.

15 A. We, obviously, worked for them during  
16 Talisman Sabre.

17 Q. Okay. Yep.

18 A. So we did a number of -- a -- a significant  
19 amount of detailed planning to prepare for that. And  
20 then we -- we did a Talisman Sabre confirmation brief -  
21 -

22 Q. Yeah.

23 A. -- with the one -- with the 1st -- 1st  
24 MARDIV CG and his staff. But outside of that, day-to-  
25 day, I mean, I consider (b) (6) (phonetic) a --

(b) (6)

1 a mentor. So I have a really good relationship with  
2 him.

3 Q. Yeah. Okay.

4 A. But beyond that, I go to I MEF for all MRF-D  
5 concerns and issues.

6 Q. That's -- that's good to hear. So no undue  
7 constraint or restraint from the division in  
8 particular? Really, it's a direct line --

9 A. Yes, sir.

10 Q. -- for the I MEF G, and ultimately, up to  
11 the chief, there, and the DCG and the commanding  
12 general of I MEF? Okay.

13 A. Yes, sir.

14 Q. And then it may be, like you said, to  
15 MARFORPAC -- how -- describe that again. Like, why  
16 would there be a interaction there?

17 A. There -- there are times where, because of  
18 the -- the time zone differences and needing something  
19 -- needing feedback on something that is adjudicated at  
20 MARFORPAC --

21 Q. Got you.

22 A. A lot of times, if it falls on a weekend or  
23 --

24 Q. Yeah.

25 A. -- or something like that.

(b) (6)

1 Q. Yeah.

2 A. That staff officer at I MEF will say just  
3 send it directly to them, CC me.

4 Q. Got it.

5 A. And then we'll follow up on that --

6 Q. Okay.

7 A. -- day.

8 Q. Okay. Right.

9 A. But that's rare. That's not the norm --

10 Q. Yeah. Okay.

11 A. -- by any -- by any stretch of the  
12 imagination.

13 Q. Did you hear -- so in the same vein of  
14 higher headquarters and relationships upstream, did you  
15 get any sense -- or did you have any conversations with  
16 any of the folks at the ACE about some of their  
17 challenges with all of their -- their chains of command  
18 that they had that to, kind of, work through?

19 A. Yeah. I mean, definitely a little bit.  
20 Dirt and I are very close.

21 Q. Okay.

22 A. So -- you know, every once in a while, there  
23 was -- there was the -- he works for (b) (6).  
24 There's -- there's this weird custodial  
25 responsibilities that's tied back to 1st MAW and MAG-24



1 due to who owned the aircraft.

2 Q. Yeah.

3 A. We don't have any -- we don't have an AMO on  
4 the MRF-D staff. We don't have access to the software.

5 Q. Yeah.

6 A. So there was a -- you might be already  
7 tracking this, there was a -- technically, it was  
8 considered a -- a mishap as the aircraft touched the  
9 water. So that exposed a lot. I mean, we use that as  
10 a vignette, and that exposed a lot of the murky COMRELS  
11 --

12 Q. Yeah.

13 A. -- between us and I MEF and III MEF and 1st  
14 Mall and MAG-24.

15 Q. Yeah. Excuse me. Is that -- are there  
16 challenges to overcome? Or were there strained  
17 relationships from your -- your understanding? Or did  
18 you just not have an understanding that -- if you don't  
19 know, you don't know. But --

20 A. No. I -- I -- I wouldn't consider anything  
21 strained or constrained. I thought we had a pretty  
22 good relationship. I think we still have a very good  
23 relationship with MAG-24.

24 Q. Okay.

25 A. I know their OPSO really well. He was my



(b) (6)

1 old ARO when --

2 Q. Okay.

3 A. -- I was a battalion OPSO. So we always got  
4 the support we needed. Like, for example, the ACE  
5 needed a -- a NOTM. We were able to get that within a  
6 couple of weeks --

7 Q. Okay.

8 A. -- via MAG-24.

9 Q. Yeah.

10 A. So from my perspective, there were -- there  
11 were no issues.

12 Q. Okay. Cool. How about just interaction  
13 directly, you know, the command element here with the  
14 ACE leadership and, you know, your counterpart?

15 A. ACE is the easiest MEC to deal with --

16 Q. Okay. Well --

17 A. -- by far.

18 Q. Yeah.

19 A. And that's not to disparage the other two.

20 Q. I understand.

21 A. It's just they -- their mentality was, we're  
22 here to support, we're here to train, we're going to  
23 make it work.

24 Q. Yeah.

25 A. You know, (b) (6)t -- (b) (6) is a unique

(b) (6)

1 personality. At the end of the day, he's -- he'll bend  
2 over backwards to -- to make it happen. He and the CO  
3 have a great relationship, and I think that  
4 relationship is built on mutual trust and respect. In  
5 the sense that you never have to worry about the ACE  
6 not telling you when they don't want to do something.

7 Q. Okay. That's -- that's critical for me to  
8 understand. That's --

9 A. Yes, sir.

10 Q. -- really good context. So they're willing  
11 to say no?

12 A. Correct. And I think that's important -- I  
13 think that's an important consideration in the sense  
14 that -- because they're willing to say yes so many  
15 times, because that's the MSC that inherently incurs  
16 the most amount of risk --

17 Q. Yeah.

18 A. -- out of the entire MAGTF --

19 Q. Yeah.

20 A. -- that when their OPSO or when their CO  
21 says, I'm not comfortable with this, like, everybody  
22 stops, puts their pen down, and -- and really listens.  
23 And again, having a very good relationship with their  
24 OPSO and I consider (b) (6) a really close friend, that --  
25 that just reinforced that professional relationship.



(b) (6)

1 Q. Yeah. Good. Did you ever get a sense that  
2 the HML/A, once they were at Fort Brown and -- and in  
3 July time frame, they had been fully integrated into  
4 the VMM reinforced mindset?

5 A. Yes, sir.

6 Q. Yeah. Okay. It --

7 A. Absolutely.

8 Q. -- it wasn't an HML/A DEP and -- and then,  
9 you know, VMM?

10 A. No, sir.

11 Q. Okay.

12 A. No. And again, knowing -- knowing (b) (6),  
13 he's a pro.

14 Q. Yeah.

15 A. (b) (6) is a pro. Yeah. This doesn't have,  
16 like, a -- a professional consideration, but just to,  
17 kind of, give you more of the -- more of the human  
18 terrain.

19 Q. Yeah.

20 A. I was their guest of honor at -- at the K  
21 Corps. And you couldn't tell what pilots were from  
22 HML/A and what pilots were from the VMM.

23 Q. Okay.

24 A. So that's just from a grunt's perspective.

25 Q. Got you. No. That's -- that's -- that's

(b) (6)

1 very good perspective, man. So ACE was the easiest one  
2 to work with. I'll leave it -- I -- what I would ask  
3 normally -- and I won't -- I won't go into the details,  
4 here, though. Was GCE, LCE -- obviously, both good  
5 folks, but you know, I'm focused, here, on the ACE.  
6 I'm just trying to get a sense -- but I think you  
7 covered that. So --

8 A. Yes, sir.

9 Q. Okay. We talked through OPTEMPO. Describe,  
10 if you can, how you think the command and control is  
11 conducted here in the MRF-D Construct. Meaning, you  
12 know, are you -- are you hubbed out of here? Do you  
13 have a -- a watch floor here? Do you have a watch  
14 floor forward? Is there a positive transfer from one  
15 watch floor to the other from command and control so if  
16 the skipper or the CO needs information, he's coming to  
17 you or to the current OPS floor to, kind of -- and  
18 how's that spread across not only Australia but also --  
19 when you're five, six different countries near,  
20 simultaneously?

21 A. Yes, sir. So -- to answer your question, we  
22 have a 24/7 watch floor --

23 Q. Okay.

24 A. -- that we stood up as part of our FOC  
25 during Croc Response.



(b) (6)

1 Q. Okay.

2 A. That has never been done before --

3 Q. Wow.

4 A. -- for MRF-D.

5 Q. Yeah.

6 A. (b) (6), having done several MEUs  
7 himself, he wanted to replicate, as much as possible,  
8 command and control of how a MEU conducts exercises and  
9 operations. My COPSO became the de facto SWO --

10 Q. Okay.

11 A. -- as the most consistent person on the  
12 watch floor.

13 Q. Yeah.

14 A. He never left Australia, never left our --  
15 we just -- poor guy.

16 Q. Yeah.

17 A. But --

18 Q. I get it.

19 A. -- the good news is he knew everything going  
20 on in MAGTF. Every morning and evening, we -- the MSCs  
21 submit DENS (phonetic) with their next 24, next 48.

22 Q. Okay.

23 A. We derive the SITREP from that information.  
24 We have a daily SITREP plus two biweekly SITREPs. One,  
25 directly to the MEF CG. And the other one is more of

(b) (6)

1 an amalgamation of -- of all of our TEEP events.  
2 That's collected by the I MEF CDO. In terms of battle  
3 handovers, we were very formal, used our checklists --

4 Q. Okay.

5 A. -- in Cebu every morning, every evening. I  
6 want to say at 07 and 2200, we'd conduct VHOs  
7 (phonetic) between us and the watch floor here.

8 Q. Okay.

9 A. So anytime the CO was on deck and we  
10 activated our forward, we were -- we would command and  
11 control from that forward and he had all the --

12 Q. Okay.

13 A. -- all, if not more, capabilities --

14 Q. Yeah.

15 A. -- within that floor.

16 Q. Tremendous.

17 A. Trying to think of what else. Not super  
18 official but definitely, we have an -- I have an OPSO  
19 signal chat. Everything that touches more than one MSC  
20 gets -- gets pushed. We have a command element chat --

21 Q. Okay.

22 A. -- OPS signal.

23 Q. Okay.

24 A. We definitely err on the side of over-  
25 communication.



(b) (6)

1 Q. Okay. To that end, a little bit of comm-  
2 mechanics, here, so I think, talking to the EXO  
3 yesterday, we, kind of, highlighted the fact that  
4 there's challenges associated with NIPR, SIPR, Five  
5 Eye, non-Five Eye, Centrix. I mean, like, the -- the  
6 challenges associated with that from a command-and-  
7 control perspective, what are your thoughts on that?

8 A. Yeah. Probably, pretty similar to what --  
9 what (b) (6) (phonetic) must have said. Right now, we  
10 have a watch floor that's -- that's in an open space  
11 that's owned by the Australians. So we use DPN,  
12 Defense Protective Network --

13 Q. Okay.

14 A. -- DSN which is their version of SIPR.

15 Q. Okay.

16 A. We can't have our SIPR machine out in that  
17 open space because it's a no foreign laptop. During  
18 Talisman Sabre, was the first time and the only time  
19 where we used a -- a Five Eye hard drive and laptop.  
20 Ultimately, that's -- that's a long-term solution to --  
21 to be able to communicate in this combined environment.

22 Q. Yeah.

23 A. Internal to the -- internal to MRF-D, we had  
24 two networks. We had the XN (phonetic) SIPR and NIPR.  
25 And then we had TAC (phonetic) SIPR. And so anytime XN

(b) (6)

1 would go down, we always had a backup via Starlink or  
2 WiFi puck --

3 Q. Yeah.

4 A. -- through a PacStar

5 Q. Okay.

6 A. Or at worse, a VSAT large which we rarely  
7 use just because of the limited bandwidth --

8 Q. Okay.

9 A. -- doesn't -- doesn't suit a MAGTF's needs  
10 anymore.

11 Q. Yeah. Yeah. Okay. Switch to, kind of,  
12 force protection. Just give me your -- I understand  
13 the mechanism. There's a -- there's a contract in  
14 place for CASEVAC, MEDIVAC services --

15 A. Yes, sir.

16 Q. -- from a -- an Australian company. Is it a  
17 company or is it a government entity that does this  
18 aero-medical support?

19 A. It's a -- it's a civilian company that's  
20 accredited. I want to say they're accredited by -- by  
21 the ADF.

22 Q. Okay. Okay. That's good. I'll have to  
23 look into that. Do you think, you know, is that an  
24 appropriate mechanism for us from a CASE-MAC  
25 perspective of -- or you know, the training exercise



(b) (6)

1 being conducted out here?

2 A. I think it's -- I think it's better than  
3 what you'll find anywhere else.

4 Q. Yeah.

5 A. And I -- I think with the hefty price tag  
6 comes dedicated medical support, never have to worry  
7 about outsourcing it or competing with another unit.  
8 So to me, that's -- I mean, it's -- it'd be the same  
9 thing. I spent four years in Twentynine Palms with the  
10 7th Marines.

11 Q. Yeah.

12 A. It's like having that --

13 Q. Mercy Air. Yeah.

14 A. -- that -- that Mercy Air, but just for you  
15 --

16 Q. Yeah.

17 A. -- all the time.

18 Q. Yeah. Was there any -- ever any tension  
19 from the ACE perspective, like, well, no, we do CASEVAC  
20 and we -- we can support that?

21 A. They didn't want to do CASEVAC.

22 Q. Okay.

23 A. And I was -- we talked about it early on --

24 Q. Yeah.

25 A. -- in our problem framing and as we were

(b) (6)

1 writing the campaign plan. And going back to (b) (6)  
2 mentality of, you know -- at the end of the day, if he  
3 needs to spin up a bird and extract a -- an urgent  
4 casualty that has been shot and for whatever reason,  
5 the AME bird is unavailable, they're prepared to do  
6 that.

7 Q. Sure.

8 A. But I didn't want to -- we didn't want to  
9 tether VMM to a sustained mission the entire  
10 deployment.

11 Q. Yeah. I mean, that's a heavy tax to pay if  
12 you're --

13 THE WITNESS: It is.

14 (b) (6) -- if you're doing 24 --  
15 or even if you're doing 20 hour a day alert lines to  
16 support CASEVAC, that's --

17 A. It is.

18 Q. -- that's an -- that's an exhausting --

19 A. Plus they can't -- they -- when we did all --  
20 - all of our risk mitigation and analysis, going back  
21 to problem framing for the deployment, again, they  
22 can't even land -- I mean, they -- technically, they  
23 can land at the LC at the hospital.

24 Q. Yeah.

25 A. They would destroy half the parking lot and



(b) (6)

1 just, like, blow out half the windows at the hospital.

2 Q. Understood. Understood.

3 A. So --

4 Q. A lot of power?

5 A. Yes, sir.

6 Q. Yeah. Okay. Can you describe a little bit  
7 of the interactions between, you know, MRF-D and  
8 Australian Defense Force elements during training and  
9 exercises?

10 A. You said the interaction, sir?

11 Q. Yeah. The interaction.

12 A. Okay. Overall, great.

13 Q. Yeah.

14 A. Very professional. The -- I think everybody  
15 would agree that Australia is, probably, the -- the  
16 easiest and most hospitable host-nation we've ever  
17 worked with. And it's -- I really have nothing  
18 negative to say, specifically, with first brigade. We  
19 were all very much looking forward to Pred Run. That -  
20 - that was going to be their -- the marquee event for  
21 them and our ability to -- to fully integrate into  
22 their Ski (phonetic) Maneuver.

23 Q. Okay.

24 A. It's something that we are very interested  
25 in.

1 Q. So with Pred Run and -- and a couple of  
2 interviews I've done, you know, one of the -- one of  
3 the things that has been brought up, at least once, was  
4 similar to the conversation we had about the post  
5 confirmation brief things. Like, the ADF was a little  
6 bit late to, kind of, finalize their planning --

7 A. Uh-huh.

8 Q. -- for an exercise until you're pretty close  
9 in to the mission being done. Would you agree with  
10 that as -- as an assessment?

11 A. I would agree with that.

12 Q. Okay.

13 A. So their -- I can't remember when their task  
14 board came out. We had a very similar experience with  
15 Southern Brigade for Southern Jack where we were  
16 consistently out-cycling their -- their planning.

17 Q. How did you -- after Southern Jack, and for  
18 instance, did -- did you guys come back to the table,  
19 you know, and talk about -- well, that's -- that's --  
20 you're -- you're starting to assume a little bit of  
21 risk there that you didn't necessarily prepare for as  
22 you left the CONUS and you came out here.

23 Was there any conversation about that, about  
24 the fact that they're, kind of, late to meet, or late  
25 to -- late to -- not necessarily communicate, they --



(b) (6)

1 they are communicating there's -- there's changes  
2 coming, but like, late to finally solving or coming up  
3 with a plan?

4 A. Yeah. I mean, ultimately, it was a  
5 combination of influencing our partners --

6 Q. Okay.

7 A. -- leveraging HQ NORCOM --

8 Q. Yeah.

9 A. -- as -- as the conduit.

10 Q. Okay.

11 A. And then --

12 Q. So going back real quick, you -- you guys  
13 did have a conversation here at the command element? I  
14 want to make sure I'm tracking. If -- if you started  
15 to do those things, my assumption is --

16 A. Oh, for --

17 Q. There was a conversation, like --

18 A. For sure, sir.

19 Q. -- we can't let this continue to happen?

20 A. For sure.

21 Q. Okay. Okay.

22 A. Yeah. Planning and JEL was constantly  
23 discussed.

24 Q. Okay.

25 A. There was never a time where we didn't talk

(b) (6)

1 about, what's the next planning event --

2 Q. Yep.

3 A. -- what's -- and even internal to us, we  
4 always gave -- I should have said this earlier --

5 Q. That's all right.

6 A. -- when we were talking about confirmation  
7 briefs. Before every confirmation brief, the CO would  
8 receive a full IPR which I've never seen done before.

9 Q. Okay.

10 A. Which, essentially, was 80 percent of the  
11 confirmation brief.

12 Q. Yeah. Would he do that in-between mid and  
13 final? You would give him an IPR and then everyone go  
14 to final and then from the final --

15 A. We tried. That was my original intent.

16 Q. Yep.

17 A. But the JEL cycle doesn't support that.

18 Q. Okay.

19 A. Sometimes, the FPC would be three weeks or a  
20 month after the MPC.

21 Q. So you can't check --

22 A. And we don't --

23 Q. Okay.

24 A. -- and we don't control that.

25 Q. So what you're telling me, make sure I

(b) (6)

1 understand, FPC would be completed. This is what we're  
2 going to do. You guys would IPR.

3 A. Uh-huh.

4 Q. -- and then still, a couple weeks later, do  
5 a confirmation brief --

6 A. Yes, sir.

7 Q. -- on MRF-D game plan, how we're going to  
8 execute?

9 A. Yes, sir.

10 Q. Got it. Okay.

11 A. And that's another way we were able to --  
12 to, kind of, tie your two questions together. That's  
13 another way we were able to mitigate --

14 Q. Yeah.

15 A. -- last minute --

16 Q. Yeah.

17 A. -- changes.

18 Q. Okay. Give me a second, here, to make a  
19 note on that.

20 A. Yes, sir.

21 Q. It's key. Yeah. It's just -- that's good  
22 info. Okay. And so last question in, kind of, this --  
23 in this, kind of, block, here, that I have: What  
24 events, exercises required confirmation briefs to the  
25 CO? And then what didn't?



(b) (6)

1           Maybe it's easier just to say: What things  
2    didn't he need to see, like, full-scale confirmation  
3    brief for and he could just take it desk-side?

4           A.    So the only desk-sides he took were -- well,  
5    we just did one yesterday, it was for EOD, anything  
6    that involves, kind of, a local -- I MSC ULT or like, a  
7    bilateral exercise that didn't have a -- a larger MAGTF  
8    role. So EOD is inert-ing a tow, and they're  
9    simulating as if they're responding in a FD 2030 EABO.

10          Q.    Yeah.

11          A.    So they're responding to a call to reduce a  
12    -- a UXO and then, ultimately, inert that. That was  
13    the desk-side with the battalion commander, myself, the  
14    EOD, DEP OIC, and obviously, (b) (6) .

15          Q.    Okay. Everything else --

16          A.    Yeah. Every TEEP exercise was a full  
17    confirmation brief.

18          Q.    Okay.

19          A.    It was full IPR. Another example of a desk-  
20    side was -- ironically, it's two EOD. But they -- we  
21    sent three PACs to Nauru for Op Render Safe --

22          Q.    Okay.

23          A.    -- for them to proof lanes and observe and  
24    ID any UXO. But there was -- there was no reduction.  
25    So --



(b) (6)

1 Q. Okay.

2 A. -- that was the desk-side with the battalion  
3 commander and the CO --

4 Q. Okay.

5 A. -- and myself.

6 Q. Okay. awesome. Talked through those. Let's  
7 talk about a couple things, here, in reverse order,  
8 however. So you talked -- you brought up earlier about  
9 VMM having an aircraft, hit the water off the Canberra.  
10 Prior to that event, did you know of any other, kind  
11 of, like, mishaps or -- or issues that they have had  
12 with their aircraft?

13 A. They had a FOD incident.

14 Q. Okay.

15 A. I don't recall the details, sir.

16 Q. Okay. That's the only thing you recall?

17 A. And they had a -- I'm going to mess up the -  
18 - it's not -- is it sponsoon (sic)?

19 Q. Sponson?

20 A. Sponson? Yeah. Sponson.

21 Q. What about the sponson?

22 A. They damaged a sponson. And just the dollar  
23 value associated with that, I think that was classified  
24 as a --

25 Q. Class echo?

1 A. I think so, sir.

2 Q. Sound familiar? Do you know what caused the  
3 damage to the sponson? Do you remember?

4 A. I -- I don't -- I don't recall the details.

5 Q. Okay. Okay. Then, the mishap occurs. So  
6 that's still under -- under investigation from VMM on,  
7 you know, why it went -- hit the water. You were  
8 tracking that, obviously?

9 A. Yes, sir.

10 Q. Did you -- were you tracking that day-of?

11 A. I was.

12 Q. Okay. Copy. So after that occurred -- and  
13 when did you find out about the sponson issue? Was  
14 that before or after the -- this thing hit the water?

15 A. I'd say that was before. We -- we briefed -  
16 - it's part of our CUB. We briefed readiness.

17 Q. Okay.

18 A. It got all our aircraft -- just, like, a new  
19 brief.

20 Q. Yeah.

21 A. And -- so that was captured in one of those  
22 briefs --

23 Q. Okay.

24 A. -- as I recall.

25 Q. Okay. So we have the crunch and the



(b) (6)

1 sponson, my terminology for some sort of impact, there.  
2 We have the Class Charlie. Was there any discussion at  
3 the command element level that you recall or -- or were  
4 part of about maybe taking -- making the ACE take an  
5 off -- pause and across the organization, to -- to  
6 include the H-1 DEP and just, kind of, taking a look at  
7 -- internally?

8 A. So that discussion happened after the --  
9 when it hit the water.

10 Q. Okay. Okay.

11 A. We -- but it was -- it wasn't a full -- it  
12 wasn't, hey, the -- the ACE is going to execute a  
13 safety stand down.

14 Q. Yeah.

15 A. It was more the, okay, what's -- what's  
16 going on on the ship? We took a look at -- because I -  
17 - I want to say that was three days prior to the  
18 vertical assault.

19 Q. Okay.

20 A. After several conversations with (b) (6)  
21 [REDACTED], and then (b) (6) with (b) (6) we  
22 assessed that it was pilot error. And that because  
23 they were completely disconnected from the rest of the  
24 ACE, that -- we assessed that that was a -- an isolated  
25 incident.

1 Q. Okay.

2 A. If that makes sense?

3 Q. Okay. Okay. Yeah, it does make sense. So  
4 no sense -- okay. I'll pause there for a second before  
5 I move on to the next thing. Okay. So I'll finish  
6 this thought then. I didn't have anything else in  
7 this. So no sense -- prior to the class Charlie in the  
8 water and between that and the actual mishap that I'm  
9 here investigating, that -- was there any sense that,  
10 you know, the ACE was -- was, kind of, out over their  
11 skis from a safety point-of-view?

12 A. Not from my perspective, sir.

13 Q. That's okay.

14 A. I mean --

15 Q. Yeah. I understand.

16 A. Yeah. It's -- it's one of those things,  
17 like -- now that things have calmed down quite a bit  
18 over the last couple of days, doing a lot of self-  
19 reflecting. It's -- we -- we had such confidence in  
20 them --

21 Q. Yeah.

22 A. And I still do.

23 Q. Yeah.

24 A. Such confidence in the plan --

25 Q. Yeah.



(b) (6)

1           A.    -- that it was definitely a wake-up call.  
2   And I do recall having many conversations with (b) (6),  
3   CO was on the phone a lot.  You know, reports up to --  
4   directly up to (b) (6).

5           Q.    Okay.

6           A.    I remember proofreading (b) (6)  
7   e-mail.

8           Q.    Yeah.

9           A.    So it -- it definitely had our attention.

10          Q.    Yeah.  Okay.

11          A.    But not -- we never felt the need to -- to  
12   reassess our plan for Pred Run.

13          Q.    Okay.  Okay.  Rightfully so, I -- I think.  
14   If -- if my context -- to agree with you.  All right.  
15   Last couple questions, here: Prior to the mishap, any  
16   suspicion or belief that the -- the VMM was conducting  
17   any aircraft maintenance practices or that -- not in  
18   accordance with rules regulations for the Navy Marine  
19   Corps or any directives?

20                Do you have any sense that something was  
21   running afoul in their maintenance department?

22          A.    No, sir.

23          Q.    And I think -- so putting it into context,  
24   you're -- on a daily basis, you're looking at their  
25   readiness rates?

1 A. Every day.

2 Q. Yeah. And so throughout the time that you  
3 were working with them, as you earlier stated, roughly  
4 around 60 percent --

5 A. Uh-huh.

6 Q. -- readiness across their -- their 10  
7 aircraft. Okay. So again, based on what you were  
8 seeing from that, what numbers -- like, there was --  
9 there was pretty standard -- steady state from day one  
10 to --

11 A. Steady state --

12 Q. Yeah.

13 A. -- forecasted phasing --

14 Q. Yeah.

15 A. -- of aircrafts.

16 Q. Yeah.

17 A. We -- we were -- I remember being very  
18 deliberate in coming out of exercises, having X amount  
19 of days that they had dedicated as either, you know, no  
20 fly days, maintenance days to prepare for -- like,  
21 perfect example --

22 Q. Yep.

23 A. -- was retrograding from Talisman Sabre.

24 Q. Yep.

25 A. And the maintenance cycle was just as



(b) (6)

1 deliberate --

2 Q. Okay.

3 A. -- as the execution of the exercise as they  
4 prepared for IPE and picking their four best aircraft.

5 Q. Okay. Alrighty. As best as you can, how  
6 would you describe the command climate over at 3-63  
7 prior to the mishap?

8 A. Really good.

9 Q. Yeah.

10 A. I'm not -- I'm not just saying that because  
11 he's -- he's my friend. But again, I -- I don't know  
12 how official a K Corp is --

13 Q. Yeah.

14 A. -- in terms of determining command climate.

15 Q. Pretty big deal.

16 A. But -- really good, sir.

17 Q. Yeah. Okay. Good.

18 A. They -- he's -- they love him.

19 Q. Yeah.

20 A. He's a father figure. Yeah. It's,  
21 probably, one of the most positive command climates  
22 I've ever seen.

23 Q. That's awesome to hear.

24 Did you ever get a sense in your time with  
25 them as you -- they, kind of -- as you -- you know, as

(b) (6)

1 MRF-D is, kind of, winding down, was there ever a sense  
2 that you had or heard or had a conversation with  
3 someone about of, ready to get out of here and get back  
4 home? Or were they really focused on the mission and -  
5 - and -- and staying here and getting the training done  
6 that they wanted to get accomplished?

7 A. The VMM, if -- if it were up to them, they  
8 would stay here as long as possible to train.

9 Q. Yeah. I figured you were going to say that.  
10 Based on earlier comments about, like, you -- you --

11 A. Yes, sir.

12 Q. -- you're not going to get this training in  
13 Hawaii. Like, yeah. It's -- it's a good deal.

14 A. Exactly.

15 Q. Okay. Let me make sure I don't have any  
16 other questions for you. And I'm going to go back  
17 through my -- my notes or comments, here, real quick.  
18 I -- I don't. So just to, you know, recap with you.  
19 The one thing I'm -- I'm -- help with is just whether  
20 it's our flight schedules or maybe we're looking -- and  
21 -- and this will be a lot of work for me detail-wise to  
22 go through the day-to-day slides. And what I'm really,  
23 kind of, honing in on -- or maybe either you or (b) (6)  
24 can help me with this, just trying to find opportunity  
25 -- and over the last, you know, once HML/A was full-up



(b) (6)

1 round, they were on deck here, opportunities that VMM  
2 and the H-1s, kind of -- you know, V-22s and H-1s work  
3 together. That's what I -- I'm, kind of, looking at --

4 A. Uh-huh.

5 Q. -- I-- I need some data on -- so -- and so -  
6 -

7 A. We can -- we can try to pinpoint that. I  
8 know the FOC one is going to be easy. That's -- that's  
9 -- was, certainly, reflected in our SITREP.

10 Q. Yeah.

11 A. And then any kind of integrated training  
12 between HML/A -- I -- I know (b) (6) can, probably -- if  
13 it did occur, he will have a better idea of exactly  
14 when it occurred.

15 Q. Okay.

16 A. And then we can figure out what -- what the  
17 best supporting documents are.

18 Q. Okay. That'd be great. Anything that --  
19 anything to add, you know, based on our questions or  
20 comments, or thoughts you think might be pertinent to  
21 the -- this investigation that we haven't discussed?

22 A. No. I -- I -- I would say as busy as we  
23 were, as dynamic as this TEEP has been -- all of our  
24 partners and even bolting-on HML/A, we were -- and I'm  
25 not -- I'm not just saying this because he's my boss.

(b) (6)

1 But this is my second time working for (b) (6)  
2 [REDACTED]. And he's -- he's the most disciplined  
3 commander I've ever met especially when it comes to a  
4 very methodical approach of receiving information and  
5 then providing guidance.

6 Q. Okay.

7 A. And it's very specific guidance. And it  
8 enables his commanders to operate, you know, the -- the  
9 way the Marine Corps is supposed -- is supposed to --  
10 is supposed to work.

11 Q. Yeah.

12 A. And then even in a distributed environment,  
13 going back to the -- the fact that the ACO was on ship,  
14 RCO was in Cebu, and the rest of the squadron was back  
15 here, we had a very detailed comm-plan. And -- and,  
16 like, one of his last comments during the IPE  
17 confirmation brief was, make sure that RPA's plan is  
18 completely validated before the ship pulls away. And  
19 we were able to do that. So -- yeah. I -- I would  
20 just say overall, communication between him and his  
21 commanders were consistent, never degraded. And then  
22 we had a very deliberate and disciplined approach when  
23 it came to risk mitigation.

24 Q. Okay. That's -- that's an important detail.  
25 Thank you for adding that. I -- I mean that,



(b) (6)

1 sincerely. Because I didn't really ask a lot of  
2 questions about him as a commander, but I -- it gives  
3 me some good context.

4 A. Yes, sir.

5 Q. And frankly, not surprised.

6 A. Yes, sir.

7 Q. Okay. Lastly, we'll just close with this:  
8 You're advised this is an ongoing investigation.  
9 You're directed not to discuss the testimony you've  
10 given here today with anyone aside from a duly  
11 appointed investigating official which is myself or the  
12 other three majors who are here with me. With that,  
13 we'll close the interview.

14 A. Yes, sir.

15 (b) (6) Kill it.

16 (End of Audio Recording.)

17

18

19

20

21

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23

24

25



(b) (6)

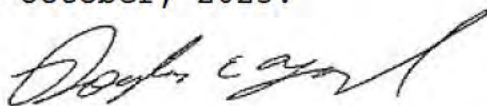
CERTIFICATE OF TRANSCRIPTIONIST

I, Doug Yarborough, a transcriptionist  
located in Charlotte, North Carolina, hereby certify:

That the foregoing is a complete and accurate  
transcript of the digital audio recording of the  
proceeding in the above-entitled matter, all to the  
best of my skills and ability.

I further certify that I am not related to any  
of the parties to this action by blood or marriage and  
that I am in no way interested in the outcome of this  
matter.

IN WITNESS THEREOF, I have hereunto set my hand  
this 19th day of October, 2023.



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(b) (6)

(b) (6)

## Interview Summary of (b) (6), ADF

0:00 IO

OK, all right. This interview is being conducting on 11th September 2023 at 11 O2 at Robertson Barracks outside of Darwin, Australia with (b) (6) of the Australian Defense Force. As I discussed with you a little bit before the interview here Tony, I'm the Investigation Officer for Major General Gering from the Commanding General I MEF into the the response to a Class A aviation mishap that occurred resulting in the death of three of the US service members an injury to several others. Just to remind you that the my command investigation I'm in partial fact Finder for the commander that Major General Gering regarding to the facts and circumstances associated with the mishap that I am not related at all to the aviation Mishap board. That Aviation Mishap Board is a separate inquiry than mine. Any statements given to them have not been provided to me from them, and so these are all questions that we're asking separately and distinctly from the Aviation MSF board. Everything they're doing is privileged. My team does not have access to that information and those statements will be used on the aviation MSF board. Are used for safety purposes only, not for any other issues, unlike mine, which is trying to find the potential fault. All right, it is important the information you provide is complete truthful to the rest of your knowledge. So if you have, if you don't know precisely so you don't know, Tony, if you do, or you you want to comment on, like what you sensed or felt from a thing, that's fine. But it's your recollection of it, not anything else. No one else's recollection of it. OK. And there's a violation to to make a false statement under oath, regardless of what nation you're from. So do you have any questions on that?

1:50 Witness

No, Sir.

1:50 IO

OK, so if you would just raise your right hand. All right. Do you swear that the testimony about the give shall be the truth, the whole truth and the nothing but the truth, so help you God?

1:59 Witness

I do.

1:59 IO

All right. thank you, (b) (6). All right. If you could just introduce yourself for the record here for me, please, (b) (6) and we'll go from there.

2:07 Witness

So my name is (b) (6) or (b) (6). I'm the operations officer or S3, for the first brigade of the Australian Army, based here in Darwin or Robertson Barracks. Darwin.

2:19 IO

OK. And how did you first get involved in the mishap event planning or execution? When were you first kind of introduced or started to work in the in Predator run?

2:31 Witness

I guess I should say as the operations officer the plan is handed to us and it was around the 10th of August. Prior to that point, I had a sound level of knowledge of what the MRF-D commitment to the exercise was looking at shaping up to become. OK then on the 24th or 23rd I'll need to confirm, and I'm I'm sure if (b) (6) has provided the exact date. We sat down in the headquarters planning office to discuss a an option for the insertion of the MRF-D on the Melville Island based off a change in platform availability from the rural Australian Air Force.

3:15 IO

What caused that change?

3:18 Witness

To the best of my understanding, a snap safety signal had been released from the US based off a fatigue or a crack in the part of the C27. From the US side, I think they were on the US Coast Guard airframes that had gone as a safety signal obviously around those who own that aircraft and the Enterprises obviously Australia being one of them, where it was then deemed that that fleet had been grounded until such time as identification of similar faults had been found which they had in the Australian fleet. What we didn't then have was a confirmation of when that fleet would be made available or would be ungrounded. That was essentially what created the demand signal to create a planning team to understand how we would then support the insertion of the MRF-D team going into Melbourne's part next source.

4:09 IO

OK. And so when that change occurs, can you describe who was there on this, this new planning team?

4:16 Witness

Sure, absolutely. So we called the planning team essentially as soon as we had that information, I believe it was mid to late afternoon the day obviously price of the planning team was called. I asked and requested (b) (6), obviously from the GC to make his presence available, our Air liaison Officer from the Royal Australian Air Force to provide us the facts of the situation that I've just given to you in



sort of broad detail the reason why. And also a team from the ACE Planning team who they all made themselves available the next day and we went through that snap planning cycle again. I believe it was the 23rd or 24th of August, OK.

4:56 IO

And of the folks that are there 23rd, 24th, were these the folks involved in further like detailed mission planning or is this kind of the detailed mission planning for this portion of Predators run?

5:10 Witness

Yeah. So I'd give them the essentially the situation of what we were confronted with in terms of the the change of availability of the aircraft. We then had the planning team, well, I don't need to recall it was either the afternoon or the morning after. Either way, we had the, the, the planning sit down and we gave them an opportunity to come back to us with their preferred course of action from the the Marine perspective, noting 2 key points of friction. The first one was obviously the marine retrograde back-to-back to United States was looming and we were keen not to stress any more availability of people or things, particularly equipment into the exercise, noting there is a very clear retrograde timeline. The second one was also understanding the availability of aircraft and what that meant to still achieving a level of, you know, valuable training experience for the MFD. And I guess the, the key take away I wanted to impose on (b) (6) as the GC sort of representative, as the Operations Officer was come back to us with your level of comfort, what you still want to commit And if it doesn't meet something anymore, we will restart the exercise as appropriate to ensure that both the relationship is maintained.

6:26 Witness

But more importantly we're not forcing an issue just for the sake of saying let's keep pushing down the line if it's not on the viable, OK, well what came from that, that kind of that interaction, that conversation. So over the course of that day, so that afternoon, the planning session and then when they came back to us, obviously the, the MRF-D team had conducted their own teaming on this situation. What was available? It was then made of sort of apparent to us that the course of action they had come up with through their own planning on the Marine side indicated they now had not one in between 2 Osprey. But now potentially a second, which were they were going to now essentially resource the insertion and X fill completely at the US Marine sort of level not even would now hadn't lost the availability of that C 27 from the Air Force.

7:16 IO

OK. So they come back, they say two MV 22's and were you there for the more detailed planning of like insertion location and and all that kind of like the back and forth between the GCE and the ACE.

Were you involved in any of that?

7:30 Witness

No, not really. The key thing I wanted to sort of impress on (b) (6) and the team who was sitting around the table from both the ACE, the Marine plant, not the Marine, the maritime planners from the ADF for the large connecting vessels. OK was you tell us what works for you and we will make it work. Though I was not Privy to any other further conversations outside of that specifically to the Marines.

7:56 IO

OK. So we had we had a choice we could you were able to flex, you were willing to flex push back to the Marines that you guys tell us if you want to flex if you think you need it and we came back with no we're good we'll do this thing with V 22. So we'll go after.

Witness.

Yes sir, as that

IO

OK. Any other planning associate that you were involved in or having Privy to in between that and and the actual mishap itself.

Witness

Obviously we went through the full orders of the brigade level which the MRF-D completely were part of as well as the rehearsal and concept drill and the back briefs at that time. Obviously Brahma 6, the CO of the MRF-D had the back brief, his initial planning. Clearly that had expired in terms of its relevancy once the subsequent events of the RAF air support had dropped. But that was certainly part of that process all the way through from issuing orders. And also obviously I was away doing another task in July. But in July through August the MRF-D planning effort from GCAC remain engaged with the Australian planners in that time frame to continue that back and forth conversation of availability, what they were going to put onto the exercise and more importantly what they were scoping to preserve for the purpose of the retrograde

9:20 IO

Any point in time from 23rd, 24th time frame until when the mishap occurred. Did you ever get a, did you ever over here, did anyone ever say to you anything about ACE concerns in particular with MV22's, number of packs on those aircrafts, fuel loads, anything with regards to that? Did you hear anything?

9:36 Witness

No, not at all. The only observation I would say I picked up on was clearly there was a level of commitment from the ACE into the Indo Pacific Endeavour which had a number of the aircraft embarked

on the HMAS Canberra, the LHD which clearly was causing an obvious usage in a way of effort issue. So in warning back to the original point I made before, we probably use that to leave her off by saying we are not looking to over stress anything here. Anything you provide to support the exercise from your perspective is fantastic, but please come back to us with your decision on what you want to put on the activity.

IO

OK. So in regards to the ACE interactions, do you have a lot of, from your level a lot of interaction with the ACE Operations officer or was it more focused, you did more focus with the GCE,

Witness

Yeah, mainly through the GCE noting that the the MAGTAF headquarters largely were consumed with other tasks at the time and that was completely fine. My main sort of touch point with the (b) (6), the two ACE planners and I, unfortunately I can't remember their names who attended that conference, that planning team with us on the 23rd, 24th time frame. I hadn't met them before up to that sort of point in time, but our interactions are pretty limited. Having said that, I got to know the 2 pilots of the of the the aircraft somewhat throughout the year. It was, it was hard work hearing that on the day.

11:14 IO

Yeah, I understand. So, OK,. In the context of what you know, how you are interacting with this and just look into my list of questions to what makes sense to kind of delve in front of with you, can we talk confirmation briefs from your perspective. So and what I'll do is I'll try to, I'll try to give you the context of what I'm at, why I'm asking this questionnaire. And so from a MEU, I'm used to being on Marine Expeditionary Unit where you're like a totally tight organization almost self-contained. And before anything that we do as a MEU, there's always a confirmation brief to two O 6 commanders, Marine Corps and a Navy counterpart. And So what I'm getting a sense of in conversations through the last week or so being here is that confirmation briefs within the MRF-D constructs are not as especially for an exercise whether it's southern Jack Roo or it's predators run. They're not the final like you have a confirmation brief but it's not like that you the table has been slapped. No changes are going to occur after that unless they're they're fully understood and vetted across the whole organization as opposed to a select few. Does that make sense to the content?

12:49 Witness

Yeah.

12:50 IO

So from your point of view you know a confirmation brief. Have you been in those confirmation briefs that are I'm assuming your commander is that and there's is there a sense in this confirmation briefs like

that is the final answer or is there there's room as things develop or change that that is OK if things developer change that you can do that post confirmation?

13:15 Witness

Sure. I've certainly been Privy to both MRF-D confirmation briefs in our own the key event post the orders on the 18th of August was on the 21st of August which I believe was on Monday.

13:31 Witness

Was that CA confirmation back brief to the commander and as I said to you before clearly for the MRF-D component of that brief or in fact for the entire plan that changed the aircraft availability warranted a a planning cycle. So as the operations officer we certainly are part of the audience where the commander is briefed in this case Brahma 6 briefing commander 1 brigade. In terms of a full confirmation brief again from any of the the main supported unit commanders to Hard Rock, I did not see one. But we've certainly provided regular updates to our commander on the status of the air from availability and the evolving plan and I've got no stage any sense of concern from that. He was probably echoing I say he I mean the command of 1 Brigade echoing similar sentiment. Let's make sure the Marines are comfortable we're putting on this and that we're not over stressing any of their current commitments. Certainly reflecting his understanding of how busy the Marines were across the region knowing multiple exercises.

14:39 IO

OK. No, that's very helpful. I'll leave it at that. I think you've answered my questions on what I, what I think I, I need from you (b) (6). So if for some reason I need to circle back, I will, but I don't think so at this point in time. OK. One last thing before we kind of end our time together here just regards to you know you're advised that this is ongoing investigation. You're directed not to discuss your testimony with me that we talked about here today with anyone outside that duly appointed investigating official which is either myself or three other or my officers at that point.

15:13 Witness

OK, Sir, understood.

15:14 IO

All right. Thanks (b) (6) for your time. Thanks so much.

15:18 Witness

Cheers.



## Interview Summary of (b) (6) 3rd Battalion, 1st Marines

0:01IO

OK, this interview is being conducted on 11th September 2023 at 1013 at Robertson Barracks in just outside of Darwin, Australia with (b) (6). I'm the Investigation Officer, the Deputy Assistant Chief of Staff at I MEF that this command investigation was directed by Major General Bradford J Gehring, CG of I MEF in response to a Class C aviation mishap resulting in the death of three service members, and injury to several others. I have a copy of the appointment letter should you want to review it. All right. An investigating officer in a command investigation is an impartial fact finder for the commander. Testimony taken by the investigation officer and reports based on the testimony may be used for official purposes. Access is normally restricted to persons who clearly need the information to perform their official duties and in some cases disclosure to other persons, such as the subjects of an action that may be taken as a result of the information gathered by this investigation, may be required bylaw or regulation, or may be directed by proper authority. You might at a future date, or they already have been interviewed as part of the Aviation Mishap Board. That is a separate inquiry from this command. Investigation No statements that you made as part of that inquiry, IE the Aviation Mishap Board, will be provided to the Command Event Investigation Team Statements made by as part of the Aviation Mishap Board are privileged and the Command Investigation Team, My team does not have access to them. Those statements will be used for safety purposes only prior to the beginning in this interview. Your advice is your rights under the Privacy Act and if applicable, applicable, about your rights regarding the origins of any injuries or you sustained in this incident. You did not receive any injuries, so we'll move on. It's important that the information you provide is complete and truthful. It is a violation of the UCMJ to normally make a false statement under oath. Do you have any questions regarding those? and if you will, raise your right hand Do you swear that the testimony you're about to give should be the truth, the whole truth and nothing but the truth so help you God.

2:11 Witness

I do

2:13IO

All right, let's begin. And so (b) (6), just you know what I'll say is, you know, if you don't know that answers the question, just say you don't know, don't try to speculate. If I ask you to give me a sense of things, give me your sense again, that is your kind of, that's your prerogative on it. But you know what I'm looking for is, is facts and especially you can understand. OK.

2:34 Witness

Yes, Sir.

2:34IO

All right, if you will. Could you just tell me what your job is here within the MRF-D MAGTF.

2:41 Witness

Yes, Sir. Yeah. I'm the operations officer for Victor 31 the ground combat element in support of the MRF-D MAGTF.

2:50 IO

OK. So in that role do you have you had a lot of opportunity to interact with the ACE command, ace commander and ace operations officer.

2:59 Witness

Yes Sir. Yeah. (b) (6) I and and all those folks opslog every week Tuesday and then iterations of planning that STEM really started with croc response as the first evolution for yeah first time with the ACE was kind of involved with that as we did a healing insert with company K second one being Southern Jackaroo and then the final really being Predator run with some ULT opportunities throughout the duration of the MAGTF from fast rope and some on off drills.

3:39 IO

OK. So let's talk about a little bit of as you talked through the major what we'll call exercises right. So you had croc response southern Jackaroo and then ultimately predators run how from your perspective how are these different these exercises how do they compare our different planning wise to let's say unit level training.

4:00 Witness

Yeah the major exercises had more input upfront from the really the MSC opsos to align what the objectives were from the MAGTF. This is for like croc response was used to make the MAGTF fully operation capable incorporating elements LC, e.g, CE, ACE wise. Same for southern Jackaroo. And then that had more of an element of the ACE was doing some ULT in conjunction while the GC was working through FTXS and the Cal FX with 7 brigade at the time out there in the eastern side of the continent and then LC tied in with the resupplying logistics sustainment there as well. As far as the ULT, that was more of A conversation with like OPSOC hey we're looking interested in doing this is that semi supportable.

4:56 IO

OK cool.

4:57 Witness

And then passing that off to the action commanders who are trying to schedule that training and the OPSOC providers oversight if they needed any assistance in shaping that.

5:06 IO

OK. So for an exercise like you know croc response Southern Jackaroo, was there ultimately a confirmation brief conducted.

5:14 Witness

Yes Sir.

5:15 IO

OK. And how soon or how far out before the beginning of the exercise was that normally kind of done?

5:24 Witness

Yeah we would aim for two weeks. However, just based off the life cycle of the exercise and some of the planning factors like the ADF planning cycles a little bit different than ours in some respects. So no, no, generally no later than one week. I think the closest one we ever had would have been Super Gruter Shield, one of the most recent and we hit that confirmation brief as Iron had just departed to get in this zone the day prior. But the IP Rs we've been going through have been pretty heavy with a lot of information IPR heavy and confirmation brief live trying to just stack up the information up front.

6:04 IO

So have you ever been on a MEU before?

6:06 Witness

I have Sir.

6:06 IO

OK. So can you give me your perception of a confirmation brief, what is it like for, you know, MRF D confirmation brief as opposed to a MEU confirmation?

6:18 Witness

Yes Sir. Yeah, three MEU's 2 31st and the last one being the 15th with 1/4 and the MEU confirmation briefs are exactly that what we know to be is that is what is happening. And I think a lot of that stems from the centralized, the ability to more centralized plan like you have all the major players you know tied into the L FOC and the comp systems are all known. That process is all known. We've been doing MEU's for how long now?

6:47 Witness

Very. In my experience with that, there's very few changes that happen outside of the confirmation brief, minus a few onesies, twosies on the deck as random things get inserted or Murphy's Law takes effect, right. So for the MRF-D MAGTF confirmation briefs are a little bit more to be about like the 85%, just based on the planning horizons as mentioned. Specifically I'll reference southern jackaroo as we work through the combined planning with like 7th Brigade and understanding like what CT, CS role is ex-con, 7th Brigade's role inside that R role as the MAGTAB, GC, ACE, LC, etcetera. There are some unknowns to that just because they the FTX was the forefront of the planning and then the LFX, the live fire exercise being kind of fleshed out in stride as different training objectives kind of came about or or what have you. So like for that for the instance we didn't have a full sight picture until probably about a week before that LFX was occurring. But the time frame inside of there is that that exercise was about a month, a month long give or give or take a little bit of time there. So there was there was time for the commanders to be on the deck to observe and talk through all those things with where the SDCS and all that stuff were. So it came out and by no means was a negative aspect to the exercise. It was just different from our perspective of like the Marine Corps side. We're always like we will know from the planning side like this is what we're doing. There's been more of discovery kind of built into those into that exercise. So if things change, post confirmation brief.

8:34 IO

And so make sure I'm understanding. When we talk confirmation brief, the MAGTF command element, commander is in on those confirmation briefs, right. So and naturally from what you're saying I guess not naturally but as you as you describe this post confirmation brief things changed right. OK so how was that communicated across the command element to the to the ace or the GC.

9:00 Witness

Yes Sir. Yeah so and change may not be the like the best word. I think more developed would be probably what I'm looking for there any anything that would come out from the on the on deck commander would be relayed back up through Brahma 6 or whoever. Again using southern Jack as the prime example. Hey LFX we're looking at instead of doing company level attacks we're going to detail down the platoons. We're going to integrate 1 platoon to be on X flank of 7th brigade and they're going to conduct a platoon attack with a four passage of lines and then that on deck commander would really send information about hey the SD DS are good. I think (b) (6) might have been in a position to be able to be tied into that too. And then all that coming from on deck to MSC Commander up to Inchon 6 for validation concurrence.



9:53 IO

OK, so it was verbal electronic.

9:58 Witness

A mix of both sir, Sitreps via Nipr were usually pretty much primary or TAC means via transverse if NIPR was unavailable, signal being probably the alternate and phone call throughout.

10:12 IO

OK. That's helpful. So let's talk about Australian Defense Force relationship and kind of the the challenges that you challenge may not be the right word here, right. But this is the second kind of interview that I've conducted where there's a little bit of discussion about the ADF's planning process, slightly different from ours. So and how that ties into, OK, we have a confirmation brief but there's things that are kind of being delayed along the way. And I just want to get a better understanding from your perspective the, the challenges, issues associated with being operating with the Australians.

10:48 Witness

Yeah, it it's a bit frustrating I guess you could say because we're just used to having the exercise planning be planned before the exercise starts. There's a bit it a good Rep in that you get like the 80% and then some of like the finer details and things like that kind of are figured out in stride to relay back to those commanders. But that's where like the IPR heavy was always kind of thing knowing that certain stuff was going to change along the way or be altered you're going to gain more fidelity as you went through definitely with not without a struggle is not the word. It's just different and it works it's just it's just not what we're generally accustomed to from the marine planning side of the house. I wouldn't say this. I don't think it's I would say this like there's nothing wrong about it or it's just it's just a different approach to things and not laissez faire is not a word not the word but just there's more stuff that gets developed along the way is s probably the best way to capture it without living it.

11:57 IO

OK. So initially when you guys got here, probably a little bit frustrating as you say, but as you developed it as you went, you know continue to work with the ADF as you get into the say Predators run, probably well understood that this is kind of the process.

12:13 Witness

Yes, Sir. Yeah, yeah. And I think we have pretty good grasp on that coming into our final exercise through that. Hey, we're going to have XY and Z information up front. There's probably a few things that get changed on the on the on throughout that or we gain some more understanding of what that relationship looks like as we go through it. But nothing that was ever like a showstopper or like a huge red flag of like

oh like well if we don't have that and I to like the pred run point I'm tying back tying in directly with brigade was leaps and bounds beneficial.

12:46 Witness

And working with those players up there to kind of see like they're like they're as like the higher headquarters for like 5 RER and 8:12 and stuff was very good in that we're able to just really solidify a lot of the information up front because they're the decision makers and the players and like I point for the after actions where we do that more super yeah advice like trying to work with like 5 RER who's technically the battalion counterpart but have we tied in five RER. 5 RER is 5th Royal Australian Regiment.

13:18 IO

OK, got you. OK. So let's delve into a little bit of Predator run, in particular the planning for this mission, the work on which the mishap occurred. Were you involved in that plan?

13:32 Witness

Yes, Sir.

13:33 IO

OK. Can you describe your role in that?

13:34 Witness

Yes, Sir. Yeah. Again, as the, the operations officer and the lead planner, I guess you we would call it this or the action officer. Terms have been used kind of interchangeably really looking to shore up all the MSC involvement for like who's providing what and to do what as far as like the MAGTF objectives aligned for this exercise. GCE heavy focus was on Lone Star just due to other elements being out at the time. So we looked at a company of Lone Star augmented then with Cat 80 ones for a follow on task in MBTA And then our internal C2 node to be able to tie in directly with the Australian C2 node. And then elements from the LCE working directly with CSSB. The combat service support battalion ADF equivalent for barge operations and sustainment on island. And then the ACE tying in for the troop transport of the MV22's and then the H1 det for the Caltex specific as we work to do like a fist X type of deal.

14:40 IO

OK. In that regard, mission planning day or days before the mishap occurred, you were involved in that you're in the room.

14:50 Witness

Yes, Sir.

14:51 IO

OK. So can you explain to me or describe to me like the changes that continue to occur between packs numbers while there were certain amount of packs initially and then those numbers got truncated and then kind of the back and forth on from your perspective on like landing plan if you can.

15:11 Witness

Yeah. Yeah. So the the big driving factor for that was the C27's fell out due to a maintenance issue on their on their tail rudder if I'm not mistaken. And then that basically caused all C27C yeah C-27's yeah to be grounded for that duration of time to which caused the change of how we're going to do the inserts to be MV 22 pure and then tailoring the packs to be able to support that insert as well. And then tie with some guidance from from Brahma 6 lives of trying to achieve the simultaneous inserts by sequential. So that way we'd have min boots on deck secure L ZS wise not necessarily the mission but then min boots on deck for the L ZS to continue on with the actual conduct of the exercise. For pred run just there was no limiting factor from our end to be able to continue that exercise forward. Not a not a big show stopper Again Leo to work through once that that word came out C27's were out we all assembled in a brigade (b) (6) myself, (b) (6), A Rep from H1's Det was there from the A side. I don't know if my forwards are or not, but yeah, like all, all parties kind of involved with like hey, what's this look like now if we have to make this make this shift and like, all right, we'll work through that and just kind of change the assets accordingly.

16:44 IO

OK. How when was that in relation to the WhatsApp?

16:49 Witness

Oh, that would have been I think probably like a week or so prior, Sir, well in advance we could coordinate like the asset wise relay the information and brief accordingly.

17:00 IO

OK, so I understand there were some folks who originally are on the mission that did not go on the mission. Can you explain to me like what do you recall anything about that one thing in particular had to do with UET training?

17:13 Witness

Oh, yes, Sir. Yeah. So the original understanding was that there was a land bridge of sorts that had a small water gap that the 22's could fly over to mitigate the need for UET. That ended up getting waived off or like trunk truncated from MRF-D wise of hey, we're not looking to entertain any extra risk of UET stuff. So we scrubbed off several packs to only guys that were full on UET qualified and also allowed for the more direct route to fly over water to achieve a faster timeline right a more beneficial timeline really for the for the A side of the house as well.

17:58 IO

What was the issue behind the UET piece.

18:00 Witness

Yes Sir. So the just a rack and stack coming out of what we rated going in as MRF-D vice a MEU trying to get personnel through the UET. As we all know the UET is a huge limiting factors. There's like one that works and we've been trying to work heavily and MAGTF has been very, very adamant and pushing this as well and trying to advance the certification of the Australians UET out here we weren't able to use it this rotation, but like going forward perhaps it is a thing, yeah, just still the main factors of UET in general we have like one company Kayo who wasn't really able to get any aircraft UET as the legacy track company. So they they're limited to overland movements entirely.

IO

So copy that. So that some of the folks you had, you wanted to go, don't go. We narrow it down to the number of packs they're going to hit this objective. Very. In particular, did you happen to be involved in any of the conversation guarding like weights and anything from the assault support side, from the V22 side?

19:08 Witness

Not particularly, Sir. I know we generally just use a standard 350 with a with a combat load as a generic weight for the 22's and that, yeah, that's been fairly standard as my time as an XO and the MEU of of a of a Helo company. But you know, Sir, not nothing. Nothing outside of that. Just, you know, that's what we're generally as a planning factor.

19:30IO

So you harkening back to MEU days. Did you guys was it a requirement or did you ever weigh. No kidding. Get your marine one marine. You know, each marine with their gear to get on a scale.

19:41 Witness



Yeah. We. Well, I remember we did that at least once. I don't know if we ever actually put. No, I don't remember. I don't know. I don't think we ever did. Was ever put like hard like Smith weighs 212 with all the stuff. Miller weighs 350 and we are just still sticking to the 350 to account for all the other stuff that they may actually acquire.

IO

But you never did that kind of thing here

Witness

not the not the non Privy to Sir I don't I don't know if the ground commander might have that.

20:11 Witness

I don't know.

20:12IO

Give me one second. I just want to take it out there. Yes. OK, so general 350lbs was ever did you ever were you ever in the room or hear anyone like any consternation from the assault support guys on the way to the packs feel low. Just you know the challenges associated with any of that. You know, I I can make this happen or I can't make this happen or any anxiety or nothing.

Witness

Not from our side Sir. From the C27's was a bit a little bit more yeah a little bit more in in depth on that side of like how much these folks are going to weigh.

21:13 Witness

Yeah, not, not. Yeah, just for the C27 wise, it just it carries. There's more of a concern from like the EDF RAP side, but not from like the 22 side because that relationship is pretty, pretty well understood in my opinion.

21:31IO

So delving into that, what's your sense of the VMM with your time working with them?

21:37 Witness

Really good Sir, very responsive for a lot of things. Anytime we had asked or questions about either ULT. or what able to support always a good honest assessment of like where they stand maintenance wise and their ability to future project. Got a got a real good sense of sense of that of hey this is what's going to generally be available that's a 22 term whatever you know 2 for 1 type of deal. But yeah they did a pretty solid job of being able to forecast out like what will be available when to either support the exercise or your unit level training.

IO

And then for you know unit level training or previous exercises based on you know your previous experience working with ACE's and VMS in particular pretty standard to their like how they interacted planning wise during those previous exercises or ULT kind of things.

Witness

Yeah, I yeah, I think it was it was good. Try and remember back to working with the guys in the MEU, you know years ago I I wasn't necessarily Privy to all the maintenance stuff. It was just more like dictating at the time. But yeah, yeah, yeah, I got. I got no comment to the contrary. When that's right, pretty, pretty straightforward. Pretty standard as well as what we understand fairly similar to professionalism wise.

23:00 Witness

Oh yeah, Yes, Sir.

23:01 IO

Yeah, cool. Did you ever have a sense of the command climate over at the VMM 363 from your interactions?

23:10 Witness

Not particularly. I mean, I knew that, knew they worked shift work, which I think is pretty standard to keep the aircraft up, up and going and keep the people on a on a steady rotation out so they don't get burned out. All the folks I've ever talked to seem happy. But again, that's all I don't even really speak with the officers I don't know about the enlisted.

23:30 IO

Just even who you're talking to, it matters, OK? Do you ever get a sense say you know as VMM and you guys are kind of getting done with your last exercises here and about the rotate you know back home. I

never get a sense from them that there is a little bit of you know smell of the barn if you will, kind of like backing off at all.

23:54 Witness

Not a chance Sir. Adamant about maintaining aircraft and what's able to be supported to all the way through For sure. Yeah, definitely not. Not a sense of complacency in that regard Sir.

24:09IO

Good. Let's see. OK. I think we talked about this, but I may ask you to just go back and I apologize (b) (6), as we do this, just the relationship between the GCE commander and your kind of your role and up to the command element. What can you describe that for me?

24:34 Witness

Yeah, I'm pretty good. I mean between boss and I looked the lines of calm and the boss news commanders always up the lines of calm. You know we send up the daily sitreps of like kind of as exercises would develop wise to the boss and you know any commanders concerns right that either I could leverage an OPS long talk with the with the operations officers or the boss himself to his commander counterparts and one of any need to come up for decision either from inchoon three or inchoon 6 like pretty open there pretty from my side on the operations side responsibly. Hey look, this is what we're looking at. Need a MAGTF decision on this as we don't, may not, you know, we don't own the MAGTF stuff. So what save you for lines of support, lines of effort. Yeah pretty, pretty responsive and no real qualms there. No issues.

25:24IO

Is there ever an issue whether you or your CO made a, you know, a judgment for the GCE that was questioned by the command element?

25:36 Witness

Nothing. I mean maybe like in terms of like C2 of like why we're C2'ing a certain way just but really more so of like hey you're just looking to understand like what is your thoughts on the on this C2 piece

IO

but never about your training plan or grand tactical plan on a scenario or a mission you're going to go do.

Witness

No Sir maybe just some like again like questions of like hey what's this looking like shaping out to be OK not generally not necessarily at the 100% yet just back brief once you kind of get these answers SD ZS or what the ground tactical move plan is or the movement to from the retrograde overview.

26:16IO

OK and none of those seem crazy and like you know out of the ordinary like overly kind of digging into your stuff trying to kind of manage you from on.

26:31 Witness

No Sir it always just from a from an aspect of like hey we want to know so we can be able to support and leverage and by nature of like the logistics movements out here requiring so many different things. The command. I'm very like proactive in in being able to assist with that as like we feed them info like how can they support type of thing.

26:55IO

What about the relationship between GC and LC?

26:58 Witness

Good sure like (b) (6) is my longest standing friend on this deployment at TBS together essential working relationship you know even you know my time seeking when wen interacting with the (b) (6) been good and I think same for Brahma 6 to freight train six.

27:13IO

OK. So between the LC, GC and ACE everyone generally gets along and everyone's there to support.

Witness

Yes sir.

IO

Command element is there like, hey, when you need bolstering on what can I do to help kind of help shape your training get things accomplished for you that kind of thing.

Witness

Yes Sir.



27:29IO

It seems like really healthy operating environment police with the Marine Corps MRF D side of things is what I get a sense from.

27:34 Witness

Yes Sir. Yeah. And like there's I'm obviously inside that there's like friction over the day-to-day as people kind of get as like the planning cycles like wearing on. Right. You're playing like several different things at one time and but nothing that's like toxic or counter to counter to that, to that effect.

IO

It's a great way of putting it right. Toxic is a key word to use and I think that's a great word to be able to put in a positive light as opposed to negatively.

27:58 Witness

Yes, Sir.

28:00IO

All right. We've talked through the op tempo a couple other things here. So you kind of brought up, you know the command element would kind of make sure they understood why you chose certain C2 command and control constructs you know prior to forming I guess prior to deployment and then the forming phase. You guys were unique in the sense that right you were kind of I don't quote on quote shocked it's not the right terminology but you started doing, you had a brief pre deployment training plan with the command element. Can you describe that?

28:37 Witness

Yeah I think probably the first major iteration of that would have been Steel Knight which would you know Steel Knight pretty standard EAB concept stuff of us being all snapped into like their planning cycle for that and then going forward previous to that would have been ITX but that like post ITX turnover of Inchon staff and Commander wise and then yeah steel knight the first iteration it's good. I mean you know without now without struggles right like a new staff for man we're doing steel knight the IT doesn't have been my first duration. There's the operation option for steel knives so I'm new to that gig. And then like the follow on being like the Mccree playing the throughout playing the Mccree and like how does how does that work That gives kind of the first Rep but like doing C2 with the not the MAGTF but the MAGTF command element as what it would be.

29:38IO

Yeah. OK did you. So with that do you get a sense it's still the regimental commander in that regard or because his staff was blessed up. It is no kidding. Like there's a different sense of this is a command element as opposed to regimental command.

29:53 Witness

Yeah. I think at that time it would have probably been like in this infancy of like MAGTF commanding like kind of like forward thinking a bit you can see that vibe right. Especially coming from like SLTE ITX or with (b) (6) is coming out right. That was very much regiment, right? And then like steel knight it was still regiment, but like more MAGTF flavor of like how do we think about this as MAGTF as we're going forward, right. So definitely started to shape that early on. It's the same for Mccree even though like hey it's regiment is overseeing it, you know evaluation wise but still kind of keeping that framework in the back of the mind. But hey what's it look like MAGTF And then coming out here is like a definitive definite shift of like the MAGTF wise.

30:45 Witness

Yeah, definitely, definitely a walk run approach to that thing or that can, you know shape definitely shape proprietary for what that looked like.

IO

That good info, let's talk force protection. From a perspective of CASEVAC I think there's some really amazing things that happened post this app that I haven't really delved into it. But I think talking to you is really important for me to understand from your side force protection wise from the first time you guys stood on deck here in MRF-D. Can you just describe what your sense of it is from like from a Marine Corps side to the Australian defense force or Australian government side.

31:29 Witness

Yeah. So it's CASEVAC wise because yeah so coming on we some like in stride learning of like what all like we knew AME was a a thing for sure and like how to get the contracts and that and then like how the release authority and that goes and like what a deep rack is for the live fire where and then like for contacts like you know say 5 RERs for predators walk right. (b) (6) assumes like the D prac role the director of practice which is equivalent to like what our range control would be. The Australians do a little bit different of their commanders assume that responsibility and I think it ties into they don't have that. I don't think they have that agreement that like they're that document that we're like they're culpable I think from like safety standpoints. Whereas like we have something that's not I can't think of what that's called.

32:22 Witness

But yeah so they assume like the D Prac version wise pretty straightforward for going for for like CASEVAC, you know Safety vic, you know calm rehearsals. We always did always do Red Dog drills prior to anything

IO

Whats a Red Dog drill?

Witness

Just like a cherry picker CASEVAC drill like you know, run it back to the MU exchange point right? Like hey, do the before the exercise to start for a live fire. Hey y'all like gunshot wound, left arm, whatever, whatever, whatever. OK, Corpsman go through the process, OIC RO, goes through the process, runs the casualty to the collection point and like and then talk through that whole talk through it in real time and do get a physical Rep of it. And then for the AME side of the house, every time we go out we do these at the very least a com rehearsal with those cats specifically for the live fire. The FTX is a little bit different, but we always at least have the com the com pathways established and forgive me, AME stands for oh fuck, Air medical evacuation. It's an Air CASEVAC platform. Like a civilian Air CASEVAC platform.

33:35 IO

This is Australia.

33:36 Witness

Yes, Sir.

33:36 IO

OK, yeah.

33:39 Witness

So they either be on standby in IVO RAAF or potentially the hospital or if we're doing a live fire exercise on MBTA, they would sit on the small LZ out there at scale A which stands for scale camp and then like when they're available at like on the deck at scale A there's always the face to face. The corpsman would do with those guys and the RXO ICS with them as far As for like pred run wise goes like CTC having the overarching control and same this is the same true for southern jackaroo. CTC maintains like the authority of like the safety structure and there's like release authorities that are in for the aircraft. So I think for Melville Island it was 1 brigade commander had a release authority and then for the one that was just dedicated back here on Darwin would have been myself until it chopped over to the Calfax at which point it would have gone to the deep rack who oversaw that whole calflex. Calflex as that birds had on that OC to that to that And I think as we saw that shape out worked pretty well right like there was no lag for

brigade commander and then as the I think the mascas if you will was occurring just did a quick call back over to the AIM aircraft that have been stationed in Darwin like knowing that it was a release authority of like hey just want to make sure you guys aren't waiting for nothing they're like no we're all good like OK good time like they're already going right because of because of the situation didn't dictate the necessity to do so.

35:14IO

So really well rehearsed is what it sounds like very well planned out from the from an exercise control force protection point of view for these exercises with Australians.

35:24 Witness

Yes, Sir.

35:25IO

Yeah.

35:25 Witness

I think probably the only thing we could maybe done better for the AIM standpoint was like how do we communicate like to the aircraft like in air like we're good at like once it comes into the zone. But tracking you like in air wise was there's a bit squishy. We had the MAOC stood up in the TACP and we're able to do it that way. That was one of the big things we were trying to test from AC2 perspective of like tying in from RC2 node with the Australian 0A which is thinking like their alpha command. We achieved that with Lnos placed at the TACP inside the 0A and then once like the actual incident happened, the collapsing of really our key players from our C2 node into 0A. Provided you know much better cross communication of like what a combined CFC would kind of look like. We're all information floats really gives you centralize to that one location with like my AirO myself my 4 Rep the boss and then you know (b) (6) who would have been the deputy for the TACP to kind of just all received info at one at one point. I didn't like (b) (6) (b) (6) in there as well and then the CTC Australian representative feeding that information to kind of kind of shore all that up.

36:50IO

OK got you. OK, you answered my last question. Let's go back one thing I didn't ask you there, so I got it for exercises of this nature and we get a confirmation brief. There's other confirmation briefs or anything bad from the command element or to the command element for unit level training.

37:10 Witness



Not generally. We do provide a though the one slide con up kind of up to them as well. Like at the very least like 5 WS, hey like this this is what we're looking at doing. So we'll say for the fast Rd. wise, you know hey initial 5 WS this is what we're looking at on a quad slide like hey here we go. And then once we get the brief kind of fleshed out of like this is what's going, this is the routing, this is you know the safety structure in place from the 6th part round, the six signs hominus dominus. We provide that back up to the command element for you know just general SA at that point or any other questions that they might have And it's a pretty standard process we've been operating here out here out throughout here.

37:52IO

OK. One last question on that. Was there ever a time where you or the GCE was not the supported commander or were we supporting the ACE or was it always you guys were supported, the ACE was the supporting element.

38:07 Witness

I think generally, yeah. I don't. I don't think that we ever really supported them per SE or anything outside of like Southern Jack where we had the yellow nose in place with the D prac and stuff to help feed information from beast to D prac. But not. Can't think of anything to that effect. No, Sir.

38:30IO

OK, all right. I think. Let me make sure I didn't miss anything along the way or another talked about the ADF. OK. Anything else that comes to mind you think about or thought about as I was kind of asking my questions. Anything else you think that might warrant annotation for the record here?

39:05 Witness

No Sir. I I covered the planning piece and I think my experience has been it's been pretty simple to work with all the all the all the planners you know and just really the biggest thing is you always just communicating like when different planning events were to occur and then if reps weren't available to attend like back briefing. Hey this is well how we see this picture. What say you and everyone's been pretty responsive on that just know I'm like not everyone can always be in the in a place at a given time. But for as far as PRED run that was pretty good.

39:36 Witness

We always had a representation specifically when we snapped over to 1 brigade to do like the planning cycles of any sorts of changes getting reps in to kind of shore all that stuff up.

39:46IO

OK All right. Thanks (b) (6) So one last comment here just as we close you are advised that this is an ongoing investigation. Yeah. You're directed not to discuss the testimony you've given in here today with anyone, aside from a duly appointed investigating official, which is there's me and there's three other officers here. But shouldn't discuss with anybody else.

Witness

Rah Sir.

IO.

All right. Thank you very much for your time.

40:09 Witness

Rah sir.

40:11 IO

Rah. Thanks.

## Interview Summary of (b) (6), VMM-363 (REIN)

0:03 IO

Good morning. This interview is being conducted on 11th September at approximately 1040 aboard Royal Australian Air Force Base Darwin with (b) (6). Present in the room are myself, (b) (6) the Legal Advisor and the Assistant Investigating Officers Major for (b) (6). Prior to turning on the recording, I covered the contents of our appointing order with the witness as well as the differences between the command investigation and the ongoing Aviation Mishap Board and Safety investigation. We discussed the privilege nature of statements made to the AMB and the uses of information collected by collected by this Command investigation. Witness also reviewed and signed a Privacy Act statement indicating he understood his rights under the Privacy Act. Witness, is there anything you'd like to add to that?

Witness

Nope.

IO

OK, at this time, I'd ask you to raise your right hand, please. Do you swear that the testimony you're about to give should be the truth, the whole truth, and nothing but the truth So help you God?

1:00 Witness

Yes.

1:00 IO

All right. OK. I'm (b) (6). We don't know each other other than just by knowing billets and knowing names. So just a quick introduction for myself. So, I almost have 15 years in the Marine Corps. I did an infantry tour, did an H1 Zulu tour, and then I transitioned to Ospreys in 2020. I've done a few deployments. I was an OPSO on a deployment for an aviation combat element with a similar construct this year. That's my background. Just going to run through some questions with you. There's not not a ton of questions honestly just a few, just a few questions. I'm primarily responsible as the assistant IO for the maintenance portion of the investigation which is why we're we're talking to you and some of the guys on your team. So, on the on the date of 27 August 2023 for aircraft 15, do you know who preflighted the aircraft?

1:59 Witness

No.

2:05 IO

How do you guys how do you guys normally go through a preflight inspection and how how is a preflight inspection normally accounted for?

2:15 Witness

A preflight will be is normally the group so I don't know if it was the aircrew will man the aircraft earlier for just normal V-22 SOP's is they'll man the aircraft earlier than the pilots and get it up to step 18 in the checklist on the engines pre start checklist part of that is kind of like a panel check a walk around get on top of the aircraft make sure all the panels are good. Look the rotating controls real quick and it wants over and then also load like once it's up to step 18 also loading like mission data from the mission stick and then the copilot normally hops right into the aircraft. And knowing Major Lewis he he would have done our SOP's will walk around and he did throw a walk around prior to getting in the aircraft but I can't say for a fact that he did on the 27th but my assumption is he did that that's our SOP on that.

3:19 IO



OK do you know who safed the book for this aircraft?

3:23 Witness

(b) (6)

3:25 IO

OK, do you know when (b) (6) got his safer flight qualification.

3:32 Witness

His first one was I believe he's he's been working in control for I think over a decade at this point we. So I think he's got it first as a Sergeant in Prowler's when he's a prowler guy and then when he was at 165 he was a controller the whole time there and we had just brought him to control from flightline about 3 weeks earlier.

3:58 IO

OK, how long has (b) (6) been with 363?

4:03 Witness

I believe he got here in September, August last year.

4:07 IO

And can you explain how safer flight procedures are being done for the B20 twos and then how safer flight procedures are being done for the H1's?

4:20 Witness

I think it's. I can't speak it as intelligently on the H1 side, but on the V-22 side Control has a checklist that they follow every time to make sure that they're reviewing the past ten flights and reviewing all maps and make sure that the aircraft is has zero PMC gripes for the mission that it's tasked to do that day. And they review all open maps and and then sign the safer flight. But they have a a checklist that's like 10-12 font that's a full page long of things that they check And then on the H1 side I don't know if they have a checklist or if they just follow the name. We got the H1's maybe six weeks ago they joined this deployment.

5:16 IO

OK, copy, are the H1's and the V-22's, are they being screened on 2 separate?

5:25 Witness

Yes. So part of the COMREL of the H1's though they are attached to the ACE, those aircraft are still 3d MAW aircraft. They're not they didn't we didn't accept them as part of 363. So, they're actually they network into Yuma on the West Coast which is unlike us we brought the Home Guard with us and so the the Home Guard in the server is here and then the three aircraft that we have back home are on a dead server for them. They didn't, they just left everything on the Home Guard in Pendleton 'cause they only brought paid aircraft here, but they didn't make bring a dead server. They they network into Camp Pendleton, and they do everything in like Pendleton time. So, they have to like do all their maps and do all the conversions & it off that way and then write like on every math that they do, they have to write Australia, they're in US at the beginning of it.

6:31 Witness

So, people back home understand because of the the time difference on different days. And you're the UMO for BMO 363 for screening the MV-22's is on Darwin time.

6:46 Witness



It is.

IO

OK Do you know how many flights this aircraft had while it was a test prior to prior to this flight?

7:11 Witness

It was not a test status prior to this flight. So, it had just come back from the air show and it and it so it had I don't know the hours, but eight or nine hour transit flight from Gold Coast which is about 40 miles South of Brisbane. So the eight or nine hours there and then I think it flew on Sunday, Saturday and Sunday in the air show. But I'm like 98% sure that they flew those two days in the air show. So that was an hour each and then they flew the transit down there as well and it flew a little bit extra time on the way down there.

7:57 IO

OK Maj Lewis when on that did he-

8:01 Witness

Major Lewis was on the air show yeah so Major Lewis did not sign for any of the the transits.

8:06 Witness

He wanted the the younger guys to get the experience in the signer time. But he signed for every air show day because he was our demo attack pilot.

8:16 IO

OK, do you know how how long from the time they returned from the air show until this flight on the 27th.

8:26 Witness

I think they came back on Monday the 21st. I don't believe we. I don't remember if they flew or not after. I don't think we flew flight schedule after they got back until Sunday because we were prepping for Sunday. We only had three aircraft available and because it was a frack, we wanted to preserve them for Sunday with aircraft 15 aircraft 3 and 13 were the only available Flyers that we have here. So with that timeline, do you know when the Daily was done on this aircraft, probably on Friday, probably Friday, but but I'm not sure.

9:05 IO

OK, so-

Witness

that it makes sense that it was on Friday. Yeah, we we did not work Saturday and then there was an early lunch on, on Sunday.

9:17 IO

OK and that's why the turn around was done in the morning of because they they won't work in the day before.

9:22 Witness

Correct.

9:24 IO

Got it. Makes sense. Do you know if Major Lewis was contingency signed on this aircraft?

9:37 Witness

I don't

9:42 IO

when they do contingency signatures or when they when they sign contingency in in Yuma for a pilot, how does that reflect on the A sheet?

9:48 Witness

I don't think you can tell the difference to be honest with you do you. I'm sure there's a way I just I I just don't know.

IO

Yeah, no it's yeah, it's good the so the what we're trying to find out if you don't know you know I wouldn't mind following up with you on this because we we would like to try to figure this out but the the safer flight signature is not reflected on the time stamp. When the safer flight signs the safer flight the pilot safer flight is reflected. There's a timestamp on it when the pilot signs in the pilot block on the A sheet. So you know the question is do you know what time the the book was saved when it was signed back under certain kind of cost. Do you know what that time was.

10:33 Witness

I don't

IO

It's alright. We're trying to find that out so afterwards we follow up with it, try to see, you know.

Witness

you're planning on interviewing (b) (6) t, right? So, he he should, he should know that.

10:49 IO

Did anyone see Major Lewis sign the aircraft, either you or anyone else?

10:54 Witness

He normally signed from his office, but he he didn't come, and we talked in my office right before he walked. So RSOP is to, screening with yourself and then come in and physically look at the the book and see if there's any MPPCS or anything like that next pilot there and so he came in to to review that because we we talked right before the 4/11.

11:23 IO

OK. Are you aware of any discrepancies on the Form F?

11:37 Witness

Discrepancies? No, I don't believe so. I know that 15 is our heaviest aircraft because it's a MNM bird, so it has the most mods of any of our aircraft, but I didn't know of any discrepancies in the Form F.

IO

Who it is like. I'm saying generally speaking, not like a person, but who is qualified to do daily turn around inspections.

12:00 Witness

Plane captains?

IO

How are plane captains certified as a plane captain?

12:07 Witness

They have to go through their full plane captain syllabus before then they have to do a QA, walk around where they do a full daily and turn around with a QA. So, a flight liner in QA makes sure that that they do it the right way and the QA's comfortable with them, for lack of a better term. It's also like a like a quiz fuck rodeo of like the QA asking like what's that? What does that do? What's that? What does that do? It usually so it's usually like a three and a half, four hour evolution when at the NT for the for the cards is a 2 1/2 hour evolution just because it's very thorough. And then following the QA walk around they we do a plan captain board. I've sat up since since June of last year is when I became the AMO. I've sat on many plan captain boards will have a safety Rep, the plane captain manager myself, the flightline div chief and the plane captain monitor which is a QA.

13:17 IO

Thank you. Do you know in the ADB 15 on the day of 27 August 23 how long the documentation for the daily reflects that the daily occurred?

13:32 Witness

No idea.

13:34 IO

OK. Same question for turn around. Were there any recent engine swaps on Area 15 that you're aware of?

13:47 Witness

It had an input quill changed, which didn't swap the engine, but they dropped the engine to put the input quill in. So that's what you have to do to change an input Quill. That was I believe in June, but no, no engine swaps.

14:00 IO

Do you remember if it was one or two?

14:02 Witness

I think it was both. Yeah, I'm pretty sure it was both. Both engines were dropped for that.

14:07 IO

OK. How long have you been in the AMO?

14:13 Witness

Since June of last year.

14:16 IO

What are some challenges that the maintenance department is experiencing that you would you would say

14:26 Witness

parts and manpower so like any V-22 squadron, the supply system, we don't have reliable parts and we don't have a good parts don't last as long as they say they're supposed to for their service life and then the supply system can't keep up with it. Us being a wide unit, we're always fat too, which is the second highest, like priority for parts. My last unit was HMX, where you're fat one and you get it all. But even with that just because we're on an island it takes a long time to get parts and then here its evenings asper exasperated more takes 10 to 14 days to get a part if we don't have it on station here in in the supply pack up which that makes makes it difficult. We also going down to 10 plane debt. We're losing a lot of people and so when the headquarters Marine Corps said we're going to 12 aircraft is too hard to maintain with the people we have. We're going to make you attend plane debt. And so we're like OK cool. And that's what we all thought was going to happen. But when they did that they also cut the manning. So it was it's the same problem that we're going to have anyway. So because when they when they all told us that that's what they're going to do, we all thought that the manning was gonna stay the same for the 10 aircraft, but it's just going to be the same problem, less people to do less with more but let us more or less with less. So that big challenge that we're first seeing.

IO

this supply chain that you discussed just kind of focusing a little more to the geographic location out here Is that in keying your ability to maintain a high-level readiness, would you say that there's been an excessive number of crackdown as a result of inability of being parts.

Witness

depends on how you look at readiness. I think before August we were hitting 300-hour flight months, so and we're still utilizing 8 to 9 aircraft of the aircraft that we had. There's over utilization of aircraft you have, you have to fly more aircraft, more hours to be able to do that. I would say no. I would say that's I think if everyone had the part parts and supply chain that HMX has, the redness would be higher around the fleet, but it's not possible. So, so yes, and I guess I don't think it's any different than other units that if other units were here. One of the things about Australia is it takes a long time to get here, but then like like big items will sit in customs for like a week or two to try to get ordinance out here. It takes a very long time, very long time.

17:24 LA

OK, do you know if the HMLA death's experiencing the same,

Witness

they are 100% even worse, even worse because the HMLA dept was not set up for success at all. In in my opinion the supply pack up was for an A plane dept. That I would say if they're sending a plane dept to the 29 Palms or to El Centro from Miramar and not across the world. So, we've been down for them three rudder blades pretty much since we've got here and they haven't shown up. So the it's it's the same if if not worse for them.

18:11 LA

So you being in Hawaii doesn't you being what I'm getting at is you being a Hawaii unit isn't making that disproportionately worse than like it is for the HOA coming from Pendleton?

18:21 Witness

No, it's just this is the same just when we're back home in Hawaii it's worse than it would be a house in Pendleton because it just takes longer to get stuff.

18:29 LA

Got it. Thank you.

IO

The H1 aircraft are they when they when when your unit 363 and 367 retrograde is the intent for the H1's to go back with them.

18:44 Witness

Yes, it has not been figured out yet. So that that's just another thing that happened. So we the the MRF-D retrograde has been thorn in our side forever so we requested a 1 October black bottom vote and we were given a 24 October. So it's extending our whole deployment in extra 3 1/2 weeks to be able to do that. And then the H1's got the H1's out here. Part of I think the exercise mobility guard is just an Air Force exercise with Strat Lift because a bunch of C5's and C17's and 46's and all those planes came to Darwin to do an exercise. And 3d MAW was able to utilize those C5's that were coming to get the H1's out here and there was no plan to get the H1's back. So we're still in the process of trying to get the H1's on our black runner boat in October because that boat is still, it's getting a lot of stuff from the command element and the GC and LC that it's going to the Camp Pendleton. So hopefully we can get the H1 stuff on there. I know that's confirmed yet.



IO

So I guess we're going to shift a little bit to kind of the morning of the mishap.

20:18 IO

Can you help us understand who, who's here and there didn't. I'm sure this isn't isn't the explanation, but we're trying to figure out like the supervision of the mishap. So can you help us understand who is here, who is doing what and who is, who's kind of providing supervision and who's providing execution perfect mishap.

Witness

Are you talking just like in flight or I'm just confused like the maintenance department We had our our AM shift come in so we've been working twelves on this deployment usually midnight to noon and then noon to midnight and we'll just follow with that. I brought everybody in all the aircraft were we DNT'd on Friday and we didn't have any up and defueled on Friday and so I brought them in [inaudible] at six for a 6:00 AM maintenance meeting for I think it was supposed to be a 9:00 launch but they they took off a little late just I don't know I don't know why it's probably you know it's very hard to make a take off time here in Darwin cause V-22's are the lowest priority so cessnas will bounce constantly.

21:39 Witness

You're just sitting there on the whole short just watching it bounce so it's pretty awesome but but yeah so I just had my normal AM shift here that morning and and that was who was in charge of that on Saturday so spark predators run Saturday I had the the H1's were working they because they still needed to get all their aircraft up and ready to to execute this prayers run was I think it was a 18 day exercise that the plan was for the H1's to work every day for for the chiefs to manage their people if they couldn't let people go to let them go but we're we're having 20- we needed 24 hour maintenance to be able to execute the exercise

IO

once the mess had occurred who was running in me.

22:41 Witness

Me. So I was the senior guy and and it was me because the the XO was in it and the also (b) (6) was flying and he was on seeing what happened. So I was I was the one doing stuff,

23:12 IO

the H1 detachment.

You said earlier that they they joined about 6-7 weeks ago. Are they abiding by this This is more like how kind of the greater group is organized. Are they did you say they're following 363 LCP's and SAP's or are they kind of operating on their own.

23:32 Witness

They. It's a really weird thing because we didn't accept their aircraft. I don't have the Marines in ASM so they didn't attach to us that way. It's it's just really weird because we didn't accept their aircraft but we have like disciplinary and like awards like on them. So like my CO can NJP them and my CO can give them awards but we don't own their aircraft and it's just kind of weird situation where they're put with like 2 dads like I'm the AMO but they still have an AMO back home and I believe that they're following the LCP's from 360.

24:22 IO

So they're it's kind of weird because they're they're adding on technically to you guys but if you look at the administrative accounting for the aircraft the aircraft are not owned by 363 they're they're really stolen by Mag-39.

24:28 Witness

Yeah so they call it OPCON with caveats I mean it's the same thing with us too. Like So we're 1st MAF aircraft but we're in III MEF aircraft but we fall under MRF-D which is a I MEF mission and it's just this weird thing I think that's something that really messed up the reporting at the very beginning as well because it went up like two different chains and So like my CO Has two bosses right. Now (b) (6) and (b) (6). The MAGTAF CO and the MAC MAC-24 CO and it's just a very very interesting thing it's yeah.

25:08 IO

Thanks. The procedures replacement set up for locking down records. Can you can you describe those for us?

25:26 Witness

Oh yeah, as soon as there's a mishap we close out OOMA, lock out OOMA, pull all the books and give them immediately the safety in the A&B and and nothing is done with them. For the maintenance stuff we pulled all the cameo files like the downloads from aircraft 15 and gave them to the A&B as well and our maintainers in didn't touch anything except to pull it and give it to the AB right away.

25:55 IO

What time did that lockdown occur?

25:58 Witness

Instantly I'm mad. So I was ground. I was about to ground turn on the plane and so I heard the the first call on guard from from the on scene commander and and sat on the plane for like 2 minutes trying to figure out what was happening. And then everyone was calling me because I'm I was a senior guy and at that point I ran in probably around 9:40-ish and locked everything down.

26:33 IO

You said everybody was calling. By what means?

26:38 Witness

I was getting a lot of texts and phone calls and they also had runners come and talk to me and so I gave the plane to maintainer to shut down. I had not started up yet. I was just sitting there on APU hot and I was in there with the ASO actually because we were going to go fly. And I sent him to go to the ready room right away. And I just wanted to get a little bit more SA And then after about 2 minutes of to 3 minutes of us and like I couldn't send the aircraft and just find out what's going on and start doing stuff.

27:20 IO

This is the next questions are kind of very general questions just about like the the setup of the unit, the culture. So can you and really it's kind of out here. It's really. So can you tell me about the the command culture out here specifically the command culture and that doesn't necessarily mean just 363 command culture between 363 and H1 is it can be the main culture between the command element. It can be the MRF-D you know relationship with the ace kind of holistically.

27:54 Witness

I'll kind of just answer like all all together kind of thing if that that makes sense or one at a time. I think the 363 culture what is really good culture and we understand and I think our CO is great and and embodies like a family kind of culture and how how we do that with 367 we brought them into the family I'm name of for the 367 and they they have me do everything. I signed the MFR's or BTR's and stuff like that. I make a lot of decisions with with the aircraft in that maintenance department. We have qual patches. I'm not sure the patch guy but we have qual patches so like CDI CDQ plane captain all that stuff. And I gave out all the patches to 367 so they're part of the family. We did a plane captain board for 2 of their Marines for each one's what that I stood out as a senior member on the board. But however after I did that, I then had to text their ammo back home was like, hey they passed their plan. Captain board you can sign an ASM because I'm. I don't have that Also like we've had 2 like investigations for like procedural errors that they they had done that after we did all the investigation and the recommendations from me, I

still had to give it to him to be able to to like suspend the license. So it's kind of that's really weird and for lack of a better term not not the the way, like the Marine Corps is supposed to operate. MRF-D as a whole took a very long time for them to understand aviation. They they just don't they're like for. So for instance Talisman Sabre so 10 aircraft here. Talisman Sabre they're like we want to send 8 aircraft. And I was like, that's not realistic. And and I kept on saying what's the requirement? They're like 8 aircraft. I was like, you don't tell me the aircraft, you tell me the passengers required. And we can tell you what we'll source it with or how we can source it with. And so for like Talisman Sabre, we ended up sending 6 and that and that was that wasn't like we shot for eight and only got 6. Like after many many conversations the number came to 6 and then we were able to support and so it's just a a weird thing that MRF-D has a lot of exercises going on constantly. So it's a lot different than a any. This is my 4th deployment and this is the first one that it's it's just different. The MAGTF commander's not liking the COC the whole time because there are like 4 exercises going on at the same time. So like there's a COC in Indonesia, there's COC here, there's COC here. So it's just it's not the, it's not the same when things are getting executed as like a normal MAGTF for what I'm I'm used to seeing as a MAGTF. I think they're, I think they're resourced but not like constructed, you know and then it also goes through like just for instance, it's safe to stand down tomorrow and at the end of that we have to give the notes to MRF-D to then forward up to I MEF. But we also have to send the notes to MAG-24 to forward up that chain as well because we have like 2 deaths and it's just a it's a weird really weird construct. And so I think that's is there any other questions you have on that or did that answer.

31:55 IO

Yeah that was that was good. Thank you. So then similar question, but it's it's really about the safety, safety culture. If you can help us kind of understand the your perception or your perspective of that.

32:07 Witness

Yeah. So I'll I'll talk as they move on this. I've said many times and the CO said many times if any aircraft doesn't go out on a flight that's OK just say it many times though the squadron has made like every mission and launched every aircraft for every frag. There's never like a time where we're like just in the unsafe aircraft. One of the things that I tell plane captains and their boards. And so for me, whenever I interview, I won't sign off a CDI, CDQ, QAR until they do an interview with me. And I won't sign off the plane captain until the plane captain port. Obviously one of the big things I talk about is how they're like they're in charge of the safe aircraft. I go on a speech about ATAF and APATH when I was at HMX I flew an aircraft for 2 1/2 hours with 23 people on board that once would have landed, had a wrench look found 18 inches from the rotating controls and I made it through 6-8 taps. So whenever I'm interviewing the the Marines in my office I turn around a picture of my kids and my wife and that show like my wife would be a widow and my kids wouldn't have a dad anymore and make sure they understand that. And then with plane captains I tell them that how important the plane captain is because they are literally the last person to to look and touch the aircraft. And normally plane captains are flight miners. So it's they're buddies that are on the aircraft and they they understand that and that's what I preach to them with. And the H1's I did the same thing and I say the same thing about like my priority is safe maintenance and safety aircraft flying.

34:01 IO

Thank you. One, one thing you said that I got, I'm thinking on the on the H1 side and ASAM specifically, are you listed as their AMO in their ASM? Like do you have,

Witness

I have no scope on H1 ASM.

IO

I'm just thinking they're signing off on you know quals like who signs off their quals?

34:20 Witness

back up, they do, yeah.

IO

So the ammo for 367 is still signing off their quals. If they get their quals out here,

Witness

Yep. So as there are QIO's out here, so I told her that no qual will get sent to him until I do the interview. Just so I have a warm and fuzzy

IO

Who's there QIO,

Witness

(b) (6). I don't think we've made it. We haven't made any CDI's or CDQ's out here. They sent a pretty qual heavy dad to begin with So I don't think anyone was like really close they just already had the qual what they had the quals. But but for example the two plane captains, I was the one who did the board and then texted that there aint and said hey they're good you can sign them off and the same thing like with pulling licenses either way to pull a TRX license because of of improper procedures that broke the TRX so suck a lot

IO

OK that's all I've got. So unless you guys have any questions that's that's where that's where we'll end. Earlier on you mentioned that the the crew or the maintenance was defueled on Friday. Did you foresee any issues or. But I know like you know it's between two guys Oh yeah, I need this fuel on the aircraft and defuel it and then you know something happens and we need to add more fuel, you know,

35:58 Witness

Yeah, so they so they told us at 1600, the fuel lives On Friday after the aircraft were already filled up.

36:05 IO

Do you know what the fuel was with requested Anyways

Witness

they wanted to take 3000 lbs. out of each aircraft. That was not possible because because of the weekend OPS in WSSI just filled up all their bags so those were all full. So we had a plane that wasn't filled. So I had them defuel and my my maintainers at each yard and from the other aircraft to pull 1500 lbs. out of two of the aircraft. And we had a truck that could take the other 1500 lbs. And they did two of them on Friday and then on Sunday morning they defueled the backup. I think that Wednesday 9-5 was the goal. And then they manned early to spend and burn gas to get it down.

36:57 IO

So you remember what fuel load they were shooting for to get out of here.

37:01 Witness

I don't, I think I think it might have been 8-5, but I know they said they were going to man early to spend it. They did man early to do that. But I don't know off the top of my head.

37:11 IO

Do you know if there's any kind of, are there maintainers that that take issue with that like you feel an aircraft up, then you have to defuel it.

37:22 Witness

I think every maintainer does something like that. It happens. If you ever talk to maintainers at WTI that happens every WTI for every flight and I've never heard of the maintainer be excited about that because I mean like we had the ADGR which is like we found a we found a way to yes to defuel the aircraft. The other option was I told them



that I would come in on Saturday with the plane captain and just ground turn the plane until it burned down. But yeah, I don't think they did do it though and they got it done out of the correct way.

38:04 IO

So it was 9500 lbs. what they were shooting for did they request for less and you guys could only give them 95. I think we could only give them 95, but then they they manned early to spend to get it down to what they wanted. Do me a favor and describe for the recording what the ADGR setup looks like. You're familiar with it.

38:21 Witness

Yeah. ADGR is a aerial delivered fuel ground refueling, excuse me. And So what that is, is we have the thing called a fair kit which is a small impeller pump, that's an external pump that you connect to the fuel and defuel of the aircraft and and then the aircraft pushes fuel to the pump which then pumps it to something else. Normally when you do ADGR you're either giving it to to refill a FARP like to fill up you know fuel bags for a FARP or to fuel smaller aircraft such as H ones or something is normally how we do ADGR. But on Friday and and Sunday we just fueled an aircraft that didn't have that didn't have wasn't full all all the way full so we could get them as close as we get to their their fuel it.

39:28 IO

You mentioned you were ground turning an aircraft.

39:31 Witness

I didn't ground turn it

IO

you were going to go ground turning aircraft on Sunday morning do you remember fuel reported by the sectionally

Witness

I I wasn't in the aircraft yet I saw them take off as I was walking the flighty

IO

OK is there a radio in the radio room when they contact the aircraft

Witness

yes in the red room and the and control but they RSMP is to report all that stuff on our inter flight and not all the base frequencies when they I'm sure they did it but they would have done that over the inter flight frequency in my like this I guess. Because they also loaded packs so like that's SOP is for your ramps up call like which is like you're ready to go call just saying I know you guys know. [inaudible] so the SOP for that situation would be ramps up fuels this as fraged fenced in with exceptions and then talk about the the good yardstick or not just attack in here and that's our SOP.

IO

OK. Do we want to talk about the the risk assessment worksheet and look up stuff with this one you can ask that or you can get one more too Yeah. My question on the on the risk assessment worksheet and look up, is it is it fairly standard or is it understood that if a pilot let's say you or I would have flew if we forgot to sign one of them. Can you talk through like what the process is, what the audio should be doing, what their abilities are, the content to use the signal ever.

41:10 Witness

They didn't sign it. I've normally just sign. I don't know. To be honest with you. I've been texted before I walked if I forgot to sign it and I then went to the ODO red room and signed it. Or I've also taken a picture before it's in tune and then I say signed like so there's like documentation on it but usually the ODO trust tries to get it to sign it. Have

I accidentally probably done it? Yeah, just forgotten to sign a load account before or a roth. But normally the ODO is pretty good about making sure people do it.

42:03 IO

Yeah. Is it fairly common for this section to sign one of the comp?

42:07 Witness

Yes. Yeah, this, this unit is actually the first unit that I've seen that, like every section signs a different one. In my experience, in the nine other years of flying V-22 except a 204, the FCF does the load comp in the morning and then just everybody signs it throughout the day. But and this unit be due for every section.

42:34 IO

OK so not every individual aircraft commander sign has one. But for the section, both aircraft commanders should be signed in.

42:40 Witness

Yeah.

42:41 IO

And the one.

42:42 Witness

Correct and it should be the heaviest aircraft that that's available that day. So they would have done aircraft. I'll assume that they did it correctly. It would have had been aircraft 15. That's the one because it's our heaviest aircraft we have.

IO

OK. But there should be two signatures on them.

42:57 Witness

There should be. Yeah

42:57 IO

. OK. I think a couple of just one one broad question I guess really is, can you tell some of the previous other mishaps that have occurred in the unit out here prior to this one?

43:14 Witness

Yeah, I think so. Aircraft 7 had had an issue on the boat and most of that's privileged information and I don't I don't know everything about it just I know they they picked up and and slid and settled with power and I think they touched the water. All I know they touched the water and that was that one and then another aircraft found a crack in the sponson on the on the belly on a on a turn around to found it. So we've no idea when that happened. Darwin has every LZ we go to is in RVL and they have trees that are saplings but they're like maybe like this tall and flying low like sometimes you might not be able to see it but yeah don't know when that happened. Could have could have happened that flight could have happened long before they just they found around turn around but really hard to find because the aircraft are filthy from our all the RVL's. So just a very keen plane captain found it and I'm glad he did. So there's a crack on the cell on the other aircraft and then Hazra aircraft 00 had a compressor stall with a onion. It had just flown in taxiing in the in the right right hand engine compressor stall. Seems like it ate itself. We have we will have an EI completed on it but As for right now that engine is still in the aircraft because the erector set was on the ship so so there was that. I would say that I forgot to mention like when you're talking about the MRF-D stuff like V-22 is not supposed to dead out anymore, but we dead out a lot in this deployment. So like 6 aircraft, 4 aircraft, 4 aircraft, 2 aircraft get out significant amounts. We don't, we don't have the TO for the stuff to be able to to do

everything. So like for example 00's engine, we've been waiting that happened like on the 13th of August and we've been just waiting for the erector set to come back from the ship and the engine to come back from the ship to change it because we didn't have enough to do it or we didn't have. We decided, we made the risk decision that if we have to drop an engine on the ship we want to have that capability and then at home we would suffer and then that would suffer after that.

IO

So there's just saying, so there's there's a reduction in TO for emerald based support [inaudible] items with a reduction of 12 to 10 aircraft and then on top of that you're deployed too. So the availability of equipment while deployed is probably not as robust as it is back home with the MALS.

Witness

I mean just just like the TRX, like when that broke, like they're like all right, you don't have TRX anymore and like we've tried to figure out how to get it and get it fixed and been told it's impossible pretty much.

46:35 LA

A couple follow-ups on that for same kind of topic, the 16th August mishap after that off the boat, was anything pushed out to the squadron, any lessons learned, any debrief points, any safety stand down, anything.

47:54 Witness

It was still under investigation, so back home knew very little about it. They just knew that there we had an issue and I knew about it because I was a senior member here so I was the one who had to submit the or validate the RMI for the initial notification. But since then I haven't heard anything else about it. I like I didn't know who the crews were because it's just they kept it as a privilege information

IO

no hash ups came from that yet or anything like that that you know of.

Witness

No I think that was I mean it had it's a Class C mishap So I think they're I don't think any of hash ups just most of the Class C is done all the stuff will get pushed out.

47:42 IO

Yeah, you have the ability during it a mishap if you find something that is pertinent to the to the community, you can pull that out. For, I wasn't sure.

47:53 Witness

I don't believe that's been done they, like because they're all about they have no access to our mind. So like that stuff like they're doing the investigation on there and they're going to complete it when when we got back which I believe will be complete like this week or next week.

IO

Can you talk to us about your maintenance chief from understanding-

Witness

Which one, I don't know I don't have the maintenance chief.

IO

That's exactly where I'm going so you didn't bring it up when you when we asked you about the challenges for the maintenance for.

48:27 Witness

Oh yeah, no, that's a that's a huge challenge that I'm forgot about. So I I kind of I'm kind of the maintenance chief. And he came up it's pretty awesome we had over.

48:38 IO

It's not helping.

Witness

What's that? It's not I don't I'm pretty sure I was doing great. Our maintenance chief had orders and so on top of the fact that we had to deploy, we had to leave an RBE, which means we had to leave the quals back home, which we weren't planning on leaving because of the input pool thing. So we're like, hey, when we get input pools we need quals to change the input pools on these aircraft back home. So we need to leave them back. On top of that, because of force design, C130s are now K Bay. K Bay doesn't have the infrastructure to support C130's. So they're kicking 363 out of the V-22 hangar that was designed for the V-22's and putting us in another hangar that our maintenance chief was dealing with back home. That that hangar was Hangar 102 Bayside. That the rainstorm happened and completely flooded the hangar and so there's no as right now. We still I think they just started the move like last week but there's ongoing construction and all all kinds of stuff like that on this set hangar that was never meant for us and because of the C130's raised their hands enough and I'll just in my opinion but we lost our we we lost the hangar that was designed for us and so we needed a senior guy back there to deal with that that issue because we just it's either Master guns who had orders or or Major and we couldn't leave Major back because we're deploying. So we left him back for that. He has since PCS'd. We got our new maintenance chief. I think he wants to say he got there on the 27th of July. He came out and like I met him for like a week here and then he's back there and me and him were texting constantly about all the stuff going on back home as well because he's the senior guy back there.

50:47 Witness

Not not only with that but we also have people that are again adsep'd and all that other stuff that are non deployers or people that weren't deployable. People who were PCS in in June or EAS in June that like we couldn't bring out here normal RV stuff that we could have, but if it wasn't for the Invocable thing, we could have given them to another unit. But because we had to do the maintenance and had to leave the falls back, we and then we had this hangar issue, we had to leave people behind for that.

51:21 IO

How many aircraft back home is 363 responsible for

Witness

three.

IO

So you got 10 here and three home.

Witness

Yep

51:26 IO

So three above TO.

Witness

Yep. Yeah,

IO

coming back to that maintenance here or operations here, other than the the like frustratio



51:43 Witness

Well, I would say one of the biggest frustrations is that like MAG-24 is still the ones doing our supply. So like we have to submit the answer at 2:00 in the morning here, which is incredibly annoying. So like I have to have my MMCO and my MCO on separate shifts, so they're not working together, which means that they can't always have to do communication. My MMCO has is the hardest worker in the unit because of that because he's trying to deal with supply issues back home. My MCO is actually (b) (6). And so we have to deal with that. I think if you look at our readiness of the aircraft, if if you just look at a screenshot of 363, you're like oh their readiness sucks, They're like 60% or something like that. But that's also counting those 3 aircraft that have stood against us this whole time that have all been in the down status. Because every time we try to do maintenance like you know you got to do some hangar move. You have to take out all the furniture that got destroyed and rip out the carpet that got destroyed by the flooding. Oh by the way the base Sergeant Majors like you have to go weed whack your your barracks and so we're pulling parties on working parties on that. So the guys that are back are getting pulled in 100 different directions. So those 3 aircraft I think, I think aircraft five was a post PMI bird which in Hawaii has always been an issue. In all other FRC's or PMI which is periodic maintenance intervals, the aircraft have to be flyable before they give him back to the unit like Cherry Point has to fix it and then fly it back to New River before New River will accept it. Here and wide is not the case. They just give you an aircraft and then they tell you to fix it more and you have to make it viable which also we have not had any success with post PMI birds. It takes about a year and a half to get them like reliable again. So one of those planes was post PMI Bird that they've been fighting and I think it's up right now than the other two had mods that were required and and the cool thing,

IO

any other impacts of specifically not having your chief out here?

54:09 Witness

Yeah, just not having my Chief fit, it means that I'm having to manage personnel a lot more than I would. And then our maintenance chief as soon as Valentine was really good about being a natural and was the advisor to the CO. So when I was, because I'm one of the only NSI's in the squadron, I fly a lot. When I was on the flight schedule, he could still get stuff like communicated. And that's not that wasn't the case with this one one also because we're all like spread to the ones of everyone being in other places. But yeah, dealing with just like stupid stuff, like accountability of the vehicles, Here's something like that he would have handled that I had to handle because of that. And just managing quals and making sure that the debts have the right amount of people, but like, back home still has the right amount of people as well. So I've been I've been pretty much the maintenance chief as well, our our control chief. (b) (6) a nice guy but he's just kind of passive and so he's not the meat eater. That's kind of needed as a as a maintenance chief, he's a he's already had one view for Master Guns and he's on court I guess in November.

IO

I didn't follow. The final question that I had was you're talking here briefly about once the mishap occurred, you're the senior guy on deck and and and ran the show for that. Can you just kind of like walk us through that? You talked to us a little bit about getting the maintenance books locked down, but what was the rest of the. Can you just walk us through the rest of the morning?

56:02 Witness

Yeah, it feels like, it feels like it was 9 weeks ago, man. Yeah, I didn't sleep a lot. That helps. I know we locked down the maintenance books, went to how went to the ODO. I made the choice just to just leave the skids on station 'cause they were acting as on scene Commander. They were the ones getting accountability for everybody. They were in charge of rack and stack. They were controlling the care flight aircraft coming in. They recommended how to get the aircraft careflight in that. I believe if it wasn't for them, (b) (6) wouldn't be alive right now. And I'm a news he's yeah he's he's critical that risk but right now in in Melbourne but if it wasn't for those guys I think he he wouldn't have made it because like the care flight was like we just got to get all the all the causalities out and they're like no he's urgent get him out now and I think that saved his life. I don't know. I mean, this is probably

HIPAA stuff, (b) (6) he's still fighting for his life and the on scene commander saved it. So I kept them on station until the until the casualties were evacuated. I also made a decision to bring the other aircraft, the V-22 back, just to have less aircraft there. And so I don't know if that was the right decision but I wanted less aircraft there and less less friction. So I brought them back and then took them out and I prepared another crew to go out if necessary to get the other people that weren't hurt. But then I was told that CTC which is some Australian task force of some sort said that they they were going to work it. So we shut that plane down and and then I just kept the H1's station until the casualties were were the urgent and priority casualties are out and I pulled them back. I also brought everybody here from the snake farm except for like a controller and a couple people that could catch up the skits when they came back and and just brought everybody here, I didn't want them talking about the mishap at the chow hall or anything. So I kept them here and had to provide meals for that, which probably wasn't a popular decision because they got MRE's. But yeah, I yeah,

IO

thank you. Since this was like our understanding is this was an Australian kind of led exercise and the squadron was supporting as the as the background aircraft platform because there's supposed to be a C27..

59:21 Witness

Yeah So originally, well I guess Predators Run was not a teamed event for the V-22's at any point in time. And it wasn't a teep event for the ACE until the H1's got thrown in to our deployment more than halfway through. And they said our goal will do H1's to do casts for them or simulated casts and all that stuff. And then we weren't supposed to support it all on that Sunday because they said like well when can you support? I said honestly, right, it's wise. I think the best way we can do this is one day and then and I said one aircraft and then the season 27 fell out and then they said can you provide 2 on Sunday And I said yes, but the extract might be in in endangered, but you want us for the insert, we can do that. But when they had to pick up flights to the one aircraft of doing like two hits, it became 2 aircraft with I think those five total hits was scheduled with that. That's yes I I think that's the right thing but I'm I'm not sure to be honest with you and was he set C27 broke on like that Thursday or Friday but was that Monday morning to fly us out there so thats that

IO

was the CTC were they kind of always intended to that's the that's supposed to like work any potential casavacs.

Witness

I was on the aircraft maintenance officer and I was involved in any of it. I I don't know I was not part of that mission.

[End]

## **Interview Summary of (b) (6), VMM-363 (REIN)**

### **Who signed the current flight ops SOP?**

2021, by the previous CO. Lots and lots of talk about that being an issue. beginning the fall, they went through multiple iterations of drafting the new SOP. After Christmas it got up to the XO's desk, so we held off because MAG was rewriting theirs. DOSS had it for a bit. By the time we got on deployment, (b) (6) was working with H1's to address their concerns. Topics in the new one applicable to deployment, not in the old one. New one doesn't have any H1 stuff in it. Training/exam/requirement for H1s to read it. I'd have to go back through our correspondence with (b) (6) to see what was said. SOPs are a touchy subject because we don't know if we need to follow 1st/3d MAW every time we pull it out and go with the most conservative. (b) (6) can answer whether they are operating on their parent command SOP. We are in separate planning spaces. Same building, but separate spaces. We've had 2-3 flights where we've been integrated, they are definitely VMM 363 rein, and part of the ACE, but really, they are a det structure.

### **I understand it's in rewrite, right now, do you know its current state in that process?**

It was on XO's desk.

### **Describe the level of integration for the ace into the MAGTF.**

Squadron generally: not hugely impacted by CE. Not a ton of major events wither other elements, for the average Marine, probably never been to the CE. For exercises a bit more, maybe the MWSS delt with them a bit more. H1's probably has more integrated planning. (b) (6) comes over a lot, so the Marines know who he is. OPSO: probably works with CE the most between meetings and sitreps and text chains, etc. its good. With GCE its strong. Sometimes it's frustrating, but for the most part they are helpful. I don't think they understood the ace very well coming into this deployment, but they were eager to learn.

### **Describe the level of planning process with the GCE or any other unit you may support.**

Really good with GCE generally. We do a lot of planning internal meetings with the GCE, a lot of weighing pax for a planning factor. We do not say they must weigh everyone, sometimes we'll ask if they're bringing an ILBE. We'll do a load comp in the plane with updated numbers. One of the exercises in the beginning, one of our partner nations was way off. We just overestimate. Leave it to the GCE crew chiefs confirm.

### **Does the VMM have its own chaplain?**

No, FOS'd and got nobody. Has one now post mishap.

### **Were there any concern about the level of leadership that remained behind when the det embarked?**

(b) (6) directed to go on the ship.

### **As the OPSO, can you go through the scheduled writing process and how you determine crew pairing, training, etc.?**



It can start anywhere about 6 months out to see who is where in terms of quals. FOPS will plan with maintenance based on hours. That's the monthly, then we'll start putting names to against flight hours. The weekly is where we will get into crew pairings. We do 2 weeks at a time. They'll look at who needs the invent, who's a good instructor for it. The PTO will have input, Ops. Etc. Mid-week we'll have a PB4T with the squadron. I'll review it prior to that make tweaks out of the PBT, 48 and 24s are developed after that. Final pairings come on the weekly at a 80% solution. I sign it, but everyone looks at it because everyone is an ASO (O4s). Daily writers route the daily through a COPSO before it comes to me. Then AMO, XO, for crew pairing. I don't think SgtMaj reviews it for crew pairing. Finally, to the CO. DOSS reviews it as well obviously, they also sign it.

#### **Who reviewed it here?**

(b) (6), while I was on the ship. We knew there was no MCEN option. It was even less communication than we anticipated because we couldn't get to sites.

#### **SA on ship about flight ops ashore.**

Day to day, I just didn't get. The detailed planning is all in my MCEN inbox that I didn't have access to. They received the weekly. She based sitreps on that, attachments were getting stripped.

#### **How come (b) (6) and not (b) (6) ?**

Because he has his det and he showed up in July. The COMREL is really messed up. We didn't have the time or workups available to have a fully combined. We maintained a joint weekly; anything above that is HMLA internal. As far as who signs it, I couldn't even tell you (b) (6) had a higher level of V22SA, and he had it for H1's I couldn't tell you all of the codes, so I also bounced it off (b) (6). We haven't had a workup, so we don't have a good understanding of each other's platforms.

#### **H1 crew scheduling, what's the process for bringing all of that together**

They have their own training plan and everything prior to the weekly is separate. They have a weekly writer at the PB4T, and that's the beginning of the integration of the schedule.

#### **On the safety side, for the sched, does an H1 ASO every screen the schedule exclusively without a v22 ASO reviewing it?**

I couldn't tell you. I don't know the real answer to that. They have their own separate RAW.

#### **No real workup, limited ops together. Explain.**

No training. Confirmation brief in June that they were coming. We spelled out the comrel responsibilities in the confirmation brief. Events they were going to support in the teep were not the same events we were supporting, different exercises. They showed up way later and their original training plan got wrecked and by the time they started flying most of us were at TS. only supposed to be here 6-8 weeks. It was a det. Not a composite squadron. But we wanted to set the standard for what an ACE should be with OPCON. Impact on day to day is they did steel knight without MACG and they were supposed to be with us, but is with the CE, and now you have H1's where there and their own SOP. It's because they are doing different exercises, we don't have any planned integrated ops.



Initial plan was to have two separate weeklies because they were doing something totally different. We decided because we were sharing duties, that it we should have a consolidated weekly.

**How man H-1 squadrons in Hawaii?**

0. V-22s, 2.

**How many copilots in your squadron have ever worked with H1's?**

Maybe none. I don't really know what they did at RIMPAC. I don't know what they did in BK or RIMPAC. Those are the two exercises we did with copilots.

**Duty selection, how was the squadron determining duties?**

Its changed a little bit. SgtMaj handles the enlisted duties. I'm not going to guess. SDO roster, (b) (6) does that. STO does that, they input names during the PB4T. It effects crew chiefs more than anyone, ODO's are id'd on the PB4T, it's based on availability on a weekly basis. Flights first, then we narrow it down. To whoever's left to break it up.

**Scheds for H-1's since they checked in to assess training.**

(b) (6) did training for the first person who stood ODO because that was before the class. Then Neilson gave the class. PPT? I don't know, it might have been on teams.

**Requirements to stand ODO?**

I don't know what the hard and fast are. I'd have to confirm with DOSS. Pilot, ODO training, 2 UT's. I'd have to reference SOP.

**Was there a roster?**

Doubt there was a roster. I'm not sure if it was on the flight sched mid-July.

**Crew pairings for mishap?**

After the crash, I pulled the sched to see who it was. Was surprised because they are pretty good people.

**Section lead syllabus, hours required?**

It used to be 50 hours, but I think that's officially gone away. Brief and leads you can just do.

**What's required to be turned in to the ODO prior to launch?**

Signed raw and fill it in, load comp signed, or acknowledged of just letting someone know like hey, good with the load comp. on the boat, I typed on it. Sign for the plane.

**Is there a printing a problem here?**

Huge problem here. [Mentioned only having printer, but listed multiple others.] I brought (b) (6) down to look at printers, tried to work it through supply. Printers have been the bane of my existence.

**What do you do to make sure the ODO knows you did a load comp if you can't print one?**

On the boat. Song and dance to get it to MC printer. Then hard line into the printer.

**Expectation of ODO if he doesn't get the raw/load comp?**

Chase down, text. The RAW is the big one.

**Are MAGTAB/electronic knee boards prescribed in the SOP about when we can use them and how?**

I'd have to go back and review the SOP.

**HFC.**

I am on it. Nothing I recall for any of them. One of them was injured like a year ago. No major human factors, every month, same for FPC.

**Cirras.**

Yes, we use it. Everyone is on it. (b) (6) monitors it and is the administrator for it.

**CO tracking this mission?**

Yes. Support to pred run on the 27th. Couldn't tell you if CO was tracking the change from 1 V-22 to 2. He was tracking V-22 support on the 27th though. Original plan was not supporting on the 27th.

**Are you in all of the standardization meetings?**

Yes, well I should be, sometimes we can't make it. I'm on the stand board.

**How much participation is expected from an instructor?**

Out PTO is good, that wouldn't be written in any of the stand minutes though.

**Pilot confessionals.**

We do if someone has something, but we don't have dedicated, standing confessionals. During AOM's people will stand up and say things if they messed something up. I'm sure they've done a lot in the last couple weeks.

**AOM.**

All officers meeting, we get in the room go through all the shops, do an award, etc. I start with the plan. CO, XO, and SgtMaj passing guidance.

**Class C. Lessons learned passed?**

No investigation still on going. No decision was made. There's an investigation ongoing. We didn't ask them for anything because of that.

**How did CO respond?**

He came up to the tower. I was in there we had an officer up there. He kind of let us do our jobs he was there for support, but he didn't take over anything. He offered his insight, experience background. We broke out the checklist, and filmed the reapproach and landing. He was up in tower.

**After, any actions?**

Afterwards we brought everybody together. I said we needed to talk about it. We brought everyone in. (all of the officers) we didn't fly the aircrew for obvious reasons. Right away told me to make sure they were good to fly if they had seen it experienced it or been a part of it.

**Any kind of safety standdown?**

We didn't fly for a while after it. Schedules will show. We needed to fly because on the 20th we were doing the mission. The boat didn't let us fly again until the 20th. We flew 20th, 21st, and 22nd.

**When pilots are briefing, what do they brief for the casevac plan, especially host nation support?**

Our flight docs have briefed it for real world casevac plan. We had a situation where we got called for casevac real world. We learned some things from that. We would bring them back to FRA and they would have an ambulance here.

**Is it well-known what resources and assets are available?**

ABCP, we send them our flight sched. Range control knew.

## Interview Summary of (b) (6), ADF

0: IO

All right, this interview is being conducted on the 12th of September 2023 at 10:45 on Robertson Barracks outside of Darwin, Australia, with (b) (6) from the Australian Royal Air Force. Did I say that correctly?

0:22 Witness

Royal Australian Air Force.

0:23 IO

Royal Australian Air Force? I knew I said wrong. I apologize. I'm the investigating officer, (b) (6), from I MEF I am conducting an investigation as directed by my commanding general, Major General Bradford G Gehring of I MEF, in response to a Class A aviation mishap resulting in death of three of our service members and injuring some others. As an investigating officer, I'm an impartial fact finder to my commander, the commanding general. The testimony taken by me and reports I develop may be used for official purposes at any point in time. You might have been interviewed by the Aviation Mishap Board either now or in the future. So you're aware those are two separate inquiries. They're solely focused on safety issues and associated with that. I'm more of the legal side of things. And so anything that if you've ever communicated with them or do in the future, all the ad information is privilege information for them only and we will never see that. That's why we're conducting a separate interview or conversation now to try to give in a little bit more details on our side of the investigation. It's hard to know the information you provide to be complete and truthful. So not hearsay or scuttlebutt if you will, but what you remember, where you can best recall. And so if you have no questions of that, I'll actually raise your right hand. Do you swear that the testimony you're about to give shall be the truth, the whole truth and nothing about the truth so help you God?

1:49 Witness

I do.

1:50 IO

All right.

1:50 Witness

Thank you, Sir.



1:53 IO

So if you can just for the record, please identify yourself and what your role is here in Australia.

1:59 Witness

Yeah. (b) (6). I'm the Headquarters First Brigade Air Liaison Officer. So my high headquarters is Headquarters Air Command in Down in New South Wales, but for the purposes of my posting up here, I work as two main fact functions. I perform a in Garrison Brigade Air Liaison, so I work with both the Marines as well as all of the units on the base here as their Air Force point of contact for any matters. And then when we push out field as a combat element, I then take command of the Tactical Air Control party, the Attack P and then we provide all of the airspace control, deconfliction, etcetera of air over the battle space of the brigade.

2:42 IO

OK. So if you could take me back to where you kind of got involved in the mission planning, if you will, for Predator run.

2:52 Witness

Yep. So regarding Predators run as the air point of contact and lead air planner for the exercise, I've been involved since late 2022 when we first commenced putting air planning requests through to relevant agencies that included Marines, all my Air Force 4 settlement groups that we wanted to play in this activity etcetera. So that was late last year forecasting ahead to this year. Then from the commencement of the year during the planning conferences, so the at the initial planning conference, mid and final planning conference, I was involved as the air point of contact for each of those activities as well as working with the Marines to coordinate what their involvement was going to look like in the exercise which at various stages have changed throughout the year from no involvement at all to we're coming to play. You may have some Ospreys, you may have some H ones through to hey we're we're going to add from execution and this is what we've actually got now. OK.

3:57 IO

So digging closer into near the mishap mission, can you kind of describe the changes as you talk through what was available, wasn't available, Can you just kind of describe from your point of view those changes that were occurring?

4:12 Witness

Sure. So I can't remember specific dates but for the purposes of the flow we had been told that we had when we gave the final brigade orders which included delivering the express control measures what the planned flows of aircraft in and that was going to look like We had one MV 22 allocated for one possibly 2 days and that was to provide an airlift function to insert the main assault into Melville Island on the 27th

OK of August. That then became you can also have it and I got it via a message from (b) (6) which was you'll also have it on 27 and 29 to exfil battlebird drama being the marine contingent off the island as well. H ones were on the cards to come and play as well. They were relatively late notice addition to the party, but we did get them in prior to final brigade orders and final planning conference occurring. So sat down with several of the aircrew of the H ones during multiple meetings and discuss what their involvement would look like, what their training goals that they had that included, but was not limited to doing detached escort, providing some four air control, some ISR reconnaissance type functions that was leading up to it. Then about 48 hours out from Predators run execution, we got a phone call. I got a call from an Air Force counterpart advising that the C 27 squadron that we were going to get, which was going to provide 6 days of dedicated support including the majority of the airlift both in and out had been cancelled as a result of a fleet wide grounding. So slight segue but for context is probably important. So the Spartan was cancelled the US Coast Guard Fly C27's as well and they noticed a problem with the rudder control surface, a rubbing or an offset misalignment issue. That's my understanding of it that going into details, they've notified the global fleet of aircraft raft have gone and conducted an inspection on air aircraft and observed that problem on a couple of the tails. So that meant that the aircraft we were getting was prioritized elsewhere. So they cancelled that support. That was, yeah, 48 hours out from execution.

6:52 IO

OK.

6:54 Witness

I then approached (b) (6) and the guys and was asking about whether or not we could potentially bolster the MV 22 support to help us out with that insertion of the battle group into both the airfields, noting that we now we're down now our main airlift asset. And he came back to me, I think it was the next morning, I can't exactly remember, but said Yep, they're actually able to provide a second airframe for that now. So the one osprey that we had allocated became 2 for the infill and exfil of the Marine Battle group into mobile. OK.

7:32 IO

So as you dig, as we get closer in towards execution, were you involved or were you participating in any of the the detailed planning of as I like I kind of alluded to you before the interview, like were you there when folks around the map kind of working through the ground tactical plan and the landing plan associated with that ground tactical plan.

7:54 Witness

So that specific meeting that was scheduled, I wasn't involved in because I'd already pushed outfield. OK, so that occurred on where are we August team in, we pushed that field on Thursday the 24th and I believe that meeting occurred either on the PM of the 24th or it might have been AM 25, I can't recall, but I wasn't able to make the round table chat which was scheduled by (b) (6) because I'd already we're already at Bush gotcha. We're in the field environment already by that point in time. So yeah before

that point we had had many conversations with both crews on H1 and osprey and they all attended our main brigade orders where we were doing the this is the muscle moves. But that last round the table ran a map planning that occurred wasn't involved.

8:48 IO

OK. So going back one second here (b) (6). During the, Is it a roc, Roc walk, whatever. Is that what you're kind of discussing when you're like, hey, we were all kind of going through the, the movements. What is that called?

9:07 Witness

Yeah, the roc drill. Rehearsal. Rehearsal of concept.

9:10 IO

Yeah. OK. Rehearsal concept. Yeah, I'm tracking that. Were all the aviators there that you know or

9:18 Witness

we didn't have all the crews there. There weren't enough people there. It looked like it was key individuals representing the relevant crews or relevant [inaudible].

9:28 IO

Yeah. OK. And do you happen to recall who the VMM, the 22 person who was representing crews was?

9:40 Witness

No. I can't remember. His name. Might have been (b) (6). He was a major.

9:47 IO

OK.

9:48 Witness

He wasn't a tall gentleman. OK, Slightly ginger hair. That's about the best I can give you. I can't remember his name. Sorry.

9:53 IO

OK. That's right.

9:54 Witness

Yeah, It might have been (b) (6). I'm not sure. OK, This is why Australians don't get interviewed because [inaudible].

9:59 IO

So now you're out in the field, you're detached away from what's the kind of final mission planning that's going on here? Did you receive any e-mail, any information to text or anything like that from the folks back here with any concerns with that mission planning as they're preparing for the execution of it?

10:25 Witness

No, no, nothing.

10:27 IO

OK.

10:28 Witness

So from it from our perspective everything was on the rails as we had planned it. And the only difference was that there was going to be two aircraft instead of one. And instead of going into because we originally had the Spartan going into the Northern objective and the Osprey going into the Southern objective. And then all we did was basically crop out the Spartan and into another MV 22. So one will go to the northern projected, one will go to the southern and they would tag that way that would guarantee the ability to insert all of the required forces. The only other last minute change that did occur was a discussion which we did have here before we went out Bush regarding the Hewitt trained personnel flying on or not flying on as the case force and just a discussion around that which went back and forward. That was the only point of I'll call it contention that I recall hearing about between final planning and when we actually executed was the discussion around UET requirements for members on board given it was going to be another water flight.

11:35 IO

Right.

11:37 Witness



And there was some emails that went back and forth that I was copied in on between the relevant stakeholders in that discussion.

11:43 IO

OK.

11:44 Witness

Yeah, that wasn't my discussion.

11:47 IO

So I understand. Yeah, OK. So for mission execution were you in the tag P at that time?

11:52 Witness

So I was operating out of our OB node which is our planning function. So Reagan was with the tag P in alpha, so he was at 0A, I was at 0B. So we weren't Co located. The role I was performing OB was I knew that we were doing the main insertion so I was monitoring down in traffic control to get an appreciation of timings as aircraft were coming and going because one of the roles we perform in Bravo was where the redundancy for Alpha if it goes down has to conduct a step up or yeah get to treat it. The battle space we have to be able to take over straight away.

12:29 IO

Gotcha.

12:30 Witness

So I was in Bravo Tag P were Co located with Alpha OK performing the same function so listening in on air traffic control. I did hear the words crash and osprey and then fire and I clued in straight away told the joint OPS room to be quiet and then it was listening for more coms and within a few minutes we realized it was not a heavy landing, it was actually something a bit more serious. So we immediately executed A coms black which is no calls in and out. Everybody's mobile phone at the AT the node was collected and stored in an ammo tin, locked with the exception of myself and the chief of staff because I was using my phone to listen in on air traffic coms. OK, so the other thing I was doing was I was able to track from that point in time the entire search and rescue response. OK, because all the air crew are using the same application that I used for flight planning, which is an AUS Australian flight planning tool. But if you're within cell phone coverage, it actually provides real time tracking information. So speeds, heights, routes. So I would, I became the guy. I was then sending everything to (b) (6) as he was asking for it with the here, the first aircrafts, off care flights on the way, tolls here, their wheels down, this time, their

wheels up. This time he's tracking to the hospital. He's not. He's tracking the care flight and the airfield etcetera. So as I was getting that information from my systems, I was then feeding that through to him.

IO

Fantastic.

Witness

Alpha was doing much the same with their, their systems, but they didn't have the same equipment I have. So we had different bits of information. So the the timeline that you guys have got is the Alpha recall who were managing it with (b) (6) and those guys. Yeah.

14:23 Witness

So but yes, that was kind of the yeah, on execution day, we we heard it. I heard it over. Air traffic was the first indication that something had gone wrong. And we basically just kicked everyone out of the OPS room, grabbed everyone's phones, told everyone to go chill out. Yeah, yeah, smoke them if you got them. Whilst we just consolidated in the OPS room with a couple of key individuals to manage it as best we could.

IO

Gotcha, Actually work the problem.

14:45 Witness

Yeah, exactly.

IO

OK, OK, let me ask you some questions based on to make sure I didn't already do those, i apologize.

14:55 Witness

No, it's OK.

14:57 IO

Previous playing evolutions with MRF-D in particular ACE, did you have any of those prior? A lot of time you do a lot of working opportunities.

15:08 Witness

Yeah, we did. I would say my involvement with the ACE this year with the MRF-D has been less than last year. I had a very, I'll pull out a very active engagement with (b) (6) and her team last year with the ACE. It was also a cooling long year and I was deploying as the camp commandant and expose controller for that activity. So I have a lot more involvement with the ace. Last year, yeah. This year haven't had quite that same relationship, but particularly have spent a lot of time working with (b) (6).

15:44 IO

OK.

15:44 Witness

So that that was sort of my four guys that I've worked with primarily was involved in several other meetings with H1 Crew and Osprey Crew, but they seem to change depending on the meetings. Based on who is available.

15:55 IO

Sure. OK Yeah. So it's hard for you based on last year's experience and this year's experience just because you're how you were aligned to who you were communicating and working through. Is is different than last year.

16:06 Witness

Yes.

16:07 IO

Yeah. I'll leave that that With that in regards to any further questions on kind of that kind of relationship, can I ask you about previous mission planning with the last minute changes? So in regards to this makes sense. C7, C27 has issues prioritization for RAF is what we'll focus on our different priorities. Were there other issues or issues? Not the right way, but were there post a confirmation brief or a roc drill? Were there any like whether last minute changes that were typical in during the MRF-D rotation?

16:50 Witness

Not really. There was the availability of the MV22's to support it was was up and down and and it was on and it was off and it was depending on who you talk to on one day we we did have support. We didn't have support So it did seem as a a third party that there was a little bit of a a disconnect maybe between what the the command element and and what the ace were were tracking. But beyond that I didn't notice

anything specifically once we sort of locked in after that that roc drill you definitely got an airframe for those two days. The only change was the addition of the second airframe to cover the gap left by the spark.

17:26 IO

Gotcha. Yeah. I'll leave it at that. OK.

Witness

At least that's all I got from my side. Yeah.

17:34 IO

I know.

17:36 Witness

Yeah.

17:37 IO

(b) (6), Well, I'm going to stop there with my my question. Otherwise it's, it's speculation and that's not what I'm here to find out. OK. Any other things that you know that I didn't ask you about, do you think that might help me in my side of the investigation? Just getting to the truth on the facts here.

17:54 Witness

Not that I can think of. Yeah, I've been actually thinking about it a bit over the last couple of weeks, just trying to work out, you know, as you do, can we have done it differently? What else could we have done? Obviously without understanding the the nature of the mechanics of the crash or the incident, given what I know and what I observed and what I've seen. Which actually reminds me, I'll talk to you about photos in a minute. I've got imagery which I could probably provide, which I'm just working on getting it declassified at the moment. So we had a PA come on station the following day and as part of their tasking, we asked them to go into Cardinals of the incident site as well as zoomed in, zoomed out, etcetera to help with the crash investigation. I've got those, but they're on our high side network. The images are only official, so I can get them declassified in, sent across to you. So I will organize that this week.

18:48 IO

Alright, thank you.



18:49 Witness

But it it may provide info it might not, I don't know. But yeah, with the exception of that, it sounds like it was a catastrophic mechanical failure which led to it as opposed to anything that we can necessarily influence. At least that's what I've deduced at the end of the day without knowing any extra things. So yeah, look, I can't think of anything more at the moment. I can pay your way to your investigation if I do, I can absolutely send you through.

19:17 IO

One last question I forgot to ask day of Do you happen to recall weather conditions over Melville Island.

Witness

Over Melville on the day it was would have been probably 7/8 clear light wind. Yeah. What's too bad at all. I did look at the weather the morning of and it was going to be 30 degrees, 31° sky clear, basically. And yeah, not much going on. We have had recently I went and did a recce on Melville in a Spartan about two months ago and they did have a lot of fires and stuff going on the island at the time. So there was a bit of smoke haze and fog and stuff around. Yeah, which may still be lingering this time of year. Up here it's very common to get that sort of dense inversion layer with that that fog and stuff. Yeah, just because it's so humid and it doesn't want to air, doesn't want to move. Yeah. And we we do get some really good ducting up here radar and and and that sort of thing. Yeah, it used to be a thing. Yeah. I don't fly anymore. Yeah, we used to get some really good ducting back in the day. But yes. No, to the best of my recollection, it was, yeah, 3031, relatively sky clear. No significant window or anything. I was.

20:36 IO

OK. All right. Thank you. (b) (6). One last thing just administratively here, You're just advises. This is ongoing investigation from our side. You're directed not to discuss testimony that you've given here today with anyone aside from a duly appointed investigating official. All right.

Enclosure (74) Post Crash Video Footage (CAUTION, VIEWER DISCRETION ADVISED)

The video footage at enclosure (74) is footage following the mishap captured by MRF-D COMMSTRAT from the VMM-363 (REIN) UH-1 participating in the mishap flight. No footage of the actual mishap was captured.

Enclosure (74) consists of the following two video clips:

MVI\_0783.MP4

MVI\_0792.MP4

ENCLOSURE (75)

Enclosure (75) is a compilation of crash site photographs taken by various entities following the mishap. Some of these photographs include graphic images of human remains.

**VIEWER DISCRETION IS ADVISED.**

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Throughout the course of this investigation photographs of the mishap site were taken by various agencies/entities. They are compiled here into one exhibit, noting the relevant source information where available.

The following photographs were taken by Northern Territory Police by an unknown photographer using a Nikon D7500 on 28 August 2023.





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(b) (6)



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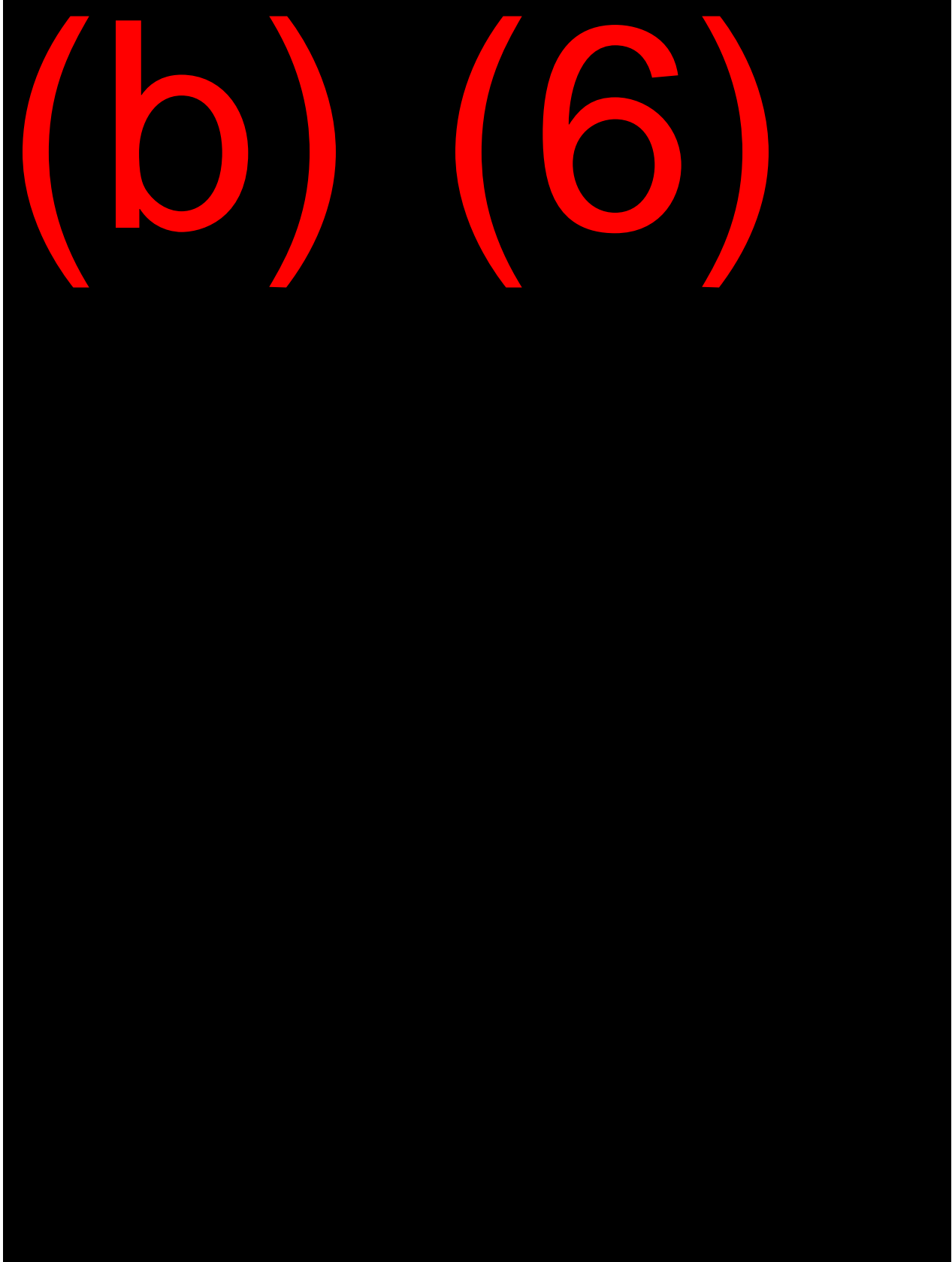


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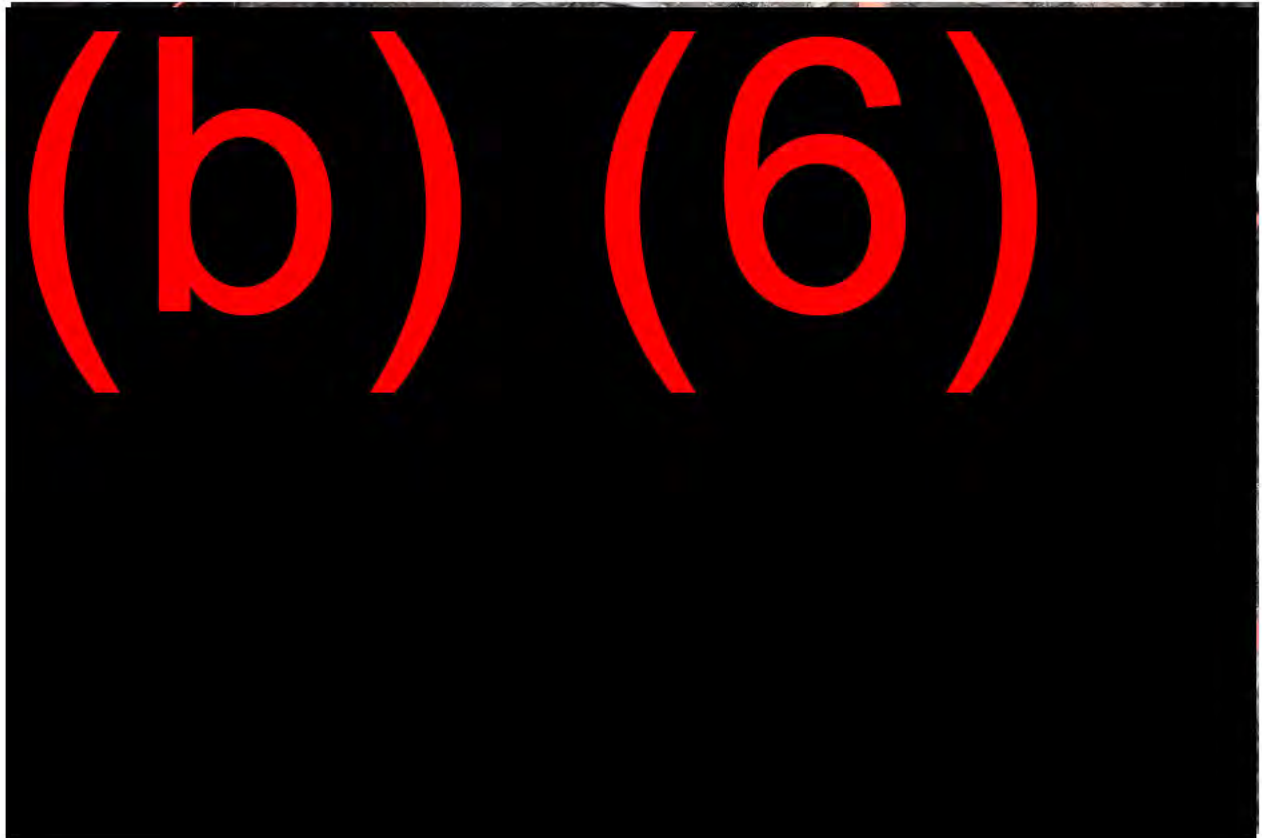




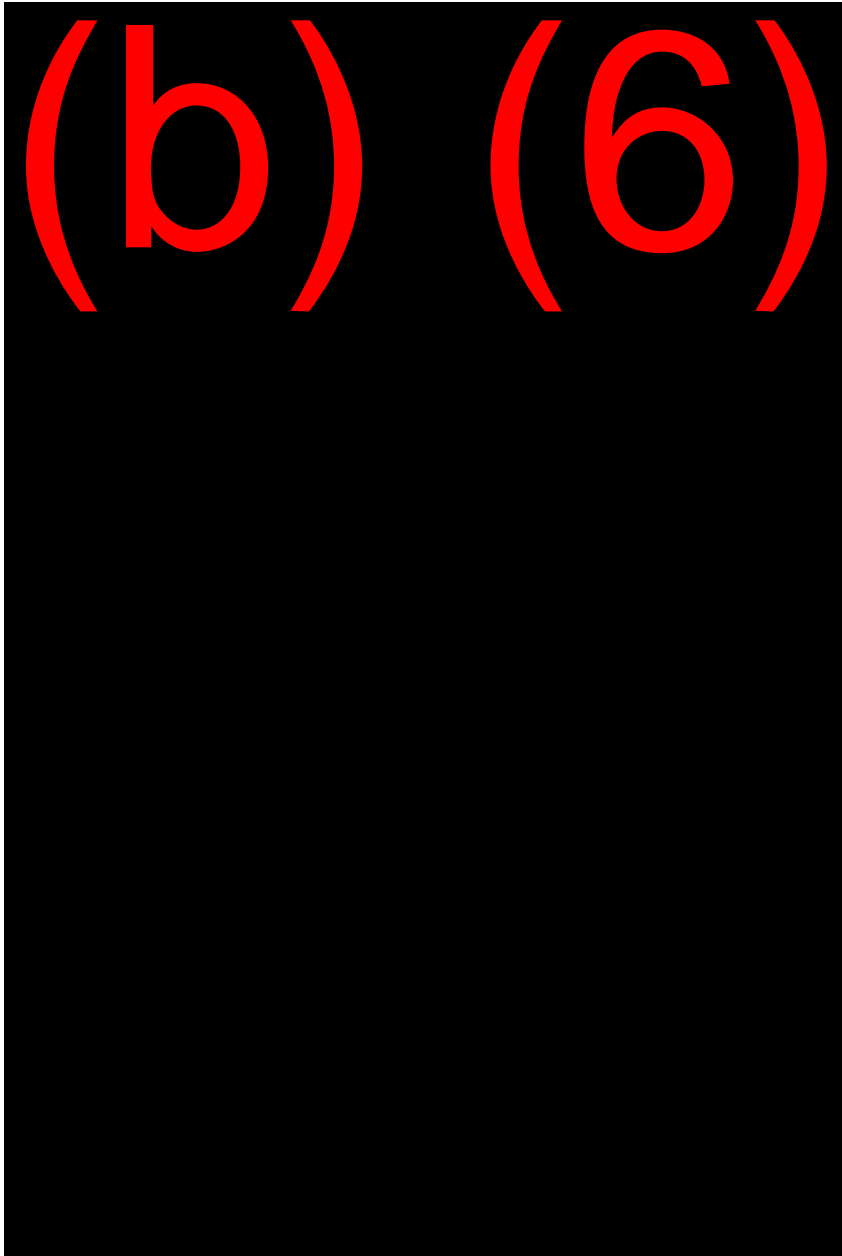
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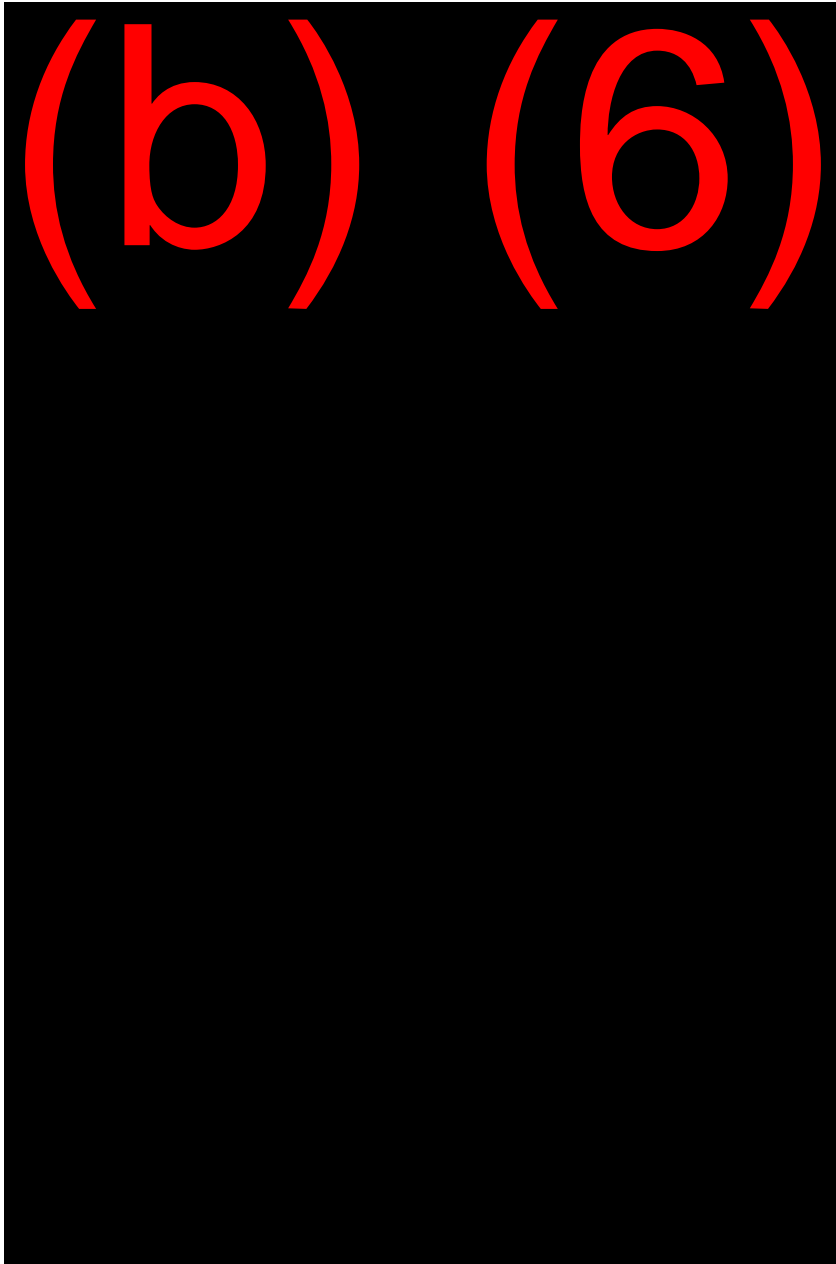




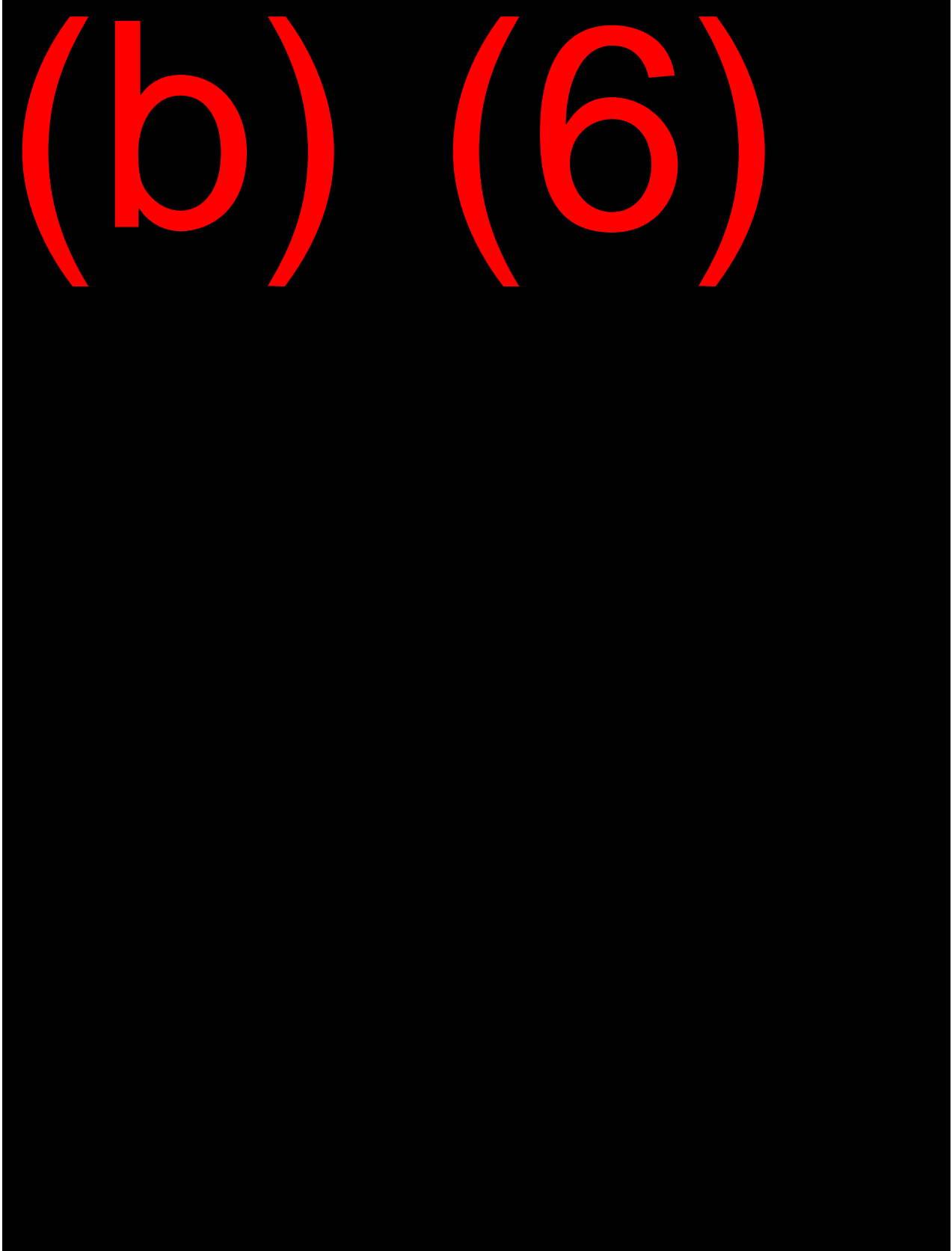
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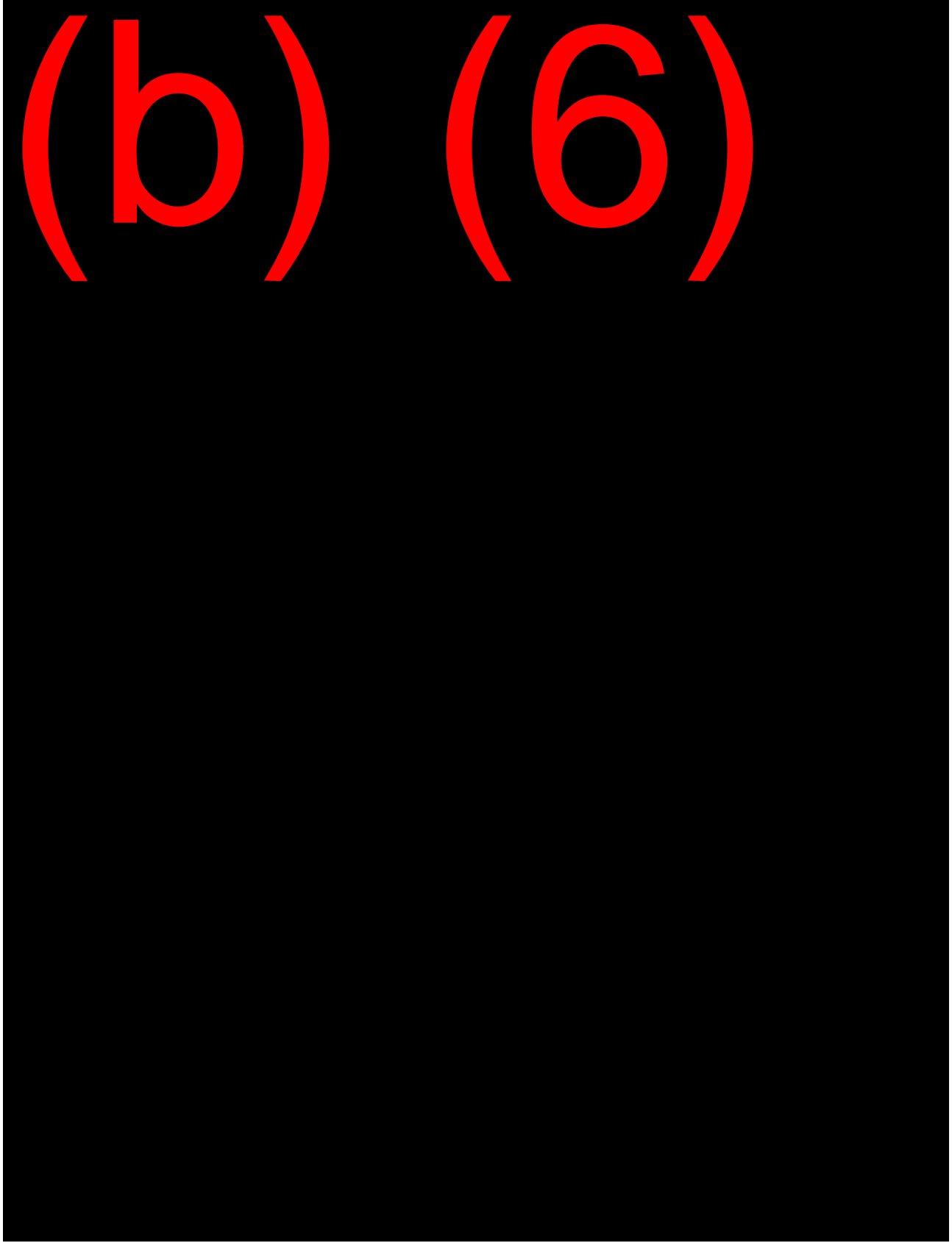


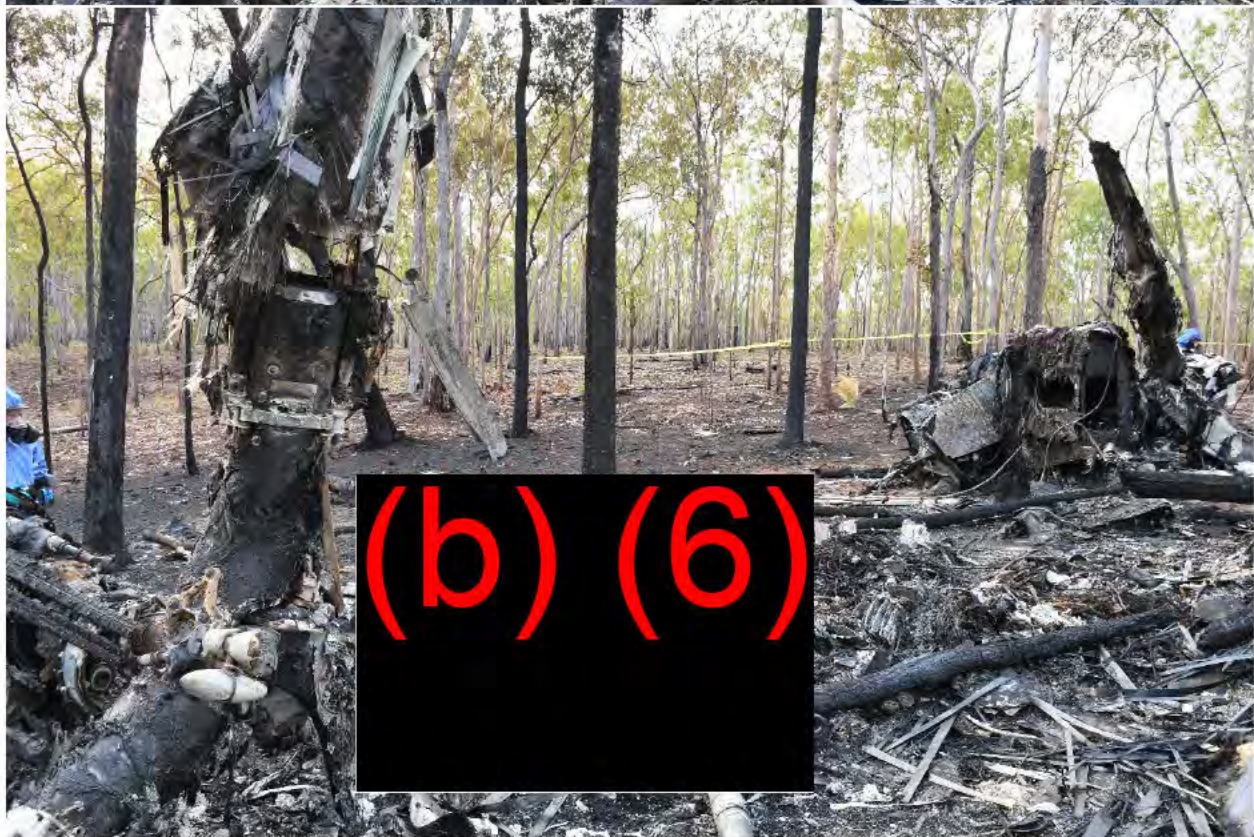
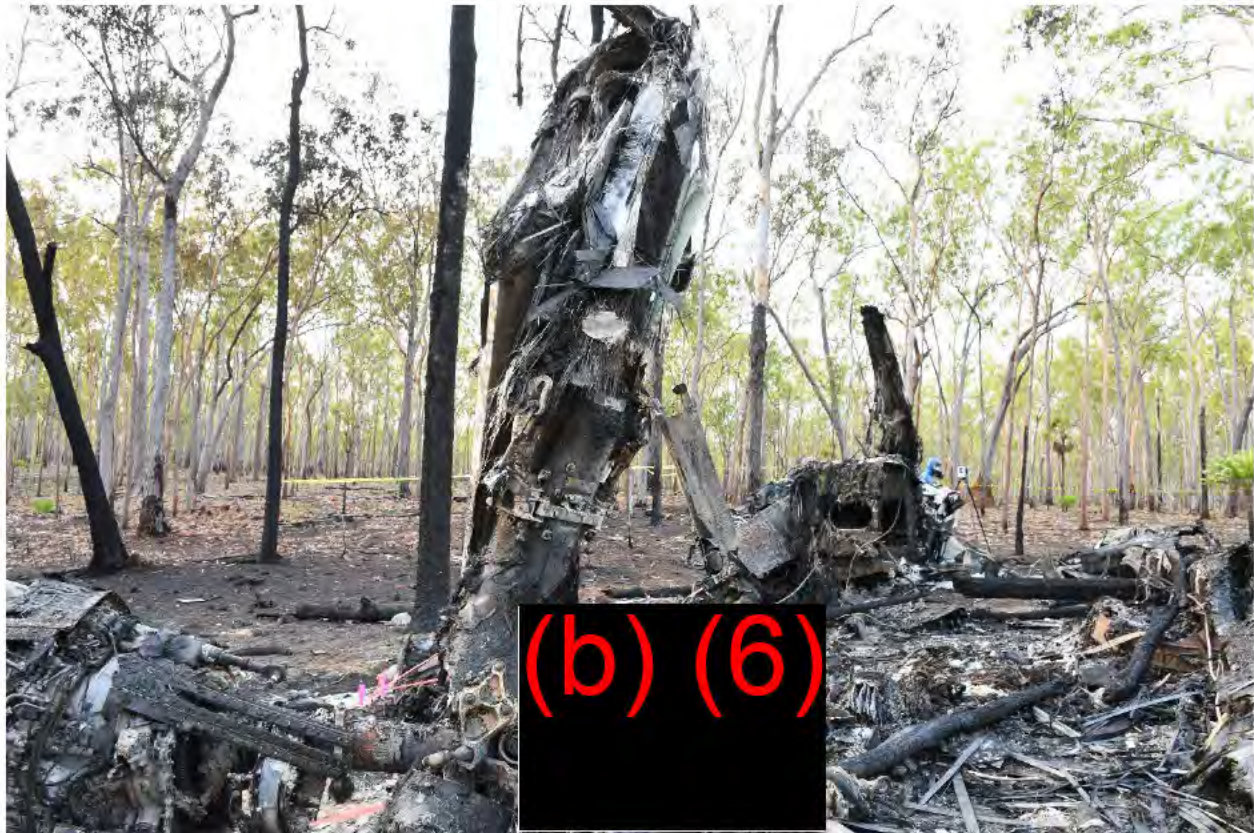
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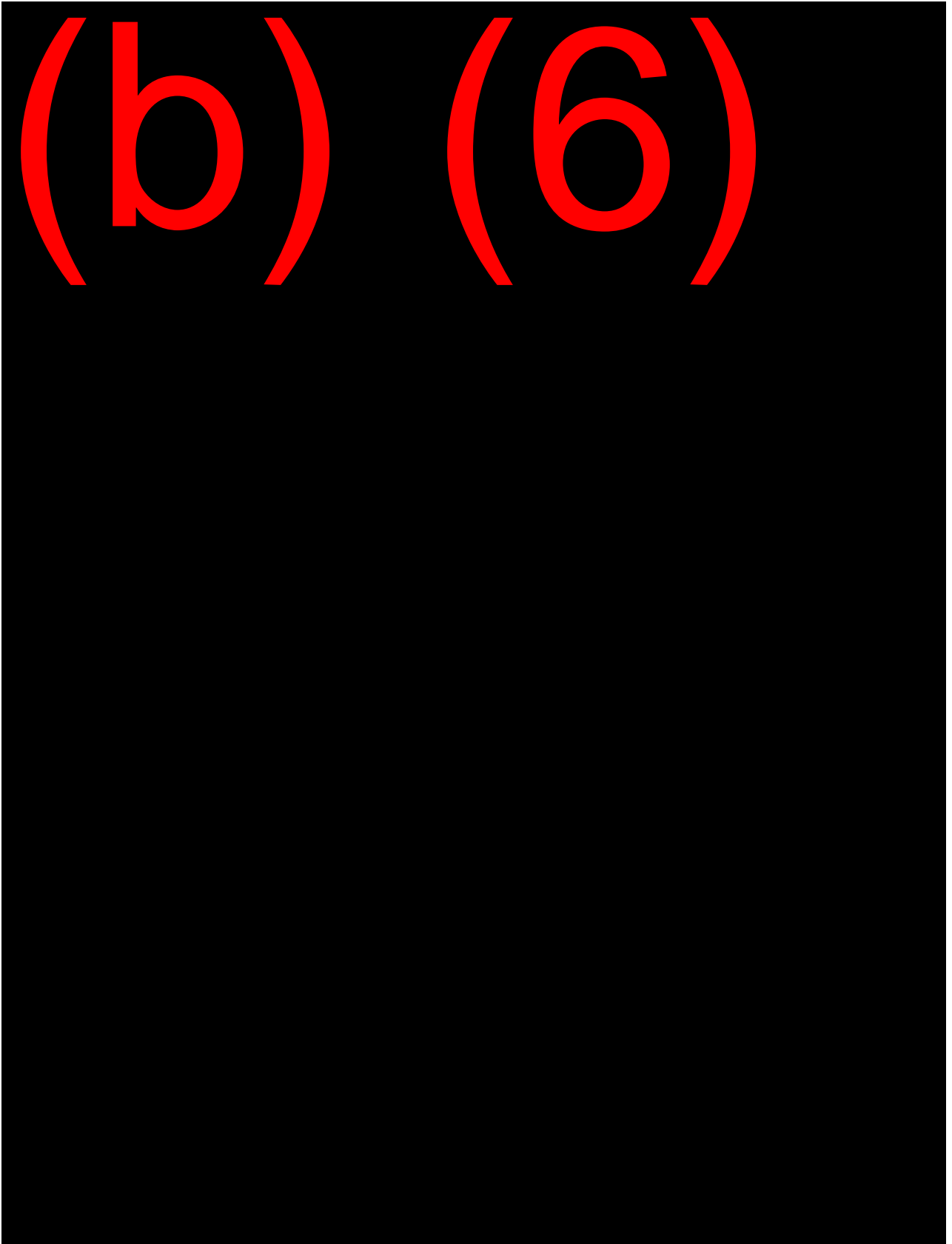


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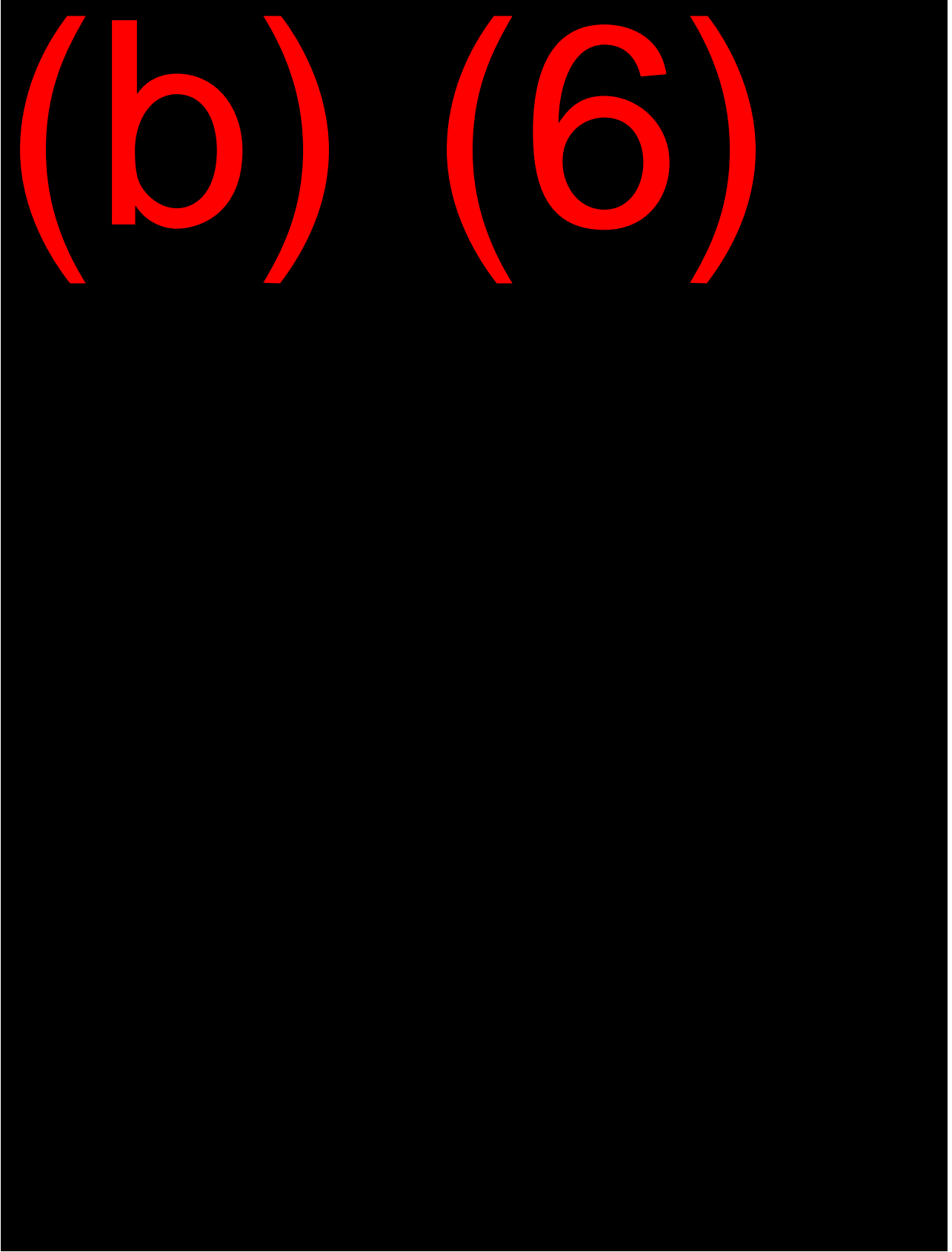




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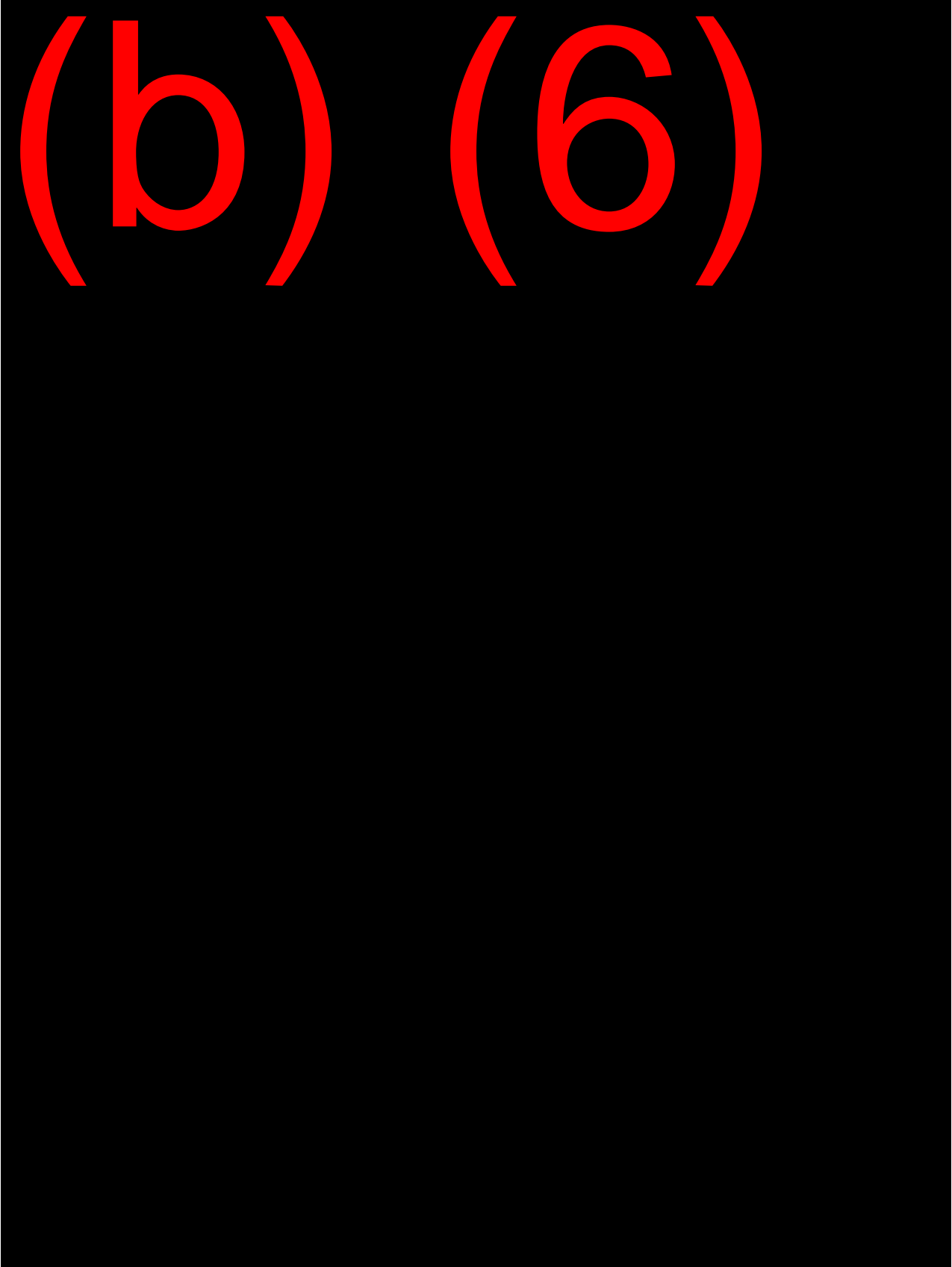


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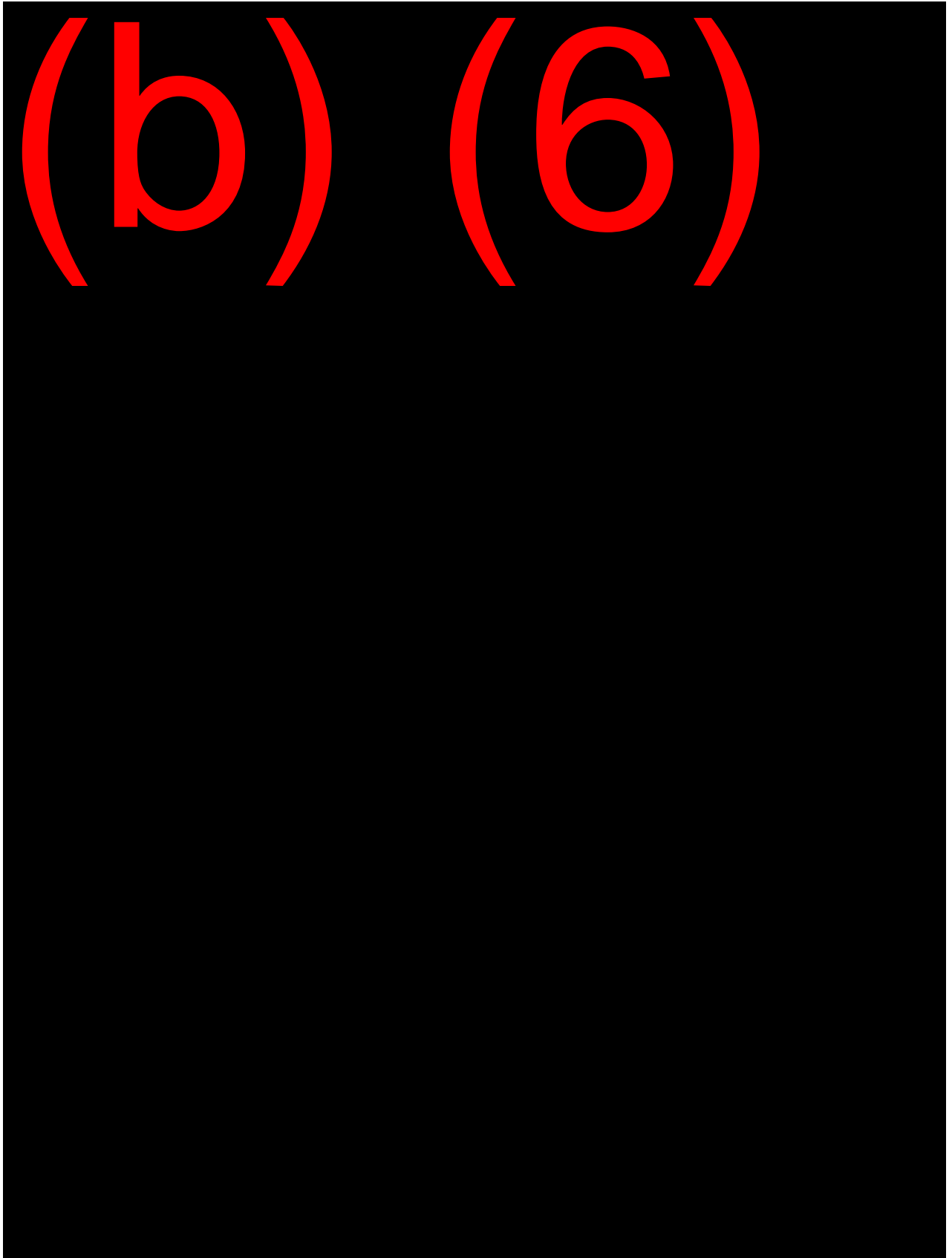




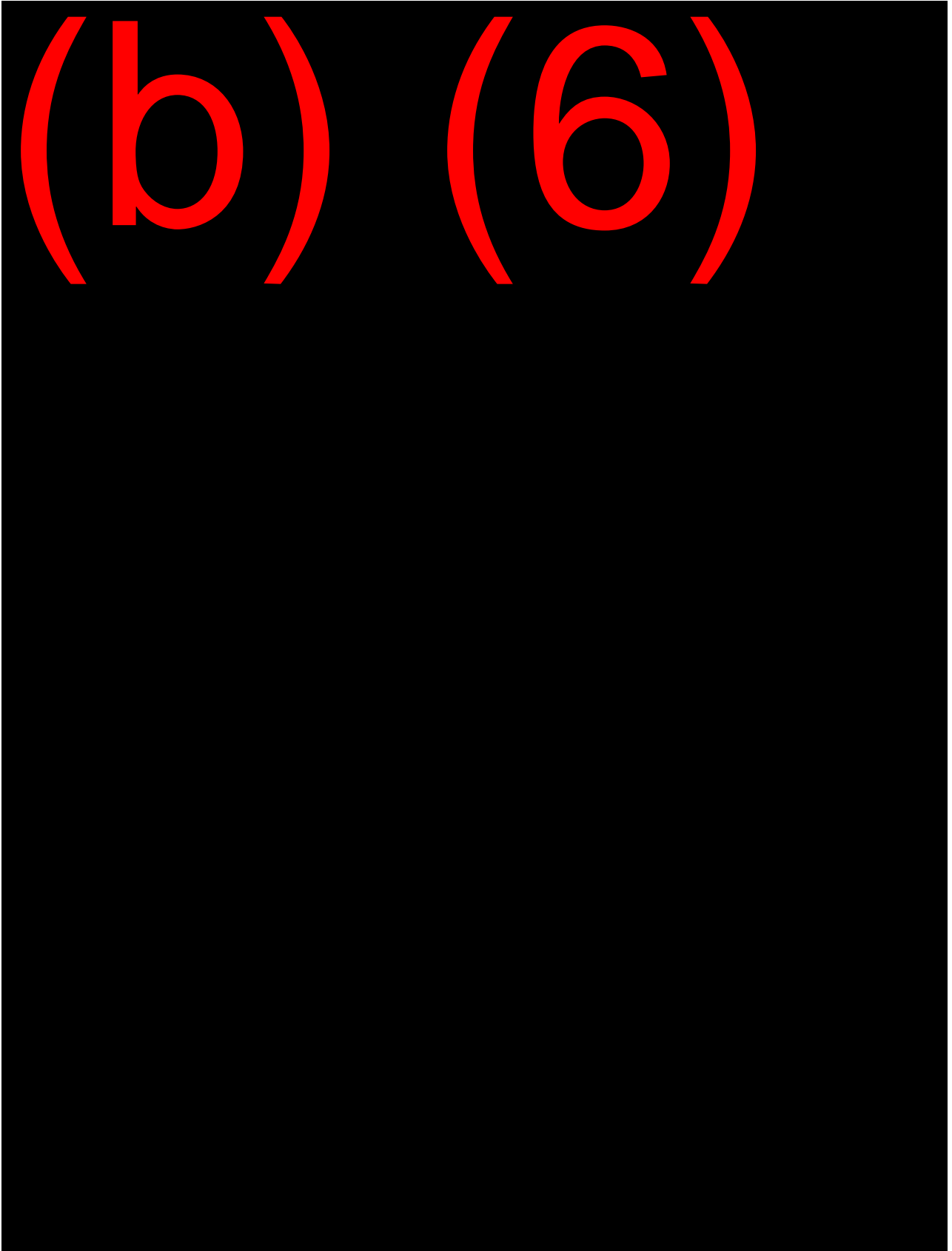
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The following photographs are still photos taken by the Northern Territory Police using a drone on 28 August 2023 at approximately 1230 by an unknown operator. The drone make/model is unknown, The camera is made by DJI and is model FC6310. The photographs were taken at varying altitudes ranging from 120 to 150.





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The following photographs were taken by the MRF-D COMMSTRAT Photographer in support of this investigation (the same photographer/videographer that was in the UH-1 during the mishap). These photographs were taken on 2 September 2023 with a Canon EOS.





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5 September, 2023

Darwin, Australia

From: Mishap Investigation Support Team (MIST)

To: VMM-363 Aviation Mishap Board (AMB)

**Title: Report containing findings from the in-field investigation concerning the VMM-363 class A mishap involving an MV-22B, Aircraft BUNO #168616 which occurred on 27 August 2023.**

In the analysis of the wreckage, the following items were the points of interest for the infield investigation: the Aviation Life Support Systems (ALSS) for the aft Crew Chief, the two (2) pilot's seats, the aircraft wreckage, a single troop seat, and the various severance assemblies on the aircraft.

#### **Aviation Life Support Systems (ALSS)**

MIST, in conjunction with a representative from the Armed Forces Medical Examiners (AFME), examined the ALSS worn by the Crew Chief located in the aft portion of the aircraft during the mishap. This ensemble included an HGU-84 helmet, a CMU-37 Survival Vest, a flight suit, a pair of boots, and a pair of gloves.

An overall photo of the HGU-84 can be seen in Figure 1. A significant strike was observed on the rear portion of the helmet. This witness mark, shown in Figure 2, penetrates through the reflective tape, and into the shell of the helmet. The Night Vision Goggle battery mount was broken. Aside from the witness mark described herein, the helmet showed normal signs of wear and tear.



**Figure 1: Overall View of HGU-84**



**Figure 2: Witness Mark on Helmet**

The survival vest is shown below in Figure 3. The Emergency Release Assembly (ERA) hooks on the back of the vest were found secured with the cross connector strap in place and a short tether still secured to the vest. The snaps on the left shoulder (occupant's perspective) ERA beaded handle was unsecured, as seen in Figure 4. The beaded handle on the right side of the vest was only secured with one snap.



Figure 3: CMU-37 Overall



Figure 4: Adjustable Tether Unsnapped ERA Handle

The MK-124 Signal Flare had a significant dent in the body as shown in Figure 5.



Figure 5: MK-124 Dent

The adjustable tether of the forward Crew Chief was found in the condition shown in Figure 6. The hook of the adjustable tether was still attached to the eye of the cargo tie down; however, the structure of the tie down had detached from the primary aircraft structure. The tether itself did not exhibit any abnormal tears, or damage.





**Figure 6: Adjustable tether**

A Supplemental Emergency Air (SEA) bottle was found at the crash scene, without thermal damage. It can be seen in Figure 7. The bottle was not turned on, as indicated by the red stripe shown in Figure 8.



**Figure 7: SEA Bottle**



**Figure 8: Red Stripe on SEA Bottle**

### **Pilot's Seats**

The post-crash fire consumed most of the pilot seats. Both rotary buckles, the Energy Absorbers (EA) for the right seat, and various tangs of the restraint systems were recovered. Both seat buckets had been destroyed in the fire and all textiles and aluminum components were completely consumed.

The rotary buckle of the right seat was found in the condition shown in Figure 9. The aluminum face plate and case were missing from the buckle assembly leaving only steel components behind. No restraint tangs were found inserted in the buckle. One lap belt tang was recovered away from where the rotary buckle was discovered. The remaining tangs were not recovered.





**Figure 9: Right Pilot Seat Rotary Buckle**

The left pilot seat rotary buckle can be seen in Figure 10. Three tangs were in the buckle (two shoulder tangs, and a lap belt tang). The second lap belt tang was found nearby the rotary buckle. The locking pawl of the missing lap belt tang was found to be missing from the rotary buckle. Without the locking pawl, the tang would be free to fall from the buckle assembly. The aluminum face plate and case of the buckle assembly was missing due to the extensive thermal damage to the buckle.



**Figure 10: Left Pilot Seat Rotary Buckle**

Typically seat stroke for the pilots seats is measured using the seat support structure and the aircraft bulk head. Both of those components were consumed by the post-crash fire. The Energy Absorbing (EA) wires were recovered for the right pilot seat. One of the two sets of wires was found to not exhibit any signs of stroking. The other wire exhibited signs of a small amount of stroking.

### **Aircraft Wreckage**

The aircraft experienced significant thermal damage. Some components that are typically found in the cabin were found in the cockpit area. An M-240 was found roughly in between the two pilot seats as seen in Figure 11.



**Figure 11: M-240 found in cockpit area.**

### **Troop Seat**

One troop seat was found outside of the aircraft wreckage, see in Figure 12. This troop seat stroked approximately 1 inch on the right side, and 1.5 inches on the left relative to the seat. There was no thermal damage to the seat and the seat exhibited normal wear and tear. The indications of seat stroke are emphasized by the red circles below.



**Figure 12: Troop Seat**



### Severance Assemblies

The port side severance assembly, DODIC WB35, was destroyed in post-crash fire. The initiation block, shown in Figure 13, was located with two partial TLX transfer lines installed. The initiation block shows detonation of the output booster cups of the installed TLX lines evident by the deformation of the initiation block output ports and channel.



**Figure 13: Port Side Severance Assembly Initiator Block and TLX Lines**

The TLX lines transfer initiation signal to the severance assembly from either Internal (JL03) or External (JN39) Initiators upon manual actuation. One of the connected TLX lines was routed through and into a solidified pool of melted metals as seen in Figure 14. X-ray of the pooled metals revealed the JL03 Internal Initiator in a non-actuated condition evident by the sear/firing pin still engaged and not separated, shown in Figure 15. Figure 16 is radiographic acceptance criteria schematic of the internal components.

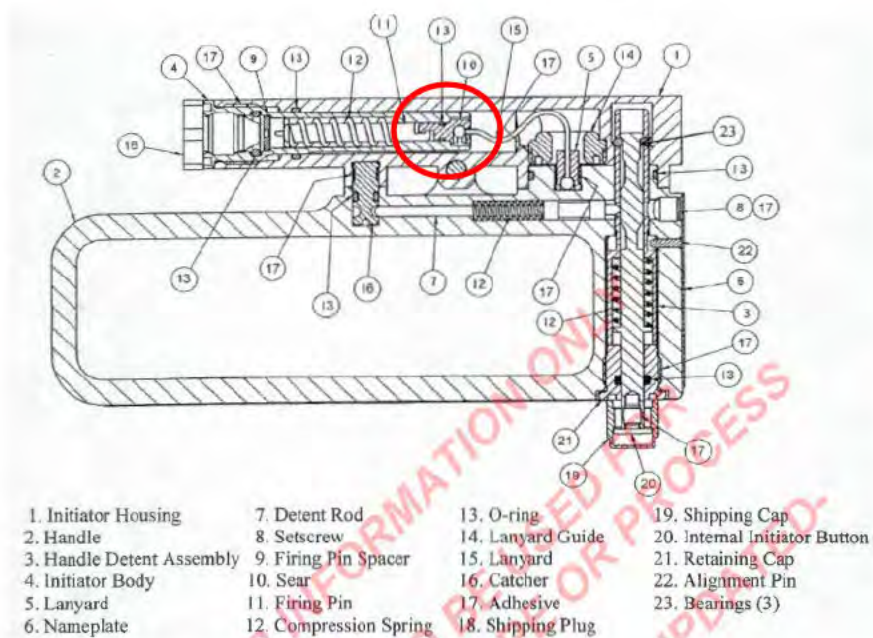


**Figure 14: TLX Lines in Metal**





**Figure 15: JL03 Internal Initiator**



**Figure 16: Radiographic Acceptance Criteria Schematic**

The starboard side severance assembly, DODIC WB34, was destroyed in post-crash fire. The initiation block was located with two partial TLX transfer lines installed. The initiation block shows detonation of the output booster cups of the installed TLX lines evident by the deformation of the initiation block output ports and channel, shown in Figure 17.





**Figure 17: Starboard Severance Assembly Initiator Block**

The internal initiator from the starboard-side emergency escape window was not recovered. The external initiator from the port side cabin, forward escape window, DODIC JN39, was found not actuated, in the unarmed position. The initiator was severely degraded and partially melted from post-crash fire, shown in Figure 18.



**Figure 18: Forward Port Side Cabin External Initiator**

In the same vicinity of the recovered external initiator two percussion-initiated TLX lines were recovered, neither line showed indications of primer strike, as shown in Figure 19.



**Figure 19: Port Side Cabin, Forward Escape Window TLX lines**

#### **Gas Generators**

Two of the aircraft's 17 fire-extinguishing gas generators were recovered from the wreckage in the vicinity of the midwing. Both exhibited severe thermal damage from the post-crash fire. The gas generators were both fired.



**Figure 20: Gas Generators**

#### **Conclusions**

The post-crash fire consumed a significant amount of potential evidence that would typically be evaluated. While some pieces and components of the ALSS were recovered in the cockpit area, due to the thermal



damage experienced, no conclusions could be made regarding the ALSS contribution to the outcome of the mishap.

Although it is unknown where the recovered troop seat was located in the cabin, it did exhibit a minor amount of seat stroke which was consistent with what was observed on the right pilot seat's EAs. It is unknown how the seat separated the aircraft. Depending on weights of the occupants, the seats in the MV-22B are designed to stroke at roughly 14 G's in the vertical direction. This aircraft saw peak accelerations over 14 G's for a relatively short amount of time.

To evaluate survivability of the accident the acronym CREEP is used. Creep stands for **C**ontainer, **R**estraint, **E**nvironment, **E**nergy Absorption/**E**scape, and **P**ost-event factors. There were several issues identified and several potential issues which may have impacted survivability for this mishap. They included issues with Restraint, Environment, and Post-event factors.

Restraint describes mitigation of energy for the occupants throughout the mishap event. Unrestrained occupants have a significantly lower chance of survival. The aft crew chief's adjustable tether was found attached to aircraft structure, however, the structure was not attached to the rest of the aircraft. The crew chief would not have been properly restrained inside the aircraft during the crash, nor would they have been restrained to the aircraft throughout the crash. In addition to being a possible projectile inside the aircraft, nothing would have precluded them from being ejected from the aircraft as well. Witness marks and a broken NVG Battery Mount on the Crew Chiefs helmet indicate a head strike at some point during the mishap.

Environment describes the immediate surroundings for the occupants throughout the mishap event. In this case, because the aircraft descended through trees, intrusion into the aircraft was possible. Having mobile aircrew and unrestrained cargo in the aircraft would have also created debris and projectiles which could be injurious to the occupants of the aircraft. An M-240 was recovered in the cockpit of the aircraft indicating that high mass objects were moving throughout the aircraft during the mishap. Being struck by high mass objects significantly increases the risk of injury during the mishap and may introduce injuries which can prevent timely egress from the aircraft.

Post-event factors includes any survivability issue that may arise after the crash is over. This includes things like timely egress and post-crash fires. In the case of this mishap, due to the post-crash fire, timely egress was essential. Based on the condition of the left side rotary buckle, it can be concluded that the pilot did not attempt egress by actuating the rotary buckle. The internal initiator for the port side severance system was not actuated. Therefore, it can be concluded that the cockpit occupants did not attempt egress through this window. Due to the thermal damage, it was inconclusive if egress was attempted through the starboard side window. Burns, smoke inhalation, and toxicity can all incapacitate an occupant, which in this case, would be fatal.

In summary, this mishap was non-survivable. Considering the lack of restraint for the aft crew chief, high mass items moving around the aircraft, potential aircraft intrusion, and the post-crash fire, conditions existed for fatal injuries for the personnel onboard.

Respectfully,

(b) (6)

NAVAIR, MIST Infield Team Lead  
Crashworthy Systems

(b) (6)

(b) (6)

NSWC IHD, MIST  
CAD/PAD, E25 In-Service Engineering

(b) (6)

(b) (6)

NAVAIR, MIST  
Crashworthy Systems

(b) (6)



UNITED STATES MARINE CORPS  
MARINE MEDIUM TILTROTOR SQUADRON 363  
MARINE AIRCRAFT GROUP 24  
BOX 63059  
MCBH KANEOHE BAY HAWAII 96863 3059

IN REPLY REFER TO:  
4400  
SAD  
1 Apr 22

From: Commanding Officer, Marine Medium Tiltrotor Squadron 363  
To: (b) (6) USMC

Subj: DESIGNATION AS WEIGHT AND BALANCE OFFICER

Ref: (a) COMNAVAIRFORINST 4790.2D  
(b) NAVAIR 01-1B-40  
(c) NAVAIR 01-1B-50

1. In accordance with the references, you are assigned as the Squadron's Weight and Balance Officer. You will familiarize yourself with all references.
2. This authority is revoked upon transfer or change of assignment.

(b) (6)

Copy to:  
CO's File  
SDO  
Turnover Binder



## Enclosure (78) UH-1Y Mishap Flight Video Footage

The video footage at enclosure (78) is footage captured by the VMM-363 (REIN) UH-1Y FLIR during the mishap flight. No footage of the actual mishap was captured.

Enclosure (78) consists of the following one video clip:

DE 34 (UH-1Y) 1st TOS (crash) - (b) (6)

**Interview Summary of (b) (6), VMM-363 (REIN)**

0:04 IO

All right, good afternoon. This interview is being conducted on 12th September 2023 at approximately 1745 aboard Royal Australian Air Force Base Darwin. Present in the room are the Witness (b) (6), myself, (b) (6) the legal advisor, and the two Assistant IOs, (b) (6). Prior to turning on the recording, we discussed the contents of our appointing order. We discussed the difference between Command investigation and safety investigation, the privileged nature of safety investigations, the purpose of the Command investigation. We discussed how the Command Investigation team will never see any privileged information associated with the AMB and some other procedural items. Finally, (b) (6) had an opportunity to review the Privacy Act statement which he signed, and he did not have any questions about that document. Is there anything you'd like to add? OK, at this time, I'd ask you to raise your right hand please. do you swear or affirm. The testimony you're about to give should be the truth, the whole truth, and nothing but the truth. So help you God.

1:06 Witness

So help me God.

1:07 IO

Thank you.

1:10 IO

All right. I am (b) (6), the ASO for the JAGMAN. Just a few kind of basic questions. Did you have any involvement or with the AFL or EFL portion of the flight the night prior or the brief the night prior helping out with any kind of product generation. Did you preserve the NATOPS brief for these guys on the 27th?

1:37 Witness

I did not.

1:38 IO

You didn't. OK. Did you have any, Did you help at all with mission planning the night prior or the leading up to the exercise?

1:45 Witness

I did not.

1:46 IO

You did not. OK. All right. Good to go. This is more just generic kind of just for us to understand ODO procedures. You've stood ODO before, I'm assuming.

Witness

I have.

IO

OK.

2:06 IO

Approximately how many times

Witness

4

IO  
here with VMM 363 or 4 in total?

Witness  
here with 363

IO  
four times.

2:16 Witness  
Give or take.

2:21 IO  
Can you kind of just go into detail how you prepare our plan for these briefs and warnings or whenever you take over the shift,

Witness  
Go to maintenance, get the aircraft assignments and the VMM and the H1 side, get the weather, prepare the brief slide and the PowerPoint that's on teams, update it with the current weather information, maxes as well as crew information as reflected on the flight schedule. And I'll brief that PowerPoint to the crew at their brief time.

2:51 IO  
OK.

2:52 IO  
Specifically on the weather part, what do you guys normally brief for the weather out here?

2:56 Witness  
We get a 96-hour forecast that's sent by e-mail by the METOC Marines and we'll put that on the PowerPoint and that's what we'll brief off of for weather, OK.

3:04 IO  
Does that usually include just this location or is it usually include other locations,

Witness  
whatever locations are relevant for the flight schedule for the day

3:12 IO  
OK. So potentially the destination weather, wherever they're going to be going,

Witness  
correct.

3:17 IO  
Cool. And I understand brief is built on that for usually when you take it over if you got them then you brief obviously OK you can send you the dump truck crew all right. As ODO, can you kind of just go through like you brief someone, what are the expectations of the crews to you like what do they owe you before they go on they fly.



Witness

Sign the risk assessment worksheet and a load composition as well as any packs manifest that's going to be on the aircraft. And then my knowledge if I'm missing anything that's also a delegate on the flight OPs SOP.

IO

OK, All right. Here we go. If someone hasn't signed it for instance, like a load comp or a risk assessment worksheet kind of what do you feel like your role is in that What are your left or right lateral limits. What would you do personally?

4:11 Witness

Ensure the required documents are signed prior to take off.

4:14 IO

OK. How would you guys go about that if they already left the room?

4:18 Witness

Use signal or contact one of the crew members via phone call.

4:24 IO

Yeah. Do you guys have a a radio in there?

4:27 Witness

We have a We do have a radio.

4:28 IO

A radio, OK, you can be able to contact the crew in the aircraft.

4:33 Witness

It's spotty because a lot of on-site communications are degraded via that berm. That's right in between the cans and the flight line. Best case scenario would be signal.

4:44 IO

Have you ever filed a flight line?

Witness

I have.

4:46 IO

As ODO? OK, how? Every time usually? Or is it kind of spotty based off the box?

4:53 Witness

Normally the aircraft that are on the flight schedule are going to have their flight plan submitted via OPS. And if it's an FCF flight, usually the pilot will reach out to you and ask you to submit a flight plan and then we do so.

5:06 IO

OK, And the flight plan is required, right, For every flight here.

5:10 Witness

I'd have to check with the flight OPS SOP to double check that.

5:12 IO

OK. All right. There you go. While we're on the SOP topic, do you ever know when, when the last time the SOP was signed or have you read it?

5:22 Witness

I have read it. I can't remember off the top of my head the last time it was updated.

5:25 IO

OK. Would you say that, so you guys have the VMM-363 SOP out here. Do you guys, do you have the SOP for back home at your home squadron?

5:38 Witness

We do.

5:39 IO

OK. I'm wondering if this is right, as H1 guys and 22 I know there's a lot of different SOP's floating around out there. As H1 guys, what are you bringing? Like what are you falling under? Are you falling under the VMM 363 SOP or are you falling under HMLA-367?

6:00 Witness

363 SOP

IO

VMM 363, That's OK, all right.

6:09 IO

Would you say that's a combined SOP? Would you say that addresses H1 requirements sufficiently?

6:17 Witness

It does not address H1 requirements in that SOP.

6:19 IO

OK, so where it doesn't address H1 flight ops what do you use?

Witness

I would have to check with the command in regards to what they want. But other than that, I'm falling on the 363 flight ops SOP. If anything, if there's any gray areas, I'll get in touch with the command and see what they want with the pilot coming with the aircraft.

IO

Good. What kind of training did you guys get when you came out here? I know it was kind of a last-minute thing, right? As long as you guys figuring out when you're going to come out here.

6:55 Witness

Yeah, we had an informal class from one of the VMM Marines on ODO procedures,

IO

ODO procedures. OK, who was that? Who gave you the last, do you know?

7:02 Witness

I cannot recall.

7:04 IO

OK, you remember kind of what you guys went over

Witness

briefing ODO briefs how to go about giving a proper brief information required in those briefs.

7:13 IO

OK. Would you say that everyone in your det was so far that brief?

7:20 Witness

They should have been per the flight schedule? I cannot recall every single name that was present at that ODO brief. I know some were absent because of attending duties per the flight schedule, but it was on the schedule for the H1 pilots to take part in that ODO class.

7:36 IO

OK, it on the schedule.

7:39 IO

Sorry And just to clarify again, when you'd say it'd be attending duties per the flight schedule, was that a consolidated VMM 363, re forced flight schedule or is there a different flight schedule for the H1 det?

7:52 Witness

It's all scheduled

IO

it's all one. OK. Was it all one when you first got on deck?

7:57 Witness

Yes.

8:01 IO

OK.

8:01 IO

Do you know if there was a roster for that training? Did you sign a roster for that training?

8:07 Witness

I did not sign a roster

IO

before standing ODO by yourself Is there any kind of requirements there in the train that you got

Witness

per the flight ops SOP I know it says it requires one or two UT's, one in the morning and then one in the evening, and then to be shadowed by a more senior pilot who's familiar with ODO procedures. And to me personally that was not given.

8:33 IO

OK.



8:33 Witness

If that answers your question

IO

So you were not given U training.

8:37 Witness

I was not. I was given. I was not given the local training

IO

for day or night?

8:41 Witness

Yeah.

8:42 IO

OK.

8:42 IO

So you didn't go to under trainings. Did you get the shadowing by the senior pilot

Witness

I did not.

8:48 IO

Have you stood ODO?

8:50 Witness

I have stood ODO.

8:53 IO

OK, thank you.

8:54 IO

Is it your perspective that occupational guys have not gotten that under training or do you know of anyone else that maybe have not gotten that under training?

9:05 Witness

I can't speak for the pilots, I cannot.

9:07 IO

OK, I'm sure. And you happen to remember the last time a pre mishap drill was conducted or was it conducted when you guys were out there?

9:19 Witness

We conducted A mishap drill. I'm unsure the exact date, but we did conduct A mishap drill prior to the actual mishap that did occur.

9:25 IO

OK. I know you mentioned you read the SOP which I can appreciate. You mentioned that it requires 200 trainings. You mentioned you hadn't gotten the under training. Did you talk to anyone about that, talked to OPs

talk to DOS, "Like hey I can't stand ODO because I haven't gotten under trainings per the SOP" or was that brought up to anyone?

9:48 Witness

It was not brought up to anyone.

9:50 IO

Do you know if it was tracked like across? Was anybody in the Ops tracking who received the UTS?

9:58 Witness

I'm not sure if anyone was tracking that.

10:13 IO

How would you describe the command climate for doing the 363 reinforce?

10:19 Witness

Strong.

10:20 IO

Strong, can you elaborate on that?

10:22 Witness

I have confidence that the command has our best interests in mind and looks after their Marines. And I'm confident that if any issue were to arise itself with myself or one of the Marines of my shop that we can run that at the chain of command and it'll be dealt with accordingly.

10:45 IO

You think you get the guidance and direction you need from the squadron leadership?

10:50 Witness

I do.

10:51 IO

Do you think as a det you receive that, let me rephrase. Did you for sure receive the guidance you needed or as an H1 det has more institutionally receives that from the squadron?

11:03 Witness

I feel like that's an opinion.

11:07 IO

And yeah, I'm asking for your opinion.

11:08 Witness

Yeah, I prefer not to answer that.

11:12 IO

And the reason why

Witness

'cause I don't have. I don't understand what right would look like in regards to that.

11:18 IO

Yeah, tell me your background, like how long have you been in the fleet? How long have you been with your squadron

Witness  
checked in April of this year,

IO  
to 367?

Witness  
Correct, Sir.

11:31 IO  
You came in [inaudible].

11:34 Witness  
I did, yes, Sir.

11:38  
Then first of all right,

Witness  
Correct.

11:41 IO  
OK. And then deployed a couple months after that out here. Am I understanding you? You've got here July time frame.

Witness  
We did July 12th.

IO  
OK.

11:54 Witness  
Yes, a couple of months after I've checked-in we did come to Australia.

11:58 IO  
I appreciate your calendar. I don't know what right looks like. This is all I know right now. I appreciate that. Like, you know, you've only been with this squadron a couple of months and you've only been in the fleet a handful, so I appreciate that. Thank you.

12:13 IO  
What times did you see on ODO at 303?

Witness  
303?

12:17 IO  
Yeah.



Witness  
about 7-8, give or take.

12:31 IO  
Is that like, normal? Is that the normal number? Yeah, for about every. Everybody goes through is about 7 to 10, something like that.

12:38 Witness  
I'm not sure what the normal is, but that was me personally.

12:40 IO  
Okay, All right.

12:41 IO  
What about 363 after you checked in.

12:44 Witness  
About 4-5

IO  
OK.

12:48 IO  
Did you feel comfortable not being under trains, standing ODO personally

Witness  
Did I feel comfortable? Yes,

IO  
you did feel comfortable. OK. It's OK if you didn't like. In other words, let me rephrase that because that's a good question. If you didn't feel comfortable, I'm not leading, I'm not leading you, just providing context. If you didn't feel comfortable, it's OK because you were assigned that duty. You were assigned the duty. You didn't voluntarily say like I'm going to go stand ODO. You were assigned, you were placed on the schedule. So with that placement and the assignment on the schedule as that duty holder, that's what we're asking is were you comfortable with that assignment and if you were and you still stick to that, great. I'm just trying to provide additional context to it. That's all.

13:47 Witness  
I was comfortable with the assignment.

13:49 IO  
Here's another kind of slightly different question, but similar to different a different way of thinking about the same thing. Would you have felt comfortable telling somebody you were uncomfortable with that duty if you hadn't been?

Witness  
Yes.

14:03 IO  
OK, thanks. Can you describe the level of integration between the H1 det into the squadron?

14:14 Witness

Obviously we're pretty well integrated. We do mesh pretty well with the VMM pilots.

14:19 IO

Why did you say that? Because you guys get along personally or because OPS are fully integrated, because the schedule's integrated,

Witness

From my standpoint, we work well together in making sure tasks are accomplished.

14:30 IO

OK, Do you have any examples? And I'm not trying to play stump the jump or anything.

Witness

No examples.

IO

OK.

14:40 IO

I really am just trying to get a feel for like what your perception of what it is. Just give me one second.

15:03 IO

Do you feel empowered as the ODO to enforce the requirements?

Witness

As in regards to signing load comps?

15:11 IO

Yeah, signing load comps, Signing RAW's.

15:14 IO

Actually, I'm going to rephrase that question too in a different way. What do you feel comfortable doing as an ODO? What authorities do you feel comfortable executing as an ODO?

15:27 Witness

Executing the flight schedule as it is written.

15:31 IO

That's it? Just execute the flight schedules written?

15:34 Witness

Ensure the tasks are accomplished for the flight schedule.

15:38 IO

What if they're not?

15:42 Witness

I would route that up a chain of command.

15:44 IO  
OK?

15:44 (b) (6)  
Who would you go to?

15:48 Witness  
Whoever's available at that time in regards to OpsO, CO, XO, ALO.

IO  
Would you feel comfortable taking that action if they weren't available? Would you feel comfortable taking action in place of any of those individuals?

16:15 Witness  
I would take action with whatever authority was delegated to me by the flight Ops SOPS ODO.

16:20 IO  
OK, So what would you do if the appropriate paperwork wasn't turned in?

16:33 Witness  
I'd ensure that paperwork was completed prior to the aircraft taking off.

16:37 IO  
And how would you do that? What are some ways that you would do that

Witness  
By reaching out to them via signal or radio.

16:44 IO  
Would you attempt to prevent them from taking off?

16:46 Witness  
I would.

16:48 IO  
Would you recall an aircraft if they had already departed, and you discovered that that was not done?

16:54 Witness  
I don't believe that authority is delegated to me in the flight Ops SOP. I would have to check on my chain of command before executing that action.

17:06 IO  
OK.

17:06 IO  
Do you have anything else, (b) (6)? Got another last warning that I alert all of our witnesses right.

IO  
One thing, I'm sorry. So do you have access to ITS for the VMM?



17:32 Witness  
We do. I do.

17:33 IO  
Do you?

17:33 Witness  
I do.

17:35 IO  
Do you brief ITS statuses for stand minutes, NATOPS changes, updates, and EP's?

17:44 Witness  
I do.

IO  
You do? What if those guys are not current on those when you're briefing the ODO brief?

17:51 Witness  
I would say that in the ODO brief X so and so ensure to complete your NATOPS EP exam prior to walking and ensure they do prior.

IO  
Following you notifying them do you go back and check and verify that it's been completed?

18:05 Witness  
I do.

IO  
And if it's not completed then what do you do?

18:11 Witness  
I would route that up the chain of command and tell them that X so and so has not finished their for example, NATOPS EP exam prior to executing flight.

IO  
And so since that is a requirement, to check those off to ensure that you are indicating to the chain of command that you are updated on the most recent changes in all of our governing documents. If they're not in the CO, XO or OpsO is not available. Would you take action to prevent them from running?

18:42 Witness  
CO, XO, just so I have understand this question correctly, the CO is not available. The XO is not available. The OpsO is not available. The AMO is not available.

18:53 IO  
The AMO in all of those chains of commands are not in your reporting unless it's delegated somewhere that the AMO takes over for the CO in his absence. For flight operations specifically, which I don't know that your SOP does, I don't believe the AMO would be in your reporting as an ODO. So if the XO, CO and the OpsO are not available, you know ITS is not updated, they don't finish it prior to departure. Would that be a trigger for you to prevent them from launching and let's even take it one more further, let's just go down the road and the AMO is

available. Would you confer with the AMO and if that. If the answer's yes, that's totally fine too. I'm just trying to figure out how would you how would you do it?

19:42 Witness

Yeah, he's a higher-ranking authority than I, so yes, I would confer with him.

19:45 IO

OK. And if the Amo is not available.

Witness

The AOpsO.

19:51 IO

So you're saying you would just continue going through the chain of command to have them give you the authority instead of preventing them from launching?

20:02 Witness

I would.

20:03 IO

OK, All right.

20:06 IO

(b) (6). This is the same warning that we give every witness, you're advised that this is an ongoing investigation. Please don't discuss your testimony with any other witnesses. There's obviously some other investigations going on as well. If you're required to discuss your testimony with them, you obviously can. Just don't discuss with anybody else. Any questions?

20:24 Witness

No questions.

**Interview Summary of (b) (6), VMM-363 (REIN)**

0:00 Investigating Officer

All right, this is (b) (6), one of the investigating officers on the JAG Man investigation into the Mishap Dump Truck 1/2. The date is 5 September 2023. Time local is 1350 with (b) (6) who's the Copilot of the lead aircraft, the Cobra for the H1 section of supporting that afternoon and we have (b) (6) and (b) (6) in the room for the interview you might have at a future date or may already have been interviewed as part of the Aviation Mishap Board as a separate inquiry from this command investigation. No statements that you made as part of that inquiry will be provided to the Command Investigation Team. Statements made as part of the Aviation Mishap Board or privileged, and the Command Investigation Team does not have access to them. Those statements will be used for safety purposes only. Prior to beginning this interview, you're advised your rights under the Privacy Act, and if applicable, by your rights regarding the origins of any injuries you sustained in this incident. Do you have any questions about those documents?

1:04 Witness

I do not, Sir.

1:05 Investigating Officer

OK. It's important that you. It's important that the information you provide is completely truthful. It is a violation of UCMJ to knowingly make a false statement Under oath. Do you have any questions?

1:16 Witness

No, Sir.

1:16 Investigating Officer

And can you verify that you did make an oath earlier at the beginning of our meeting?

1:22 Witness

I did, Sir.

1:23 Investigating Officer

OK All right. So, what I'm going to do is I'm going to run through some questions. Some of these will probably sound familiar to you from the forms that you filled out earlier and you know, just to your just to your best ability into what you remember, you're going to try to explain and provide details to the questions.

1:45 Witness

Yes, Sir. All right, so this will be with regards to the mishap crew. These questions are regards to the crew or Dump truck 1/2 were you tracking or aware of any deficiencies, personal performance factors with the crew on board Dump truck 1/2.

2:01 Witness

I was not.

Investigating Officer

OK, from an IMSAFE perspective. Do you believe or have evidence that the crew, or really for that matter any crew, was not in accordance with the requirements of IMSAFE during this flight or even on previous flights?

2:19 Witness

I do not, Sir. Following the brief, I saw them outside finalizing their crew brief and it looked like Major Lewis had just got done telling a joke or something, they're all laughing and everyone seemed to be awake and in good spirits.

2:33 Investigating Officer



How would you describe the behavior or demeanor of that crew which sounds like you did lean on that a little bit,

Witness  
Yes Sir.

Investigating Officer  
and really any crew that was participating on the flight that day.

2:45 Witness  
So it sounds like everyone was excited to get started with it. We've been obviously working out toward that for a few days prior that's everyone was pretty much it was an all-hands effort planning. I think everyone was excited to execute. Everyone looked alert and awake both for the combined brief or the confirmation brief the day prior and then individual crew briefs everyone looked attentive and on their game.

3:11 Investigating Officer  
OK. All right. All right. So, this portion at 1353 is going to be discussing the environmental factors for the day.

3:24 Witness  
Yes, Sir.

3:24 Investigating Officer  
Do you recall wind direction and speed during the mishap event? And if so, can you describe what it was?

3:29 Witness  
Yes, Sir. Winds aloft from about 1000 feet up to 3000 feet were out of the east, so 090 fluctuating from 25 to 30 knots.

3:41 Investigating Officer  
OK. Do you recall how you know what the wind speed was?

3:48 Witness  
Yes, Sir. We were having a having a crab really, really hard into the wind to stay overhead at the time of the crash. So, after trying to work that and I checked the wind bug to figure out what was going on and it was staying about anywhere from 20 to 30 knots. We kept scanning that throughout the day.

4:05 Investigating Officer  
Do you recall the sun direction on the flight that day?

4:09 Witness  
I don't know, it was high in the sky though.

4:10 Investigating Officer  
What about the visibility?

4:15 Witness  
Visibility was I'd say at least 6 miles. A little bit of like the smoke and haze in the air, but really no, no issues. It was definitely 6 miles, OK.

4:26 Investigating Officer  
And then can you describe the bird activity that was going on that day? And was there a BASH report that was given to anyone either by the ODO at any point prior to the flight?

4:39 Witness

That's right. I don't recall any BASH report being passed to us. I also don't remember really seeing any bird activity throughout the duration of the day.

Investigating Officer

Do you personally remember seeing any birds in the objective area?

4:54 Witness

I think I was mostly heads-down in the sensor, but I don't remember. Don't remember seeing any birds we didn't have to evade at any point. I don't remember any. No bird activity stands out to me.

5:12 Investigating Officer

OK, thank you. 1335, we're going to talk about the mission planning.

Witness

Yes sir.

5:18 Investigating Officer

So describe the mission being conducted that day.

5:21 Witness

It's going to be an air assault. Insert onto Percatmore Airfield or LZ Crow. From there, we're going to drop off the first wave at Crow. Second wave was going to be dropped in north at objective Alpaca LZ Ante that was going to have to be in two different waves, if you will, because the C27's has fallen out two days prior and then my understanding was from there ground forces were going to retain the airfields and potentially push N from there.

6:03 Investigating Officer

Was there any confusion about what the mission was or how the execution of the mission was going to go in the pre-flight planning? Was there any changes that were made relatively close to the brief timeline that you can remember with regards to the flight execution and or with the pack slowed out.

Witness

As far as initial plan was concerned. Really the big wrench that got thrown in was the C 27 falling out, but we were there at Robo with the ground forces commander, and we were able to talk through it together and we pretty much agreed. It simplified the equation a little bit as at least from the Escort side because it was one section of Ospreys that were going in instead of a C27 that would also have to Escort. So that did simplify things a little bit where our goal was to provide continuous overhead coverage and that was going to make it a lot easier just having one working one objective at a time, if you will.

7:07 Investigating Officer

(b) (6), can you talk about what the intended length of the mission was? What was the, what was the planned mission length?

7:13 Witness

My understanding of it was, and I'll [inaudible], I apologize, I was kind of zoomed in on our first our piece of the pie. I think we're just supposed to do one time on station, come back and that was going to be it for us. But my understanding was total air mission was supposed to take about 5 hours from start to finish and then from there ground forces would be remaining on deck for several days. The exact point at which they were going to terminate that? Not sure.

7:44 Investigating Officer

The PZ operations. Do you recall where the PZ operations were supposed to go and where they actually went?

7:52 Witness

Yes Sir. If memory serves, they wanted to do the pickup to the West side of runway 3/6. I didn't pay a whole I should've paid more attention to it but pick up zone. That wasn't our slice of the pie. So, my limited understanding was that somewhere over by the PAX terminal was my understanding of it. They were hoping to pick up there something happened. They weren't able to do that. So, the alternate PZ was here at the FRA that's right outside the gate there.

8:23 Investigating Officer

OK. Do you recall if there was a mako that was identified with the mako gate and were they set up in the PZ in accordance with their serials and their sticks accordingly?

8:33 Witness

Yes sir, we'll get to the stick or the serial swap in a minute here. But yeah, there was a Mako gate established just at the end of the barricade, just on the opposite side of maintenance control from us that was serving as the Mako Gate. And then get my directions mixed up here. But troops would essentially go through the gate, have to turn left to stay off the flight line, and kind of follow the edge of the flight line around over toward the fuel pit area. From there, they'd be loaded on the Osprey. My understanding is that one of the Ospreys momentarily went maintenance down for some troubleshooting. So, they switched the serials, which is why Lone Star Five (b) (6) was on Dump Truck 1/2.

9:25 Investigating Officer

Did you find that out prior to their departure or afterwards?

9:29 Witness

Afterwards Sir, we were surprised to hear them on deck, but yeah, we found out the serials had swapped and we looking back on it can view that as a fortunate sequence of events. My understanding is if those serials had not swapped the Senior Marine on Dump Truck 1-2 in the back would have been a Corporal. Well, I'm sure would have crushed it, but (b) (6) having a radio was instrumental, I would argue, in getting everyone out and helping us get head counts. And he was setting up 9 lines and he knew we had the 1 urgent 2 priority. He was, you know, instrumental in all of that. So as tragic as that was, we all went back and talked about it. We're very thankful, those swapped because I think that would have looked a lot different. Had (b) (6) not been there.

10:23 Investigating Officer

Thank you for sharing that that's good. Can you describe where the fuel pits are in reference to the rest of the aircraft on the flight line?

10:34 Witness

Yes, Sir. Would you mind if I pull up a map or something?

10:36 Investigating Officer

Probably, yeah sure.

10:38 Witness

Essentially,

Investigating Officer

Do you mind if you draw?



10:42 Witness  
Yeah.

(b) (6)  
Do you want to borrow my paper.

10:53 Investigating Officer  
Oh, you want that paper?

10:55 Investigating Officer  
Oh yeah, a white paper.

11:02 Witness  
So essentially the Osprey and H1's use the same fuel pit. It's on the other side of the berm here, and you access it via taxiway alpha, and it essentially makes a horseshoe shape. That's where the other V22's are parked at this time, and the fuel pit is immediately adjacent. So, gentlemen, essentially taxiway off the Parallels, runway 1129 in general flow for H1's as you flow in through here. There's Osprey parked here. The berm separating us from the flight line is right here and you taxi along here and set up in the fuel pits oriented that way. So, lead dash 2 and just to make it easier on the fuel as we tend to scoot a little bit closer so the hose reaches.

Investigating Officer  
OK, thank you, you can keep that I am probably going to have you draw something else in a few minutes.

12:19 Witness  
Yes, Sir.

12:19 Investigating Officer  
OK, Thank you. What were the planning considerations for fuel on board and take off from Darwin for you guys. And then if you can remember if you've heard fuel states briefed for the Ospreys at any point,

Witness  
Sorry, I don't recall fuel states being briefed for the Ospreys. My understanding was that that was going to be pushed during their section brief. So, I do know the EFL and AFL spoken before the confirmation brief about trying to keep items covered in the confirmation brief applicable to all TMS's and then the TMS specifics and continuation fuels were to be brief in the section, individual section briefs, sorry. So, the first half of your question.

Investigating Officer  
Fuel [inaudible].

Witness  
Fuel stressor. Essentially, we had different bingos based on we build a North and South bingo based on the furthest away OA HA for objective cheetah and objective alpaca. So essentially just the most conservative point that we would realistically find ourselves in, we build our bingos out of there. And I think for the Cobra, we planned the 400 instead of the NATOPS. Yeah, instead of 300, just to give us a little bit of buffer with winds and going over water and tower being a little, you never know what you're going to get on intersect (sic).

13:46 Investigating Officer  
What about what about your departure fuel?

Witness

Departure fuel hold short. I'd have to go back and look at our fuel card to get the exact figure. But we calculated, I can't remember exactly how much, how much time on station mission fuel whole short fuel gave us, but we had to 2 fuels planted below whole short fuel . We're just going to come back to the pits to top off before we launched.

Investigating Officer

Reasonably the [inaudible].

14:18 Witness

Yes, Sir.

14:18 Investigating Officer

Yeah, yeah, great. Thank you. Did you guys have refueling, multiple refueling options? What were your refuel options or is this the only refueling site for you guys?

14:39 Witness

No, this is the only, the only site available to us somewhere. So, we briefly looked into like could we set up a FARP on Melville Island and it was deep north but that didn't happen.

14:51 Investigating Officer

Can you describe the ground tactical plan for this mission?

14:59 Witness

So I believe it was golf company was feeling kind of like a Recon role and they were we had RFA as set up on both LZ's can't remember exactly how they plotted out. There was three RFA's per LZ and we were going to be told in a situation update which RFA's they were occupying and obviously those ones would go active whichever ones weren't occupied weren't in play. So, Golf was essentially doing Recon prior once we inserted the remainder of the GCE, my understanding was that they were tasked with retaining airfields and then potentially pushing up north toward the northern side of the Melville Island.

15:44 Investigating Officer

OK, thank you. Can you just describe what the planned mission profile was for the conduct of the flight like to the best that you can remember for the plan, what was the brief plan for execution of the launch, the execution and recovery?

16:15 Witness

OK yes Sir. Plan was for H1's to arrive on station 20 minutes prior in order to sensor soak LZ Crow. We're starting with Crow and then second wave would be alpaca to be escorted by a different H1 section. Plan was for H1's to get there 20 minutes prior and then we were going to position in the Southern HA to affect the rejoin as they came from checkpoint prior through the IP. That was the original plan. There was yeah 20, 20 minutes of sensor soak attempt to gain comms with golf company on deck and then yeah, essentially commence attached escort en route to the front the IP inbound.

Investigating Officer

And then following that first insert what was the next plan.

17:16 Witness

So we had briefed the DAS to CAS transition and what that would look like up to the RFA's in play plan was for initial overhead cast coverage until they had a foothold on LZ Crow and then from there once that was complete, we're expecting to bingo out. My understanding was then the second section of H1's would escort the second line with the V22, so we'd come back to your hot seat, take their second serials, and then launch from there. Similar if I remember correctly, and I apologize, I was kind of zooming in on my piece of the pie. I think there's going to be a little bit less for the 2nd wave. They're trading a little bit less sensor time prior to package

driving in exchange for a little bit more backside CAS coverage to support both Objective Cheetah and Objective Alpaca. If I remember that correctly,

Investigating Officer

The plan for the launch for the Ospreys was together correct. They're going to launch together as a section.

18:29 Witness

Yes Sir.

18:30 Investigating Officer

That was the plan.

18:30 Witness

Yes Sir. Section launch drop sticks off at crow and then come back crew swap and then launches a section again to Alpaca.

18:42 Investigating Officer

And the plan for each one section departure was as a section as well, correct?

18:46 Witness

Yes, Sir.

18:50 Investigating Officer

What was the planned ingress profile for the Ospreys going into the landing zone?

18:59 Witness

Would you mind if I drew that out too, Sir?

19:03 Investigating Officer

I would appreciate if you draw up to your memory what the planned approach was right to execution we can maybe draw out what you remember they executed.

Witness

Yes sir, this plan was essentially they briefed it as a 90° tactical approach N approximately that way. So, from the IP which I believe the Southern one was Subaru. From IP Subaru they'd be pushing N until essentially be Percatormore or LZ Crow executing a 90° approach with dash 2 on the left, lead on the right. And then they would land essentially on online with each other on the runway.

20:09 Investigating Officer

So you do remember that what I'm hearing you say is? Do you remember the briefing that Dash 2 would land to the north and lead would land to the South? In an echelon left formation.

20:24 Witness

If I remember correctly, that is what they briefed. I wish I had my smart pack here. It had the -

20:32 Investigating Officer

We have the references.

20:33 Witness

Yes, Sir.



20:33 Investigating Officer

If you don't remember completely, that's OK too.

20:35 Witness

OK. Yes, Sir. I don't remember that with like absolute fidelity. But I do believe yes that's Dash 2. And leading to the South.

20:44 Investigating Officer

That's OK we'll we can reference the other products. I just didn't know if you might know that off the top of your head that's fine.

20:49 Witness

Yes Sir. OK we're at time 1410. We're going to move on to mission briefing questions.

20:53 Witness

Yes sir.

20:54 Investigating Officer

We're all crew members participating in the mission at the brief to include escorts and if not why and for you obviously you since you were the escort the assaults is really so for the EFL AFL brief that happened at the evening prior for the brief was everybody present at that brief?

Witness

To the best of my knowledge, yes Sir.

21:18 Investigating Officer

OK and can you tell me what the what the original planned time for that brief was?

Witness

The exact time the brief kicked; I don't recall Sir. I apologize.

21:31 Investigating Officer

It's OK. Did the brief occur at the time that it was intended or was it delayed?

21:46 Witness

We delayed one of our briefs. We delayed Sir, I don't remember. I don't think it was the EFL AFL brief. I think that was our section brief. We're just running into like some computer issues and printing products, and we wanted like products in front of everyone that would chum up during the brief. I believe the EFL AFL brief kicked on time.

22:08 Investigating Officer

Was an ODO brief given for that.

22:09 Witness

It was Sir.

Investigating Officer

Was an ODO brief given the morning of?

Witness  
Yes Sir.

22:13 Investigating Officer  
OK And then during the ODO brief was forecasted weather for the objective area provided to include slap wind direction speed and bash?

Witness  
Slap wind direction and wind information was I don't believe we briefed bash Sir. I don't think that's usually something we. There's not a lot of birds that we've seen.

Investigating Officer  
OK. Do you remember if wind direction at Melville Island was briefed during the ODO brief?

Witness  
That I don't recall, Sir. I'm not sure if we just briefed Darwin. If we kind of translated Darwin winds to Melville Island winds. I don't recall.

22:52 Investigating Officer  
It's OK. All right. I did the brief presented deviate in any way from the planned admission.

22:59 Witness  
Yes, Sir.

23:02 Investigating Officer  
Was the planned approach profile briefed for the Ospreys on their ingress?

23:11 Witness  
I don't believe so.

23:12 Investigating Officer  
Were NATOPS crew briefs conducted?

23:15 Witness  
Yes, Sir.

23:16 Investigating Officer  
Were risk assessment work sheets filled out in accordance with squadron, group and wing standards.

23:20 Witness  
To the best of my knowledge. Yes, Sir. The H1's, we did ours as we normally do at the ODO desk.

23:25 Investigating Officer  
Do the H ones and MV 22's submit their RAWs, load comps and weight powers at the same desk?

23:33 Witness  
Yes. So, they get submitted there. I'm not quite sure how the H1 or the V22's do. There's but we have a risk assessment sheet that we do on the back of our weight and power and then there's the squadron risk assessment worksheet that stays at the ODO right underneath the schedule.

23:51 Investigating Officer  
What was the assessed risk for this mission?

Witness  
Overall risk? I don't remember Sir.

23:57 Investigating Officer  
Alright, did any of normal activities interruptions due to phone calls, text messages, people getting pulled out for meetings occur during the brief. They could have distracted aircrew.

24:10 Witness  
No Sir.

24:11 Investigating Officer  
Was an on-scene commander brief conducted and if so who was identified during that on-scene commander brief.

Witness  
So that on scene commander was briefed during the contingencies portion of the brief and we slated with him on the aircraft with the most situational awareness. Who would assume on scene commander, we didn't pin a specific person to it.

24:32 Investigating Officer  
Was that briefed in the EFL AFL brief or was that briefed in your section brief?

24:42 Witness  
Believe it was both, Sir.

24:45 Investigating Officer  
All right. So, time 1414, we're going to go to mission execution prior to mishap events. Once the aircraft were manned for this machine were there any unexpected delays to plan taxi or take off that would be that would be really for both you guys and for the MV 22 and that includes you know PZ operations that includes "Bump", "Delay", "Straggle" that includes maintenance delays anything like that.

25:09 Witness  
OK Yes Sir. Duct tape 3-4 got a no start. I don't remember which engine, but they went to start and no light off and one of the crew chief smelt fuel so they shut down and troubleshoot a fuel leak and duct tape. 33 (b) (6) and I launched as a single just to keep timeline going and we had briefed we could straggle out to the objective area. Everyone agreed on that So we launched and they just agreed if they got another aircraft that straggle out there and catch up with us. So, we launched wish I might smart pack with me but it was 830 launch like per the schedule so we launched then. I can't remember if we were told this over the radio or if we just found out later that one of the Ospreys it was troubleshooting, one was troubleshooting and that they'd swap serials. I think we found that out after. I don't think I knew that in the objective area. But yes Sir, my understanding is that one of the Ospreys fell out, so the serial swapped to get (b) (6) and other (b) (6) and the Corpsman with a couple of their like key personnel to get them on the objective first.

Investigating Officer  
For the Straggle plan.

Witness  
Yes Sir.



Investigating Officer

On the Ospreys do you remember the EFL AFL brief if they if they briefed what their Straggle plan was going to be and also what their rendezvous plan was going to be.

26:57 Witness

So that part I don't remember how long they said they would like delay or what they're umm I want to say they briefed for that good aircraft would orbit over a GRP (ground reference point) and then essentially just conduct a rejoin over orbiting over a FR checkpoint. But I don't remember that with absolute fidelity probably getting ahead of myself, but I do know they ingressed together. They called, they called checkpoint prior and slew the sensor over there and they were together as a section. So, I do know, I'm not quite sure when they when it was that they rejoined, but they showed up to the objective area together.

27:33 Investigating Officer

So what I'm hearing you say is they, they did depart separately that you don't know.

Witness

I don't know that with any fidelity.

Investigating Officer

That's good, I'm just trying to get clarity.

27:43 Witness

Yes, Sir.

27:44 Investigating Officer

All right. If PZ was not on the flight line in Darwin, were there any unexpected delays in the PZ operations? And I know that we did the swap and everything like that, but if there's anything else that you can expand upon, that's kind of where I'm getting at.

28:01 Witness

Nothing else to my knowledge, just nearly they had to swap serials due to troubleshooting. That's all we got.

28:14 Investigating Officer

OK, so this this portion we're going to focus on the execution of flight from what you can remember from your observation.

28:24 Witness

Yes sir.

Investigating Officer

So can you describe the flight from takeoff out of Darwin through the PZ and to Melville Island to the best of your ability both from what you know for the H1 section and the MV 22 section. Obviously the MV 22 section was the one that conducted the PZ operations but from your perspective as the escort package can you describe the flight as it occurred to the best your ability.

28:53 Witness

OK yes Sir. I guess starting from the H1 side we pretty much tower gave us runway. We weren't sure towers are going to let us depart out of the north, so we had planned for worst case scenario. They made us depart out of the South, bob all the way around the airspace and then push N They gave us runway 3 six straight out so that was that saved us a ton of time and fuel. So, (b) (6) and I departed, feet wet, fenced in and then essentially just started trying to reach. One of our first priorities was trying to get a hold of golf company to

figure out which to confirm which of the RFAs they were and weren't in. So, we had to work on that. Didn't hear anyone initially. As we continued with ingress, we which HA we went to initially there's the Western, Western HA and BP, it was really windy. So, trying to stay in the HA was becoming a little bit impractical or just more labor some than it needed to be. So we essentially started to orbit from the BP HA kind of just circling the two. I think it was longer since our own time. So, we started scanning around because the day prior we were told they were vehicles symbolizing enemy activity. We saw White pick up on the runway and we're trying to inquire about whether that was, well, that that was a player that was just an admin vehicle, so kept scanning up and down the runway just trying to catalogue other vehicles and a couple of them went parking. You can see people walking around think probably about 15 to 20 minutes after we'd gotten into the objective area, we heard Duct Tape 34 in Grassangs. We asked them like because (b) (6) had done the area familiarization with the GCE the day prior. We asked them, hey, the vehicles you saw, was it just a white pickup? And he said had like a big red X on the bonnet or the hood. So, we figured that the vehicle we saw wasn't in place. We kept looking around from there. We were climbing, trying TATC, Primary, and Tertiary weren't at no point throughout the day were we able to get a hold of golf company, the Recon element. So, we're troubleshooting that for a while and getting a little bit. We were a little frustrated that we couldn't see them.

31:27

We knew they're in the tree line somewhere but couldn't get comms with them. So, we yeah, orbited around, kept trying to do that. (b) (6) his section, I believe it's HA Sheila the just to the South, southeast of the LZ. They said they were going to go there. We were going to affect the rejoin from there. So we joined up. We passed on the vehicles we had seen and there were a few other, I don't know if they were ADF, brown vehicles over there. The airfields, we talked them onto those and kept working that bit with the sensors, just trying to get correlated and trying to find where golf company was. So we knew which RFA's we were going to honor per the brief. If we couldn't, the Lost comm plan was just to honor them all as active. So obviously we wanted to find them. So we could, you know, remove some of those, but we never couldn't find them. We couldn't get them on the radio from there. Yeah, we're orbiting Sheila and we heard the V22's call point Gambier inbound. And I'll admit that's Gambier is the first point at which I have any SA on what the V22's were doing as far as like leaving tower towers, airspace or anything up until Gambier I'm not really sure what they what they did or how they did it, but they called point Gambier inbound so we couldn't see them initially. So we slid the sensor over there trying to find like thermal signatures and we picked them up pretty quick. So they were a little way away but moving quick. So I would (b) (6), and I threw a track on it just to keep tabs on it so we could keep doing what we were doing in the sensor and watch them padlock or whatever. And then from there we were both in the HA. We're trying to figure out how to, we briefed attaching it escorts at the 5:00 and 7:00. So we're briefing how we wanted to, how we wanted to do that (b) (6) was like teaching a little bit too. I'd never done an Escort X before, so he was teaching my (inaudible) like really quick and to pull pitch like you're going to get left in the dust if you don't, like get a running start. But then you got to be ready to stop quick too, because they can like, air brake pretty fast. So he was kind of talking through this. He was on controls; I was on sensor and just system inputs. And yeah, from there I do remember looking at the sensor and watching it track them from Gambier up to the IP at the IP, I don't remember clearly if I left the track on them or if we slid the sensor back over to the zone just to keep an eye on that. I'm pretty sure we pulled the track off and move the sensor over to the zone just to get the warm and fuzzy that nothing had changed over there. Sorry, just keep going with that or I don't feel like I might be going outside this question?

#### Investigating Officer

Keep going so the so they hit Gambier, they go up you guys visually acquire that prior to Gambier. You guys pulling pitch in order to get yourselves into a position so that when they basically are a beam you, you're able to join at the five and seven. They report IP inbound what IP was it was the name of the IP.

#### Witness

Believe it was IP Subaru should have been the southern one. I think Suzuki was for Alpaca should have been IP Subaru.

#### 35:10 Investigating Officer

OK. So they hit IP Subaru when they're at the IP, is that when you join on them where were you in the five and seven position? Where was your position.



(b) (6) a little further east in Sheila than we wanted to be. So we're playing a little bit of catch up and I brought the point like hey, yeah like they're going to slow down hard like we will. Like you're going to be able to catch them but just trying to get attached as soon as possible obviously. So as they came from the South pushing northbound (b) (6) was pretty far off to our left and I'm pretty sure it was (b) (6) made the sugar call. I don't think it was (b) (6), but (b) (6) essentially said, hey, we're attached right side heavy right now. I'll be essentially something to the extent I'll be pushing off to the 5:00 momentarily. So he pretty much took a cut away to join on five and seven and we were essentially, I'd say by the time we were here relative to the runway, they were about to start their turn. So admittedly, when they completed their 90° approach facing toward the runway, we are probably we were just a little bit less than 180° pointed the opposite direction. Looking down at them, I mentioned altitude deconflictions, believe they were tasked with 500 and below from IP and we were 900 and above. So we had altitude separation with them and then we watched them around the corner looking down and right to my about like 2:00 watching them execute that turn and then proceeding pretty much opposite direction we were as we we're starting our turn to join on them and then essentially just establish an overhead orbit.

37:23 Investigating Officer

When this was happening, we're we described what the Osprey section looked like as they were egressing from the IP.

37:32 Witness

Yes, Sir. So lead and Dash two was on their left side. I don't know if they call it echelon left, but that's how it looked. So yeah, Dash two was initially on leads left side and we were looking down watching as that was going on. And then from there you kind of keep going in there. From there, Dash 2, the nose kicked up.

38:07 Investigating Officer

When did the nose pick up?

38:09 Witness

When I'd call it? I wouldn't call it short final, but I got a kilom, one to 1.5 clicks. I don't they were not in. I don't think they're in full airplane mode. I wish we had the little dummies.

38:26 Investigating Officer

They were converting them?

38:27 Witness

Yes, Sir, they were. Yes, Sir.

38:28 Investigating Officer

Yeah.

Witness

They were converting. And then they started, it looked like they used that turn to shed speed. I don't know if that's what they do, but they look a lot, a hell of a lot slower after that turn. And then, yeah, they looked like they were in the process of converting. And then, yeah, maybe a 1.1 to 1.5 kilometers away from the runway dash 2's nose came up and it started to turn. And then I remember really clearly looking down and seeing the belly of it as it did essentially like a wing over like you know primary. Yeah, it picked up over and behind lead and I remember seeing it nose kind of pointed at us initially as it looking down at it and then it kept its turn in.

Investigating Officer

So.



39:23  
Yes, Sir.

39:24 Investigating Officer  
You're oriented towards the West essentially.

39:26 Witness  
We oriented West. Yes, Sir. In a right-hand turn.

39:29 Investigating Officer  
Yeah. So you're arcing right.

39:31 Witness  
Yes, Sir.

39:31 Investigating Officer  
Facing West.

Witness  
Correct.

39:33 Investigating Officer  
You're looking down at the 2:00.

39:35 Witness  
Yes, Sir.

39:36 Investigating Officer  
You can see them executing the right 90 turn.

39:41 Witness  
Yes, Sir.

39:41 Investigating Officer  
When they execute that right 90 turn, dump truck 1/2 is on the left side of the formation and an echelon left.

39:49 Witness  
Yes Sir.

39:50 Investigating Officer  
Once they complete that turn then you notice that dump truck 1-2 in the dash 2 echelon left position. As they're converting, the nose pops up.

40:01 Witness  
Up, yes Sir. And it begins to turn immediately.

Investigating Officer  
And it starts to turn to the right to essentially move to the right side of the formation. And that's why you're saying it's kind of pointing at you.

40:10 Witness

Yes, Sir.

Investigating Officer

Because you're South and West. So as they make that right turn, they're starting to turn their nose towards you.

Witness

Yes, Sir. That's correct.

40:18 Investigating Officer

That one from that moment right there.

40:21 Witness

Yes, Sir.

40:21 Investigating Officer

Then continue to, to go with what you observed.

40:24 Witness

OK.

40:25 Investigating Officer

When you said you saw the belly, was it the nose up, belly looking at it or was it the turn as they were coming through.

Witness

Rotate up.

Investigating Officer

So the belly would have been rolled from you.

40:35 Witness

It was turned, it started its turn essentially did a wing over and then as it started to roll out from its wing over, you know we saw its belly essentially. So it executed up, over and then down as far as ground track is concerned. Up, up, over, down. Obviously leads over here at this point, up, over, behind lead. We're somewhere over here looking down at this. (b) (6) is probably here. I drew the tail the wrong way, sorry. Anyway so we're looking down so as dash 2 up over down and then starts to pretty much starts to descend as it knife-edges through this like wing over type maneuver and then from there obviously we're pushing this way continuously. I'm watching. Initially our assumption was they were like trying to do a, I don't know if they do like a break proceed like a FARP entry like where they break for sequencing. We weren't sure. I don't remember that in the brief but we that was the initial thought like looked weird but just kind of wrote it off as something they did to gain separation if they needed to dump truck 1-2 then rolls wings level facing away from the runway and we're watched and it's probably at about our 3:00 at this point and I'm looking down watching it from there and I think nacelles were still I don't know exact degree but it not in full airplane mode and definitely not in full helicopter mode either.

42:20 Investigating Officer

Were their nacelles when they're in this mode right here and they're coming through the 90.

42:24 Witness

Yes Sir.

42:24 Investigating Officer

Were there nacelles higher at that point than they were when you saw them coming down.

Witness

I think as I recall it yes Sir.

42:34 Investigating Officer

So they were higher and they then when you last saw them going down, looked like they moved them down.

42:42 Witness

Watch that over. Yes, Sir, I believe so.

42:46 Investigating Officer

So you know, I'm going to press pause on that really quick.

42:49 Witness

Yes, Sir.

42:49 Investigating Officer

This is actually really good. This is really exciting for us. So do you remember dump Truck 1/2 when they crossed over? Can you remember whether it was above Dump Truck 11 or do you remember it passing laterally through the tail of dump truck 11? And from your position I understand that made it may be difficult. Can you remember whether or not if they were above or if they were at the same altitude when they passed by?

Witness

As far as altitude at the top of their wing over. I believe the from where I saw it they were higher I don't think. I don't believe at any point 1/2 was physically above, over the top of 1/1. But yeah, I don't think at any point they were physically above 11, but essentially 11 on final 12, probably just back ever so slightly above.

43:53 Investigating Officer

So the next question is, so it sounds like you're saying they were behind them, like you're saying they didn't cross over the top one, which would indicate they were behind them when they executed the cross.

44:02 Witness

Yes, Sir.

44:04 Investigating Officer

Do you remember whether or not the nose pitched up after they had crossed through the tail of 11, or did it pitch up prior to them making their crossover?

Witness

Impact that we've got like a really clear memory of it, like up nosing up and over toward us. It looked like pretty much simultaneously from their dash two position up, over, and beginning to roll toward us.

Investigating Officer

As they were going through the tail that was occurring as they were passing through the tail of 1/1.

Witness

As far as when it started I'm not exactly sure when. I don't think they were like at any point like a trail



necessary. I think they both of them on final, it looked like 2 just picked up like that and started wing over essentially. Sorry did I answer that?

45:03 Investigating Officer

It does and I'm going to. I'm going to re ask it in a different way.

45:06 Witness

Yes Sir.

45:06 Investigating Officer

Because there's the reason I'm asking. So dump truck 11 is here.

45:10 Witness

Yes Sir.

45:10 Investigating Officer

Dump truck 1/2 is on the left side.

45:12 Witness

Yes Sir.

45:13 Investigating Officer

It's making its movement over. Oh, does it pitch up here on the left side and then they execute crossover, or do you remember him making the move through the tail like this and then pitching up as he got through the tail?

45:32 Witness

I'll say at no point did I ever see dash 2 Co altitude him behind the lead it looked like they went up and over, up and over simultaneously. I hope that as I remember that and yeah, remember looking down at it was pretty much pointed at us for a moment as it executed that turn.

45:55 Investigating Officer

OK. So the next question I have is once they executed that crossover then describe the orientation of dump truck 12.

46:06 Witness

OK, Sir. So it looked like as they completed their turn it started to roll wings level and we were pretty much running parallel to them. It did look like it rolled wings level descent rate slowed down from there nacelles. It wasn't in full helicopter as I remember nacelles were somewhere in transition and then (b) (6) and I were flying pretty much along it looking down at it and we got really hard to tell how high above the trees they were without like aspect or anything for reference. But I remember we were looking down thinking it was low and then it looked like it almost like stagnated over the trees for a while before it settled into it for a while. I mean stayed there just long enough to start thinking it was deliberate and they were just trying to stay really low. And then it settled into the trees from there. But it did. It absolutely settled into the trees wings level.

47:11 Investigating Officer

OK, let's, let's talk through that a little bit.

47:13 Witness

Yes, Sir.

47:14 Investigating Officer

I'll just kind of talk through a little bit more of what you would observe. So as they made that turn and it was basically pointing the opposite direction from the ingress, I think.

47:23 Witness

Yes, Sir.

47:25 Investigating Officer

You observed that following that turn they went wings level.

47:29 Witness

Yes, Sir.

47:30 Investigating Officer

When they went wings level, you, you mentioned earlier that you noticed the nacelles were a little bit further forward than they were when they executed the approach.

47:38 Witness

Yes, Sir.

47:39 Investigating Officer

And when they went wings level, were they in a descent when they were wings level?

Witness

In a descent-, Yes, Sir. Yeah. They're losing, losing altitude as they did that turn and then they were all wings level and still -

Investigating Officer

They were still stagnated.

47:53 Witness

Yes, Sir. Yeah. Then it stagnated from there, and as I recall it, the nose of the aircraft pitched up, was pitched up slightly as it started like skimming over the trees.

48:06 Investigating Officer

It did pitch up.

48:07 Witness

It did.

48:08 Investigating Officer

So I guess what I'm saying is you when it rolled out.

Witness

Yes Sir.

48:12 Investigating Officer

It wasn't more like a level attitude. And then you did observe the nose start to pitch up.

48:17 Witness

Yes Sir, it was trying to. I think it was going really slow because by the time it touched down, we were looking. It was well after 3 o'clock. Obviously, we're executing a turn through all this.

Investigating Officer  
But what was your airspeed?

48:35 Witness

That I don't recall, Sir I apologize, (b) (6) was flying and I was sensor operating. So I was pretty much like heads out, but yeah, I don't recall what our airspeed was at that point. But I'm looking down and it was coming after 3:00 as it settled into the trees but I do yeah it was like slightly pitched nose up.

Investigating Officer

OK so from that once you observe that the nose was slightly pitched up after the wings level nose low altitude started it to notice the nose slightly pointing up.

49:08 Witness

Yes Sir.

49:11 Investigating Officer

When that happened, what happened next? So you see the nose start to pitch up, then what happens to the aircraft.

Witness

At that point, Sir I don't know if it was adrenaline making it seem like forever, but it really did feel like forever, where it was just like stagnated above the trees. It just seemed like just long enough for me to think maybe that was something deliberate. They were doing that, you know? It's hard to tell if that was something abnormal or if it was just kind of sporty thing they did. And then we started to see trees getting moved as it settled in at that point, obviously knew something wasn't right.

49:49 Investigating Officer

Do you remember if the tail struck the trees first?

49:54 Witness

I don't Sir. I apologize at this point.

49:56 Investigating Officer

And I'm not saying that you should or shouldn't. I'm just trying to get as much information I can. You know.

Witness

Of course.

Investigating Officer

Basically what I'm hearing you say is, is you remember the aircraft striking the trees, but you can't remember, you know, what struck the tree first or you just it was at that point happening so quickly that it just you just saw it go into the tree line.

50:18 Witness

Yes, Sir. Just like going to. I don't remember seeing nacelles, smack rotors, smack anything. I don't remember seeing tail or anything like that at first. But yeah, I remember watching it like starting to descend into the trees. It's not like super dense forest over there. So we could still see it as it was descending into the trees. But then from there things got like you know looking through like moving trees as we watched it.

50:50 Investigating Officer

OK, thank you for doing that. I appreciate you going through going through all the detail that was very helpful. So I really do appreciate that.



Witness  
Yes Sir.

51:05

I think so one of the other things we're trying to figure out is do you do you remember over Tad what communications from Dumptruck 11 flight happened to you guys and do you remember hearing anything or were TAD while the approach was being executed?

Witness

From this turn on I don't remember anything and I don't know if I can if ears shut off but it all I remember is like silence watching that turn and watching it settle into the trees. I like I don't know if people were talking and I just didn't register it or if nobody talked. But there was definitely after it did touchdown there was private few second delay before like (b) (6) transmitted. Dash 2 crashed.

Investigating Officer  
Okay.

51:55

Yes Sir, correction, correction. I can't remember if he said dash 2 crashed or if he just said one of the Ospreys crashed.

52:09 Investigating Officer

OK so that leads us into a 1442. We're going to talk about mission execution during the mishap event.

52:16 Witness

Yes, Sir.

52:17 Investigating Officer

So once a mishap occurred who is the on-scene commander can you talk through the on-scene Commander you know profile.

52:24 Witness

Yes Sir. So (b) (6) essentially assumed on scene Commander. I don't think at any point we like transmitted like (b) (6) is on scene Commander. But we were higher up. The Huey descended immediately to start looking for somewhere to land. I know Dump Truck 11 waved off. I don't remember seeing where they went or what they did the next time I saw Dump Truck 11 that a few minutes later but a huge brown out on the airfield that I remember being concerned about. A second issue, but I remember, if I remember correctly, (b) (6) (b) (6) directed Dump Truck 11 to circle around and land. From there (b) (6) and I remained orbiting. Yeah, we're pretty close to 900 feet as I recall. When the crash happened, we tried 1 to 1.5 and we couldn't get anybody. We went over to, so I recover. We went over to 24.3. Tried, still no one. So we merely started to climb. Spiraling climb. He worked that and started making guard calls. We kept climbing and transmitting in the blind until we got a response. While he did that, I slewed the sensor over, got a grid, yeah, saved it as a target. And then admittedly pulled out my phone and we couldn't get comms with anyone. So I checked my phone. I had a bar of signal, so I reached out to the ODO (b) (6) and started sending him details. Got those if you want, but essentially, yeah, yeah, send him the grid and just start passing on everything that we saw. So that (b) (6) is the ODO kid. At least start hitting something.

54:26 Investigating Officer

Those messages, did you send to the AMB, those text messages.

Witness

AMB, they've looked at 'em. I have not sent them.

54:34 Investigating Officer

OK, OK. As long as they've seen them, alright cool.

54:36 Witness

Yes, Sir.

54:37 Investigating Officer

Thank you.

54:37 Witness

I'm trying to think from there. Yeah, we kept climbing until we got a hold of approach reached out to it or I think, yeah, Darwin Approach reached out to us. And then obviously from there radios got kind of hectic but a few minutes later approach said there was an Australian C 130 that could be re tasked. And then from there the next couple of hours was running the stack and trying to get a hold of what was going on the ground, build the plan.

55:16 Investigating Officer

OK a couple more questions on this. Once the mishap aircraft was on the ground, what did you observe?

Witness

With our track on the crash site? I looked down and I had the sensor zoomed in too far but out from underneath the aircraft tail out from underneath the tail looked down the sensor. I saw marines running off the tailgate since it had TSS now, (b) (6) looked, believe saw that too. I was only able to count for with Fidelity 6. It turned out there's a lot more, but we passed on and we saw at least at least six personnel evacuating the back of the aircraft.

Investigating Officer

With the DVR activated, were you able to record any of this on the TSS for video footage?

56:14 Witness

We tried. We tried, Sir. They tried pulling the footage and weren't able to recover anything. So I really wish that had worked.

56:24 Investigating Officer

The audio was recovered though the audio recording of the ICS.

56:30 Witness

Of us, I'll have to check with Captain Gaby as soon as we landed when the day was done. We've (inaudible) with the cover sorry, yeah, I'm not sure if our voice audio was recovered.

56:43 Investigating Officer

What personal actions did you take once you observed the mishap aircraft on the ground?

56:49 Witness

Check the laser was in I SAFE. Pull a grid. Save it then Yeah, fed that to (b) (6) so you can pass it on. He was flying talking on the radios. I messaged the ODO to with grid and updates and then from there we'd pretty much just take turns flying like if he needed like write down CASEVAC 9 line or something like that. I'd take controls and fly us around or if I was pushing something on signal he'd hit take control so I could pass that, yeah, but I did like really high to get line of sight comms with anyone back on mainland Darwin so that became a little bit of an issue. The C130 was able to relay some stuff occasionally, so that was good. But and at that point, yeah,

for the next couple of hours it was pretty much just Me and (b) (6) passing controls back and forth, writing down grids, passing grids, got it plotted on kill switch so we could give the person on the ground like at azimuth and distance. So if they're trying to get to the crash site from there. And then I think from there, yeah, just trying to battle track, yeah, keep track of all of them. Aircraft coming in from different directions. C130 was there first and then the hoist helicopter, a couple other like we saw care Flight 4 and 2, the two air ambulances, we passed them on our way back to the fuel. But yeah, basically just running the stack and trying to get a head count on people.

58:40 Investigating Officer  
When did you leave the mishap area.

Witness

Yes Sir, i apologize I had that written down on the kneeboard. I don't remember that exact time but we we've bingo'd out. We're worried about that wind didn't have a good way of calculating how a third knot cross wind was going to affect our required (inaudible) home. So we we're probably a little too conservative with our fuel time. We probably left some, we probably left some money on the table with that and we did leave a little too early, but we did the math on how much fuel that took us. We passed it on to the next Cobra so they could refine that a little bit more. But yeah, we spent that -

Investigating Officer  
That was Maj Smith.

59:22 Witness

Yes, Sir. Yeah, we passed that on to Major Smith, I didn't know that for his fuel Calcs and then we obviously came back to get fuel and would keep that in mind. So I think probably about 10 to 15 minutes prior to us bingo'ing out, (b) (6) started doing a battlefield hand over with (b) (6) (b) (6) who's just on deck idling. Then they took over and we then we bingo' d out.

59:47 Investigating Officer  
All right. At time 1449, we're going to talk about maintenance mishap questions. Do you recall who Preflighted Dump Truck 12's aircraft?

1:00:02 Witness  
I don't sir.

Investigating Officer  
OK, when did they, correction? Do you know who SAFE'd dump truck 12 aircraft?

Witness  
I don't sir.

1:00:18 Investigating Officer

Help me understand the maintenance culture for both the H1 detachment as well as the VMM squadron? Can you help me understand you know things that they emphasize you know? Is there perception about the maintenance department is you know, and it can be any perception, you know, we're trying to understand the view about the maintenance quality of both the VMM and H1 detachment.

1:00:47 Witness

Oh yes Sir, it's starting with the VMM because that's the easiest, shortest, just getting to like to pass their guys and walk past them and whatnot and ask how they're doing. They all seem pretty like motivated, like morale seems. Prior to this, this seemed pretty high. They all seemed happy. I saw the shops, right, little micro cultures, but they all kind of stick together and you know watching like the shop friendly rivalry and whatnot. They also



seem to get along really well. But yeah, trying to get witnessed anything else personally regarding that? Nothing. Nothing really else that I've noticed with them.

Investigating Officer  
OK.

Witness

With our culture and those our Marines obviously I work with more frequently and they seem to be enjoying it too. It's a nice change of pace from Pendleton, like change of scenery somewhere else seems really high. We found a few like cracked tiltballs recently but I think the cool like command and maintenance has done a really good job. Like hey good find like nobody gets like reprimanded for finding something or anything like that. It's I've never witnessed anyone being told to pass something that they didn't feel good about or yeah, say it's yeah, with ours. I don't think anyone would hesitate to bring something up if they found it and weren't sure about it. Yeah, these guys just seemed happy.

1:02:19 Investigating Officer

Can you describe the actions after a flight with regards to writing and discrepancies on aircraft?

1:02:27 Witness

Yes Sir. So basically, just once we've shut down, they're really good about it here actually too, I don't know if they've just started that here, but usually there's a swarm of marines from different shops and different shop represents. They all come up and ask how the aircraft was, if there's any gripes, if usually for like EVA, if we run into anything as soon as we land, we'll like call them over and they'll try and be like an initial, like tap rack bang triage, just to see if they can reclaim it while the aircraft's still on power. If not, yeah, they always. There's always someone there asking like how it flew and if there's any issues, there's a Rep from that shop that'll write it down and work, you know, at least get the gears turning with it opposite. Then we go back to inland, cut in half for it. Or if it's a some of it's just small repeat stuff like a sensor or something like that. If it's still acting weird, we'll just tell the shop and then we'll go try another adjustment or something.

1:03:23 Investigating Officer

Is it always the pilot that writes at the discrepancy in the aircraft.

Witness

At least for Cobras, yes, Sir. I'm not sure. I don't know if crew chiefs can write. They can probably write a map better than I could, I'm sure. But like, usually I don't know if they write maps or not.

1:03:38 Investigating Officer

OK, all right. Couple of final questions. Can you talk to me about the command culture, you know with the det leadership for you guys as well as the VMM and also if there's any, if there's any issues that you have experienced, you know between the two units. I'm just kind of curious what your perception of the command culture is.

1:04:02 Witness

Yes Sir, I can speak for the whole H1 det they love (b) (6) is awesome. It's been really nice getting to hang out with them really like their command structure or just all (b) (6) been great to work with. Yeah, I'm trying to think really not a whole lot of like rubbing elbows or anything like that. Between the H1's and the VMM, actually, they've talked about that a lot. Like some of the last dets they had, they like had a really hard time getting along. But everyone's been cool and we'll, our aircrew will go hang out on the weekends and whatnot. So they've been great, great to us. And yeah, their training commands been awesome. I think they've done a pretty good job like integrating with them and whatnot. I understand (b) (6) is our det OIC. I think he's done it. My understanding is him and Major Lewis were like really good friends back in the day. They'd known each other for a long time, so kind of had that going for us too. Just some prior pre-establishment friendships and whatnot. So I think that would help smooth things out even more than. Yeah. Other than that, really no, no big command discrepancies or anything that puts bad taste in my mouth that I've seen.

1:05:21 Investigating Officer

What about the safety culture? I'm talking about the safety, safety culture. So really kind of to give some context to that, what I mean is like abiding by crew day, ensuring that people are being scheduled correctly, abiding by risk assessment worksheets, making sure that operational risk management is being executed, making sure that they're doing appropriate crew pairings by the TNR for proficiency. That's kind of what I mean.

1:05:45 Witness

OK. Yes, Sir. Yeah. I'd say everyone's been really thorough. I don't know if the back of the V22 point quite has the crew, the risk assessment portion there as well. But I think at least on the H1 side, I guess beach, I think it's pretty thorough. OpsO is there. They generate the. I think it's OPS and Dos generate the risk assessment work sheet for the day. And a lot of that's just pulled straight from M Sharp. Like you know computing is this is this a legal crew is it the right crew from there that gets routed so that OpsO and Dos works that portion and then each individual air crew does day of we're about to go fly. Let's like check ourselves out here too. I think they're pretty thorough about it. And yeah, as far as like crew day goes and whatnot, yeah, I've seen that. I have not seen anyone not abiding by that. (b) (6) will come through if he knows he's flying with you the next day. Like he'll check. He'll check into the planning space and be like, you better be out of here. Like I'm coming back in an hour and then I have to leave and like you better not be here when I get back kind of thing. So not like a pointed way but like we need to get out of here and they've been really cool about it. Like if it's going to be a late night, you're you know people you can take a jumps computer home if there's anything you need to finish up. So I don't think anyone has felt like there's really no need to stay here past your crew day. That I'm aware of. At least there's anything you can do here you can do at home.

1:07:23 Investigating Officer

Do you, do you think you've been flying enough?

1:07:27 Witness

I'd say so, Yes, Sir. A lot more than the guys back home.

1:07:29 Investigating Officer

Yeah. What about the Osprey pilots, do you think they're flying enough?

Witness

I would think so. They seem just looking at the schedule and whatnot. They seem to stay, stay pretty busy. I don't really. I'm not sure how many like exits or flights they do per week, but all my close VMM friends, every time I talk to them, they're pretty regularly you'll ask them what they're up to and they'll be planning for an event or something like that. So I don't, I don't think there's a whole lot of people like sitting around doing like not flying.

1:08:03 Investigating Officer

OK. The last question I got for you is, so do you, do you feel safe getting in your aircraft and going to fly?

1:08:10 Witness

Absolutely. Yes, Sir.

1:08:11 Investigating Officer

All right. Well that's, that's all I have. We'll end this interview at 1458 on 5 September 2023 with (b) (6) .

**Interview Summary of (b) (6), MRF-D**

Investigating Officer

OK. All right. This interview is being conducted on 13 September 2023 at 1329 Larrakeyah defense precinct with (b) (6). Just so hear you're aware, I'm the investigation officer, (b) (6), as directed by Major General Bradford J Gehring, the commanding General of I MEF, into a response to a Class A aviation mishap resulting in the death of three service members and injury to several others. As an investigating officer, my job is to be an impartial fact Finder for my commander. So the testimony taken by myself or my team and the reports that we develop will be based on that testimony, may be used for official purposes down the road. Access to these testimonies and these reports are typically restricted to persons who clearly need the information to perform their official duties. However, in some cases, disclosure to other persons, such as the subject or subjects of an action that may be taken as a result of the information, we've gathered through our investigation may be required by law or regulation or may be directed by proper authority. You might at a future date or may already have been interviewed by the Aviation Mishap Board that is a separate inquiry from this Command investigation. No statements that you made to the part of the excuse me as a part of the Aviation Mishap Board that will be provided to the Command Investigation Team or my team. So, statements made as part of that Aviation Mishap Board are privileged and the Command Investigation Team does not have access to any of that information. Hence why we're having a conversation with you separately. The statements that you provided to the Aviation Mishap Board are for use and safety purposes only. Prior to the beginning of this interview, you're advised your rights under the Privacy Act. Do you have any questions regards to those rights?

Witness

No, Sir.

Investigating Officer

OK. All right. Finally, it is important to you that the information you provide is complete and truthful. It is a violation of the UCMJ to not only make a false statement under oath. Do you have any questions regards to that?

Witness

No, Sir.

Investigating Officer

OK. If you would raise your right hand so I may administer the oath. Do you swear that the testimony you're about to give shall be the truth, the whole truth and nothing but the truth, so help you God?

Witness

I do.

Investigating Officer

All right. Thank you. Right. For the record, please, if you could introduce yourself and what you do here at MRF-D?

Witness

My name is (b) (6), I'm the Air Officer, the MRF-D And do you want job descriptions here.

Investigating Officer

Please.

Witness

So what I do mostly is service the Aviation advisor to the commanding officer. So questions as to the ACE's operations maintenance readiness, specifics like that, I answer those or pull that information from the ACE, liaise directly with them for exercise planning as well and then integrate with NORCOM or one brigade or whatever ADF agency essentially is running an exercise which we've done a couple times this deployment. So that goes to facilitating, putting together the air flows, the ATO if we have one in place, things like that.



Investigating Officer

OK. Can you give me a little bit of background from your point, from your aviation background to help kind of round out how your experiences help lend you to do the job your task to do here, please?

Witness

OK, well, I am an aviator, I'm a Huey pilot by trade. I am a 7502 Forward Air Controller, so finished TACP at the beginning of this year. I was originally supposed to go to 1/1 as one of their FAC's. But with one of the actual First Marine regiment air officer falling out of the deployment, I got picked to kind of backfill that gap. So,

Investigating Officer

OK

Witness

Got pulled out of that battalion and then I joined as a late deployer in May with the MRF-D.

Investigating Officer

OK. So you said you got here in May. Can you kind of describe what you've been involved in from that May time frame until the mishap event occurred?

Witness

Well, I fell in as the assistant we had (b) (6), he was the, he was serving as the actual air officer. So we worked pretty much hand in hands. We had a pretty busy TEEP from pretty much this the second I got on deck so went into exercise Croc response at the end of May where we did facilitate NORCOM publishing the air flows for that. So that had a had a an ATO from there June was pretty much a planning month. End of June, beginning of July we launched into Northern Edge. So we both or I left for the Philippines to support that, came back middle to end of July and then pretty much right after went to RAP Sugar (sic) to support Talisman Sabre. And that was both of us Again. There we helped put together the ATO. We weren't the actual ones producing it, but we were able to provide the inputs for the MRF-D ACE to the larger exercise, larger ex-con picture. From there came back first week of August and then went into planning for IPE again. But that or around that point, Captain Curry left so he redeployed for some family stuff and then I ended up going on IPE to the Philippines again and then pretty much got back the week before Pred Run kicked off. So it was here all throughout Pred Run helping to facilitate the air flows production. Again, we weren't responsible for publishing it, but we got the ACE's inputs for that and yeah, I've been involved in that and then the mishap happens involved pretty directly with the response helping with the aircraft recovery and so forth.

Investigating Officer

So prior to Predator run interaction with the ACE, how would you describe that from your point of view and the planning of these exercises or what have you.

Witness

It's pretty routine. We kind of had the distance issue with them being on the RAF base and us being on Larrakeyah, but pretty much planning via e-mail, phone calls, stuff like that for their just routine reporting. Every morning there OpsO would send daily intentions message over chat surfer, which is where we got their operations and maintenance readiness information. So we would just essentially transcribe that to the CUB to brief the commander. Otherwise mostly dealt with their Ops. Pretty much only dealt with their OPS department mostly to individuals (b) (6) and (b) (6). So that's those are the OpsO. Those are the OpsO and AOpsO respectively for the ACE. And then yeah obviously attending the various IPRs for the exercises and any other kind of routine stuff that they needed. I did help with the I did help pretty much right. Another thing that I do is support kind of the Phys due process for getting C130 logistics support fraggged from one map in support of all the MSCs. But for this deployment primarily it's been the ACE requesting them, so probably irrelevant, but just adding that back.

Investigating Officer

Makes sense. So, the interactions mostly with the OpsO system, OpsO anything abnormal or like friction that you ever sensed from them with regards to the tasking they were getting prior to the Predator run mission?

Witness

Well, I guess the only friction was and I think this was this was a product of their squadron being displaced. So, their OpsO was on Camp Berrimah and their a OpsO was kind of taking the lead back here. So originally it had been advertised that there was not going to be any MV 22 participation in Pred Run. I heard it specifically from Captain Griffin. And then that kind of got overruled by their CO during their confirmation brief, for at least the 27 August day. But that was that was subject to change just throughout the planning process. One day they were supporting, one day they weren't vice versa.

Investigating Officer

OK. Were you in the room when their CO in your term overruled support or were you.

Witness

I was it was more. It wasn't really an overruling. It was like probably about 30 more minutes.

Investigating Officer

Yeah. I'm conducting an investigation interview that's all right.

Witness

Yes. It wasn't an overruling it was just clarifying kind of. I think she kind of maybe spoke without the full picture of information. He was like we're going to support on that day.

Investigating Officer

Copy. That's good. That's good info. Thank you for clarifying that because yeah overrules that's pretty yeah.

Witness

Sorry Sir.

Investigating Officer

That's alright, That's right. That's why I wanted to ask to make sure.

Witness

I will be more precise with my language.

Investigating Officer

Yep. OK. So that was the only in the time that you've been working here in MRF-D, the AirO or assistant AirO, that's really the only time that you can recall there being anything like this. That there is maybe we'll call it, a disconnect between what was briefed and what was potentially planned for or what was going to be allowed to occur.

Witness

I would say yes, Sir.

Investigating Officer

OK, did you notice? So once HMLA shows up, do you recall when they showed up? Time, space?

36:02 Witness

They started showing up beginning to mid-July and then they didn't start flying. They got held up in DAF for a little bit. They had some maintenance issues to start flying until the end of July.

Investigating Officer

So once they got on deck, were you still operating through ACE OpsO, an ACE assistance OpsO, or did that change and was there coordination being conducted through HMLA Det itself?

Witness

It did, yeah. So I started reaching out for H1 specific questions to (b) (6) primarily and (b) (6).

Investigating Officer

OK. Was that directed from VMM OpsO or Assistant OpsO or just what you chose to do?

Witness

It's what I chose to do. So I had a relationship with (b) (6) as a peer of mine for us.

Investigating Officer

So I understand, right.

Witness

Same background. So I knew kind of which questions to ask. I felt like it would be kind of cutting out the middleman to the direct items and stuff.

Investigating Officer

OK. Did you ever get a sense from HMLA, either the det OIC or (b) (6) that they were uncomfortable with that you reaching straight down to them?

Witness

No Sir, I forgot that sense.

Investigating Officer

Any sense or any conversation from VMM OpsO a OPSO about you reaching straight to the HMLA as opposed to going through the ACE OpsO to the det?

Witness

Nothing. No, not specifically to the HMLA. I did. I did get an upset e-mail from their OpsO when I reached out direct to their maintenance department for some maintenance questions and their CWO responded a bit snarkily to me. So forward his forwarded his e-mail to the CO and she was obviously that it was not the right thing to do but she basically said at that point just direct all interactions to go directly to her herself or (b) (6) the OpsO, make it off center essentially.

Investigating Officer

Got it.

Command Element OpsO

Sorry Sir, I'm going to just reach for (inaudible).

Investigating Officer

I'm just going to pause this then.

Investigating Officer

All right, after a brief pause there for the command element OpsO to grab his stuff, we're back into the conversation. OK, so let's circle back to where we were before we got interrupted. So HMLA gets on deck. Understandable. Your background, Familiarity with the platforms, familiarity with the folks who were at the det, you start to kind of converse with them for what kind of things were you like? Were you working frags or



requests for support or JTARs or whatever that being kind of provided or what were you kind of just want to make sure I'm understanding that I got the reason why. I'm just trying to make sure I understand what information is being translated back and forth between you and the HMLA debt.

Witness

So it was mostly. Yeah, like you said fragged. So, there were some fast ropes. There were some fast rope operations that we needed to get a seat out waiver routed for because they didn't have enough seats. And when I say I went out direct, Sir, I mean I kept the VMM Ops people on the CC line the whole time.

Investigating Officer

Thank you for clarifying.

Witness

Yeah. It wasn't. I was not going around their back or anything.

Investigating Officer

All right. Cool.

Witness

So questions of like that and I invited them specifically to do one of the more unofficial Pred Run planning conferences that we did with one brigade just because the CO had made his intention clear that Pred Run was.

Investigating Officer

Which CO?

Witness

(b) (6), he made his intention clear that that he wanted Pred Run to really maximize H1 participation. So they went to the planning conference there. I did invite (b) (6), but I think she was busy that day and then I believe, I guess I'll stop talking there, that was that's pretty much what I did, Sir.

Investigating Officer

Sounds good. OK. So then prior to Pred run, once HMLA was on deck and up and flying in late July. Do you recall any times whether it was unit level training between the V22's and the H1's that they had ever kind of worked together, trained together if you will, and in a in a kind of combined objective area?

Witness

I'll have to I do have their flight. I have to go back and see if they did any ULT like that Sir. It was definitely never briefed to me specifically, but it's possible.

Investigating Officer

OK. Do you recall during any exercises major one of these exercises, they're an opportunity for H1's and V22's to fly in a combined objective area.

Witness

I believe Pred Ryan would have been the first one.

Investigating Officer

OK, Pred Run's the 1st, as you would remember, and I talked to your OpsO about this yesterday. I asked him and I'll ask you to do the same thing for me. If you can go back and find me either flight schedules or documents that you provided to the commanding office here at MRF-D that can potentially provide us insight on if those type of flights, those combined flights, combined Objective Air flights have ever been conducted. All right. OK.

So we get to Predrun. Can you talk me through the planning process aviation wise between kind of when Pred run kind of started in earnest until the day of the mishap you can from a planning perspective.

Witness

Yes sir, so the first time I got involved was during the MPC, it was in the middle of June. I can't remember the exact date. I believe it was between 12 and 16 June. So that was a very general broad-brush overview of how the exercise was going to go down, the littoral objectives, the airfields, stuff like that. So I attended that with our FOpsO (b) (6). Following that, the next meeting I had was it's kind of the week prior to the FPC on 24 July. It was informal. I got invited by one of the I Brigade planners, (b) (6) to attend that because they were essentially briefing or planning in a vacuum. So I brought (b) (6) from the HMLA and (b) (6) from Victor 31. They're the AirO and one of the FAC's respectively. So we met at the I Brigade headquarters in Robo (sic) and essentially hashed out a very rough timeline for support days. What they were looking for, what the H1's could offer, Sir essentially turn into the capabilities brief for them to start factoring that into how they want to set up the scenario. And then came away from that with I sent an e-mail back brief to VMM OpsO and the HMLA OpsO essentially with the summary of all the days and the requests were for support. So I think that was the first time that (b) (6) reached or came back out to me and clarified that the 27th of August and 27th or 29th August were the only days that we were really wanting support. And I think it was up for discussion from there whether or not they were able to do that.

Investigating Officer

I'm sorry, this is mid FPC or -

Witness

This is between the MPC and the FPC.

Investigating Officer

Still preempt, got it.

Witness

So a week prior to the FPC, I was not at the FPC that was on 2 August, I was in Rapcheerier. That was the day we retrograded, and then next meeting was a working group on August 8th that had myself and (b) (6). I don't think HMLA or VMM. Yeah, I definitely didn't see any of them there. So that was pretty much just us with the airspace planner, (b) (6) working out again, just finalizing date requirements in the (expletive) from the ACE for support. And then on 10 August we had the confirmation brief. I think I sent you the e-mail chain. After that, while it was in the Philippines, the issue with the C27's came up, so we weren't able to use those. So then I did not specifically ask for it for the V22's to offer another aircraft that day. I think that may have come from either I Brigade or Brahma, but I know at some point along that that chain they increase their support from one to two. Coming back from IPE, it was there not a lot of time to plan. I was doing most of most of this over e-mail. So giving out flows instructions and when I needed the inputs just the afternoon before each day, we're just going to do a 24-hour cycle. So that was the last 10 August was the last in person brief that we did on Pred Run and then coming back 25 August the day before the CG's flight. We did not have any flight OpS planned to directly support Pred run on the on 26th August and then that day I remember they were they didn't get me the flows inputs until late. They missed the deadline, so I just gave them DIRLAUTH to supply them directly to since it was just an ACE internal planning gave them DIRLAUTH to supply those directly to the I Brigade and ex-con air planners.

Investigating Officer

OK so air flows relate just because they're doing, they're still working through the finer details of how they're going to flow.

Witness

Yeah, (b) (6) texted me and he said they weren't going to get them on time. They're still doing the AFL EFL planning.

Investigating Officer  
So when were those due?

Witness

I placed the due date at 1430 because the I Brigade planners who published them had a 1500 deadline and I wanted to just have the 30 minutes of rubber time. But I gave them a heads up that it was going to be late that day and then just asked Major Smith to send them directly to those addresses when they were complete. He thumbs up my message. So took that as an action, 'Will do.'

Investigating Officer  
OK, Sir. OK all right. And then after that we go into the 27th. This is execution day.

Witness  
Yes Sir.

Investigating Officer  
OK And I forgive me. Let me make sure I'm not re reiterating a question I already asked you and it wouldn't be on purpose. I think you we already covered what I wanted to ask there talked about relationship between ACE and you and what your role is here. If we got no further questions on that. I mean you're here pretty much through the majority of the, you know the MRF-D right. I mean so ever concern or either verbalized to you or emailed to you or just about the level of participation being required of the ACE from ACE OpsO or ACE AOpsO or anybody?

Witness  
Are saying if they were uncomfortable with the tasking sir

Investigating Officer  
Yeah, we're like I'm overwhelmed with the squadrons overloaded here. Can we can they do they ever ask for relief or frustration like again verbally that you to you or an e-mail to you saying hey can we can we take an Op pause or can we throttle back on the amount of things we have to do.

Witness  
I'm just, I'm trying to remember Sir, I it, I I don't. Nothing comes to mind. Definitely not directly to me. It may have been brief to someone else with me on the CC line, but it was never something that was. I don't think the command element ever put the kind of pressure like I want you to do something you're uncomfortable with. I know the Talisman Sabre was a pretty high demand on them, but that planning had begun long before I got here, and the aircraft commitment was like a pretty well established on them thing that had been addressed prior. I think the most honest answer Sir is I just don't remember.

Investigating Officer  
That's great if you can say.

Witness  
I can definitely look back through my emails and see if that was ever offensive.

Investigating Officer



Did was the ACE and that you recall well they're OpsO or a AOpsO or the ACO. Did they ever communicate openly that you're aware of, hey, to the, to the CO or even to the OpsO or to you, less about I need time off and we need to kind of take a pause here, but we don't. This isn't what we want to do or there's a better way for us to manage our assets or anything like that. Like, kind of basically what I'm trying to get to is did you ever hear them say no? Like, I can't support that.

Witness

Specifically for exercises, sir or just for exercises or anything?

Investigating Officer

Exercises, and then, yeah, you know, exercises, yes. And then you can describe to me what you mean when you say frag as a as a within an exercise or with a unit level training.

Witness

Yeah, sorry Sir.

Investigating Officer

That's OK.

Witness

Routine. We get routine frags like support something with 31 might have some like fast like the fast rip thing training like that that they might want to get done or they might be planning their own sort of operations that they need an aircraft support for. So they would the process that we had implemented was at a minimum we need the notification that that that it's happening because the CO wouldn't normally like the con op and some sort of risk assessment briefed to him that kind of joint training was taking place. There were definitely some frag requests I think mostly from the ADF to do like flyovers or something like that, that they said no, we don't, we prefer not to and my own process was to reach out directly to them prior to even briefing my OpsO on it and saying what what's the fuss for this like what would be the impacts, you know risk to your readiness or whatever. Is this on a maintenance day? Is it something that you can support? And I would wait for them their response before recommending some sort of tasking to them. So within those conversations prior to reaching the OpsO, there was definitely some back and forth. Maybe this day would work better. Stuff like that Sir.

Investigating Officer

So again let's I'm going to just close the loop, so I make sure I understand. When we talk frag process, so typically from battalion or maybe CLB, someone wants an aviation asset, it's either an ASR if you're talking about aviation support request or a JTAR is delivered to you and then from there it gets adjudicated and then you either send it down range because they're ready to do it and comfortable doing it or goes away.

Witness

Yes Sir. That is the process.

Investigating Officer

Because I just want to make sure I'm tracking. And so when you say frag, you mean that is an approved ASR JTAR approved from the command element, either yourself or the opposite, whoever, whoever has that approval authority and then directed towards the ACE to be able to go execute a quote on quote a mission in support of another unit.

Witness

Yes Sir. A few frags we did publish, they were signed by the OpsO.

Investigating Officer

OK awesome. I just want to make sure I'm understanding that. Let's talk Australian Defense Force interaction in all these plannings, whether it's a major exercise or if it's an ASR submitted. What's your sense of the level of professionalism and similarity and mission planning between the Australian Defense Force and Marine Corps units since you've been here?

Witness

From an air perspective, very similar, correct response was pretty much run just like any normal ATO APB would be for like ITX or something like that. So we have a conference every morning, 7:00 or 7:30, have all the players phone in, go through the flows as they were, as they were promoted by the MSC's and everyone who put the inputs in. And then we just requested any updates, changes. If anyone had any conflicts or if we noticed any conflicts, we'd bring those up, make sure that they were resolved. Those were run by (b) (6), so she's the NORCOM Air Officer because they were heading that exercise. And then myself and (b) (6) facilitated the MRF-D aspects, and we were present with her in the room and we she held this meeting.

Investigating Officer

So as I look at Predator Run, there was some last-minute changes that occurred. Obviously, C 27 is one of those things. But and again post confirmation briefing for the exercise with Large (sic), was that a standard thing for the ADF to kind of be a little bit late and like finalizing information and details required from marine units. I'll ask that question 1st and I have a follow up.

Witness

I guess it's specifically for the maintenance issue with the C 27 Sir.

Investigating Officer

Well just so there was other issues as far as I understand, no, I guess that is really the only thing to kind of anchored on. So yeah. Is that a one off?

Witness

No that that was pretty much one off, they're pretty from my experience here they've been pretty diligent planners with a pretty set timeline for when they need things or

Investigating Officer

OK and so is relative to other Marine Corps planning evolutions you've done. Is it working with the Australians, is it differ dramatically or is it fairly similar to like late information that comes up and kind of minor changes to mission planning.

Witness

Well, the only really the only other experience I have was at ITX in this in the winter with TTCG running those and it was honestly probably less loose The air picture was a lot smaller than all the exercises that we did. So it wasn't there wasn't as many friction points there. But yeah, dealing with flight range control, airspace, MMT, like every bring everyone in the room and just kind of hashing it out like in a you know very structured manner like, no, it's pretty similar.

Investigating Officer

So, OK, all right, good. Prior to the mishap, from your perspective, your chair here at the command element within the MRF-D, did you ever have any suspicion or belief that VMM 363 reinforce was conducting any aircraft maintenance practices that were not in accordance with required Naval and Marine Corps regulations, orders or directives?

Witness  
Specifically maintenance practices?

Investigating Officer  
Yeah.

Witness  
No sir.

Investigating Officer  
OK, OK, right. Is there anything else you think is warranted that we haven't discussed, or I haven't asked a question about that might help me in my investigation trying to get to the facts behind what happened here in this mishap?

Witness  
Yes. So the VMM this this this VMM and again Sir this is coming from someone who it's not an Osprey pilot. I don't come from that community. I don't know what the norm or standard is. They had they they've had just kind of, I would say the word sketchy track record. This deployment from what I saw that at times did make me feel uncomfortable. 2 instances that stand out at Talisman Sabre. They had an issue where they had a division launching to do the sort of the main event insert of troops to down South in the vicinity of Townsville and the flight essentially ran out of gas and landed at this farmer's field with no ability to get refueled. That was not the plan. It was a product of weather primarily I think, but I mean from my background like if you run out of fuel, there's one reason really that why that happens. It's because of poor planning. So again, I don't want to get in their cockpit or that I wasn't intimately involved in their planning process. I didn't. I do know that their weather minimums that they selected for that may be a bit uncomfortable for specifically for Division there was that was the first incident. No one was in danger or hurt or anything, just. That just kind of created a headache for the command element now to try and find an ADGR (air-delivered ground refueling) platform to go land in this very tight field and get them fueled and bring them home.

Investigating Officer  
So just to be clear, there were no packs on the back of these aircraft.

Witness  
There were packs.

Investigating Officer  
There were packs.

Witness  
Yes Sir. That was it was it was a company level insert, to seize some terrain there. I honestly forget the exact scenario, but there was that. And then there was the issue on the Canberra, which might have already been briefed to you Sir, where one of their pilots or one of their aircraft, and I'm not going to assign blame or culpability, but one of the aircraft launched without the proper power margin and damaged the landing gear hitting the water again with packs in the back and they were grounded on the boat Canberra for a few days after that. So the combination of those two events, I have said it informally. I did not ever brief this to the commander because I didn't think it was necessarily my place, personally they made me very uncomfortable with this VMM. And I was, I was, I was obviously shocked when this mishap happened. But I did think that something was going to happen with them. Not to that level of severity, but I was I was expecting something else. As far as whether someone violated a specific procedure or policy. I can't speak to that, Sir. I don't. I don't know.



Investigating Officer

So other than to me, did you communicate that to (b) (6) or to the OpsO here or anybody?

Witness

I did not, Sir. I did. I think I did talk to (b) (6) about it and it's pretty informal setting. I talked to other people in operations about it, but it was, it was never, it was never like I am. I have a safety concern with this, with this squadron. So, yeah, I didn't, Sir.

Investigating Officer

Let me put it differently. Would you have felt comfortable flying on the aircraft?

Witness

I think I would have, Sir. I mean, again, I didn't think it was going to be a catastrophic loss of life or anything. I just, I just was kind of expecting like, oh, they're going to do something else that's a little bit weird, you know, kind of like cause problems for other people or something to that effect.

Investigating Officer

Yeah. And they ask you this for the one that the three Ship division that I'm assuming the division, you're talking about 3-Ship, right?

Witness

Yes sir.

Investigating Officer

Did you ever talk to anybody at the ACE about what happened during that event who was involved in it?

Witness

I talked to yeah. So when we were trying to recover the aircraft, I was talking mostly with (b) (6) and (b) (6) who was the QAO, and we just cause talking about like what happened specifically with that and that's where I learned that it was it was an issue with. So they weren't getting picked up for IFR but again they were there. I'm not an Osprey pilot Sir, but I know that that that distance was like pretty much that was pretty far stretching their fuel and they were launching with pretty low cloud ceilings and visibility at their destination. And then obviously this there's a CNAF requirement that if you do that you need to have to be able to make it to another field with approach mins above 200 or 300 for precision on precision. So I was like 1000, they briefed 1003 as their weather minimum of the destination. I said is that it's like, is that their tactical weatherman's like is that their administrative? Because we always in our community, we distinguish the two. It's like there's something that I would do if this was no (expletive) combat and there's something I would accept doing routine training and I was. I verified with them. Is this you guys actually launched with 1003 and they're like, yeah, we can make it to another airfield. Just essentially, it's like a 15-minute trip between the two. And then what? What was weird in my mind was like, well, they have to plan for three aircraft to do an approach which means one is getting vectored in, the other two are holding and then it's back. So it could be 30-45 minutes for that last aircraft to get vectored in. So I was again, Sir, I didn't want to get into any of that with them. I was just, I didn't know. I didn't think it as the air officer. I didn't think it was my place. Like, I'm not an ASO, I'm not, I'm not part of the DOS. It just personally made me feel a little bit weird about the risk accept acceptance.

Investigating Officer

Understandable. I could I ask you to, you know, beyond the other documents I'm looking for from you the, in particular, the flight schedule associated with this event. Could you please provide that to me?

Witness

Provide what, Sir?

Investigating Officer

The flight schedule that you have from that event to (inaudible) this division.

Witness

For Talisman Saber.

Investigating Officer

Yeah, for Talisman Saber. And was there a brief associated with that that you're aware of.

Witness

Not involving the command elements, Sir, I know the ACE did. They're on internal brief.

Investigating Officer

Thank you for offering that up.

Witness

Yes, Sir. That's been on my mind a lot.

Investigating Officer

Yeah, understandable. All right. Anything else?

Witness

No, Sir.

Investigating Officer

OK. Just closing comment here. You're advised that this is ongoing investigation. All right. You're directed not to discuss the testimony given here today with any with anyone aside from a duly appointed investigating official, which is either myself or the three majors who are here with me as directed by the Community General of Plymouth. All right.

Witness

Yes, Sir.

Interview Summary of (b) (6), VMM-363 (REIN)

0:02 Investigating Officer

All right, good afternoon. This interview is being conducted on 11th September 2023 at approximately 1525 aboard Royal Australian Air Force Base Darwin with (b) (6). Present in the room are myself, (b) (6), the Legal Advisor and the Assistant Investigating Officers, (b) (6) and (b) (6). Prior to turning on the recording, we discussed the contents of our appointing order, the difference between a command investigation and a safety investigation, the privilege nature of statements made as part of a safety investigation or the aviation of the mishap board and the purposes and differences between those two types of inquiries, the safety investigation, and this command investigation. Additionally, (b) (6) had an opportunity to review a Privacy Act statement that informed him about his rights and the Privacy Act. He stated that he didn't have any questions and he signed to that statement. (b) (6). Is that an accurate summary?

0:54 Witness

Yes.

0:55 Investigating Officer

Anything you'd like to add?

0:56 Witness

No.

0:57 Investigating Officer

OK. At this time, I'd ask you to raise your right hand please.

0:59 Witness

You need me to stand up?

1:00 Investigating Officer

You don't need to. Do you swear that the testimony you're about to give should be the truth, the whole truth, and nothing but the truth, so help you God?

1:07 Witness

Yes.

1:07 Investigating Officer

Thank you.

1:09 Investigating Officer

(b) (6) did I fly with you at all at 204?

1:17 Witness

Yes, Sir.

1:18 Investigating Officer

When did you go through 204?

1:19 Witness

I just checked into 363 November 17. So I checked in at 204 upon two May or June last year.

1:32 Investigating Officer

OK, All right. So I wasn't there. OK, cool. Yeah. So background on me. I'm an osprey guy purebred. I was with 163 for 4 1/2 years and I went to 204 and I was instructor there until 2020. The 3d MAW ASO and that's kind of one of the reasons why they're pulling out here for my ASO experience and investigating. So like (b) (6)



(b) (6) said, we're not going to suspect you of anything. We just want to like ask some base questions and kind of get a feel of the squadron. I'll ask a few pointed questions regarding the mishap. If you don't know anything, then just say you don't know. Is that alright?

2:07 Witness  
Yes, Sir.

2:09 Investigating Officer  
All right. So the were you present or did you help at all with the AFL EFL like brief and setting up the mission?

2:17 Witness  
Yes, Sir.

2:18 Investigating Officer  
OK. Can you talk through your experience with that and what you observed.

2:22 Witness  
So the day prior we had a coordination with the GCE as far as the conduct of the mission. I was at the brief on Robertson Barracks because originally, I was supposed to fly the aircraft with Major Lewis, but ultimately I got swapped out with Captain LeBeau.

2:46 Investigating Officer  
Why was that?

2:47 Witness  
Just because for her own proficiency, in order for her to capture a CASEVAC code where I was, I did not to meet the prereqs in order to do it. So from an Ops perspective, we wanted to capture as much training as we could, so we put her in that place as a Copilot instead of me. So that's why she flew. And then ultimately because I was there at the coordination with the GCE, I was somebody who not necessarily was told to go help out with the mission planner, but since I had them prior SA, situational awareness what was going on, I decided that I wanted to help out with the flight. So that Friday, Friday evening slash Saturday day prior to the accident happened on Sunday, I was in mission plan helping to set up products or just any other coordination to assist for the mission for execution on Sunday on the 27th.

4:02 Investigating Officer  
OK can you kind of go into detail if you know this the kind of the fuel planning.

4:10 Witness  
So I'm not, I don't want to speculate honestly, I don't know too much about the fuel planning besides the fact from V22 perspective the things that we do is we, I know that we requested maintenance to defuel the aircraft in order to have enough power for the packs.

4:32 Investigating Officer  
Do you know what too?

4:34 Witness  
I don't know. I don't know. I wanted to say 7.5 because that's something I heard prior but I I honestly do not know.

Investigating Officer  
Do you know if any control gave you any push back for that that amount.

4:47 Witness

Oh absolutely not no.

4:49 Investigating Officer

So it was expected that they were going to defuel to what you guys requested.

Witness

Whatever they requested that that was the expectation.

4:56 Investigating Officer

OK. Can you kind of explain the demeanor of dump truck 1/2 the crew and the night prior obviously with the with the brief.

Witness

oh everybody was, can't speak on Major Lewis's part but I can speak on Capt LeBeau's since me and her peers. She was pretty excited about flying and we were definitely excited about doing it was a different location that within Darwin we haven't been able to go to up in Tibi Island. So that was going to be something new and exciting for us to experience and we're just doing what we usually do is just taking the right people at the right time or right, right people, the right place, right time. So we're pretty excited. We definitely, the coordination was the piece was definitely long and drawn out, but ultimately like it's a good attitude about it.

5:51 Investigating Officer

Did you feel like she was nervous at all about the flights? And she's, you know, I don't know a lot when she had flown last, this kind of mission or if she's had this experience with H1's in the past. Is there any?

6:01 Witness

She wasn't necessarily nervous about it. The only concern that she did have was just like discuss items that she had to study for prior. She just wanted Capt LeBeau, just like her character. She just wanted to make sure that she understood everything. She's definitely done a scenario with CASEVAC within it. So she it wasn't her first time receiving it, right. And we obviously get the academic classes prior, so she felt like she was prepared for her. She just wanted to make sure that she was ready for the brief prior to actually going to execute the mission.

6:38 Investigating Officer

OK Do you know if she had had any experience flying with H1's before?

6:49 Witness

I want to say I'm not sure.

6:50 Investigating Officer

OK, that's all right.

6:51 Witness

I don't think so.

6:53 Investigating Officer

OK, no worries. This is a specific with an ODO, I understand you you've said ODO before.

7:02 Witness

Yes Sir.

7:02 Investigating Officer

Can you kind of go through the preparation for an ODO brief and that kind of way where you pull the data from what's expected of you.

7:10 Witness

So as an ODO, generally you'll come in 30 minutes prior to the scheduled brief time in order to allow you to set up that the aircrew brief for that line. Typically why we choose 30 minutes is because if the person who was ODO the night prior or whoever the last ODO was, they'll generally set up your PowerPoint presentation to where you only have to come in. You don't have to do like that that side of the admin stuff. You only have to research stuff like whether that be that not even be in there already whether any deconfliction with ranges which is usually discussed at our weekly range meetings with non-winding (sic) control or BASH all. But for that day we weren't going to any ranges so it wasn't really a deconfliction that we had to deal with. And then for ODO procedures you'll look at So what I've met by weather I've met by METARS, TAF's (sic) all that stuff for the day and then NOTAMS that would affect the mission any TFR's that are out there. Just basics, just give you other stuff that we will look prior to actually going to SQM mission or going to fly in general.

8:42 Investigating Officer

OK. Have you guys operated out of the TB Island before?

8:45 Witness

Like I previously mentioned before that was the first time for V22's that we actually share on this deployment that we went up to TB Island. We operated up there. Can't speak for the last rotation for with 363. However, I would say that the day prior the H1's, they did a reconnaissance of the ejective area that we're going to be operating out of. So they were familiar like the day prior. They give us some good Recon on what to expect when we're going there.

Investigating Officer

OK, for you know local operations or in and around the area within you know 20 miles like Tui Islands fairly close to here. Is it normal to only brief the weather for Darwin International or do you guys typically pull weather for the locations that you plan on going?

9:33 Witness

Typically it was both. So any area that we're operating out of, any weather that's en route to where we're going and then the destination. So typically where we take off from enroute weather surrounding airports as well as the destination.

9:53 Investigating Officer

Do you know if it's possible to pull weather for Tibi Island?

9:59 Witness

I do not know.

Investigating Officer

Just got my questions, we went over that one. OK. Where were you at the morning of the 27th that that Sunday morning?

10:19 Witness

So I was. I can't give you the exact time. When I came in, the brief was at 06, so I definitely was not coming in at 06 because I just didn't have to. I was writing the schedule, the flight schedule for Monday's flight schedule. So I came in. I usually come in around. It depends on what time follow up is. I can't remember off the top of my head what time the follow up was. I believe it was at 0730. So I come in at 0730 to do follow up and then write the schedule. I think that's what time I actually came in.



11:00 Investigating Officer

OK And you're in operations Obviously, you're scheduling.

11:03 Witness

Yes, Sir.

11:03 Investigating Officer

OK Did you by chance observe the NATOPS, right. Let's start back then, at the section lead brief for dump truck crew?

11:12 Witness

I did not.

11:13 Investigating Officer

OK. Did you observe the NATOPS brief for each crew?

11:17 Witness

I did not.

11:18 Investigating Officer

Didn't. OK.

11:22 Investigating Officer

As an ODO a VFR flight plan is required coming out here as I understand that.

Witness

yes

Investigating Officer

who usually does that.

11:31 Witness

So I actually, so one who usually does it is somebody in an OPS who would do it, and if they're if they haven't done it, the ODO would cover down on it. And then the statement always proves, you know what I mean?

Because I'm actually the one who submitted the flight plans for their flight.

11:50 Investigating Officer

OK, so it's a shared responsibility between OPS and Odo, but mainly OPS,

Witness

Yes Sir.

12:02 Investigating Officer

Do you happen to know when the VM363 SOP was signed?

12:09 Witness

I do not know.

12:09 Investigating Officer

You don't know. Do you know about who was signed by? Have you read it?

12:18 Witness  
So it was the CO prior Two year ago.

12:22 Investigating Officer  
OK, have you read it?

12:24 Witness  
I have read it.

12:33 Investigating Officer  
As an ODO do you have the ability to contact outbound aircraft and can they contact you? Is there a radio in the ODO area?

12:39 Witness  
I do have the ability,

Investigating Officer  
OK what do they normally report to you when they're outbound?

12:44 Witness  
So they'll say call sign flight or if there's a single aircraft outbound.

Investigating Officer  
OK do they usually report fuel?

12:51 Witness  
They do not.

12:53 Investigating Officer  
How about packs?

12:55 Witness  
So depends on the mission. Typically they do not report pax.

Investigating Officer  
Just outbound.

Witness  
Just outbound.

13:13 Investigating Officer  
Assuming when you got, when did you get the squadron again you said June.

Witness  
no, November, November of 22, 2022.

13:20 Investigating Officer  
OK, all right. When you got to the squadron was there. Can you kind of explain the training for an ODO, can use a standard ODO like yourself?

13:29 Witness

I can, so we usually do 2 trainings so we have different procedures when you're taking over ODO for the day. So you'll get you'll get a new copilot or whatever comes to the squadron doesn't have to be a Copilot in particular we'll give them training for that first shift or whatever AMS or middle shifts that they are as an under training. And then there's different procedures for our last plan on debt as L pod ODO , so they'll get an additional one, so 2 total and minimum another under trainer for L pod procedures.

14:10 Investigating Officer

OK. Was there like an official ODO training or is it all done during the UTs?

14:15 Witness

So when I got to the squadron, I got an all around the UTs and then when we came out here on deployment we had an actual official ODO class for anybody who was newer to the squadron as well as for anybody who wanted to review any information.

14:38 Investigating Officer

You know approximately when that was?

Witness

It was when we first got out of here. So well I got out of here and towards the end of April I think we came out here for MRF-D.

14:52 Investigating Officer

So OK, so it was probably all VMM people.

Witness

May time frame as well as the H ones. So actually it was when we came out here for VMM and then the H1's, the HMLA det also got an additional class when it came out here as well for ODO.

Investigating Officer

OK, Do you know if there was a roster cut for that at all?

15:11 Witness

I do not know that.

15:13 Investigating Officer

OK, you mentioned getting the UTs for the AM and PM for you guys. Do you know if the H1 pilots got under training as well?

15:20 Witness

They did.

15:21 Investigating Officer

They did. OK, so they got an official training and then they got the UT training for AM and PM, OK. And it was that a requirement for them standing duty by themselves?

15:30 Witness

Yes, Sir.

15:31 Investigating Officer

OK. How was that annotated?



Witness  
on the flight schedule?

Investigating Officer  
On the flight schedule. There's nothing in there NATOPS folders or anything like that you guys would normally keep.

Witness  
No sir.

15:39 Investigating Officer  
So it's really going to have to OPS to track that.

15:41 Witness  
Yes, Sir.

15:42 Investigating Officer  
OK, All right, here we go. On top of your head, you know when the last pre-mishap drill was conducted prior to the accident or has it?

15:53 Witness  
I there has there's been two of them since we've been out here. When we first got out here and I can't give you the exact date when we first got out of here, we did one with all of the VMM and then we recently did one prior to the mishap. I was on a detachment at the time. I believe that attachment I was Talisman Saber when we did it or it may have been doing it. I can't remember to be honest. But I know we did two of them so far since we've been out here.

16:27 Investigating Officer  
OK. All right.

16:30 Witness  
I just know it was gone for the second one, but you know, two. I know two.

16:35 Investigating Officer  
OK, I'll wrap it up in a second. You gentlemen have any more questions?

16:40 Investigating Officer  
I do have a few follow ups here.

16:41 Investigating Officer  
OK.

16:47 Investigating Officer  
You talked about filing the flight plan.

16:50 Witness  
Yes, Sir.

16:53 Investigating Officer  
My understanding from what you described was, correct me if this is wrong, OK? Because this is me trying to just back briefly make sure I understand right. Usually somebody in OPS does it. If they don't do it, the ODO

may cover down. OK, what gets filed with the flight plan? Like what all do you have to do to submit the flight plan,

Witness

So the flight plan. So out here in Australia we do it via the Australian aviation system. It's called NAIPS. It's spelled November, Alpha, India, Papa, Sierra. What goes into the flight plan is essentially call sign a number of aircraft within that flight, what kind of flight it is. So usually we're military, military type as well as the rules that we're going to be operating on. So there's IFR, Shimmer flight rules and the VFR for visual. So typically out here is beautiful weather. So we do VFR most of the time and then we'll do date that we're taken off and then date that we're landing. We'll put the time that we're taken off and Zulu time and then we'll also have the estimated time and route for that. We're going to our destination so that we'll do our departure airport and our destination airport. And then we'll put just a generalized route that we're going to do for the flight as well as any equipment that we have on board, whether it's like survivability or ways that we're able to communicate or just navigate for ourselves, we'll put that in the flight plan as well. As for carrying passengers, we put them over as well. Typically, we kind of omit that part because ATC, they ask anyway. Once, once we call our what we call clearance, they'll ask anyway call ground. So they'll annotate that themselves and then sometimes passengers come off depending on the mission. There's a lot of last-minute changes. So we kind of just omit that part. We'll put our, like I already mentioned, we'll put our call sign on there. If we have any like extra information we want ATC to know, we'll put that in the remarks section just for just better coordination and better communication on their part. So just makes the flow a lot better for us from when we actually do our flight and that's generally what goes on with the flight plan, that's a lot of information.

Investigating Officer

Do you know if there are other documents that go with the flight plan or is that?

Witness

no, no sir.

Investigating Officer

OK, did you have all the information you needed when you filed the flight plan?

Witness

Yes sir.

20:01 Investigating Officer

OK, what happens if you don't have hypothetically if you didn't have all the information, what would you do?

20:07 Witness

I'll just ask.

Investigating Officer

Who.

20:10 Witness

Either. So I'll ask the members like the pilots who are flying that flight, I'll ask them what profile they are planning on doing. And then if it comes to a point where I have any confusion when I'm trying to submit the flight plan, I'll just do the flight plan with them. So that way they have extra eyes on it and I'm like, hey, this is what I actually want in there and then we'll walk through it together. But since I've flown out here multiple times, we generally do the same things over and over again. So I have an idea what the flight, the flight plan is going to be.

20:49 Investigating Officer

OK, does there anything change if there's packs on board?

Witness

For the flight plan?

Investigating Officer

With what's required for the flight plan.

20:57 Witness

No, no, Sir. So was there our survivability appointment like we're, agency doesn't really they care about how many souls are on board but that always gets passed on prior to us even departing the airport so it does not change the flight plan, long story short.

21:14 Investigating Officer

Yeah aside from ATC is there is there a publication that requires certain documentation to be turned in with the flight plan with how many packs are on board?

Witness

Not to my knowledge.

21:29 Investigating Officer

Do you have anything else? Right. Witness this is kind of the last morning that we gave all the witnesses. Once we're done with questions, it's pretty simple. You're advised that this is an ongoing investigation. Please don't discuss your testimony or the questions we've asked with any other witnesses. Obviously, there's also an aviation mishap board word going on, right. You can discuss your testimony with them or any other duly appointed IO. Just don't discuss with any other potential witnesses.

21:56 Witness

OK.

21:57 Investigating Officer

Any questions?

21:58 Witness

No, Sir.

21:59 Investigating Officer

All right. Thank you very much.



## Interview Summary of (b) (6), 3d Battalion, 1st Marines

IO

All right, good afternoon. This interview is being conducted on five September at Robertson Barracks in Darwin, Australia, with (b) (6), the investigation officer. (b) (6) is also president and myself, (b) (6) of the legal advisor, is also present. Prior to the beginning of the recording, Corporal Mueller was notified of his Privacy Act rights and he signed a Privacy Act statement. He did not have any questions about that. Also, prior to beginning the recording, we discussed the difference between this command investigation and the ongoing safety investigation in this matter. He doesn't have any questions about that either. Is that accurate or do you have anything you'd like to add?

Witness

I have nothing sir.

IO

Thanks. At this time, I'm going to go ahead and administer the oath, so if you could please raise your right hand. Do you swear that the testimony you're about to give should be the truth, the whole truth, and nothing but the truth so help you God.

Witness

I do.

IO

Thank you, Sir.

IO

All right so, (b) (6), right?

Witness

Yes, sir.

IO

Okay, so I understand you were up on ICS and dump truck 11 lead aircraft.

Witness

Yes, sir.

IO

Can you describe where you were sitting in in the back in the cabin area when you were up on ICS?

Witness

I had one person to my left and that was like, so I think that was a second from the front in the aircraft.

IO

Okay, on the left-hand side as you're looking forward?

Witness

As you're looking towards cockpit left hand side.

IO

Can you just describe to me what you recall from once you got loaded into the aircraft and departed out of Darwin all the way until the kind of the landing at what was considered to be the landing zone. Does that make sense?

Witness

Yes, sir.

IO

Just kind of talk me through what you remember hearing and feeling in the in the airplane.

Witness

So boarded, everything felt normal. We taxied around base for a little, took off, everything seemed casual, the same, the pilots were discussing like their elevations and speed and stuff like that, like I guess that they normally do. We flew across the water and then about, I'd say like 5 minutes after we got over land on TV. We had seen, I only saw the aircrafts veer to the right and then saw some reactions from the guys towards the back of the bird, and then shortly after the back of our bird kind of swung back to where we could see where it happened and there's almost immediately a huge bill of smoke, the ICU there like the one, the one pilot was like kind of saw it, seeing it happen, and I think it took him like a second to actually, like cognitively know that the birds went down so then that's when they heard bird down, bird down. Most of my aircraft didn't know besides the people in the back and then after that they kind of, I remember them talking about remaining calm like, hey, remain calm we still have a serial of Marines in here we need to like land, as the mission has stated, and then we'll figure out from there. So then I kind of just remember flying over the airstrip on TV. We got a little bit browned out as we're going down and then we made contact with the ground. The pilots kind of were just discussing, hey, like we got to relax. We'll figure out what's going on, figure out what our next, like, tax game will be. At that point, some of the Marines were kind of wondering what was going on so I kind of waited, held most of it because I didn't want to tell them so people start freaking out and then like the pilots just kept discussing what they should do, the one I think he was like the section leader of like the air wing or something basically said that he's like we need to wait for our orders basically after this mishap and like somewhere probably like 30 minutes after them discussing and then just listening to like the rescue, the different Australian rescue, American people flying over and stuff. I was kind of just trying to listen for like casualties and stuff like that because obviously there's some people on there that I knew. Like 35 minutes in the Captain was talking about coming back and talking to us. I don't know if he knew that I was on ICU the entire time, but it's regardless. He came back, basically told the Marines what had happened. Most of them kind of already started figuring it out because we started passing it down the line as it came because we had been sitting there for so long. He basically just told us we had a mishap, bird went down, we're waiting for their tasking and then kind of just went back to the front and he kept telling, like, the two crewmen to just like, assess us to make sure that no one was like trying to get out of their seat or anything. At that point, as we're sitting there, kind of we're contemplating whether or they should let us go help them and I kind of just remembered throwing a thumbs up to him every time he said something about us going but obviously, we weren't allowed to because they wanted to keep like the integrity of the serial. So then kind of just listen to everything going on who's getting rescued, sir, Lonestar 5, our XO came over the net and I was like, okay, didn't really think that it was him, but it was now that I know now they basically after a while sitting there, they got the orders to basically fly us back to the airstrip. They were talking about like what they wanted to do. Basically, they want to do like I don't think they said minimum maneuver, but they basically hovered straight up, did a 180, flew directly back to the airstrip, and then they requested a parallel landing to make sure it was like the least amount of maneuverability over the Air Force. I think that was more the case for us and for them, cause I I'm guessing the guys in our aircraft weren't very excited to get back in the air after that happened. Flew back, There's no issues, landed parallel taxi back and then that's pretty much all.

IO

All right. Thank you. So have you been on Osprey before?

Witness

I have, sir.

IO

Okay how many times, roughly do you remember?

Witness

I'd probably say like 10 times sir

IO

10 times, okay. So do you kind of get a, you know, kind of know what it feels like to fly on it when you're like you're coming in to land?

Witness

Yes sir.

IO

During, you know once you were feet dry before the mishap occurs, do you remember anything that was like any, I won't say wacky, but any kind of aggressive maneuvers going on with the aircraft did it seem kind of normal to you.

Witness

It seemed pretty normal. There was nothing like maneuverability from like the pilots standpoint that I like noticed was like different, I mean there's obviously the little like dips in like the air temperature and stuff from we're flying one point but there's no, I didn't notice anything different.

IO

Do you recall them saying over ICS anything about the Dash 2 airplane as you were coming on the land?

Witness

What was Dash 2 airplane,

IO

the mishap aircraft

Witness

when we were coming in to land, like after it went down?

IO

No before it went down.

Witness

I don't remember anything specific of that. I kind of remember when we were coming in, they were just talking about like elevation, I forgot what it was. They're like 700 or something. I don't, can't recall exactly it was, but they're basically talking about getting on the same elevation I think what I know and then Tulane because we were getting close and that's like right before it happened.

IO

Okay, so just want to make sure I understand. You don't recall and that's okay if you don't, you don't recall anything over ICS, any kind of conversation between the pilots or the crew about where the the mishap aircraft where it was or whatever it was doing



Witness

Negative.

IO

Okay, okay thank you much. Do you happen to recall who's on the back closer to the ramp of the aircraft on your of the 19 packs

Witness

Of my aircrafts?

IO

Yeah.

Witness

It was a male that's all I know. I mean a female in front.

IO

Not the aircrew, but your of your serial like of your stick if you will, or 19.

Witness

I know (b) (6), I think his last name is he was towards the back for sure and then I can't, I don't really know their names that well. I don't know the Elevens names that well as much as I know I'm a weapons guy.

IO

Okay so he was on the back?

Witness

(b) (6).

IO

No, you said that they're not part of you.

Witness

Third 0311's so they were Third Platoon Rifleman, and then maybe on the other side, the right side of the aircraft was (b) (6), what's his name, (b) (6) and that's all I have to recall really. I'm sure they would have who would know to the right and their left.

IO

So because what I'm trying to trying to help understand is trying to find individuals who might have seen what the the aircraft, the other aircraft was doing as it was coming in prior to its impact into the in the to the trees and ultimately into the the ground and that's what I'm saying. Did you happen to see that?

Witness

I only saw the, I only saw the birds swing from I think it was that's looking at it, it was like from our right side and then it swung to the left and I didn't really think anything of it to be honest.

IO

And that was during when you guys were coming in the land.

Witness

Well, it was before that.

IO

Oh okay.

Witness

I think we it happened to mishap happened like 5 minutes before we were like on the deck because we were like right there, but I just remember it swinging past us as I'm looking out swing past us and then you could almost immediately there was like 100 something meters off the deck of black smoke put me it was like almost immediately, so like once it's swung back over there, you could obviously saw something happen and I was already tracking because they announced breakdown, but

IO

sure, so can you talk me a little bit about that? So when you said you saw the bird swing through, where did you see it swing through? So you're sitting on the on this side are you looking out the like the window that's out there in the crew like the crew door.

Witness

I'm looking out the back, back ramp door.

IO

Okay so you're looking out like this.

Witness

I'm looking at like this sir yes.

IO

And you saw it flying and this is well before the came in the land, I'm just trying to make sure I understand that. I'm trying to trying to picture what-

Witness

I think it was just right a couple minutes before we landed, I don't know if maybe they were trying to figure out which side each of them were going to land on or something in that case, but all I know is I remember seeing it veer towards the right and it didn't look anything crazy to me it just looked normal.

IO

Was it in the airplane mode or was it in like within the cells, engines?

Witness

I don't recall sir.

IO

Okay that's alright. Okay, all right make sure I don't miss anything here. So I think the three names that you gave me that I might want to try to talk to you here are (b) (6) and (b) (6), is that right?

Witness

Yes, sir. So (b) (6) and B (b) (6) were both on the right side, so they would have a little bit hard time seeing it and then, but (b) (6) was, I think he was the most rear man, and I believe that he saw some of it, so he could probably give you guys on his right and left as well to see if they saw anything.

IO

Okay all right. That's it. (b) (6), thank you for your time today I appreciate it.

Witness

Thank you, Sir.

IO

Have a good one.



## **Interview Summary of (b) (6), VMM-363 (REIN)**

**How are you, getting enough sleep?**

8 hours of sleep.

**Do you remember day of mishap, who conducted the preflight on the A/C?**

They only wanted one, I did the turnaround.

**Do you recall who did the preflight though.**

I don't recall who did that. They just wanted turnaround that day.

**Who were the chiefs?**

Cpl Collart and (b) (6) were the chiefs.

**Who was the plane Capt?**

Cpl Collart is.

**You didn't see though?**

I did not see it no. I was on a different aircraft. I assume they did all the preflight.

**Time in?**

It was Sunday. They wanted us to come in around 0600, maintenance meeting at 0700, they wanted us at 0600 to get everything ready.

**When did you find out about the turnaround?**

Last minute, I found out that morning.

**About what time?**

About 0650.

**Do you know who did the daily?**

No

**What time did get it completed?**

I'd say an hour and a half.

**How long should it take?**

It should take around 30 minutes. I usually take longer.

**What time was is started?**

0650 or so.

**When finished, who did you inform?**

We inform MC. I don't know who was running the desk. I informed them by radio.

**How does it get signed off**

My name gets on it on OOMA. So, we screened the book. Any discrepancies we have we put on the card, and then we sign off on the a sheet.

**Did you do that?**

Yes sir. They wanted it signed off that morning harping on it, so I went in there and signed it

**Any discrepancies?**

I didn't find anything. It would have been written up already.

**What time did OOMA finish?**

I can't recall.

**You saw it spinning?**

I didn't see them walk out.

**Do you remember what time?**

Around 1000.

**How much do you screen on an A/C on a turnaround?**

It's not much. Looking at the skin of the body, no lose hardware, missing hardware. We'll open the mid wing and check servicing make sure nothing is loose no hardwares lose, check oil then close everything up, also look in the cabin as well for anything misplaced or out of place or odd.

**Who is authorized to do a daily and turnaround?**

Plane captains.

**How long has he been a plane Capt.**

1.5 years.

**What kind of training?**

Its repetition. It's a qual we work up to. We can't call anything bad we're just the last set of eyes to get a qual to look at something to determine whether something is bad or not. We out to healthy bird, then to bird in the hangar, its issue spotting, and be able to explain components that we see.

**Explain the samples process for a turnaround.**

For samples we pull the fuel samples. 6 bottles we take. Outboard, inboard, sponson. That takes a little longer.

**You did the fuel sample? Did you find anything?**

Yes, I did the fuel sample. No, I didn't find anything.



**HYD sample?**

That's an Airframes question.

**Do you remember the time you annotated the fuel samples were completed?**

I don't remember. Probably about the same time I signed the book for the turnaround. It's a logbook for a certain A/C. I don't recall what it's called. I think its red.

**When you hand sign, it's just a list/logbook entry?**

Yes.

**How long have you been in the unit?**

Almost 2 years.

**How is it?**

Units great. Very loving people, great. First enlistment, so a good enlistment. Hawaii is good, you can get island fever.

**How's the command climate, overall morale?**

363's a great command. Helped me get extra training which I'm thankful for. When I asked for extra training, they did not hesitate. They'll spend time with you if you're struggling. Everybody cares about you.

**(b) (6) is OIC?**

**(b) (6)**. They're good. Really good. GySgt is like a dad to us. He's going to be there like he's the boss, but he'll teach us what to expect and what to do.

**Any undue pressure from anywhere to rush any maintenance or sign off when not complete?**

I personally am not a witness to that. I'm not entirely too sure. I'm just a worker.

**For MAF's, any potential friction with how this process goes. When you complete a MA, who annotates the and who signs?**

For the MAF, its usually the qual CDI/CDQ and they put their IPs and they put everything they did in that box. The worker signs the worker portion and then it gets signed by control.

**Who did you make the radio call to on the day of?**

I asked the desk Sgt to notify MC that the cards were signed off.

(b) (6)

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Transcript of Audio File:

10

COMMAND INVESTIGATION RE: AVIATION MISHAP

11

INTERVIEW OF (b) (6)

12

TAKEN AT ROYAL AUSTRALIAN AIR FORCE BASE DARWIN

13

WEDNESDAY, SEPTEMBER 13, 2023

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Audio Runtime: 1 hour 12 minutes 40 seconds

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(b) (6)

1 (Beginning of Audio Recording.)

2 (b) (6) All right. Good afternoon.

3 This interview is being conducted on 13 September, at  
4 approximately 12:10, aboard Royal Australian Air Force  
5 Base Darwin. Present in the room are (b) (6)

6 (b) (6), myself, (b) (6) the legal  
7 advisor, the assistant investigating officers, (b) (6)  
8 (b) (6) and (b) (6).

9 Prior to turning on the recording, we  
10 discussed the contents of our appointing order. We  
11 discussed the purpose of this command investigation,  
12 the difference between a command investigation and a  
13 safety investigation, and how the safety privilege does  
14 not apply to this command investigation. We discussed  
15 the fact that this command investigation team does not  
16 have any privileged information and nor will it receive  
17 any privileged information from the A and B.

18 Additionally, (b) (6)  
19 had an opportunity to review a Privacy Act Statement,  
20 advising him of his rights under the Privacy Act. He  
21 signed that statement and did not have any questions  
22 about it. He was also advised of his rights under  
23 Article 31 Bravo, which he elected to waive and conduct  
24 an interview.

25 (b) (6), is there anything

(b) (6)

1 you'd like to add to that?

2 (b) (6) Nothing.

3 (b) (6) Okay. At this time, I'd ask  
4 you to raise your right hand.

5 (b) (6),  
6 having first been duly sworn, testified as follows:

7 (b) (6) Thank you. And (b) (6)  
(b) (6), I'd like -- I'll just remind you too with the  
9 rights under 31B and you can terminate this interview  
10 at any time, okay?

11 (b) (6) Okay.

12 UNIDENTIFIED SPEAKER: Okay. I'm going to  
13 ask you some very general questions first, and then  
14 we'll get more towards, like, some of the documentation  
15 with regards to the articles.

16 (b) (6) Yep.

17 UNIDENTIFIED SPEAKER: And we'll make sure  
18 that we're all very clear of what's going on, okay?

19 (b) (6) Perfect.

20 UNIDENTIFIED SPEAKER: So what we'd like to  
21 know is a little bit about your background. So how  
22 long have you been with VMM 363?

23 (b) (6) Since March of 2021. Just  
24 over a year, about a year and a half.

25 UNIDENTIFIED SPEAKER: March what?

(b) (6)

1 (b) (6) March 1st.

2 UNIDENTIFIED SPEAKER: 72.

3 (b) (6) I'm sorry. March of '22.

4 UNIDENTIFIED SPEAKER: Commercial, yeah.

5 (b) (6) Yeah. Sorry about that.

6 UNIDENTIFIED SPEAKER: (crosstalk)

7 (b) (6) So were you a (b) (6)

8 (b) (6) before when you checked into VMM?

9 (b) (6) Yes.

10 (b) (6) Or is this your (b) (6)

11 (b) (6) tour?

12 (b) (6) I was at the Malvs (phonetic)  
13 for about six or seven months, but yeah, it's my -- my  
14 first actual O level, I'm an O level by trade. I  
15 worked all the way from basically maintainer up to the  
16 program office all the way through, so about 16 years  
17 in November I'm -- I'll be at.

18 (b) (6) Okay. Cool. Any highlights  
19 from your previous background you want to cover off of?

20 (b) (6) I mean, I've been every  
21 billet in the squadron Maintenance Controller, JR for  
22 many years, CDQ, basic worker, all the way up to  
23 program office level with, you know, the colonels and  
24 generals there, headquarters Marine Corps. So did all  
25 that, then I was accepted for officer program first



(b) (6)

1 time, I put in and then moved over there and -- and  
2 ended up in my (inaudible).

3 UNIDENTIFIED SPEAKER: Okay. So you've been  
4 in this quadrant since March 2022. And you've done  
5 every --

6 (b) (6) 2021?

7 (b) (6) 2022.

8 UNIDENTIFIED SPEAKER: 2022. Yeah, that's  
9 correct. I'm sorry about that. And prior to this, you  
10 you've held a many, many billets in maintenance, and it  
11 sounds like your entire career's been in maintenance?

12 (b) (6) Yes, minus the program office  
13 up there where I was, you know, maintenance advisor  
14 liaison for, you know, C-130, I was down on the  
15 original platform, C-130. I love everything about  
16 aviation. Yeah, I love it, but yeah, kind of rough.  
17 So I've been through many mishaps before. Yeah. Every  
18 single one will bring me to my knees, but you know,  
19 keep pushing forward.

20 UNIDENTIFIED SPEAKER: Do you want to share  
21 any of those experiences that you have?

22 (b) (6) Yeah. First tour was in  
23 Okinawa for four years. Did all that. Went to  
24 Afghanistan with them to Cherry Point. Was there with  
25 them for five years in North Afghanistan as a special

1 MAGTF. You know, for many years, a lot of people  
2 thought that a C-130 couldn't bring a Hercules down,  
3 you know? And in a very short time, we had a few  
4 mishaps between blades coming off, you know, from the  
5 New York bird.

6 And then we moved up to Iwakuni in '14. And  
7 then on several years after that, you know, F18, the C-  
8 130 there. And then the last -- the latest one in the  
9 C-130 world was WTI, you know, doing, like, blue air  
10 support, everything like that.

11 But everybody lived on that one, so very  
12 great to hear that there. But I was the program office  
13 during that time, talked to everybody after that. It  
14 was awesome. They landed. So and this one is the  
15 obviously close to home most recent, but I've dealt  
16 with a lot of death in the last year and a half, two  
17 years too, so that's kind of been a rough year.

18 UNIDENTIFIED SPEAKER: Okay. Going to the  
19 actual day of the mishap, if you can shed some light  
20 from your perspective. Like, can you talk us through  
21 the events of that morning? Some of the things, like,  
22 from your perspective, what time did you get in? What  
23 were the actions that you were taking that morning?  
24 What -- what is it that happened from -- from your  
25 view, your actions, your view, your perspective, up

(b) (6)

1 until the mishap occurred? We'll start there and we'll  
2 go with actions after the mishap as well.

3 (b) (6) All right, would you mind if  
4 I peel back to the night before?

5 UNIDENTIFIED SPEAKER: Yeah, just --

6 (b) (6) You can just do wherever you  
7 think is necessary to share.

8 (b) (6) So I was working midnight to  
9 noon shift. Switched over because my -- I really don't  
10 have a Dash-2 as a chief warrant officer. You know, I  
11 had a lieutenant, but he went home, so I had to work  
12 the midnight to noon shift to cover the answer for all  
13 readiness reporting. So I worked that the -- the week  
14 prior. Friday got off at noon, normal weekend,  
15 everything there. I knew we were going to be working -  
16 - flying Sunday. So maintenance never gets off, but we  
17 got a Saturday off.

18 I wasn't really aware of anything that  
19 happened on Friday afternoon, right, so -- but Sunday -  
20 - I'm sorry, Saturday night, you know, I did my normal  
21 thing. I had a lot of laundry to do. Did my laundry  
22 and I'd just moved over, me and the XO Major Lewis  
23 shared a head, and I was doing laundry about -- started  
24 about 7:30 or 8:00 at night. And then we were flying  
25 on Sunday. Obviously I'm in CO, you know what I mean?



1           And went put my stuff in the washer, it was  
2   probably 8:00-8:30 ish. His light was on. Nothing out  
3   of the ordinary, you know -- in 20:30, excuse me, you  
4   know. Go back to switched over the dryer route and  
5   probably 21:00 and 21:15ish. Maybe there. His light  
6   was off, room was quiet. Before that, you could hear  
7   noises over there and you're like -- so I thought,  
8   well, he's, you know, getting to bed early, we're  
9   coming in the morning.

10           He was supposed to be a six show for non-go  
11   and he's a very intentional marine. He was very  
12   controlled and, you know, did things by the book. So I  
13   just noted that, you know, just out of nowhere, because  
14   I'm -- I'm very particular about how we do things. And  
15   me and (b) (6) (phonetic) were going in at  
16   5:00 in the morning the next morning. So I hit the  
17   rack, whatever, as soon as laundry was done, didn't  
18   even fold it, kind of took it all and, you know, folded  
19   what I didn't want to get wrinkled, then did that.

20           And then we headed in -- it's about right at  
21   5:00 in the morning. I think we -- I think -- I  
22   honestly think that we met outside at 4:00 something.  
23   I don't think we met right at 5:00. I think we were  
24   trying to be over here right at 5:00, so it must've  
25   been 5:00, no later than the 5:10, I -- I believe.

1 Walk in right into work, boom, boom, boom.  
2 I look up at the board and say, what's with this fuel  
3 load, you know? See the fuel load. And he said  
4 something about pass down this and that, that they had  
5 to be fueled to 9,500 and which is normal, 100 percent  
6 normal for there.

7 I usually allocate anywhere from eight to  
8 10,000 pounds of fuel if they're carrying anything,  
9 even externals or anything like that. But what do I  
10 first do? I grab the flight schedule. When you look  
11 at the flight schedule, where's this configuration  
12 note, you know?

13 And like, I've -- I've done this for a few  
14 years, you know, I'm not perfect, but C-130s, was very  
15 good about it because the fuel load was never the same.  
16 You know, sometimes you'd bag it out to 60 K.  
17 Sometimes you have 20 gauge. Sometimes you have 32,000  
18 pounds, whatever.

19 Looking at this platform here, it's pretty  
20 standard to put 11-2. 11-2, they -- that's when they  
21 bag them out. (inaudible). Say you can get up to like  
22 11-7 there. But nobody ever fuels to that. It's  
23 always 11-2. And then so I'm like, where's this 9,500  
24 fuel load coming from? You know? No configuration.  
25 No, it's whatever. You know, and Major Lewis, acting

(b) (6)

1 CO, he signed the schedule. It wasn't on there. He  
2 was flying, so I circled it, highlighted it.

3 That was my first question for the AMO once  
4 we were coming through the door, you know, once I saw  
5 him. And I saw him probably 6:10, 6:15, maybe ish. I  
6 don't know. Somewhere around there. I would say no  
7 later to 6:30. He's a pretty dedicated marine as well  
8 on top of it. Serpa highlight.

9 I -- I usually go into to work, checking  
10 things, right. Looking at other books. And I know  
11 Aircraft 15 is the heaviest. Trying to see what the  
12 configuration of the aircraft was, checking everything,  
13 making sure Form Fs matched with it. Talked to (b) (6)  
14 (b) (6) about it, went back and forth.

15 Where -- where -- where's all this coming  
16 from, (b) (6)? And I was -- I was pretty heated about  
17 that it wasn't on the flight schedule. As soon as I  
18 saw the AMO, I held it up pissed, you know? And he  
19 said he took care of it, took care of it, you know?  
20 And I was like, okay. And they didn't defuel the  
21 aircraft. We still had to defuel 13, if I remember  
22 right. It was a backup that they rolled into as soon  
23 as the -- or as soon as maintenance started coming in.

24 And yeah, I sat there at my desk, normal --  
25 normal morning. Watched everything, kind of, unfold



(b) (6)

1 before the launch. XO came in and we talked for, I  
2 think, about 15 or 20 minutes. You know, he sat at my  
3 desk and we were in Townsville together, came decently  
4 close. He loved what I did, had high respect for  
5 maintenance, and I was supposed to go to the air show  
6 with him the week prior and whenever that happened.

7 And sorry, my line is a little bit of a blur  
8 with all those timelines right now. But yeah, but I  
9 got pulled off of it. AMO said he needed CO here or  
10 not, you know, around Australia because whatever. But  
11 I helped (b) (6) plan, do a lot of things with the  
12 air show and e-mails and all that other stuff.

13 And I was supposed to go down there with  
14 them. They were -- had to end up taking 13 and 15 down  
15 there. That's what they took. And so he knew I wanted  
16 to go. So we discussed things many times, but he sat  
17 at my desk that morning for 15 or 20 minutes, and he  
18 showed me all the pictures from it, you know, and I  
19 told him about news articles that I saw and how great  
20 it was.

21 And he told me all how they flew. So not --  
22 not close calls, but just some surprises that he had  
23 with how things things were set up. And, you know, he  
24 was a demo pilot and all the other stuff. And it was -  
25 - it was very exciting for him.

1           And, you know, to the point of where the  
2 conversation was going on -- I'm a pretty fast-paced  
3 guy, and conversation was going on longer where I was  
4 like, hey, we're getting ready -- you got to get out to  
5 your bird. You know, you got to go. I had to say that  
6 to him. And -- and he knows -- he knows his timeline.

7           Then that time passed and he stand up  
8 talking to me a little bit longer. And he said, all  
9 right, see you later. And as he was walking out, I  
10 look at my controllers and I say, hey, make sure the A  
11 sheets open up for him so he can -- he's going to go  
12 back to his office and sign.

13           And he walked out, went out to the -- to the  
14 line. I was in the shop. He -- they had some HPU  
15 issues. Nothing really out of the ordinary, you know,  
16 because aircraft is aggravating to say the least. But  
17 they worked through it out there and it was short-  
18 lived. It wasn't like they were fighting it for 30 or  
19 45 minutes. You know, it was -- it was pretty quick.  
20 But yeah, they -- the last I heard was that they were -  
21 - I want to say -- I don't know how I heard, but it was  
22 just the hustle and bustle.

23           It was like 86 or 8,700 pounds or something  
24 as a taxiing or something like that. It's -- I don't  
25 know if it's irrelevant or not, but it was -- they were

(b) (6)

1 kind of going back and forth of how they were going to  
2 launch or not, you know, trying to get out the door.  
3 But they left as a section ultimately, you know? And  
4 it must have been -- must have been milliseconds that  
5 it seemed like. But it was minutes. You know, that  
6 Major Begab (phonetic) was in Aircraft 10, getting  
7 ready to spin it.

8 And in-between all those, you know, showtime  
9 and everything with him getting there, and I -- I  
10 talked to him a couple times.

11 Hey, how are we going to launch 10? Are we  
12 going to launch 10 before the section? Or are we going  
13 to, you know, do it after? I -- I would prefer before  
14 just to get it -- because we need to get a 30 nail fly  
15 or to not be 30 fly on it.

16 So he's like, no, I'll do it after they  
17 launch.

18 So I'm not going to wait and everything like  
19 that. So he was out in the bird. Somebody after they  
20 launch, and then, you know, we heard the first things  
21 about the mishap. Somebody was ODO or something was  
22 trying to get ahold of him or whatever.

23 And I was right there. I'm like, right  
24 here. And they -- as soon as I heard the mishap, I  
25 initially thought it was (b) (6) and (b) (6) and, you

1 know, not because they're junior inexperienced pilots,  
2 it's just for some reason in -- in I'd say eight to 15  
3 seconds I -- that's what I heard.

4 I heard it was whatever lead aircraft this  
5 mission number. I'd already been looking at the flight  
6 schedule for three or four hours by then because of the  
7 morning shenanigans I wasn't very happy about. I'm  
8 very particular in the configuration notes and just all  
9 that stuff.

10 But -- and then something within, you know,  
11 it feels like a lot longer, but probably under 10  
12 seconds, I had to -- I looked at it again, over the  
13 manager's control desk and see it. And it was -- it  
14 was Major Lewis'. And immediately, I really didn't  
15 believe it there, but with Aircraft 15, I went and  
16 pulled up with the VA chief who was signed for it. It  
17 was Major Lewis.

18 And then somewhere around that time, AMO  
19 busted in stripping his gear, fell in on the deck. A  
20 lot of, you know, chaos at that time, trying to see,  
21 you know, contacting them, what's going on, this and  
22 that. I still didn't believe it. I pulled up on them  
23 once again, just to look at the MA sheet and there it  
24 was. And I told maintenance and everybody and looking  
25 at all of it, and we went into the mishap, you know,



1 procedures: secure this, gather this, do that.

2           During all that time, AMO was trying to  
3 launch. I'm sorry. That's fast-forward a little bit.  
4 I thought they were maybe at Mount Bundey or somewhere  
5 around here. I didn't realize they were going, you  
6 know, to the islands for some reason. But yeah, I just  
7 went in to open everything up through backups, print  
8 everything off, and that's what I did there.

9           Even with AWBS stuff, the -- I grabbed the  
10 book. I have had a lot of issues with that system as  
11 far as saving or processing from out here. But I left  
12 everything that was in the book in the hard copy  
13 because I have nothing to hide there that I've -- I've  
14 done, but I print out fresh copies of what there, did  
15 my backup, saved to the central server, and closed the  
16 book and put it with all the rest of the files, you  
17 know.

18           And then moving forward, they were trying to  
19 launch. The one bird came back finally. Three came  
20 back. And they were trying to, like, send it back out  
21 and, you know, we've never done that. Maybe in combat  
22 we'll do it. But you don't -- you don't send the same  
23 TMS back out under whatever conditions.

24           So I sprinted out today at the launch. I  
25 said, what the hell are we doing? You know, why are we

(b) (6)

1 sending this bird back out? By this time, we could  
2 have sent Motor T over there in this and that.

3 He's like, they're on an island, Jeff, what  
4 are we supposed to do? And we already sent the Huey  
5 over there, trying to give some recovery.

6 And then, you know, we didn't send that bird  
7 back out. It -- it helped helped shore. The Colonel  
8 came in and then we -- it finally shut down. It was  
9 out there spinning for a long time, but they shut it  
10 down and then obviously, like, ADF and all the other  
11 emergency people came.

12 And then from that point forward, a little  
13 prop plane came in here, seven or eight people got off  
14 of it each time. They were all marines and grunts, and  
15 I was just looking for a white helmet to come off the  
16 thing and it never happened. So and now -- now we know  
17 what really happened.

18 UNIDENTIFIED SPEAKER: Okay. We're going to  
19 kind of circling towards some of the documents review.  
20 So this is a -- actually, just -- if you tell me what  
21 this is?

22 (b) (6) Safer flight checklist.

23 UNIDENTIFIED SPEAKER: Okay. And if you can  
24 review it, just take a few minutes, take a look at it,  
25 review it and then tell us the description of which

(b) (6)

1 Safer Flight Checklist this is, for when, and for what  
2 aircraft?

3 (b) (6) This is VMM 363 Safer Flight  
4 Checklist for Aircraft 15 B168616 and mark six and a  
5 half hours, looks like, and the date -- 6:45, it says  
6 August 07 looks like, but suppose the 27th, maybe.  
7 27th.

8 UNIDENTIFIED SPEAKER: So this Safer Flight  
9 Checklist was pulled out of the Aircraft Discrepancy  
10 Book for the date of the mishap, August 27th. It was  
11 confirmed with Gunnery Sergeant Havercross that he  
12 signed this and the date stamp that's on it 06:45 on  
13 August 27th was when he signed this. And he also  
14 verified that he -- he signed UMA approximately one  
15 minute after he hand signed this document.

16 Just a couple things on this document. When  
17 you look at it, and I know that you're not responsible  
18 for the Safer Flight Checklist because, let's say safer  
19 flight certification, and the safer flight in this case  
20 was (b) (6). Is there anything  
21 unusual that you see about this? And again, you can  
22 take a few minutes to look at it.

23 Is there anything unusual about this Safer  
24 Flight Checklist that you can observe right now?

25 (b) (6) Yeah, I haven't done many

(b) (6)

1 Safes, but I can probably find a few things, I'd  
2 imagine. Fuel log said 11.0. I don't know why that's  
3 there. Maybe somebody else initially checked this or  
4 something. I don't know. I didn't -- I didn't run  
5 through this checklist at all with him. It looks like  
6 it's written in pencil. I don't know if that's the  
7 case maybe or not.

8 UNIDENTIFIED SPEAKER: Just to answer your  
9 question, there -- there are areas that were written in  
10 pencil and there are areas that were written in pen.

11 (b) (6) Yeah. Yeah. I go down  
12 through every one of my Safes. I go down this full  
13 checklist of every single person that's certified for  
14 this before I sign them off in ASM, and let them know  
15 that you'll not initial anything until it's actually  
16 done because it will be forgotten if you don't do it  
17 that way. No matter how, until you actually lay eyes  
18 on it, you do not initial it. So it says, needs fuel  
19 samples. I don't know when those were done. I can't  
20 elaborate on that at all.

21 (b) (6) So I can answer your  
22 question. In the ADB (phonetic) for the fuel sample  
23 log, the fuel sample entry was for 08:00.

24 (b) (6) Oh, okay.

25 UNIDENTIFIED SPEAKER: Hmm. So you finished



(b) (6)

1 the Safer Flight Checklist before the fuel samples were  
2 done, maybe?

3 (b) (6) Yeah, it's definitely odd  
4 there. What I would say is the fuel samples were done.  
5 You know, I don't know why they would've been signed  
6 off if they were not added at that time, but I didn't -  
7 - that morning, I didn't hear anything about fuel  
8 samples or anything like that, you know?

9 UNIDENTIFIED SPEAKER: Okay.

10 (b) (6) I didn't hear them taking  
11 fuel examples, doing anything there. Obviously we  
12 didn't work on Saturday, a turnaround -- a turnaround  
13 haven't been done.

14 UNIDENTIFIED SPEAKER: So you talked about  
15 that turnaround -- if you don't mind. So the  
16 turnaround -- the turnaround inspection in UMA on the  
17 turnaround documentation in the AV, it was signed after  
18 he signed this Safer Flight, both on a hard copy and  
19 UMA.

20 (b) (6) Okay.

21 UNIDENTIFIED SPEAKER: Is that -- is that a  
22 normal practice or is that --

23 (b) (6) I wouldn't say it's normal.  
24 I wouldn't say it's abnormal. You know, I'm not a big  
25 helicopter guy, but the platforms are different from

1 fixed wing. You know, a lot of times people will look  
2 at a lot of different stuff. They'll save a bird.  
3 Then a next person will go over and resave it all the  
4 way down. A lot of things in UMA get blown out in --  
5 in a certain amount of time. And that's -- that's the  
6 verbiage we use. Like, did you blow out that daily?  
7 Did you blow out this? Did you do that?

8           So a lot of maintenance tasks, I would say,  
9 can occur. And then they'll say, come in here, sign  
10 off your turnaround and sign off this or that. And it  
11 will be, oh, it's not blown out yet. And they'll blow  
12 it out at that time and then hit it then, you know what  
13 I mean? So for maybe him to know that it's getting  
14 done and it's being done, I'd say it's maybe odd or  
15 rare, but he was definitely aware that it was getting  
16 done in some form or fashion, you know?

17           UNIDENTIFIED SPEAKER: Okay. Yeah. One of  
18 the things we wanted to talk about was the Form F. The  
19 reason we want to talk about is because there's -- we  
20 just we want to get clarity because there's a couple  
21 different things that we're hearing about it. So was  
22 there a conversation with the Safer Flight that morning  
23 about the Form F? And -- and you alluded to being  
24 upset about the fuel? It kind of sounds like maybe  
25 that was the case.

(b) (6)

1           So is there -- was there a conversation that  
2   happened about the Form F that morning with (b) (6)  
3   (b) (6) ?

4           (b) (6)   Yeah. I'm -- I'm very  
5   particular in this control, probably to the point of  
6   aggravation with these guys, but I -- I think it's for  
7   good reason, you know? And I'm -- I'm very just  
8   specific on it. And like I said, you see 11-2  
9   constantly. Other than when I look at the board and I  
10   see 9,500, I'm thinking what the -- what the heck are  
11   we doing? What missions are we doing?

12           So initial discussions we're talked about, I  
13   don't know at what time before the launch. But --  
14   because the basic weight match is always there,  
15   according to the -- the Tac 50 (phonetic), that's what  
16   everything goes into the weight and balance. You --  
17   the new form just has to be reviewed.

18           It has to be reviewed every 180 days. It  
19   has to be accessible to the people that need it, you  
20   know? So instead of having 10 or 12 Form Fs in a ADB,  
21   which it's not really an ADB, you know, it's a scale of  
22   ADB because we use the ADD (phonetic) for UMA. But I  
23   give them one basic. That's what I give them there,  
24   and that'll handle, you know, most mission sets.

25           But when they're doing abnormal stuff -- and

(b) (6)

1 this wasn't anything abnormal, but just with aircraft  
2 15 weights and everything like that, I provide them  
3 that information. You know, I give that to them, but  
4 the basic weight did not change in UMA from what the  
5 original one was, you know, as -- as far as with the  
6 base -- with the basic Form F.

7 So there were discussions about it,  
8 requesting, looking at MM aircraft and everything like  
9 that. But there was no like concern about because they  
10 did defuel the 9500, you know, and they were going to  
11 burn off, you know, when I talked to the MO and I --  
12 when I talked to them about the configuration note of  
13 how him saying he took care of it, you know, very  
14 adamant, I didn't -- I don't slow my roll because I  
15 have a very specific job in the maintenance department.  
16 I still pushed on it that I was, you know, not happy  
17 about how I wasn't on there, but the schedule was  
18 already written and all this other stuff.

19 And I just -- I -- I didn't -- I didn't see  
20 an issue with anything there as far as notes or  
21 anything that, you know, going to have (b) (6)  
22 address or anything like that. We knew what the weight  
23 was looking at previous Form Fs and everything there.  
24 So yeah, there's -- generating that is -- is honestly  
25 pretty basic. The AWBS does a lot for you.



(b) (6)

1 (b) (6) And I know what it is. I  
2 think that for the recording, can you just -- can you  
3 explain what AWBS is?

4 (b) (6) Yes. It's -- it's a Lockheed  
5 Martin generated program that takes out all the number  
6 crunching for a weight and balance technician or  
7 officer to account for center of gravities and load  
8 outs for a specific aircraft, you know.

9 UNIDENTIFIED SPEAKER: Okay. So the -- what  
10 is -- what is the requirement for a Safer Flight with  
11 regards to the weight and balance specifically? And  
12 you can reference the checklist too, but I'm sure you  
13 know it.

14 What is the requirement for Safer Flight for  
15 Form F?

16 (b) (6) Verify the Form F is 180  
17 days, which is in accordance with Tac 50. And then  
18 that means it's relevant and current. And then also  
19 the basic weight, make sure the basic weight matches.

20 UNIDENTIFIED SPEAKER: Okay. So a couple  
21 questions about Form Fs, which I have copies. There's  
22 -- I have two copies. These are the two copies that  
23 were in the ADB. The reason I'm referencing these is  
24 because there appears to be a basic configuration of  
25 the aircraft. This one is dated 6-1-2023.

(b) (6)

1           It appears as though this Form F was used  
2   before saving the book for the FCF flights that were  
3   done on the previous 10 flights on this aircraft based  
4   on the configuration of this Form F. This was the --  
5   this was the one that was in the book that we are --  
6   based on our evidence collection, we are concluding was  
7   in the book for those test flights because it's a  
8   standard configuration for FCF.

9           This -- this one was dated June 1st, 2023.  
10   The Chart C certification date for the last certified  
11   weight on the aircraft was August 22nd, 2023. And that  
12   would not have been within 180 days of the  
13   certification for the Chart C. So the -- the date on  
14   this Form F is not within 180 days of the certification  
15   on the Chart C date.

16           (b) (6) I'm trying to see what you're  
17   saying.

18           UNIDENTIFIED SPEAKER: So the -- the  
19   requirement is that the -- the Form F that is used for  
20   the flight is -- is -- is compiled within 180 days of  
21   the certification of the Chart C?

22           (b) (6) No.

23           UNIDENTIFIED SPEAKER: Okay. Can you help  
24   us understand what your interpretation is on that?

25           (b) (6) The 180 days is the

(b) (6)

1 verification. It is the technical verbiage of the  
2 review of the Form F. So the Chart C has nothing to do  
3 -- it -- it has a lot to do with the basic weight of  
4 the configuration of the aircraft, but it has nothing  
5 to do as far as balancing that off of a Chart C.

6 UNIDENTIFIED SPEAKER: Yeah, the -- okay,  
7 thank you for that.

8 (b) (6) Yeah. So the review is  
9 checking -- and even if this date was a year old, it  
10 all revolves around the date here, because this is  
11 saying when you review and signed it. This is when  
12 this -- this format was actually generated, built,  
13 changed, or anything there.

14 So under inspection, looking at it through  
15 wing and CNAF (phonetic) all the way across the board,  
16 they're not going to really look at this date here.  
17 They're going to want to see stuff match, but really  
18 ultimately comes down to when it was signed, when it  
19 was their (crosstalk).

20 UNIDENTIFIED SPEAKER: Which is -- which is  
21 -- okay. And I appreciate that. That makes sense.  
22 The -- the date timestamp that's on there is also not  
23 within 180 days of the certification of the Chart C?

24 (b) (6) It's not. It's not in  
25 certification of the Chart C, though.

(b) (6)

1 UNIDENTIFIED SPEAKER: Okay.

2 (b) (6) It's not.

3 UNIDENTIFIED SPEAKER: Yeah. I -- I'd like  
4 you to educate me.

5 (b) (6) Yeah. Yeah.

6 UNIDENTIFIED SPEAKER: That's what I'm --

7 (b) (6) And that's the thing with the  
8 Chart C. The Chart C is -- so you have Chart A, which  
9 is built per, you know, bottom line is how it's built.  
10 Chart C is I can plug and play and pull in and out of  
11 everything there. Chart A feeds into that Chart C that  
12 says what's installed in this aircraft and all the mods  
13 and everything there. Chart C will build this basic  
14 piece here, but this does not have to reference in any  
15 date configuration with a Chart C.

16 I can do a Chart C update two years ago.  
17 Nothing has changed on that aircraft. When I build a  
18 Form F, this is specific to that mission there, and it  
19 does not have to align with anything on the Chart C.  
20 This automatic will populate from the Chart C here.  
21 You don't have to change the Chart C every 180 days.  
22 You don't have to change that at all. You only have to  
23 update these Form Fs every 180 days or review it.  
24 That's all you have to do.

25 UNIDENTIFIED SPEAKER: Okay. Thank you very



(b) (6)

1 much.

2 (b) (6) Yes, sir.

3 UNIDENTIFIED SPEAKER: And then for the for  
4 the -- the date timestamp here, can you verify that  
5 this date timestamp was used for those FCF flights?

6 (b) (6) I could -- you know, I can't  
7 confirm 100 percent, but I would -- I would say that,  
8 what FCFs are we talking about, you know what I mean?  
9 I don't know the books as far as looking at those decks  
10 without having them in front of me. But, I mean, I'm  
11 confident that this date is -- was current during those  
12 times. I'm very strict on my Safer Flights.

13 If there's anything wrong with weight and  
14 balance, I don't care where I am in the world, you  
15 contact me immediately. Even to the ship, when they  
16 were just coming off the camera Aircraft 7, Aircraft 1,  
17 switching things out, I e-mailed them immediately.  
18 This was, you know, before mishaps and everything like  
19 that, I'm very particular, they know how I am about  
20 this program.

21 So I can't 100 percent confirm to say that  
22 this was in line with any FCFs or anything there. But  
23 I -- I'm very confident, with almost 100 percent, to  
24 say that this was current during that time because my  
25 Safer Flight would've said something if it wasn't

(b) (6)

1 within those days.

2 UNIDENTIFIED SPEAKER: Okay. And just for  
3 clarification, because we're -- we're just trying to  
4 understand better is -- so what -- what is this 180  
5 days describing?

6 (b) (6) This 180 days, if you go to  
7 01 Tac 1 Bravo Tac 50, it's the publication that drives  
8 all the weight and balance for aircraft. It's the same  
9 system that Air Force uses, everybody uses, Navy,  
10 everything. Yep, and it's a little bit different with  
11 TO stuff, but yeah, it's a joint plug. So the 180 days  
12 is review format. That's what it is.

13 UNIDENTIFIED SPEAKER: 180 days from what?

14 (b) (6) From date of signature from  
15 the last one.

16 UNIDENTIFIED SPEAKER: Date of signature of  
17 the last Form F?

18 (b) (6) Yes. So every 180 days, this  
19 basically expires. So you have to go in and you have  
20 to review it to say, is this current? Has anything  
21 changed? Is my weight and balance the same, everything  
22 driving that. But that's what it comes down to. So  
23 every 180 days, you're either going to see something  
24 here that's been changed, a date, or you're going to  
25 see a new signature here.

(b) (6)

1           Like I said, every inspection I've been  
2   through as a maintenance controller and a chief warrant  
3   officer, went through multiple wings and everything.  
4   Looking at this, they didn't care so much about this  
5   date, including CNAF. They care about, you know,  
6   signature dates of that.

7           So these dates don't need to match. I'm  
8   pretty particular on matching and, you know, just  
9   reviewing stuff, but I -- I can almost guarantee not  
10  every single one of my dates here are going to match  
11  the other dates because you don't have to change the  
12  date.

13           UNIDENTIFIED SPEAKER: Okay. So we're going  
14  to look at the Form F for the date of the mishap --

15           (b) (6)           Yep.

16           UNIDENTIFIED SPEAKER: -- as well. I'll  
17  show this one for you. So the date of the mishap, Form  
18  F, this is a Form F with Site Number 15 for BMO 168616.  
19  It was dated 2022-12-3.

20           (b) (6)           Yep.

21           UNIDENTIFIED SPEAKER: And it was time date  
22  stamped on 27 August 2023, 09:57.

23           (b) (6)           Yep.

24           UNIDENTIFIED SPEAKER: So can you help us  
25  understand, one, the -- the date discrepancy here --

(b) (6)

1 (b) (6) Yep.

2 UNIDENTIFIED SPEAKER: -- and then the  
3 timestamp discrepancy here, and then also there's a  
4 load out here of additional items --

5 (b) (6) Yep.

6 UNIDENTIFIED SPEAKER: -- that don't match  
7 the configuration. And it sounds like you were  
8 somewhat alluding to that earlier, but these -- these  
9 don't quite match either?

10 (b) (6) Yep. So this a general Form  
11 F that we use for Helotrope salts (phonetic).  
12 Basically, what we were doing there with ground powders  
13 kind of insertion. This date up here, 2020 of  
14 December, like I said that's not any reference to 180  
15 days there because this Form F was generated then, and  
16 it was generated after. Without looking at the Chart  
17 C, I -- like I said, I'm very particular. I would -- I  
18 would know that this date was after the last Chart C  
19 entry, which would drive this basic weight here.

20 So this date is not as, you know, relevant  
21 as the signature here. This is a current Form F. Now,  
22 as far as the review here, this was after the mishap.  
23 This was after the mishap. Like I mentioned before,  
24 AWS, I have had issues with it because of connectivity  
25 out here. It -- it drives through the share drive. So



1 it goes through a Z or an S drive.

2 And I don't actually know how that whole  
3 process works, but if you don't have internet  
4 connectivity, it won't pull from there and it won't  
5 update and load. So the morning of, like I said, I  
6 kept all the forms in there in the thing. I printed  
7 off the new form -- or the new Chart C and I printed  
8 off the new Form F and put inside the binder with the  
9 remaining the items that were already in there to  
10 there.

11 So to say that I checked the weights before  
12 the flight, I absolutely did. Looking at this, the  
13 date was -- when you go in there and you click on it,  
14 if you -- because it's -- it's a weird -- not a really  
15 weird program, but it's different as far as when you  
16 open it up initially it opens up the aircraft, and then  
17 you have to click Form F and it drives you into this  
18 part of the system.

19 That morning when I went to go print it off  
20 and do all my backups and everything to -- to provide  
21 for the -- the mishap investigation, which obviously we  
22 all know that that's the direction a mishap goes -- it  
23 says yes or no as far as update weight. And I kind of  
24 looked at it said what -- and it was like a it was like  
25 a pound or something there. But it was this weight

(b) (6)

1 that -- that was on the Form B or on the -- the basic  
2 Form F.

3 We don't really call these the FCFs. We  
4 just call them the basic, but we kind of use them for  
5 everything there. So that -- the weight matching, I  
6 thought it was kind of odd there, printed off the new  
7 one. That's why it's the stamp there. Put in the file  
8 with the other remaining ones. Did my backups, and  
9 gave the book, I think to either QA or MDS. I can't  
10 remember where they all went, because it was safe --  
11 safety officer flying all around and everything like  
12 that. But yeah, that's -- that's why the -- the time  
13 is there.

14 UNIDENTIFIED SPEAKER: So you're -- you're  
15 just saying you reviewed it. You reviewed it before  
16 the flight. You had it pulled up. You were looking at  
17 it, but you didn't print it until after. And when you  
18 print it, that's when it does the time-based stamp?

19 (b) (6) Yep. Yeah. And see -- and  
20 that right there, the time-based stamp, like I said, I  
21 -- I have nothing to hide. I don't want change  
22 anything or do anything out of the ordinary. You can  
23 take these dates and times off here. You can move that  
24 stuff around. You can hand sign them. You can date  
25 them yourself and everything like that. It just makes

1 it easier for MMCO to have this, kind of, configured  
2 this way, and that's internal to the system as well.  
3 So I had nothing to hide there, printed off the new --  
4 or the actual Form F for it to put in the file and did  
5 my backup, and that's that.

6 Not moving on from that question or anything  
7 there, but talking about the configuration here. Yes  
8 the configuration of the aircraft, I didn't believe  
9 that there was a GOT 21 or GAL 21 or anything on the  
10 ramp or anything there. That's only going to  
11 technically benefit the weight and balance chart.  
12 Because if you take this Form F and it's out of -- if  
13 it's exceedance, it'll be highlighted. It says,  
14 exceedance. It has all these crossbars, has all this  
15 stuff. So I keep it in my weight and balance binder  
16 for training for my controllers, so if you ever see one  
17 or anything like this pops up like that.

18 So this is just added weight and it's not  
19 really wrong. I -- I would venture to say that, you  
20 know, it's -- it's better there because you're  
21 accounting for more weight there than you could  
22 actually have, you know, more fuel over there. So fuel  
23 of 10,000 pounds here, they're going to be under 9,000  
24 pounds at takeoff. And I would -- I would -- I would  
25 like to say that this is pretty standard across the

(b) (6)

1 board because if you did a true insert, you would do  
2 things like that. And that's accounting for the weight  
3 there.

4 UNIDENTIFIED SPEAKER: Is this format within  
5 weight and CG locations?

6 (b) (6) It is, 100 percent.

7 UNIDENTIFIED SPEAKER: Okay. And there was  
8 a little bit of contradictory -- or at least my  
9 interpretation, but just not -- not saying anything so  
10 you -- you can help me understand. But the -- can you  
11 -- I'm giving you the opportunity to kind of help me  
12 understand and redescribe the -- the reference between  
13 the Chart C on the date of this form and the basic  
14 weight on this form with the Chart C?

15 (b) (6) Okay. So Chart C technically  
16 has nothing to do with 180 days.

17 UNIDENTIFIED SPEAKER: Okay.

18 (b) (6) When you look in Tac Bravo or  
19 Tac 50, you'll see that it is Form Fs need to be  
20 reviewed 180 days. So this needs to be reviewed every  
21 180 days if you're doing that mission set. So we have  
22 Form Fs -- you can have 20 Form Fs. If you go look at  
23 Huey and Cobra right now, you'll have, you know, maybe  
24 50 Form Fs that are built.

25 Not all of them are going to be screened



(b) (6)

1 every 180 days. It is 180 days within that mission set  
2 for the Form F. The Chart C is only pulling that basic  
3 aircraft weight from the Chart C. So as long as that  
4 is pulled into this and it's accurate, and this is  
5 signed within 180 days, they can go do that mission  
6 set.

7 UNIDENTIFIED SPEAKER: So the reason that  
8 I'm asking is you indicated that there was a  
9 notification to you on a WBS that the basic weight was  
10 changed. And so what I'm asking is, if that's the  
11 case, that would have driven you to reference the Chart  
12 C to see what the basic weight was? So that's kind of  
13 what I'm getting at is what's -- what -- you know, how  
14 did you know that the basic weight was correct without  
15 referencing the Chart C?

16 (b) (6) Not 100 percent. You know  
17 where your question -- it's kind of landing, but it's -  
18 -

19 UNIDENTIFIED SPEAKER: You said on a WBS,  
20 you got a notification that said that there was a  
21 change in the -- in the basic weight and you -- so you  
22 clicked okay, and then that's what you used to sign the  
23 document. But if that's true, then that would've --  
24 that would've driven you to check the Chart C for the  
25 basic weight.

(b) (6)

1           So that's -- that's kind of what I'm getting  
2   at is, like, so you would not have known what the basic  
3   weight was if you didn't reference the Chart C for the  
4   Form F? And then particularly you would not have known  
5   if there was a notification, a WBS telling you that the  
6   basic weight has changed, unless you check the Chart C?

7           Like that notification saying, hey, the  
8   basically is different, that would've -- I would assume  
9   that would drive you to reference what the Chart C  
10   says?

11           (b) (6)           Yeah.

12           UNIDENTIFIED SPEAKER: If there --

13           (b) (6)           I -- I kind of see what  
14   you're saying there, but I -- I would maybe not really  
15   because I knew the basic weight of this aircraft  
16   because we were talking about the fuels. We were  
17   talking about it all morning. Even looking at the --  
18   the basic here that is current here, I knew it was  
19   whatever 389.1. You know what I'm saying? So maybe  
20   36,000 is what it was.

21           UNIDENTIFIED SPEAKER: Yeah.

22           (b) (6)           36,689. And I knew that's  
23   what it was there, so it immediately just drives me to  
24   -- to know that it's within. It was not maybe so much  
25   far as a -- a review, not on the -- not on the lack of

(b) (6)

1 safety call there. I would say just -- just knowing.

2 UNIDENTIFIED SPEAKER: Yeah.

3 (b) (6) You know what I mean? I was  
4 very -- I was in tune with what that aircraft was  
5 already. I know it's the heaviest aircraft. We have  
6 other forms that I have to push all the way up that  
7 say, you know, where are -- where's our most aft and  
8 heavy aircraft, which is 616, you know, 166616 Aircraft  
9 15, so --

10 UNIDENTIFIED SPEAKER: Okay. So the next  
11 question I would have is -- on that is, do you -- do  
12 you know if this is the correct basic weight for the  
13 Chart C, just looking at it? Based on what you just  
14 said, saying that you know what the basic weight was,  
15 is this the right basic weight?

16 (b) (6) I believe so.

17 UNIDENTIFIED SPEAKER: Okay. Okay. Yeah.  
18 So going back to the Safer Flight because we're trying  
19 to understand like what would've been a trigger to --  
20 to necessarily say, like, we need to -- we need to do  
21 something before we completely sign off as a Safer  
22 Flight. So what -- what was -- for that -- for the  
23 weight and balance specifically, why did he sign it as  
24 complete if -- if this form was not done in the book  
25 until after the mishap occurred?

(b) (6)

1 (b) (6) Because if I tell him it's  
2 good, it's good.

3 UNIDENTIFIED SPEAKER: Okay. Okay.

4 (b) (6) Like, he doesn't even --  
5 they're not technicians. They're not weight and  
6 balance officers. They have no idea what any of these  
7 numbers were. And that's what was different about C-  
8 130 world. A lot of the crew chiefs, they are  
9 technicians and they know what they're doing. He could  
10 look at this. This is Chinese to them.

11 UNIDENTIFIED SPEAKER: Okay.

12 (b) (6) And by me looking at this and  
13 telling that it is good, he knows it's good.

14 UNIDENTIFIED SPEAKER: Okay.

15 (b) (6) I wouldn't waste my breath on  
16 that, if -- I would not tell him that it wasn't if it  
17 wasn't.

18 UNIDENTIFIED SPEAKER: Yeah. And so going  
19 back to -- going back to some of the other procedures,  
20 is -- is that the same case for the completion of fuel  
21 samples and the completion of turnaround inspections  
22 and is -- I mean, he doesn't really realistically -- I  
23 mean, maybe he does, depending on what his MLS is, but  
24 he may not know like how to do a turnaround, so would  
25 that be the same? He would just ask is the turnaround



(b) (6)

1 complete, and if he says it's complete it's complete  
2 without referencing whether or not it's been signed  
3 off?

4 Same with fuel samples. Like, he may not  
5 know how to do fuel samples. Is he going to ask and  
6 have them say like, oh, fuel samples are complete, and  
7 then he doesn't verify that they're actually complete  
8 and signed off? He just says, hey, it's safe. Like,  
9 is it -- is it -- is -- and I'm saying like,  
10 procedurally, is it similar?

11 (b) (6) I -- I -- I really can't  
12 speak for them as maintenance because this is not my,  
13 you know, original platform. I don't know what their  
14 procedures exactly are, but that's what their quals are  
15 for. That's why we have the plane captain. That's why  
16 we have the people that are doing the dailies, the  
17 turnarounds, the fuel samples.

18 If -- if a qual looks at you and says it's  
19 good, you know, if they have the right certification  
20 for that being a collateral duty inspector or a quality  
21 assurance guy, then that's what we have to go with.  
22 You know what I mean? We can't go out there and verify  
23 it all ourself, so that's maybe what he did there.

24 UNIDENTIFIED SPEAKER: Can you help us  
25 understand how the logs and records and UMA were

(b) (6)

1 secured after the mishap, the notification of mishap  
2 occurred? And then how was everything secured?

3 (b) (6) I honestly thought it was  
4 pretty well. It's kind of a weird thing though,  
5 because I'm used to -- so the aircraft was, I would  
6 say, within minutes moved into a mishap folder. That's  
7 part of my job there, guidance just to help the NW --  
8 or MD -- MDS. (b) (6) (phonetic) over there, she  
9 came in. She was in civvies. I don't know where she  
10 was that morning.

11 Maybe -- maybe she was coming in at 7:00 or  
12 8:00 or --. I don't know where she was for some  
13 reason. But she came in, took care of all of it,  
14 locked it down. I thought it was handled pretty well.  
15 She sent a message up, apparently procedures these days  
16 aren't that they don't -- they don't lock the aircraft,  
17 so it was still on UMA.

18 I don't know how many people have been part  
19 of the mishap, but we told them not to get in there,  
20 plug around and mess with it, or do anything weird, you  
21 know, because you could still see it on the bed on the  
22 visual, you know, there as you pulled it up.

23 Configuration management was pulled off there into a  
24 folder. So they couldn't, you know, scrub it there.

25 A lot of things did happen over that time,

(b) (6)

1    though.  People asking questions.  You know, obviously  
2    IQA is the big top of the town for B22.  Different  
3    people reached out, safety board and all the other  
4    stuff asking, you know, how many, not safety board, but  
5    FST part of that system, how many hours (inaudible)  
6    installed, kind of things like that.  So I think those  
7    answers were provided.  But as far as, you know,  
8    obviously UMA, anything I thought it was handled very  
9    well.

10           UNIDENTIFIED SPEAKER:  Okay.  I'm going to  
11   ask a couple questions about Major Lewis.  You know, I  
12   know this is sensitive.  You can go ahead.

13           (b) (6)           Do you know what time  
14   everything was locked down by?

15           (b) (6)           It was 10:00 something.  I  
16   would probably say 10:15 to no later than maybe 10:40  
17   something, 10:30 something, around there maybe.  And I  
18   -- I could be off on that time.  You know, there was a  
19   lot of running around.  Was ERT going in, you know,  
20   were they going to go do stuff, all this other stuff.  
21   So there was a lot of management, but I think 10:00  
22   something, I would -- I would say.

23           UNIDENTIFIED SPEAKER:  Quick -- quick --  
24   quick question, a couple questions on Major Lewis.  So  
25   I understand if it's -- you know, might be sensitive in

(b) (6)

1 asking. So I understand.

2 Did -- when Major Lewis came in and he was  
3 talking to you that morning before he walked to the  
4 aircraft, do you -- do you remember him screening the  
5 AV?

6 (b) (6) I can't say 100 percent. If  
7 he did, he screened it from one of the computers across  
8 my way, but I -- I handled the field grade a little bit  
9 differently than I do the basic, you know, aircraft  
10 commander or copilot. We will blow out a -- a sheet  
11 for them where they can screen it in their shops. You  
12 know what I mean? So I know he screened the book.

13 UNIDENTIFIED SPEAKER: Yeah.

14 (b) (6) I don't remember visually  
15 seeing him screen the book, you know, and he probably  
16 did it from his office, which is pretty common. I  
17 think for many of these guys around here, they'll do  
18 it, but --

19 UNIDENTIFIED SPEAKER: It doesn't sound like  
20 you saw him screen the finders? That was --

21 (b) (6) Not that I remember, but  
22 there's been so many flights, and I can picture him  
23 sitting in a seat that he would've screened. But  
24 usually I see him if he's doing that, he's in full get  
25 up, you know, with all his gear and everything like



(b) (6)

1 that. And he wasn't that morning when he was in  
2 maintenance control. So I can't confirm that he -- you  
3 know, with my eyes that he did that.

4 UNIDENTIFIED SPEAKER: Okay. I -- that is  
5 the questions that I've got. I -- I think, you know,  
6 if you guys want to ask open questions kind of about  
7 the -- the -- the command culture and those items,  
8 might be warranted, but I'm those are the main  
9 questions that I have.

10 (b) (6) You said you had taken care  
11 of it. Going back to your initial description, you  
12 said you were -- you know, you were upset about the  
13 fuel count you saw on the board. You said the AMO said  
14 he had taken care of it.

15 Can you just elaborate on what you meant by  
16 that?

17 (b) (6) Yeah, so not that I was upset  
18 with the fuel loads on the board. I was upset that it  
19 wasn't a configuration on the flight schedule.

20 (b) (6) Okay. Is it normal to list  
21 that configuration on the flight schedule?

22 (b) (6) I don't know if this platform  
23 or maybe the squadron, but that's an absolute must, you  
24 know what I mean? And we can't -- as maintenance, you  
25 cannot configure -- configure an aircraft without

(b) (6)

1 having that note on there. So that was what I was  
2 getting at. That basically, not that we're so sloppy,  
3 but how can we not do that? How can we not present  
4 that product to maintenance where we can actually have  
5 an aircraft that's configured in a way so that air crew  
6 can fly it, you know?

7 (b) (6) Okay. Let me follow up on  
8 that. You -- you've been with the squadron since a  
9 little over March 2022 --

10 (b) (6) March 2022.

11 (b) (6) -- so is it normal for this  
12 squadron to have the configuration on the flight  
13 schedule here? Because --

14 (b) (6) I would say if it's abnormal  
15 to fuel loads, yes. And then also, if there is certain  
16 things like litters installed, yes, those have been  
17 configuration notes. I would say they do a pretty good  
18 job of it, but I don't know how well schedule writers  
19 do. So I haven't reviewed every single flight  
20 schedule, you know.

21 (b) (6) Yeah.

22 (b) (6) But I -- I'd say it's -- it's  
23 pretty good because they have to present that to us so  
24 we can make sure it's configured.

25 (b) (6) Just asking --

(b) (6)

1 (b) (6) They're pretty, yeah.

2 (b) (6) -- generally, right, like is  
3 this something like a battle you're fighting daily or  
4 weekly or is this, like, an every now and again thing  
5 that pops up?

6 (b) (6) I say it's every now and  
7 again, but in all grand scheme of things, we don't  
8 change configuration of aircraft too much either, you  
9 know? So it's, kind of, maybe it is few and far  
10 between. Maybe, you know, it's only because it's only  
11 few and far between. I don't know.

12 (b) (6) So I guess, what did -- what  
13 did the AMO mean by he had taken care of it?

14 (b) (6) As far as getting them  
15 fueled.

16 (b) (6) Okay.

17 (b) (6) That -- that -- that was my  
18 perception of it, that he took care of it, he handled  
19 it, yes that aircraft would be fueled to meet, you  
20 know, you know, percentages and -- and all the stuff  
21 that they do for flight planning and stuff like that.  
22 That's what I took as far as that they put the extra  
23 work in on Friday because I left at noon, you know, and  
24 they got it taken care of, so not, like, pushed it  
25 aside taken care of.

(b) (6)

1 (b) (6) Yeah. You mentioned the  
2 configurations don't change much out here. You know, I  
3 know you're -- I know your work. I know you like  
4 mission planning for this -- this and everything like  
5 that. But I guess from your perception and your  
6 understanding, what was the complexity of this mission  
7 compared to what is normal?

8 (b) (6) So normal that complacency  
9 wasn't there. That being that normal, you know what  
10 I'm saying? But this is what this aircraft does. You  
11 know, this is -- this is a mission set that we do every  
12 single day. I mean, even out there right now, they're  
13 doing, you know, the on off drills. It's pretty basic.  
14 You know, I've flown on this aircraft, like this. TBS,  
15 we do the same thing. You know, all -- that's what  
16 this aircraft does. So nothing out of the ordinary at  
17 all.

18 (b) (6) Okay. And then just  
19 generally, describe the command climate in VMM 363?

20 (b) (6) I don't want to be off-  
21 putting.

22 (b) (6) No, I want -- I want your  
23 honest answer.

24 (b) (6) Yeah. I would like to  
25 provide that answer, but the -- I have my questions



(b) (6)

1 about the articles signed as well. So as far as  
2 Article 92 and --

3 UNIDENTIFIED SPEAKER: Yeah, so specifics  
4 about the assignments of the articles were with regards  
5 to the form of documentation that you spoke through,  
6 the articles are in scope are not -- not really -- not  
7 really outside of that. Unless -- unless there's  
8 something that you report that, you know, potentially  
9 could violate one of those -- those additional  
10 articles. But the -- the scope of those articles are  
11 with regards to the questions we've asked you around  
12 the -- the Safer Plane and the Form Fs.

13 (b) (6) Yeah.

14 UNIDENTIFIED SPEAKER: Okay. Okay.  
15 Hopefully I provided some --

16 (b) (6) You did. Yeah, for sure.

17 UNIDENTIFIED SPEAKER: -- clarification on  
18 that, but okay. Sure.

19 (b) (6) Yep. Command climate. You  
20 know, like I said earlier, I'm not a -- I'm not a  
21 helicopter guy, you know, but I love all aviation  
22 equally, you know, and I stress that to the maintainers  
23 out here because MCO is quite different in its role.  
24 But I tell them, we all -- we love all aircraft  
25 equally, you know?

(b) (6)

1           And that's the -- that's the kind of thing I  
2 go with. Major Lewis was acting CO, as I said earlier,  
3 you know. No better person to take that helm, you  
4 know, and I -- I think we're in a -- we were in a very  
5 good spot. You know, when we started coming out, if I  
6 -- I want to speak a little bit in length about this,  
7 if you don't mind.

8           (b) (6)           No, that's why we asked the  
9 question.

10          (b) (6)           Yeah. On our -- on our way  
11 out here, you know, this -- this CO did previous Murphy  
12 (phonetic) and they had 12 aircraft, right. And then  
13 the IQA terrible list of all that came to us just  
14 before we got out here. So we pieced together 10  
15 aircraft.

16           And not unsafe as far as, you know, we -- we  
17 Tycon (phonetic) helped us and we got all the  
18 maintenance done. We took our own 10 aircraft out  
19 here, which I wanted 12 so bad just to help the  
20 maintenance, you know, and really just the utilization  
21 of aircraft to kind of bring that down a little bit.

22           But I didn't want the same stamp of the --  
23 what they did two years ago.

24           I said, hey, we're bringing that -- I stood  
25 up in the ready room and -- and told everyone this. I

1 said, yeah, we're going to take lessons learned from  
2 two years ago. We're going to get out here and we're  
3 going to, you know, make it our own, make our own day,  
4 you know, make it better.

5 But what did we do? We fell in on a product  
6 that they had two years ago that was working six days a  
7 week. And it was -- it was Monday -- I'm sorry. It  
8 was, like, Sunday night through Saturday, and we were  
9 flying four fly days a week. It was Monday, Tuesday,  
10 maintenance day Wednesday, Thursday, Friday,  
11 maintenance day Saturday, Saturday get your -- or  
12 Sunday get your hair cut, do your laundry, back into  
13 work Monday. And we did that for a little over a month  
14 or so.

15 And I -- I just, you know, I did two tours  
16 in Afghanistan, you know, 12 on 12 off, no days off,  
17 you know, special Mag Tabs (phonetic), done a lot of  
18 it. And I went to the AMO and said, you know, this --  
19 this ain't healthy. We can't do this. And I really  
20 revolved around three fly days. That's what I wanted.  
21 I didn't care so much about time on time off, but I  
22 knew that we could mold that into that.

23 So I presented a product to him, said 12 on  
24 12 off, Monday through Friday. Because what do we see?  
25 We see the GC and we see all these other people, all

1 these marines taking, you know, weekends, 96s, taking  
2 leave during the whole time and we're just over here  
3 working, you know, six days a week.

4 So right before Townsville, that was  
5 Southern Jack Rudet (phonetic), I presented that  
6 product, you know, and it -- it -- it took hold. I was  
7 so freaking ecstatic about it. And AMO presented to  
8 the staff and COs, went and grabbed me up, and went to  
9 present to the CO.

10 And I'm like, heck yeah, man, this is  
11 freaking awesome. Change, you know. Not change just a  
12 change, but change for the better, of where we can get,  
13 you know, a Saturday and a Sunday as a squadron.

14 And went to the CO's office and he chewed on  
15 it for a while. Went back and forth with it, pulled  
16 the ops over in, did everything. And he said, give me  
17 a couple days. We'll do it. I might -- I might  
18 entertain it. Then he's like, more longer we sit  
19 there, explain it to me again. And he was like, hey,  
20 in 30 minutes, you know, give me 30 minutes -- and he  
21 said, no, we'll do it.

22 And I was ecstatic. But the best thing that  
23 he said, he's like, you know, we're going to go with  
24 this. But if this doesn't work, we won't even go back  
25 to six days. We'll do something totally different.



1 And that was one of the best things I heard out of his  
2 mouth, you know, to that mentality of, you know, if  
3 something isn't working, we're not just going to go  
4 change it and then change it back to it also. We're  
5 going to try to, you know, revamp the entire process.

6 So I couldn't even sleep that night. I was  
7 ecstatic, you know what I mean, that I made a change  
8 like that throughout the maintenance department where,  
9 you know, everybody says 12 on 12 off sounds so bad.  
10 But in all reality for a maintainer, we're working 10-  
11 hour days. It's not a 10-hour day. It's a 12 to 14  
12 hour day because you come in an hour prior to doing  
13 your ATasks (phonetic), you stay an hour or two for  
14 documentation, do all that.

15 So I think it improved. I went to  
16 Townsville, people got their weekends. We came back,  
17 and we were going to -- we were going to keep that for  
18 two exercises to make sure, you know, give it the best  
19 chance, best hope possible. And I think it worked  
20 great. You know, night crew -- love the night crew, we  
21 split up where it was -- they split the day because,  
22 learned in Afghanistan as well, the heat out here is  
23 nuts.

24 So the 12 to midnight, midnight to 12, we  
25 share half that heat in the day. That was part of the

(b) (6)

1 process that I try to talk to. And I think it improved  
2 a lot. You know, I -- man climate, it's -- it's busy.  
3 You know, some people think it's overly busy. I really  
4 don't think it's that fast-paced.

5 It's sad that a mishap has to happen where  
6 we all come together and, you know, do more barbecues  
7 and stuff like that. But I think we were -- we were in  
8 a stride, you know? And we were -- we were moving  
9 pretty well. It was pretty lubricated where we --  
10 where everything was jiving pretty dang well.

11 There was some other instances, some small  
12 ones here and there, like another BuNo that had landed  
13 on some stuff in an LZ and stuff like that, that I  
14 wasn't too particular how -- or I wasn't too happy  
15 about how it was handled.

16 (b) (6) Can you talk about that?

17 (b) (6) Yeah. I -- I don't know  
18 really even dates or when it -- how it happened, but a  
19 BuNo or -- 168343 Aircraft 10, somehow it looked like  
20 it landed on something, and we don't know if it was  
21 during a night flight or whatever it was, this or that.  
22 We don't know how long it had been done, you know? But  
23 somebody found it on a turnaround and went out there  
24 and looked at it. Boom, the lower sponson had damage.

25 And, you know, obviously they landed on

(b) (6)

1 something, and it didn't look like it was maintenance  
2 induced at at all. But I don't know how that was  
3 handled behind the scenes as far as, you know,  
4 categorizing that or, you know, fixing it. We reported  
5 that up to the mouths and everything like that.  
6 Everybody's tracking.

7 So we got deferrals on, the Tycon was aware  
8 of it, everything there. But as far as the safety  
9 piece of it, I don't know exactly how that was handled.  
10 You know what I mean? Like, how are we not going to do  
11 that again? You know, kind of thing. That's where my  
12 mind goes immediately, but yeah.

13 (b) (6) Was there a discussion of  
14 that? An officer's discussion, all-hands discussion  
15 about it?

16 (b) (6) There was a lot of movement  
17 exercises and stuff like that. I don't think we all  
18 came together in the red room as far as that or  
19 anything like that. On -- on the different way,  
20 though, we were -- with all the gear moving around, all  
21 the different exercises like that, there was some GSE  
22 ground support equipment, mishap kind of stuff, that  
23 fell off or got damaged in transit and all this other  
24 stuff, and I wasn't getting answers about that. And  
25 one day I was just sick and tired of it.

(b) (6)

1           A tour came to me and said, Hey, sir, we  
2   need this. We need that.

3           I went straight to the AMO, AMO said, okay.  
4   We walked over to XO's office.

5           He picked up the phone, talked to S4, said,  
6   where's the answers for this and that?

7           Major Lewis took care of it. And it was --  
8   it was immediate action. You know, and I was ecstatic  
9   about that because it was like, that's the process.  
10   Right? Like, hey, we've been waiting around for a week  
11   and a half for this. We don't have an answer. We put  
12   somebody on it and get us an answer for it.

13          So that kind of stuff was handled well. I  
14   think it's -- it's a tough business, right? I think  
15   the -- the spirit is there to cradle to grave on every  
16   single item. I -- I -- I -- I think we do a pretty  
17   pretty well job of that, or a pretty good job of that,  
18   so.

19          As far as the rest of the command climate, I  
20   think they're about as happy as they can be as  
21   maintainers. You know?

22          (b) (6)           I do.

23          (b) (6)           It's a tough business.

24   Osprey will take everything from you. It's a tough  
25   platform.



(b) (6)

1 (b) (6) You mentioned the -- the  
2 mishap landed on something. Were you aware of any  
3 other -- were you aware of that mishap that happened  
4 off the ship?

5 (b) (6) I was. Thank you. Sorry. I  
6 wasn't aware of what actually happened. It was very  
7 vague, and it was -- I had a few conversations with AMO  
8 about that of, you know, to the point of we're doing a  
9 mishap. I'm reporting up that this aircraft is non-  
10 mission capable.

11 We're trying to get flight clearances for  
12 it, but I don't have any information to even ask for a  
13 flight clearance. Like, what's the damage? What's the  
14 pictures? What's, you know, limitations? What's the  
15 configuration of the aircraft? Are the doors off? Are  
16 the doors on? All this other stuff.

17 I still have not heard exactly what happened  
18 from the ship, you know. Most I gathered, took off,  
19 touched the water, and they were recovered back on the  
20 ship. And -- and it's pretty sad that, you know, I  
21 don't know that. I'm -- I'm -- it is a little  
22 ridiculous, in my opinion. I understand investigations  
23 and stuff like that, but we could have some  
24 transparency about that, I believe, especially in my  
25 billet and moving forward.

(b) (6)

1 (b) (6) I think last question for  
2 me: You mentioned you'd kind of gotten a little closer  
3 to Major Lewis, just having gone to Townsville with him  
4 and then living closely near him.

5 Are you aware of any human factors or  
6 anything like that, that -- or anything in his personal  
7 life that may have been impacting him?

8 (b) (6) No, he was, every morning,  
9 night, any -- any situation, you got the same guy,  
10 every single -- every single second of every day. God-  
11 fearing man, and he -- he was a straight shooter. He -  
12 - he knew what he was doing. He was -- one thing I  
13 can't help myself to speak on, you know, and him and  
14 (b) (6) (phonetic), that's the co-pilot, Lebo (phonetic),  
15 you know?

16 And I don't know how far this is going to go  
17 or anything like that, but they've flown together many  
18 times over the last, you know, few months. And she was  
19 above her peers, and -- as far as I know, and -- and  
20 you know, where on the -- throughout the company grade  
21 that I've seen is she's above her peers.

22 And I don't know if that was, you know, a  
23 contributing factor at all that they were -- but Major  
24 Lewis was such a freaking great pilot, and even looking  
25 at, you know, the section lead because he was going for

(b) (6)

1 his X, (b) (6) was. And if Major Lewis saw anything  
2 out of place, he would've mentioned in a heartbeat. He  
3 wouldn't have let something even minute slide by.  
4 Like, you couldn't have emphasized this more. You  
5 could've done this. He would -- he would've said that  
6 doing those things. And as far as I know, that never  
7 happened or anything like that.

8 I don't think he was complacent or  
9 comfortable. I had no clue what happened. But he  
10 didn't, you know -- like I said that morning, we talked  
11 more than we talked, you know, in the last few days,  
12 you know, and went over the air show and everything  
13 like that. So he was well rested as far as I know from  
14 the night prior, you know, and -- and it is kind of  
15 strange that I took note of that even there, but just  
16 situational awareness, you know what I'm saying?

17 And like I said, from the washer, the lights  
18 were out then and everything like that. I didn't hear  
19 any noises over there about 9:00 something, but 21:00  
20 at night somewhere around there. But he didn't -- he  
21 didn't show tired that morning. Wasn't, like, drinking  
22 abnormal amounts of coffee. You know, he was normal  
23 flow, normal flow.

24 (b) (6) Thank you. You have any  
25 questions?

(b) (6)

1 UNIDENTIFIED SPEAKER: No, thank you.

2 (b) (6) Good. The last, kind of,  
3 warning I give to every witness, right? We advise this  
4 is an ongoing investigation. Please don't discuss your  
5 testimony with any potential witnesses. I know you  
6 know this. All the same, please don't. There's  
7 another investigation going on. If they interview you,  
8 obviously discuss things with them, but not with any  
9 other witnesses.

10 Any questions?

11 (b) (6) When am I -- when is further  
12 stuff going to go on about this article stuff or --

13 (b) (6) Yeah. If you don't mind?

14 (b) (6) Yeah.

15 (b) (6) We'll stop the recording and  
16 just kind of talk through the process.

17 (End of audio recording)

18

19

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21

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25



1 CERTIFICATE OF TRANSCRIPTIONIST

2

3 I, Doug Yarborough, a transcriptionist

4 located in Charlotte, North Carolina, hereby certify:

5

6 That the foregoing is a complete and accurate

7 transcript of the digital audio recording of the

8 proceeding in the above-entitled matter, all to the

9 best of my skills and ability.

10

11 I further certify that I am not related to any

12 of the parties to this action by blood or marriage and

13 that I am in no way interested in the outcome of this

14 matter.

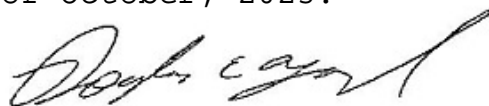
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16 IN WITNESS THEREOF, I have hereunto set my hand

17 this 20th day of October, 2023.

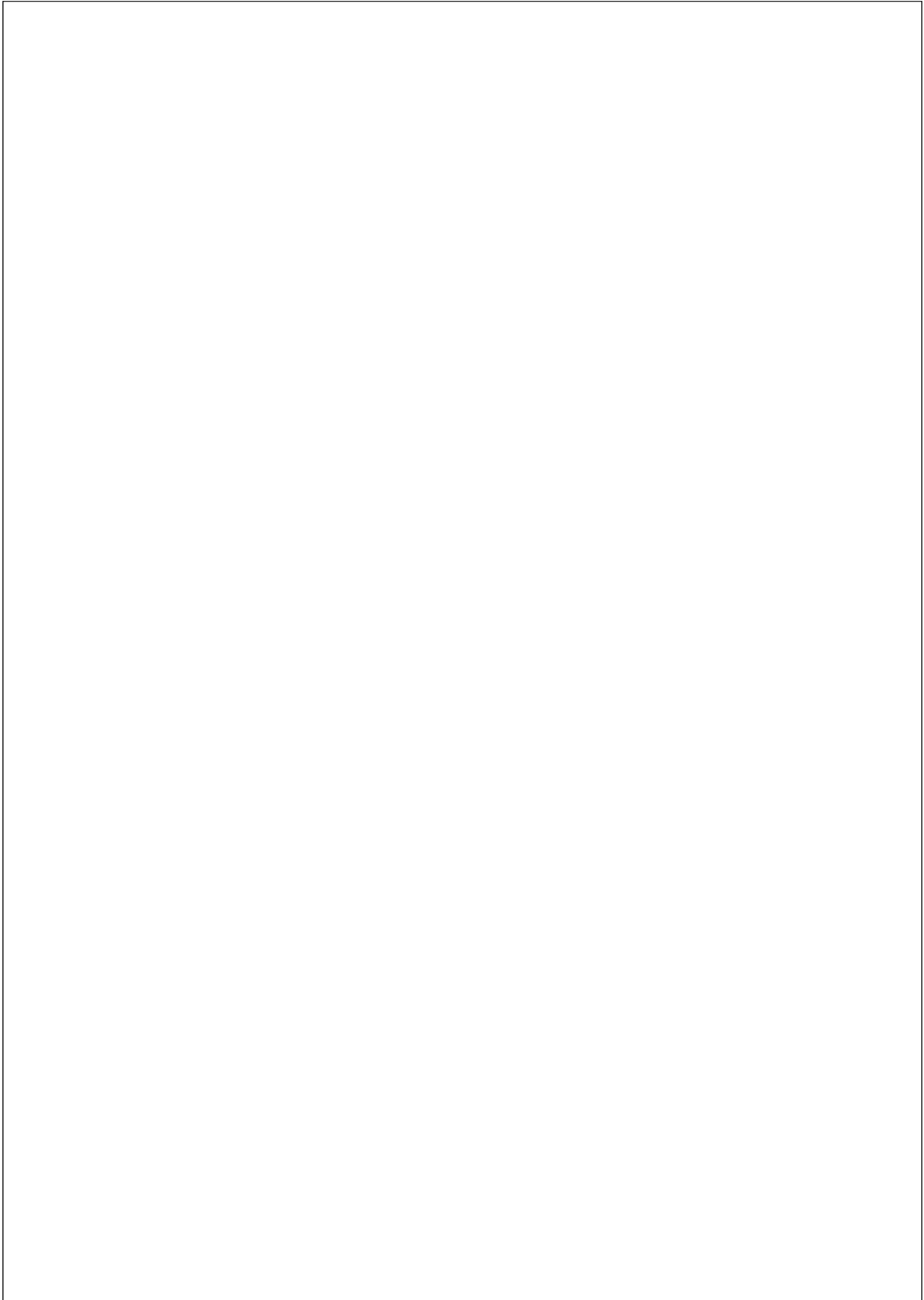
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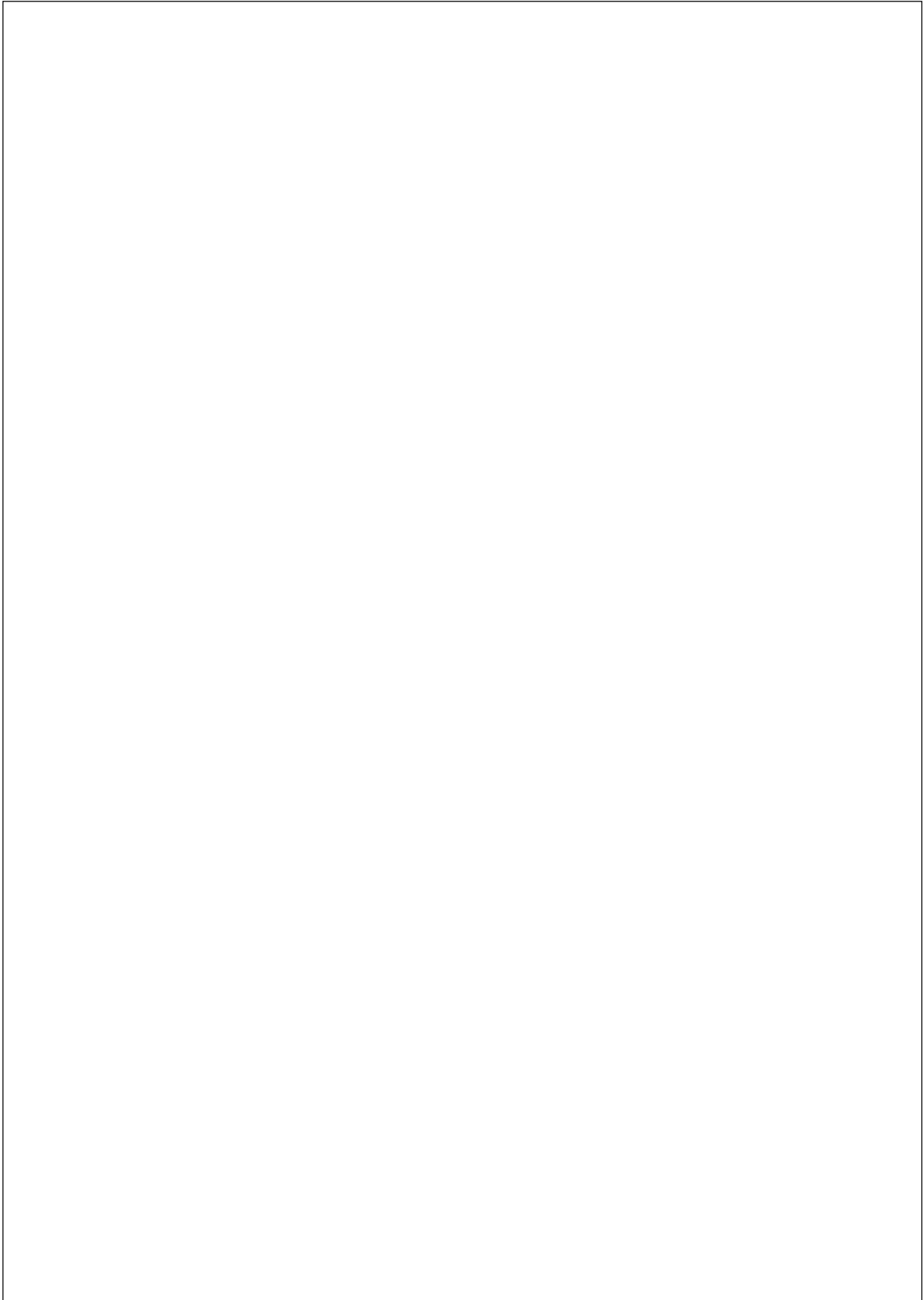


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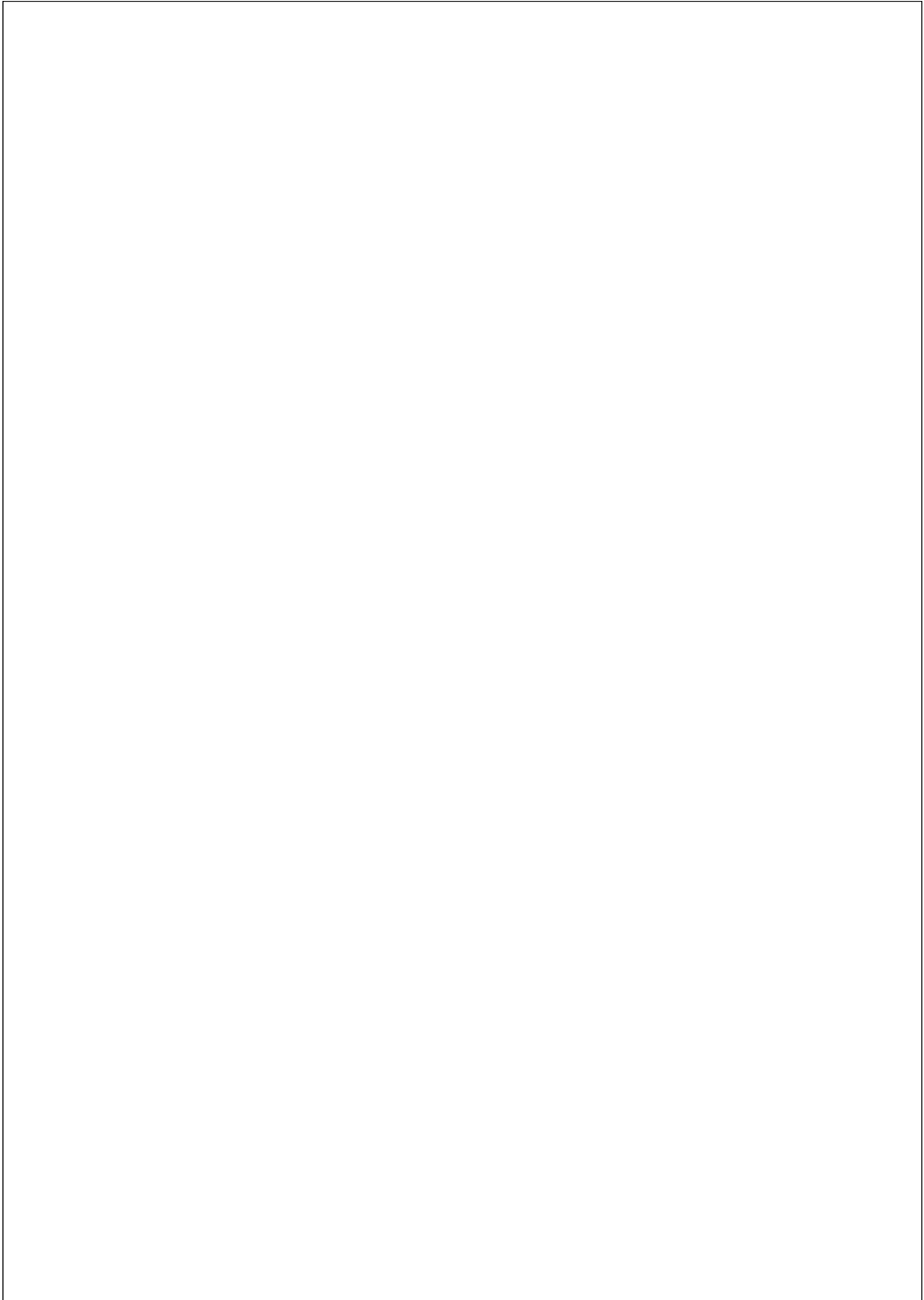


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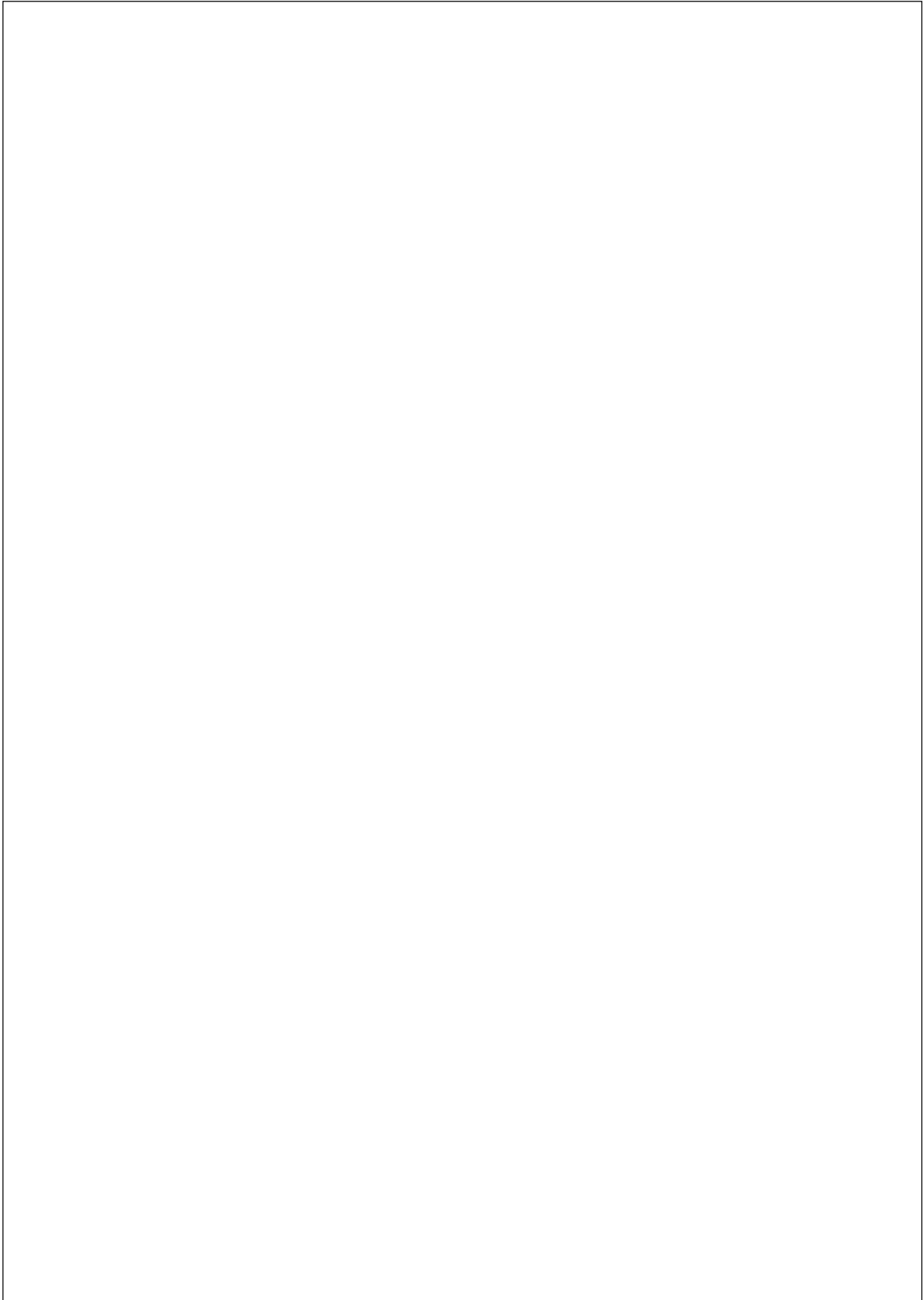
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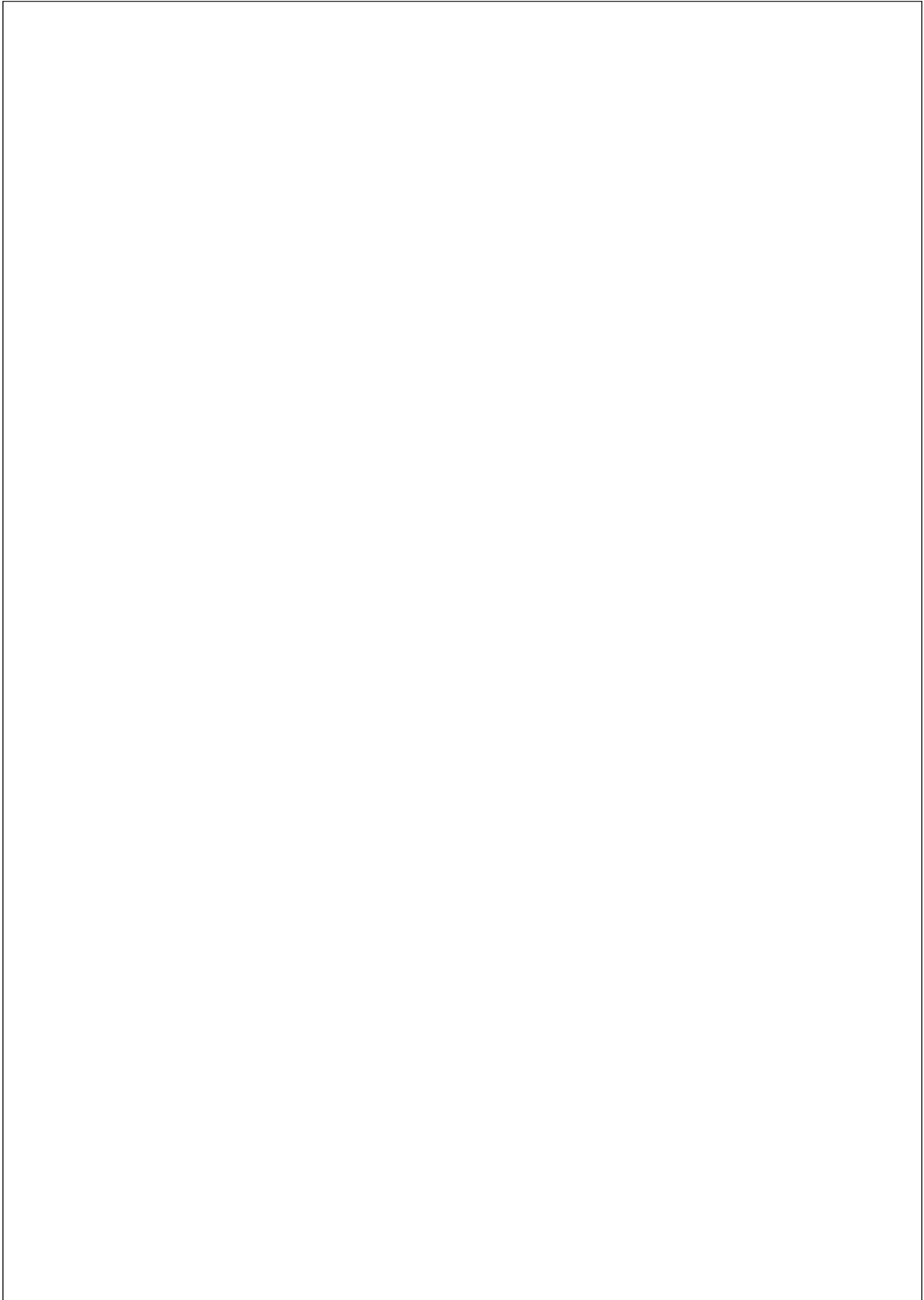
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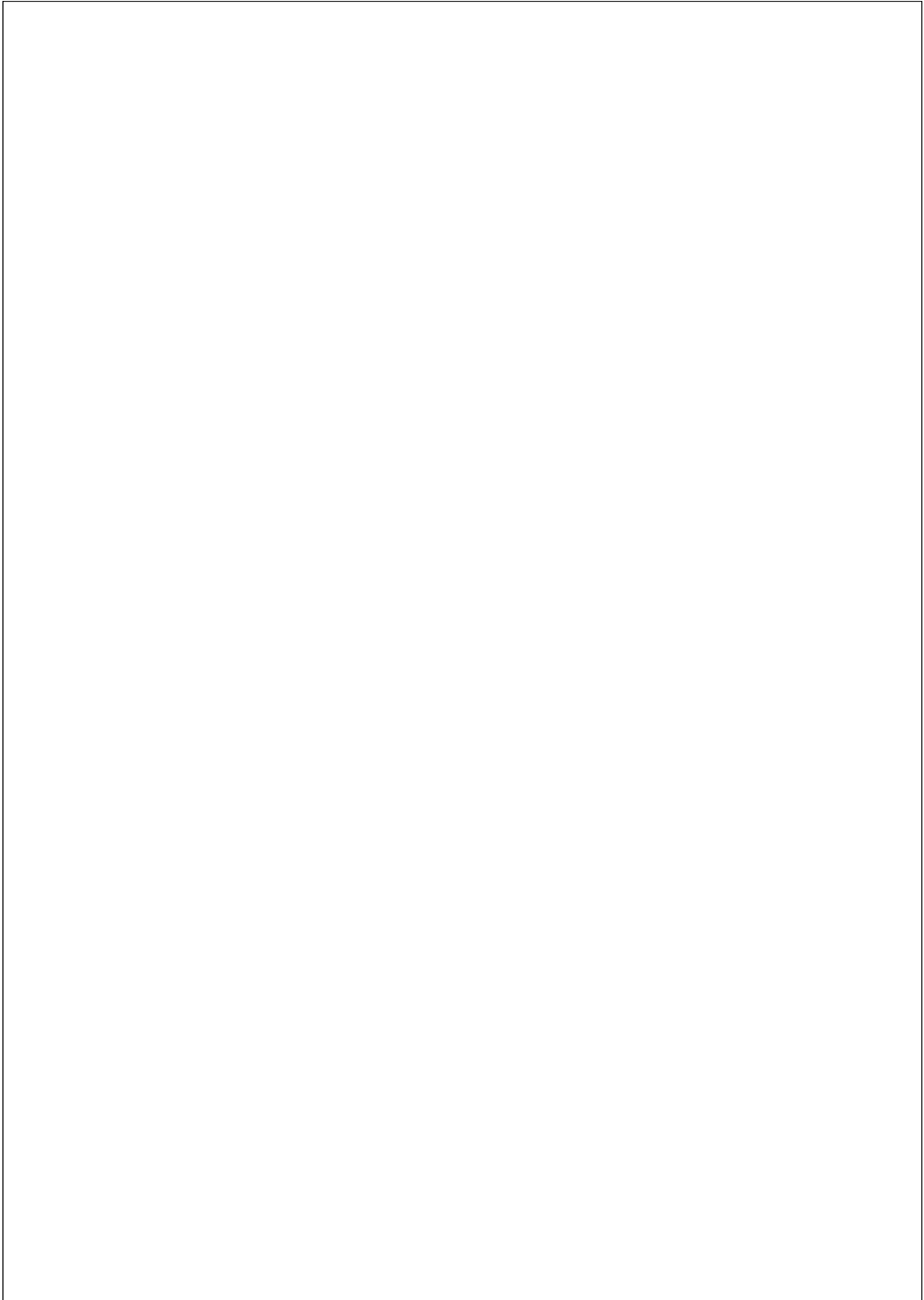


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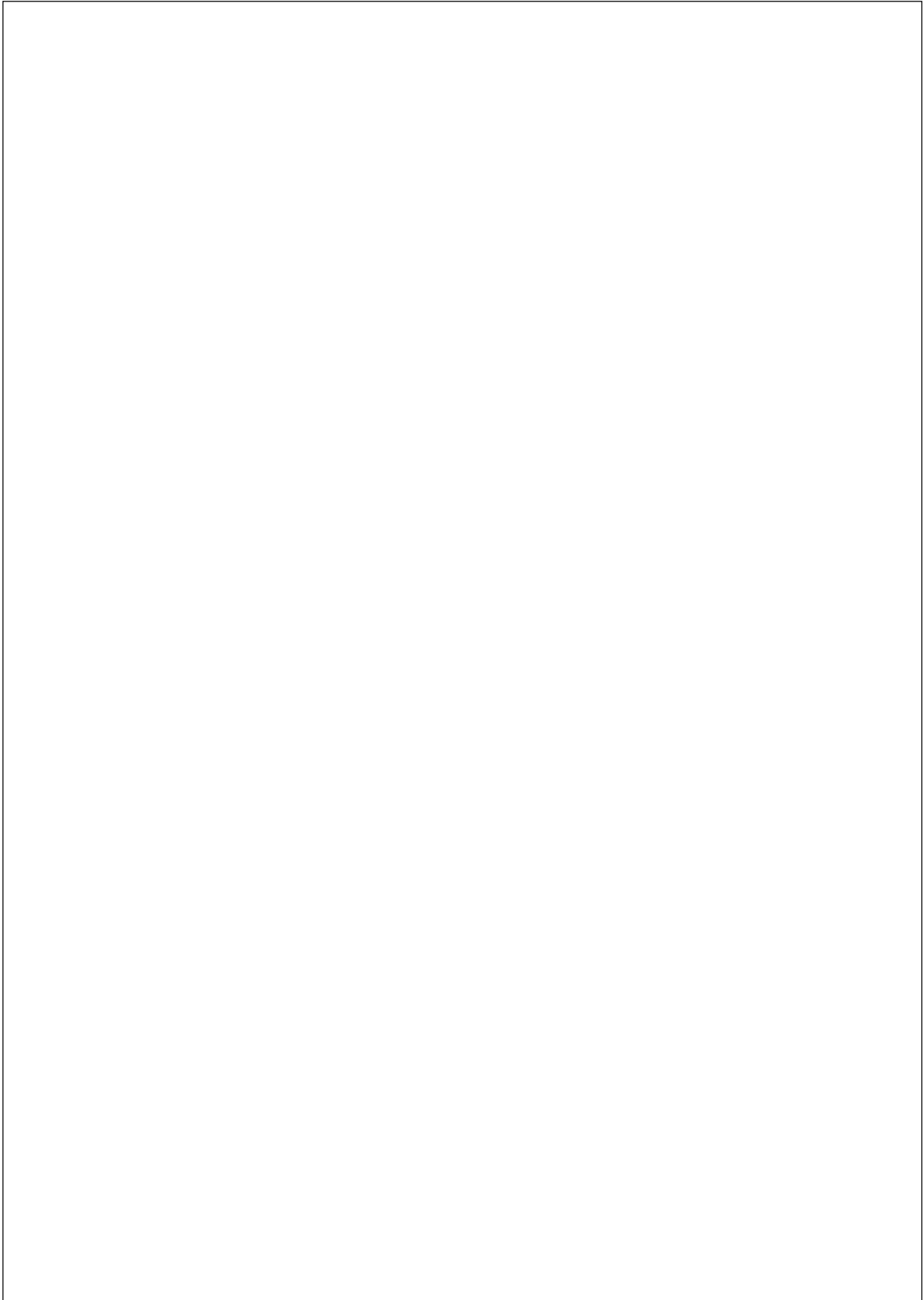
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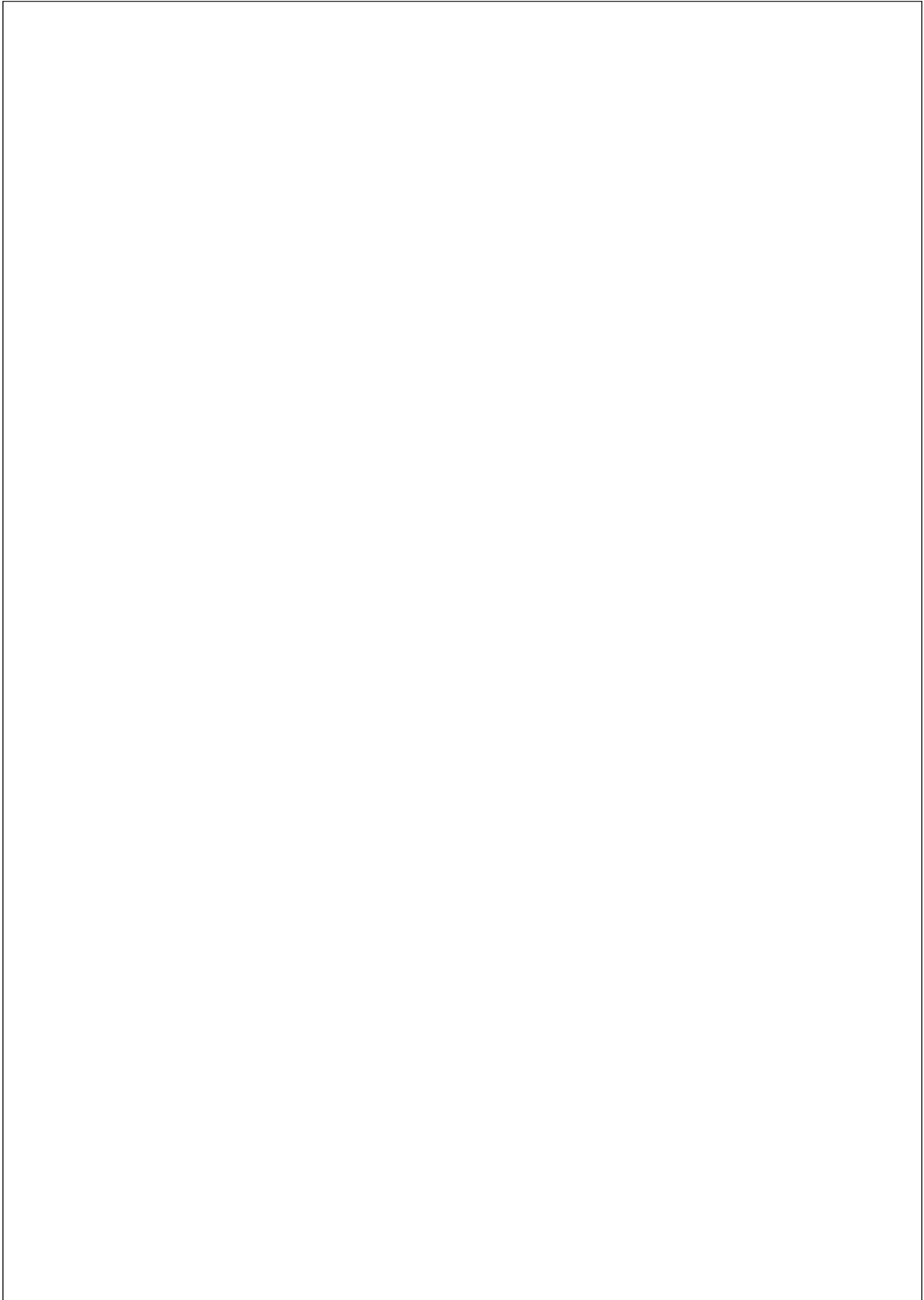
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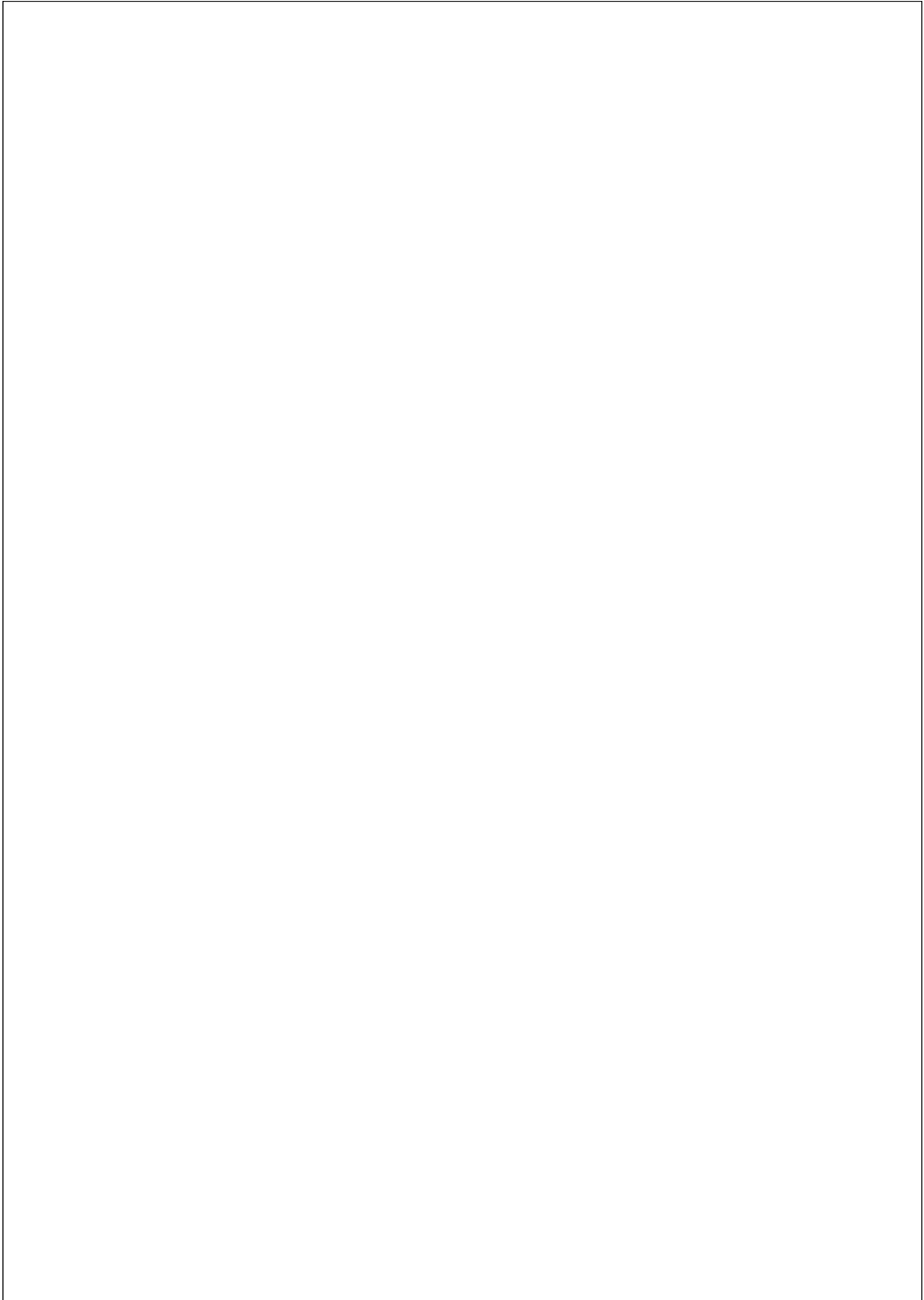


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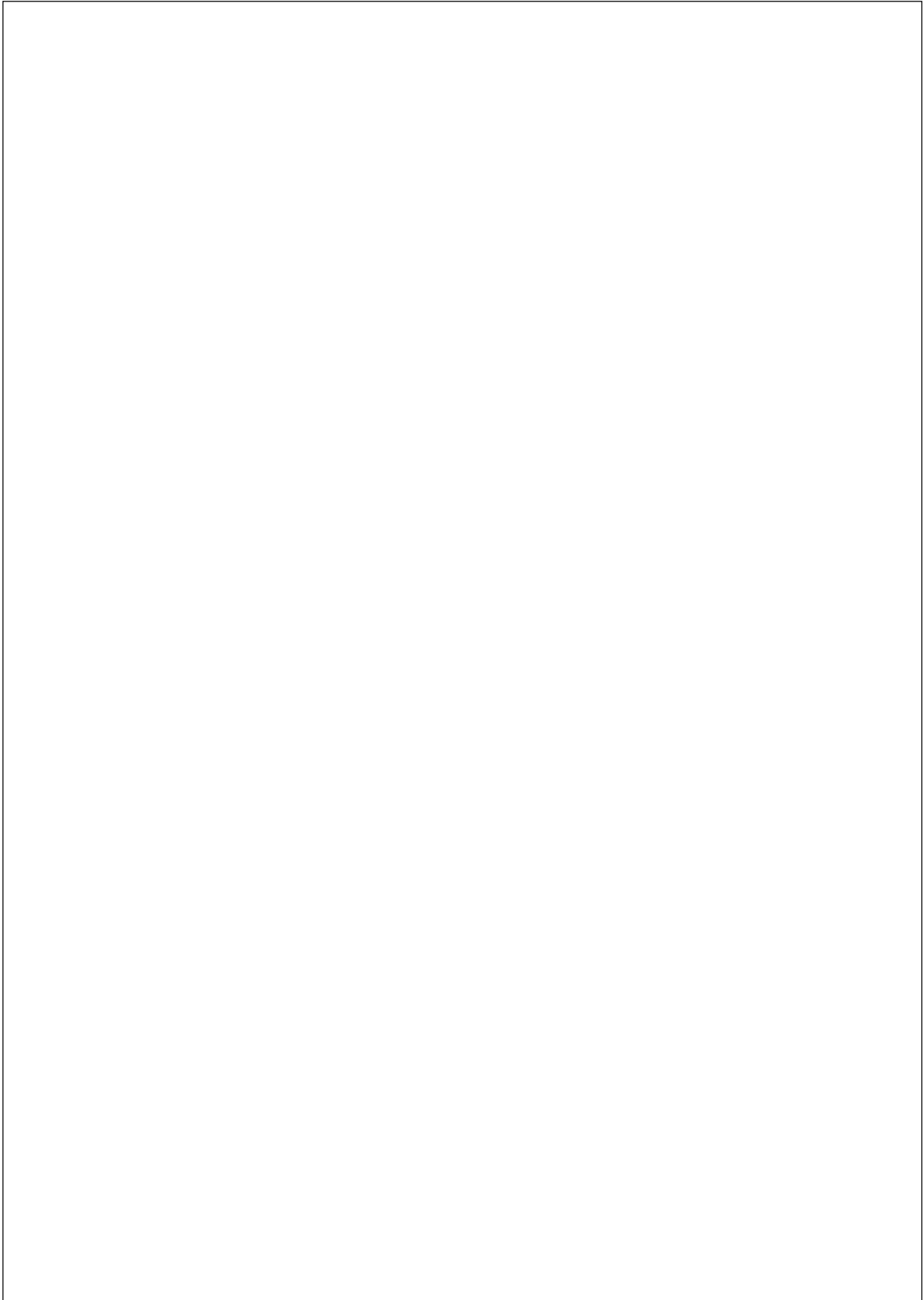
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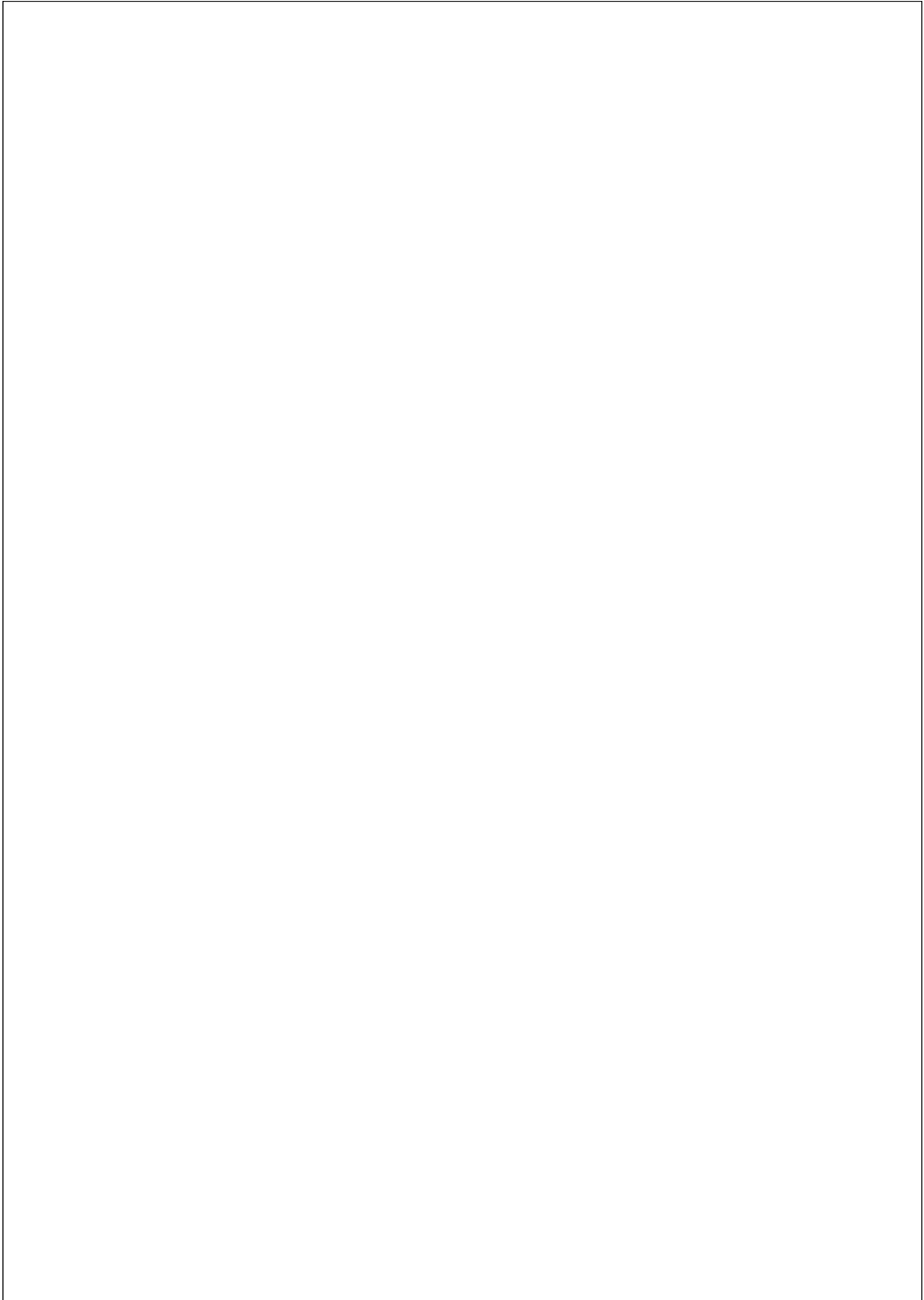


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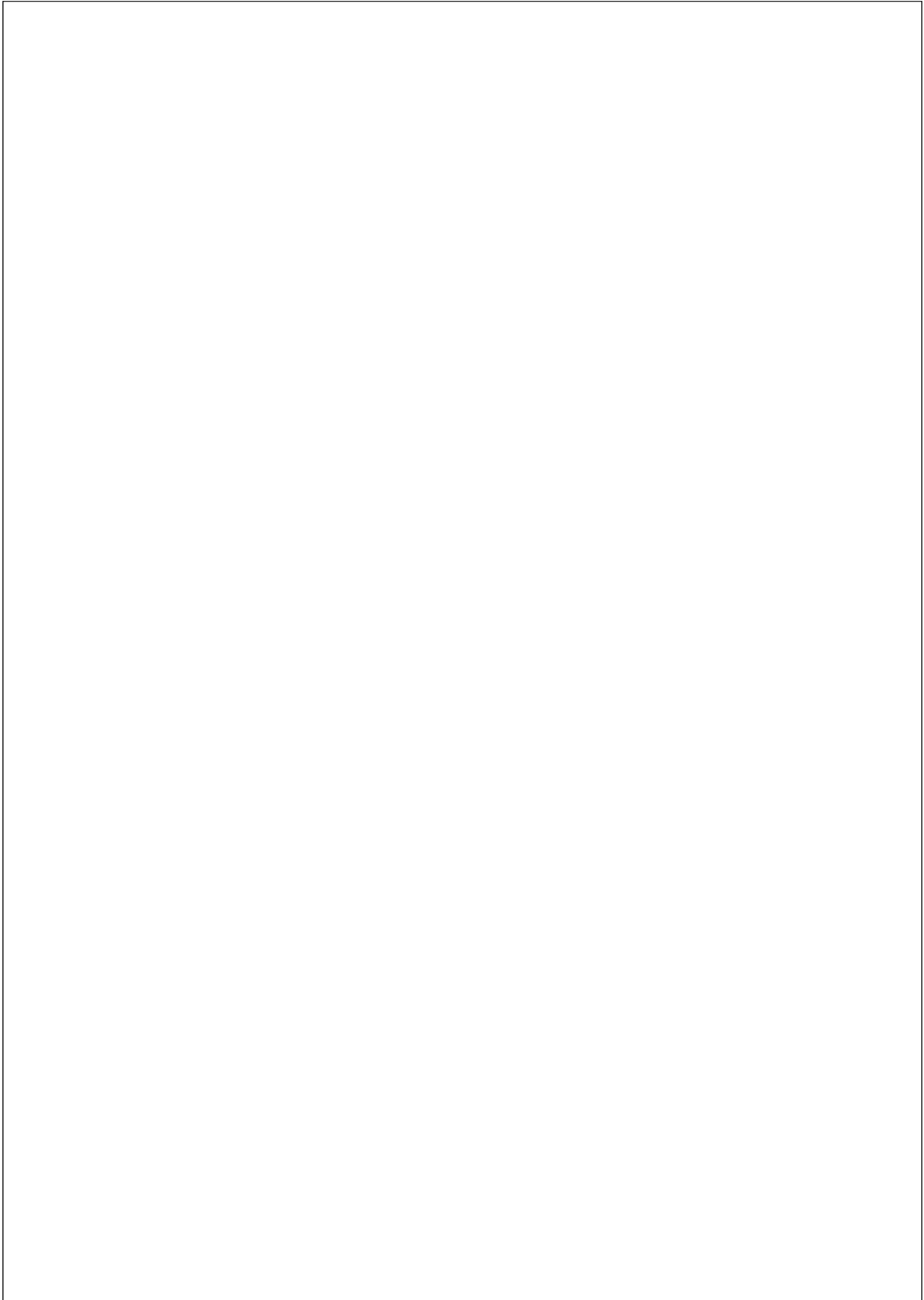
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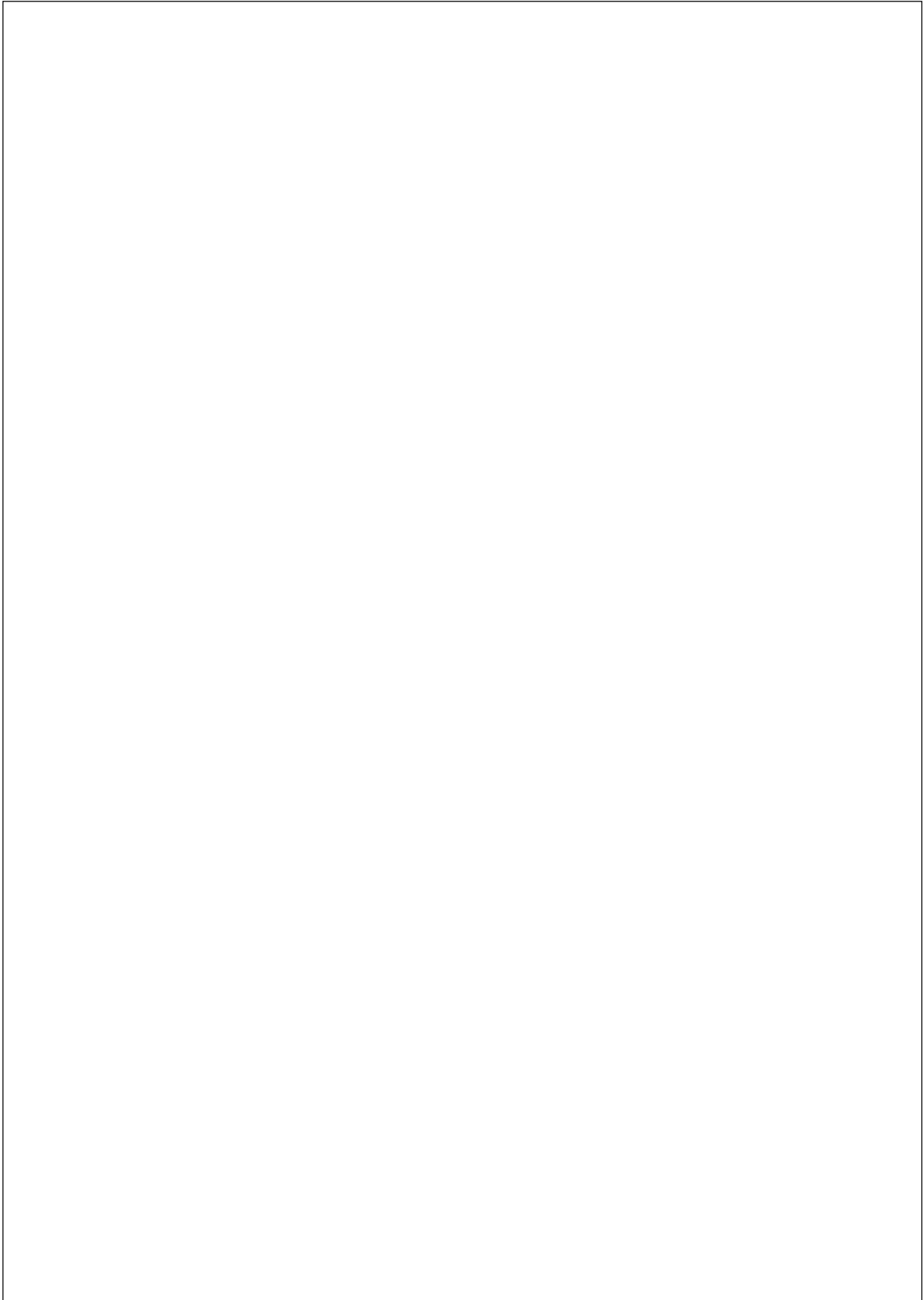
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(b) (6)



## Interview Summary of Flight (b) (6), ADF

IO

This interview is being conducted on 12 September 2023 at 11:14 on Robertson Barracks outside of Darwin, Australia, with a (b) (6). So you know, I'm the investigation officer, (b) (6). As part of the Assistant Deputy Assistant Chief of Staff for One MEF, I'm conducting an investigation as directed by Major General Bradford J Gering, the Commanding General of I MEF, in response to a class A aviation mishap that resulted in the death of three service members and an injury to several others. Just be advised that as an investigating officer, I'm an impartial fact Finder for my commander. Testimony taken by myself and reports based on your testimony today may be used for official purposes, and then access to that is restricted to people who need it clearly need that information to perform their official duties. In some cases, however, disclosure to other persons, such as subjects that might be part of an action that may be taken based on the interview or the information gathered may be provided. That information or information may be provided as required by our laws, our regulations, or may be directed by a proper authority in a future at a future date. Or maybe you already have been interviewed as part of the Aviation Mishap Board. That is a separate inquiry from my command investigation and my team. Those statements provided to them have been given to my side or my team, and that is separate and equal and they're solely focused on safety, where I'm focused on the legalities of what could potentially occurred during this mishap. It's important for you to understand the information you're providing me to be as complete and truthful, as honest or as you can hearsay those kinds of things as scuttlebutt. It's not what we're looking for. If you don't know. Just so you don't know and we can move on. Do you any questions before I administer you? OK. If you would raise your right hand, do you swear that the testimony you're about to give shall be the truth, the whole truth, and nothing but the truth, so help you God?

Witness

I do

IO

All right. Thank you. Very good. If you could please introduce yourself for the record and let us know what you do here at in Darwin.

Witness

So I'm (b) (6), I'm the Deputy Brigade Air Liaison Officer. I work with (b) (6). So the two of us are essentially the RAF representatives to brigade within the contract of ex Predators from I was seeing the OA node in current executions with the tactical air control party. So that's for individuals. Two were brought up correction till five. There were four in the truck at the time who were brought up from Williamtown to essentially provide the air control function. I serve as liaison between them and the brigades are often those. OK.

IO

So prior to execution were you involved in any of the planning or detailed planning efforts associated with predators run

Witness

not directly. So I was cc'd all the correspondence, but CC we've been able to provide the greater detail of that.

IO

OK. All right. So just want to clarify, we're not focused on mission planning, solely mission execution from your side and we're relocated during the mission execution.

Witness

I was in the zero half a node, so we're out with on base near the one CER compounds and that was with the headquarters, OK.

IO

And if you could just kind of talk to me about what you recall from that day.



Witness

So it was a pretty routine day at the time. We were just seeing them monitoring, the team was seeing the PMV, monitoring the radio I was in the in the draw. So they're connected right next to each other, but I wouldn't necessarily be able to hear the radio. I briefed the day before the airplane that we've been provided from the L OS here and we were expecting I think it was a 930 wheels something like that flying from rough down there brief that they've taken off and then I got notified by signal. So it's in Signal app, not the formal message from our liaison in ex-con who's a Rafi as well, that he'd heard of the radio that there'd been a aircraft incident, that an aircraft had gone down. And I heard shortly after that was confirmed from the TAC P and they given us a grid. So I've notified the OPS room, told everyone there that this happened, that we'd received a report that an Osprey had gone down and that there was a fire location. And then we received further information. At first no one knew for sure whether it happened, but then over by listening to air traffic control columns, we could confirm that there was a reported incident that had been declared and that aircraft were being launched as part of the response. And then following the timeline that CT has provided, essentially a rescue was launched in the C130, was launched of diversity to remain on stay. And then my role in there essentially for the rest of the day was with the tech page to provide those regular updates of the air picture to 0A and then also to the Marines. So the CR I've left a (b) (6) I believe did end up coming into the drawer as well. So he was him and his command team as well a couple of hours later, I wouldn't remember exactly ended up relocating 20A and we were providing them the updates. So we were there when he received the updates through his own means from the ACE about the aircraft and who was on it. And we just kept on abreast of what aircraft were moving around, what the rescue options were in terms of Australian civilian assets and military assets. And then after that, I was rolled into the instant recovery team when we retrograded from the field Gotcha.

IO

So the air picture that you're able to see from your location, where does that data come from?

Witness

So it was a mixture of sources, some of those open source using flight Radar. So we're unable to track the Ospreys using that, but we were able to track all the civilian and Australian aircraft. We did have access through the feed but I'm not sure if we could see the Ospreys through that. I suspect not. But I could talk to the. I could find out. If you needed to know, I could ask the technician who was part of the tech be who was there and had the Colt open and I could ask him if he could see if I don't think we could. And we were essentially relying on yeah, flight radar and listening to the air traffic control via you know, open source.

IO

OK. Got it. OK. Anything from execution, you know once you've heard that the aircraft had gone down any contentious things that you kind of heard or you're monitoring or friction areas, there's a lot of confusion.

Witness

It there were a few issues with getting the casualty details. The numbers control that information I think on both sides and both Australian and American in terms of how many people were injured, who they were. The accuracy of the flap sheet I think was an issue that that came up. So we also the flap sheets are the, we call it the packs manifest of PY One O 4 or whatever. Yeah we call it flap sheets for the vehicles.

IO

OK gotcha.

Witness

Whichever the main question you prefer. But essentially it's like the, the official list of everyone who is on the aircraft. Yeah, we needed it because we needed to confirm through X Con and this is probably, I don't know if this is part of your area, but something that came up from our point of the Australian side with CCC's involvement and what happens. So that's the combat training centre who ran the exercise and the division between who's owning the actual response. Like if we went for CTC to tell us what to do, are we doing it in 0A? There's a bit of confusion over that in terms of who's launching stuff, who's communicating with who, and gaps in information. So where we sometimes knew more because we had controllers who were listening to the radio

and we had an LO from CCC who was a bit clueless because he didn't know what and CTC didn't necessarily know what was going on. But we had to get a hold of the flash in ourselves because CTC needed to confirm for the domestic size who was going to the hospital and checking that off because they had no means necessarily of identifying. They're just getting people onto aircrafts and they don't know who's getting on the aircraft and they're just trying to evacuate them and get them to roll one as quickly as possible. And I think there was some confusion about where people were going. There was definitely misinformation or incorrect information from the Marines that were giving us so they were adamant. For example, there was a so the aircraft that was used as an Augusta West wind, I forget the exact name was like a 116. There's a helicopter that was used in the Kazakh and they one of the Marine LOSI think it was a captain who was that told us adamantly that there was an aircraft rescue 114 or something like that and that had taken off with three or a number of casualties. We weren't tracking that at all. We couldn't find any reference to this aircraft except we suspected that they were actually referring to rescue four O 2 which is in Augusta West wind 116 or whatever. And they misread some information and we're assessing that as the aircraft, it caused confusion because then our numbers didn't add up because they were tracking, you know, three CAS being evacuated by air and got 6. And so we had this running tally of incorrect numbers because pretty quickly it was established that there was three Mia and the number of pro ones and twos that Mia seemed to keep fluctuating depending on which aircraft, like how many people they put on the aircraft. So there was a bit of confusion over the numbers at the time. And again, I don't know where the Murph D was getting their information from, but they were very certain about their numbers and the aircraft and we were, we're quite certain that that information was incorrect. But we can't just say like, no, you're wrong because they could be right. Maybe they've got better sources than we do. But from the zero point of view, we didn't have a means. So basically, no, you're wrong. We're certain as this, it just caused friction. I imagine it made it difficult then for the CEO to try and determine what's actually happening because he doesn't know how many people are injured and where they're going and who's going to the hospital. And there's lots of back and forth about that at the time.

IO

And yeah, and until you said this, I realized that there's two reporting chains happening simultaneously. And rightfully so, right from, you know, if the roles reversed and an Aussie unit was working in the United States, you'd still be reporting that through your chain of command. Like what's occurring in the United States. There would be, you know US kind of focused people who are dealing with the castback procedure here and the roles reversed here in the same in the same sense. And so there are lies, confusion that yes that I would imagine I'll leave, I'll leave my imagination alone and out of it, but that that's critical of information as we go forward.

Witness

There was actually that you mentioned that it reminds me there was actually a an issue that arose out of that. So it did impact the casualties, but there was confusion over the team that was originally sent there over whether they needed to remain so.

Witness

I think three people were sent there and the CO wanted everyone returned, but from my understanding his boss wanted them to remain the investigation team that went over like straight away and that caused some friction. Again, not no one, no one's life was at risk, but it did cause confusion because the direction we'd received was there was a remain. The CO was very adamant and quite emotional about them being returned, like he wanted everyone off the island and we had to split up another asset which in the end NT Paul was happy to support. But that just kind of highlights that confusion over who who exactly is in command here because the CO on the ground is saying get everyone home, but the information that CCC had been provided from the O Six was no, I want them to remain so hypothetically in the future incident if that translated to casualties, it could cause confusion as to who's the priority and where they're going.

IO

OK Anything else that you know I haven't asked questions about that you think it might be warranted as we you know from what you remember from that day it's worthy of you know of us detailing

Witness

not really. I mean we knew there would be issues tracking the aircraft without having a radar and we didn't have, I think we did have some comms issues with them. We tried to check in with Grammys, but that happens every single time. Whenever we have an exercise there's always going to be comms problems. I don't know if it would

have made a difference had our TAC P been physically located on the islands versus where we were in Robertson Barracks. I don't know if that would have changed the response. We didn't look to try and get them over there when we put in the temporary restrict to their space as a controlling agency for the safety after the incident. But for the incident itself, I don't know if it would have made a very big difference if we just moved our Taipei onto the Island of control from there because we don't have a radar or anything. So it would have still been procedural, it's all procedural.

IO

And then backed up with a cop provided from a higher.

Witness

Yeah, correct.

IO

The last question I guess do you recall the weather over at Melville Island that day if you happen to what was forecast or anything then

Witness

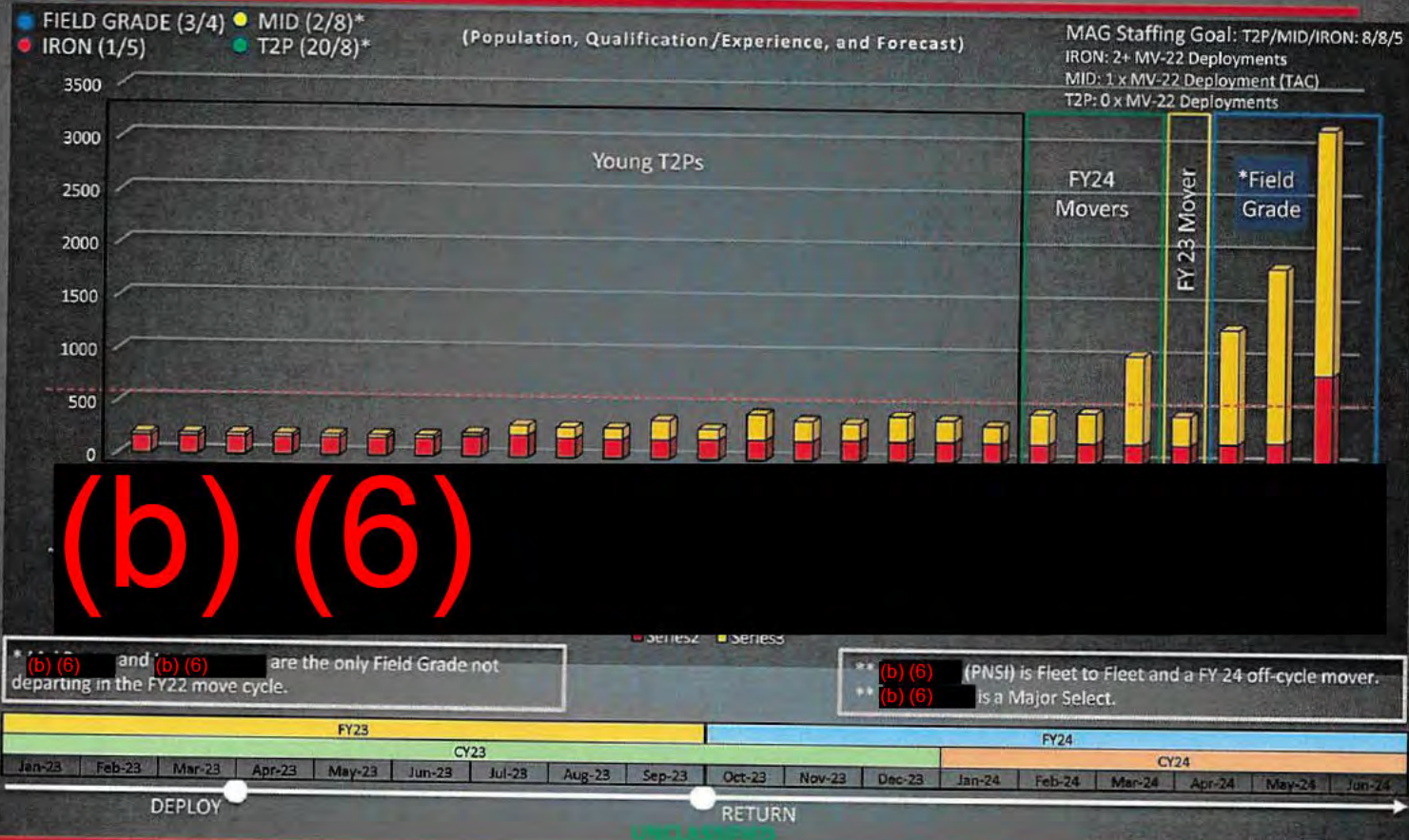
I didn't, I didn't look at the meds, I look at that.

IO

OK. One last comment here just from a legal point of view and we can close up here. Yeah. I just advise you that this is ongoing investigation. You're advised to not discuss the testimony provided us here today with anyone aside from duly appointed investigating official from the US side, which is either myself or three other majors.



# VMM-363 Pilot Assessment (After Movers Depart)









## Interview Summary of (b) (6), VMM-363 (REIN)

0:03 IO

All right, good morning. This interview is being conducted on 13 September at approximately 1037 aboard Royal Australian Air Force Base Darwin. Present in the room are the witness (b) (6), myself, (b) (6), the Legal Advisor and the two Assistant Investigating Officers, (b) (6) and (b) (6). Prior to turning on the recording, we went over the contents of our appointing order with GySgt Rosado. We discussed the differences between a command investigation and the aviation mishap or the safety investigation. We discussed the different purpose of those two investigative bodies and the privilege nature of statements made to the AMB and how the command investigation will not receive any of that information. Finally, (b) (6) had an opportunity to review the right the CX statement. He signed it. He did not have any questions about it.

Anything you'd like to add to that (b) (6)? OK.

At this time, I just ask you to raise your right hand. Please. Do you swear or affirm that the testimony you're about to give should be the truth, the whole truth, and nothing but the truth so help you God

1:08 Witness

I do.

1:09

Thanks.

IO

1:11 IO

OK. My name is (b) (6). I'm an investigating officer. My main role is to talk about maintenance questions. Just looking into all the maintenance details of the flight. I don't have a lot of questions for you, but I do have a few. Some of them are going to be pointed and some of them are going to be more general questions just about like overall functions and actions. So just getting into what is your knowledge of the safe for flight procedures and methods for conducting safe for flight?

1:47 Witness

It's pretty knowledgeable on it. I was a safe for flight prior to being the control chief, so I was in maintenance control with this unit from 2020 to October of 2022. So approximately 2 years with this unit. So I was safe for flight during that entire time. So I'm pretty knowledgeable on it.

2:07 IO

OK, during the safe for flight procedures, what is what is used to ensure that all the actions are taken?

2:15 Witness

For safe for flight we use the NAMP.

2:15 IO

It's chapter five. We follow those procedures on NAMP, so it's pretty much everything on the NAMP. We have a sheet that states everything that you have to check for the safe flight procedures and then depending on the units obviously you can add on. You can't remove anything from it for the NAMP, so there's different steps, checking scheduled inspections, checking open work orders, closed work orders, in process inspections or in process that are put in the closed work orders.

2:49 IO

If you look at the CRD, which is Component removal Due Report installed explosives, it's pretty much everything that the aircraft has to make sure that nothing is past due and every scheduled inspection that is scheduled for that aircraft is within the limits or the time allotted for the flight or whatever the case may be. So just looking for any discrepancies before you sign saying hey, that aircraft a safe flight. So dailies and turnarounds make sure that's done with a program out of time, fuel samples, things like that. So I'm handing a document over to (b) (6). Can you describe what this document is?

3:27 Witness

So this is the safe flight checklist sent from the beginning. So you know, it's kind of things like I said are technically not part of the NAMP itself, but things like it's the aircraft went on debt, you know and that helps you look at screening for a longer period of time. So if for instance we just went to IP and before the aircraft went on debt for approximately almost a month. So you look at that and you're like, OK, they're going from this day to this day. You actually look at the high time components, the Cads and the schedule especially for that entire time to see if there's any major inspections that are going to be done during that. And that actually helps you plan accordingly with the proper tools and scheduling inspections ahead of time. So if we're going to be flying 50 hours, then we know like, OK, cool, I'm going to fly 50 hours. I'm just dead during that 50 hours. These inspections are going to fall.

So we need these tools to make sure these inspections get done properly. So from there the daily and the turn around inspection, so you make sure the daily and turn around are good, daily is good for 72 hours, turn around is good for 24 hours for the turn around at the new fuel samples within that 24 hours prior to the aircraft launching. So you got to verify that that daily and turn around got signed on on verify over consumption logs.

So you're verifying the over consumption log and it's not going over the limit of 10.25. I think it was because if there is an excessive amount of oil being somebody engine, there's probably a reason like maybe a discrepancy of some sort. So here's a verifying that it's all within limits. After that the fuel log and fuel quantity. So there is for fuel samples, making sure the fuel samples are good and what the fuel load is because they have to take that into account when they're doing their weights and stuff. So if you have 11,000 which is pretty much full bags on the aircraft, on the aircraft with a certain amount, they need to know that. So when they're putting packs on stuff, they know what the total weight of the aircraft is, whether they could do a vertical take off or or short schedule inspections. Like I stated earlier, you're looking at all the schedule inspections from 35 hour to a the phase 280. So you're just making sure that the aircraft has the hours to fly that certain mission.

5:43 Witness

So if it's ten hours make sure that there's nothing that's going to go over any inspection CRD, same thing component renewal do just making sure that none of the components, renewables or components on the aircraft are coming up on high time during that flight open and closed work orders. So open work orders, you're looking at partial mission capable mass make sure that the aircraft will fly that mission and any open work orders that in a sense, same thing with partial mission capable. So like making sure that aircraft can fly that specific mission and there's nothing like that pops out like hey, there's an open work order and it says this panel's off, like obviously that bird can't fly. So you're screening all those open work orders and when you're screening the close work orders, you're screening all the close workers and the inspections that were done. So if anything might need a ground turn because they removed a certain component or something like you're making sure that that's covered already like that already happened those work orders.

6:43 IO

Do you review how many? Whats required?

6:47 Witness

It's the last ten flights.

6:53 IO

Yep.

6:53 Witness

Check the last 10A sheets. So you're just checking make sure that the last 10A sheets are in the book or in OOMA as well. For that one has to be plan. (b) (6). I'm sorry. Yeah (b) (6). (b) (6) Safe flight and the pilot that's signed. So you're checking those last 10A sheets and then they reflect on the ADB installed explosive devices. They also go high time. So you're making sure that all those installed explosives are within the time allotted and they're not overflowing outstanding T DS. So that's a big one because T DS pop up every once in a while, like they just come out. So you're making sure that this aircraft, all the T DS are done in appropriate time and they're not flying an aircraft that has ATD that's overdo or anything like that and then screened in the air for flight gear report. So that's something the fight appointment will bring up at the beginning of the meeting or in the morning and that's just making sure that they're best and everything for the gear is up to date and there's nothing over to of that. So we checked that report the weight balance goes along with what I was saying with the fuel and everything. So you got to make sure that the weight balance on the log books that the Chief Board

Officer is in charge of that program that matches OOMA. And if there is any difference or anything, then obviously we need to fix that and figure out you know where the discrepancy is, if it's in the logbook or if it's in OOMA and someone you know the wrong number or something like that. So you make sure that matches the aircraft limitations that's in the in UMA as well on the limitations tab and in there you're pretty much going to put anything like the EBP. If there's like for instance we do a lot of things with like mass nuts which is on the hub. So if you disturb that mass nut within 35 hours, you have to tort check it. The first time it's actually 35 to 70 hours, but after that it's 35 hours until it's stable. So once it's stable you sign it off and it's good. But on that limitations, it'll say like left hand mass nut tort check due in 35 hours next time due it's you know you put the five hours when it's due. So you just make sure that the aircraft same thing as a scheduled inspection has the time allotted for that specific flight. And then any things like PMC partial emission capable discrepancies are put in there as well. So if we're icing for instance, if we're going into cold weather environment and that's on the aircraft limitations tab, then obviously that aircraft cannot fly that mission. The tool report, that's the iPod that we pulled before saving the aircraft as well and just making sure there's no tools checked out to that specific aircraft.

9:37 Witness

And if there was someone wasn't working on something, make sure that it was CDI by the ball for that shot. Because if it isn't, then obviously we're not a tap on that aircraft and there could be a missing tool somewhere in the critical code area or something like that. So you know make sure all the tool boxes are CDI for that aircraft, anything that was work on that and then the job statuses is updating it. So you can make sure the job status is like you look at all the job statuses at 3:00 and 8:00 all that between but before you go on a flight you got to put it at A7. So that means it's you know it's going on a mission FCF. So for some reason if there's an FCF like as you're screening the close 10 work orders, you make sure that hey that component was removed. You go to the meso and it's like well on the FCF matrix actually says that that that needed FCF Then we FCF that you know and it says on the checkbox on top like key way required FCF report or check flight report. So you just verify that you're not running any of the issues that somebody missed it or something like that. So make sure that aircraft doesn't require any FCF and then after that you just sign the sheet, print it out and then book is saved for the pilot.

10:56 IO

For the FCF, there's there. This aircraft didn't have previous flights within the last ten flights for FCF. So in accordance with your description and this checklist, we can conclude that a requirement for FCF was checked to ensure compliance prior to saving this aircraft, right?

11:14 Witness

I'm not sure on that, like if if there was, they should have been checked yet.

11:19 IO

Can you read the date of this safe for flight checklist and what aircraft it's for?

11:24 Witness

Date is August 7th and it's for aircraft 15

11:30 IO

and I know it's hard to read, but it's actually 27. Yeah, August 27th.

11:39 Witness

Oh, OK that's the two.

11:40 IO

OK.

11:40 Witness

So August 27th.



11:41 IO  
OK And then what BUNO is this checklist

11:47 Witness  
168616

1148 IO  
And then what aircraft side number is that, you know?

11:49 Witness  
15

11:49 IO  
OK, so this was the safe for flight checklist that was used for the date of the mishap for aircraft 168616 aircraft 15 side number, which is the mishap aircraft.

11:59 IO  
So again I just like re ask the question if this checklist was completed then we can we can conclude that it was verified that no FCF was required due to any maintenance actions that were done and that the FCF that was done in the previous ten flights was verified as complete prior to this flight, right.

12:18 Witness  
Yeah. So corner of the central link if you put not applicable. So just reading the checklist that would my assumption by going to the list that means he checked and it was the FCF that was on the last ten was already completed. So it didn't need to have it for this specific one, yes.

12:39 IO  
Is there anything unusual about this checklist that you you see

12:56 Witness  
unusual the only thing like the weight balance then put the number on there and then for the FCF I mean I don't have personal preference or anything but like for the checklist like I just initially saying that I did it he put NA is not applicable so but it's the only real thing that I see on here says that it needs fuel samples needs turn around fuel samples. So sometimes when you're screening the doing a safe flight you'll put in notes in there. My way of doing it is usually like I put a little box next to it and be like hey it needs a daily or it needs this and then as it gets completed I check it off. So I'm tracking like OK that's done. But on this one it just says needs fuel samples and needs turn around fuel samples. Obviously I wasn't there, I was on the boat for a month so I wasn't around when this happened. So yeah, I just, I'm assuming you got done, but that's usually what.

14:01 IO  
Yes.

14:02 Witness  
So you said like your practice is to put a little box if it's a little sample or turn around.

14:08 IO  
Have you observed other kind of personal preference practices?

14:11 Witness

Yes. So usually. So you won't sign your initials on next to the box saying that it got completed until it gets done. And I'd seen where they put it on a sticky note, like as they're doing it, they won't put their initials on that one. But on a sticky note, I've done that before where I'll be like aircraft 10 and as I'm like screening it and I find discrepancies, I put it on the sticky note like, hey, this needs to get done. This needs to get done this week. And then I put a box next to it. And then as that gets completed I check it off. And if that was one of like a daily turn around then I sign it like, Yup, it's good, I sign it, check the box, That's usually my practice on it. That's what I've been taught before in previous units because I was I got my safe for flight originally with HMX back in 2017, I think it was 2016 so, and that's what I was taught before. So that's just my usual practice. So usually I won't sign it until that gets done.

15:04 Witness

Now other people might do it differently, you know, because they might write that in there and forget to cross it out, or they just put it in there, but as soon as it gets done then they sign it. My usual practice is I usually either write it on a sticky note or write it on the paper and put a box next to it and I won't sign it until it gets done and then I check it off saying Yup, got completed. It's good to go

15:29 IO

this Safe for flight sign off both on the sheet and an MO. Is it standard or normal? Not maybe not standard, but is it? Is it a common practice that the Safe for flight is signed before the completion of any of the items on the safe for flight checklist?

15:41 Witness

No. So usually it's one of those things like when you save the book, it's like, hey, this bird is ready, it is safe flight, you're ready to take it. There has been instances and this is like not in this unit, just where they might like for instance FCF is a perfect example. So per the Nan like you don't have to do a daily or turn around if you have to do adjustments because it's FCF. So like pitch lengths are big things and we do adjustments. So like the bird might be safe for flight, it goes out and does an RTV run and it comes back and it needs adjustments. That bird's still safe for flight, but per the nap that's allowed because you're allowed to do adjustments on it and continue flying it. So things like that, you will see where it's safe flight and then no discrepancy because when you write up in a rotor trigger balance adjustments, it is a downer. So it's C coded. So the map will be down on OOMA and that bird was already safe, but once they sign off, they can go out and do it again. But that's allowed for the NAMP.

16:46 IO

So things like that for the recording, what's an RTV run,

16:51 Witness

rotor track and balance and

16:52 IO

when you say RTV run, what are you describing?

16:54 Witness

So I just want the aircraft is out of Rd. track and balance and then it goes out to get it within level one or level 2.

17:01 IO

So sometimes it'll be a couple runs or sometimes it might just be one or two runs,

17:12 Witness

but it's just reading the road track and balance. Make sure that the bikes are within the levels. It usually happens after you place certain deployments.

17:16 IO

So the RTB run specifically is There might be some people that aren't familiar with that, that would be listening to this. It's when an adjustment is made to the PCL, the pitch change links on the actual aircraft, Those adjustments that are made are adjusting the vibration analysis of the aircraft.

17:34 Witness

It's adjusting the pitch, yeah.

17:36 IO

In order to actually get at it or reading on that, the aircraft has to go fly, goes, flies. The the Functional checker flight pilot will run several tests while that's conducted and then they'll come back And then when that aircraft comes back, they may need to make some additional changes. And then what you're describing is while they're making those changes the aircraft does not necessarily go into an out of safe for flight status. They make the changes, the call will inspect the work post the change and then that safe for flight continues to maintain its status and then the pilot can take it out and the outstanding test status to do an additional flight.

18:17 Witness

If this there's certain it's just not there's certain components. If you remove the motor hub, you know itself like that will need a e-card which is part of the FCF, that's the RTV run, it's an e-card for the FCF profile. So you would need to do an FCF profile, e-card for that specific. There's certain components per the me some that you have to do or sorry for the FCF matrix that you have to do certain RTV runs.

So that would be one of those things. But yes, they right on the map, after they say they go out for the, you know, e-card, they come back. Yep, it has AQA screens to download. It's like, no, it's not level 1 yet. It needs this many adjustments. Cameo pops out the the adjustments it needs, we write up the map, flight lines, CDQ and worker will go out, we'll do the adjustment. Everything's good, sign it off and then they'll save flight. The pilot takes it out and does another test until it's up. It's an up status.

19:11 IO

We're only describing that because that's an the example of me. This was done on the aircraft. It doesn't take it out of a safe for flight status in this case. Can you help us understand what the highlights what what, what do you interpret those highlights as?

19:25 Witness

The highlighted ones? I would assume so if he highlighted it prior to it was things that still needed to get done. That's what I interpreted as possibly like instead of like, you know, he didn't sign it or whatever. He didn't. He was going through the checklist. All right, That's not done. That's not done. That's not done. So he would go and highlight it and like, hey, these things still need to get done before he can sign the checklist saying it's good to go. And I'm that's what I interpreted as as it was highlighted prior to because it was not complete yet. Especially when it comes to like fuel samples and stuff and turnarounds, because a lot of the times we'll need to turn around before the flight because it already expired, but the daily's still good. So he might have like screamed. He's like, hey, I still need, I still need to turn on the fuel samples on this aircraft and he just highlighted those two boxes just to for his own knowledge and stuff. It's like, hey, this bird's still not ready, this is what it needs.

20:24 Witness

And then after it was done, he probably just wrote over it.

20:28 IO

So as the QA chief, if if the aircraft discrepancy book and the fuel sample log reflects that the fuel samples were signed off at 0800 in the morning and this safe for flight was signed at what time?

20:43 Witness  
6:45

20:45 IO

And it was verified via testimony that the Puma safe for flight was signed about a minute following what's on that form. So a minute past what time would that be?

20:56 Witness

A minute past this form that would be 645-46.

21:00 IO

So if the Safe for flight at anyone was signed off by the Safe for flight Certified Maintenance Controller at 0646 and the fuel samples weren't logged as complete until 0800, is that in compliance with the Safe for flight checklist?

21:11 Witness

It would not be. The only thing I would look into would be if there was fuel samples. So sometimes the fuel samples were good until that time, but let's say it drops down at 07 and the flight doesn't take off till 08/30 or something. Obviously there's going to be a gap. So you're going to need brand new fuel samples on it. So that would be the only thing.

21:33 IO

How long are fuel samples good for ?

21:38 Witness

24 hours

21:31 IO

So that would indicate that within that 24 hour turn around. Fuel samples were already completed because the daily was not done until almost 72 hours prior to the turn around being completed, right.

21:46 Witness

Yes. So they might have been done and might have been good within that time frame but it was going to take it out before because it aircraft has to wait off wheels with good fuel samples.

21:57 Witness

It cannot just be like spinning for instance. So if an air, if a pilot goes in there and I if I were to sign this at 0700 and the fuel samples expire at 7:30 but the pilot's in the seat and spinning and he takes off after 7:30, that's not in compliance with because weight off wheels. Now if the fuel samples expire while it's in the air, it's technically that's good because it launched before the turn around or the fuel samples expired.

22:26 IO

OK on the format portion of this checklist, can you tell us what what it describes needs to be checked for the format on the what? On the format, on the weight and balance. So there's a there's a checklist that says Weight and balance format If you just read the requirement.

22:39 Witness

Yep, get the basic weight of the format in front of the ADB and compare this way with what's on top of the ADB and OOMA. The weight needs to match. Date sign must be less than 180 days.



22:50 IO

What is that less than 180 days. Six months from what?

22:55 Witness

From the last time that the program manager actually went over all the weights and everything like updated his program riders.

23:03 IO

Do you know what chart that is I don't think we'll talk about that.

23:08 Witness

I mean you know I mean the Form F but like but charts specifically yeah I can't remember the time that

23:18 IO

that 180 days What does it apply to document

23:22 Witness

that's in the NAMP Yeah.

23:23 IO

OK. So I guess what I mean that is when he's saving the book, what is he looking at to verify that 180 day.

23:34 Witness

He's checking the program, the weight balance book for that specific buno. So on that, buno, you take out the, you take the weight balance book that the MCO has in the back and then you verify the date on that once, the last time and it says the date like hey this was updated On this date, it's 180 days from that and

23:53 IO

what has to be within 180 days of that,

23:55 Witness

the weight balance,

23:54 IO

the weight balance. And there's one other document that has to be within 180 days of that weight and balance. What what is that other document on the, on the UMO, on the AC or on the actual format, the format, yes. So this format date has to be within 180 days of the date that it's that it's last certified, right. That's the way that that date, what date is that on the format?

24:27 Witness

It's the last time that the as long as I've tried the last time that the aircraft or the program entered went in there and like reviewed. So he has to do it every 180 days. Like the program manager has to go in there and verify that nothing has changed for the basic weight and just the equipment on the format. So like he puts his inputs, like for instance if we had a mod or something and we have to put that MOD modification in there of like, hey, they didn't MOD and it gained this much weight. Or whatever the case may be when he finalized that assignment. That is the date that pretty much is saying that hey, this weight for this aircraft is accurate as of this date and from that day you have 180 days with it's where it's accurate it with no changes. If there is changes though, then he has to.

25:17 IO

OK, the question on that. For the test flights that were conducted within the last ten flights on this aircraft, there

was a date used in the format for those test flights. The configuration matches the test configuration of the aircraft. This is this format that I'm looking at right now. Was the format that was used for those flights for those test flights in the previous ten flights is for aircraft 15 with the Buno 168616. The date on this weight balance form F is 20230601. That date is beyond 180 days from the previous certification and the Chart C This This was time date stamped at 20230607 at 1412. So this was time being stamped six days after the date reflected on this format which indicates that this this entry was put into the ADB as the format that was being used for those check flights that were being conducted within the previous ten flights. This form F is beyond the 180 day. Which is a requirement as you indicated it. Read off on there on the Safe for flight Checklist. So with those dates, this date and the time date stamp on here, would you say that this was not a correct form F to be in compliance with Safe for flight requirements for the Safe for flight Checklist and for the NAMP?

26:39 Witness

For the NAMP for the Check Flight requirement, no, it would not.

26:42 IO

OK. This form F was used on multiple FCF flights so I'm going to ask you another question.

26:49 Witness

So like the Form F was, so you said it was July or June 1.

26:54 IO

Yeah, June 1 of 2023

26:58 Witness

and that that's the date that I got like that's the date they put on there.

27:01 IO

This is the date for the format. The certification for the Chart CE was greater than 180 days from the state.

27:07 Witness

OK. So they didn't match. OK What was the date for the other one

27:14 IO

Can you look and see what the date is on the Chart CE? We should have the notes for that. It was so I can remember the date off the top of my head. It was August 4th of 2022 really. He took over the weight balance program on August 1st 2022 and if I remember crack off the top of my head the certification and Chart C for the most recent certification for this aircraft was done three days later after he took over The program which I believe is August 4th August 4th 2023 into June 1st 2022 is greater than 180 days from the certificate last certification for the chart CM aircraft in the format that is used for those flights which would indicate that this was not a safe aircraft.

28:19 Witness

You know, technically when he does the Chart C like after and all that's done, like they update all of them at the same from the same day. So like format and everything else shouldn't match.

28:22 IO

And I believe you're right, but but that would also indicate that every other aircraft that he came in when he took away the balance has a certification that charge C of that date, which would be concerning. And we're going to look into that and that's why I'm asking because if that's the case, then that would indicate that every aircraft certification charge C to potential Form F is greater than 180 days, which is a requirement in the safer way. Yeah, so I'm going to ask you a couple questions about this. This form F appears to be a one time form F Can you tell us what the the joint weight in power publication states about the use of a one time form?

29:09 Witness

I honestly cannot stay on that I cannot recall.

29:12 IO

OK. Can you tell us what the requirement for a Form F is? It packs our onboard an aircraft,

29:19 Witness

so the Form F if I'm not mistaken. It's been a while. If I'm not mistaken the Form F already should have the packs allocated to it.

29:28 IO

If packs are on board, the Form F is updated for a one time Form F to reflect the correct pack load on here. That's a question.

29:39 Witness

Oh, I'm I'm thinking. I know usually I thought the Form F already had allocated for like a full pack load. No, I'm I'm and I can't remember from the top of my head, but I thought that on the format, if you're not mistaken, it has pretty much the basic way for the aircraft and everything on it feel loaded. And then I believe there's a section where it says packs and it has the 22 packs on it, but I cannot recall at this point.

30:08 IO

OK, so the reason I ask that is because this format was the format that was in the ADB that appears to reflect the loadout for the load on the aircraft on 27 August 2023, which is the mishap date for the mishap aircraft. This form F reflects aircraft side #15 with Abuno 168616. The date on this Form F is 20/22, 12:03. Is there anything that's interesting about that date? As I described earlier would be the date of the Chart C 12/03, so that'd be December 3rd August.

30:47 Witness

It's within four months of the last time the charge was updated.

30:55 IO

So it's within OK timeline?

30:59 Witness

Yep.

31:00 IO

Would that would that be unusual for you if the previous formats that were in the book were dated June 1st 2023, not having an income seeing it from the one time in December and not like updating the Chart C as well? Would it also be unusual to you if the time date stamp on this format was twenty 23/08/27 so August 27 at 095725? Would that be unusual to you? And if so, can you just help us understand why that would be unusual?

31:49 Witness

Only thing I can see is that they found a discrepancy and they were fixing it before the flight. Like for when it comes to the weight and stuff, weight balance of the aircraft.

32:00 IO

Do you know what time the flight took off?

32:02 Witness

I have no idea.

32:03 IO

Do you know what time the mishap was reported?

32:06 Witness

I was on the boat. I think they said around 0930ish.

32:12 IO

Yeah, there's an aviation mishap checklist that's posted right there. An aviation mishap checklist that's posted right there. That's the aviation mishap checklist that's been used on the day of the aviation mishap. The aviation mishap is reported as occurring and being reported 09/30. That was also corroborated by other previous testimony from other witnesses of the event that between 09/30 and 0940 it was reported. It was also reported in previous testimony by the Amo that the documents were locked down at 0940 in the maintenance department 0940. With that information, do you find it unusual that this Form F was time date stamped on August 27th, 2023 at 0957?

33:15 Witness

Yeah, because when we're on the boat we heard something happen. But obviously our communications on a boat, it's rough, like we can't really get anything. We're on Australia ship, so we heard that something went, but we didn't know the details most of it and we didn't really find out till later on that afternoon of exactly what was happening and everything else. So I only heard the 09/30 was through like the ceremony stuff and like things that people were saying like hey 09/30 is when the mishap happened. But that day specifically that they we didn't really find out everyone on the boat which is pretty much half the unit was, didn't really find out till like later on this that afternoon of the occurrence. But time launches things like that I cannot say.

34:04 IO

was (b) (6) on the boat.

34:06 Witness

No, he was not.

34:07 IO

Thank you. Yeah, I just want to correct. Yeah. I just want to write the date for the recording. It should be June 1st. If I remember correctly, for the day that he took the program and the day that he certified the chart c, the last weight balance was certified on August 22nd, 2022. The That's right. And then June 1st, that date's 2023 for the format, yeah, OK. So August 22nd was the last Chart C certification which for the other format is beyond 188 mark. So I just wanted to clarify that we're recording that the correct date was August 22nd. So what we're what we're looking at here is you know I'm I'm asking you as the QA Chief if if this is a requirement for the Safe for flight with the correct configuration of the aircraft. Should this have been done before the safe for flight was certified?

35:13 Witness

Yes.

35:17 IO

And particularly with packs on board. Are you aware that there is a requirement for a format completed with packs accurately indicating the pack load for a flight plan filing. Are you aware of that requirement for the format?

35:30 Witness

No. So that's why I was that's the part that I can't remember very well 'cause I thought that for the four MF they would be, they're pretty much saying like hey there's 22 packs and then the average weight of packs with bags is this and then that's what the four MF covers. So pretty much the most extend loadout for a transporting troops would be this and that's the only way that that's what they would have.

35:57 Witness

So when the pilot see like format to be like yeah the aircraft total weight is this much they're aware of that and that's what 22 packs on board. But I have to that's just for what I remember you said. I haven't dealt with formats and stuff.



36:15 IO

What is what is the format provided what data does it provide.

36:19 Witness

It should provide just the aircraft basic way. It provides a a feel load on it with full bags and pretty much anything that's aircraft has that's modified just the total basic weight can fuel load on the aircraft.

36:35 IO

Once that data is populated what does the format give you?

36:38 Witness

It'll tell you whether it's within limits or not and it'll like what limits of the weight balance where so depending on the aircraft. So it says like hey this weight is over. I don't remember the exact limit of it, but it'll tell you if it's over pretty much. And it like it literally gives you like a big bread. I think like lot of limits got a little symbol on the entire format saying like, hey, this aircraft is not within weight limits and

37:09 IO

it's, it's weight and then there's an additional item you balance the, the balance which would be also known as the, you know, the center of gravity.

37:18 Witness

Yes.

37:19 IO

OK, good. So as you can imagine like we're a little concerned about this. Yeah, that's that's, yeah.

37:27 Witness

So I understand that.

37:29 IO

And as the QHD, you know, I'm curious about your perception of what in your mind would the expectation for you as the QHD be for actions after a mishap.

37:47 Witness

So for actions wise this one first thing I want to do which actually doing today. So I'm having us qualification meeting, CDI/CDQ meeting this afternoon and just get everyone together and hear any worries like anything, anyone have anything to say like going forward how do they want to attack this together? You know, a big thing for me as the QHD voter since I took over back in October was I'm a big person in like making sure the qualifications are united and when they're making calls, they're making calls as a magnified team. So that way if there's any pushback from anywhere else, it's like, Nope, that team came to me. They said this is bad, this is the limitation, it's bad. Going forward, I want to talk to everyone. And pretty much patience is key when it comes to everything. It's patience is the key. I don't see it from my perspective. The maintenance department in general has gotten, isn't it before the Misev was in a great place. We're making a lot of qualifications, doing the right way. Maintenance in general like just the experience and everything through the deployment has gotten way better and we were just on and up and up in a sense. Obviously after this I think SNCOs and the senior, the aviation qualms need to be more involved. But just being present with the qualifications because now they're going to be hesitant or it's something that they might have done a million times, they're going to question. And I understand that I've been part of Mishap. Luckily I've never lost anyone until now. Goes back with CH46s and I saw the process it took afterwards on maintainers.

Just something they wouldn't do every day, they would just question themselves. You know, you worry, I always tell maintainers and qualifications where you're doing the big job. If you're still a little nervous after you do the job that's been that's fine.

39:49 Witness

Then that to me tells you that you care. You're worried like you, we're trying to do the best you can and following the the steps. So going forward, I want to make sure that everyone's on the same page. So understand that it's OK to be a little nervous and be a little hesitant on doing certain jobs they were doing million times and that it's going to take time to get to back to that point where we were at. And I want to stress that to them, like it's important to always be looking at the publications, things like this, understanding everything, because publications change all the time. You might do pick up this glasses time, this way. Tomorrow night, items change, happens and they tell you to pick up this way. There's a reason for it and it changes. You might not agree with it, but there's a reason for it. And that's why having the publications and being up to date on all publications at all times, understanding it is very key to what we do every day. Simplest thing is like you're saying this format, like understanding 180 days. There's a reason for that because mods happen and things change and the aircraft weight might change. So making sure that, hey, is that thing still up to date. All right, cool. Then I can still sign off this or safe with this burn. But patience is key. It's going to be a lot of leadership involvement in patience going forward.

41:07 IO

So another question about that. Sorry, go ahead. Yeah, is was your question if you needed aftermath of this out, what do you expect the maintenance department to do? I had a we're on that question so you can re attack that question man. I guess kind of what we're getting is like, what would the process be if a mishap occurred? Like what's the immediate action goes, what should the maintenance department do?

41:34 Witness

Oh, like would they find out?

41:36 IO

What do they do?

41:38 Witness

No.

41:38 IO

I appreciate your perspective on it. Just kind of blank. So it's really good to hear.

41:42 Witness

Yeah. Immediate action. It's like you lock up. It's like all the the log books, uma ADB, the ADB itself, the FCF book and the QA like the download. Everything gets immediately locked up. Like that's number one. Like, yeah. So as soon as that happens, it's supposed to be the ASO and stuff, and they're supposed to come by and they're supposed to collect all that data. Like, no one's supposed to touch shit at that point. Pretty much something like that happens. Everything. You don't touch it. You don't sign shit off. You don't do anything that is secure because now there's an investigation happening and they need all the data up to that point and they want to make sure no one's tampers with it. realistically, what it comes out to, because people might, you know, go into a log book and realize, oh, this might be wrong and then try to change it. Like, no, the entire purpose is so no one tamper with the data so we can get all the correct data up to that mishap.

42:40 IO

Some of these log books are like physical books. Binders.

42:43 Witness

Yes.

42:43 IO

What happens with those?

42:45 Witness

So there's the ASO is supposed to take all those and they're supposed to take them with them.

42:48 IO

So. And then how do you lock the stuff into UMA on UMA?

42:52 Witness

So NDS is supposed to remove that aircraft data from UMA immediately.

42:59 IO

So if it's related, if this document was signed after the notification of a mishap, what is your opinion of that?

43:10 Witness

The process wasn't completed the way it's supposed to be?

43:13 IO

It would occur another question about kind of the safe for flight procedures.

43:23 IO

The turn around inspection on this aircraft was done in the morning of 27 August 21 three the the the difference between the time with which the turn around was received in UMA and completed in UMA were signed off by the my cabinet conducted was a total of 8 minutes Is is that common.

43:47 Witness

So that's the whole I actually had this question so if you don't open the turn around sometimes it'll be like signed a day prior for a different (b) (6) and if the controller at the time opens it like right before he signs it off it's going to have the date it got opened at right and then the plan gap is going to sign it off at a certain date. So it is not uncommon for it. Usually I would just go in there and be like, hey, well I passed it at this time and I would just change the date. But it is very common for that date to be to not get changed. And like, oh, I opened that, they signed it off and then they just kind of signed off their portion and it gives you that 8 minute gap. So if you were looking at data, they'd be like did not turn around, get done in 8 minutes, it did not get done in 8 minutes. More than likely what happened was that the controller opened it 8 minutes prior to the new guy signing it off so the turn around would probably pass. Wait for that.

44:45 IO

Is it common? Would you say that the safe for flight is saved off prior to the completion of the turn around in Ooma?

44:55 Witness

No that is not common and that's that's why I said I would have to. The only way I would be able to see like why he signed it would have been maybe the turn around was good and then he realized the turn around was going to drop dead. But technically if he does a new turn around, technically he has to re save the book so that that day does not add up. It's he's supposed this is supposed to be signed and it's supposed to match the time he signed under the money.

45:21 IO

So as the QA chief and I'm asking your opinion on this, I think I know what your opinion on this is going to be, but I'm just asking what if if we were finding multiple discrepancies in a safe for flight checklist, is the aircraft safe?

45:41 Witness

No, there's multiple discrepancies and obviously there's not. The processes are being completed correctly. The process is in place for a reason, yeah. So if there's discrepancies, like if I'm saving a book, usually I can screen a book prior to saving it just to get ahead of it because it takes a while. And let's say the turn around is not done,

but that doesn't mean I'm signing for it yet. I'm waiting till everything gets done. I can start screening the scheduled inspections, all these reports I can start screening prior to that has nothing to do with the daily turn around portion of it, but I will not sign it until that gets completed.

46:35 IO

What was the result of the last round of maintenance inspections for the maintenance department?

46:45 Witness

They were so I believe was like 88%, Wing was around the same I believe is 85-86 maybe and then CNF was 83 ish, something like that. It was all in the 80s. It was the last, yeah, long days.

47:19 IO

When was that done?

47:20 Witness

in October, wing inspection was in December, and then CNF was done in February.

47:32 IO

OK. Can we get the result of the wing balance program and can we get a copy of the most recent?

47:40 Witness

I can get you all there.

47:41 IO

So that's what I want is I'd like I'd like the result of the inspection for the week balance program for the mouse, wing and CNAP all three. And then if I can get the audits that were conducted, post those inspections for fixing discrepancies that were discovered in the week balance if there were any that were discovered. And then it should have done an annual inspection on that program and you know on that program since then. So if I get a copy of that as well, Thanks. Can you do that? The other one is there should be a maintenance control program as well. If I get a copy sent on those on the copy waiting, that's all I've got for him once you once you guys got the additional items. But I think I just have one follow up question. Yeah, I'm going to go back a little bit to earlier in the interview. I just didn't want to interrupt at that time. You know, you mentioned you might put some things on a checklist with little boxes by them and check them off as they get completed. And looks like maybe this person highlighted on this one. What's the normal practice in this squadron?

49:43 Witness

Just in normal practice is just as you're going through the checklist, you just don't sign the box until it's completed. That's pretty much yes. Like everything else, taking notes on your own, things like that. That's just a however that person you know inspects an aircraft or something like that. But at the end of the day when you put your initials in that box, it's saying that is good, that portion of the same flight check lid is complete and is done correctly. That is normal practice. Everything else in between. Like I usually write things a lot down because I don't remember, you know, don't have that greatest memory. So like, I'll just like start writing things down or you know, on the side because if I start writing things down on here, I just don't have enough room. So that's why I'll usually just put a little paper or something. It's like, oh, this open work order doesn't have the correct IP or something. So I'll have the worker like the qual like, hey, what's going on with this? Oh, is it complete? OK well, you need to put your in process inspection you know, sign it off saying it's good that way. I know, like, yo, that's good. And I can sign off my check box. But until that specific task is complete, you don't put your initials on it.

50:53 IO

Does everybody take that pretty seriously?

50:56 Witness

I'd say yes. Like I said, I was in amazing control for two years prior to going to QA and it's one of those things where, I mean it says in a safe flight, it's one of the most important qualifications that you have in aviation for



the last eyes on everything in a sense. So they take it very seriously. And I know while I was there, I definitely like harped on the simplest things that might be like, hey, make sure to look at this.

51:23 Witness

You know, most people might not see this or whatever the case may be just from experience. But I would say that they absolutely, because they understand the end of the day, you're saying that aircraft is good for a bunch of individuals to get on and go fly it away. You know I'm also a big person on like because the pilot also comes over and screens the book after I say fit. And I always tell them like if you guys have questions, please ask. Don't just assume because I saved it that it's good. I welcome questions like what's up with this what's up with this

52:00 IO

that that can you just talk about like the culture within the squadron, right. Like you say you tell people to ask you questions if they've got them do the. I would feel confident doing that.

52:12 Witness

I believe so. I've been in this unit long enough that my biggest thing wherever I go is culture, because culture is everything. And I think that from the moment that I got to this unit, the culture was in its greatest and till now it's gigantic improvement. And it's having that communication with pilots in general, having that communication with qualifications. And just everyone to me has a voice in a sense. Like I always when I was amazing, like I would pass many priorities or whatever. But I always tell him like if you have a better way or better idea, please tell me because this is my plan. But if you see a different way that should work better, let me know and then we'll do that. And the same thing with pilots. Like, I feel like I have a pretty good relationship with all the pilots that, like, they come in. And even till now, like if they had questions about an aircraft, they would come into QA and they would ask myself, the QAO or in the QAI was like, hey, this aircraft was doing this or I noticed this on this. And you know, I'm like, oh, show me. And I would go through it with them. I was like, hey, this is good because this isn't that. Or like actually this is something we need to look at. So like every time they got to get the fund, they would go into QA and they would always give us a brief on what the aircraft was doing. So just knowing that they were comfortable going in there and doing that, like to me that that shows the culture and the communication. It wasn't just they'd come in, sign the book and then disappear like a lot. The culture within this, this unit in general, like upstairs and downstairs is it's very tight. For instance, the XO Major Lewis, like usually that's the QHAPI, like you interact with upstairs a little, but not as much. But like me and the XO have a great relationship. They said one of the honest moments right before we left was I remember what aircraft it was, but he was up there with me. We're looking at the drive system from the trash out specifically. And he was asking me all sorts of questions. I was like, yeah, that's what this does, what this does. He was just up there just hanging out with us, you know, So that just shows the officer and maintainer part of that maintainer relationship is really good.

54:15 IO

So thanks. I appreciate that insight. Yeah. One last question.

54:29 Witness

You can filter us that Puma is screened electronically oftentimes at a different computer than it may just roll in the screen in the book to sign for the aircraft and then the electronic map. So you can reasonably assume that anybody that's got a new account and access to any, any MCI computer on MC send from anywhere, right. Is it common that when pilot screened sign for the book electronically, if they actually look at the hard copy ADD DS data, is it common now as long as contract?

55:01 Witness

Yes it is. Because regardless if you could screen on ooma and your separate computer & for the book, you still have to go into control because there are things that are on there that might not be. Like for instance, like the check flight, like if there's a downturn or something or if there's an MPPC that's part of the pre-check like things like that, we have to brief them. So as a single flight, like PACER, this first single flight, it has no issues or hey Sir, this is the first life, but it needs a ground for cross ties before you launch things like that. Or it needs an HVAC, you know, power service check for the engines. So you need to brief the pilot face to face because they

have to screen. They be like Yep, everything looks good for them and electronically. So they can't just screen it electronically and be like yeah, it's going to go,

55:53 IO

you know the format that's in the ADB is the format sorry, in the ADB. The pilot would have seen that format in the ADB if it's screening the hard copy ADB because that's where the copy of the format stuff

56:02 Witness

should be the one of the first pages on the ADB.

56:06 IO

The other thing is that the pilot would be able to see the time that it was saved in the hard copy ADB and he would also be able to screen to see what time each of the daily turnarounds were completed and the rest of the log items location as well, right.

56:22 Witness

Yes.

56:23 IO

Yeah. And so that's why I'm asking, is it common that pilots screen the hard copy ADB was to your point. There are items in the hard copy ADB that you wouldn't be able to see in the electronic and that's why they should be looking at it. And so it is and I'm asking is it an expectation that the pilots they're signing for the year have to review the hard copy ADB to verify those things before they sign it as take the receipt of the plan?

56:44 Witness

Yes.

56:46 IO

All right. That's all I have done last morning that I give every witness, right your advice. This is an ongoing investigation and directed not to discuss your testimony with any other potential witnesses. Obviously, there's some other investigations going on. And if you review for that, we can testify and discuss the things we've talked about here or there, right? But we've talked about a variety of sensitive things here. Please don't talk to any other witnesses about doing so. Can be considered tampering with investigation or obstructing investigation. Any questions?

57:18 Witness

No, Sir.

57:19 IO

I really appreciate your time.

57:20 Witness

Thank you.

## **Interview Summary of (b) (6), Naval Aviation Technical Training Detachment, Whiting Field**

### **Background**

NAS Whiting Field for 2.5 years; about to retire.

162 and then 264 doing weight and balance; then MMCO jobs with a jet squadron.

### **Weight and balance procedures. How does an A/C go through that process including charts and forms?**

Generally, upon acceptance/transfer look at chart A and do a hands on inventory comparing the chart against the A/C. AWBS=automated weight and balance systems updates made to chart A will automatically feed into chart C in the system. Any form F adjustments you do should pull the basic weight from chart C and populate it on the form F, then you would add personnel, fuel, armament, etc. to ensure A/C is within applicable limits. form B, we don't mess with that much because they get weighed at specific intervals depending on no TMS off cycle adjustments may occur with TD's or any other significant changes to the A/C you would update chart A. Anytime chart C is updated, the updates will automatically go onto the form F.

### **What is chart A and C?**

Chart A: A/C inventory record, a list of components that the manufacture put on the A/C and you're required to inventory.

Chart C: Is a running log of any changes to the A/C, these can occur with maintenance, additions/mods to the A/C, etc.

### **If a TD is incorporated on an A/C and it's a replacement, does that change the chart A?**

It can depending on the TD. In the WT/BLNCE portion of the TD there are usually marked with \*\*. Assuming posting is turned on in AWBS, it will automatically update chart C it defaults on, and you would have to turn it off and then manually make the updates to chart C.

### **What if a TD requires a chart a update, but the chart C and A has not been updated since the TD?**

TD might not have been complied with it yet, or met the date for it yet, or not complied with electronically, but is reflected in the hard copies. Yeah, if a TD is signed off and is in the logbooks and incorporated on the A/C It could be in AWBS and just not printed or it could just not have been updated in AWBS and that means there's a good chance there's a routing problem in the command.

### **Help us understand different types of form F's, why and when do they need to be done?**

Two types, a one-time use, and a standardized load form F. A one-time use is just that an obscure mission, or something unique. You need them to declare the A/C safe for flight so you can ensure it is within limits. Standardized load, this is really for convenience, running the same missions every day so you can just pull the same form F.

### **What is the purpose of form F. what does it tell us?**

It tells you the basic weight at a point in time. You can install the crew, ancillary equip, troops, pax, and you would list all of that in the body. You'd list fuel loads and planned preflight burns so you can validate that you are within center of GRAV limits. The goal is so you can determine that you are within limits when you come into land.

**Where is chart A, C, and form f?**

In the weight and balance binder for each aircraft. Maintained by the MMCO

**Does ADB have any of that?**

It could but isn't required it is up to command discretion, usually its own binder.

**Is it possible it exists in multiple places? ADB, WB binder, a form F binder, etc.**

Programmatically, to pass CNAF, the requirement is in the WB binder for each A/C. Sometimes for convenience they'll put them in the ADB if crews want to review them.

**Why should the weights match? What does it mean if the weights on the form F doesn't match with the chart C?**

It means that somebody typed over it. If you generate a form F and it populates the BUNO, it will auto populate the basic weight from the chart C.

**What if the form F matched a previous chart C in the binder?**

That would tell me that they did not print new or most current version.

**When you sign it and date stamp it, would it be possible that the form F didn't come from AWBS, maybe they used a saved one? Can you generate one outside of AWBS?**

If you had a form F built in excel, you could fill it out and pdf it and sign it. The form F generator is way easier to use, but they do exist.

**Why would someone sign a form f after the flight departed?**

To right a wrong. Generally, you have to have a current form F up to date to release an aircraft as safe for flight. He could have gone and done it to maintain program compliance while trying to maintain a flight schedule at the same time. That's not what we are trained to do.

**Why is the weight generated? To ensure proper weight and balance?**

Safe for flight. That is correct.

**Pilot procedures, what's your opinion/observation/as a SME. Help us understand the perception of form F's and WB binders? How are they screened by pilots? Are they disregarded?**

Personal experience is that WB officers take it seriously because of what it is and because they are maintaining a program. Not a lot of observation after that on the part of the air crew? They trust their numbers more than ours. Rarely have I been asked to see a form F by an air crew. Safe for flights would look through them to ensure one was on file. Maybe 2-3 times in 11 years?

**Recommendation for that to change?**

I would. If it's important for someone to do it for safety of flight, then I imagine the air crew would want to ensure their safety as well.

**What is the pilot requirement when filing a flight plan with PAX?**

I have heard you have to have a form F filed, when carrying PAX. I don't know how that process works, I always just had them available to people.



**What is the 180 day window?**

Prior to release any A/C safe for flight, you have to have a form F on file. Standardized use is good for 180 days from generation unless there is a configuration change or TD change a WB change. if you've reviewed it and there are no changes, you can just redate it and initial it. You can keep using the same paper and just redate it and initial it if you want.

**If in Dec it's signed, and the flight is in Aug, its expired?**

Yes. Unless somewhere on that form, the WB officer certified it on the paper.

**Let me describe this, date on top is greater than 180 days?**

Not kosher, not safe for flight

**The signature on bottom is time date stamped after departure of flight?**

Not kosher, not safe for flight. That is a second no go.

**Should that A/C have been released safe for flight?**

No.

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**UNITED STATES MARINE CORPS**  
MARINE MEDIUM TILTROTOR SQUADRON 363 (REINFORCED)  
MARINE ROTATIONAL FORCE - DARWIN  
UNIT 89012  
FPO AP 99610

IN REPLY REFER TO  
5000  
CO  
11 Aug 23

From: Commanding Officer, Marine Medium Tiltrotor Squadron 363 (Reinforced)

To: Major Tobin J. Lewis 1291292603/7532 USMC

Subj: MARINE MEDIUM TILTROTOR SQUADRON 363 (REINFORCED) "ACTING" AUTHORITY

Ref: (a) Marine Corps Manual, 21 Mar 1980 W/CH 1-3  
(b) SECNAVINST M-5216.5

1. Per reference (a), paragraph 1007.2, the Executive Officer shall succeed to the command of Marine Medium Tiltrotor Squadron 363 (Reinforced) when necessary. Accordingly, you are directed to sign correspondence and issue orders as "Acting" Commanding Officer during periods of my absence that may arise from time to time. All matters of military justice, emergencies, and other unforeseen situations shall be adjudicated in accordance with my established policies and keeping with my intent. All correspondence signed under this direction shall be formatted in accordance with reference (b), chapter 2, paragraph 2-Sc.

2. The use of this authority will valid from 21 August 2023 to 7 September 2023, or until my return from temporary additional duty (TAD) if the TAD period is extended.

3. This authority is automatically revoked upon your transfer or relief of your present duties, and upon transfer of the Commanding Officer.

4. A Specimen signature is required for the records.

  
Tobin J. Lewis

  
(b) (6)





**UNITED STATES MARINE CORPS**  
MARINE MEDIUM TILTROTOR SQUADRON 363 (REINFORCED)  
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2. The use of this authority will valid from 12 August 2023 to 16 August 2023, or until my return from temporary additional duty (TAD) if the TAD period is extended.

3. This authority is automatically revoked upon your transfer or relief of your present duties, and upon transfer of the Commanding Officer.

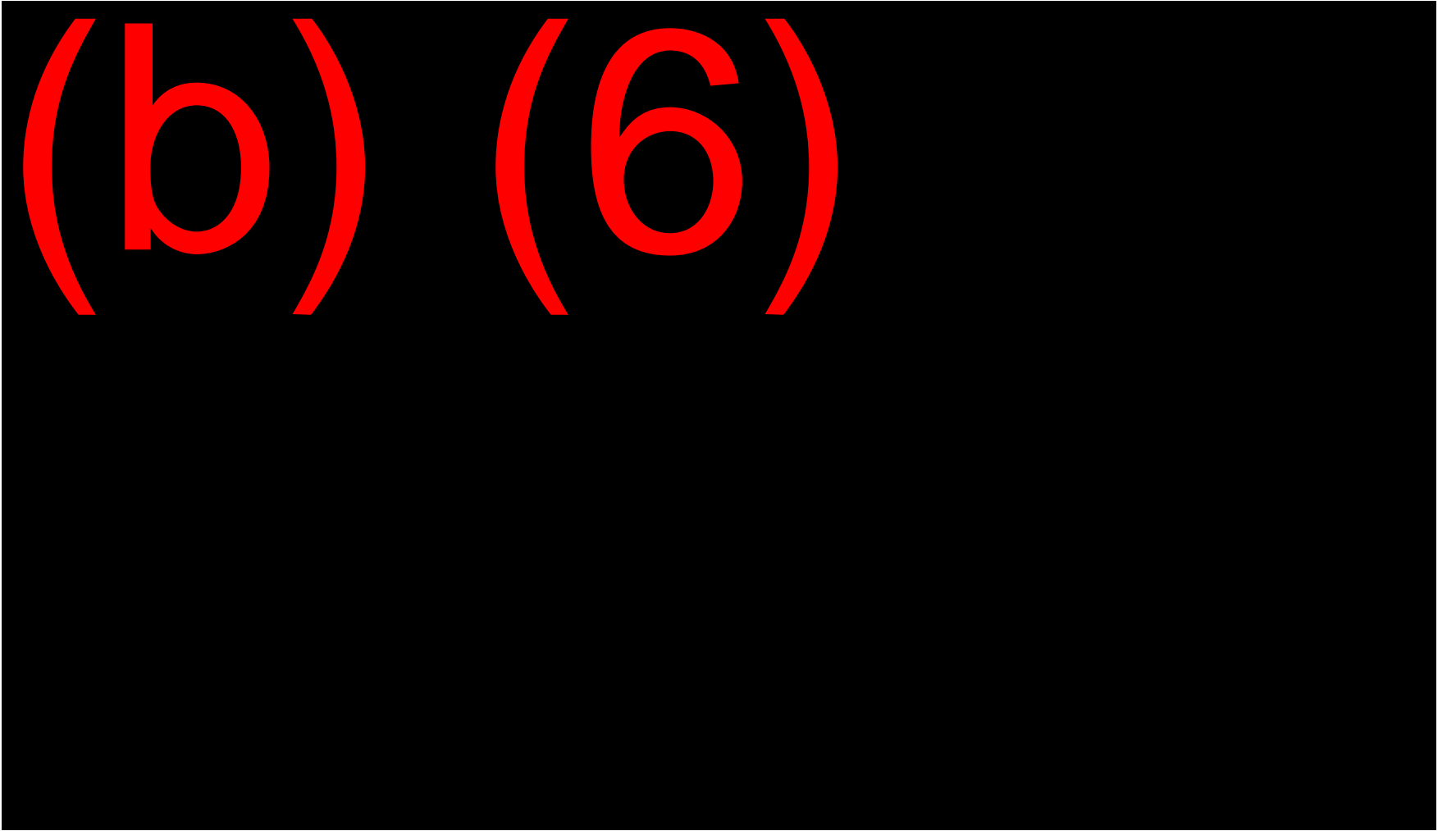
4. A Specimen signature is required for the records.

  
Tobin J. Lewis

  
(b) (6)

## Personal Details

(b) (6)



# Relationships

(b) (6)

## Relationships Cont.

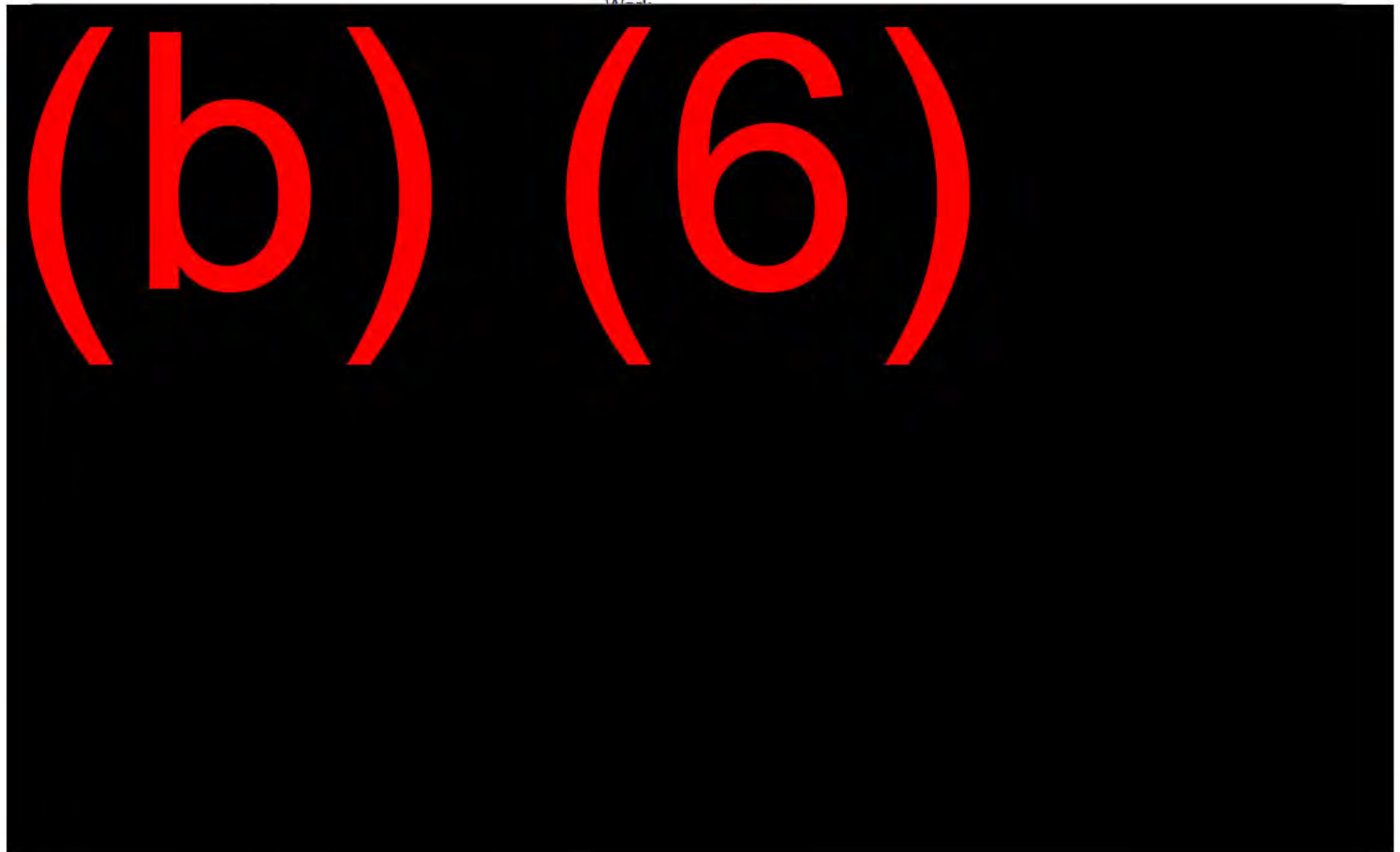
Relationships  
**(b) (6)**



Work

(b) (6)

Work Cont.



Housing

Housing

(b) (6)

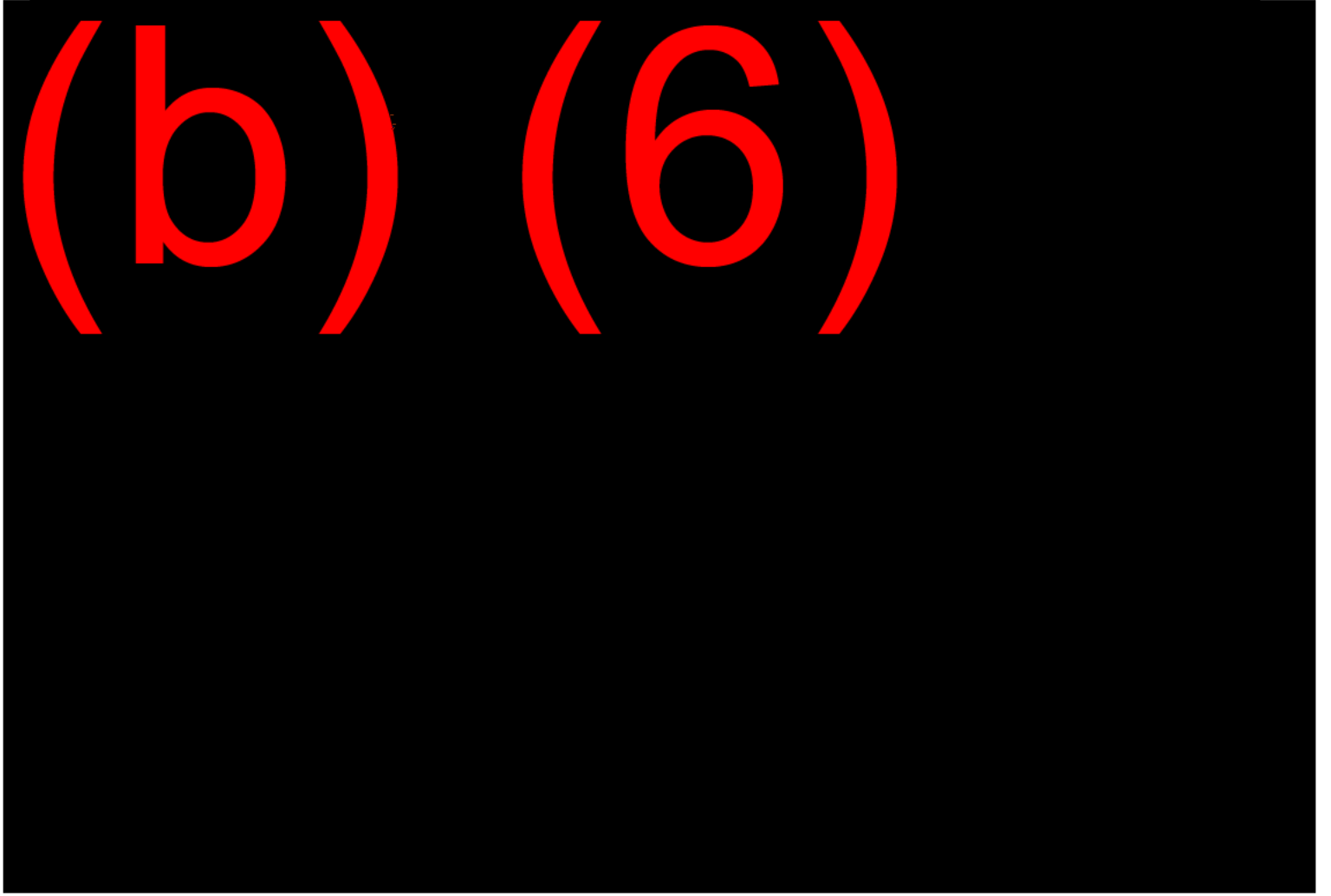
Transportation

(b) (6)



Social & Spiritual

(b) (6)



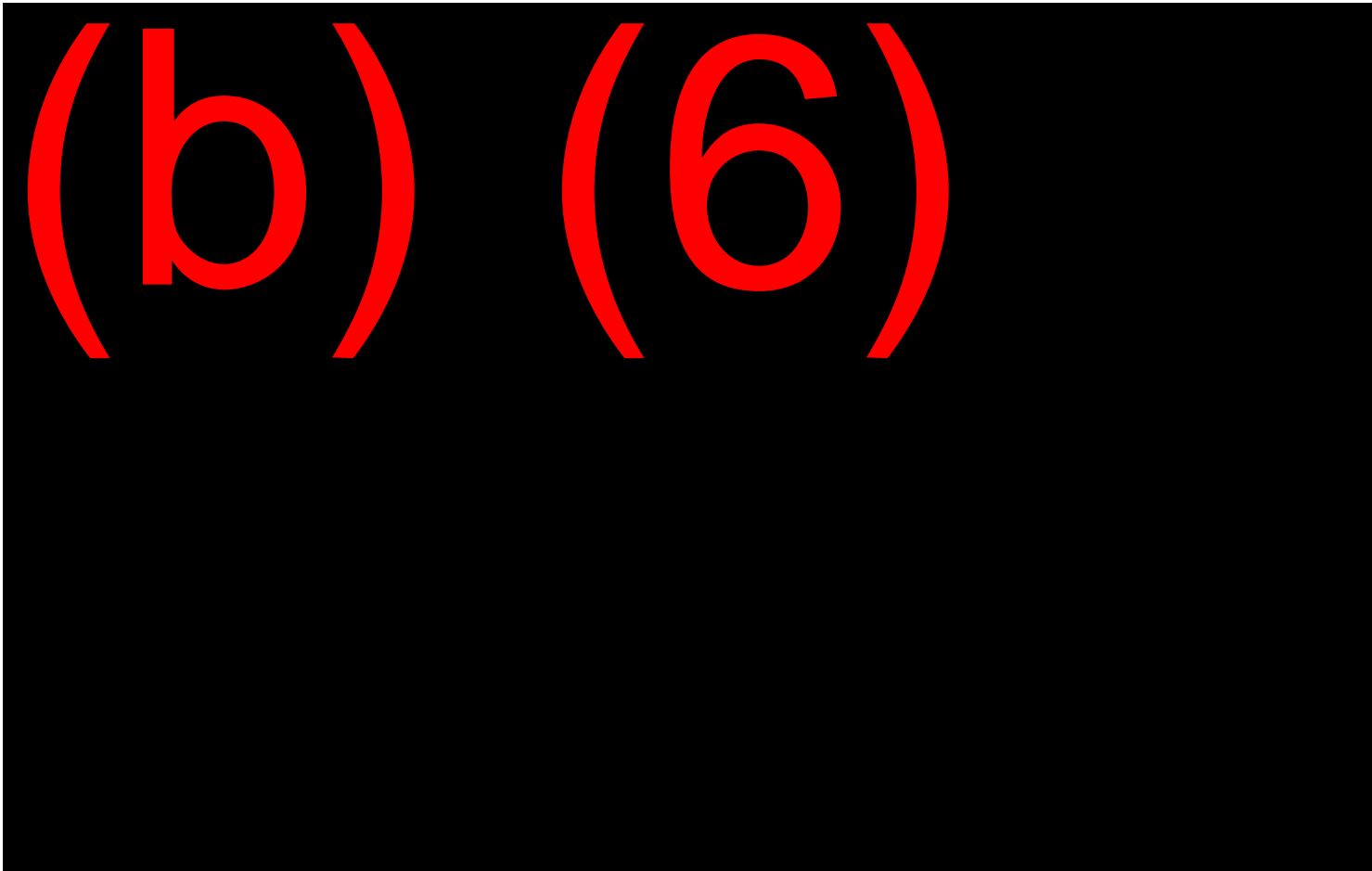
Social & Spiritual Cont.

(b) (6)

Health & Fitness

(b) (6)

Health & Fitness Cont.





Financial

Financial

(b) (6)

Legal

Legal

(b) (6)

## Training & Education

(b) (6)

Training & Education Cont.

(b) (6)



## Training & Education

(b) (6)

## Personal Details

(b) (6)



# Relationships

(b) (6)

Relationships Cont.

(b) (6)



Work

(b) (6)

Housing

(b) (6)

Transportation

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Social & Spiritual

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Social & Spiritual Cont.

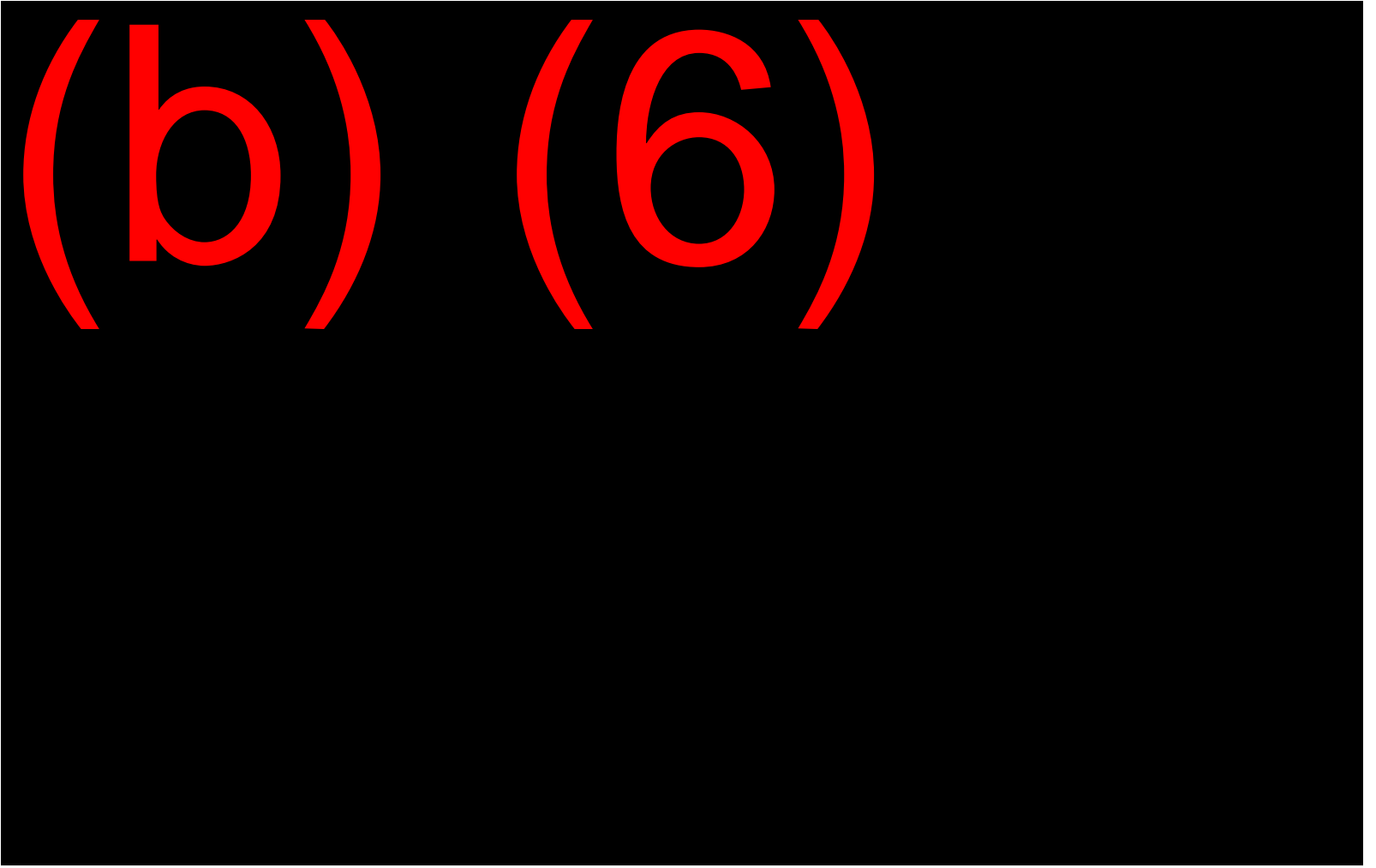
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Health & Fitness

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Health & Fitness Cont.

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Financial

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Legal

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## Training & Education

Training & Education

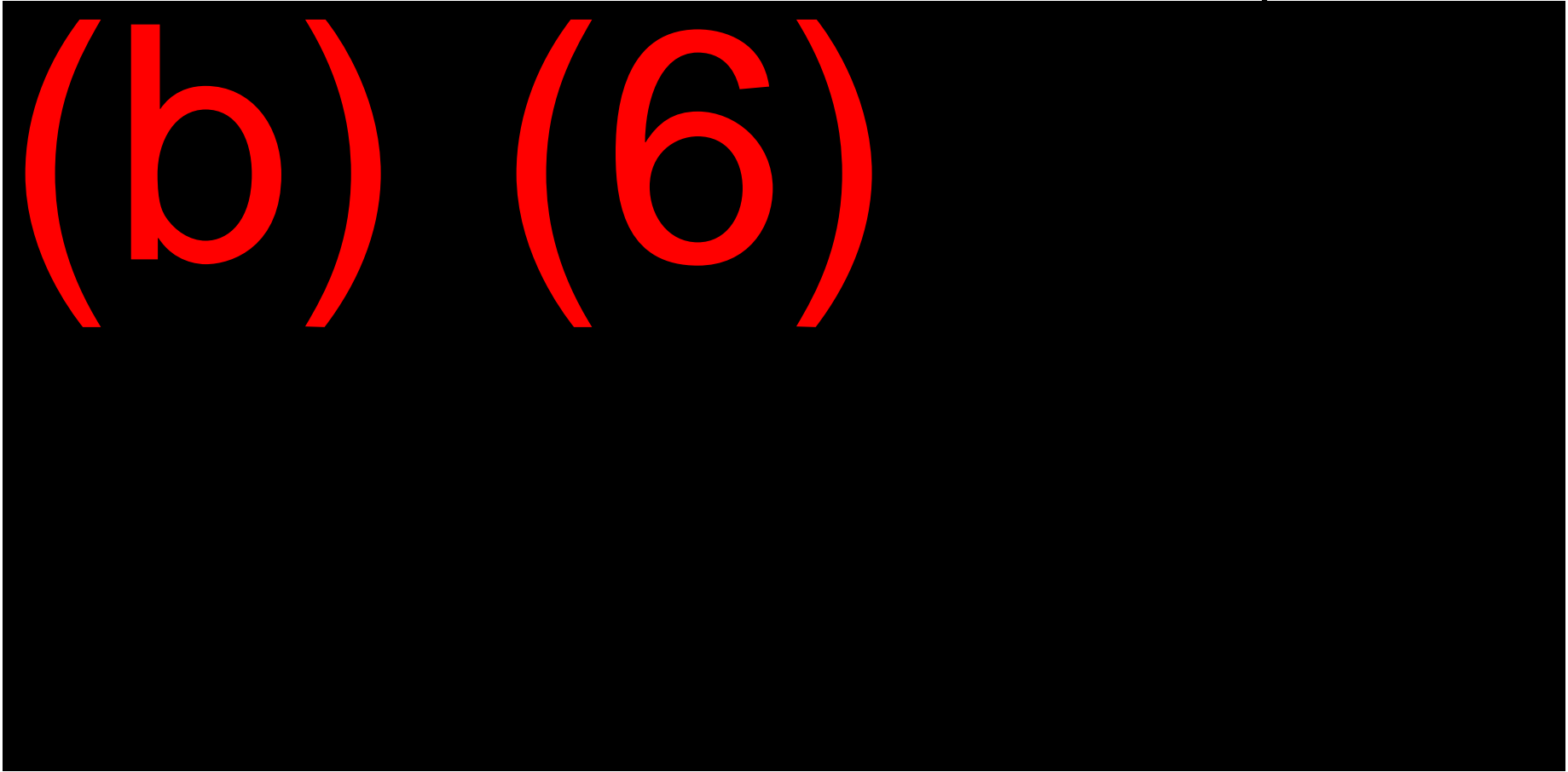
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Training & Education Cont.

(b) (6)

## Force Preservation Individual Summary

(b) (6)





## Personal Details

(b) (6)

Relationships

(b) (6)

## Relationships Cont.

(b) (6)

Date Created

Date Of Event

Event Type

Issue/Event

Mitigation Strategy/Resources

Work

(b) (6)



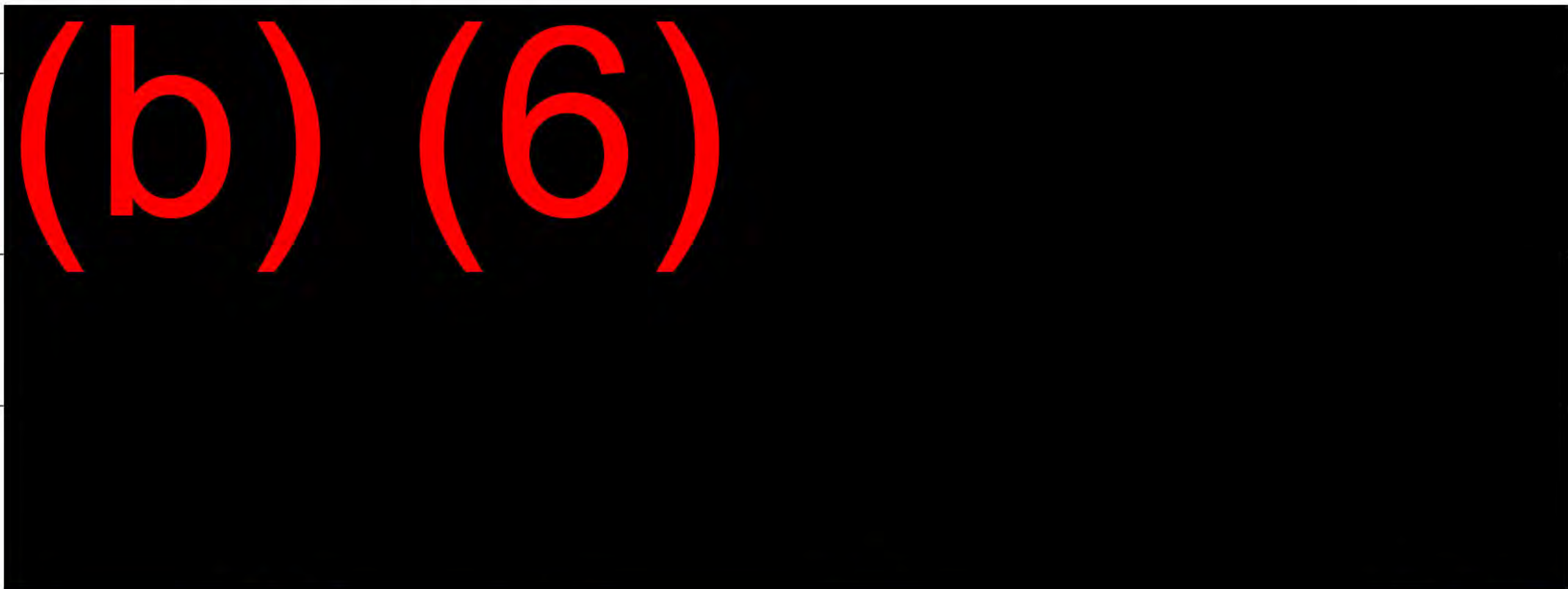
Work Cont.

(b) (6)

# Housing

(b) (6)

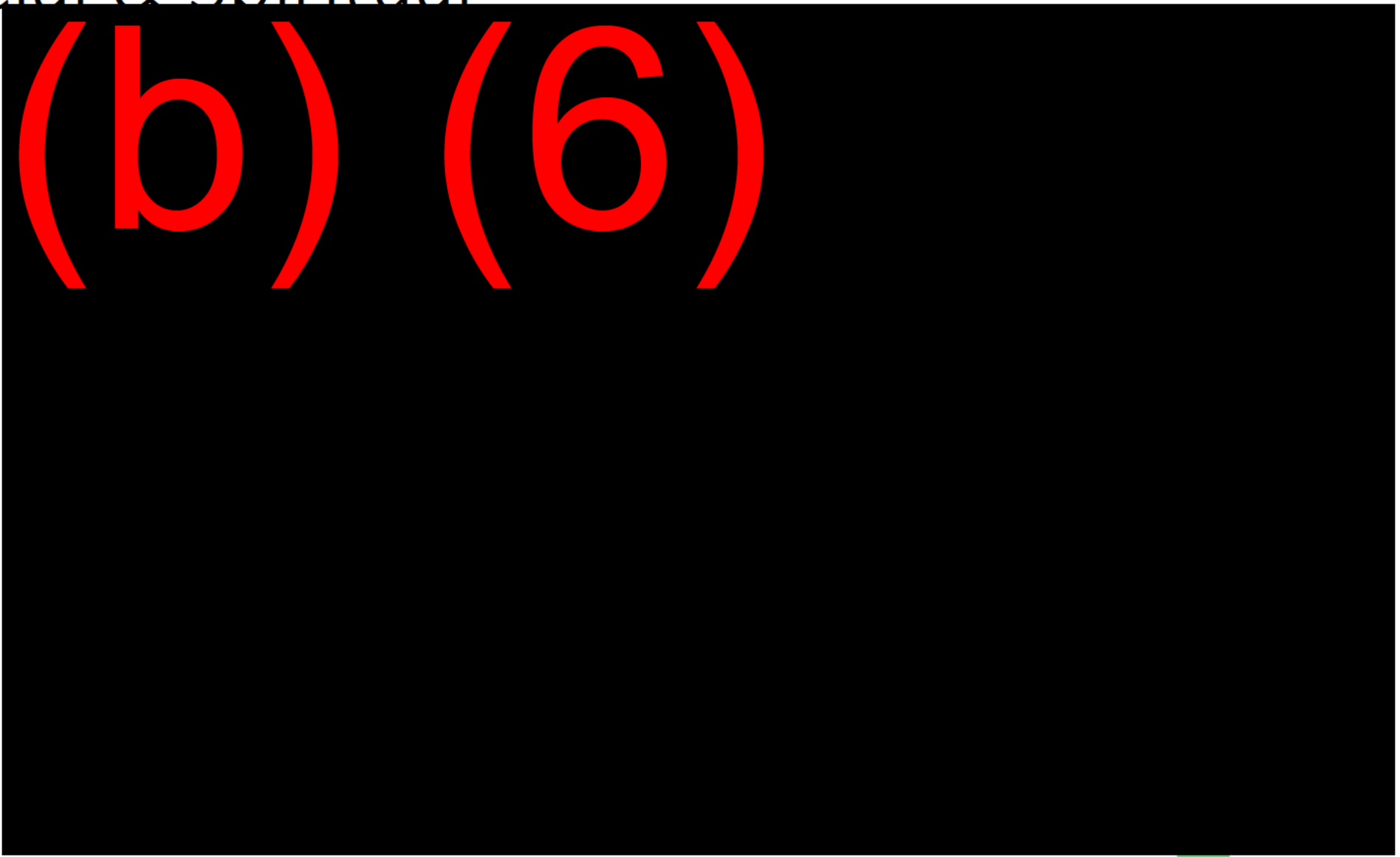
# Transportation



Date Created	Date Of Event	Event Type	Issue/Event	Mitigation Strategy/Resources
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Social & Spiritual

(b) (6)





## Health & Fitness

(b) (6)

Financial

Financial

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Date Created

Date Of Event

Event Type

Issue/Event

Mitigation Strategy/Resources

Legal

(b) (6)

Date Created

Date Of Event

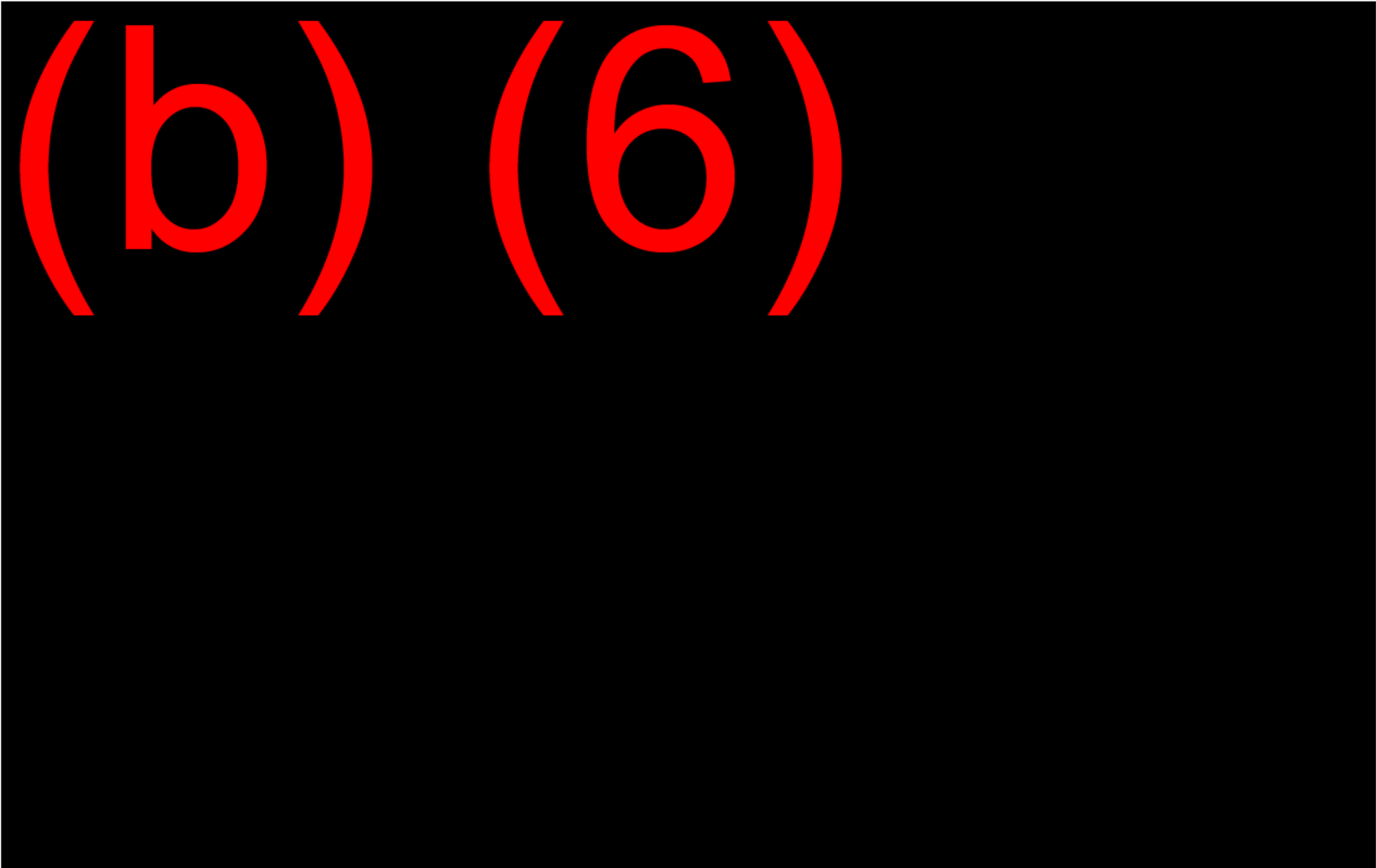
Event Type

Issue/Event

Mitigation Strategy/Resources

# Training & Education

(b) (6)





# Training & Education Cont.



# Force Preservation Individual Summary

(b) (6)

(b) (6)

# Relationships

(b) (6)



## Relationships Cont.

(b) (6)

Relationships Cont.

(b) (6)

Work

VMM-363 MAG-24(-) 1ST MAW

(b) (6)

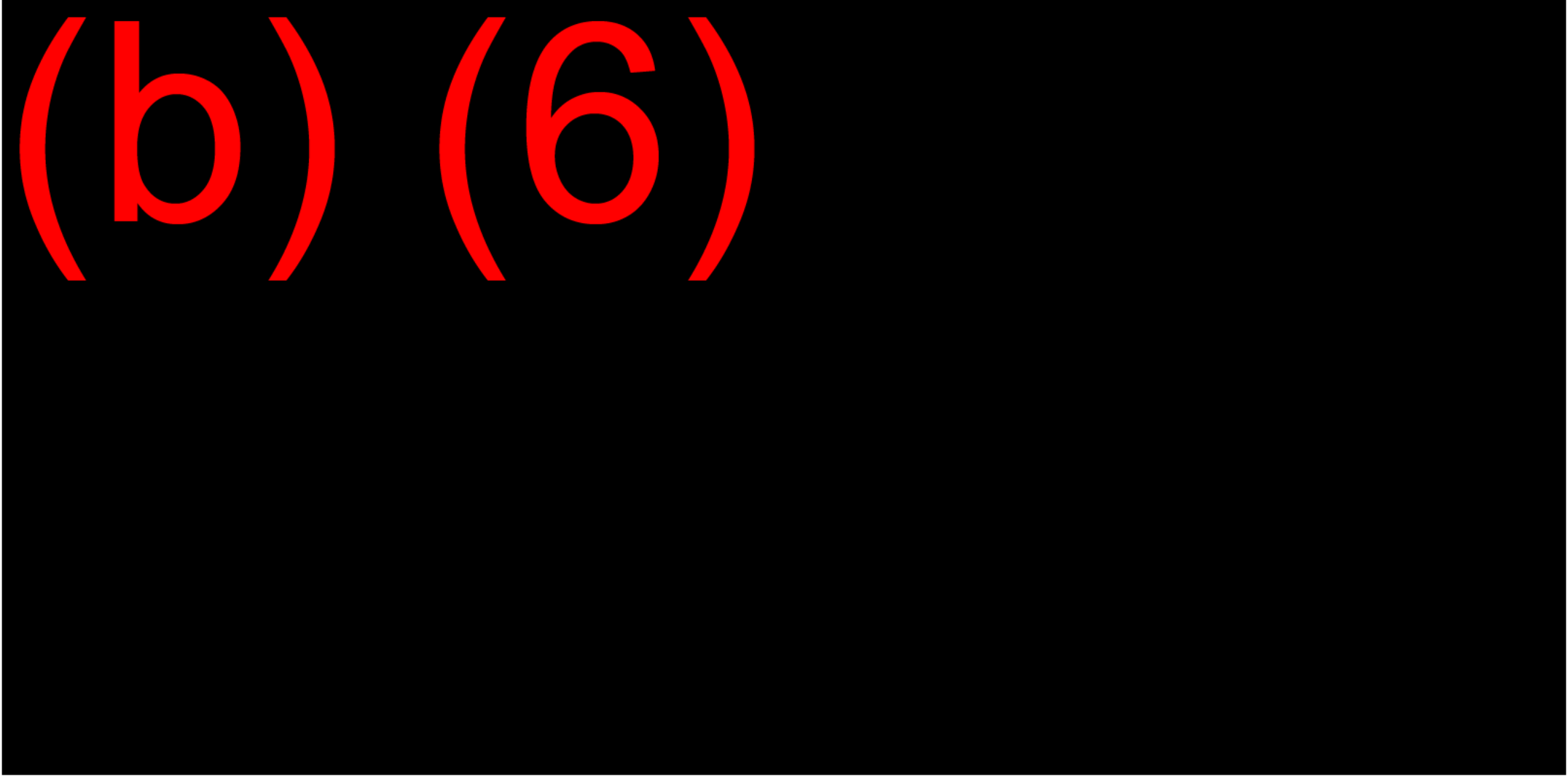
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Work Cont.

(b) (6)

Housing

(b) (6)





# Transportation

VMM-363 MAG-24(-) 1ST MAW

VMM-363 MAG-24(-) 1ST MAW

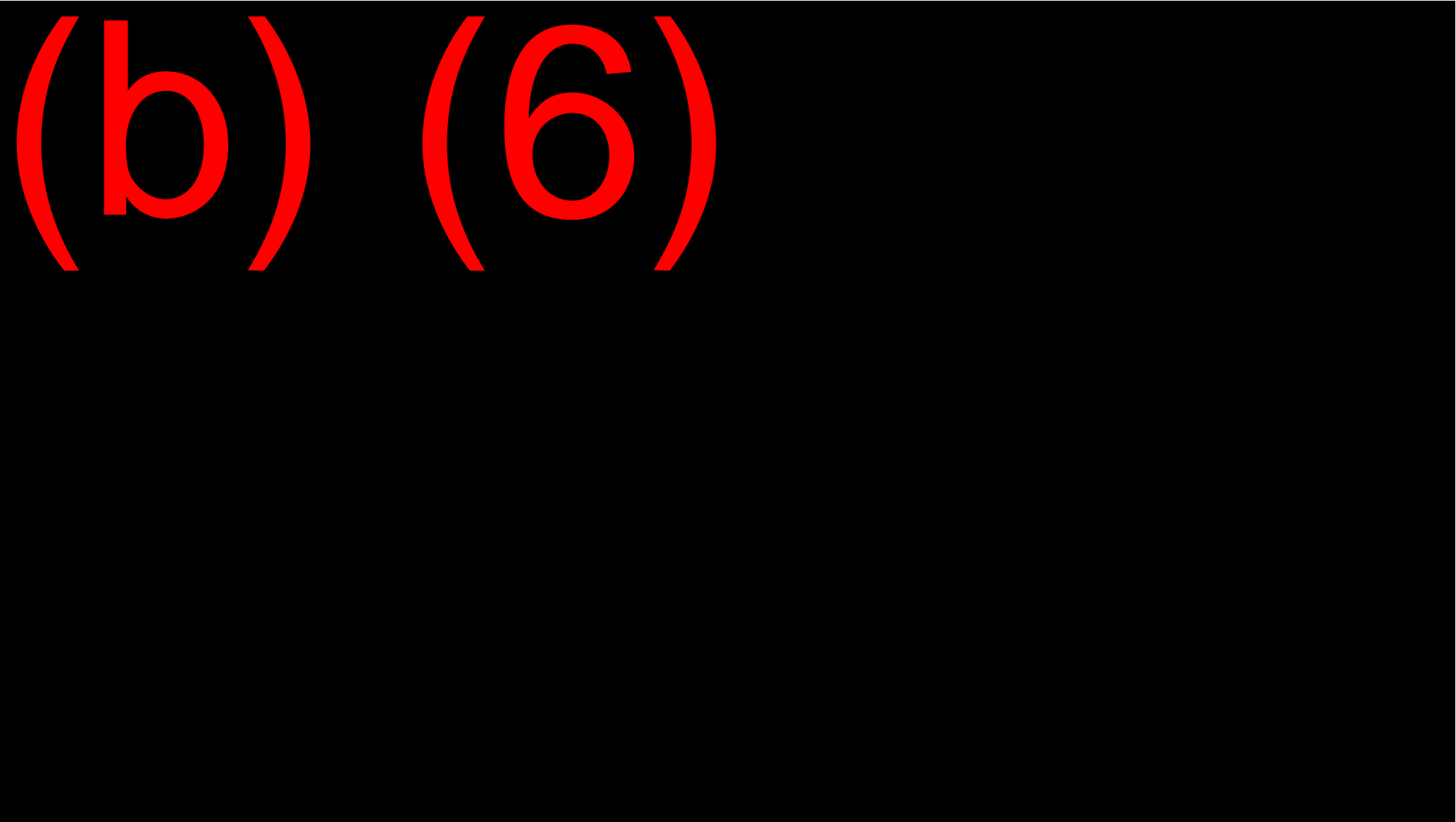
(b) (6)

Social & Spiritual

(b) (6)

Health & Fitness

(b) (6)



Financial

(b) (6)

Legal

VMM-363 MAG-24(-) 1ST MAW

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Legal Cont.

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(b) (6)

INFORMATION HE

# Training & Education

VMM-363 MAG-24(-) 1ST MAW

(b) (6)

Training & Education Cont.

(b) (6)

(b) (6)

**Interview Summary of (b) (6) Wounded Warrior Battalion, East**

**LEGAL ADVISOR**

All right, good morning. This is (b) (6) the legal advisor appointed to the command investigation into the Class A aviation mishap that happened on August 27th, 2023 present in the room are myself the legal advisor Investigating Officer the investigator Officer and (b) (6) (b) (6) was the aerial observer during that mishap also present in the room is (b) (6) here at BAMC. This interview is being taken aboard Fort St. Houston at Brooks Army Medical Center and prior to turning on the recording we covered the contents of our pointing order the scope of our investigation we distinguished it and discussed the differences between it and the Aviation Mishap Board of Safety Investigation we went through the Line of Duty Rights advisement and we went through a Privacy Act statement with (b) (6) (b) (6) just for the record did you have any questions or concerns about any of that?

**WITNESS**

No sir.

**LEGAL ADVISOR**

Anything you'd like to add to that summary?

**WITNESS**

No sir.

**LEGAL ADVISOR**

OK thank you, sir.

**INVESTIGATING OFFICER**

OK, if you could (b) (6) I want one thanks for the time today this is important for you for me and for our command investigation and ultimately to the family members associated with this mishap so that, you know, just ask you if you don't know an answer to a question just say I don't know I don't recall and that's OK There's no foul on that whatsoever it's really just trying to get to what you recall from your experiences and your memories from those these days surrounding us if you could though, could you start with just give us a background of your experience and as an aerial observer in the red lines.

**WITNESS**

So I'm part of the airframe shop and there was not many people have volunteered to become an AO because I think it was because of the everybody was kind of scared of the crash that happened with the raging bulls in the East Coast so everybody was kind of scared to do it so I was one of like I think I was one of five out of the entire unit that volunteered to do it out of every out of that five I'm the only one that kind of progressed the most and I flew probably 3 times a week in Australia so I got a lot of flight hours in it was just a it just came kind of naturally like the whole learning curve was pretty easy the aircrew that were able to instruct they were super helpful and like even sometimes like after work we'd meet up at the little kitchen area at the tent city and then maybe go over some calls and just basic procedures and I thought it was it was a great experience to step outside of my own and was and do something like that.

**INVESTIGATING OFFICER**

Yeah and how long had you been AO and when were you officially do you like how long before you were in Australia when you officially signed off as an AO so you can fly circle with a crew chief.

**WITNESS**

I think it was two months before we left for Australia, I think.

**INVESTIGATING OFFICER**

So you did all your training prior to this in Hawaii.

**WITNESS**

Yes and then I flew over to Cherry Point to do my aircrew swim qual.

**INVESTIGATING OFFICER**



Gotcha OK In that time I'll hold off on that question so I will so in that time as you're working in Hawaii and or in Australia before this this flight have you ever flown or been in a flight with H1's or any other type model series aircraft and an objective area before?

WITNESS

I've been in the V-22.

LEGAL ADVISOR

OK just to be clear on that not asking if you had flown on other aircraft but had other aircraft like while you were on V-22 been flying or anything like that.

WITNESS

Just the V-22

INVESTIGATING OFFICER

WITNESS if you could if you take us back to you know what you remember from the days prior to or the day prior to the mishap decline kind of walk us through what you what you recall.

WITNESS

The day before?

INVESTIGATING OFFICER

Day before yeah.

WITNESS

The only thing I remember from the day before is that the group of us went bowling and we were there till closing and that was about it that's the only thing I can remember from the day before.

INVESTIGATING OFFICER

Was it going on, RAF-D?

WITNESS

No it's all basic.

INVESTIGATING OFFICER

You recall what time you guys stopped bowling?

WITNESS

I think it's right like 9:00.

INVESTIGATING OFFICER

Anybody drinking there?

WITNESS

Not that I recall I I think the bar was closed.

[inaudible]

INVESTIGATING OFFICER

And how many of you, how many folks were there were bowling.

WITNESS

like a big majority of the airframe shop I couldn't tell you how many-

INVESTIGATING OFFICER

Gotcha coming like the family outing.

WITNESS

Yeah.

INVESTIGATING OFFICER

OK so if you could do you recall much of that day prior to the flight?

WITNESS

No I don't.

INVESTIGATING OFFICER

Yeah OK so you don't recall the getting to the squadron spaces or the brief or anything.

WITNESS

I don't remember the brief at all.

INVESTIGATING OFFICER

OK.

WITNESS

Only thing I remember really just like walking out to the aircraft and there's bits and pieces of the crash that I do remember.

INVESTIGATING OFFICER

OK before we get into that do you recall having a NATOP's for you?

WITNESS

I I do recall having a NATOP's for you.

INVESTIGATING OFFICER

OK.

WITNESS

That's one thing that they're always good about so after the NATOP's brief like, I think, I believe we're dump truck dash 2 and then we don't lift a major list to a different room and then we'll go over the NATOP's brief.

INVESTIGATING OFFICER

OK do you recall anything about that NATOP's brief.

WITNESS

I do not sir.

INVESTIGATING OFFICER

OK but you do recall that you did have one?

WITNESS

Yes, Sir.

INVESTIGATING OFFICER

Got you OK so you recall walking out to the aircraft and that's about it other than bits and pieces from the mishap.

WITNESS

I do remember the walk around.

INVESTIGATING OFFICER

OK

WITNESS

At least I'm always kind of slow when I walk around just cause me being a CDI very cautious of finding things.

INVESTIGATING OFFICER

Yeah absolutely.

WITNESS

So I don't remember seeing anything like suspicious it was just it felt like another day of flying.

INVESTIGATING OFFICER

OK do you recall the weather?

WITNESS

It was always sunny out [inaudible]

INVESTIGATING OFFICER

OK yeah yeah yeah you guys wearing bullet bouncer vests?

WITNESS

Yes sir.

INVESTIGATING OFFICER

That's always fun do you recall loading up packs?

WITNESS

I do not sir.

INVESTIGATING OFFICER

OK I'm just since we're trying to get to it I'm going to walk you through what I think are the phase of fight is that OK and I'll ask you if you recall if you recall me and if you do then please bring up and something either call taxi and [inaudible] room.

WITNESS

No sir.

INVESTIGATING OFFICER

OK do you recall take off?

WITNESS

No sir.

INVESTIGATING OFFICER

Do you recall any conversations over ICS in between any of that before you got airborne?

WITNESS

No, Sir.

INVESTIGATING OFFICER

OK how about airborne taking off and heading out over feet dry heading or feet wet towards Melville Island do you recall me or that?

WITNESS

No sir.

INVESTIGATING OFFICER

OK do you recall comms with the H1's going into the objective area?

WITNESS

No sir.

INVESTIGATING OFFICER

OK Do you recall going into the objective area descending or anything like that?

WITNESS

No sir.

INVESTIGATING OFFICER

Do you have any recollection of the aircraft maneuvering as you were coming into land?

WITNESS

No sir.

INVESTIGATING OFFICER

OK do you recall any audible noises, sounds coming over ICS?

WITNESS

Just the normal deedles.

INVESTIGATING OFFICER

OK any verbal indications associated with any of those deedle deedles?

WITNESS

No sir.

INVESTIGATING OFFICER

OK so it's just it's you hear the deedle deedles in the recall what the crew was saying, the pilots were saying.

WITNESS

No sir.

INVESTIGATING OFFICER

OK gotcha do you recall seeing the lead aircraft at any point in time?

WITNESS

No sir.

INVESTIGATING OFFICER

OK do you recall any aggressive maneuvers as you were coming into land?

WITNESS

No sir.

INVESTIGATING OFFICER

OK do you recall where you were in the aircraft at that point?

WITNESS

I was at the ramp.

INVESTIGATING OFFICER

OK do you recall moving off the ramp at any point in time?

WITNESS

No sir I believe I was supposed to fly in the tunnel that day but I think (b) (6) or sorry sorry (b) (6) (b) (6) swapped me in (b) (6) I'm not sure why I think it was 'cause it had to do something with the X's I think I just didn't have a certain X to be out there and (b) (6) was a lot more experienced and like the missions later that we were doing.

INVESTIGATING OFFICER

Copy so (b) (6) swapped you guys on the flight schedule to make sure that you were at written in as not the crew chief but as the AO.

WITNESS

Yes sir.

INVESTIGATING OFFICER

OK but just to be clear you don't you're not a crew chief you are strictly-

WITNESS

An aerial observer.

INVESTIGATING OFFICER

Got ya OK let's take a step back then have you flown with the XO before?

WITNESS

I think I've flown it once in the beginning of Australia there that's all I remember I can't really run my tongue [inaudible].

INVESTIGATING OFFICER

What do you think about when you flew within that that time that you recall?

WITNESS

I've always felt safe.

INVESTIGATING OFFICER

OK.

WITNESS

He was a badass pilot.

INVESTIGATING OFFICER

He was a badass pilot.

WITNESS

Yes sir.

INVESTIGATING OFFICER

When you say that what do you mean?

WITNESS

He knows a lot about the aircraft and he'll never he would fly I always hear like how smooth the flight was or just like everybody enjoys flying with him the XO and the CO, also a (b) (6) he's also a great pilot.

INVESTIGATING OFFICER

So what about Capt Lebeau had you flown with her before?

WITNESS

That was my first time.

INVESTIGATING OFFICER

it was OK.

WITNESS

I mainly fly with (b) (6).

INVESTIGATING OFFICER

OK.

WITNESS

So that was fine yeah that was my first time with Capt Lebeau

INVESTIGATING OFFICER

and what about Cpl Collier?



WITNESS

I've flown with him a couple of times.

INVESTIGATING OFFICER

What'd you think of flying with him?

WITNESS

He was aweso- he was awesome yeah I always learn something new he's a he's like one of those people that's just like super smart at their job and it was crazy on how much he knew and during the flights he was always like drowning knowledge in my head I guess it was a really great experience so I learned a lot from him.

INVESTIGATING OFFICER

And he had a good temperament when he would instruct was he wasn't like a hammer or whatever.

WITNESS

It was always just, it was always a chill plate and he if they didn't know anything he would never really press it on me he would just go to the next step can't talk about that.

INVESTIGATING OFFICER

OK so this is the first time that all four of you have been in the same airplane at the same time.

WITNESS

Yes sir we were all very familiar with each other though We did a lot of like you know like you have to read sometimes we get in position and we walk around

INVESTIGATING OFFICER

Doing tac form.

WITNESS

Yeah.

WITNESS

Basically that and then we did a lot of that together in the training yeah.

INVESTIGATING OFFICER

Prior to this this flight we did you happen to get get a chance to get to the air show were we on that that section that-

WITNESS

Brisbane yeah I I did that I went for one night because yeah my nose tires blow out and I had to grab two nose tires and get them on a commercial flight and then fly all the way to Briston and I also had a EMU on me and then we get to Briston I changed the tires out and then I was only there for one day and then we flew back,

INVESTIGATING OFFICER

Commercial back.

WITNESS

Yes sir.

INVESTIGATING OFFICER

So did you do the jag and replacement all by yourself-

WITNESS

Or we didn't fly commercial back we flew-

INVESTIGATING OFFICER

[inaudible] so you did the replacement all by yourself?

WITNESS

No, I did it with (b) (6) .

INVESTIGATING OFFICER

Two nose tires.

WITNESS

Yes.

INVESTIGATING OFFICER

Do you know how that happened?

WITNESS

How they blew out?

INVESTIGATING OFFICER

Yeah.

WITNESS

I think they were just lining it was like the gravel that they were landing on or something about that.

INVESTIGATING OFFICER

It's pretty weird OK so you didn't get a chance to go to that and then he flew back on those Ospreys OK gotcha can you tell me what you do recall from the mishap.

WITNESS

So i remember we were it felt like we were going down doing a nose dive and Capt Lebeau was flying and Maj Lewis took over and he called for mayday I remember hearing that and then he leveled up the plane and then I remember hearing like us smack into a bunch of trees and then I buckled up a couple of the the [inaudible] and then I laid on the floor back flat and then sinch my gunners belt and just held on for the ride and that's all I remember and then just getting pulled out after the crash.

INVESTIGATING OFFICER

OK so you weren't on the ramp during the crash.

WITNESS

It was on the way.

INVESTIGATING OFFICER

You were on the ramp.

WITNESS

Yes sir.

INVESTIGATING OFFICER

OK.

WITNESS

That's where I laid down.

INVESTIGATING OFFICER

Gotcha OK and you lay down on your back-

WITNESS

And I sinch my gunners belt down and hold on tight.

INVESTIGATING OFFICER

Gotcha so it felt like you were in a nosedive.

WITNESS

It just felt like the verticals power.

INVESTIGATING OFFICER

OK.

WITNESS

And it just like I don't know I just never felt that before can't really explain it.

INVESTIGATING OFFICER

OK and you don't recall anything prior to that any conversation or anything over ICS before the exit takes controls.

WITNESS

No sir.

INVESTIGATING OFFICER

Trying to think anything else I have a question about from that day that I can try to ask you I apologize that it's not as quick so take a step back you said you helped the some of the packs in the back strapped down.

WITNESS

Yes sir.

INVESTIGATING OFFICER 20:08

Do you recall how far before you went to do that let me ask you this do you recall any discussion about fuel weight before you took off?

WITNESS

No sir I'm sure there was especially Maj Lewis yeah he's a he was like a stickler.

INVESTIGATING OFFICER

OK so that so I've heard do you recall trying to do that you might have we required the man at the normal time that you were going to man for a flight or was it supposed sooner or later than or.

WITNESS

I don't think we were late I think there's anything that's on time hopefully.

INVESTIGATING OFFICER

OK all right so just reiterate I don't I don't think I took a note over here never saw the lead aircraft from the time it took off.

WITNESS

It was just because I was on the ramp-

WITNESS

On the ramp your dash 2 there's no reason you should see lead aircraft though just want to make sure you have anything.

LEGAL ADVISOR

What's the first thing you remember after the impact?

WITNESS

I remember getting pulled out and (b) (6) was talking about and then that was it everything went black and then in October I woke up here.

[inaudible]

INVESTIGATING OFFICER

Yeah did you know (b) (6) before?

WITNESS

Yes I did.

INVESTIGATING OFFICER

That flight.

WITNESS

He was one of the instructors he was in my Cpl's course.

INVESTIGATING OFFICER

OK that makes sense.

LEGAL ADVISOR

How long have you known Cpl Collard for?

WITNESS

I guess I knew him since I got to the squadron.

LEGAL ADVISOR

When did you get to the squadron?

WITNESS

In 2022, 2021 I believe yeah cause it was right for it I got there in January of 2021 I think so.

LEGAL ADVISOR

Yeah were you like what was your relationship with him were you guys friends?

WITNESS

We we're cordial I'd see him like just say what's up it's like we were kind of talking yeah actually we would talk about lacrosse because apparently I get he told me he played and apparently I played against him when we were younger yeah cause he grew up in Annapolis, MD and I'm Southern Maryland so we weren't that far apart so I guess our teams kind of played against each other in this like common tournament that we always went to so it's kind of cool.

INVESTIGATING OFFICER

That is cool yeah it is.

LEGAL ADVISOR

Is that you playing lacrosse there?

WITNESS

Yes.

INVESTIGATING OFFICER

Awesome.

LEGAL ADVISOR

Was he in a different section from there?

WITNESS

He's so he's flat line so aircrew and flat line they're two different shops but they share the same shop basically and all the air frames is all the way at the other end and like I don't know what relationship between flat line and air frames they were always butt heads but I always tried to I never had problems with anybody at the squadron I always tried to not kind of always worry about your flight line like I tried to be friendly with everybody so I never had problems with flight line or anything.

INVESTIGATING OFFICER

Yeah there's a natural tension between all the shops there's you know you have your tribes.

LEGAL ADVISOR

We talk about human factors whenever something like this happens do you know anything going on in Cpl Collard personal life or outside of work that might have been affecting him?

WITNESS

Not that I know he was always I didn't say he was like he was always happy but he was like kind of he's always kind of just chilled out.

INVESTIGATING OFFICER

Yeah.

WITNESS

Sometimes I notice like work would kind of get to him just cause I understand how he felt cause it's a flat line turned into a very young shot they lost all their good quals and it was like kind of stressful for him I think cause he was he was very experienced and then you know you got new guys and like they just got to deal with them they're idiots I don't know what they're doing but yeah, that's it comes that's what it comes with, right It's stressed out with new people.

INVESTIGATING OFFICER

Yeah what was your sense you talked about that that was the sense down in the garage of the flight OPS, the pace of flight OPS when your guys were in Australia?

WITNESS

We were flying a lot it was back-to-back I don't think i ever missed a beat so it it was great and then maintenance was awesome remember some big I think we had to change out the PCA that was really fun not really it was a good experience.

INVESTIGATING OFFICER

Yeah it's a good way to put it how many shifts did that take do you remember?

WITNESS

I think we only took one shift.

INVESTIGATING OFFICER

Oh really?

WITNESS

We had a (b) (6).

INVESTIGATING OFFICER

OK.

26:37

Yeah that guys-

INVESTIGATING OFFICER

Blocked out.

WITNESS

a wizard he's really experienced with the 22 and he's done literally everything so now he's in QA I think so kind of sucks for airframes, but they just lost two Q's so (b) (6) and (b) (6) (sic) so they don't have any.

INVESTIGATING OFFICER

Oh really?

WITNESS

They really don't have, air frames is a young shop again,

INVESTIGATING OFFICER



So time to build eyes in the cues.

WITNESS

They have a (b) (6) I think (b) (6) just got back to the squadron and then they have (b) (6) (b) (6) those are their cues so it's kind of rough.

INVESTIGATING OFFICER

Got a bunch of old dudes and a bunch of young, young pups.

WITNESS

Not a lot of CDI's there's a couple of CDI's but that's it.

INVESTIGATING OFFICER

So OP tempo was quick but what was the general sense? Positive negative from what you would call.

WITNESS

Positive yeah everybody was everybody was on prompt I wasn't in airframes here in Australia I was in phase.

INVESTIGATING OFFICER

OK gotcha.

WITNESS

But we got even for us during phase I think we phased five birds out there In Australia.

INVESTIGATING OFFICER

You phased five bird's holy cow.

WITNESS

it was there's a lot of just like sweating and rushing throughout that.

INVESTIGATING OFFICER

Yeah well this runs for what about 3 months?

WITNESS

Yes sir we're shooting for that NAM just didn't get it I think (b) (6) got it got the NAM that's just like a joke that we had that's what made us kind of push you like oh we want that NAM we kept telling the that NAM and we kept telling the CWO like we really want that NAM and he was like y'all be start phasing and so we pushed really hard.

INVESTIGATING OFFICER

OK awesome OK so general sense and like everybody since you have positive across maintenance regardless of the OP tempo.

WITNESS

Yes sir.

INVESTIGATING OFFICER

OK, cool what was the sense was there any frustration with the command itself at all beyond the OP tempo person like personality wise command climate we'll call it that.

WITNESS

The one thing that was that's kind of rough was the infantry guys at the other at the other 1066 I think we were kind of butting heads with them just because they were there longer they kind of think they own everything but that's just how it goes.

INVESTIGATING OFFICER

Yeah got it.

WITNESS

That's the only thing though.

INVESTIGATING OFFICER

I think that's the like the nature of the Marine Corps.

WITNESS

Basically.

INVESTIGATING OFFICER

Was it just frustration or was there shouting was there like we go to blows.

WITNESS

It was just not kind of shaming.

INVESTIGATING OFFICER

OK got it.

WITNESS

But that got handled quick.

30:13 INVESTIGATING OFFICER

OK so any concern at your level or who you worked with, not with the ACE that has an element, but with the command element like so (b) (6) any of those folks was there any interaction between them and you?

WITNESS

I don't think so.

INVESTIGATING OFFICER

What about when the H1's came to show up in town do you recall them being on deck?

WITNESS

I do yeah.

INVESTIGATING OFFICER

What was that relationship like?

WITNESS

It's first was kind of rough because there was word that we had to share rooms with them and like we do like the thing like if you're a CDI you get your own room you don't share one instead of a lot of us were upset about that but they ended up moving into 1066 I would say infantry guys left.

INVESTIGATING OFFICER

Do you recall the Showtime for the day that you from the flight?

WITNESS

Oh no.

INVESTIGATING OFFICER

OK do you recall if it was full maintenance like show was everybody there for maintenance that day?

WITNESS

I think I was showing up late cause it just had to be more compressed cause phase was phase was a night shift so I had to leave early and go to bed and wake up during the day.

INVESTIGATING OFFICER

Did they ramp you up or ramp you down for that or was it just you're on phase or some phase one night or the next day you're on the flight schedule?

WITNESS

Yeah it was like that alot, which I didn't complain about it everyone was very understanding about why I was late.

INVESTIGATING OFFICER

Yeah so that makes sense did you ever feel like you were not allowed to get enough rest or it felt like you showed up to a flight tired?

WITNESS

I always utilize my career (sic) just 'cause I know if I don't get sleep, I was really pretty dull headed everything kind of into one ear out through the other.

INVESTIGATING OFFICER

Yeah I can't think of anything else to be honest with you am I missing anything.

LEGAL ADVISOR

Anything else about that day the flight the days prior to when you found out you were gonna be on that flight anything else relevant to it that you can think I would recall that you think it would be important for us to know.

WITNESS

I did feel like it was kind of weird because I remember I do my walk around air frames is always online watching with the hides just in case I need the service and I'd always do my walk around I'd tap the aircraft and give airframes a thumbs up that we're good but I don't remember doing that it's kind of like a superstitious thing.

INVESTIGATING OFFICER

Yeah yeah I know the feeling.

WITNESS

I just don't ever do that at all.

INVESTIGATING OFFICER

You remember frames being out there?

WITNESS

Yes sir.

INVESTIGATING OFFICER

OK.

WITNESS

Just always something.

INVESTIGATING OFFICER

Yeah got you I would purposely talk about superstitions I would purposely from one flight to the next change how I'd walk around from clockwise to counterclockwise and if I started it the same way too I'd stop and go back over and start over the other direction.

WITNESS

Thats very smart, I never thought about it like that. Just to keep from getting complacent.

INVESTIGATING OFFICER

I can't think of anything else (b) (6).

LEGAL ADVISOR

No other memories or about the final moments of the flight.

WITNESS

No sir.

LEGAL ADVISOR

I completely understand.

35:16 WITNESS

I hit my head pretty hard.

INVESTIGATING OFFICER

All right I think that's it.

ELEMENT	UNIT	SECTION	MO ME NO NE
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
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ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	CTRL	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAD	ME
ACE	VMM-363	MALS-24	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	PHAS	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS5	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	CTRL	MO
ACE	VMM-363	MAAF	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	PHAS	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	HQS2	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	CTRL	ME

(b) (6)



ACE	VMM-363	HMLA DET	ME	(b) (6)							
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HQS3	ME								
ACE	VMM-363	HQS3	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	MAAF	ME								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	ORD	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	MO								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	MALS-24	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	MO								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	HQS6	MO								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	DOSS	MO								
ACE	VMM-363	LINE	ME		CPL	COLLART	SPENCER	R	16-Apr-23	DARWIN, AUS	17-Apr-23
ACE	VMM-363	MAAQ	ME		(b) (6)						
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HQS3	MO								
ACE	VMM-363	MAAD	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	CNMD	ME								
ACE	VMM-363	CTRL	ME								
ACE	VMM-363	MAAQ	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	LINE	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	MAAF	ME								
ACE	VMM-363	MAAF	ME								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	HMLA DET	MO								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	LINE	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	NE								
ACE	VMM-363	HMLA DET	NE								
ACE	VMM-363	MAAF	MO								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	ORD	ME								
ACE	VMM-363	LINE	ME								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	LINE	ME								
ACE	VMM-363	MWSS DET	MO								
ACE	VMM-363	MWSS DET	ME								
ACE	VMM-363	HMLA DET	MO								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	MAAD	ME								
ACE	VMM-363	MALS-24	ME								
ACE	VMM-363	MALS-24	ME								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	FLTE	MO								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	HMLA DET	ME								
ACE	VMM-363	LINE	ME								
ACE	VMM-363	MAAV	ME								
ACE	VMM-363	HMLA DET	ME								

ACE	VMM-363	MWSS DET	ME	(b) (6)						
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	ORD	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	ORDN	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	TOOL	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	HQS2	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	NMED	NO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	ORDN	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MAAQ	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	CTRL	ME							
ACE	VMM-363	CNMD	MO							
ACE	VMM-363	TOOL	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	HQS2	ME							
ACE	VMM-363	HQS5	MO	CAPT	LEBEAU	ELEANOR	V	16-Apr-23	DARWIN, AUS	17-Apr-23
ACE	VMM-363	MWSS DET	ME	(b) (6)						
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	CNMD	MO	MAJ	LEWIS	TOBIN	J	19-May-23	DARWIN, AUS	20-May-23
ACE	VMM-363	LINE	ME	(b) (6)						
ACE	VMM-363	MWSS DET	ME							

ACE	VMM-363	HQS1	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HQS4	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	PHAS	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	CTRL	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MWSS DET	NE
ACE	VMM-363	MAAV	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS1	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	CIV
ACE	VMM-363	PHAS	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAD	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HQS4	MO
ACE	VMM-363	ORD	ME
ACE	VMM-363	NMED	NO
ACE	VMM-363	MALS-24	CIV
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	FLTE	ME

(b) (6)



ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	CTRL	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	ORDN	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	LINE	MO
ACE	VMM-363	HQS6	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HQS4	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	HQS4	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	CTRL	MO
ACE	VMM-363	BELL	CTR
ACE	VMM-363	HMLA DET	CIV
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAD	ME
ACE	VMM-363	MWSS DET	NE
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS2	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HQS4	MO
ACE	VMM-363	HQS4	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	CNMD	MO
ACE	VMM-363	HMLA DET	MO

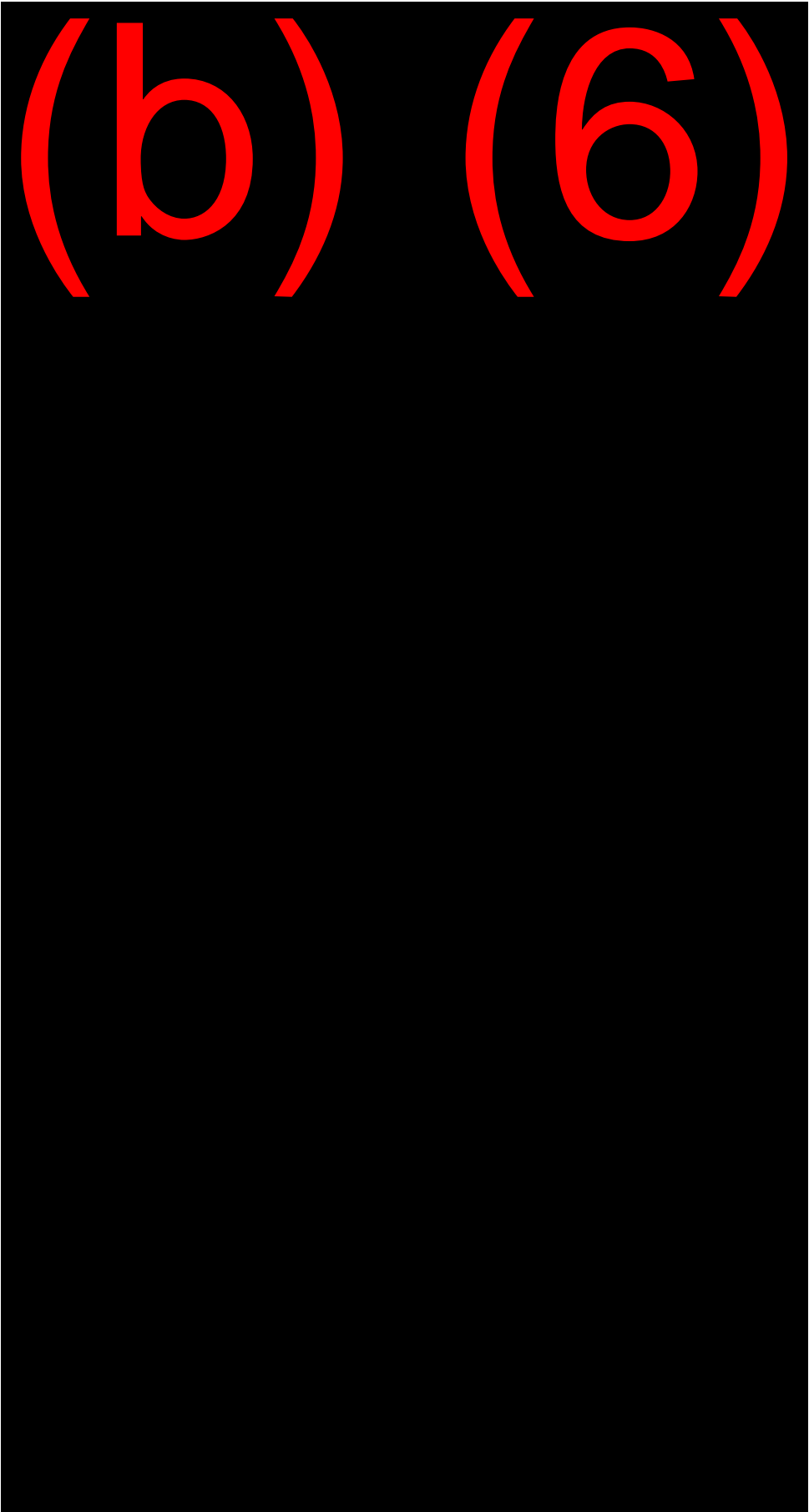
(b) (6)

ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAD	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS4	ME
ACE	VMM-363	HMLA DET	ME

(b) (6)



ELEMENT	UNIT	SECTION	MO ME NO NE
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	CTRL	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAD	ME
ACE	VMM-363	MALS-24	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	PHAS	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS5	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	CTRL	MO
ACE	VMM-363	MAAF	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	PHAS	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	HQS2	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	CTRL	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME



ACE	VMM-363	MAAF	ME	(b) (6)						
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	ORD	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HQS6	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	DOSS	MO							
ACE	VMM-363	LINE	ME	CPL	COLLART	SPENCER	R	16-Apr-23	DARWIN, AUS	17-Apr-23
ACE	VMM-363	MAAQ	ME	(b) (6)						
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	CNMD	ME							
ACE	VMM-363	CTRL	ME							
ACE	VMM-363	MAAQ	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	NE							
ACE	VMM-363	HMLA DET	NE							
ACE	VMM-363	MAAF	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	ORD	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MWSS DET	MO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	ELTE	MO							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	MWSS DET	ME							

ACE	VMM-363	MALS-24	ME	(b) (6)						
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	ORD	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	ORDN	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	TOOL	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	LINE	ME							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	HQS2	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	NMED	NO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	ORDN	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	FLTE	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MALS-24	ME							
ACE	VMM-363	MAAQ	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MAAD	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	CTRL	ME							
ACE	VMM-363	CNMD	MO							
ACE	VMM-363	TOOL	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	HQS3	MO							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HMLA DET	ME							
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MAAF	ME							
ACE	VMM-363	HQS2	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HQS5	MO	CAPT	LEBEAU	ELEANOR	V	16-Apr-23	DARWIN, AUS	17-Apr-23
ACE	VMM-363	MWSS DET	ME	(b) (6)						
ACE	VMM-363	HMLA DET	MO							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	CNMD	MO	MAJ	LEWIS	TOBIN	J	19-May-23	DARWIN, AUS	20-May-23
ACE	VMM-363	LINE	ME	(b) (6)						
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	MWSS DET	ME							
ACE	VMM-363	HQS1	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	MAAV	ME							
ACE	VMM-363	HQS4	ME							
ACE	VMM-363	LINE	ME							



ACE	VMM-363	PHAS	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	CTRL	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MWSS DET	NE
ACE	VMM-363	MAAV	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS1	MO
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	CIV
ACE	VMM-363	PHAS	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAD	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HQS4	MO
ACE	VMM-363	ORD	ME
ACE	VMM-363	NMED	NO
ACE	VMM-363	MALS-24	CIV
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	CTRL	ME
ACE	VMM-363	DOSS	MO
ACE	VMM-363	ORDN	ME
ACE	VMM-363	MAAF	ME

(b) (6)

ACE	VMM-363	LINE	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	LINE	MO
ACE	VMM-363	HQS6	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	FLTE	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MAAQ	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HQS4	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	TOOL	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	HQS1	ME
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	HQS4	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	NMED	NE
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	CTRL	MO
ACE	VMM-363	BELL	CTR
ACE	VMM-363	HMLA DET	CIV
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAD	ME
ACE	VMM-363	MWSS DET	NE
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS3	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	HQS2	ME
ACE	VMM-363	MALS-24	ME
ACE	VMM-363	MAAF	ME
ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	HQS4	MO
ACE	VMM-363	HQS4	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	CNMD	MO
ACE	VMM-363	HMLA DET	MO
ACE	VMM-363	MWSS DET	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS3	MO
ACE	VMM-363	MAAD	ME
ACE	VMM-363	HMLA DET	ME

(b) (6)



ACE	VMM-363	HMLA DET	ME
ACE	VMM-363	MAAV	ME
ACE	VMM-363	LINE	ME
ACE	VMM-363	HQS4	ME
ACE	VMM-363	HMLA DET	ME

(b) (6)

















The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The methodology section describes the research design and the data collection process. The results section presents the findings of the study, and the conclusion section summarizes the main findings and provides recommendations for future research.

The study was conducted in a laboratory setting, and the data were collected using a series of experiments. The results of the experiments were analyzed using statistical methods, and the findings were compared with the results of previous studies. The study found that the research objectives were achieved, and the results were consistent with the findings of previous research.

The study has several limitations, and there are some areas that need to be explored in future research. The study was conducted in a laboratory setting, and the results may not be generalizable to real-world situations. The study also had a limited sample size, and the results may not be representative of the entire population.

In conclusion, the study found that the research objectives were achieved, and the results were consistent with the findings of previous research. The study has several limitations, and there are some areas that need to be explored in future research.

The first part of the paper discusses the importance of understanding the local context in which a project is implemented. This includes a thorough analysis of the social, economic, and cultural factors that may influence the success or failure of the intervention. It is essential to engage with the community from the outset, ensuring that their voices are heard and their needs are addressed. This participatory approach not only fosters a sense of ownership and commitment among the community members but also allows for the identification of potential challenges and the development of strategies to mitigate them.

In addition, the paper highlights the need for a clear and realistic assessment of the resources available, both human and financial. It is crucial to establish a strong foundation of trust and collaboration with the local stakeholders, as this will be instrumental in the implementation and sustainability of the project. The paper also emphasizes the importance of monitoring and evaluation, as these processes provide valuable feedback on the progress and impact of the intervention, allowing for timely adjustments and improvements.

The second part of the paper presents a detailed case study of a community-based health intervention in a rural setting. The study illustrates the challenges faced by the community, such as limited access to healthcare services and a lack of health knowledge. The intervention was designed to address these issues through a combination of health education, the establishment of a local health committee, and the provision of basic medical services. The results of the study show a significant increase in the community's health knowledge and a higher utilization of the local health services. The study also identifies the key factors that contributed to the success of the intervention, including the active participation of the community members and the support of the local health authorities.

The paper concludes by discussing the implications of the findings for the design and implementation of similar interventions in other contexts. It stresses the importance of tailoring the intervention to the specific needs and characteristics of the target community, as well as the need for ongoing support and collaboration with the local stakeholders. The paper also highlights the potential for community-based interventions to play a significant role in improving the health and well-being of underserved populations.





[The page contains a large, faint, and mostly illegible watermark or bleed-through from the reverse side. The text is mirrored and difficult to decipher, but appears to be a formal document or letter.]

## Final Training Plan



**Date Printed:** 17-Jan-24  
**Report generated by** BRUNDAGER01  
**Show Task / Signoff Comments:** Yes  
**Show Routing / Signer Comments:** Yes

Controlled by: NUWC Keyport  
Controlled by: NUWC Keyport C414  
CUI Category: PRVCY  
Distribution Statement: D  
POC: ASM Helpdesk 360-315-7450

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Completed Date: 08-Mar-23

Final Signature: (b) (6)

Final Signature Date: 08-Mar-23

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC5: TRAINING SYLLABUS TOPICS</b>						
25. Verify: ACCREDITATION: EGRESS/EXPLOSIVES SYSTEMS CHECKOUT QUALIFICATION (MV-22)	SUPERVISOR (MC)	AUTO_SIGNED	COMPLETE	02-Mar-23		
26. Verify: ACCREDITATION: AIRCRAFT ENGINE/APU TURN-UP LICENSE (4790/192)(APU)(V-22)	SUPERVISOR (MC)	AUTO_SIGNED	COMPLETE	02-Mar-23		
<b>Task Area: PART I. OPNAV 4790/158: TESTING</b>						
1: PASS Practical Examination with Quality Assurance Representative that is currently qualified as a Plane Captain. NOTE: CDQARs are not authorized to administer initial prac app.	QUALITY ASSURANCE REPRESENTATIVE (MC)	(b) (6)	COMPLETE	06-Mar-23		
<b>Routing Steps:</b>						
Description	Signer Authority	Signer Name	Date Signed	Status		
FOLLOW UP	QUALITY ASSURANCE REPRESENTATIVE (MC)	(b) (6)	08-Mar-23	RECOMMENDED		
APPROVED BY	1500 - PLANE CAPTAIN QUALIFICATION PROGRAM MANAGER (MC)	(b) (6)	08-Mar-23	APPROVED		

## Final Training Plan



**Date Printed:** 17-Jan-24  
**Report generated by** BRUNDAGER01  
**Show Task / Signoff Comments:** Yes  
**Show Routing / Signer Comments:** Yes

Controlled by: NUWC Keyport  
Controlled by: NUWC Keyport C414  
CUI Category: PRVCY  
Distribution Statement: D  
POC: ASM Helpdesk 360-315-7450



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC1: PREREQUISTIES</b>						
a: VERIFY NAMP Indoctrination training has been completed	SUPERVISOR (MC)	(b) (6)	COMPLETE	07-Jun-22		
b: VERIFY Indoctrination interview completed	SUPERVISOR (MC)	(b) (6)	COMPLETE	07-Jun-22		
c: VERIFY Trainee has the maturity, and skills required to perform Plane Captain duties	SUPERVISOR (MC)	(b) (6)	COMPLETE	07-Jun-22		
<b>Task Area: PC2: REQUIRED READING</b>						
a: READ COMNAVAIRFORINST 4790.2 __, Chapter 10, Section 10.14	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
b: READ OPNAVINST 3710.7__	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
c: READ NAVAIR 00-80T-105, CV NATOPS Manual	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
d: READ NAVAIR 00-80T-106, LHA/LHD NATOPS Manual	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
e: READ NAVAIR 00-80T-113, Aircraft Signals NATOPS Manual	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
f: READ NAVAIR 01-1A-17 (Sections 2, 3, 4) Aviation Hydraulics Manual	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
g: READ NAVAIR 01-1A-509, Aircraft Weapons Systems Cleaning and Corrosion Control	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
h: READ NAVAIR 04-10-506, Aircraft Tire and Tubes	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
i: READ NAVAIR 17-1-125, Support Equipment Cleaning, Prevention and Corrosion Control	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
j: READ A1-V22AB-NFM-000, NATOPS Flight Manual, MV-22B Tiltrotor	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
k: READ A1 V22AB NFM 500, NATOPS Pilot's/Aircrew Pocket Checklist, MV-22B Tiltrotor	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
l: READ A1-V22AB-CLG-000, Cargo Handling Manual, V-22 Tiltrotor	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
m: READ NAVAIR 17-1-537, Aircraft Servicing and Handling Procedures	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		

# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC2: REQUIRED READING (Cont.)</b>	TRAINEE	(b) (6)	COMPLETE	09-Jun-22		
n: READ NAVAIR 15-01-500, Maintenance Preservation of Naval Aircraft	TRAINEE		COMPLETE	09-Jun-22		
o: READ NAVAIR 00-80T-122, Helicopter Operating Procedures for Air Capable Ships NATOPS Manual	TRAINEE		COMPLETE	09-Jun-22		
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
o3: DEMO KNOWLEDGE OF Landing Gear System: Main Landing Gear Bay Fire Suppression System SSS 1210 (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
o4: PERFORM Landing Gear System: Main Landing Gear Bay Fire Suppression System Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
o4: PERFORM Landing Gear System: Main Landing Gear Bay Fire Suppression System Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
p1: PERFORM Inter Connect Drive Shaft System: Inspect Left and Right Pylon Drive Shaft	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
p1: PERFORM Inter Connect Drive Shaft System: Inspect Left and Right Pylon Drive Shaft (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	26-Aug-22		



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
p2: PERFORM Inter Connect Drive Shaft System: Inspect Left and Right Nacelle Blower Drive Shaft	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
p2: PERFORM Inter Connect Drive Shaft System: Inspect Left and Right Nacelle Blower Drive Shaft (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	26-Aug-22		
q: PERFORM Fire Detection/Suppression System Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
q: PERFORM Fire Detection/Suppression System Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
r1: PERFORM Aircraft interior/Exterior: Cabin Interior Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
r1: PERFORM Aircraft interior/Exterior: Cabin Interior Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
r2: PERFORM Aircraft interior/Exterior: Flap Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		

# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
r2: PERFORM Aircraft interior/Exterior: Flap Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
r3: PERFORM Aircraft interior/Exterior: Rudder Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
r3: PERFORM Aircraft interior/Exterior: Rudder Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
r4: PERFORM Aircraft interior/Exterior: Elevator Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
r4: PERFORM Aircraft interior/Exterior: Elevator Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
s: PERFORM Ice Protection Control System Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
s: PERFORM Ice Protection Control System Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	18-Aug-22		
t1: PERFORM AIRCRAFT SERVICING: Prop Rotor Gearbox	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t2: PERFORM AIRCRAFT SERVICING: Tilt Axis Gearbox	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t3: PERFORM AIRCRAFT SERVICING: Mid Wing Gearbox	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t4: PERFORM AIRCRAFT SERVICING: SDC	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t5: PERFORM AIRCRAFT SERVICING: Hydraulic System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
t6: PERFORM AIRCRAFT SERVICING: Generators	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	09-Jun-22		
t7: PERFORM AIRCRAFT SERVICING: APU	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t8: PERFORM AIRCRAFT SERVICING: Engines	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
t9: PERFORM AIRCRAFT SERVICING: Emergency Lubrication System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	09-Jun-22		
a: DEMO KNOWLEDGE OF INTEGRATED ELECTRONIC TECHNICAL MANUAL (IETM)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Jul-22		
a: DEMO KNOWLEDGE OF INTEGRATED ELECTRONIC TECHNICAL MANUAL (IETM) (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		
a: DEMO KNOWLEDGE OF INTEGRATED ELECTRONIC TECHNICAL MANUAL (IETM) (Rep: 3)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		

# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
b: DEMO KNOWLEDGE OF INTEGRATED ELECTRONIC TECHNICAL MANUAL (IETM) PARTS	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
t10: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Tires and Struts	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
t10: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Tires and Struts (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
t11: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Emergency Oxygen	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
t11: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Emergency Oxygen (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
t12: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Emergency Landing Gear Blow Down Bottle	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
t12: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Emergency Landing Gear Blow Down Bottle (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
t13: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Aircraft Fire Bottles	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
c: DEMO KNOWLEDGE OF INTEGRATED ELECTRONIC TECHNICAL MANUAL (IETM) INSPECTIONS	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
d1: DEMO KNOWLEDGE OF COCKPIT FAMILIARIZATION: Pilot Seat	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
d2: DEMO KNOWLEDGE OF COCKPIT FAMILIARIZATION: Flight Controls	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
d3: DEMO KNOWLEDGE OF COCKPIT FAMILIARIZATION: Displays	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
e1: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): CMS Power-Up	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
e1: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): CMS Power-Up (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
e2: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT Flight Controls	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
t13: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Aircraft Fire Bottles (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
t14: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Main Landing Gear Bay Fire Suppression System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
t14: DEMO KNOWLEDGE OF AIRCRAFT SERVICING: Main Landing Gear Bay Fire Suppression System (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
u: DEMO KNOWLEDGE OF Conditional Inspections	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
v: DEMO KNOWLEDGE OF Special Inspections	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
w: PERFORM Daily Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
w: PERFORM Daily Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	31-Aug-22		
e2: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT Flight Controls (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
e3: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): IBIT Any System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
e3: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): IBIT Any System (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
e4: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT Fuel	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
e4: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT Fuel (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
e5: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT O2/N2	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
e5: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT O2/N2 (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
w: PERFORM Daily Inspection (Rep: 3)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	31-Aug-22		
x: PERFORM Turnaround Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
x: PERFORM Turnaround Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
x: PERFORM Turnaround Inspection (Rep: 3)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	30-Aug-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	30-Aug-22		
y: DEMO KNOWLEDGE OF Cargo Winch	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
z: DEMONSTRATE Tie Down Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
aa1: DEMO KNOWLEDGE OF External Cargo Hooks	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	30-Aug-22		
e6: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT ECS	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
e6: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT ECS (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		
e7: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT ICE Protection System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
e7: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): PFBIT ICE Protection System (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
e8: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): WRA Status and Test	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
e8: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): WRA Status and Test (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
e9: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): INS Alignment	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
aa2: DEMO KNOWLEDGE OF External Cargo Pendants	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	30-Aug-22		
bb: DEMO KNOWLEDGE OF Rescue Hoist	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	30-Aug-22		
cc1: PERFORM Day Taxi	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	09-Jun-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	09-Jun-22		
cc1: PERFORM Day Taxi (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
cc2: PERFORM Night Taxi	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
cc2: PERFORM Night Taxi (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
cc3: PERFORM Hand and Arm Signals for Hover Taxi	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		
e10: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Lighting System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
e10: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Lighting System (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Jul-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
e11: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Weight and Balance Comps	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		
e11: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Weight and Balance Comps (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Jul-22		
e9: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): INS Alignment (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		
e12: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): VSLED	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	08-Jul-22		
e12: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): VSLED (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
cc3: PERFORM Hand and Arm Signals for Hover Taxi (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	07-Jul-22		
cc4: DISCUSS Hot Brake Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	22-Jun-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
cc4: DISCUSS Hot Brake Procedures (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
dd: PERFORM Aircraft Turn up	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		
dd: PERFORM Aircraft Turn up (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	26-Aug-22		
ee1: PERFORM SECURING AIRCRAFT: Ashore	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	28-Jun-22		
ee2: PERFORM SECURING AIRCRAFT: Hanger	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	28-Jun-22		
e14: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Download Maintenance Data	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
e14: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Download Maintenance Data (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
e15: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Update Crew Configuration	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
e16: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Upload Mission Data	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
e13: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Communication System	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	22-Jun-22		
e13: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Communication System (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
e16: DEMO KNOWLEDGE OF COCKPIT MANAGEMENT SYSTEM (CMS): Upload Mission Data (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
ee3: PERFORM SECURING AIRCRAFT: Heavy Weather	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	28-Jun-22		



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	28-Jun-22		
ee4: PERFORM SECURING AIRCRAFT: Afloat	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		
ff1: PERFORM TOWING OR MOVING AIRCRAFT: Tow Director Duties	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		
ff2: PERFORM TOWING OR MOVING AIRCRAFT: Wing/Tail Walker Duties	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		
f3: PERFORM Aircraft Operations with Hydraulic Cart (PHPS)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
f4: PERFORM Aircraft Operations with Electric Cart	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Jul-22		
g1: INSPECT ENGINES: Engine Oil Tank	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	26-Aug-22		
g1: INSPECT ENGINES: Engine Oil Tank (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	26-Aug-22		
f1: DEMO KNOWLEDGE OF FLIR Maintenance Calibration	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
f2: DEMO KNOWLEDGE OF FLIR Thermal Calibration	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
g2: INSPECT ENGINES: APU	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
h1: INSPECT GEAR BOXES: MWGB	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
h1: INSPECT GEAR BOXES: MWGB (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
h2: INSPECT GEAR BOXES: TAGB	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
h2: INSPECT GEAR BOXES: TAGB (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	26-Aug-22		
g2: INSPECT ENGINES: APU (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	18-Aug-22		
h3: INSPECT GEAR BOXES: PRGB	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
h3: INSPECT GEAR BOXES: PRGB (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	26-Aug-22		
i1: PERFORM PROP ROTORS: Prop Rotor Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	26-Aug-22		
i2: PERFORM PROP ROTORS: Swashplate Actuator Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	01-Jul-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	26-Aug-22		
i2: PERFORM PROP ROTORS: Swashplate Actuator Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	26-Aug-22		
j1: INSPECT GENERATORS: #1 and #2 CFG	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
i1: PERFORM PROP ROTORS: Prop Rotor Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	01-Jul-22		
j2: INSPECT GENERATORS: #3 and #4 VFG	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
k1: INSPECT EXPLOSIVE DEVICES: Cockpit Doors	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
k3: INSPECT EXPLOSIVE DEVICES: Cabin Overhead Escape	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		
k4: INSPECT EXPLOSIVE DEVICES: Cable Cutter	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	28-Jun-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	28-Jun-22		
I1: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Refuel	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	09-Jun-22		
I1: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Refuel (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
k2: INSPECT EXPLOSIVE DEVICES: Cabin Egress Windows	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
I1: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Refuel (Rep: 3)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
I2: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Defuel	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
I2: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Defuel (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	07-Jul-22		



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
I2: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Pressure Defuel (Rep: 3)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	18-Aug-22		
I3: DEMO KNOWLEDGE OF AIRCRAFT FUELING/FUEL MANAGEMENT: Gravity Refuel	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
I4: INSPECT AIRCRAFT FUELING/FUEL MANAGEMENT: Suction Defuel	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Jul-22		
m: DEMO KNOWLEDGE OF Corrosion Prevention	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
n1: PERFORM PNEUMATIC SYSTEM: SDC Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
n1: PERFORM PNEUMATIC SYSTEM: SDC Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22		
n2: PERFORM PNEUMATIC SYSTEM: ECS Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC3: HANDS-ON/PRACTICAL TRAINING (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	24-Jun-22		
n2: PERFORM PNEUMATIC SYSTEM: ECS Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
o1: PERFORM Landing Gear System: Nose Landing Gear System Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
o1: PERFORM Landing Gear System: Nose Landing Gear System Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	18-Aug-22		
o2: PERFORM Landing Gear System: Main Landing Gear System Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	24-Jun-22		
o2: PERFORM Landing Gear System: Main Landing Gear System Inspection (Rep: 2)	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22		
o3: DEMO KNOWLEDGE OF Landing Gear System: Main Landing Gear Bay Fire Suppression System SSS 1210	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Jul-22		

### Task Area: PC4: 3M DOCUMENTATION



# Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date	
Task Area: PC4: 3M DOCUMENTATION (Cont.)			COMPLETE	11-Aug-22			
1: Complete DM MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	11-Aug-22			
2: Initiate DM MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	11-Aug-22			
4: Initiate DF MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	01-Jul-22			
5: Complete CP MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	18-Aug-22			
6: Initiate CP MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	18-Aug-22			
3: Complete DF MAF	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	01-Jul-22			
Task Area: PC5: TRAINING SYLLABUS TOPICS							
1: VERIFY General or Avionics Corrosion Control Course Completed	SUPERVISOR (MC)		COMPLETE	06-Sep-22			



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

**Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)**

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

<u>Task</u>	<u>Sign-Off Auth</u>	<u>Signature</u>	<u>Task Status</u>	<u>Sign-Off Date</u>	<u>Test Score</u>	<u>Test Date</u>
<b>Task Area: PC5: TRAINING SYLLABUS TOPICS (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
2: Discuss Exhaust Blast Hazards	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
5: Discuss FOD Prevention	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
6: Discuss Tool Control	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
7: Discuss Noise Hazards	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
8: Discuss Fuel Surveillance	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
3: Discuss Propeller or Rotor Hazards	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
4: Discuss Tire and Wheel Maintenance Safety	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC5: TRAINING SYLLABUS TOPICS (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
9: Discuss Hydraulic Contamination Control	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		
12: Discuss Flight Line/Flight Deck Safety and Flight Deck Familiarization	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		
13: Discuss Hazardous Material Control and Management Program.	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		
14: Discuss SE Operator Training and Licensing Program	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		
15: Discuss Fire Fighting Procedures and Responsibilities	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		
10: Discuss Navy Oil Analysis and Consumption Monitoring	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)		COMPLETE	06-Sep-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC5: TRAINING SYLLABUS TOPICS (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
11: Discuss Aircraft Ordnance	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
16: Discuss Cleaning Aircraft	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
19: Discuss Aircraft Alert Posture Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
20: Review Oil System Servicing Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
21: Review Aircraft Refueling/Defueling Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
22: Perform Launch Aircraft	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
17: Discuss Aircraft Preservation	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		

## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PC5: TRAINING SYLLABUS TOPICS (Cont.)</b>	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
18: Discuss Aircraft Fastener Integrity Inspection	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
23: Perform Recover Aircraft	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
26. Verify: ACCREDITATION: AIRCRAFT ENGINE/APU TURN-UP LICENSE (4790/192)(APU)(V-22)	SUPERVISOR (MC)	(b) (6)	COMPLETE	31-Aug-22		
27. Verify: ACCREDITATION: BRAKE RIDER QUAL (V-22) (MC)	SUPERVISOR (MC)	(b) (6)	COMPLETE	31-Aug-22		
28. Verify: ACCREDITATION: BLADE FOLD WING STOW QUAL (V-22) (MC)	SUPERVISOR (MC)	(b) (6)	COMPLETE	31-Aug-22		
29: Complete Quality Assurance (currently qualified Plane Captain) Monitor Interview	QUALITY ASSURANCE REPRESENTATIVE (MC)	(b) (6)	COMPLETE	20-Sep-22		
24: Perform Fuel Sampling Procedures	PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)	(b) (6)	COMPLETE	06-Sep-22		
25. Verify: ACCREDITATION: EGRESS/EXPLOSIVES SYSTEMS CHECKOUT QUALIFICATION (MV-22)	SUPERVISOR (MC)	(b) (6)	COMPLETE	31-Aug-22		

### Task Area: PART I. OPNAV 4790/158: TESTING

\*\* Assign test practical and instruct Plane Captain to select true and submit for a passed practical exam. Qualified Plane Captain (QAR for Initial and Renewal),(QAR/CDQAR for Proficiency and Annual) shall sign when a PASS is obtained and documented using the CSEC 5700 Checklist in ASM.\*\*



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

### Task List: PLANE CAPTAIN DESIGNATION (4790/158)(MV-22)(USMC) (Cont.)

Completed Date: 06-Oct-22

Final Signature: (b) (6)

Final Signature Date: 06-Oct-22

Accreditation Type: QUALIFICATION

Accreditation: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC)

Task	Sign-Off Auth	Signature	Task Status	Sign-Off Date	Test Score	Test Date
<b>Task Area: PART I. OPNAV 4790/158: TESTING (Cont.)</b>	QUALITY ASSURANCE REPRESENTATIVE (MC)	(b) (6)	COMPLETE	20-Sep-22		
1: PASS Practical Examination with Quality Assurance Representative that is currently qualified as a Plane Captain. NOTE: CDQARs are not authorized to administer initial prac app.	QUALITY ASSURANCE REPRESENTATIVE (MC)		COMPLETE	20-Sep-22		
2: TEST: PLANE CAPTAIN TRAINING SYLLABUS (V-22MC)	QUALITY ASSURANCE REPRESENTATIVE (MC)		COMPLETE	21-Sep-22	100	21-Sep-22
<b>Task Area: PART II - OPNAV 4790/158: Certification</b>						
1: CERTIFY That I understand my responsibilities as set forth in the current COMNAVAIRFORINST 4790.2 __.	TRAINEE	(b) (6)	COMPLETE	21-Sep-22		
2: Official recommending designation and verified ready to go before the Plane Captain Selection Board.	1500 - PLANE CAPTAIN QUALIFICATION PROGRAM MANAGER (MC)		COMPLETE	27-Sep-22		



## Final Training Plan



Name: (b) (6)

Assignment Start Date: 24-Jan-22

Organization: MARINE AVIATION - TECOM - COMMARFORPAC - 1ST MAW - MAG-24 - VMM-363 - MAINT DEPT - LINE DIV - W/C 310

## Routing Steps: PLANE CAPTAIN DESIGNATION (4790/158) (MV-22) (USMC) (Cont.)

Description	Signer Authority	Signer Name	Date Signed	Status
PART III - BOARD MEMBER-PLANE CAPTAIN PROGRAM MONITOR Routing Comments:	1500 - PLANE CAPTAIN QUALIFICATION PROGRAM MONITOR (MC) Candidate has appeared before the Plane Captain Selection Board, and is fully qualified and recommended for designation as a Plane Captain	(b) (6)	29-Sep-22	RECOMMENDED
PART III - BOARD MEMBER-PLANE CAPTAIN BRANCH SUPERVISOR Routing Comments:	PLANE CAPTAIN BRANCH SUPERVISOR (MC) Candidate has appeared before the Plane Captain Selection Board, and is fully qualified and recommended for designation as a Plane Captain	(b) (6)	29-Sep-22	RECOMMENDED
PART III - BOARD MEMBER-PLANE CAPTAIN PROGRAM MANAGER Routing Comments:	1500 - PLANE CAPTAIN QUALIFICATION PROGRAM MANAGER (MC) Candidate has appeared before the Plane Captain Selection Board, and is fully qualified and recommended for designation as a Plane Captain	(b) (6)	29-Sep-22	RECOMMENDED
PART III - BOARD MEMBER-SAFETY OFFICER Routing Comments:	SAFETY OFFICER Candidate has appeared before the Plane Captain Selection Board, and is fully qualified and recommended for designation as a Plane Captain	(b) (6)	04-Oct-22	RECOMMENDED
INFO Routing Comments:	AIRCRAFT MAINTENANCE CHIEF (MC) INFO	(b) (6)	05-Oct-22	RECOMMENDED
PART III - BOARD MEMBER-MAINTENANCE OFFICER Routing Comments:	MAINTENANCE OFFICER Candidate has appeared before the Plane Captain Selection Board, and is fully qualified and recommended for designation as a Plane Captain	(b) (6)	05-Oct-22	RECOMMENDED
PART IV - DESIGNATE-COMMANDING OFFICER Routing Comments:	COMMANDING OFFICER DESIGNATION EFFECTIVE DATE SIGNED	(b) (6)	06-Oct-22	APPROVED

## PRIVACY ACT STATEMENT

Name: (b) (6) Rank/Rate: (b) (6)  
Activity: Pilot Unit: VMFA-303  
Telephone number: 214 406 6756

Today, (b) (6), 2023, I acknowledge that I have received the following advisement under the guidelines of the Privacy Act.

This statement is provided in compliance with the provisions of the Privacy Act of 1974 (Public Law 93-579) which requires that Federal agencies must inform individuals who are requested to furnish personal information about themselves as to certain facts regarding the information requested below.

1. AUTHORITY: 5 U.S.C. 301; 10 U.S.C. 972, 1201-1221, 2733, 2734-2734b., 2737, 5013, 5031-5036, 5131-5150, 5947, 6148, 7205, 7622-7623; 28 U.S.C. 1346, 2671-2680; 31 U.S.C. 240-243, 3521-3531, 3701-3702, 3717-3718; 37 U.S.C. 802; 38 U.S.C. 105; 42 U.S.C. 2651-2653; 44 U.S.C. 3101; 49 U.S.C. 1901.

2. PRINCIPAL PURPOSES. The information which will be solicited is intended principally and may be used for the following purposes:

- a. Determinations on the status of personnel regarding entitlements to pay during disability, disability benefits, severance pay, retirement pay, increases of pay for longevity, survivor's benefits, involuntary extensions of enlistments, date of expiration of active obligated service, and accrual of annual leave.
- b. Determinations on disciplinary or punitive action.
- c. Determinations on liability of personnel for losses of, or damage to, public funds or property.
- d. Evaluation of petitions, grievances, and complaints.
- e. Adjudication, pursuit, or defense of claims for or against the Government or among private parties.
- f. Other determinations, as required, in the course of naval administration.
- g. Public information releases.
- h. Evaluation of procedures, operations, material, and designs by the Navy and contractors, with a view to improving the efficiency and safety of the Department of the Navy.

3. ROUTINE USES: In addition to being used within the Department of the Navy and Defense for the purpose(s) indicated above, records of investigations are routinely furnished, as appropriate, to the Department of Veterans Affairs for use in determinations concerning entitlement to veterans' and survivors' benefits; to Servicemen's Group Life Insurance administrators for determinations concerning payment of life insurance proceeds; to the U.S. General Accounting Office for purposes of determinations concerning relief of accountable personnel from liability for losses of public funds and related fiscal matters; and to the Department of Justice for use in litigation involving the Government. Additionally, such investigations are sometimes furnished to agencies of the Department of Justice and to State or local law enforcement and court authorities for use in connection with civilian criminal and civil court proceedings. The records of investigations are provided to agents and authorized representatives of persons involved in the incident, for use in legal or administrative matters. The records are provided to contractors for use in connection with

settlements, adjudication, or defense of claims by or against the Government, and for use in design and evaluation of products, services, and systems. The records are also furnished to agencies of the Federal, State, or local law enforcement authorities, and regulatory authorities, for use in connection with civilian and military criminal, civil, administrative, and regulatory proceedings and actions.

4. MANDATORY/VOLUNTARY DISCLOSURE. CONSEQUENCES OF REFUSING TO DISCLOSE:

*i.* Where an individual is a subject of an investigation for purpose 2a or 2b, above: Disclosure is voluntary. You are advised that you are initially presumed to be entitled to have the personnel determination and/or disciplinary determinations in paragraph 2, above, resolved in your favor, but the final determination will be based on all the evidence in the investigative record. If you do not provide the requested information, you will be entitled to a favorable determination if the record does not contain sufficient evidence to overcome the presumption in your favor. If the completed record does contain sufficient evidence to overcome the presumption in your favor, however, your election not to provide the requested information possible could prevent the investigation from obtaining evidence which may be needed to support a favorable determination.

*j.* Where an individual is a subject of an investigation for purpose 2c, above: Disclosure is voluntary, and if you do not provide the requested information, any determination as to whether you should be held pecuniarily liable for repayment of the Government's loss would be based on the other evidence in the investigative record, which possibly might not support a favorable determination.

*k.* Where the individual is a claimant or potential claimant in an investigation for purpose 2e, above: Disclosure is voluntary, but refusal to disclose the requested information could prevent the investigation from obtaining sufficient information to substantiate any claim which you have made or may make against the Government as a result of the incident under investigation.

*l.* Where the individual was treated at Government expense for injuries caused by third parties in connection with a matter being investigated for purpose 2e, above: Disclosure is voluntary, but refusal to disclose the requested information could result in a requirement for you to assign to the Government your medical care claims against third parties in connection with the incident, or authorize withholding of the records of your treatment in naval medical facilities.

*m.* In any other case: Disclosure is voluntary, and if you do not provide the requested information, and determinations or evaluations made as a result of the investigation will be made on the basis of the evidence that is contained in the investigative record.

(b) (6)

11/27/23

(Signature and date)

SWORN STATEMENT			
For use of this form, see AR 190-45; the proponent of this form is ODCSOPS			
PRIVACY ACT STATEMENT			
<b>AUTHORITY:</b>		Title 10 USC Section 301; Title 5 USC Section 2951; E.O. 9397 Dated November 22, 1943 (SSN)	
<b>PRINCIPAL PURPOSE:</b>		To provide commanders and law enforcement officials with means by which information may be accurately recorded.	
<b>ROUTINE USES:</b>		Your social security number is used as an additional alternate means of identification to facilitate filing and retrieval.	
<b>DISCLOSURE:</b>		Disclosure of your social security number is voluntary.	
1. LOCATION	2. DATE	3. TIME	4. FILE NUMBER
5. LAST NAME, FIRST NAME, MIDDLE NAME (b) (6)		6. EDIPI (b) (6)	7. GRADE STATUS (b) (6)
8. ORGANIZATION OR ADDRESS VMM-363			

## Background

1. Explain your career background and role in VMM-363 (REIN).  
Copilot for a little over a year, and progressing through the copilot syllabus and worked in operations.
2. Describe the command climate in VMM-363 (REIN)  
Overall the climate is good with the exception of high operational tempo resulting in possible fatigue and/or burnout.
3. Describe the safety culture in VMM-363 (REIN).  
The safety culture is good. We have a well unified DOSS section but it seems like it can be bullied into bending rules through the high operational tempo.  
- Example - DOSS initially uncomfortable with a scheduled flight event, but the command signs off on it anyway.

4. Describe operations on the HMAS Canberra.

Relatively younger crew pairings with a high operational tempo learning to work with the unfamiliar Australian rules and regulations.

Example - The HMAS Canberra requesting that departing aircraft fly under the ship's radar, resulting in non-standard takeoffs.

5. Were you aware of the Class C mishap on 16 August aboard the HMAS Canberra?  
Describe what you know about that incident.

Yes, I was relieving the ODO in the ship's tower. I watched the Osprey depart and descend below the flight deck before accelerating and climbing away. I was immediately told to go retrieve the CO. Once the CO was in the flight tower, I was assigned as a runner to begin executing the mishap plan.

6. How did the Squadron CO respond to that incident?

The CO took it very seriously and sat all the pilots down to discuss learning from the incident. We continued high tempo work operations with the exception of the two mishap pilots.

7. How did the Squadron Operations Officer respond to that incident?

The squadron operations officer responded in the same manner as the CO. She worked with the Australians to ensure better policies were in place to improve the comfort level of the Australian personnel.



8. How did the Australians respond to that incident?

The Australians were extremely helpful and acted without hesitation as if it were one of their own aircraft, and did everything in their power to assist in the recovery of the aircraft.

I.e. turning the ship to provide best landing winds, launching safety boats, etc.

9. How did the other VMM-363 (REIN) pilots aboard the HMAS Canberra respond to that incident?

All pilots immediately came to the operations room to assist in any matters (ie. looking for suitable runways/hard surfaced landing zones, updating the fuel state of each aircraft, and executing the mishap plan without hesitation)

10. Were any practices or procedures changed as a result of that incident? Either aboard the HMAS Canberra or across the squadron? If so, describe.

The squadron instituted a policy requiring the operations duty officer work with Australian personnel in the tower to provide on-call power calculations to ensure adequate power margins prior to each takeoff.

11. Were you aware of any human factors concerns with Major Lewis?

None were noted or visibly foreseeable.

12. Were you aware of any human factors concerns with Captain LeBeau?

No, (b) (6) she was excited to fly that day. She handles stress extremely well.

13.

(b) (6)

14.

(b) (6)

15. Did Captain LeBeau make any comments to you about Major Lewis's or her own participation in the air show? If so, what were they.

She did not fly in the airshow. She as in charge of setting up and selling 363 merchandise.

16. Did Captain LeBeau make any statements to you in the days prior to the mishap that gave you concern about safety of flight operations?

No

17. Is there anything else—whether about the mishap, VMM-363, or in general—you would like to make the Command Investigation team aware of?

This being my first deployment, the high tempo work did not raise any red flags as I did not know what a normal work tempo would look like. It felt like we were flying additional days, not to support events, but to achieve other goals.

# AFFIDAVIT

I, (b) (6), have read or have had read to me this statement which begins on page 1, and ends on page 1. I understand the contents of the entire statement made by me. The statement is true. I have initialed all corrections and have initialed the bottom of each page containing the statement. I have made this statement freely without hope of benefit or reward, without threat of punishment, and without coercion, unlawful influence, or unlawful inducement.

(b) (6)

(Signature) (Statement)

Subscribed and sworn to before me, a person authorized by law to administer oaths, this 27 th day of November 2023.

Witness:

(b) (6)

Printed Name

(b) (6)

(b) (6)

Sworn

Oath

(b) (6)

Printed Name

27 NOV 23

Unit/Organization

LEGAL OFFICER

Authority to Administer Oaths





MARINE MEDIUM TILTROTOR SQUADRON 363 (REINFORCED)  
MARINE ROTATIONAL FORCE-DARWIN 23.3  
UNIT 89012  
FPO AP 96610-1200



SUNDAY, 27 AUGUST 2023

JULIAN: 23238

GENERAL NOTES										FLIGHT NOTES										RANGE NOTES										CONFIGURATION NOTES									
1. ALL CURRENT AND QUALIFIED H-1 PILOTS AUTHORIZED TO TEST. FCS AUTHORIZED ADDITIONAL CREW MEMBERS. MANIFEST WITH ODO. FCS TO ATTEND MAINTENANCE MEETING IF CREW DAY PERMITS.										1. PAX AUTHORIZED; MANIFEST WITH ODO. FCS: 3301 SMOLINSKI.										1. 0830-0900 INGRESS / 0900-0955 TOS (0920 L HOUR) / 1025-1040 PITS / 1120-1200 TOS / 1240-1255 PITS / 1325-1405 TOS / 1445 Y1 H/S AT PITS.										1. CONFIGURE WITH 1 = CATIA-124 PER AIRCRAFT.									
2. ALL H-1 ALERTS: JTAAR 01237001 / Y1/Y1 FAC POC: CAPT GARDNER. ODO TO MONITOR TRANSVERSE CHAT AND COORDINATE WITH PRED RUN LNO.										2. EPLA/LBRIE TO OCCUR NIGHT PRIOR.										2. 0925-1015 INGRESS / 1015-1055 TOS / 1135-1150 PITS / 1230-1310 TOS / 1350 Z2 H/S AT PITS, Y2 S/D SHAKE FARM.										2. CONFIGURE WITH MUOS, SIPR MAGTAB, RAFT, 1 = ICS CRANIAL & LPU. PROVIDE ODO WITH MUOS & SIPR MAGTAB.									
3. HLT 500 AGA FOR SONAL.										3. HLT 500 AGA FOR SONAL.										3. 1310-1405 TOS / 1445 Y1 H/S AT PITS.										3. 1 = ICS CRANIAL & LPU. PROVIDE ODO WITH MUOS & SIPR MAGTAB.									
4. SECTION TO MAINTAIN 90 MIN RESPONSE TIME FROM OBJECTIVE.										4. SECTION TO MAINTAIN 90 MIN RESPONSE TIME FROM OBJECTIVE.										4. 1230-1310 TOS / 1350 Z2 H/S AT PITS, Y2 S/D SHAKE FARM.										4. 1 = ICS CRANIAL & LPU. PROVIDE ODO WITH MUOS & SIPR MAGTAB.									

START	END	SUBJECT	LOCATION	POC	PERSONNEL	NOTES
0800	0815	TOD WALK	FLIGHTLINE	MAJ BEGAB	AVAILABLE PERSONNEL	
1200	1215	MAINTENANCE MEETING	MAINTENANCE CONTROL	MAJ BEGAB	DESIGNATED PERSONNEL	
0000*	0015*	MAINTENANCE MEETING	MAINTENANCE CONTROL	MAJ BEGAB	DESIGNATED PERSONNEL	

QUESTIONS OF THE DAY

MY-22 NATOPS

Q: THE \_\_\_\_\_ MOUNTED ON THE MWGB RIGHT SIDE, ENABLES GROUND OPERATION OF THE AIRCRAFT ELECTRICAL, PNEUMATIC, AND HYDRAULIC SYSTEMS.  
A: APU REF: NATOPS 2.10 (PG. 2-167)

MY-22 EP

Q: AVIONICS BAY HOT  
A: E2-3-5 (CAUT)  
1) APLN - TRANSITION  
IF CAUTION FAILS TO CLEAR:  
2) LAND AS SOON AS PRACTICAL

TACTICS

Q: A SECURE LZ ON ROOFTOP IS THE FASTEST AND MOST PREFERRED METHOD OF \_\_\_\_\_.  
A: EXTRACTION/EGRESS REF: ANMTP 8.3.5.6 (PG. 8-7)

OPS \_\_\_\_\_ /CSJ \_\_\_\_\_ MAINT \_\_\_\_\_ /BJ \_\_\_\_\_ DOSS \_\_\_\_\_ /NAG \_\_\_\_\_

CO. *[Signature]*  
MAJ BEGAB  
ACTING



(b) (6)

**(Yes, No) Block for Det Requirements**

Est Depart Date \_\_\_\_\_ Est Rtn Date \_\_\_\_\_ HighTimes( ), CADs( ), Sched Inspections( ),

**Daily Maint. Record Turnaround Record**

Print After Signed off by Crew Chief and MC and insert in ADB - PRINT - needs TA, fuel samples

**Verify Oil Consumption Log**

Ensure last flight logged and proper oil consumption calculated for each engine.

**Fuel Log & Fuel Qty** 11.0 / needs fuel samples

Ensure Fuel Log in ADB has current passing samples annotated within 24 hours of aircraft's initial launch time

Check the Flight Schedule for FUEL qty and check the White Board for Fuel qty. Call Fuel Farm 257-2707.

**Schedule Inspection Report**

Click Aircraft VED, Right Click, Reports, Scheduled Inspections, Choose your MODEX, Change end start date to minus (-1) year

Change the End date (+3) years, click OK. Click on SORT (A/Z), Drag everything from the Sort Column (right to left), Then

move/organize from left to right by "Interval Type, Interval, Assembly Cd, Task Name," Click OK. - PRINT

**Screen Component Removal Due**

Click Configuration Management/Logs &amp; Records (CM) Reports, Click CM Reports, Click Component Removal Due, Select

Aircraft BUNO, Click Submit, Click Save File, Save as type: CSV, Save with Headers. Open in Excel - Print

All components on this list will not expire during this flight.

**Screen Open and Closed MAFs in AADB**

Verify correct EOC Code per MESM and for correct Job Status

Screen for PMC discrepancies &amp; CDI In-Processes according to flight schedule mission requirements.

Verify all downing discrepancies and flight safety Quality Assurance inspections are signed off

Verify no open Corrosion discrepancy past 28 Days of initiation. If there is now a downer and be assigned a "Z" EOC Code

Click Aircraft VED, Right Click, Reports, Aircraft/Equipment Workload - PRINT

Click Aircraft VED, Left Click, Select 1<sup>st</sup> MAF then scroll down Select Shift & Left Click, Print, Select QAR/CDI in Process, PRINT**CHECK LAST FLIGHT STATUS**

Click Aircraft VED, right click AADB, Last 10 "A" Sheets - PRINT.

Click on Flight (airplane), Reports, Aircraft Flight, select Aircraft and change start date (Use above oldest Date) last 10 flights  
PRINT

Verify Flight Hour accuracy by bouncing Last 10 "A" Sheets against the OOMA Flight Summary report

Ensure there was a 30 day no fly cut if the A/C did not fly for 30 days.

**Screen Installed Explosive Device Report**

Click Configuration Management/Logs &amp; Records (CM) Reports, Click CM Reports, Click Installed Explosives, Select Aircraft

BUNO, Click Submit - PRINT.

**Outstanding TD Report**

Click Configuration Management/Logs &amp; Records (CM) Reports, Click CM Reports, Click Outstanding Technical Directives,

Select BUNO only, Click submit - PRINT.

Ensure TD's are not overdue for incorporation. Bounce with Work Load Report (Do Not go with Target Completion Date)

All Maintenance Level 1 TD's must be assigned an MCN

**SCREEN DAILY AIRCREW FLIGHT GEAR REPORT**

Ensure all A/C personnel flight gear is up to date.

**Weight & Balance**

Get the Basic Weight off the Form F in the front of ADB and compare this weight with what's on the top of the AADB in OOMA.

The weights need to match. Date signed must be less than 180 days

**Update Aircraft Limitations**

Click VED, Right Click AADB, Click Aircraft Limitations, add all PMC Discrepancies with corresponding EOC Code

**Tool Report**

Click Ad Hoc Query - Verify all toolboxes have been CDI'ed

**W/O STATUS UPDATE**

Click VED, Click Mass Job Status, Click Update, Click drop down for Job Status From and select M3, Click drop down for Job

Status to and select M7, Click drop down for BUNO and select correct BUNO, Click O.K.

**FCF ONLY**

QA gives FCF brief with Maintenance Controller, Pilot and One Rep. from each W/C (as required).

**A-Sheet (ADB)**

Print after Crew Chief / Maintenance Control / Pilot in Command signs Part A (Use Print Screen) and insert in ADB. - PRINT

**AADB Summary Back up**

After A-Sheet is fully signed, Click Aircraft VED, Right Click, Click AADB, SUMMARY, Go-to-Print, Select "Microsoft Print to PDF", Change to YYYYMMDD SFF, save in Share Drive in MxCtrl / 4. ADB Backups / BUNO.

**Post Flight**

- o Fill out Oil Consumption Record in ADB and Calculate Oil Consumption with download from QA.
- o Update "Timesheet" using NAVFLIR
- o Retain the following documents in the ADB, A-Sheet, Scheduled Inspections, Component Removal Due, SFF Screening Checklist, Previous Timesheet, NAVFLIR, Download Screening Sheet.
- o Change M7's back to M3.

Print Name:

(b) (6)

Date/Time/Sign:

00000000

/ 0643

(b) (6)

Post Flight Name:

Date/Time/Sign:

/ /



**Interview Summary of (b) (6), VMM-363 (REIN)**

IO

All right good afternoon this interview is being conducted on 11th September 2023 at approximately 1305 aboard Royal Australian Air Force Base Darwin with (b) (6) present in the room are myself (b) (6) the Legal Advisor and the Assistant Investigating Officers (b) (6) for (b) (6) and (b) (6) prior to turning on the recording we covered the contents of the appointing order the purpose of a command investigation the differences between the command investigation and the Aviation Mishap Board and the privileged nature of those statements additionally (b) (6) had an opportunity to review a Privacy Act statement which he signed the and that statement advised him of his rights under the Privacy Act (b) (6) anything additional you would like to add?

Witness

I don't have any at this time.

IO

OK at this point I'll ask you to go ahead and raise your right hand do you swear that the testimony you're about to give will be the truth the whole truth and nothing but the truth so help you god?

Witness

Yes Sir.

IO

All right thank you.

IO

So I don't know you so I just do a quick introduction I'm (b) (6) one of the assistant investigating officers for this a little bit about a little bit about my background I've been in the Marine Corps almost 15 years I was an Infantry officer I also flew HO Zulus for several years and then I did a transition conversion to V-22's and 2020 so I've been applying V-22's for about 3 years I was asked to help with really the maintenance side helping with a lot of other areas but that's kind of my focus for this investigation so we'll run through some questions the questions the majority of the questions are going to be with regards to aircraft 15168616 on the day of 27 August 2023 if there's anything that's not applicable to that aircraft I'll let you know I'll say what we're what we're talking about just to ensure that you know we're deviating away from that aircraft and naturalness of it and I'll make sure that you know but for to run through a couple questions some will be general and then some will be pointed so the ones that we'll start out with are little more pointed questions OK.

Witness

Yes Sir.

IO

Can you tell us for aircraft 15 on the morning 27 August 2023, who who preflighted that aircraft?

Witness

Who preflighted as far as walking out would have been the crew chief to my knowledge.

IO

Who was that?

Witness

That was Corporal Collart.

IO

OK Corporal Collart conducted preflight on that aircraft?

Witness

Yes, he got it up to step 19.

IO

OK and what can you tell us what that means?

Witness

They go through the PCL and they go through the checklist step one all the way to we say step 19 but essentially it's 18 because 19 is I believe engines so they can't do that so we just tell them guys step 19 they call the radio say it's ready and or the crew is already headed out there just kind of wait to get all the checks I don't know the specific checks from the PCL but.

IO

yeah so that was speculation earlier for step 19.

Witness

Oh my apologies.

IO

That's good do you can you help us know so Collart was the plane captain for the aircraft who did the preflight is is that plane captain qualification required to go out there to to preflight and get up to step 19?

Witness

Yes Sir unless you're under the direct a trainee under direct supervision of a qualified plane captain.

IO

OK copy was Collart the one who did the turn around on this aircraft?

Witness

I I'd have to check the documents I don't off the top of my head Sir.

IO

OK was Callard the one who did the daily on this on this aircraft?

Witness

I did not know the answer though that's correct.

IO

When you guys do preflights on aircraft so separate from the daily and the turn around but the actual preflight itself is there anything that you guys use to document that the preflight was completed?

Witness

To my knowledge no Sir.

IO

OK who's safed aircraft 15?

Witness

I did Sir.

IO

When did you receive your Sabre Flight qualification and and I know I know your history goes a ways back

Witness

For for this command about maybe two weeks ago Sir.

IO

Two weeks from today.

Witness

Yes about there about Sir yes.

IO

How many aircraft had you preflighted I'm sorry how many aircraft had you safed before this aircraft



Witness

For this command this was my first one Sir.

IO

How about other commands?

Witness

Hundreds.

IO

And for this command did you do any safe for flight training did you run through any other aircraft with somebody else who was a safe for flight can you help us understand what that looks like?

Witness

Yes so I checked into the I guess checked into the unit or the shop 020 commands control kind of went over the amstrip to see what I was required to have since I had already held a V-22 Safe for Flight you know when I was in 165 and it was essentially a refresher course with a lot of required reading and then the test did those passed went under routing and then kind of went up the chain until they notified me it was complete.

IO

There's a external agency that you have to go through in order to get those readings signed up as well correct for safe for flight.

Witness

There is a required course from CNET that you are required to do and mine is complete and that was one of the I believe the first two sign offs in that syllabus are verify have a supervisor verify this course number was complete and then they sign off.

IO

OK can we see your ASM sign offs for safe for flight?

Witness

Yeah absolutely I have no problem with that yes Sir I don't have the here obviously.

IO

Yeah that's OK

Witness

Absolutely.

IO

No doubt I was curious for this yeah can you tell us what the results this is more of a general question but can you tell us what the results do you know I'm asking because you're you're relatively new to the unit what was the result of the last units inspection with the mouse maintenance CNAF inspections.

Witness

Mouse was pretty I'd say pretty decent no at least to my knowledge from the programs I was dealing with at the time I was in flatline just general hits general discrepancies dirty fuel bottles some FOD like inside the grates they hit us on so we made processes to get all that fixed and then wing hit us pretty hard on a few things but those are outside programs so don't know a lot about those ones CNAF now I believe went pretty well with that being said in my opinion I don't really think they look that hard they didn't seem like they did at least for my programs but yeah that one went pretty well we had no failures for that.

IO

Do you know if you failed a reinspection?

Witness

To my knowledge I don't believe we fail I know there might have been a few programs outside of the shop I was in that needed reinspect but as a command we did not fail.

IO

You know that for sure?

Witness

Yes Sir.

IO

OK so getting more specifically the Daily do you remember when the Daily was done on this aircraft?

Witness

No not without seeing the documents Sir it should be in the summary backup.

IO

Do you remember when the turn around was done on the aircraft.

Witness

Morning of.

IO

OK and can you tell us what is the period of time that a daily is good for?

Witness

Daily is good for 72 hours.

IO

What about turn around.

Witness

Only 24 or its first flight?

IO

OK and my understanding was the this was like a little earlier than in the day than normal than like when they normally fly is that right?

Witness

Yes Sir we had an early show because they were leaving earlier than standard.

IO

What time do you guys show that day?

Witness

I believe for myself that was 0530 we got here to start kind of prepping the maintainers to go out, do the turnarounds and finish saving the safing the aircraft.

IO

The individual that did the turn around, you said you didn't remember who that was but do you remember what time they started the turn around.

Witness

Roughly around say about 5:45 we held the meeting at about 5:30 and then to check out care and equipment and go out there.

IO

what was the reason you guys decided to do the turn around that morning?

Witness

We didn't want to risk any delays or because if we it would have been expired Sir honest answer would have been expired.

IO

Oh well if it's good for 24 hours, you guys reasonably could have done that at any point on Sunday and it's still would have been I'm sorry Saturday not Sunday was daily event on Saturday you could have done the day prior and it still would have been good for 24 hour period.

Witness

You are correct.

IO

Yeah so that's kind of what I'm getting at it's like why not the day before?

Witness

From my recollection I know some shops were tasked out with other maintenance and I think it was just decided since we're coming in early anyway just knock it out morning of so it's fresh we got the fresh fuel samples we know it's got a full 24 be ready to go.

IO

OK the turn around in section in the ADB reflects a received to complete time of 8 minutes it was 8 minutes so I'm what I'm trying to figure out is I'm trying to figure out was there enough time from the time that it was assigned to the time that it was signed off to complete the turn around.

Witness

I believe yes.

Witness

The unfortunate part with now Comus Uma is if the daily and turn around are signed and then I go to initiate a new turn around it's going to stamp it on that corner that you're talking about for the time it got generated so do the meeting pass the word go in see that the turnaround is still there blow by use the term blow out or or clear the cards and then that would give that time And then once their turn around is signed and I sign it for the safe for flight signs it stamps it again.

IO

Yeah so you're saying and again this is me just trying to like kind of follow the bouncing ball you're saying that the turnaround was a sign that morning.

Witness

Yes Sir.

IO

You're saying you remember about 0545 but you don't remember who actually went out and did it.

Witness

correct Sir.

IO

And you're saying that that you that the time with which you got in your process to receiving it in UMA even though he had already began working on it was 8 minutes before you signed it off assuming that he came back and said hey the turnaround was complete did he come back from the turn around and say it was complete and that was what was the reminder for you and in either case it's OK I'm just trying to get figure out how this happened did he come back and say I'm complete with the turn around that was a reminder for you to receive the turnaround in UMA and then once you receive the turnaround in Uma 8 minutes later you signed off the turn around that it was completed.

Witness

Not exactly that's close so I kind of because I've been doing this for a little bit I have kind of a process on how I do it so I was making sure after the meeting was done I was kind of going around making sure the other safe for flights were tracking they had all the documents they needed like what masks needed to get updated or fixed before they could finish safing and then I went into the UMA and started clearing out all the aircraft that needed.

IO

All right nice when you do you remember what time you signed in UMA for safe for flight for aircraft 15?

Witness

I do not but on the ADB on the bottom where I signed it I dated and timed it that was maybe 45 seconds to a minute after I had signed the A sheet and then I put that it was safe

IO

on the checklist.

Witness

Yes Sir.

IO

So the time on the checklist was when you signed off and then the safe for flight.

Witness

Yes Sir or around a minute about that time Sir.

IO

OK thank you can you talk to me about the process for in the turnaround they're taking fuel samples how does that how what does that look like what does that process look like for specifically for the fuel samples?

Witness

Specifically for the fuel samples Sir the flat liners will check out all the required PPE personal protective equipment face shield goggles splash proof apron and rubber gloves as well as the fuel sample kit which is all the bottles for each port that needs to be taken out of before they head out to the aircraft they're required to go check the material safety data sheet for any hazards required PPE as well just to make sure they have everything and then in the event they get splashed in their eyes or on their skin the process for how they would clean that up from there once that's done they'll usually head out with the ladder either from the aircraft or checked out from the shop and they'll go with the supervisor or qualified individual to determine if the sample is good put the lid on make sure the sorry I'll go back up they'll make sure the bottles are clean put the lid on with the tube and then they'll put it into the lowest train port about half the bottle and then kind of the vortex and then a supervisor will inspect to make sure there's no contaminants.

IO

OK for the a tap and a path for the safe for flight requirement when do they come and report that to you?

Witness

Usually as soon as they're done Sir it does with maintenance it kind of sometimes gets delayed but for the most part as far as me being here, I've observed it's quite nearly as soon as they're done

IO

How do they annotate it that they're a tap a path complete.

Witness

For the job via the supervisor coming in saying hey we're done with the job we're getting ready to sign off the math we're all good or they'll call over the radio.

15:33

OK can I get any when we follow up after this can I get a copy of that document for signing on the maf that they're a tap a path complete part of the-

Witness

Is there a specific maf you're looking for because it's going to be on every maf and they're unfortunately they're not they're not going to be time stamped it'll just be whatever maf unless you're asking for 15 correct?

IO

Yeah cause what I have is I have the mafs for previous flights open and closed work orders.



Witness  
Yes Sir.

IO  
So if they're in there that's fine I can do that.

Witness  
They will be.

IO  
And I've looked at them all but I haven't looked specifically for that so.

Witness  
it'll be in the corrective action at the very bottom it'll say a taf p taf area corrosion thought free.

IO  
OK thank you.

Witness  
Yes Sir.

IO  
On that morning, can you tell us whether or not Major Lewis was contingency signed on the aircraft or if he came in and signed for the aircraft himself?

Witness  
To my knowledge I believe he used the computer that was behind me maintenance control to sign in.

IO  
So you did see him in Manage Control that morning?

Witness  
I did yes several times actually in the morning.

IO  
And did you know he was reviewing the aircraft?

Witness  
Yes I don't I didn't actually physically see him sign but I know he never asked me to contingency him.

IO  
Thank you.

Witness  
Yes Sir.

IO  
Are you aware of any discrepancies on the form F for Aircraft 15?

Witness  
Any discrepancies I am not for the checklist that we are required to follow when saving we are only required to verify that it is with the signature from the MMCO is within 180 days and that the basic weight on the form F matches what is in that was that was good here was a conversation the MMCO and I did have because the way they do it here is the only command I've seen that does it this way is they put the form F for that flight they'll put it into the ADB however the source document is going to be his aircraft book that has all the form F's and that one that was in the front was not set for the troop transport I did let him know about that and he said he was going to take care of it.

IO

So the one got it the 180 day requirement for the form F can you if you don't know that's fine too but I'm trying to I'm trying to find out what is that 180 day requirement what is the actual 180 day requirement.

Witness

That that I do not know Sir that's definitely for the weight balance manager.

IO

And you guys but you know that because you guys discussed it the 180 days picture that was in there.

Witness

Yes he's the one who that's our heat the MMCO is the one who reviewed the Safe for Flight checklist and made sure before I got in there obviously everything that needed to be on there was on there and that was one of the things that they incorporated to make sure that it was never missed.

IO

And that was after the mishap occurred he was like he was reviewing the Safe for Flight checklist to ensure that everything was completed that was after the mishap occurred that he was reviewing those things.

Witness

No Sir that was well before he even got into maintenance control here

IO

you're saying that was his process before you took over as like a safe for flight that was his process.

Witness

Yes to generate the proper safe for flight checklist and then that was the one after it was approved that I utilized.

IO

OK do you remember what that conversation was around the previous form F that was in the book?

Witness

No just that it needed to be updated.

IO

OK and when did that conversation happen?

Witness

In the morning.

IO

Do you remember when in the morning it happened?

Witness

I I do not I just remember letting the MSO know hey this is not for the.

IO

Do you remember when you let him know that?

Witness

No I don't know Sir.

IO

Before the flight or after the flight.

Witness

Was after was it well after well not necessarily after but it was after they had signed it.

IO

After they had signed.

Witness

Yes the aircraft the pilot.

IO  
OK.

Witness  
Yes.

IO  
Do you remember if before or after the mishap?

Witness  
It was before I believe now I don't know when he swapped it out but I know the conversation did happen before.

IO  
OK who can you tell like who is qualified to do a daily and a turn around like who is that person?

Witness  
Do you want by name.

IO  
No like by Qual like who is allowed to do a daily turn around.

Witness  
Qualified plane captain or a plane captain trainee under the supervision of a qualified plane captain.

IO  
Do you know what qualification (b) (6) has.

Witness  
(b) (6) he, I believe he is a plane captain i can't tell you when it was signed off, though, but I I do believe he is a plane captain.

IO  
Do you remember seeing (b) (6) that morning?

Witness  
No at least not inside maintenance control.

IO  
OK so the person who did the turnaround was (b) (6) per the documentation and you said that the guy that did the turn around came back and reported to you that the turnaround was complete but you don't remember seeing (b) (6) ?

Witness  
No they did not report that to take to my face no it was yeah it was over the radio Sir.

IO  
OK very well could we find out if (b) (6) was present that morning

Witness  
Like you're at work?

IO  
Yeah.

Witness  
Yes you should be able to every morning we have to submit the morning report MOL stating that everyone was here or who's absent.

IO

And is your practice right now to report everybody in since you guys are on deployment for the morning reports?

Witness

No they haven't broken down who's back in the rear it it's not currently right now because we're all days, but usually when we split the day crew night crew they'll annotate these ones are night crew and then they'll submit it that way.

IO

OK so I think you know you get to to know you know what (b) (6) status was were there any recent engine swaps on aircraft 15 that you're aware of

Witness

Engine swaps not that ive ever seen.

IO

OK you know if the Input Pool Actuator Technical Directive was supplied for for aircraft 15 the most recent technical directive for the replacement of the Input Pool.

Witness

For 15 I believe they were both done yesterday.

IO

Technical directives are required to be reviewed prior to safe for flight is that right?

IO

Yes Sir.

IO

High times are required to be reviewed before signed for safe for flight 2.

Witness

Yes Sir.

IO

Aircraft 15 went on a cross country it was down at the air show down at the Gold Coast before that it was in a period of time where it was conducting it was a fairly long period of time for functional check flights.

Witness

Yes Sir.

IO

Do you recall what the what the reason for the functional check flight was for.

Witness

The actual reasoning for the flight I do not know I do know that aircraft was phased and in phase I'd have to go through the documentation but could have been an engine replacement or removal and reinstall prop box I know the input quills they did do and those to require the engine to be dropped which does require an FCF.

IO

Yeah and they did do you do you recall if you don't it's OK I'm just trying to find find out inform Fion so do you recall on the input Quill input Quill actuator replacements for both of them did they do that during phase the phase inspection is that when they conducted that?

Witness

I believe so Sir yes.

IO

Just come back to the form F really quick are you are you aware of what the requirement for a form F is if the aircraft configuration changes and if a flight plan is filed with packs on board?



Witness

As far as the the filling out of the whole form no I know I know kind of where to look for what the weights are for gear equipment like those estimates and where the basic weight is but as far as how they generate that information I do I do not know.

IO

OK so yeah a different question when you're reviewing the form F for your safe flight check what do you look at?

Witness

Well you go off of what's on the checklist Sir and it just says verify the signatures within 180 days and the basic weight matches.

IO

Yeah so and you said you did you weren't sure what the 180 days was for

Witness

at least as far as where the source documentation generates that number.

IO

Yeah OK so there's the two things you look for what is required from the pilot on that form F do you recall

Witness

From the pilot no I do not Sir.

IO

OK that's good just trying to just trying to understand for the mishap following the mishap can you describe what happened following the mishap who took charge and can you tell us what maintenance was required to do as soon as the notification occurred?

Witness

As far as the maintenance there was there was really nothing required my hands on anyway so I would say I don't know about what time has happened but I was just kind of you know getting updates on maintenance and I believe it was the ASO came in and said I there's been an incident we need to start getting and it kind of gave a little checklist we need to kind of start getting these things ready I was like roger that and then as time kind of progressed I'd say about an hour was going by they were getting information and then they let us know it was a crash so from that point we got the ERT team together started getting all the gear and equipment ready in case we were ready to go and then make its data started doing their checklist grabbed the ADBFCF books and then hand them over and then they locked them up as well immediately I have a certain if I believe.

IO

What about the hard documents how did you guys lock down the hard documents so the log books logs and records ADB all of the all the physical records how did those things lock down?

Witness

We gather them all together and we specifically hand them to maintenance admin It goes into their work center if you walk into maintenance admin there's kind of like a wood thing it has all their aircraft books they had a spot that was 415 and then that's where we put all the and then they-

IO

Including the ADB?

Witness

Yes Sir and then they had just I guess Marine's keeping an eye on it because I know if anyone wanted to go in there and was asking questions about what he wanted what he needed and anything like that.

IO

What time did that happen?

Witness

I would have to say maybe around 1100 ish to my rainy way over time I don't think that's like a set of time but around that time.

IO

OK all right copy let's see

IO

Sorry.

Witness

Yes Sir.

IO

So there's it sounds like you're saying there's a bookshelf in there for all the aircraft books right?

Witness

Yes Sir.

IO

And they put the aircraft 15 books back on the shelf with all the other ones.

Witness

No so the way it's set up is maintenance control has their own aircraft data book which is set up with fuel samples a plethora of things and that's the one we use to kind of let the pilot screen then they go into Nakoma zoom and screen that and then maintenance admin or maintenance data I'm sorry they have the aircraft record books so every component all the high times and all that that's where those were and then we took ours handed it to them and then they

IO

So you turned yours in [inaudible]

Witness

Yes per their checklist it was lock AB and then lock.

IO

And then you said they had Marine on it.

Witness

They didn't have necessarily one like standing guard but from my recollection the only person that was leaving maintenance admin at the time or maintenance admin at the time was Sgt [inaudible] to making sure that checklist is done not everyone else stayed in their shop.

IO

Who's supervising the events that were occurring that you're describing now.

Witness

Supervising I know it was kind of a team effort as far as the ASO I know I'm not sure if they were the Assistant Safety Officer but sorry I just brain dumped what was called the ODL those two were running around a lot trying to get data and information and get everything kind of where it needs to go.

IO

Did you physically see the ODO?

Witness

Yes multiple times.

IO

You did.

Witness  
Yes Sir.

IO  
So you run back and forth from the duty desk.

Witness  
Yes I believe the ASO was kind of in charge of the whole thing but as far as I know the ODO was coming over like hey these are the things we need to hand over to the investigation team when can we get these and then we'd have to that's where more demands happen.

IO  
Where were you that morning so what time do you recall being notified of the mishap.

Witness  
8:45-ish maybe 9 but there wasn't an official like hey there's been an incident it's like hey something happened and that was pretty much it then about an hour after that they're like yes there was an impact.

IO  
Do you know what time they're supposed to take off that day?

Witness  
Not off the top of my head no sorry Sir.

IO  
So where were you physically located?

Witness  
Inside Beta's control at the desk.

IO  
And for the entire duration of evolution that's where you were.

Witness  
Yes Sir within the building I was inside QA and inside we're talking to man's dad just to make sure we had everything we needed to give up but I was within the building.

IO  
Just due to the nature of like the size of this flight right pretty large flight who did you perceive as being in charge here on deck.

Witness  
As far as in charge of the flight or in charge of.

IO  
In charge of the unit who's in charge of the unit?

Witness  
To me it was the XO Major Lewis.

IO  
And then once you found out he was part of the mishap then who did you perceive as being in charge?

Witness  
(b) (6) .

IO

OK so these some of these are actually one more final question so on the safe for flight checklist that you use I noticed that there's a couple highlights there's like highlighted lines well can you explain to me why the why the highlights?

Witness

Yeah so I was planning on saving it the day prior started the process and then they told me hey we're going to do the turn arounds tomorrow so I was like oh well we can't finish so I highlighted those ones just kind of like a reminder to myself and then the following morning I came back just re verified nothing new was cut nothing none of the hours changed and then inspected those items.

IO

Can you so these are more general questions I'm just curious about the can you tell us your perception of the command culture so this you know you don't have to keep it as narrow of scope as just 363 if you want you can broaden the scope of that question but generally speaking like what would you say the culture of you know 363 is what would you say the culture of H1 dead is And then if you want to expand to what you think the culture of the greater MRF-D you know construct that would be interesting too.

Witness

I think for 363 proper I think our so we got a very good family I guess oriented kind of way of doing business one thing I have noticed from coming from 165 over to here the Marines are very no nonsense when it comes to maintenance so if qual comes in and says hey this is bad we start kind of asking a follow up questions that are limits what are the limits they're usually pretty on point with that a few things that are out of the normal they'll they'll have to go look up but for the most part from what I see pretty pretty solid pride of the work I can't really speak too much for the H1's just from seeing them around they seem like they're all right I haven't had a whole lot of interactions with any of them other than their Master Sergeant kind of comes in to check out stuff and then I'd say MRF-D as a whole I think I think it's gotten better I think the whole probably from when we first got here till now it's a little it was a little rocky starting because when we first got here everyone was Tier 3 Liberty so no going out in town no leaving base no drinking alcohol and then slowly those got peeled back as people were not getting in trouble we finally got over to Tier 1 so you could leave drink leave the CO changed the drinking age to the legal limit here so I believe 18 on base only though not town drinking and then during that process some of the other elements that were here were causing problems making issues for NJP that kind of the outlook I guess on what they saw us as it was Americans was probably not in the greatest light but we were trying to do what we could do you know, show that everyone's on that bad and I think we're definitely in a better spot now especially with all the support they've been giving us.

IO

Can you same question just about the safety culture can you help us understand the safety culture for maintenance.

Witness

Oh yes Sir safety is always I don't want to sound cliché but it's pretty it's paramount the Marines know that there are times here and there when I'll drop a screw drop something you know standard human dexterity in their hands but Marines are very good about making sure they're following the steps at least to my knowledge anyway that they're following the procedures properly and if something does come up they're usually really good about it and this doesn't look right I have a few examples of Marines getting some awards because aircraft were spinning and getting ready to launch and they were like that doesn't look right stop the aircraft we need to we need to investigate and then it turned out the harness kind of broke loose and we were able to fix it so say for the most part, everyone's safety conscious QA is always available it's not necessarily their homework center but throughout the day usually the Staff Sergeants walking the line making sure everyone's you know wearing the cranial, not trying to use the chalks as a latter or anything like that.

IO

Would you say there's any ending pressure to execute operations no matter what or pressure to sign off the aircraft maintenance action forms no matter what?

Witness

I don't want to say that there's none but there's no pressure I think the Marines put the pressure on themselves. I'm not sure if you gentlemen have been around for when they talk or like with the CO or the AMO or the talk but they always say stuff like if we have a big mission or something's going on you know you know we're not worried about it we know you guys will get it done right but I think maybe that more on the the junior Marine

level might play an impact but as far as the supervisors go I know they're pretty low headed and this might be the mission and then they'll just this is what the pub says to do and if they make it they make it if they don't then better luck tomorrow.

IO

I think that's all the questions that I have for you.

Witness

And then just for my own knowledge when we get done here would you like goal for my ASM for my safe for flight I can open up the entire syllabus so you can see all the requirements and then also the rally or it shows reviewed and signed basically.

IO

Yes please can you just print those off so that I can have them?

Witness

Absolutely yes I can Sir I just want to make sure I print the right stuff for you.

IO

Thank you I appreciate that..

IO

I I do have just one kind of broad jump of questions anything you observed on the day in the mishap that didn't seem right or didn't seem quite impointing or was questionable or anybody specific you think we should talk to other witnesses wise?

Witness

Not to my not to my knowledge I didn't get to see all the maintainers I saw the pilots and then Corporal Collar they seemed like they were a good spirits excited at least Collar was very excited that's one conversation ill never forget.

IO

[inaudible] yeah when you saw Major [inaudible] was that one he seemed normal everything seemed normal.

Witness

Yeah focused I would say yeah.

IO

Is he tired or anything like that.

Witness

I didn't I didn't notice any fatigue he wasn't really I wouldn't say he was really chatty I was more focused he walked in you know said some things and then went to the AMO in that area and then got a computer and left

IO

anybody else specific you think we should talk to either within maintenance control or.

Witness

No I think I think you have the MMCO is he on the he was he would be the one for the way in balance he'll be able to tell you all about how those are generated no I think that's it.

IO

OK.

IO

When were things kind of last morning as we wrapped these things, it's not because I think anything, it's just I tell all the witnesses you're advised that this is an ongoing investigation you're directing not to discuss your testimony with anybody else aside from that a duly appointed investigation right?



Witness

Yes Sir one of you three gentlemen.

IO

So one of us the A and BS ongoing you know there's a couple of investigations you're obviously welcome to speak with any of that but you know if you go back to the shop there's no reason to discuss your testimony of the questions we've asked.

Witness

Yes Sir.

IO

OK any questions about anything.

Witness

Anything else you need from me.

26 AUG 23

(b) (6)

FIELD CO  
OPSO  
ODD

0700 I, (b) (6) HAVE ASSUMED THE DUTIES AND RESPONSIBILITIES OF VMM-365 ODD. I HAVE IN MY POSSESSION (1) PEBBLES, ~~6~~<sup>50</sup> (3) NAV BAGS, (7) SHOOT HANDS, (6) BATTERIES, AND (1) IRIDIUM PHONE.

(b) (6)

0942 DE 91/92 OS

1115 DE 91/92 CREW SWAP

1136 DE 92 PITS

1204 DE 92 PITS TO SNAKE FARM

1209 DE 91 PITS

1216 DE 91 O/B

1234 DE 92 O/B

1300 I, (b) (6) HAVE BEEN PROPERLY RELIEVED BY (b) (6)

1405 DE 92 SOP

1414 DE 91 SOP

NA

NA

(b) (6)

Enclosure (102)

27 AUG 75

CO

ORSO

ORD

(b) (6)

0830 I, (b) (6), HAVE ASSUMED THE DUTIES AND RESPONSIBILITIES OF VMM-363 (RED)  
000. I HAVE IN MY POSSESSION (8) PERICLES, (3) NAVRAGS, (7) SHOOT NAVOS, (6)  
BATTERIES, AND (1) ILLUMIN PHONE (b) (6)

0831 DE33 DB

0858 DE34 DB

0915 DK11 FLIGHT DB

0930 DE33 CONTACT CNO SAY DK11 WENT DOWN IN 52LGM02918 27163  
WITH A FIRE, PERSONNEL EVALUATING.

1010 DE29 ON DECK, FUEL PITS

1027 DE29 O/B

1044 DE 33 PITS

1100 DK11 CO-UPPERABLE FLUING PROCEEDING TO PZ

1107 PE 53 O/B TO PZ

1120 DK11 SHORT FINAL

1131 DK11 TAKE FRT TO SWAKE FARM

1146 DE34 DB

1150 LONESTAR 1 MJS DUNLEY ON BOARD DE34

1151 DE34 O/B W/ LONESTAR 1

1215 DE33 @ 08T FUEL

1252 DE30 PITS

1316 DE29 PITS

1322 DE2-2 LINE S/D

1347 ALL H-35 RECALLED

1411 DE 30 10MMWT FOR LINE. DE29 REPOSITIONING TO LINE.

1414 DE 33 PITS.

1419 DE 30 PITS.



(b) (6)

1425 DE 34 10 MIN out.

1433 DE 33 TAXIING FROM PITS TO SNAKE FARM TO S/D.

1437 DE 34 PITS.

1447 DE 29 + 30 REPOSITIONING FROM PITS TO SNAKE FARM.

1451 DE 34 REPOSITIONING FROM PITS TO SNAKE FARM.

1455 DE 34 SOD SNAKE FARM.

1527 FLIGHT OPS COMPLETE

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

# NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
Page: 1 of 51

Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

## AIRCRAFT INSPECTIONS AND ACCEPTANCE RECORD

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	2000	JP8	9500	(b) (6)	(b) (6)	MAJ T LEWIS	27 AUG 2023 0809

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT / 23699 LH 0 OZ RH 15 OZ  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	1800	ETA	11200	(b) (6)	(b) (6)	(b) (6)	21 AUG 2023 0800

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT / 23699 LH 0 OZ RH 15 OZ  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	1800	ETA	11200	(b) (6)	(b) (6)	MAJ T LEWIS	19 AUG 2023 1000

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT / 23699 LH 33 OZ RH 32 OZ  
Equipment:



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

# NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
Page: 2 of 51

Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

## AIRCRAFT INSPECTIONS AND ACCEPTANCE RECORD

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	2000	JP8	6500	(b) (6)	(b) (6)	(b) (6)	16 AUG 2023 0655

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT / 23699 LH 0 OZ RH 0 OZ  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	2000	JP8	11200	(b) (6)	(b) (6)	MAJ T LEWIS	08 AUG 2023 0902

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT 23699// LH 0 OZ RH 29 OZ  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
YES	1900	JP8	11200		(b) (6)	(b) (6)	07 AUG 2023 1905

Ordinance: HOTSEAT

Special HOTSEAT  
Equipment:

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

# NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
Page: 3 of 51

Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

## AIRCRAFT INSPECTIONS AND ACCEPTANCE RECORD

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
YES	1900	JP8	11200		MAJ T LEWIS	(b) (6)	07 AUG 2023 1455

Ordinance: HOTSEAT

Special HOTSEAT  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	1900	JP8	11200	(b) (6)	(b) (6)	MAJ T LEWIS	07 AUG 2023 1019

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT 23699// LH 17 OZ RH 29 OZ  
Equipment:

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	1800	JP8	11200	CPL S COLLART	(b) (6)	(b) (6)	01 AUG 2023 1642

Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)

Special LIFERAFT / 23699 LH 0 OZ RH 0 OZ  
Equipment:

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

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AIRCRAFT INSPECTIONS AND ACCEPTANCE RECORD

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	2000	JP8	11200	(b) (6)	(b) (6)	(b) (6)	22 JUL 2023 1100
Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)							
Special LIFERAFT / 23699 LH 0 OZ RH 0 OZ Equipment:							

Hot Seat Indicator	Oxygen Quantity	Fuel Grade	Fuel Quantity	Captain Signature	Safety Signature	Pilot Signature	Signature Date
NO	2000	JP8	11200	(b) (6)	(b) (6)	(b) (6)	21 JUL 2023 1102
Ordinance: NO AAE OR ORDNANCE INSTALLED AT THIS TIME POC (b) (6)							
Special LIFERAFT/ 23699 LH 0 OZ RH 15 OZ Equipment:							

ENGINE/AUXILIARY POWER UNIT/PROPELLER DATA

ENG/APU/PROP	Description	Serno	TSN	TSO	Usage Parm
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	2199.000		AFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	2199.000		EFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		EOC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		EPC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		FOC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		HCC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		HSC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		IPC

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

# NALCOMIS OMA AADB SUMMARY REPORT

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Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

ENGINE/AUXILIARY POWER UNIT/PROPELLER DATA					
ENG/APU/PROP	Description	Serno	TSN	TSO	Usage Parm
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		MPC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		OCC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		RNT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		SGC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		SRC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		STC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		STT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		TERT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		PBH_AFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	0.000		PBH_ERT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130132 (LH)	CAE130132	499.010		LIFE_AFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	1796.900		AFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	1796.900		EFH
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		EOC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		EPC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		FOC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		HCC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		HSC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		IPC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		MPC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		OCC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		RNT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		SGC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		SRC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		STC
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		STT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		TERT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		PBH_AFH

FOR OFFICIAL USE ONLY

Enclosure (103)

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
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ENGINE/AUXILIARY POWER UNIT/PROPELLER DATA					
ENG/APU/PROP	Description	Serno	TSN	TSO	Usage Parm
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	0.000		PBH_ERT
ENG	ENGINE, AIRCRAFT TURBINE - CAE130379 (RH)	CAE130379	639.288		LIFE_AFH
APU	AUXILIARY POWER UNIT - SP-E149462	SP-E149462	3.900		AFH
APU	AUXILIARY POWER UNIT - SP-E149462	SP-E149462	5073.000		AOS
APU	AUXILIARY POWER UNIT - SP-E149462	SP-E149462	1617.000		AOT
APU	AUXILIARY POWER UNIT - SP-E149462	SP-E149462	0.000		EFH

NEAR DUE REMOVAL DATA										
End Item			Interval		Remaining	Driver			Deviation	
<u>Buno/Serno</u>	<u>Serno</u>	<u>Part</u>	<u>Code</u>	<u>When Due</u>	<u>Interval</u>	<u>Remaining Interval</u>	<u>Overdue?</u>	<u>TSN</u>	<u>TSO</u>	<u>Indicator</u>
168616	BH310465	SWASHPLATE ASSY - BH310465 (LH)	AFH	30000.000	28520.500	2620.500	N	1479.500		N

OPEN WORK ORDERS				
MCN	JCN	Work Center	U/D/P	Type WO
198GJLC	GC4187176	120	U	DF

Discrepancy:  
ORIGINAL: 1MPO32Q. ORIGINAL: 2X3Z6UP. ORIGINAL: 1P1PLL5. LEFT CONVERSION ACTUATOR ELECTRICAL LEAD BROKEN



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GRTL	GC4342208	200	U	DF

Discrepancy:  
RH NACELLE CENTER BEAM GROUNDING STRAP IS STAPPED AT END CONNECTED TO CENTER BEAM AT FS 357.

198GVZV	GC4073403	120	U	DF
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Discrepancy:  
CARGO DOOR SEAL BROKEN

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GY5N	GC4140138	310	U	DF

Discrepancy:  
APU STARTER MOTOR GROUNDING WIRE CUT

198GZOF	GC4163475	310	U	DF
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Discrepancy:  
RAMP CARGO HOIST GUIDE RAIL PANEL BROKEN WITH 3 SCREW HEADS SHEARED OFF. PANEL DISCARD IN F/L

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H10H	GC4194069	120	U	DF

Discrepancy:  
LOWER CREW DOOR FORWARD CABLE FRAYED

198H20S	GC4219446	120	U	DF
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Discrepancy:  
RH SPONSON STEP FWD CABLE FRAYED

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H20T	GC4219448	310	U	DF

Discrepancy:  
RH DRIVE TUBE HAS SURFACE DAMAGE MEASURED AT 0.004 INCHES. REPLACE DRIVE TUBE AT NEXT HUB REMOVAL. POC (b) (6)

198H2GB	GC4227310	12C	U	DF
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Discrepancy:  
6RB2 HAS WORN SKYFLEX.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

## NALCOMIS OMA AADB SUMMARY REPORT

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Basic Weight: 36689  
Airframe Hours: 1846.200  
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### OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GJK4	GC4187166	200	P	DM

#### Discrepancy:

ORIGINAL: 1MPO31F. ORIGINAL: 2X3Z6TB. ORIGINAL: 1P1PIFO. ORIGINAL: 2X3YUK2. ORIGINAL: 1P1PCRK. ORIGINAL: 29Z5FKP. ORIGINAL: 2X3YG3S. ORIGINAL: 2X3Y3YD. ORIGINAL: 4EB1NB5. ORIGINAL: 1MPMMM7. ORIGINAL: 2X3XRXY. ORIGINAL: 1MPMJ79.  
\*\* \*LH NIPCU F(P) INDICA TION POSTS CAUSING AL H ENG IPS FAIL WITHA N ASSOCIATED L ENG F AIL ON CAUTION AND C/ MI INDICATION OF L AL L ENG IPS INOP.\*\*\*LH HUB DAMPENER TERMINALS TORN

-L/R PRTR IPS FAILS ORIGINAL MCN 1MP O32A POSTS WITH L WHITE BLADE AND R GR EEN BLADE TEMP SENSORS.

198GJK6	GC4187168	200	U	DM
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#### Discrepancy:

ORIGINAL: 1MPO31H. ORIGINAL: 2X3Z6TD. ORIGINAL: 1P1PIFR. ORIGINAL: 2X3YUK5. ORIGINAL: 1P1PCRN. ORIGINAL: 29Z5FKU. ORIGINAL: 2X3YG3X. ORIGINAL: 2X3Y3YI. ORIGINAL: 4EB1NBA. ORIGINAL: 1MPMR3K. L TORQUE SENSOR 2 F(P)



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GJL0	GC4187170	120	P	DM

Discrepancy:  
WHILE IN FULL STOW BOTH STOW SWITHES READ NO ON THE GLASS CAUSING RED HALT AC WING WILL LOCK AND CONTINUE READING NO.  
\*\*\*AIRCRAFT HAS THE ABILITY FULL STOW, WILL REQUIRE QA TO PUT AIRCRAFT IN FULL STOW.\*\*\*

198GJLD GC4187177 200 P DM

Discrepancy:  
ORIGINAL: 1MPO32U. ORIGINAL: 2X3Z6UT. ORIGINAL: 1P1PMTD. HYD 3 HEAT CONT FAIL WITH ASSOCIATED L UTIL THERMAL CONTR VALVE F(P).

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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Airframe Hours: 1846.200  
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Next Phase: 165.400 Hours

OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GJLG	GC4187180	200	U	DM

Discrepancy:  
ORIGINAL: 1MPO336. ORIGINAL: 2X3ZEY0. FOUND CLAMP ON W130 BROKEN. APAF. CLAMP IS REMOVED AND DISCARDED IN AVIONICS. WILL NOT HINDER FLIGHT OPERATIONS

198GM3E	GC4236063	310	U	DM
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Discrepancy:  
LH INBOARD NACELLE FPMU DRAIN LINE SNAPPED

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GNGY	GC4264294	130	U	DM

Discrepancy:  
NIGHT HUD LENS ASSEMBLY FOUND WORN.

198GNH6	GC4264299	130	U	DM
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Discrepancy:  
CAN NOT VERIFY PIS OR EXPIRATION DATE. FORWARD FWD PENDANT S/N: 350 TO MALS FOR REPAIR.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GS4W	GC4350528	200	P	DM

Discrepancy:  
BFWS - BFCU 2 F(P) 6 TIMES DURING FLIGHT FOUND ON THE MAINTENANCE SUMMARY \*\*\*ONLY POSTS IN FLIGHT, DOES NOT HINDER BFWS OPERATIONS\*\*\*

198GSPV      GC4364524      200      U      DM

Discrepancy:  
ENGINE TORQUE SPLIT >5% NOTED AT 100% NR.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GXHR	GC4129076	120	U	DM

Discrepancy:  
AVI BAY FILTER BOX MOUNTING NUTPLATES HAS (2) BROKEN AND (2) FREE SPINNING AND RECESSED INTO FRAME AT FS 309.00 UNDER CABIN FLOOR CENTERLINE. BOLTS REMOVED AND BAGGED AND TAGGED IN FLIGHTLINE. NUTPLATES REMOVED AND DISCARDED IN FLIGHTLINE

198GXVT	GC4135467	310	U	DM
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Discrepancy:  
LONG CORD DOES NOT TRANSMIT 310-LC09



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GY67	GC4141148	200	U	DM

**Discrepancy:**  
RIGHT HAND GREEN TIP LIGHTS WORK ON ALL MODES. HOWEVER, WHEN NORM IS SELECTED FOR THE BOTTOM THE TOP WILL TURN ON IN NVG AND VICE VERSA. WHEN NVG IS SELECTED FOR THE BOTTOM THE TOP WILL TURN ON IN NORM AND VISE VERSA.

198GZRM GC4165569 200 P DM

**Discrepancy:**  
LEFT AND RIGHT FLIR VIDEO INOP ADVISORY POSTS. ONLY POSTS WHEN USING FOV SWITCH. WILL NOT HINDER FLIGHT OPS, WORKS AS ADVERTISED.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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Basic Weight: 36689  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GZZF	GC4171192	120	U	DM

Discrepancy:  
DISCOVERED CRACK ON HOIST OPERATOR LIGHT LENS.

198H0G2	GC4180096	120	U	DM
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Discrepancy:  
CLAMP A BRACKET FOR THE RH COANDA UNDER PANEL 6R17 BETWEEN NACELLE STATION 416-427 BROKE OFF. APAF IN AF. WILL NOT HINDER FLIGHT OPS.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H0TH	GC4188465	12C	U	DM

Discrepancy:  
FUSELAGE NON-SKID WORN

198H0TI	GC4188467	12C	U	DM
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Discrepancy:  
CBAIN NON-SKID WORN

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H0W7	GC4192550	310	U	DM

Discrepancy:  
ROTOR BRAKE SEAL DRAIN TUBE BROKEN, APAF IN FLIGHTLINE

198H102	GC4194057	200	U	DM
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Discrepancy:  
DISCOVERED HARNESS W539 CLAMP 'F' WORN. APAF AND PARTS DISCARDED IN AVI.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS				
MCN	JCN	Work Center	U/D/P	Type WO
198H1HN	GC4202535	200	U	DM
Discrepancy: RH ENGINE FADEC A LANE DIFF WITH WORD 8/8000 MGT				

198H24T GC4220573 200 P DM  
Discrepancy:  
L WHITE BLADE TEMP SENSOR F(P) - FAULT ID 70A5



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H24U	GC4220574	200	P	DM

Discrepancy:  
R RED BLADE TEMP SENSOR F(P)

198H24X	GC4220575	200	P	DM
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Discrepancy:  
L SPINNER TEMP SENSOR F(P) - FAULT ID 70AA

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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OPEN WORK ORDERS				
MCN	JCN	Work Center	U/D/P	Type WO
198H27S	GC4220057	200	U	DM
Discrepancy: L ABCV FADEC A F(P) - FAULT ID 58C4				

198H2BJ      GC4222159      310      U      DM

Discrepancy:  
APU EXHAUST PLUG TORN AND FRAYED

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198H2H2	GC4228325	200	P	DM

Discrepancy:  
RH OUTBOARD MFD DOES NOT WORK IN DAY OR NIGHT MODE, WHEN DISPLAY PROCESSOR 2 (RH) IS POWERSHED ON.

198GOEU    GC4272A06    120    U    PF

Discrepancy:  
LH LOWER CENTER AIR MANAGEMENT BAFFLE AT FS 400.00 HAS RIVET HOLE WORN THROUGH ON OUTBOARD SIDE.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

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Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GJKY	GC4187169	120	U	SF

Discrepancy:  
ORIGINAL: 1MPO329. ORIGINAL: 2X3Z6U5. ORIGINAL: 1P1PIGL. ORIGINAL: 2X3YUL0. ORIGINAL: 1P1PG1C. RIGHT HAND NACELLE UPPER CENTER AIR BAFFLE HAS SMALL CRACK ON INBOARD SIDE.

198GJL6	GC4187172	310	U	SF
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Discrepancy:  
ORIGINAL: 1MPO32K. ORIGINAL: 2X3Z6UI. ORIGINAL: 1P1PKGZ. LH UPPER FUEL SWIVEL GROUNDING STRAP BROKEN

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GJK3	GC4187299	021	U	TD

Discrepancy:  
ORIGINAL: 1MPO31E. ORIGINAL: 2X3Z6TA. ORIGINAL: 1P1PIFN. ORIGINAL: 2X3YUK1. ORIGINAL: 1P1PCRJ. ORIGINAL: 29Z5FKO. ORIGINAL: 2X3YG3R. ORIGINAL: 2X3Y3YC. ORIGINAL: 4EB1NB4. ORIGINAL: 1MPMMM6. ORIGINAL: 2X3XRXX. ORIGINAL: 1MPMJ03. COMPLY WITHINTRM: CODE : 50 BASIC N O: 0239 REV LTR:AM END: PART: KIT NO: 00  
TOR EPLACE THE FORWARD L OOKING INFRARED (FLIR ) SYSTEM ELECTRONIC U NIT (SEU), P/N 901-37 0-361-403, WITH UPGRA DED SEU, P/N 6376300- 113. SEE DEPENDENCY STAT EMENT. COMPLIANCE BY O-LEVEL AND ABOV E IAW PUBLISHEDSCHEDUL E. NO W&B. [B UNO#: 168616]PER SCHED ULE NLT 30 JUN 2024

198GUZF	GC4052551	021	U	TD
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Discrepancy:  
Comply withIntrm: Code: 50 Basic No: 0277 Rev Ltr: Amend: Part: Kit No: A1  
TO UPDATE TROOP SEAT LOCK PINS TO ENSURE PROPER INSTALLATION. COMPLIANCE BY O-LEVEL IAW PUBLISHED SCHEDULE. NEGLIGIBLE W&B. [Buno#: 168616]



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

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Up/Down/Partial: **P**

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

### OPEN WORK ORDERS

MCN	JCN	Work Center	U/D/P	Type WO
198GZX0	GC4167132	021	U	TD

**Discrepancy:**  
Comply withIntrm: Code: 54 Basic No: 6154 Rev Ltr: Amend: Part: Kit No: A1  
TO MOD THE V-22 KVADR BY REPLACING THE ACOUSTIC BEACON FROM A 30 DAY OPERATING LIFE TO A 90-DAY OPERATING LIFE BEACON TO MEET THE TSO-C121B REQ. SEE DEP STATEMENT. COMP BY O-LEVEL AND ABOVE IAW PUB SCHEDULE. NEG W&B. (313101) [Ser#: 0001044]

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2QD	GC4237002	25 AUG 2023 1103	310	D	JC	TD

**Discrepancy:**  
Comply withIntrm: Code: 52 Basic No: 0064 Rev Ltr: Amend: 1 Part: Kit No: 00 INSP AND REPL OF PRGB ASSY, P/N 901-044-001-115 AND 901-044-002-115, WHICH MAY BE AT AN INCREASED RISK OF MAST FAILURE DUE TO HYDROGEN EMBRITTLEMENT. ADDITIONAL WORK REQUIRED. COMP BY O-LEVEL OR ABOVE PRIOR TO NEXT FLIGHT. NO W&B. (6322) [Ser#: BH548455]

**Corrective Action:**  
COMPLIED WITH INTRM: CODE: 52 BASIC NO: 0064 REV LTR: AMEND: 1 PART: KIT NO: 00  
INSP AND REPL OF PRGB ASSY, P/N 901-044-001-115 AND 901-044-002-115, WHICH MAY BE AT AN INCREASED RISK OF MAST FAILURE DUE TO HYDROGEN EMBRITTLEMENT. ADDITIONAL WORK REQUIRED. COMP BY O-LEVEL OR ABOVE PRIOR TO NEXT FLIGHT. NO W&B. (6322) [SER#: BH548455] PEMA 9KKKC91601 ATAF APAF AFF ACF

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
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Next Phase: 165.400 Hours

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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H01Z	GC4172273	25 AUG 2023 0656	310	U	JC	DM

**Discrepancy:**  
HW WORN ON PANEL 6LB3. WORN HW REMOVED DISCARDED IN FL.  
**Corrective Action:**  
REPLACED WORN HW ON PANEL 6LB3 IAW 01-1A-8 AND SSS 5421. PEMA 9KKKC91885 ATAF,APAF,AFF,ACF

198H2DO GC4223227 24 AUG 2023 1955 200 P JC DF

**Discrepancy:**  
RH DON LAIRCM HUMIDITY INDICATOR DISCOVERED OUT OF LIMITATIONS  
**Corrective Action:**  
REMOVED AND REPLACED RH GLTA HYDROCARBON AND DESICCANT FILTERS IAW IETM TASK SSS:9913. PEMA 9KKKC92678 WAS USED. ATAF. APAF. AFF. ACF.

198H2DP GC4223228 24 AUG 2023 1955 200 P JC DF

**Discrepancy:**  
LH DON LAIRCM HUMIDITY INDICATOR DISCOVERED OUT OF LIMITATIONS  
**Corrective Action:**  
REMOVED AND REPLACED LH GLTA HYDROCARBON AND DESICCANT FILTERS IAW IETM TASK SSS:9913. PEMA 9KKKC92678 WAS USED. ATAF. APAF. AFF. ACF.

198H2O5 GC4234528 23 AUG 2023 0322 120 D JC DM

**Discrepancy:**  
BOTTOM MOST FORWARD FASTENER OF PANEL 6RI2 IS WORN COMPLETELY THROUGH THE PANNEL.  
**Corrective Action:**  
FOUND BOTTOM MOST FORWARD FASTENER OF PANEL 6RI2 WAS WORN COMPLETELY THROUGH PANNEL. REPAIRED PANEL IAW SSS 5110 UTILIZNG PEMA 91352. ATAF APAF AFF ACF AT TIME OF INSPECTION.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
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Next Phase: 165.400 Hours

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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2OA	GC4234536	23 AUG 2023 0119	310	U	JC	DM

Discrepancy:  
LH ENG WATER WASH AIR CHECK VALVE JAMNUT STRIPPED  
Corrective Action:  
REPLACED LH ENG WATER WASH AIR CHECK VALVE IAW SSS: 7112 PEMA 9KKKC91601 ATAF, APAF, ACF, AFF

198H2OL      GC4234545      23 AUG 2023 0041      120      D      JC      DF

Discrepancy:  
NOTM DOME BOLT LOOSE, RIGHT HAND SIDE, SECOND FROM THE FRONT OF DOME  
Corrective Action:  
DISCREPANCY COULD NOT BE DUPLICATED AS DESCRIBED. ALL CHECKS GOOD NO DEFECTS TO NOTE. UTILIZIED PEMA 91352. ATAF APAF AFF ACF.

198H2N4      GC4234495      22 AUG 2023 2048      310      U      JC      DM

Discrepancy:  
RIGHT ENGINE WATER RINSE/AIR CHECK VALVE CLOGGED.  
Corrective Action:  
CLEANED RH WATER RINSE/AIR CHECK VALVE IAW SSS 72AO W PEMA 9KKKC91990. ATAF, APAF, AFF, CF.

198H2N1      GC4234493      22 AUG 2023 2038      310      U      JC      OX

Discrepancy:  
PERFORM LH AND RH ENGINE WASH  
Corrective Action:  
PERFORMED LH AND RH ENGINE WASHES IAW SSS 054A W PEMA 9KKKC91990. ATAF, APAF, AFF, CF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2MY	GC4234492	22 AUG 2023 1528	120	D	JC	DF

**Discrepancy:**  
LH NACELLE WATER WASH FITTING HAS PLAYING IN WHICH IS CAUSING THE FRAME STA 426.00 TO 440.04 TO BE WORN IN A ODD OVAL SHAPE  
**Corrective Action:**  
TIGHTENED LH ENGINE WATER WASH AIR FITTING JAMNUT IAW SSS 7195 UTILIZED PEMA 91352 ATAF APAF AFF CF AT TIME OF INSPECTION.

198H2KX GC4233441 21 AUG 2023 2355 310 D JC DM

**Discrepancy:**  
APU OIL IMPENDING BYPASS  
**Corrective Action:**  
REPLACED APU OIL FILTER ELEMENT IAW SSS: 4920. PEMA 9KKKC91601 ATAF, APAF, ACF, AFF

198H2JE GC4230388 21 AUG 2023 2006 310 U JC DM

**Discrepancy:**  
SERVICE LH ENGINE WITH 33 OZ  
**Corrective Action:**  
SERVICED LH ENGINE 33 OZ OF MIL-PRF 23699 IAW SSS 1210. PEMA:9KKKC91990 ATAF, APAF, ACF, AFF

198H2JF GC4230389 21 AUG 2023 1955 310 U JC DM

**Discrepancy:**  
SERVICE RH ENGINE WITH 32 OZ.  
**Corrective Action:**  
SERVICED RH ENGINE 32OZ OF MIL-PRF 23699 IAW SSS 1210. PEMA:9KKKC91990 ATAF, APAF, ACF, AFF

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

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Airframe Hours: 1846.200  
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Next Phase: 165.400 Hours

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2L5	GC4233447	21 AUG 2023 1940	310	U	JC	CX

**Discrepancy:**

COMPLY WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130379 CONDITIONAL INSPECTION ; POSITION - RH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000

**Corrective Action:**

COMPLIED WITH RH SALT LADEN WATER MOTORING/RUNNING RINSE IAW SSS:0550 PEMA:9KKKC91990 ATAF, APAF, ACF, AFF.

198H2L4	GC4233446	21 AUG 2023 1937	310	U	JC	CX
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**Discrepancy:**

COMPLY WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130132 CONDITIONAL INSPECTION ; POSITION - LH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000

**Corrective Action:**

COMPLIED WITH LH SALT LADEN WATER MOTORING/RUNNING RINSE IAW SSS:0550 PEMA:9KKKC91990 ATAF, APAF, ACF, AFF.

198H2KW	GC4233440	21 AUG 2023 1931	310	U	JC	DM
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**Discrepancy:**

SERVICE RH ENGINE WITH 29 OZ.

**Corrective Action:**

SERVICED RH ENGINE 29OZ O MIL-PRF 23699 IAW SSS:1210 PEMA:9KKKC91990 ATAF, APAF, ACF, AFF.

198H2MA	GC4232901	20 AUG 2023 1437	310	U	JC	DM
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**Discrepancy:**

RIGHT ENGINE OIL 15 OZ LOW ON DOWNLOAD

**Corrective Action:**

RIGHT ENGINE OIL LEVEL LOW 15 OUNCES. SERVICED RIGHT ENGINE WITH 15 OUNCES OF MIL-PRF-23699 SSS 1210 PEMA 9KKKC92095 APAF ATAF AFF ACF



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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Basic Weight: 36689  
Airframe Hours: 1846.200  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2N3	GC4232904	20 AUG 2023 1047	200	U	JC	DM

Discrepancy:  
IFF BATTERY LOW  
Corrective Action:  
REMOVED AND REPLACED IFF BATTERY IAW IETM TASK SSS:3455. PEMA 9KKKC92711 WAS USED. ATAF, APAF, AFF, ACF.

198H2GS      GC4227322      16 AUG 2023 0605      200      D      JC      DM

Discrepancy:  
RH OB MFD DOES NOT WORK ON DAY MODE.  
Corrective Action:  
TROUBLESHOT DOWN TO RH OB MFD. REMOVED AND REPLACED RH OB MFD IAW SSS: 4630. PEMA S/N: 92678. ATAF, APAF, AREA FOD AND CORROSION FREE

198H2H1      GC4227324      16 AUG 2023 0122      310      D      JC      DF

Discrepancy:  
RH ENGINE TAILPIPE BELLOWS SEAL IS CRACKED AND PROTRUDING OUT OF THE ASSEMBLY  
Corrective Action:  
REPLACED RH ENGINE TAILPIPE BELLOWS SEAL IAW SSS 7812 PEMA 9KKKC91611 ATAF APAF AFF ACF \*\*\*LEAK CHECK REQUIRED\*\*\*

198H2H0      GC4227323      15 AUG 2023 2306      120      D      JC      DF

Discrepancy:  
UPPER RUDDER MOUNTING HW WORN. \*\*UPDATE\*\* LH UPPER RUDDER HW WORN.  
Corrective Action:  
REPLACED LH UPPER RUDDER HW IAW SSS:5542 UTILZING PEMA1362 ATAF APAF AFF ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H298	GC4221098	15 AUG 2023 1914	200	P	JC	DM

Discrepancy:  
RH OB MFD DOES NOT WORK ON DAY MODE.  
Corrective Action:  
FOR CORRECTIVE ACTION REFER TO AVIONICS MAF MCN: 198H2GS JCN:GC4227322. PEMA 9KKKC92711 WAS USED.

198H2GD GC4227312 15 AUG 2023 1217 040 D JC CX

Discrepancy:  
COMPLY WITH FOD INSPECTION CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: CNAFINST 4790.2 SERIES ; S/N = 168616. POTENTIAL FOD FROM MISSING SCREW ON PANEL 6LI2-1.  
Corrective Action:  
COMPLIED WITH FOD INSPECTION CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: CNAFINST 4790.2 SERIES ; S/N = 168616. POTENTIAL FOD FROM MISSING SCREW ON PANEL 6LI2-1. ATAF APAF AFF ACF PEMA 9KKKC91604. MISSING SCREW WAS NOT FOUND. AMO MAJ BEGAB RELEASED AIRCRAFT.

198H2GC GC4227311 15 AUG 2023 1138 310 U JC DM

Discrepancy:  
MISSING SCREW ON PANEL 6LI2-1. REFER TO MFR 23-045  
Corrective Action:  
MISSING SCREW HAS REPLACED ON PANEL 6RLI2-1 IAW S/S/S 5422. REFER TO MFR#23-045 . ATAF, APAF, AFF, ACF. PEMA 9KKKC92095

198H2DS GC4223231 11 AUG 2023 1650 12C U JC CP

Discrepancy:  
DD:20230908 NACELLE PANEL 6LO7 LACKS PAINT ON LOWER PANEL LATCH AND TWO REPAIRED RIVETS  
Corrective Action:  
PAINTED BARE METAL ON PANEL 6LO7 IAW MIL-STD-2161 UTILIZING PEMA 7509 ATAF APAF AFF ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

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Airframe Hours: 1846.200  
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### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H2CH	GC4222192	11 AUG 2023 0156	200	U	JC	SX

**Discrepancy:**

COMPLY WITH CABIN EMERGENCY EQUIPMENT INSP (ANNUAL) IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = 405019 CRASH POSITION INDICATOR

**Corrective Action:**

COMPLIED WITH CABIN EMERGENCY EQUIPMENT INSP (ANNUAL) IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = 405019 CRASH POSITION INDICATOR. OP-CHECKS GOOD. PEMA S/N: 92143. ATAF, APAF, AREA FOD AND CORROSION FREE

198H28X	GC4221090	10 AUG 2023 1123	120	U	JC	SX
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**Discrepancy:**

COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = A-2053 \*\*\*REBASE\*\*\*

**Corrective Action:**

COMPLIED WITH 35 HOUR INSPECTION IAW SSS 053D UTILIZNG PEMA 92111 ATAF APAF AFF ACF AT TIME OF INSPECTION S/N = A-2053

198H290	GC4221093	10 AUG 2023 1050	020	U	JC	SC
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**Discrepancy:**

PERFORM 56 DAY INSPECTION INSPECTION

**Corrective Action:**

ALL SHOPS PERFORMED 56 DAY INSPECTION AS REQUIRED

198H2AJ	GC4222131	10 AUG 2023 0507	200	D	JC	DM
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**Discrepancy:**

LH CENTER SWASHPLATE ACTUATOR POSTS FCC 2 F(P) WITH ASSOCIATED CRITICAL CONVERSION ACTUATOR FAULT

**Corrective Action:**

DISCOVERED CONNECTOR 2722DCM1P1, FCC NO.2 WAS LOOSE. CLEANED AND RESEATED CONNECTOR 2722DCM1P1, FCC NO.2 IAW IETMS TASK SSS 2721. PEMA9KKKC92143 WAS USED. ATAF, APAF, AREA FOD/CORROSION FREE.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

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Next Phase: 165.400 Hours

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H28U	GC4221087	09 AUG 2023 2351	120	U	JC	SX

**Discrepancy:**

COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = VL00071469 \*\*\*REBASE\*\*\*

**Corrective Action:**

COMPLIED WITH 35 HOUR INSPECTION IAW SSS:053D UTILIZING PEMA 1352 ATAF APAF AFF ACF.

198H28V	GC4221088	09 AUG 2023 2351	120	U	JC	SX
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**Discrepancy:**

COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = BH664950 \*\*\*REBASE\*\*\*

**Corrective Action:**

COMPLIED WITH 35 HOUR INSPECTION IAW SSS:053D UTILIZING PEMA 1352 ATAF APAF AFF ACF.

198H28W	GC4221089	09 AUG 2023 2351	120	U	JC	SX
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**Discrepancy:**

COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = A-610 \*\*\*REBASE\*\*\*

**Corrective Action:**

COMPLIED WITH 35 HOUR INSPECTION IAW SSS:053D UTILIZING PEMA 1352 ATAF APAF AFF ACF.

198H28Y	GC4221091	09 AUG 2023 2351	120	U	JC	SX
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**Discrepancy:**

COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = BH117192 \*\*\*REBASE\*\*\*

**Corrective Action:**

COMPLIED WITH 35 HOUR INSPECTION IAW SSS:053D UTILIZING PEMA 1352 ATAF APAF AFF ACF.

FOR OFFICIAL USE ONLY

Enclosure (103)

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

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Basic Weight: 36689  
Airframe Hours: 1846.200  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H28Z	GC4221092	09 AUG 2023 2351	120	U	JC	SX

**Discrepancy:**  
COMPLY WITH 35 HOUR INSPECTION. IN ACCORDANCE WITH REFERENCE: A1-V22AB-TIS-000 ; S/N = VL00077555 \*\*\*REBASE\*\*\*  
**Corrective Action:**  
COMPLIED WITH 35 HOUR INSPECTION IAW SSS:053D UTILIZING PEMA 1352 ATAF APAF AFF ACF.

198H29Z      GC4221112      09 AUG 2023 2217      200      P      JC      DM

**Discrepancy:**  
LH WHITE BLADE LATCHES DO NOT UNLATCH CAUSING BLADE NOT TO FOLD  
**Corrective Action:**  
DISCOVERED BROKEN PIN ON CONNECTOR BL DISC P3, WIRE U131N20, OF HARNESS W683, UNDER THE LEADING EDGE FAIRING. PERFORMED WIRE REPAIR ON WIRE U131N20 IAW NAVAIR 01-1A-505-2. OPERATIONAL CHECK WAS SATISFACTORY ON APU POWER. PEMA 9KKKC92285 WAS USED. AREA FOD /CORROSION FREE. ATAF. APAF.

198H29A      GC4221097      09 AUG 2023 2158      120      U      JC      CX

**Discrepancy:**  
COMPLY WITH 053C -WING STOW CABLE TENSION INSP CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: A1-V22AB-MRC-000 ; S/N = 168616  
**Corrective Action:**  
COMPLIED WITH CABLE TENSION CHECK IAW SSS:053C UTILIZING PEMA 1352 ATAF APAF AFF ACF.

198H29Q      GC4221108      09 AUG 2023 2121      230      U      JC      OX

**Discrepancy:**  
PERFORM OX BUCKET CHECKS  
**Corrective Action:**  
PERFORMED ALE-47 OPS CHECKS IAW A1-V22AB-LWS-720. CHECKS GOOD. PEMA 9KKKC91751 USED. AF/CF, ATAF, APAF.



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198GY5I	GC4140133	09 AUG 2023 1918	200	U	JC	DM

**Discrepancy:**  
REPLACE MNM LITHIUM BATTERIES. DD20240602

**Corrective Action:**  
REMOVED AND REPLACED MESHED NETWORK MANAGER PROCESSOR BATTERIES IAW IETMS TASK SSS 4392. PEMA 9KKKC92678 WAS USED. AREA FOD/CORROSION FREE. ATAF. APAF.

198H29N	GC4140133	09 AUG 2023 1440	120	U	JC	AD
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**Discrepancy:**  
ASSIST AVIONICS WITH STRIPPED HW

**Corrective Action:**  
REMOVED STRIPPED HW FOR THE AVIONICS DIVISION IAW SSS:5110 UTILIZING PEMA 1636. ATAF APAF AFF ACF.

198H287	GC4221069	09 AUG 2023 0655	310	U	JC	OX
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**Discrepancy:**  
PERFORM ONE TIME INSPECTION FOR APU STARTS AND HOURS.

**Corrective Action:**  
PERFORMED ONE TIME APU STARTS AND HOURS IAW SSS 0100 PEMA 999KC91611 ATAF APAF AFF ACF  
STARTS: 5073 HOURS: 1617

198H25Z	GC4220011	09 AUG 2023 0531	310	U	JC	DM
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**Discrepancy:**  
CONFIGURE AIRCRAFT WITH STANCHIONS AND LITTERS FOR FLIGHT SCHEDULE AND REMOVE UPON COMPLETION

**Corrective Action:**  
DECONFIGURED AIRCRAFT WITH STANCHIONS AND LITTERS IAW SSS 2560 PEMA USED 9KKKC91885 ATAF. APAF. AFF. ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H26I	GC4220032	08 AUG 2023 2308	200	D	JC	DM

**Discrepancy:**  
DATA TRANSFER UNIT F(P)  
**Corrective Action:**  
DISCOVERED ABNORMALLY FUNCTIONING DATA TRANSFER UNIT. REMOVED AND REPLACED DATA TRANSFER UNIT IAW IETMS TASK SSS 4612. OPERATIONAL CHECK WAS SATISFACTORY ON APU POWER. PEMA 9KKKC92678 WAS USED. AREA FOD/CORROSION FREE. ATAF. APAF.

198GZYY	GC4171177	08 AUG 2023 1755	12C	U	JC	SF
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**Discrepancy:**  
PANEL 6LO2 HAS WORN SKYFLEX.  
**Corrective Action:**  
REPAIRED WORN SKYFLEX ON PANEL 6LO2 IAW SSS 5110 UTILIZING PEMA 67509. ATAF APAF AFF ACF AT TIME OF THE INSPECTION.

198GZYZ	GC4171178	08 AUG 2023 1754	12C	U	JC	SF
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**Discrepancy:**  
PANEL 6LO1B HAS WORN SKYFLEX.  
**Corrective Action:**  
REPAIRED WORN SKYFLEX ON PANEL 6LO1B IAW SSS 5110 USING PEMA 67509. ATAF APAF AFF ACF AT TIME OF INSPECTION

198GZZ5	GC4171182	08 AUG 2023 1724	12C	U	JC	SF
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**Discrepancy:**  
PANEL 6RO3 HAS WORN SKYFLEX.  
**Corrective Action:**  
REPAIRED WORN SKYFLEX ON PANEL 6RO3 IAW SSS 5110 UTILIZING PEMA 67509. ATAF APAF AFF ACF AT TIME OF INSPECTION

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS							
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO	
198GZZ0	GC4171179	08 AUG 2023 1723	12C	U	JC	SF	

Discrepancy:  
PANEL 6LO6 HAS WORN SKYFLEX.  
Corrective Action:  
REPAIRED WORN SKYFLEX ON PANEL 6LO6 IAW SSS 5110 UTILIZING PEMA 67509. ATAF APAF AFF ACF AT TIME OF INSPECTION

198H24Y GC4220577 08 AUG 2023 0749 200 U JC DM

Discrepancy:  
LIGHT BULBS ON NVG NORM PANEL AND WET COMPASS BURNED OUT  
Corrective Action:  
REMOVED AND REPLACED NVG NORM AND WET COMPASS PANEL LIGHT BULBS IAW IETMS TASK SSS 3360. PEMA 9KKKC92678 WAS USED. ATAF. APAF. AFF. ACF.

198H24P GC4220569 08 AUG 2023 0737 200 D JC DM

Discrepancy:  
R PRGB DEBRIS SENSOR 3 POSTED F(P) INTERMITTENTLY 99 TIMES  
Corrective Action:  
PERFORMED WIRE REPAIR ON RH PRGB DEBRIS SENSOR 3 HARNESS W614 CONNECTOR 6352UCD54P1 APPROXIMATELY 12 INCHES BEHIND THE BACKSHELL UNDER PANEL 6RI1B IAW 01-1A-505-1. PEMA 9KKKC92285 WAS USED. ATAF. APAF. AFF. ACF. \*\*GT REQUIRED\*\*

198H24Q GC4220570 08 AUG 2023 0503 310 U JC DM

Discrepancy:  
SERVICE RH ENGINE 29OZ  
Corrective Action:  
SERVICED RH ENGINE WITH 29 OUNCES OF MIL-PRF-23699. DONE IAW SSS 1210. PEMA USED WAS 9KKKC91885. ATAF, APAF, AFF, ACF

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H247	GC4219555	08 AUG 2023 0502	310	U	JC	DM

Discrepancy:  
RH ABC VALVES DIRTY AND SURROUNDED BY DEBRIS  
Corrective Action:  
CLEANED LH AND RH ABC VALVE INLET FILTERS IAW SSS 7531 PEMA 9KKKC92095 ATAF APAF AFF ACF

198H248	GC4219556	08 AUG 2023 0502	310	U	JC	DM
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Discrepancy:  
LH ABC VALVES DIRTY AND SURROUNDED BY DEBRIS  
Corrective Action:  
CLEANED LH AND RH ABC VALVE INLET FILTERS IAW SSS 7531 PEMA 9KKKC92095 ATAF APAF AFF ACF

198H246	GC4219554	08 AUG 2023 0321	310	U	JC	DM
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Discrepancy:  
MWGB OIL COOLER DIRTY AND FULL OF DEBRIS  
Corrective Action:  
CLEANED MWGB OIL COOLER IAW SSS 6325. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H245	GC4219553	08 AUG 2023 0321	310	U	JC	DM
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Discrepancy:  
RH HEAT EXCHANGER ASSY FULL OF DIRT AND DEBRIS  
Corrective Action:  
CLEANED RH HEAT EXCHANGER ASSY IAW SSS 6322. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

## NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H244	GC4219552	08 AUG 2023 0320	310	U	JC	DM

**Discrepancy:**

LH HEAT EXCHANGER ASSY FULL OF DIRT AND DEBRIS.

**Corrective Action:**

CLEANED LH HEAT EXCHANGER ASSY IAW SSS 6321. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H241	GC4219549	08 AUG 2023 0319	310	U	JC	CX
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**Discrepancy:**

COMPLY WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130379 CONDITIONAL INSPECTION ; POSITION - RH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000

**Corrective Action:**

COMPLIED WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130379 CONDITIONAL INSPECTION ; POSITION - RH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000. DONE IAW SSS 0550. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H240	GC4219548	08 AUG 2023 0318	310	U	JC	CX
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**Discrepancy:**

COMPLY WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130132 CONDITIONAL INSPECTION ; POSITION - LH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000

**Corrective Action:**

COMPLIED WITH SALT LADEN WATER MOTORING/RUNNING RINSE ; S/N = CAE130132 CONDITIONAL INSPECTION ; POSITION - LH; IN ACCORDANCE WITH REFERENCE : A1-V22AB-MRC-000. DONE IAW SSS 0550. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H0WY	GC4192566	08 AUG 2023 0203	040	U	JC	DM
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**Discrepancy:**

MONITOR LH ENGINE FOR OIL COMSUMPTION FOR NEXT 20 FLT HRS. CURRENTLY AT 1801.7

**Corrective Action:**

MONITORED LH ENGINE OIL CONSUMPTION FOR 22 HOURS. RATE IS 1.5OZ/HR. WITHIN LIMITS. PEMA 9KKKC92625. ATAF APAF AFF ACF.



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
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CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H0WZ	GC4192567	08 AUG 2023 0132	040	U	JC	DM

**Discrepancy:**  
MONITOR RH ENGINE FOR OIL COMSUMPTION FOR NEXT 20 FLT HRS. CURRENTLY AT 1801.7  
**Corrective Action:**  
MONITORED RH ENGINE OIL CONSUMPTION FOR 22 HOURS. RATE IS 2.68OZ/HR. WITHIN LIMITS. PEMA 9KKKC92625. ATAF APAF AFF ACF.

198H20E	GC4216443	07 AUG 2023 1011	200	D	JC	DM
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**Discrepancy:**  
RH NACELLE BLOWER F(P) DURING GT.  
**Corrective Action:**  
REMOVED AND REPLACED RH NACELLE BLOWER DIFFERENTIAL PRESSURE SWITCH IAW IETMS TASK SSS:5492. PEMA 9KKKC92285 WAS USED. ATAF. APAF. AFF. ACF. \*\*GROUND TURN RQUIRED FOR FULL OPERATIONAL CHECK.\*

198H20X	GC4219451	07 AUG 2023 0553	310	U	JC	DM
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**Discrepancy:**  
SERVICE RH ENG 29OZ  
**Corrective Action:**  
SERVICED RH ENGINE WITH 29 OZ OF 23699 IAW SSS 1210 PEMA 9KKKC91601 ATAF APAF AFF ACF.

198H20W	GC4219450	07 AUG 2023 0552	310	U	JC	DM
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**Discrepancy:**  
SERVICE LH ENGINE 17OZ  
**Corrective Action:**  
SERVICED LH ENGINE WITH 17 OZ OF 23699 IAW SSS 1210 PEMA 9KKKC91601 ATAF APAF AFF ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H20Q	GC4219445	07 AUG 2023 0537	130	D	JC	DF

**Discrepancy:**  
EMERGENCY OXYGEN BOTTLE WAS FOUND OUT OF LIMITATIONS  
**Corrective Action:**  
EMERGENCY OXYGEN BOTTLE WAS FOUND OUT OF LIMITATIONS. SERVICED EMERGENCY OXYGEN BOTTLE IAW IETM SSS:3541 PEMA 91715 ATAF, APAF, AFF, ACF.

198H1XF      GC4215359      04 AUG 2023 0939      200      D      JC      DM

**Discrepancy:**  
RH BLOWER FAIL POSTED EVERY 15 SEC IN FLIGHT  
**Corrective Action:**  
DISCOVERED NICK ON HARNESS W635 FOR RIGHT NACELLE AIR MANAGEMENT SYSTEM ON CONNECTOR 6340US50P1 ON PIN 2 WIRE W635-H8Q24 VBL UNDER PANEL 6RT9 ABOUT 2 INCHES FROM THE BACKSHELL. APPLIED HEAT SHRINK ON WIRE NICK IAW 01-1A-505-1. PEMA9KKKC92143 WAS USED. ATA F. APAF. AFF. ACF.

198H1VN      GC4214314      03 AUG 2023 1807      120      D      JC      OX

**Discrepancy:**  
PERFORM ONE TIME SAMPLE OF HYD SYSTEM 2  
**Corrective Action:**  
PERFORMED ONE TIME SAMPLE OF HYD SYSTEM 2 IAW SSS 2900 UTILIZING PEMA 92111 ALL CHECKS GOOD NO DEFECTS NOTED HYDRAULIC SYSTEM 2 RAN A NAVAL CLASS 4 UTILIZING THE PODS METHOOD. ATAF APAF AFF ACF AT TIME OF INSPECTION

198H1X6      GC4215345      03 AUG 2023 1623      200      D      JC      TD

**Discrepancy:**  
Comply withIntrm:      Code: 93      Basic No: 0117      Rev Ltr: A      Amend:      Part:      Kit No: 00 TO UPGRADE THE FLIGHT CONTROL COMPUTER SOFTWARE TO VER 18.4. THIS CHANGE UPDATES SYS CAPABILITY AND ENHANCES MAINT TROUBLESHOOTING. COMPLIANCE BY O -LEVEL AND ABOVE NLT NEXT 56 DAY INSP. SEE DEPENDENCY STATEMENT. (272201) [Ser#: 0573]  
**Corrective Action:**  
COMPLIED WITHINTRM:      CODE: 93      BASIC NO: 0117      REV LTR: A      AMEND:      PART:      KIT NO: 00 TO UPGRADE THE FLIGHT CONTROL COMPUTER SOFTWARE TO VER 18.4. THIS CHANGE UPDATES SYS CAPABILITY AND ENHANCES MAINT TROUBLESHOOTING. COMPLIANCE B Y O-LEVEL AND ABOVE NLT NEXT 56 DAY INSP. SEE DEPENDENCY STATEMENT. (272201) [SER#: 0573]. PEMA 9KKKC92576 WAS USED. ATAF. APAF. AFF. ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

## NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H1X7	GC4215346	03 AUG 2023 1622	200	D	JC	TD

#### Discrepancy:

Comply withIntrm: Code: 93 Basic No: 0118 Rev Ltr: Amend: Part: Kit No: 00 TO UPGRADE MV-22B TSS TO RELEASE 8.1. COMPLIANCE BY O-LEVEL AND ABOVE NLT NEXT 56 DAY INSPECTION. NO W&B. SEE DEPENDENCY STATEMENT. UP TO AND INCL UDING AM 1.(272201) [Ser#: 0573]

#### Corrective Action:

COMPLIED WITHINTRM: CODE: 93 BASIC NO: 0118 REV LTR: AMEND: PART: KIT NO: 00 TO UPGRADE MV-22B TSS TO RELEASE 8.1. COMPLIANCE BY O-LEVEL AND ABOVE NLT NEXT 56 DAY INSPECTION. NO W&B. SEE DEPENDENCY STATEMENT. UP TO AND IN CLUDING AM 1.(272201) [SER#: 0573]. PEMA 9KKKC92576 WAS USED . ATAF. APAF. AFF. ACF.

198H1X8	GC4215347	03 AUG 2023 1621	200	D	JC	TD
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#### Discrepancy:

Comply withIntrm: Code: 93 Basic No: 0095 Rev Ltr: Amend: Part: Kit No: 00 TO UPGRADE MV-22B AIRCRAFT TO TSS RELEASE A8.01/B6.01/C3.01 AS AUTHORIZED BY ECP. SEE DEPENDENCY STATEMENT. COMPLIANCE BY O-LEVEL AND ABOVE NLT NEX T 35 HOUR INSPECTION. NO W&B. (272201) [Ser#: 0573]

#### Corrective Action:

COMPLIED WITHINTRM: CODE: 93 BASIC NO: 0095 REV LTR: AMEND: PART: KIT NO: 00 TO UPGRADE MV-22B AIRCRAFT TO TSS RELEASE A8.01/B6.01/C3.01 AS AUTHORIZED BY ECP. SEE DEPENDENCY STATEMENT. COMPLIANCE BY O-LEVEL AND ABOVE NLT N EXT 35 HOUR INSPECTION. NO W&B. (272201) [SER#: 0573]. PEMA 9KKKC92576 WAS USED. ATAF. APAF. AFF. ACF.

198H1X9	GC4215348	03 AUG 2023 1621	200	D	JC	TD
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#### Discrepancy:

Comply withIntrm: Code: 93 Basic No: 0114 Rev Ltr: A Amend: Part: Kit No: 00 TO UPGRADE MV-22 TSS TO RELEASE B7.01/C4.01. SEE DEPENDENCY STATEMENT. COMPLIANCE BY O-LEVEL AND ABOVE NLT NEXT 56 DAY INSPECTION. NO W&B. (2722 01) [Ser#: 0573]

#### Corrective Action:

COMPLIED WITHINTRM: CODE: 93 BASIC NO: 0114 REV LTR: A AMEND: PART: KIT NO: 00 TO UPGRADE MV-22 TSS TO RELEASE B7.01/C4.01. SEE DEPENDENCY STATEMENT. COMPLIANCE BY O-LEVEL AND ABOVE NLT NEXT 56 DAY INSPECTION. NO W&B. (27 2201) [SER#: 0573] PEMA9KKKC92756 WAS USED. ATAF. APAF. AFF. ACF.

198H1F8	GC4201462	03 AUG 2023 1603	200	U	JC	DM
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#### Discrepancy:

RH WHT TE SHEAR PIN REQUIRED SEALANT

#### Corrective Action:

DISCOVERED RH WHT TE SHEAR PIN NEEDED SEALANT. SEALED RH WHT TE SHEAR PIN IAW SSS: 6630. PEMA S/N: 92285. ATAF, APAF, AREA FOD AND CORROSION FREE

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H1V2	GC4214294	03 AUG 2023 1003	200	D	JC	DM

**Discrepancy:**  
APU NO LIGHT DUE TO LOW VOLTAGE  
**Corrective Action:**  
REMOVED AND REPLACED DC CONTECTOR K8 IAW IETMS TASK SSS:2420. OPERATIONAL CHECK WAS SATISFACTORY ON APU POWER. PEMA 9KKKC91607 WAS USED. ATAF. APAF. AFF. ACF. \*\*GROUND TURN REQUIRED FOR OPERATIONAL CHECK\*\*

198H1W4	GC4214329	02 AUG 2023 1929	230	U	JC	DM
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**Discrepancy:**  
REMOVE ADU-977 ADAPTER UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381-B-MOB-200  
**Corrective Action:**  
REMOVED ADU-977 ADAPTER UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381-B-MOB-200. ATAF, APAF, AF/CF, PEMA 9KKKC91751.

19CYK3X	GC4209746	01 AUG 2023 1626	120	D	JC	CM
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**Discrepancy:**  
Cannibalized item: 42555-43 NR 2 PRIMARY HYDRAULIC POWERED DRIVE UNIT ASSEMBLY (DDSN: 3209GH80) for Modex 07 Original MCN: 19CYK3Q  
**Corrective Action:**  
REPLACED LH NO.2 PRIMARY HYDRAULIC POWER DRIVE UNIT IAW SSS 2750 USING PEMA 91636. ATAF APAF AFF ACF. RAN HYDRAULIC SAMPLE UTILIZING PATCH TEST METHOD. SYSTEM 2 HYDRAULIC SAMPLE RAN A NAVY CLASS 3.

19CYK3Y	GC4209745	01 AUG 2023 1625	120	D	JC	CM
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**Discrepancy:**  
Cannibalized item: 42555-281 NR 2 PRIMARY HYD POWERED DRIVE UNIT BRAKE ASSY (DDSN: 3209GH81) for Modex 08 Original MCN: 19CYK3P  
**Corrective Action:**  
REPLACED LH NO.2 HPDU BRAKE ASSY IAW SSS 2750 USING PEMA 91636. ATAF APAF AFF ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
19CYK4H	GC4211761	01 AUG 2023 1529	200	D	JC	DM

**Discrepancy:**  
DISCOVERED WORN CONNECTOR THREADS ON W892 (7631UCM52P3)  
**Corrective Action:**  
DISCOVERED WORN CONNECTOR ON HARNESS W892. REMOVED AND REPLACED HARNESS W892 IAW IETMS TASK SSS 4253. PEMA USED WAS 9KKKC92146. OPERATIONAL CHECK SATISFACTORY ON APU POWER. ATAF. APAF. AFF. ACF.

19CYK3T	GC4209744	01 AUG 2023 1526	200	D	JC	CM
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**Discrepancy:**  
Cannibalized item: 901-305-150-111 NR 2 FLIGHT CONTROL COMPUTER (DDSN: 3209GH79) for Modex 07 Original MCN: 19CYK3N  
**Corrective Action:**  
REMOVED AND REPLACED FCC NO 2 IAW IETMS TASK SSS 2722. OPERATIONAL CHECK SATISFACTORY ON APU. PEMA USED WAS 9KKKC92146. ATAF. APAF. AFF. ACF.

19CYK4K	GC4212765	31 JUL 2023 1202	230	U	JC	DM
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**Discrepancy:**  
REMOVE .50CAL MOUNT UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381AB-MOB-200  
**Corrective Action:**  
REMOVED .50CAL MOUNT UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381AB-MOB-200. USED PEMA 9KKKC91751. ATAF, APAF, AF/CF.

19CYK3U	GC4209748	28 JUL 2023 1700	200	D	JC	DM
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**Discrepancy:**  
DISCOVERED LH NACELLE BLOWER DIFFERENTIAL PRESSURE SW FAILING ERRONEOUSLY.  
**Corrective Action:**  
DISCOVERED WIRE INSULATION TORN. PERFORMED WIRE REPAIR ON CONNECTOR 6340US50P1, PIN 2, ON HARNESS W635 UNDER PANEL 6LT9 IAW 01-1A-505-1. PEMA 9KKKC91607 WAS USED. ATAF. APAF. AFF. ACF.



Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
19CYK2W	GC4207723	28 JUL 2023 1135	200	D	JC	DM
<b>Discrepancy:</b> RH PRGB SECONDARY OIL PRESSURE TRANSDUCER POSTING ON DOWNLOAD <b>Corrective Action:</b> DISCOVERED BROKEN CONNECTOR, REMOVED AND REPLACED BROKEN CONNECTOR 6342UMT50P1 ON HARNESS W567, FOR THE DUMP VALVE SYSTEM, UNDER THE RH CENTER BODY, IAW IETMS TASK SSS:6322. PEMA 9KKKC92314 WAS USED. ATAF. APAF. AFF. ACF.						
19CYK2X	GC4207724	28 JUL 2023 1026	200	D	JC	DM
<b>Discrepancy:</b> CONVERTER 3 FAIL DURING GROUND TURN <b>Corrective Action:</b> DISCOVERED DAMAGE ON WIRE P245B24, CONNECTOR 4270WA9P18 IN DC CONVERTER 3 SYSTEM. PERFORMED WIRE REPAIR ON WIRE P245B24 11 INCHES FROM THE BACKSHELL OF CONNECTOR 4270WA9P18 UNDER PANEL BLS1, IAW NAVAIR 01-1A-505-1 PEMA 9KKKC92143 WAS USED. ATAF. APAF. AFF. ACF. OP CHECK SATISFACTORY ON APU POWER.						
19CYK37	GC4207733	27 JUL 2023 0159	310	D	JC	DM
<b>Discrepancy:</b> LH PROPROTOR GEARBOX DESSICANT FILTER MOUNT LOOSE <b>Corrective Action:</b> LH PROPROTOR GEARBOX DESSICANT FILTER MOUNTS TIGHTEN IAW SSS 6321 ATAF, APAF, AFF, ACF. PEMA 9KKKC91604						
19CYK30	GC4207727	26 JUL 2023 1936	040	D	JC	CX
<b>Discrepancy:</b> COMPLY WITH FOD INSPECTION CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: CNAFINST 4790.2 SERIES ; S/N = 168616. POTENTIAL FOD FROM MISSING BOLTS (2) AND WASHERS (3) ON 6LO2 LATCH KEEPER MOUNTING HARDWARE MFR # D23-001 <b>Corrective Action:</b> COMPLIED WITH FOD INSPECTION CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: CNAFINST 4790.2 SERIES ; S/N = 168616. POTENTIAL FOD FROM MISSING BOLTS (2) AND WASHERS (3) ON 6LO2 LATCH KEEPER MOUNTING HARDWARE MFR # D23-001. DID FIND A BOLT AND WASHER AND DID NOT FIND 1 BOLT, 1 NUT OR 2 WASHERS. AFF ACF. UTILIZED PEMA 91924.AAMO 1ST LT HILL RELEASED AIRCRAFT						

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
19CYK32	GC4207730	26 JUL 2023 1754	120	D	JC	DF

Discrepancy:  
LEFT HAND UPPER RUDDER HARDWARE WORN  
Corrective Action:  
REMOVED AND REPLACED LH UPPER RUDDER MOUNTING HW IAW SSS 5541. ATAF APAF AFF ACF, PEMA 2111

19CYK2Z	GC4207726	26 JUL 2023 1752	120	D	JC	DF
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Discrepancy:  
PANEL 6LO3 LATCH KEEPER HW DISCOVERED MISSING. REFER TO MFR: D23-001  
Corrective Action:  
INSTALLED 6LO3 LOWER FORWARD LATCH KEEPER HW IAW SSS: 5421 UTILIZING PEMA 91636. ATAF APAF AFF ACF AT TIME OF INSPECTION.

19CYK2Y	GC4207725	26 JUL 2023 1736	120	D	JC	DM
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Discrepancy:  
LH AFT (STATION 400) OUTBOARD LINK LOWER BOLT HAS FREE SPINNING WASHERS  
Corrective Action:  
TORQUED LH AFT HW IAW SSS 5431 UTILIZING PEMA 91636. ATAF APAF AFF ACF AT TIME OF INSPECTION.

19CYK2B	GC4204708	26 JUL 2023 1028	310	D	JC	DM
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Discrepancy:  
LH PRGB DUMP VALVE LEAKING OIL FROM DUMP TUBE WHEN POWER IS APPLIED TO AIRCRAFT  
Corrective Action:  
REPLACED INTERNALLY FAILED LH PRGB DUMP VALVE IAW SSS 6321. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF. \*\*\* OPCHECK REQUIRED\*\*\*

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B

## NALCOMIS OMA AADB SUMMARY REPORT

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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Up/Down/Partial: P

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

### CLOSED WORK ORDERS LAST 10 FLIGHTS

MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H1HH	GC4202530	24 JUL 2023 1244	230	U	JC	DM

**Discrepancy:**

REMOVE ADU-977 ADAPTER UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381-B-MOB-200

**Corrective Action:**

REMOVED ADU-977 ADAPTER UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381-B-MOB-200. USED PEMA 9KKKC91751. ATAF, APAF, AF/CF.

198H1HF	GC4202528	24 JUL 2023 1243	230	U	JC	DM
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**Discrepancy:**

REMOVE .50CAL MOUNT UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381AB-MOB-200

**Corrective Action:**

REMOVED .50CAL MOUNT UPON COMPLETION OF FLIGHT SCHEDULE IAW AW-381AB-MOB-200. USED PEMA 9KKKC91751. ATAF, APAF, AF/CF.

19CYK21	GC4204708	24 JUL 2023 1057	200	D	JC	TS
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**Discrepancy:**

LH PRGB DUMP VALVE LEAKING OIL FROM DUMP TUBE WHEN POWER IS APPLIED TO AIRCRAFT

**Corrective Action:**

TROUBLESHOT DOWN TO INTERNALLY FAILED LH PRGB DUMP VALVE IAW IETMS TASK SSS:6326. FOR CORRECTIVE ACTION REFER TO MCN:19CYK2B. PEMA 9KKKC92285 WAS USED. ATAF, APAF, AFF, ACF.

19CYK1Y	GC4204705	23 JUL 2023 1842	200	D	JC	DM
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**Discrepancy:**

R/H PRGB SECONDARY OIL PRESSURE TRANSDUCER FAIL.

**Corrective Action:**

REMOVED AND REPLACED RH PRGB SECONDARY OIL PRESSURE TRANSDUCER IAW IETMS TASK SSS 6322. PEMA9KKKC92285 WAS USED. ATAF, APAF, AFF, ACF.

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H1HP	GC4202537	22 JUL 2023 0042	310	D	JC	DM

**Discrepancy:**  
SDC LEAKING OIL TYPE 23699 PAST ALLOWABLE LIMITATION AT APPROX 10 DROPS/MIN.  
**Corrective Action:**  
CANNIBALIZED (BUNO: 168294 MCN: 198H1I0) REPLACED LEAKING SDC IAW SSS 2110. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H10I	GC4194070	22 JUL 2023 0018	310	U	JC	OX
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**Discrepancy:**  
INSTALL OPTICAL TRACKERS FOR ADJUSTMENT RUN AND REMOVE OPTICAL TRACKERS AFTER ALL RTB SMOOTHING EPISODES HAVE BEEN COMPLETED  
**Corrective Action:**  
REMOVED OPTICAL TRACKERS IAW SSS 6200. PEMA 9KKKC91885. ATAF, APAF, AFF, ACF

198H1I1	GC4202506	21 JUL 2023 2341	310	D	JC	DM
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**Discrepancy:**  
GEN 2 OIL FILTER IMPENDING BYPASS FAULT CODE: 5701.\*\*\*TS DOWN TO BAD RH TAGB SINGLE STAGE OIL FILTER BYPASS INDICATOR\*\*  
**Corrective Action:**  
REMOVED AND REPLACED GEN 2 OIL FILTER IMPENDING BYPASS INDICATOR IAW SSS6324, USED PEMA 9KKKC91601, ATAF, APAF, AFF, ACF \*\*GROUND TURN REQUIRED\*\*

198H1HI	GC4202531	21 JUL 2023 2202	200	D	JC	DM
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**Discrepancy:**  
DC BUS 3 - ESS/BATT CONTR (ABIU) F(P) FAULT CODE: 5C87  
**Corrective Action:**  
REMOVED AND REPLACED CONTACTOR 2432FK25 ON PDP #3 IAW IETMS TASK: 24. PEMA 9KKKC92711 WAS USED. ATAF. APAF. AREA FOD AND CORROSION FREED. \*\*\* GROUND TURN AND CROSSTIES REQUIRED FOR OPERATIONAL CHECK\*\*\*

Org: GC4  
MODEX: 15  
Buno: 168616  
Assy Cd: AYNE  
TMS: MV-22B  
Up/Down/Partial: P

NALCOMIS OMA  
AADB SUMMARY REPORT

Basic Weight: 36689  
Airframe Hours: 1846.200  
Last Flown: 21 AUG 2023 0800  
Next Phase: 165.400 Hours

Date: 27 AUG 2023  
Time: 08:16:25  
REQ BY: (b) (6)  
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CLOSED WORK ORDERS LAST 10 FLIGHTS						
MCN	JCN	Completion Datetime	Work Center	U/D/P	Job Status	Type WO
198H1GT	GC4202506	21 JUL 2023 1928	200	D	JC	TS

Discrepancy:  
GEN 2 OIL FILTER IMPENDING BYPASS FAULT CODE: 5701.\*\*\*TS DOWN TO BAD RH TAGB SINGLE STAGE OIL FILTER BYPASS INDICATOR\*\*

Corrective Action:  
TS DOWN TO BAD RH TAGB SINGLE STAGE OIL FILTER BYPASS INDICATOR. MAF TRANSFERRED TO FLIGHTLINE. PEMA 9KKKC92711 WAS USED. ATAF, APAF, AREA FOD/CORRISSION FREE. REFER TO MCN 198H1L1 JCN GC4202506 FOR CORRECTIVE ACTION.





























org_c	mod	bl_no_ind	inv_subcl	tsk_sts_c	sched_e	actf_or_e	sasr_usg_group_to														
d	ex	buno	acft_tsn	pn	cage	serno	pos_cd	wuc	nomen	_cd	tsd	tsn	ass_cd	name_1	t	xpntr	sched_dt	ng_rpl_cn	usg_remn	remng_qt	gether_fl
GC4	15	168616	1846.2	901-364-201-107	97499	SP-E149462			4920 AUXILIARY POWER UNIT - SP-E149462	AOS		5073	APU	ACTV	10000			10000	4927		0
GC4	15	168616	1846.2	901-034-601-113	77272	VD3-318			5520 ELEVATOR ASSY - VD3-318	AHF		1846.2	SRD	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-034-900-111	97499	VD2-171	LH		5541 RUDDER ASSY - VD2-171 (LH)	AFH		2864.2	SRC	ACTV	10000			8982	7135.8		0
GC4	15	168616	1846.2	901-034-900-111	77272	AN2-51	RH		5542 RUDDER ASSY - AN2-51 (RH)	AFH		2504.2	SRC	ACTV	10000			9342	7495.8		0
GC4	15	168616	1846.2	901-033-800-141	97499	CP218367			5731 SUPPORT ASSY - CP218367	AFH		1846.2	ASR	ACTV	7964			7964	6117.8		0
GC4	15	168616	1846.2	901-033-800-142	97499	CP218368			5732 SUPPORT ASSY - CP218368	AFH		1846.2	ASR	ACTV	7964			7964	6117.8	6117.8	0
GC4	15	168616	1846.2	901-044-001-113	97499	BH182667	LH		6321 PROPTOR GEARBOX ASSY - BH182667 (LH)	AFH		1152.2	ASR	ACTV	30000			30694	28847.8	5247.8	0
GC4	15	168616	1846.2	901-044-002-115	97499	BH548455	RH		6322 PROPTOR GEARBOX ASSY - BH548455 (RH)	AFH		845.2	ASR	ACTV	30000			31001	29154.8	5554.8	0
GC4	15	168616	1846.2	901-045-001-105	97499	BH311900	LH		6323 TILT AXIS GB ASSY LH - BH311900 (LH)	AFH		1846.2	ASR	ACTV	30000			30000	28153.8	28153.8	0
GC4	15	168616	1846.2	901-045-002-105	97499	BH300464	RH		6324 TILT AXIS GB ASSY RH - BH300464 (RH)	AFH		1846.2	ASR	ACTV	30000			30000	28153.8	28153.8	0
GC4	15	168616	1846.2	901-046-381-101	97499	US41			6360 STRUT ASSY - US41	AFH		1846.2	SRC	ACTV	30000			30000	28153.8		0
GC4	15	168616	1846.2	D8565/7-2	81349	3344			242004 BATTERY - 03344	CMON			0	SRC	ACTV	36	11/1/2025	23:59			0
GC4	15	168616	1846.2	DK130	94970	ST58334			256005 SONAR BEACON - ST58334	CMON			0	SRC	ACTV	72	6/30/2025	23:59			0
GC4	15	168616	1846.2	132-008	6535	EN002859	FW		262001 PORTABLE FIRE EXTINGUISHER (CO2) - EN002859 (FW)	CMON			0	SRC	ACTV	60	3/31/2024	23:59			0
GC4	15	168616	1846.2	132-008	6535	EN002620	AF		262002 PORTABLE FIRE EXTINGUISHER (CO2) - EN002620 (AF)	CMON			0	SRC	ACTV	60	11/30/2023	23:59			0
GC4	15	168616	1846.2	901-369-201-101	97499	828	LH		262102 BOTTLE ASSY, FIRE EXT - 0828	CMON			0	SRC	ACTV	60	9/30/2024	23:59			0
GC4	15	168616	1846.2	3205AS158	30003	3746	S589	3	262103 GENERATOR, GAS (S589) - 3746 (S589	3)	3	3	3	3	3	3	3	3	3	3	3
GC4	15	168616	1846.2	3205AS158	30003	3739	S589	4	262105 GENERATOR, GAS (S589) - 3739 (S589	4)	4	4	4	4	4	4	4	4	4	4	4
GC4	15	168616	1846.2	3205AS158	30003	3648	S589	5	262107 GENERATOR, GAS (S589) - 3648 (S589	5)	5	5	5	5	5	5	5	5	5	5	5
GC4	15	168616	1846.2	901-369-201-101	97499	276	RH		262202 BOTTLE ASSY, FIRE EXT - 0276	CMON			0	SRC	ACTV	60	10/31/2024	23:59			0
GC4	15	168616	1846.2	3205AS158	30003	4106	S589	3	262204 GENERATOR, GAS (S589) - 4106 (S589	3)	3	3	3	3	3	3	3	3	3	3	3
GC4	15	168616	1846.2	3205AS158	30003	4096	S589	4	262206 GENERATOR, GAS (S589) - 4096 (S589	4)	4	4	4	4	4	4	4	4	4	4	4
GC4	15	168616	1846.2	3205AS158	30003	4093	S589	5	262208 GENERATOR, GAS (S589) - 4093 (S589	5)	5	5	5	5	5	5	5	5	5	5	5
GC4	15	168616	1846.2	3205AS159	30003	3839	S590	1	262301 GENERATOR, GAS (S590) - 3839 (S590	1)	1	1	1	1	1	1	1	1	1	1	1
GC4	15	168616	1846.2	3205AS159	30003	3840	S590	2	262303 GENERATOR, GAS (S590) - 3840 (S590	2)	2	2	2	2	2	2	2	2	2	2	2
GC4	15	168616	1846.2	3205AS159	30003	3842	S590	3	262305 GENERATOR, GAS (S590) - 3842 (S590	3)	3	3	3	3	3	3	3	3	3	3	3
GC4	15	168616	1846.2	3205AS159	30003	3843	S590	4	262307 GENERATOR, GAS (S590) - 3843 (S590	4)	4	4	4	4	4	4	4	4	4	4	4
GC4	15	168616	1846.2	3205AS159	30003	3845	S590	5	262309 GENERATOR, GAS (S590) - 3845 (S590	5)	5	5	5	5	5	5	5	5	5	5	5
GC4	15	168616	1846.2	3205AS159	30003	7044	S590	6	262311 GENERATOR, GAS (S590) - 7044 (S590	6)	6	6	6	6	6	6	6	6	6	6	6
GC4	15	168616	1846.2	3205AS157	30003	786	S591	7	262313 GENERATOR, GAS (S591) - 786 (S591	7)	7	7	7	7	7	7	7	7	7	7	7
GC4	15	168616	1846.2	3205AS156	30003	1379	S592	1	263105 GENERATOR, GAS (S592) - 1379 (S592	1)	1	1	1	1	1	1	1	1	1	1	1
GC4	15	168616	1846.2	3205AS160	30003	1393	S593	2	263107 GENERATOR, GAS (S593) - 1393 (S593	2)	2	2	2	2	2	2	2	2	2	2	2
GC4	15	168616	1846.2	3205AS160	30003	1401	S593	2	263206 GENERATOR, GAS (S593) - 1401 (S593	2)	2	2	2	2	2	2	2	2	2	2	2
GC4	15	168616	1846.2	3205AS160	30003	1406	S593	2	263208 GENERATOR, GAS (S593) - 1406 (S593	2)	2	2	2	2	2	2	2	2	2	2	2
GC4	15	168616	1846.2	918000	3R5K2	1074	LH		263302 VALVE AND BOTTLE ASSY - 001074	CMON			0	SRC	ACTV	72	9/30/2024	23:59			0
GC4	15	168616	1846.2	918000	3R5K2	1242	RH		263402 VALVE AND BOTTLE ASSY - 001242 (RH)	CMON			0	SRC	ACTV	72	11/30/2025	23:59			0
GC4	15	168616	1846.2	D8565/6-1	81349	4114003			272119 BATTERY ASSEMBLY - 4114003	CMON			0	SRC	ACTV	36	6/2/2025	23:59			0
GC4	15	168616	1846.2	901-382-012-105	77272	3114	LOO		275001 ACTUATOR ELECTRO-ME - 03114 (LOO)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-012-105	77272	2853	ROO		275002 ACTUATOR ELECTRO-ME - 02853 (ROO)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-012-105	77272	3287	LIO		275003 ACTUATOR ELECTRO-ME - 03287	AFH		1164.6	SRC	ACTV	10000			10681.6	8835.4		0
GC4	15	168616	1846.2	901-382-012-105	77272	3252	RIO		275004 ACTUATOR ELECTRO-ME - 03252	AFH		1319.6	SRC	ACTV	10000			10526.6	8680.4		0
GC4	15	168616	1846.2	901-382-012-105	77272	3112	LIO		275005 ACTUATOR ELECTRO-ME - 03112 (LIO)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-012-105	77272	1522	RIO		275006 ACTUATOR ELECTRO-ME - 01522	AFH		1815.6	SRC	ACTV	10000			10030.6	8184.4		0
GC4	15	168616	1846.2	901-382-012-105	77272	2864	LII		275007 ACTUATOR ELECTRO-ME - 02864 (LII)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-012-105	77272	3193	RII		275008 ACTUATOR ELECTRO-ME - 03193 (RII)	AFH		1410.6	SRC	ACTV	10000			10435.6	8589.4		0
GC4	15	168616	1846.2	901-382-013-109	77272	1135	LH		275009 ACTUATOR, ELEVATOR - 01135 (LH)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-013-109	77272	1137	CT		275010 ACTUATOR, ELEVATOR - 01137 (CT)	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-382-013-109	77272	1362	RH		275011 ACTUATOR, ELEVATOR - 01362	AFH		1017.5	SRC	ACTV	10000			10828.7	8982.5		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD002511	LII		275013 ACTUATOR, SWASHPLATE, SERVO - BD002511 (LII)	AFH		1846.2	SRC	ACTV	2500			2500	653.8		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD002965	CTR		275014 ACTUATOR, SWASHPLATE, SERVO - BD002965 (CTR)	AFH		1023	SRC	ACTV	2500			3323.2	1477		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD002689	CTL		275015 ACTUATOR, SWASHPLATE, SERVO - BD002689 (CTL)	AFH		1270.2	SRC	ACTV	2500			3076	1229.8		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD002089	RII		275016 ACTUATOR, SWASHPLATE, SERVO - BD002089 (RII)	AFH		1747.2	SRC	ACTV	2500			2599	752.8		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD002479	LO		275017 ACTUATOR, SWASHPLATE, SERVO - BD002479 (LO)	AFH		1846.2	SRC	ACTV	2500			2500	653.8		0
GC4	15	168616	1846.2	901-382-011-115	77272	BD001950	RO		275018 ACTUATOR, SWASHPLATE, SERVO - BD001950	AFH		1248.6	SRC	ACTV	2500			3097.6	1251.4		0
GC4	15	168616	1846.2	901-382-014-105	77272	AA03534	LH		275022 ACTUATOR, RUDDER - AA0353468 (LH)	AFH		1326.6	SRC	ACTV	10000			10519.6	8673.4		0
GC4	15	168616	1846.2	901-382-014-105	77272	AA03534	RH		275023 ACTUATOR, RUDDER - AA0353468	AFH		794.6	SRC	ACTV	10000			11051.6	9205.4		0
GC4	15	168616	1846.2	901-366-654-109	77272	S-292	LFWD		282305 PUMP RECIPROCATING - S-292 (LFWD)	AFH	45	1469	SRC	ACTV	1680			3481.2	1635		0
GC4	15	168616	1846.2	901-366-654-109	77272	S-475	RFWD		282405 PUMP RECIPROCATING - S-475	AFH		45	SRD	ACTV	1680			3481.2	1635		0
GC4	15	168616	1846.2	901-380-032-107	77272	760			291102 CONTROL NAVIGATIONAL - 0760	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-380-035-109	77272	756			291104 MODULE, SWITCHING VALVE - 0756	AFH		1846.2	SRC	ACTV	10000			10000	8153.8		0
GC4	15	168616	1846.2	901-380-034-109	77272	92	LH		291105 VALVE REGULATING SYSTEM - 0092 (LH)	AFH		1433.2	SRC	ACTV	2500			2913	1066.8		0
GC4	15	168616	1846.2	901-																	

GC4	15	168616	1846.2	901-011-124-105	97499	MJ000422 RRED	622838	BLADE FOLD SUPPORT ASSY - MJ000422 (RRED)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-124-106	97499	MJ000508 RRED	622840	BLADE FOLD SUPPORT ASSY - MJ000508 (RRED)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-124-106	97499	MJ000526 RGRN	622842	BLADE FOLD SUPPORT ASSY - MJ000526 (RGRN)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-124-105	97499	MJ000476 RGRN	622844	BLADE FOLD SUPPORT ASSY - MJ000476 (RGRN)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-124-105	97499	MJ000429 RWHHT	622846	BLADE FOLD SUPPORT ASSY - MJ000429 (RWHHT)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-124-106	97499	MJ000523 RWHHT	622848	BLADE FOLD SUPPORT ASSY - MJ000523 (RWHHT)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-420-101	97499	BH319894 LRED	623111	PITCH LINK ASSY - BH319894 (LRED)	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-011-420-101	97499	BH319896 LGRN	623117	PITCH LINK ASSY - BH319896 (LGRN)	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-011-420-101	97499	BH319895 LWHHT	623119	PITCH LINK ASSY - BH319895 (LWHHT)	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-011-420-101	97499	BH319883 RRED	623212	PITCH LINK ASSY - BH319883 (RRED)	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-011-420-101	97499	BH319897 RGRN	623218	PITCH LINK ASSY - BH319897 (RGRN)	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-011-420-101	97499	BH319879 RWHHT	623220	PITCH LINK ASSY - BH319879	AFH	115	1846.2	ASR	ACTV	315	2046.6	200.4	200.4
GC4	15	168616	1846.2	901-047-523-101	97499	GR2623 LH6	631101	DRIVE SHAFT ASSY - GR2623 (LH6)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-521-101	97499	GR2507 RWH	631103	DRIVESHAFT ASSY ISS - GR2507 (LH5)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3475 LH4	631105	DRIVE SHAFT ASSY - GR3475 (LH4)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3471 LH3	631106	DRIVE SHAFT ASSY - GR3471 (LH3)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3378 LH2	631107	DRIVE SHAFT ASSY - GR3378 (LH2)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-317-101	97499	GR2530 LH1	631108	DRIVE SHAFT ASSY - GR2530 (LH1)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-523-101	97499	GR2621 RH6	631109	DRIVE SHAFT ASSY - GR2621 (RH6)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-521-101	97499	GR2505 RH5	631110	DRIVESHAFT ASSY ISS - GR2505 (RH5)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3399 RH4	631111	DRIVE SHAFT ASSY - GR3399 (RH4)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3474 RH3	631112	DRIVE SHAFT ASSY - GR3474 (RH3)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-519-103	97499	GR3472 RH2	631113	DRIVE SHAFT ASSY - GR3472 (RH2)	AFH	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-047-317-101	97499	GR2676 RH1	631114	DRIVE SHAFT ASSY - GR2676	AFH	1017	SRC	ACTV	10000	10829.2	8983	0	
GC4	15	168616	1846.2	901-044-055-103	97499	BH340078 LH	632101	QUILL ASSY - BH340078 (LH)	AFH	45	2119.7	ASR	ACTV	800	2601.2	755	755
GC4	15	168616	1846.2	901-044-913-105	97499	FN111 FL	632115	BRACKET ASSY - FN111 (FL)	AFH	746.2	SRC	ACTV	30000	31100	29253.8	0	
GC4	15	168616	1846.2	901-044-913-106	97499	FN000007 AL	632117	BRACKET ASSY - FN000007 (AL)	AFH	746.2	SRC	ACTV	30000	31100	29253.8	0	
GC4	15	168616	1846.2	901-044-056-103	97499	BH654903 RH	632202	QUILL ASSY - BH654903 (RH)	AFH	45	1105.3	ASR	ACTV	800	2601.2	755	755
GC4	15	168616	1846.2	901-044-913-106	97499	FN136 FR	632216	BRACKET ASSY - FN136 (FR)	AFH	845.2	SRC	ACTV	30000	31001	29154.8	0	
GC4	15	168616	1846.2	901-044-913-105	97499	FN108 AR	632218	BRACKET ASSY - FN108 (AR)	AFH	845.2	SRC	ACTV	30000	31001	29154.8	0	
GC4	15	168616	1846.2	901-046-001-117	97499	BH269554	632505	GEARBOX ASSY, MOWG - BH269554	AFH	1846.2	SRC	ACTV	30000	30000	28153.8	28153.8	
GC4	15	168616	1846.2	901-044-361-111	97499	MO267 LH	712170	RING ASSY-GIMBAL - MO267 (LH)	AFH	2348.2	SRC	ACTV	11000	10498	8651.8	8651.8	
GC4	15	168616	1846.2	901-044-361-111	97499	MO307 RH	712270	RING ASSY-GIMBAL - MO307	AFH	1309.4	ASR	ACTV	11000	11336.8	9690.6	9690.6	
GC4	15	168616	1846.2	23077311	1E0F1	A20941	723501	ROTOR ASSY, COMPRESSOR - A20941	EFH	2199	ASR	ACTV	45300	45300	43101	6001	
GC4	15	168616	1846.2	23090451	63005	A22563	725201	ROTOR ASSY, COMPRESSOR - A22563	EFH	1796.9	ASR	ACTV	45300	45300	43503.1	6403.1	
GC4	15	168616	1846.2	23089993	1E0F1	A50882	725201	ROTOR ASSY, GS TURBINE - A50882	EFH	2199	ASR	ACTV	36000	36000	33801	12009	
GC4	15	168616	1846.2	23089993	1E0F1	A51687	725201	ROTOR ASSY, GS TURBINE - A51687	EFH	1796.9	ASR	ACTV	36000	36000	34203.1	11603.1	
GC4	15	168616	1846.2	23074155	1E0F1	A60872	725801	ROTOR ASSY, POWER TURBINE - A60872	EFH	2199	ASR	ACTV	21800	21800	19601	7701	
GC4	15	168616	1846.2	23074155	1E0F1	A61671	725801	ROTOR ASSY, POWER TURBINE - A61671	EFH	1796.9	ASR	ACTV	21800	21800	20031.1	8103.1	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLN05	1	731101 NOZZLE, FUEL - VN1BLN0550 (1)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BKU01	2	731101 NOZZLE, FUEL - VN1BKU0741 (2)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLB13	3	731101 NOZZLE, FUEL - VN1BLB1320 (3)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLH06	4	731101 NOZZLE, FUEL - VN1BLH0606 (4)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BMB1	5	731101 NOZZLE, FUEL - VN1BMB1639 (5)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BKU07	6	731101 NOZZLE, FUEL - VN1BKU0737 (6)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLH16	7	731101 NOZZLE, FUEL - VN1BLH1623 (7)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BMU0	8	731101 NOZZLE, FUEL - VN1BMU0342 (8)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BKP09	9	731101 NOZZLE, FUEL - VN1BKP0903 (9)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLN08	10	731101 NOZZLE, FUEL - VN1BLN0848 (10)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLP13	11	731101 NOZZLE, FUEL - VN1BLP1314 (11)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLA15	12	731101 NOZZLE, FUEL - VN1BLA1564 (12)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLN08	13	731101 NOZZLE, FUEL - VN1BLN0859 (13)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLN08	14	731101 NOZZLE, FUEL - VN1BLN0841 (14)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BLE07	15	731101 NOZZLE, FUEL - VN1BLE0775 (15)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BKU07	16	731101 NOZZLE, FUEL - VN1BKU0735 (16)	EFH	1720	SRC	ACTV	5000	5479	3280	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	1	731101 NOZZLE, FUEL - VN1BHC1340 (1)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	2	731101 NOZZLE, FUEL - VN1BHC1341 (2)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	3	731101 NOZZLE, FUEL - VN1BHC1342 (3)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	4	731101 NOZZLE, FUEL - VN1BHC1343 (4)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	5	731101 NOZZLE, FUEL - VN1BHC1345 (5)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	6	731101 NOZZLE, FUEL - VN1BHC1347 (6)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	7	731101 NOZZLE, FUEL - VN1BHC1350 (7)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	8	731101 NOZZLE, FUEL - VN1BHC1356 (8)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	9	731101 NOZZLE, FUEL - VN1BHC1358 (9)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	10	731101 NOZZLE, FUEL - VN1BHC1360 (10)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	11	731101 NOZZLE, FUEL - VN1BHC1363 (11)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHC1	12	731101 NOZZLE, FUEL - VN1BHC1623 (12)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1BHD00	13	731101 NOZZLE, FUEL - VN1BHD0259 (13)	EFH	1796.9	SRC	ACTV	5000	5000	3203.1	0	
GC4	15	168616	1846.2	23087210	1E0F1	VN1B											

GC4	15	168616	1846.2	901-331-954-131	77272 STR-RLA-6 RLA	57805518 BEARING, SPHERICAL - STR-RLA-616 (RLA)	CYC	48	STR	ACTV	500		467	452	0
GC4	15	168616	1846.2	901-011-208-101	77499 A-297 LRED	62210707 PENDULUM CAP ASSY - A-297 (LRED)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 A-284 LRED	62210709 PENDULUM CAP ASSY - A-284 (LRED)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-208-101	77499 A-195 LGRN	62210715 PENDULUM CAP ASSY - A-195 (LGRN)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 A-305 LGRN	62210717 PENDULUM CAP ASSY - A-305 (LGRN)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-208-101	77499 A-214 LWHIT	62210723 PENDULUM CAP ASSY - A-214 (LWHT)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 A-304 LWHIT	62210725 PENDULUM CAP ASSY - A-304 (LWHT)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-201-101	77499 A-97 LH	62210727 ADAPTER ASSY MAST - A-97 (LH)	AHF	3438.2	SRC	ACTV	30000		28408	26561.8	0
GC4	15	168616	1846.2	901-011-104-107	77499 BH273081 LRED	62211903 PROPROTOR GRIP - BH273081 (LRED)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-311-103-107	77499 LK1813 LRED	62211909 BEARING, CF - LK1813 (LRED)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-106-113	77499 HD965 LRED	62211911 CF FITTING - HD965 (LRED)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-104-107	77499 A-1125 LGRN	62211917 PROPROTOR GRIP - A-1125 (LGRN)	AHF	2893.2	SRC	ACTV	10000		8953	7106.8	0
GC4	15	168616	1846.2	901-311-103-107	77499 LK2882 LGRN	62211923 BEARING, CF - LK2882 (LGRN)	AHF	872.2	SRC	ACTV	2500		3474	1627.8	0
GC4	15	168616	1846.2	901-011-106-113	77499 HD963 LGRN	62211925 CF FITTING - HD963 (LGRN)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-104-107	77499 BH291826 LWHT	62211931 PROPROTOR GRIP - BH291826 (LWHT)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-311-103-107	77499 LK1817 LWHT	62211937 BEARING, CF - LK1817 (LWHT)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-106-113	77499 HD981 LWHT	62211939 CF FITTING - HD981 (LWHT)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-502-143	77499 BH325868 LH	62211945 LH YOKE ASSEMBLY - BH325868 (LH)	AHF	1846.2	SRC	ACTV	3600		3600	1753.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2570 LRED	62211947 BEAM ASSY - LK2570 (LRED)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2792 LRED	62211949 SPINDLE ASSY - LK2792 (LRED)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2568 LGRN	62211951 BEAM ASSY - LK2568 (LGRN)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2762 LGRN	62211953 SPINDLE ASSY - LK2762 (LGRN)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2567 LWHT	62211955 BEAM ASSY - LK2567 (LWHT)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2761 LWHT	62211957 SPINDLE ASSY - LK2761 (LWHT)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-208-101	77499 AZ485 RRED	62220808 PENDULUM CAP ASSY - AZ485 (RRED)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 WGO0080:RRED	62220810 PENDULUM CAP ASSY - WGO00803 (RRED)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-208-101	77499 AZ214 RGRN	62220816 PENDULUM CAP ASSY - AZ214 (RGRN)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 WGO0081:RGRN	62220818 PENDULUM CAP ASSY - WGO00811 (RGRN)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-208-101	77499 AZ256 RWHT	62220824 PENDULUM CAP ASSY - AZ256 (RWHT)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-207-101	77499 WGO0080:RWHT	62220826 PENDULUM CAP ASSY - WGO00802 (RWHT)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-201-101	77499 BH258358 RH	62220828 ADAPTER ASSY MAST - BH258358 (RH)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-104-108	77499 BH306795 RRED	62222004 PROPROTOR GRIP - BH306795 (RRED)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-311-103-109	77499 CB1098 RRED	62222010 BEARING, CF - CB1098 (RRED)	AHF	1816.2	SRC	ACTV	2500		2530	683.8	0
GC4	15	168616	1846.2	901-011-106-114	77499 HD924 RRED	62222012 CF FITTING - HD924 (RRED)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-103-108	77499 BH301550 RGRN	62222018 PROPROTOR GRIP - BH301550 (RGRN)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-311-103-107	77499 LK1846 RGRN	62222024 BEARING, CF - LK1846 (RGRN)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-106-114	77499 HD332 RGRN	62222026 CF FITTING - HD332 (RGRN)	AHF	1846.2	SRC	ACTV	3000		3000	28153.8	0
GC4	15	168616	1846.2	901-011-104-108	77499 BH313637 RWHT	62222032 PROPROTOR GRIP - BH313637 (RWHT)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-311-103-107	77499 LK3971 RWHT	62222038 BEARING, CF - LK3971	AHF	43	SRC	ACTV	2500		4303.2	2457	0
GC4	15	168616	1846.2	901-011-106-114	77499 HD538 RWHT	62222040 CF FITTING - HD538 (RWHT)	AHF	1846.2	SRC	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	901-011-502-144	77499 BH280950 RH	62222046 YOKE ASSY - BH280950 (RH)	AHF	1846.2	SRC	ACTV	3600		3600	1753.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2516 RRED	62222048 BEAM ASSY - LK2516 (RRED)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2791 RRED	62222050 SPINDLE ASSY - LK2791 (RRED)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2507 RGRN	62222052 BEAM ASSY - LK2507 (RGRN)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2760 RGRN	62222054 SPINDLE ASSY - LK2760 (RGRN)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-112-109	77499 LK2561 RWHT	62222056 BEAM ASSY - LK2561 (RWHT)	AHF	1846.2	SRC	ACTV	2500		2500	653.8	0
GC4	15	168616	1846.2	901-011-110-107	77499 LK2790 RWHT	62222058 SPINDLE ASSY - LK2790 (RWHT)	AHF	1846.2	SRC	ACTV	10000		10000	8153.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2846 LLER	62276707 BLADE FOLD LATCH PIN - AZ2846 (LLER)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2984 LTER	62276907 BLADE FOLD LATCH PIN - AZ2984 (LTER)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ3096 LLEG	62277107 BLADE FOLD LATCH PIN - AZ3096 (LLEG)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ3103 LLEG	62277307 BLADE FOLD LATCH PIN - AZ3103 (LLEG)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2995 LLEW	62277507 BLADE FOLD LATCH PIN - AZ2995 (LLEW)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ3009 LLEW	62277707 BLADE FOLD LATCH PIN - AZ3009 (LLEW)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2639 RLER	62286808 BLADE FOLD LATCH PIN - AZ2639 (RLER)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2690 RTER	62287008 BLADE FOLD LATCH PIN - AZ2690 (RTER)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2781 RLEG	62287208 BLADE FOLD LATCH PIN - AZ2781 (RLEG)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2841 RTEG	62287408 BLADE FOLD LATCH PIN - AZ2841 (RTEG)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2698 RLEW	62287608 BLADE FOLD LATCH PIN - AZ2698 (RLEW)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-325-101	77499 AZ2779 RTEW	62287808 BLADE FOLD LATCH PIN - AZ2779 (RTEW)	AHF	1846.2	SRC	ACTV	5800		5800	3953.8	0
GC4	15	168616	1846.2	901-011-400-109	77499 BH310465 LH	62311301 SWASHPLATE ASSY - BH310465 (LH)	AHF	1479.5	ASR	ACTV	30000		30566.7	28520.5	2620.5
GC4	15	168616	1846.2	901-011-403-107	77499 ZX1091 LH	62311303 TUBE, SWASHPLATE DRIVE - ZX1091	AHF	360.5	SRC	ACTV	30000		31485.7	29639.5	0
GC4	15	168616	1846.2	901-011-410-105	77499 BH388000 LH	62311501 LINK, ANTI-DIVE - BH388000 (LH)	AHF	1807.2	SRC	ACTV	30000		30039	28192.8	0
GC4	15	168616	1846.2	901-011-407-109	77499 A-690 LH	62311507 BASE ASSY - A-690 (LH)	AHF	1807.2	SRC	ACTV	30000		30039	28192.8	0
GC4	15	168616	1846.2	901-011-400-110	77499 A-171 RH	62321402 SWASHPLATE ASSEMBLY - A-171 (RH)	AHF	2905.5	ASR	ACTV	30000		28940.7	27094.5	3739.5
GC4	15	168616	1846.2	901-011-403-107	77499 DN2033 RH	62321404 TUBE, SWASHPLATE DRIVE - DN2033 (RH)	AHF	954.2	SRC	ACTV	30000		30892	29045.8	0
GC4	15	168616	1846.2	901-011-410-105	77499 A-815 RH	62321602 LINK, ANTI-DIVE - A-815 (RH)	AHF	783.4	SRC	ACTV	30000		31062.8	29216.6	0
GC4	15	168616	1846.2	901-011-407-116	77499 BH246959 RH	62321608 BASE ASSY - BH246959	AHF	312.9	SRC	ACTV	30000		31533.3	29687.1	0
GC4	15	168616	1846.2	20-098-8-23D	77499 GCS-1124 LH	71211007 BOLT SHEAR - GCS-1124 (LH)	AHF	1846.2	STR	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	20-089-8D31	77499 GCS-1936 LH	71211009 BOLT, SHEAR - GCS-1936 (LH)	AHF	1846.2	STR	ACTV	30000		30000	28153.8	0
GC4	15	168616	1846.2	20-089-8D31	77499 GCS-1937 LH	71212007 BOLT, SHEAR - GCS-1937 (LH)	AHF	1846.2	STR	ACTV</					

GC4	15	168616	1846.2	901-011-115-101	97499	BH169611	LGRN	6.22E+09	RETAINER SET - BH169611 (LGRN)	AFH	1846.2	SRC	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK4048		6.22E+09	BEARING - LK4048	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK4056		6.22E+09	BEARING - LK4056	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4150	LGRN1	6.22E+09	BOLT - DI4150 (LGRN A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4159	LTEGRN	6.22E+09	BOLT - DI4159 (LTEGRN)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4441	LGRN1	6.22E+09	BOLT, CLOSE TOLERANCE - DI4441 (LGRN A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4434	LTEGRN	6.22E+09	BOLT, CLOSE TOLERANCE - DI4434 (LTEGRN)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-011-115-101	97499	BH169617	LWHT	6.22E+09	RETAINER SET - BH169617 (LWHT)	AFH	1846.2	SRC	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK4023		6.22E+09	BEARING - LK4023	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK3637		6.22E+09	BEARING - LK3637	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4154	LWHT1	6.22E+09	BOLT - DI4154 (LWHT1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4160	LTEWHT	6.22E+09	BOLT - DI4160 (LTEWHT)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4419	LWHT1	6.22E+09	BOLT, CLOSE TOLERANCE - DI4419 (LWHT A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4456	LTEWHT	6.22E+09	BOLT, CLOSE TOLERANCE - DI4456 (LTEWHT)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD1	RLED	6.22E+09	BUSHING, SLEEVE - 616TBD1 (RLED)	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD2	RTERED	6.22E+09	BUSHING, SLEEVE - 616TBD2 (RTERED)	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD3		6.22E+09	BUSHING, SLEEVE - 616TBD3	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD4	RTEWHT	6.22E+09	BUSHING, SLEEVE - 616TBD4 (RTEWHT)	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD5	RLEGRN	6.22E+09	BUSHING, SLEEVE - 616TBD5 (RLEGRN)	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-011-226-101	97499	616TBD6	RTEGRN	6.22E+09	BUSHING, SLEEVE - 616TBD6 (RTEGRN)	AFH	2325.2	STR	ACTV	22300	21821	19974.8	0
GC4	15	168616	1846.2	901-311-106-105	97499	LK2142	RRED	6.22E+09	BEARING - LK2142 (RRED)	AFH	448.9	SRC	ACTV	30000	31397.3	29551.1	0
GC4	15	168616	1846.2	901-311-106-105	97499	LK2321	RGRN	6.22E+09	BEARING - LK2321 (RGRN)	AFH	448.9	SRC	ACTV	30000	31397.3	29551.1	0
GC4	15	168616	1846.2	901-311-106-105	97499	LK2919	RWHT	6.22E+09	BEARING - LK2919 (RWHT)	AFH	448.9	SRC	ACTV	30000	31397.3	29551.1	0
GC4	15	168616	1846.2	901-011-115-101	97499	BH169616	RRED1	6.22E+09	RETAINER SET - BH169616 (RRED)	AFH	1846.2	SRC	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK3886		6.22E+09	BEARING - LK3886	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK3757		6.22E+09	BEARING - LK3757	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4153	RLED	6.22E+09	BOLT - DI4153 (RLED A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4139	RTERED	6.22E+09	BOLT - DI4139 (RTERED)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4396	RLED	6.22E+09	BOLT, CLOSE TOLERANCE - DI4396 (RRED A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4340	RTERED	6.22E+09	BOLT, CLOSE TOLERANCE - DI4340 (RTERED)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-011-115-101	97499	BH169606	RGRN1	6.22E+09	RETAINER SET - BH169606 (RGRN)	AFH	1846.2	SRC	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK3794		6.22E+09	BEARING - LK3794	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK4029		6.22E+09	BEARING - LK4029	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4143	RLEGRN	6.22E+09	BOLT - DI4143 (RGRN A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4142	RTEGRN	6.22E+09	BOLT - DI4142 (RTEGRN)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4413	RLEGRN	6.22E+09	BOLT, CLOSE TOLERANCE - DI4413 (RGRN A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4401		6.22E+09	BOLT, CLOSE TOLERANCE - DI4401	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-011-115-101	97499	BH169614	RWHT1	6.22E+09	RETAINER SET - BH169614 (RWHT)	AFH	1846.2	SRC	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK4040		6.22E+09	BEARING - LK4040	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-311-105-101	97499	LK3601		6.22E+09	BEARING - LK3601	AFH	1846.2	SRC	ACTV	2500	2500	653.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4144	RWHT1	6.22E+09	BOLT - DI4144 (RWHT A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-310-106-101	97499	DI4166	RTEWHT	6.22E+09	BOLT - DI4166 (RTEWHT)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4383	RLEWHT	6.22E+09	BOLT, CLOSE TOLERANCE - DI4383 (RWHT A1)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-311-110-101	97499	DI4414	RTEWHT	6.22E+09	BOLT, CLOSE TOLERANCE - DI4414 (RTEWHT)	AFH	1846.2	SRC	ACTV	13250	13250	11403.8	0
GC4	15	168616	1846.2	901-036-580-107	77272	CP1373	LH	3210011W	PIN, DRAG STRUT - CP1373 (LH)	LDNG	3803	SRC	ACTV	7500	7500	3697	0
GC4	15	168616	1846.2	901-036-580-107	77272	CP1442	RH	3210021W	PIN, DRAG STRUT - CP1442 (RH)	LDNG	3803	SRC	ACTV	7500	7500	3697	0
GC4	15	168616	1846.2	901-031-582-105	77272	STR616	(-105)	5323C5	SPLICE FITTING - STR616 ((-105))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-106	77272	STR616	(-106)	5323C6	SPLICE FITTING - STR616 ((-106))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-107	77272	STR616	(-107)	5323C7	SPLICE FITTING - STR616 ((-107))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-115	77272	STR616	(-115)	5323C8	SPLICE FITTING - STR616 ((-115))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-109	77272	STR616	(-109)	5323C9	SPLICE FITTING - STR616 ((-109))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-110	77272	STR616	(-110)	5323CA	SPLICE FITTING - STR616 ((-110))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-113	77272	STR616	(-113)	5323CB	SPLICE FITTING - STR616 ((-113))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-114	77272	STR616	(-114)	5323CC	SPLICE FITTING - STR616 ((-114))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-101	77272	STR616	(-101)	5323D1	SPLICE FITTING - STR616 ((-101))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-103	77272	STR616	(-103)	5323D2	SPLICE FITTING - STR616 ((-103))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-031-582-111	77272	STR616	(-111)	5323D3	SPLICE FITTING - STR616 ((-111))	AFH	1846.2	STR	ACTV	10000	10000	8153.8	0
GC4	15	168616	1846.2	901-311-632-103	77272	GCS-9038	LH	533A21	MLG DRAG STRUT FITTING - GCS-9038 (LH)	AFH	1846.2	STR	ACTV	18600	18600	16753.8	0
GC4	15	168616	1846.2	901-031-690-101	77272	GCS-9036		533AF3	FITTING ASSY FWD - GCS-9036	AFH	1846.2	STR	ACTV	16100	16100	14253.8	0
GC4	15	168616	1846.2	901-311-632-103	77272	GCS-9039	RH	534A24	MLG DRAG STRUT FITTING - GCS-9039 (RH)	AFH	1846.2	STR	ACTV	18600	18600	16753.8	0
GC4	15	168616	1846.2	901-031-690-102	77272	GCS-9037		534AF3	FITTING ASSY FWD - GCS-9037	AFH	1846.2	STR	ACTV	16100	16100	14253.8	0
GC4	15	168616	1846.2	901-032-158-109	97499	GC4236-2	UNBBD	57210F01	RIB ASSY - GC4236-2 (UNBBD)	AFH	1846.2	STR	ACTV	10300	10300	8453.8	0
GC4	15	168616	1846.2	901-332-117-101	97499	GC4236-2	UNBBD	57210F19	BEARING, PLAIN, SPHERICAL - GC4236-2 (UNBBD)	AFH	1846.2	STR	ACTV	11454	11454	9607.8	0
GC4	15	168616	1846.2	901-032-158-104	97499	GC4236-2	RINBD	57210G01	RIB ASSY - GC4236-2 (RINBD)	AFH	1846.2	STR	ACTV	10300	10300	8453.8	0
GC4	15	168616	1846.2	901-332-117-101	97499	GC4236-2	RINBD	57210G19	BEARING, PLAIN, SPHERICAL - GC4236-2 (RINBD)	AFH	1846.2	STR	ACTV	11454	11454	9607.8	0
GC4	15	168616	1846.2	901-032-159-101	97499	GCS-9051	LOUTBD	57210H01	TIP RIB ASSY - GCS-9051	AFH	1846.2	STR	ACTV	1030			



## Name Index

In anticipation of this report being released pursuant to the Freedom of Information Act and to improve readability, repeatedly used names have been omitted throughout the report and the reference names listed have been used in their place. Reference names are based on either their assigned billets or their roles in the mishap, where appropriate. Where no reference name is listed, the individual is referred to by name.

Name	Reference Name Used Throughout Report
(b) (6)	MRF-D Commanding Officer (CO)
	VMM-363 (REIN) CO, or Squadron CO
	MRF-D Executive Officer (XO)
	MRF-D Operations Officer (OpsO)
Major Tobin J. Lewis	Mishap Aircraft Commander (MAC), Mishap Squadron XO or Mishap Pilot #1 (MP1)
(b) (6)	Squadron AMO or AMO
	Squadron OpsO or OpsO
	H-1 Detachment (Det) Officer in Charge (OIC) or Acting OpsO
	VMM-363 (REIN)
	Lead Aircraft (LA)
	Mishap Aircraft (MA)
	MF
	MS
Captain Eleanor V. LeBeau	Mishap Pilot 2 (MP2)
(b) (6)	Section Lead Under Instruction (SLUI) or Mishap Pilot 3 (MP3)
	Mishap Pilot 4 (MP4)
	Escort Flight Leader (EFL), On Scene Commander (OSC)
	Operations Duty Officer (ODO)
	Department of Safety and Standardization (DOSS)
	Lima Company XO or Ground Force Commander (GFC)
	Fire Support Team Leader (FiST Leader)
	Maintenance Material Control Officer (MMCO)
	UH-1 Crew Chief
	Quality Assurance Chief (QA Chief)
	Maintenance Control Chief (MCC) or Safe for Flight Controller
	COMMSTRAT Rep
	Passenger 1 (P1)

Sergeant Schannon C. Arena	Lead Aircraft (LA) Crew Chief (CC)
(b) (6)	Platoon Corpsman
Corporal Spencer Collart	Mishap Aircraft CC
(b) (6)	Mishap Aircraft (MA) Aerial Observer (AO)
	Lead Aircraft (LA) AO
Dump Truck 11 (DK11)	Lead Aircraft (LA)
Dump Truck 12 (DK12)	Mishap Aircraft (MA)
(b) (6)	Plane Captain
	Passenger 2 (P2)

# 168616 Mishap (Darwin, AUS)

Flight Control System Findings



Controlled By: V-22 Fleet Support Team

CUI Category: CUI

Distribution/Dissemination Controls: C

POC: [joshua.h.barefoot.civ@us.navy.mil](mailto:joshua.h.barefoot.civ@us.navy.mil)

Enclosure (107)





## Pylon Conversion Actuator Left Nacelle



- Left Pylon Conversion Actuator was intact with left nacelle mounting lug and outboard wing section conversion actuator spindle (left nacelle and outboard wing section had separated from the aircraft wing and rotated approximately 180 degrees). Ball Screw Assembly Small (inner) Ball Screw was bent inwards towards nacelle. Backup Hydraulic Power Drive Unit (HPDU) was intact; both Upper and Lower Primary HPDUs were buried under the nacelle. Ball Screw Assembly and HPDUs experienced moderate to severe mechanical and thermal damage.
- Small Ball Screw was extended 44 threads, and Large Ball Screw was extended 46 threads which equates to a nacelle angle of approximately 66 degrees.



# Pylon Conversion Actuator Left Nacelle



Left Pylon Conversion Actuator  
Ball Screw Assembly



Left Pylon Conversion Actuator Backup HPDU





## Pylon Conversion Actuators Right Nacelle



- Right Pylon Conversion Actuator was intact with right nacelle mounting lug and outboard wing section conversion actuator spindle (right nacelle and outboard wing section had separated from the aircraft wing, rotated approximately 180 degrees and was flipped upside down). Lower Primary Hydraulic Power Drive Unit (HPDU) and Backup HPDU were intact. Upper Primary HPDU hydraulic motor and control module had fractured. Ball Screw Assembly and HPDUs had experienced moderate to severe mechanical and thermal damage.
- Small Ball Screw was extended 44 threads, and Large Ball Screw was extended 46 threads which equates to a nacelle angle of approximately 66 degrees.





# Pylon Conversion Actuators Right Nacelle



Right Pylon Conversion Actuator  
Ball Screw Assembly



Right Pylon Conversion Actuator  
Backup HPDU



Right Pylon Conversion Actuator  
Primary HPDU





## Swashplate Actuators Left Nacelle



- Swashplate Actuator cylinder bodies and control components experienced severe mechanical and thermal damage but were largely intact within the left nacelle. Both actuator mounting links that attach the actuators trunnion bearing to the gearbox transmission adaptor and the actuators trunnion bearing center bolts were intact. The actuators piston rod ends were no longer attached to the swashplate assembly non-rotating ring; the actuators rod end attach bolts and locking hardware were all intact. The actuators aft cylinder control manifolds and associated servo and solenoid control components had separated from the aft cylinders. Approximate measurements of the actuators piston rods (inches of exposed chrome) were taken:
  - Left Inboard Swashplate Actuator: 6.75 inches
  - Left Outboard Swashplate Actuator: 4.0 inches
  - Left Center Swashplate Actuator: 3.0 inches
- Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Swashplate Actuators, the actuators were operating in bypass mode. Any external forces on the attached swashplate control surface during the impact sequence could result in the actuators changing position.





## Swashplate Actuators Left Nacelle



Left Outboard and Left Center Swashplate Actuators



Left Inboard Swashplate Actuator





## Swashplate Actuators Right Nacelle



- Swashplate Actuator cylinder bodies and control components experienced severe mechanical and thermal damage but were largely intact within the right nacelle. Both actuator mounting links that attach the actuators trunnion bearing to the gearbox transmission adaptor and the actuators trunnion bearing center bolts were intact. The actuators piston rod end attach bolts and locking hardware were all intact with the swashplate assembly non-rotating ring. The actuators aft cylinder control manifolds and associated servo and solenoid control components had separated from the aft cylinders. Approximate measurements of the actuators piston rods (inches of exposed chrome) were taken:
  - Right Inboard Swashplate Actuator: 6.0 inches
  - Right Outboard Swashplate Actuator: 8.0 inches
  - Right Center Swashplate Actuator: 7.0 inches
- Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Swashplate Actuators, the actuators were operating in bypass mode. Any external forces on the attached swashplate control surface during the impact sequence could result in the actuators changing position.





## Swashplate Actuators Right Nacelle



Right Outboard Swashplate Actuator



Right Inboard Swashplate Actuator





# Flaperon Actuators Left Wing



- All actuator cylinder bodies and control components experienced moderate to severe mechanical and thermal damage. All actuator cylinder mounting clevis attachment bolts and locking hardware were intact. All piston rod end attachment bolts and locking hardware were intact.
  - Left Outboard Outboard Flaperon Actuator was detached from the wing and control surface. Piston rod had fractured and was no longer integral to the actuator cylinder; piston rod was bent and attached to the left outboard flaperon which had separate from the wing.
  - Left Outboard Inboard Flaperon Actuator was attached to the wing and detached from the control surface. Actuator cylinder mounting clevis was bent approximately 45 degrees outboard. Piston rod end had fractured from the piston from overload. Piston rod was extended approximately 10.25 inches.
  - Left Inboard Outboard Flaperon Actuator was detached from the wing and control surface. Piston rod was bent outboard and extended approximately 10.25 inches.
  - Left Inboard Inboard Flaperon Actuator was detached from the wing and control surface. Piston rod was extended approximately 11.00 inches.
- Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Flaperon Actuators, the actuators were operating in bypass mode. Any external forces on the attached flaperon control surfaces during the impact sequence could result in the actuators changing position.





# Flaperon Actuators Left Wing



Left Outboard Inboard Flaperon Actuator



Left Outboard Outboard Flaperon Actuator Piston Rod



Left Outboard Outboard & Left Outboard Inboard Flaperon Actuators





## Flaperon Actuators Right Wing



- All actuator cylinder bodies and control components experienced moderate to severe mechanical and thermal damage. All actuator cylinder mounting clevis attachment bolts and locking hardware were intact. All piston rod end attachment bolts and locking hardware were intact.
  - Right Inboard Inboard Flaperon Actuator was detached from the wing and control surface. Piston rod was extended approximately 8.0 inches.
  - Right Inboard Outboard Flaperon Actuator was detached from the wing and control surface. Piston rod had fractured and was no longer integral to the actuator cylinder; piston rod was attached to the right inboard flaperon which had separate from the wing.
  - Right Outboard Inboard Flaperon Actuator was detached from the wing and control surface. Piston rod was extended approximately 11.00 inches.
  - Right Outboard Outboard Flaperon Actuator was attached to the wing and detached from the control surface. Piston rod was extended approximately 5.5 inches.
- Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Flaperon Actuators, the actuators were operating in bypass mode. Any external forces on the attached flaperon control surfaces during the impact sequence could result in the actuators changing position.



# Flaperon Actuators Right Wing



Right Outboard Inboard Flaperon Actuator



Right Inboard Outboard Flaperon Actuator





# Elevator Actuators



- All actuator cylinder bodies and control components experienced moderate mechanical and thermal damage. All actuators were detached from the empennage and control surface. All actuator cylinder mounting clevis attachment bolts and locking hardware were intact. All piston rod end attachment bolts and locking hardware were intact. Approximate measurements of the actuator piston rods (inches of exposed chrome) were taken:
  - Left Elevator Actuator: 8.5 inches (witness mark approximately 2.0 inches from the actuator cylinder believed to be from the wiper seal, mud ring approximately 5.0 inches from the actuator cylinder).
  - Center Elevator Actuator: 8.0 inches (witness mark approximately 2.0 inches from the actuator cylinder believed to be from the wiper seal, mud ring approximately 4.75 inches from the actuator cylinder).
  - Right Elevator Actuator: 8.0 inches (witness mark approximately 1.5 inches from the actuator cylinder believed to be from the wiper seal, mud ring approximately 3.5 inches from the actuator cylinder).
- Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Elevator Actuators, the actuators were operating in bypass mode. Any external forces on the attached elevator control surface during the impact sequence could result in the actuators changing position.



# Elevator Actuators



Left, Center and Right Elevator Actuators



Center Elevator Actuator





## Rudder Actuators



- Left and Right Rudder Actuators were fully intact and connected to the empennage and control surfaces. Actuators experiences no mechanical or thermal damage. Actuators were free to move through full range of motion of the rudder control surfaces.



# Mechanical Cockpit Controls



- Cockpit Control Feel Drive Actuators:

- All three Cockpit Control Feel Drive Actuators (Pitch, Roll and Yaw) experienced moderate to severe mechanical and thermal damage. The housing for all three were severely damaged/melted so identification via nameplate or clevis length was not possible. Identification by position was made based on measurements of the torsion spring thickness and number of windings.
- Measurement of the gradient arms for the Cockpit Control Feel Drive Actuators were taken to determine if the gradient arms were at the lowest setting, which would be representative of the aircraft speed at the time of ground impact. Measurements established that the gradient arms were at the lowest setting, corresponding to an aircraft speed below 50 knots.





# Mechanical Cockpit Controls



Pitch Cockpit Control Feel Drive  
Actuator



Roll Cockpit Control Feel Drive  
Actuator



Yaw Cockpit Control Feel Drive  
Actuator





# Mechanical Cockpit Controls



- Mechanical Control Linkages:

- All Mechanical Control Linkages experienced severe mechanical and thermal damage.
- The connecting hardware between recovered mechanical linkages were inspected and found to be intact.





# Flight Control Computers



- Only a single Flight Control Computer was recovered and believed to be from the number 3 position based on the recovered location within the cockpit wreckage. Identification via nameplate was not possible due to the severe mechanical and thermal damage.
  - The non-volatile memory for the Flight Control Computer is located in the U225 Programmable Array Logic chip on the A10 Circuit Card Assembly.
  - Disassembly of the Flight Control Computer and inspection of the A10 Circuit Card Assembly revealed that the U225 Programmable Array Logic chip was subjected to extensive thermal damage making the recovery of any non-volatile memory data not possible.





# Flight Control Computers



Flight Control Computer as recovered in the field



A10 and A11 Circuit Card Assemblies

#### PYLON CONVERSION ACTUATORS:

Left Pylon Conversion Actuator was intact with left nacelle mounting lug and outboard wing section conversion actuator spindle (left nacelle and outboard wing section had separated from the aircraft wing and rotated approximately 180 degrees). Ball Screw Assembly Small (inner) Ball Screw was bent inwards towards nacelle. Backup Hydraulic Power Drive Unit (HPDU) was intact; both Upper and Lower Primary HPDUs were buried under the nacelle. Ball Screw Assembly and HPDUs experienced moderate to severe mechanical and thermal damage.

Left Pylon Conversion Actuator Small Ball Screw was extended 44 threads, and Large Ball Screw was extended 46 threads which equates to a nacelle angle of approximately 66 degrees.

Right Pylon Conversion Actuator was intact with right nacelle mounting lug and outboard wing section conversion actuator spindle (right nacelle and outboard wing section had separated from the aircraft wing, rotated approximately 180 degrees and was flipped upside down). Lower Primary Hydraulic Power Drive Unit (HPDU) and Backup HPDU were intact. Upper Primary HPDU hydraulic motor and control module had fractured. Ball Screw Assembly and HPDUs had experienced moderate to severe mechanical and thermal damage.

Right Pylon Conversion Actuator Small Ball Screw was extended 44 threads, and Large Ball Screw was extended 46 threads which equates to a nacelle angle of approximately 66 degrees.

#### SWASHPLATE ACTUATORS:

Left Inboard Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the left nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. Actuator piston rod end was no longer attached to the non-rotating ring of the swashplate assembly; actuator rod end attach bolt and locking hardware was intact. The aft control manifold and associated servo and solenoid control components had separated from the aft cylinder. 6.75 inches of exposed chrome was measured along the piston rod.

Left Outboard Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the left nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. Actuator piston rod end was no longer attached to the non-rotating ring of the swashplate assembly; actuator rod end attach bolt and locking hardware was intact. The aft control manifold and associated servo and solenoid control components had separated from the aft cylinder. 4.0 inches of exposed chrome was measured along the piston rod.

Left Center Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the left nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. Actuator piston rod end was no longer attached to the non-rotating ring of the swashplate assembly; actuator rod end attach bolt and locking hardware was intact. The aft control manifold and associated servo and solenoid control components had separated from the aft cylinder. 3.0 inches of exposed chrome was measured along the piston rod.

Right Inboard Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the right nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. The aft control manifold and associated servo and solenoid control components had separated from the aft cylinder. 6.0 inches of exposed chrome was measured along the piston rod.

Right Outboard Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the right nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. The aft control manifold and associated servo and solenoid control components had separated from the aft cylinder. 8.0 inches of exposed chrome was measured along the piston rod.

Right Center Swashplate Actuator: The actuator body and control components experienced severe mechanical and thermal damage but were largely intact within the right nacelle. Both actuator mounting links that attach the actuator trunnion bearing to the transmission adaptor and the actuator trunnion bearing center bolt were intact. 7.0 inches of exposed chrome was measured along the piston rod.

Note: Given that the aircraft's hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Swashplate Actuators, the actuators were operating in bypass mode. Any external forces on the attached swashplate control surface during the impact sequence could result in the actuators changing position.

#### FLAPERON ACTUATORS:

Left Outboard Flaperon separated from wing and was largely intact and located IVO left nacelle. Flaperon experienced mechanical and thermal damage.

Left Inboard Flaperon separated from wing and located aft of wing. Flaperon was heavily burnt and severely deformed from impact with a tree.

Left Outboard Outboard Flaperon Actuator: Actuator was detached from the wing and control surface (located with the left nacelle and outboard wing section). Actuator cylinder and control components experienced moderate mechanical and thermal damage. Actuator cylinder mounting clevis attachment bolt and locking hardware was intact. Piston rod had fractured and no longer integral to the actuator cylinder; piston rod was bent and attached to the left outboard flaperon.

Left Outboard Inboard Flaperon Actuator: Actuator was attached to the wing and detached from the control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting clevis was bent approximately 45 degrees outboard. Piston rod end had fractured from the piston from overload. Piston rod was extended approximately 10.25 inches.

Left Inboard Outboard Flaperon Actuator: Actuator was detached from the wing and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but



was largely intact. Piston rod end attachment bolt and locking hardware was intact. Piston rod was bent outboard and extended approximately 10.25 inches.

Left Inboard Inboard Flaperon Actuator: Actuator was detached from the wing and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting clevis attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact. Piston rod was extended approximately 11.0 inches.

Right Inboard Flaperon separated from wing and was largely intact but heavily burnt, located aft of wing.

Right Outboard Flaperon separated from wing and was located IVO right nacelle and outer wing section. Flaperon was heavily burnt and suffered severe mechanical damage.

Right Inboard Inboard Flaperon Actuator: Actuator was detached from the wing and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting clevis attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact. Piston rod was extended approximately 8.0 inches.

Right Inboard Outboard Flaperon Actuator: Actuator was detached from the wing. Actuator cylinder and control components experienced moderate mechanical and thermal damage. Actuator cylinder mounting clevis attachment bolt and locking hardware was intact. Piston rod had fractured and no longer integral to the actuator cylinder; piston rod was attached to the right inboard flaperon.

Right Outboard Inboard Flaperon Actuator: Actuator was detached from the wing and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting clevis attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact. Piston rod was extended approximately 11.0 inches.

Right Outboard Outboard Flaperon Actuator: Actuator was attached to the wing and detached from the control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Outer wing section was resting on top of actuator; piston rod end buried in ground. Piston rod end attachment bolt and locking hardware was intact. Piston rod extended approximately 5.5 inches.

Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Flaperon Actuators, the actuators were operating in bypass mode. Any external forces on the attached flaperon control surfaces during the impact sequence could result in the actuators changing position.

#### ELEVATOR ACTUATORS:

Left Elevator Actuator: Actuator was detached from the empennage and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting lug attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact and attached to the control surface mount.

Piston rod was extended approximately 8.5 inches with a witness mark approximately 2.0 inches from the end of the actuator cylinder (believed to be from the wiper seal). There was also a mud ring approximately 5.0 inches from the end of the actuator cylinder.

Center Elevator Actuator: Actuator was detached from the empennage and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting lug attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact and attached to the control surface mount. Piston rod was extended approximately 8.0 inches with a witness mark approximately 2.0 inches from the end of the actuator cylinder (believed to be from the wiper seal). There was also a mud ring approximately 4.75 0 inches from the end of the actuator cylinder.

Right Elevator Actuator: Actuator was detached from the empennage and control surface. Actuator cylinder and control components experienced moderate mechanical and thermal damage, but was largely intact. Actuator cylinder mounting lug attachment bolt and locking hardware was intact. Piston rod end attachment bolt and locking hardware was intact but not attached to the control surface mount. Piston rod was extended approximately 8.0 inches with a witness mark approximately 1.5 inches from the end of the actuator cylinder (believed to be from the wiper seal). There was also a mud ring approximately 3.5 inches from the end of the actuator cylinder.

Note: Given that the aircrafts hydraulic system components became compromised during the aircraft ground impact resulting in a loss of supply pressure to the Elevator Actuators, the actuators were operating in bypass mode. Any external forces on the attached elevator control surface during the impact sequence could result in the actuators changing position.

#### RUDDER ACTUATORS:

Left/Right Rudder Actuator: Both actuators were fully intact and connected to the empennage and control surface(s). Actuators experienced no mechanical or thermal damage. Actuators were free to move through full range of motion of the rudder control surfaces.

#### MECHANICAL COCKPIT CONTROLS:

Mechanical Control Linkages: All mechanical controls experienced severe mechanical and thermal damage. The connecting hardware between all recovered control linkages and associated transducers was inspected and found to be intact.

Cockpit Control Feel Drive Actuators: All three Cockpit Control Feel Drive Actuators (Pitch, Roll and Yaw) experienced moderate to severe mechanical and thermal damage. The housing for all three were severely damaged/melted so identification via nameplate or clevis length was not possible. Identification by position was made based on measurements of the torsion spring thickness and number of windings.

Measurement of the gradient arms for the Cockpit Control Feel Drive Actuators were taken to determine if the gradient arms were at the lowest setting, which would be representative of the aircraft speed at the time of ground impact. Measurements established that the gradient arms were at the lowest setting, corresponding to an aircraft speed below 50 knots.

#### FLIGHT CONTROL COMPUTERS:

Only a single Flight Control Computer was recovered and believed to be from the number 3 position based on the recovered location within the cockpit wreckage. Identification via nameplate was not possible due to the severe mechanical and thermal damage.

The non-volatile memory for the Flight Control Computer is located in the U225 Programmable Array Logic chip on the A10 Circuit Card Assembly.

Disassembly of the Flight Control Computer and inspection of the A10 Circuit Card Assembly revealed that the U225 Programmable Array Logic chip was subjected to extensive thermal damage making the recovery of any non-volatile memory data not possible.

# 168616 Mishap (Darwin, Aus)

## Avionics Findings



Controlled By: V-22 Fleet Support Team

CUI Category: CUI

Distribution/Dissemination Controls: C

(b) (6)

Enclosure (108)

Controlled Unclassified Information



# K-Series Voice and Data Recorder (KVADR)

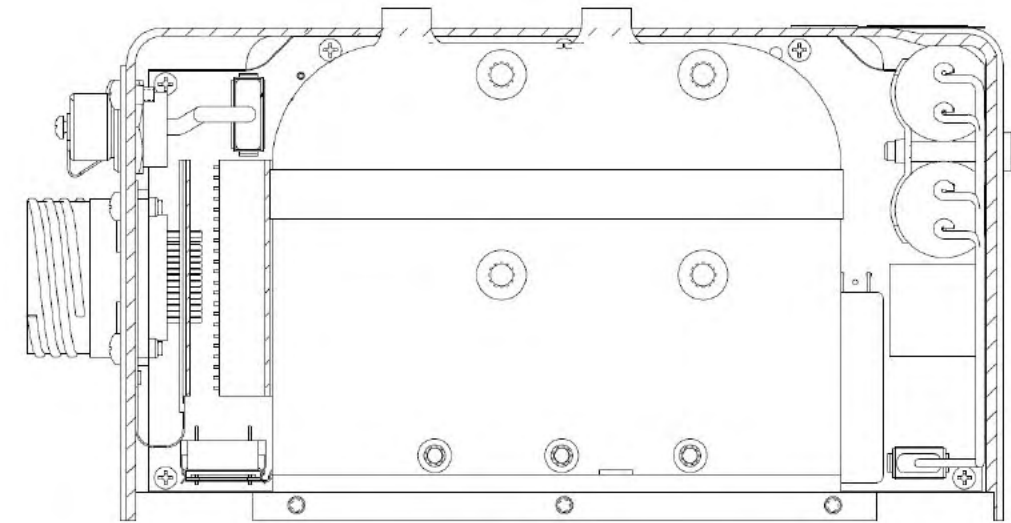


- Crash protected memory was shipped to the FST
  - No KVADR chassis or motherboard
- Asset was badly fire damaged with a torn data ribbon cable
- Asset was opened to attempt a ribbon cable repair for data download
- Internals were too badly damaged to attempt ribbon cable repair
  - Fire resistant potting had melted and hardened
  - Circuit board plastic clamshell melted
  - Memory chips delaminated from circuit board
- Asset was shipped to GE for data recovery. Recovery unsuccessful





# KVADR



Crash protected memory internal to KVADR



Sealed crash protected memory



# KVADR



Opened crash protected memory



Exposed circuit card after initial fire resistant potting removal





# KVADR



Ribbon Cable remnants



Delaminated memory chips and damaged circuit card



# KVADR Summary



Data recovery was unsuccessful by both Avionics FST and GE

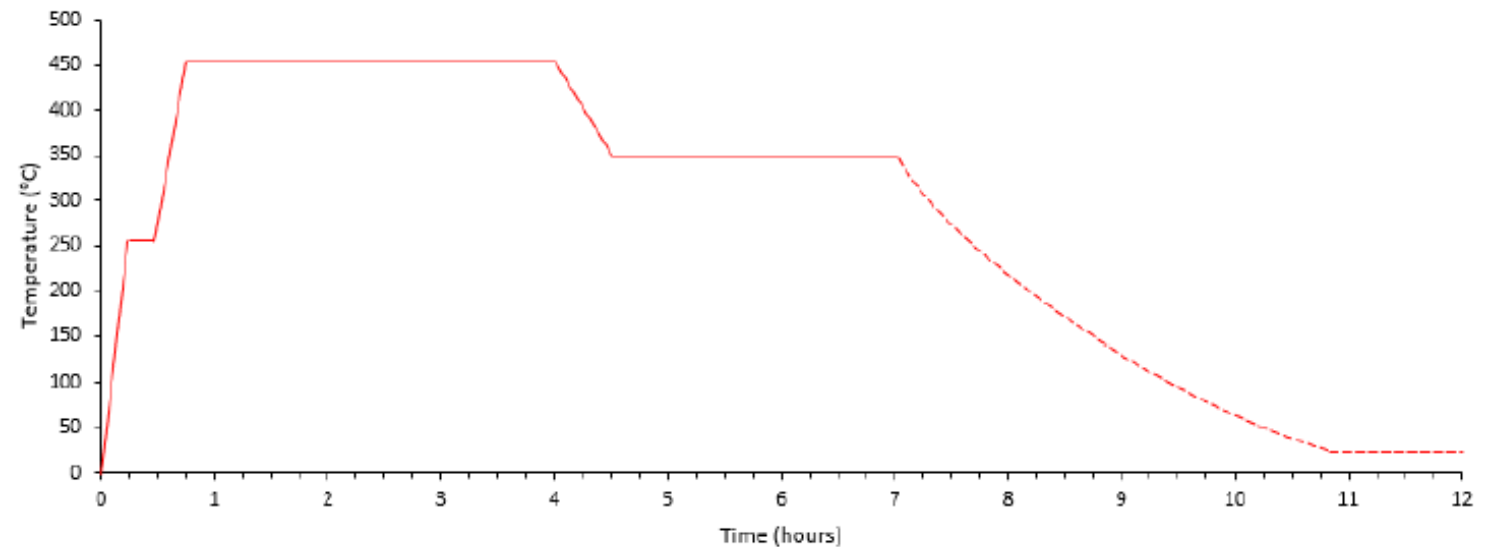
Asset seems to have experienced thermal conditions that exceeded what the asset was rated for

No further action from Avionics on asset



# KVADR Chip Temperature Profile Investigation

- Previous thermal testing at GE concluded that long durations at increased temperatures (max 450 degrees C over a 12-hour period) will result in chip memory degradation and ultimately memory zeroization.
- FST and GE determined that lab testing environment was representative of fire exposure and duration of 168616.







# Removable Storage Module (RSM)



- RSM was shipped to FST
- Asset was badly fire damaged
- Could not discern if it was the Mission RSM or a Maintenance RSM
- Even if asset was Mission RSM, circuit card was too badly damaged to attempt any data recovery



# RSM



Melted asset with visible circuit card



RSM Release Tab





# RSM Summary



Data recovery was unsuccessful by Avionics FST

No further action from Avionics on asset

# 168616 Mishap (Darwin, Aus)

LHE and RHE Findings



Controlled By: V-22 Fleet Support Team  
CUI Category: CUI  
Distribution/Dissemination Controls: C

(b) (6)

Enclosure (109)

Controlled Unclassified Information



# Left Hand Engine (LHE) CAE130132 Findings



## Overall Engine Condition

- Significant External Fire Damage
- Most external components with aluminum cases missing/destroyed





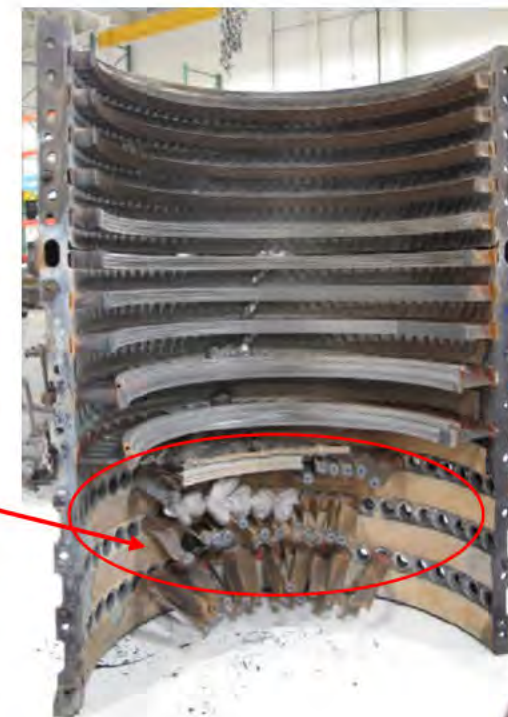


# Left Hand Engine (LHE) CAE130132 Findings



## Compressor Section Condition

- Compressor Blades, Cases and Vanes
  - Minimal evidence of wear
  - Minimal Foreign Object Damage (FOD)
  - Significant fire damage
  - First through Third Stage CVG inner bands melted
  - Molten Aluminum flow (without rotational evidence)
- CVG Actuator Position closed







# Left Hand Engine (LHE) CAE130132 Findings



## Turbine Section Gas Generator Condition

- Minimal wear/rotational damage
- Minimal buildup of dirt/debris on components
- No blade tip rub/damage





# Left Hand Engine (LHE) CAE130132 Findings



## Turbine Section Power Turbine (PT) Condition

- Minimal wear/rotational damage on either stage
- Minimal buildup of dirt/debris on components
- PT shaft intact







# Left Hand Engine (LHE) CAE130132 Findings



## Oil Sump and Bearing Condition

- No indication of oil loss/leakage
- Significant Coking present
- Bearings intact





# Left Hand Engine (LHE) CAE130132 Findings



## Torquemeter Shaft Condition

- Thermal damage
- Minimal mechanical damage
- Evidence of impact/bending at forward splines (failure analysis in work related to bending)







# Left Hand Engine (LHE) CAE130132 Findings



## FADEC Condition

- Significant fire damage to both chassis
- No intact FADEC boards or chips for either FADEC
- Data retrieval not possible





# Right Hand Engine (RHE) CAE130379 Findings



## Overall Engine Condition

- Significant External Fire Damage
- Externals intact







# Right Hand Engine (RHE) CAE130379 Findings



## Compressor Section Condition

- Compressor Blades, Cases and Vanes
  - Fire damage
  - Minimal evidence of wear on components
  - Minimal FOD
- CVG Actuator position closed





# Right Hand Engine (RHE) CAE130379 Findings



## Turbine Section Gas Generator Condition

- Minimal wear/rotational damage
- Minimal buildup of dirt/debris





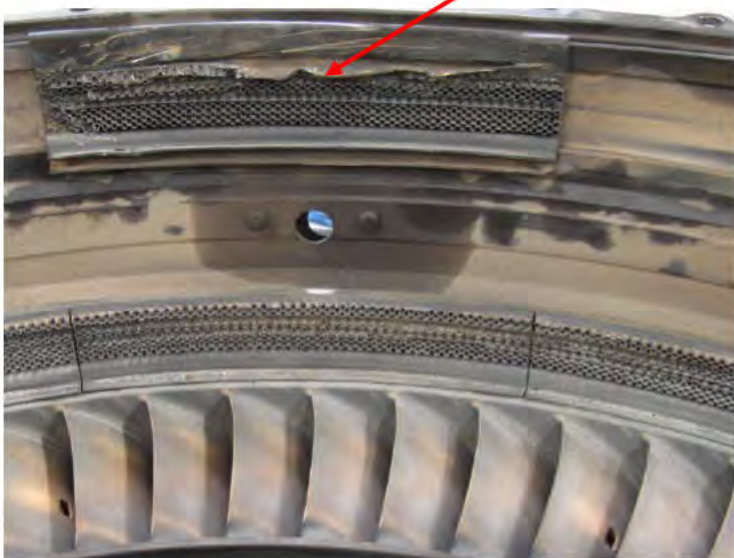


# Right Hand Engine (RHE) CAE130379 Findings



## Turbine Section Power Turbine (PT) Condition

- Minimal overall wear/rotational damage
- Some second stage PT blade damage consistent with impact at low rotational energy
- Some second stage PT blade track damage
- PT shaft intact







# Right Hand Engine (RHE) CAE130379 Findings



## Oil Sump and Bearing Condition

- No indication of oil loss/leakage
- Significant Coking present
- Bearings intact





# Right Hand Engine (RHE) CAE130379 Findings



## Torquemeter Shaft Condition

- Thermal damage
- Minimal mechanical damage







# Right Hand Engine (RHE) CAE130379 Findings

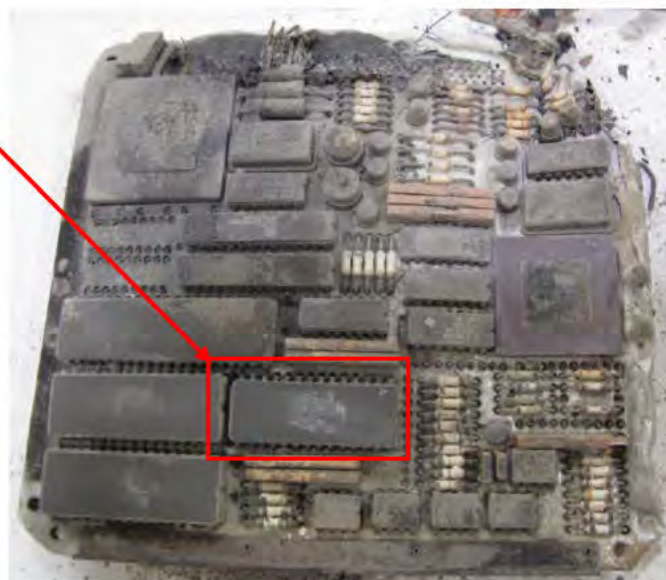


## FADEC Condition

- Significant fire damage to both chassis
- FADEC A had one intact NVM chip, but data was not retrievable
- FADEC B had no intact boards or chips



**FADEC B**



**FADEC A**



# 168616 LHE and RHE Summary



## **Engines at low power or shutoff**

- RHE CVG position closed
- LHE CVG position closed
- Minimal FOD in either engine (low rotational energy)
- Minimal rotational damage or wear throughout both engines (low rotational energy)
- Turbines showed no excessive tip rub/damage (with exception of second stage PT impact damage)

## **No observed Engine mechanical failures**

- Bearings intact
- No non-impact related Compressor Section failures noted
- No non-impact Turbine Section failures noted
- PT shafts intact (failure would have resulted in overspeed and engine shutdown)
- Torquemeter Shafts intact (LHE Torquemeter shaft had some bending)

## **No apparent failure with either Engine and both were at a similar operational state**

- No mechanical failures
- CVG position closed (both Engines)
- Rotational damage between Engines are consistent (operating similarly)



# 168616 Mishap (Darwin, Aus)

## Drive Systems Findings

Jacob Hodges, V-22 FST Drive System Engineering

Controlled By: V-22 Fleet Support Team

CUI Category: CUI

Distribution/Dissemination Controls: C

POC: [joshua.h.barefoot.civ@us.navy.mil](mailto:joshua.h.barefoot.civ@us.navy.mil)





# Drive System Component Overview



- Left Hand (LH) Proprotor Gearbox (PRGB)
  - P/N 901-044-001-113
  - S/N BH182667
  - TSN: 1152
  - TSR: Blank
- LH Input Quill (IQ)
  - P/N 901-044-055-103
  - S/N BH340078
  - TSN: 2120 FH
  - TSO: 45 FH
- Right Hand (RH) PRGB
  - P/N 901-044-002-115
  - S/N BH548455
  - TSN: 845.2 FH
  - TSO: Blank
- RH IQ
  - P/N 901-044-056-103
  - S/N BH654903
  - TSN: 1105 FH
  - TSR: 45 FH
- LH Tiltaxis Gearbox (TAGB)
  - P/N 901-045-001-105
  - S/N BH311900
  - TSN: 1846 FH
  - TSO: Blank. Should be cNEW since A/C time is 1846 FH
- RH TAGB
  - P/N 901-045-002-105
  - S/N BH300464
  - TSN: 1846 FH
  - TSO: Blank. Should be cNEW since A/C time is 1846 FH
- Midwing Gearbox (MWGB)
  - P/N 901-046-001-117
  - S/N BH269554
  - TSN: 1846 FH
  - TSO: Blank. Should be cNEW since A/C time is 1846 FH



# Onsite Findings





# LH PRGB



- Still within LH Nacelle but has severe fire damage.
- Case set mostly melted away.
- ICDS gear (-121) gear found on ground on the outboard side of the PRGB with PRGB coupling still attached.
- Oil pump gears (all 3) found on ground on the inboard side of the PRGB.
  - No picture taken prior to moving.
- Bull gear and input helical gears exposed and appear still in mesh (slightly misaligned). No apparent evidence of rotation/ non-rotation in areas exposed.
  - Severe fire damage may be covering up evidence if present.
- Mast Still intact and no signs of failure.
- Input Quill appears in expected location.
  - Could not move any of the pieces out of the debris pile as it was all “welded” together.
- Debris Sensors/ Mag Plugs melted away.





# LH PRGB







# LH PRGB







# LH PRGB







# LH PRGB







# LH TAGB



- Found within LH Nacelle.
- Accessory Section Case melted away and gears in pile of various melted metal components in the aft part of the nacelle.
  - Include TAGB accessory section, accessory components, LH HX, etc.
- Bevel Section Case still mainly intact. Is melted away from Spindle.
- TAGB coupling still attached to Bevel Pinion and in expected location.





# LH TAGB







# LH TAGB







# RH PRGB



- Found in RH Nacelle (upside down).
- Looks fully intact but severely burned/charred from fire damage.
- Mast looks good and relatively undamaged.
- Input Quill still attached to PRGB and TM Shaft Housing
- Debris Sensors/ Mag Plugs are present.
  - Performed debris inspection with assistance from onsite maintainer. No debris found.





# RH PRGB







# RH PRGB







# RH TAGB



- Found in RH Nacelle (upside down).
- Case set completely melted away.
- Bevel Gear and Bevel Pinion still present and in mesh together. Laying in the expected position. No apparent evidence of rotation/ non-rotation in areas exposed.
  - Severe fire damage may be covering up evidence if present.
- Accessory Section gears in pile of metal at the aft of the nacelle with other various components.
- TAGB coupling still attached to Bevel Pinion.
- None of the components could be moved as they are “welded” together.



# RH TAGB







# RH TAGB







# MWGB



- Found in the expected location of the midwing.
- Case set completely melted away.
- Accessory components melted away and everything in pile of metal.
- Thru-shaft present and besides fire damage, looks undamaged.
- No curvic tooth wear on thru shaft.
- Hardware still present from attaching L1/R1 driveshafts.
- Loose gears and remaining accessory components were removed from wreckage and retained.



# MWGB







# MWGB







# ICDS



- Multiple discontinuities in the ICDS but all appear to be due to post impact related events (fire).
  - L1 and R1 driveshafts not presented (presumed melted in fire)
    - Hardware present on both L1/R1 couplings and MWGB Thru-shaft
  - Break in composite section of L2 Driveshaft
    - Appears to be due to the fire damage and post impact activity in the area
  - Break in R2 driveshaft composite with tree fallen on top.
  - L4 driveshaft broken just outboard of the inboard side adapter (L3 coupling side). Break is in line with wing break.
    - Outboard side of L4 driveshaft found still attached to the L4 coupling with the LH nacelle.
  - R3 driveshaft broken in composite. Break is in line with wing break
    - Each end still attached to respective couplings with inboard side with wing and outboard side with the RH nacelle.
  - Both LH Pylon Driveshaft curvic adapters and the RH Pylon Driveshaft Aft Curvic Adapter (TAGB side) not present (presumed melted in fire).
    - Respective PRGB/TAGB couplings still present and in line/expected positions. Remains of the Pylon Driveshaft composites still present and in line with couplings.
  - Both L5/R5 spindle adapters were present in spindles. They are both “welded” into the Bevel Quills and could not be removed.
    - Was able to get a hand on each one but could not get good pictures due to remaining Spindle debris.
- Piece of composite tube found forward of main wreckage.
  - Diameter matches diameter of a LH/RH #2, #3, or #4 wing driveshaft. Based on length and other composite accounted for, it is believed to be from the L4 driveshaft.
- All other areas of ICDS present but heavily damaged by fire.





# ICDS - L1 Driveshaft (Missing - Melted)







# ICDS - L1 Coupling







# ICDS - L2 Driveshaft







# ICDS - L2 Coupling







# ICDS - L3 Driveshaft







# ICDS - L3 Coupling







# ICDS - L4 Driveshaft







# ICDS - L4 Driveshaft







# ICDS - L4 Coupling







# ICDS - L5 Driveshaft



- Picture taken after removed from LH Spindle.
- Inboard side of L5 Driveshaft still attached to L4 coupling.
- Composite was heavily burned and disintegrated when removing inboard side (with L4 coupling) from spindle.
- Spindle adapter (outboard side) could not be removed from LH TAGB Bevel Quill. Could fill it engaged with hand and could see pin side.
  - Was unable to get picture of it due to debris in the way.





# ICDS - LH Pylon Driveshaft (PRGB Side)







# ICDS - LH Pylon Driveshaft (TAGB Side)







# ICDS - R1 Driveshaft (Missing - Melted)







# ICDS - R1 Coupling







# ICDS - R2 Driveshaft







# ICDS - R2 Driveshaft







# ICDS - R2 Coupling







# ICDS - R3 Driveshaft







# ICDS - R3 Coupling







# ICDS - R4 Driveshaft







# ICDS - R4 Coupling



\*Picture taken after removing  
from RH spindle.





# ICDS - R5 Driveshaft



- Composite was heavily burned and disintegrated when removing inboard side (with R4 coupling) from spindle.
- Spindle adapter (outboard side) could not be removed from RH TAGB Bevel Quill. Could fill it engaged with hand and could see pin side.





# ICDS - RH Pylon Driveshaft (PRGB Side)







# ICDS - RH Pylon Driveshaft (TAGB Side)







# LH Nacelle Blower

- LH Nacelle Blower Melted.
  - Could not distinguish the remains within the debris.
- Found Nacelle Blower Shaft and appeared intact





# RH Nacelle Blower



- Could not find RH Nacelle Blower or Nacelle Blower Shaft
  - Suspected to be within pile of melted metal under the aft part of the RH Nacelle



# Disassembly Findings





# Background



- Mishap Components recovered from the site were shipped via C-130 to Fleet Readiness Center (FRC) East (MCAS Cherry Point, NC) for further disassembly and evaluation.
  - Includes LH/RH Engines, LH/RH PRGBs, LH/RH TAGBs, various ICDS components (mainly the couplings and driveshaft metal end adapters), the MWGB thru-shaft.
  - Components were accepted at FRC-East under various Engineering Investigation (EI) Report Control Numbers (RCNs)
- PRGBs and Engines were removed from the Nacelles.
- Engines shipped to Rolls Royce for EI.
- LH/RH Input Quills removed and disassembled for EI.
- Remainder of LH/RH PRGBs and LH/RH TAGBs given visual inspection but have not been disassembled.



# Drive System EI RCNs



- LH PRGB, P/N 901-044-001-113, S/N BH182667
  - EI RCN: N65923-23-4285
    - Includes LH IQ
- RH PRGB, P/N 901-044-002-115, S/N BH548455
  - EI RCN: N65923-23-4286
    - Includes RH IQ
- LH TAGB, P/N 901-045-001-105, S/N BH311900
  - EI RCN: N65923-23-4287
- RH TAGB, P/N 901-045-002-105, S/N BH300464
  - EI RCN: N65923-23-4288
- MWGB and Miscellaneous ICDS Components
  - EI RCN: N65923-23-4289
  - Submitted under the Drive System Installation P/N (901-144-001)





# LH IQ, S/N BH340078, Findings



- Focused inspection on Clutch Components
  - LH Clutch Inner Race, P/N 901-044-341-101, S/N VL00304376
  - LH Clutch Outer Race, P/N 901-044-337-101, S/N VL00304188
  - LH Sprag Retainer Assembly, P/N 901-344-529-101, S/N FD2739
    - Unable to distinguish which retainer assembly was forward vs aft
- No signs of Hard Clutch Engagement (HCE)
  - No signs of smeared metal/ material transfer on Clutch Inner Race, Clutch Outer Race, or Sprag cam surfaces
- Significant Fire Damage
  - Oil transfer tube melted
  - Axial lines at sprag spacing on Clutch Inner Race and Outer Race
    - Appears to be the resting position of the sprags during the fire
  - Brunt/ Charred appearance on all inspected components





# LH Clutch Inner Race, S/N VL00304376

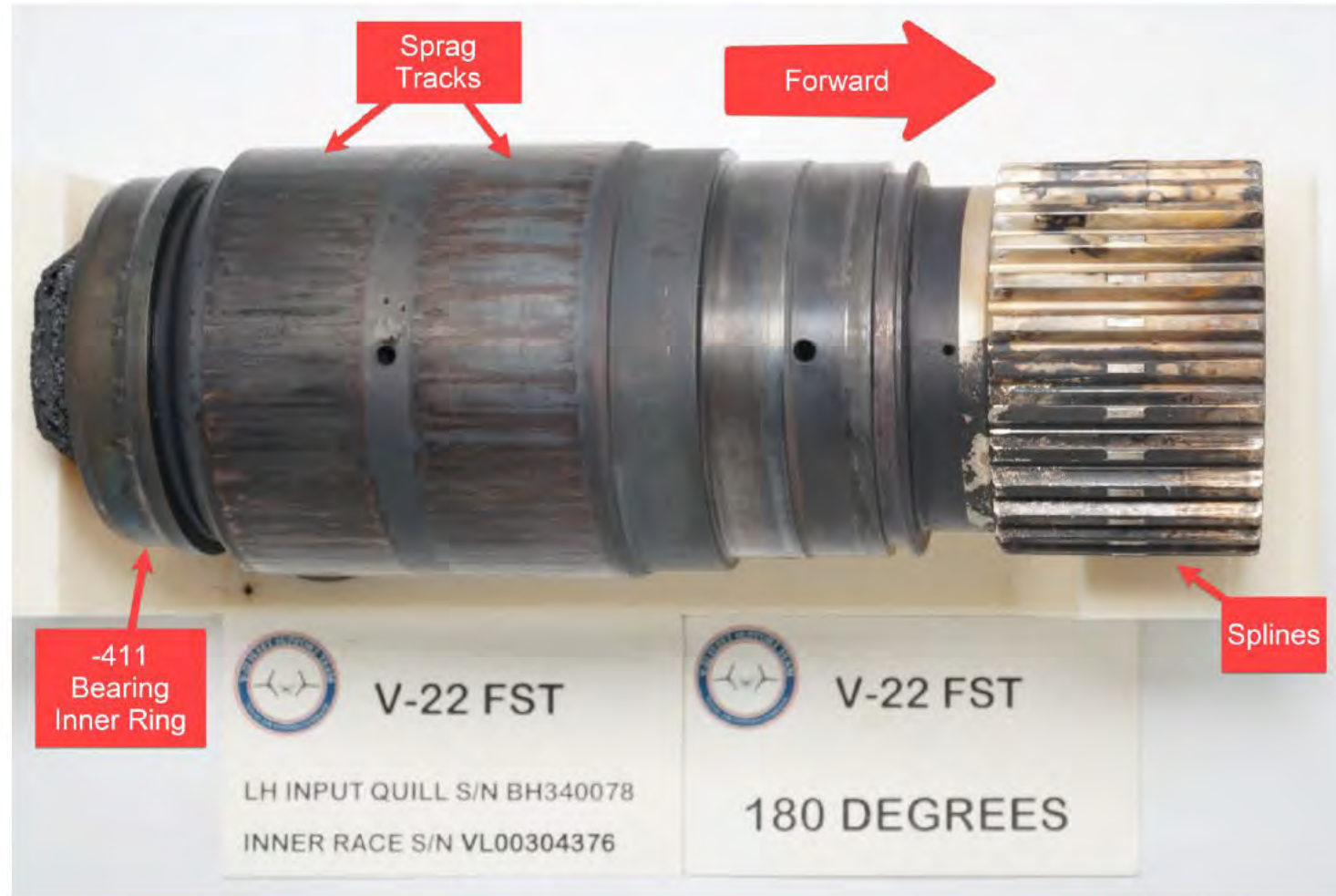


- Heavy fire damage on entire component
  - Burnt/ Charred look
- No signs of smeared metal/material transfer
  - Sprag track surfaces smooth to the touch. No raised material felt with probe.
- Slight axial chatter along sprag track edges and some excursions outside of tracks.
- Minor silver plate wear on splines
  - Some splines have vertical and/or diagonal impressions on aft ends of drive side faces.
    - Indicated possible relative movement while under load (possibly impact)
- 901-344-411 Bearing Inner Ring still attached
  - Has brinnell marks at ball spacing
    - Brinnell marks are on top of fire damage indicating that they occurred post fire (likely from disassembly).
      - IQ housing was “welded” to the PRGB housing and hammers amongst other tools were used with significant force to separate them.
- Evidence of surface corrosion noted within sprag tracks.





# LH Clutch Inner Race, S/N VL00304376





# LH Clutch Inner Race, S/N VL00304376







# LH Clutch Inner Race, S/N VL00304376



V-22 FST

LH INPUT QUILL S/N BH340078

INNER RACE S/N VL00304376





# LH Clutch Inner Race, S/N VL00304376



V-22 FST

LH INPUT QUILL S/N BH340078

INNER RACE S/N VL00304376

Melted Oil  
Transfer  
Tube

Brinnell Marks





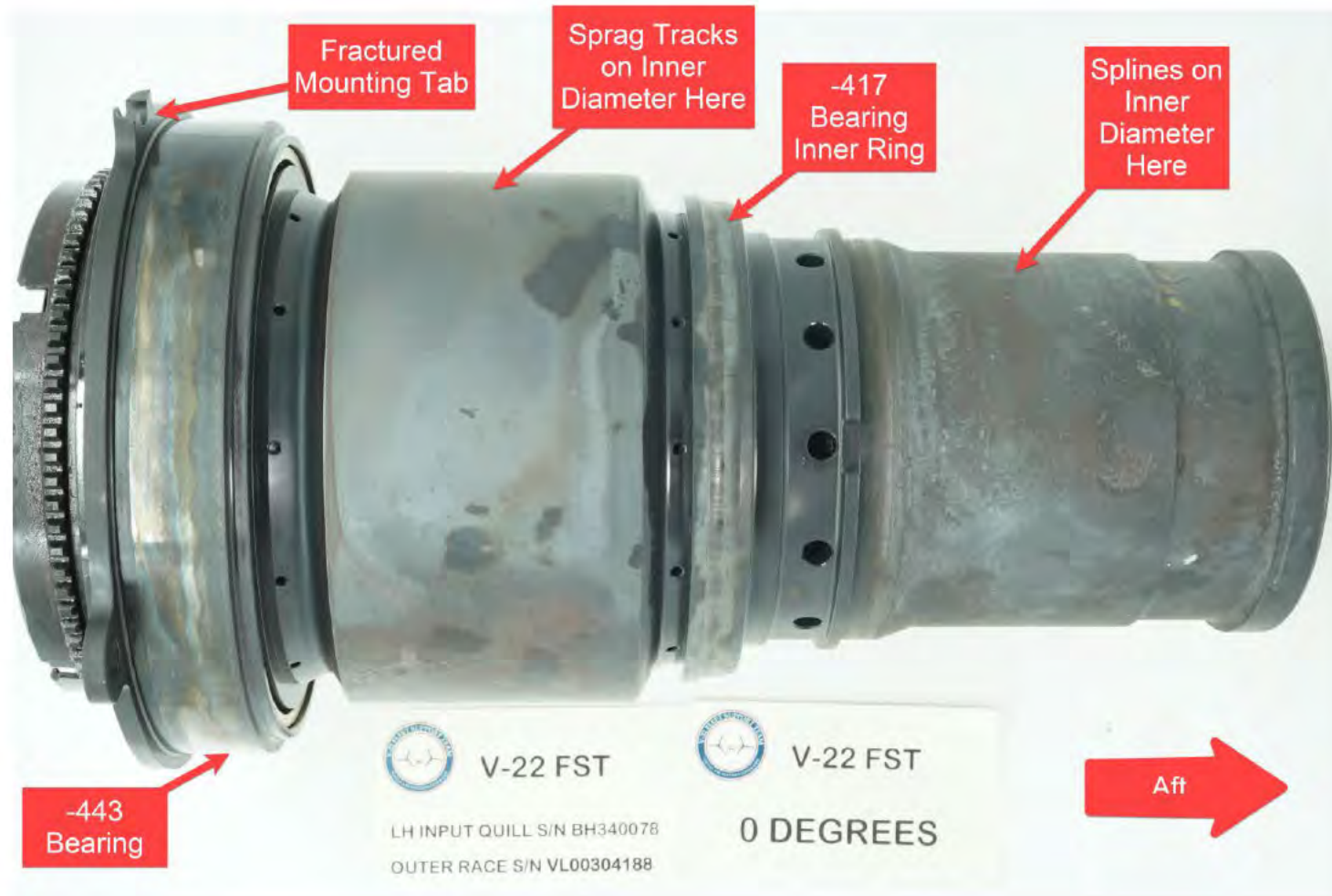
# LH Clutch Outer Race, S/N VL00304188



- Heavy fire damage on entire component
  - Burnt/ Charred look
- No signs of smeared metal/material transfer within sprag tracks
  - Sprag track surfaces smooth to the touch. No raised material felt with probe.
  - Lines at sprag spacing within sprag tracks
    - Shows resting position during fire
- 901-344-443 Bearing still installed
  - One Mounting Tab is fractured
  - Bearing rotates but not smoothly
- 901-344-417 Bearing Inner Ring still installed
  - Fire damage at ball spacing
  - False Brinnelling (likely from disassembly)
- Minor evidence of surface corrosion noted within sprag tracks.



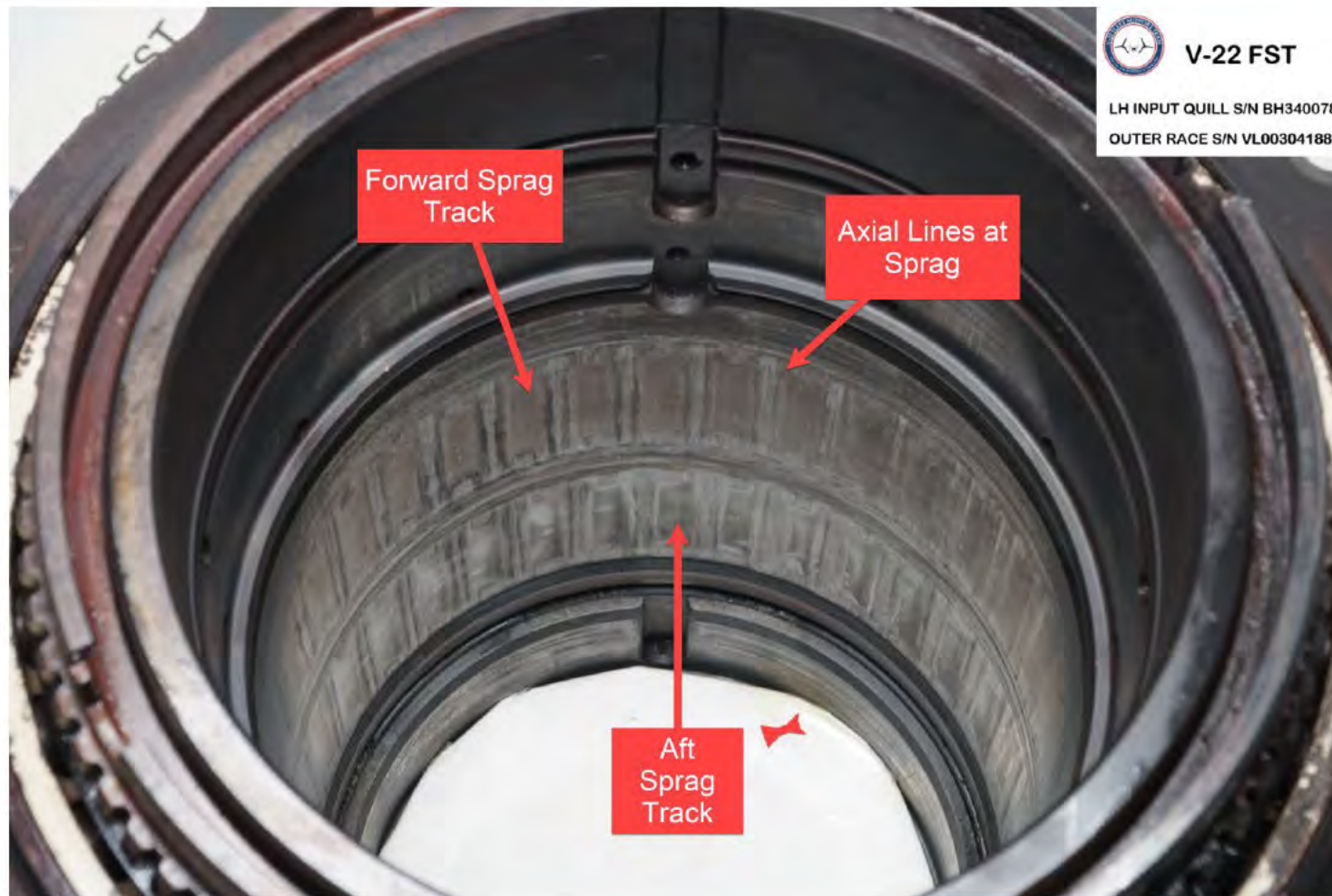
# LH Clutch Outer Race, S/N VL00304188







# LH Clutch Outer Race, S/N VL00304188





# LH Sprag Retainer Assembly, S/N FD2739



- FD2739-1

- Burnt/Charred appearance
- No signs of HCE
  - No heavily worn inner/outer cams
  - No flats or material loss on cams
  - No broken ears on sprags
- Sprags very loose within retainer
  - Spring lost resistance
- Minor evidence of surface corrosion noted

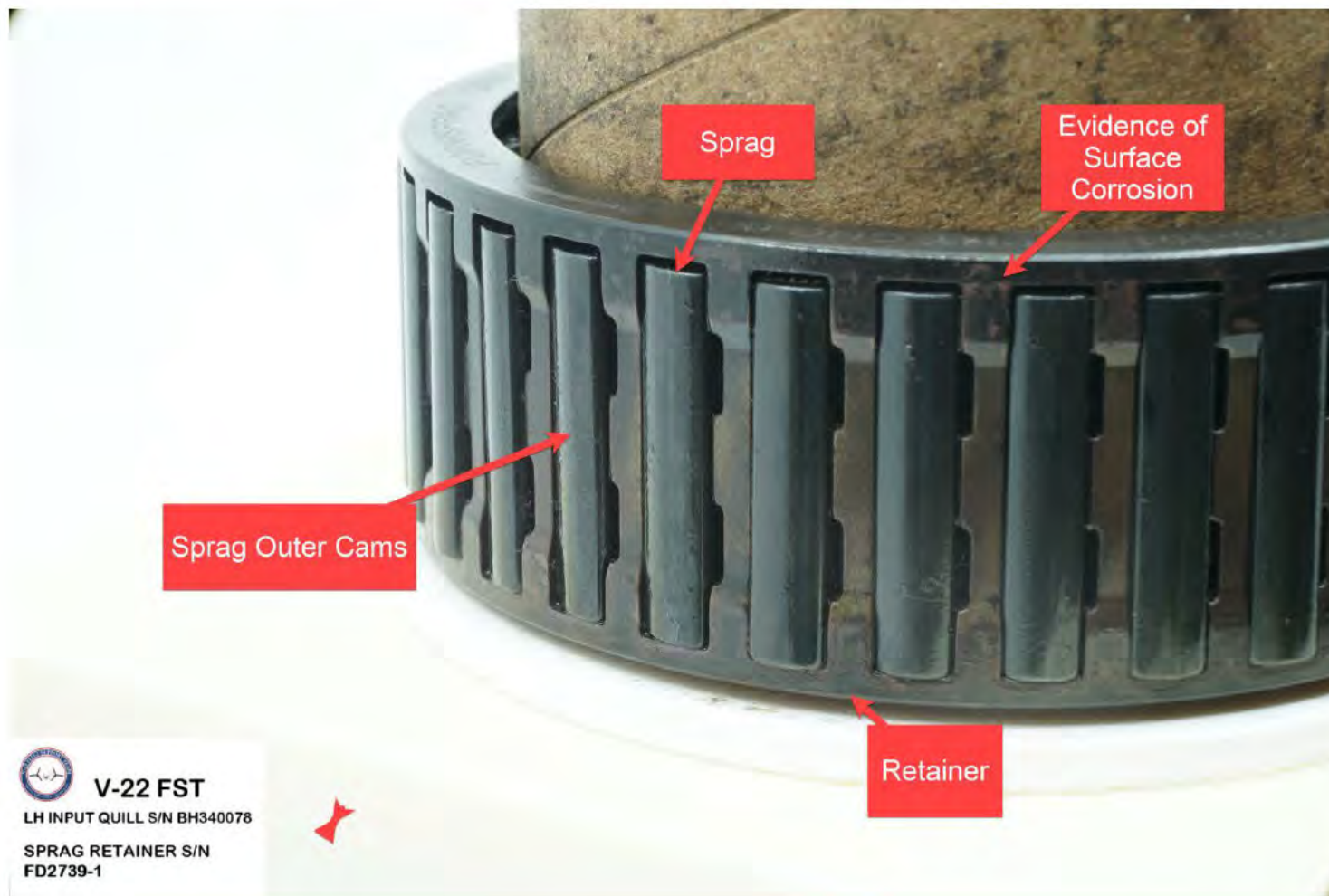
- FD2739-2

- Burnt/Charred appearance
- No signs of HCE
  - No heavily worn inner/outer cams
  - No flats or material loss on cams
  - No broken ears on sprags
- Sprags very loose within retainer
  - Spring lost resistance
- Minor evidence of surface corrosion noted



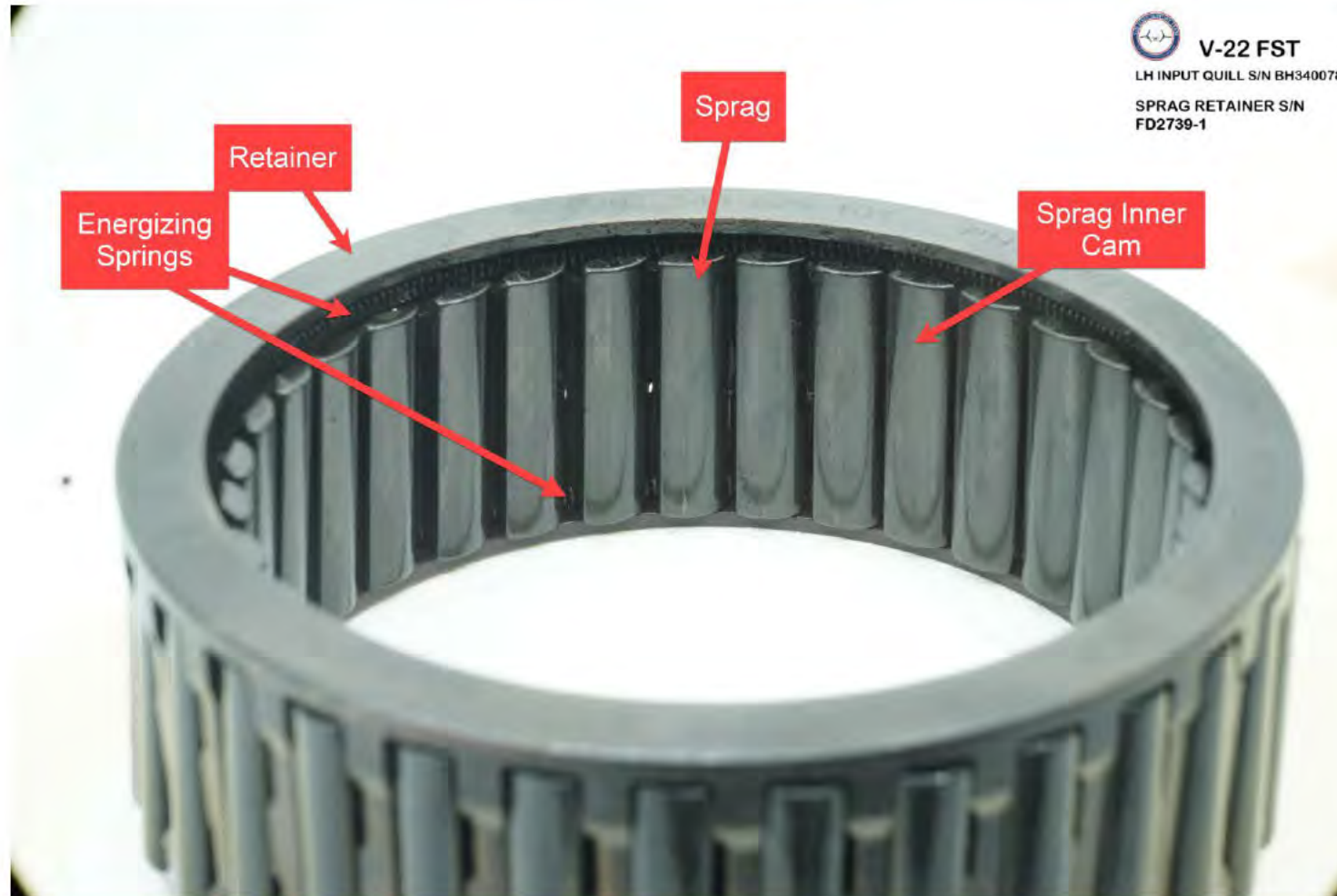


# LH Sprag Retainer Assembly, S/N FD2739-1





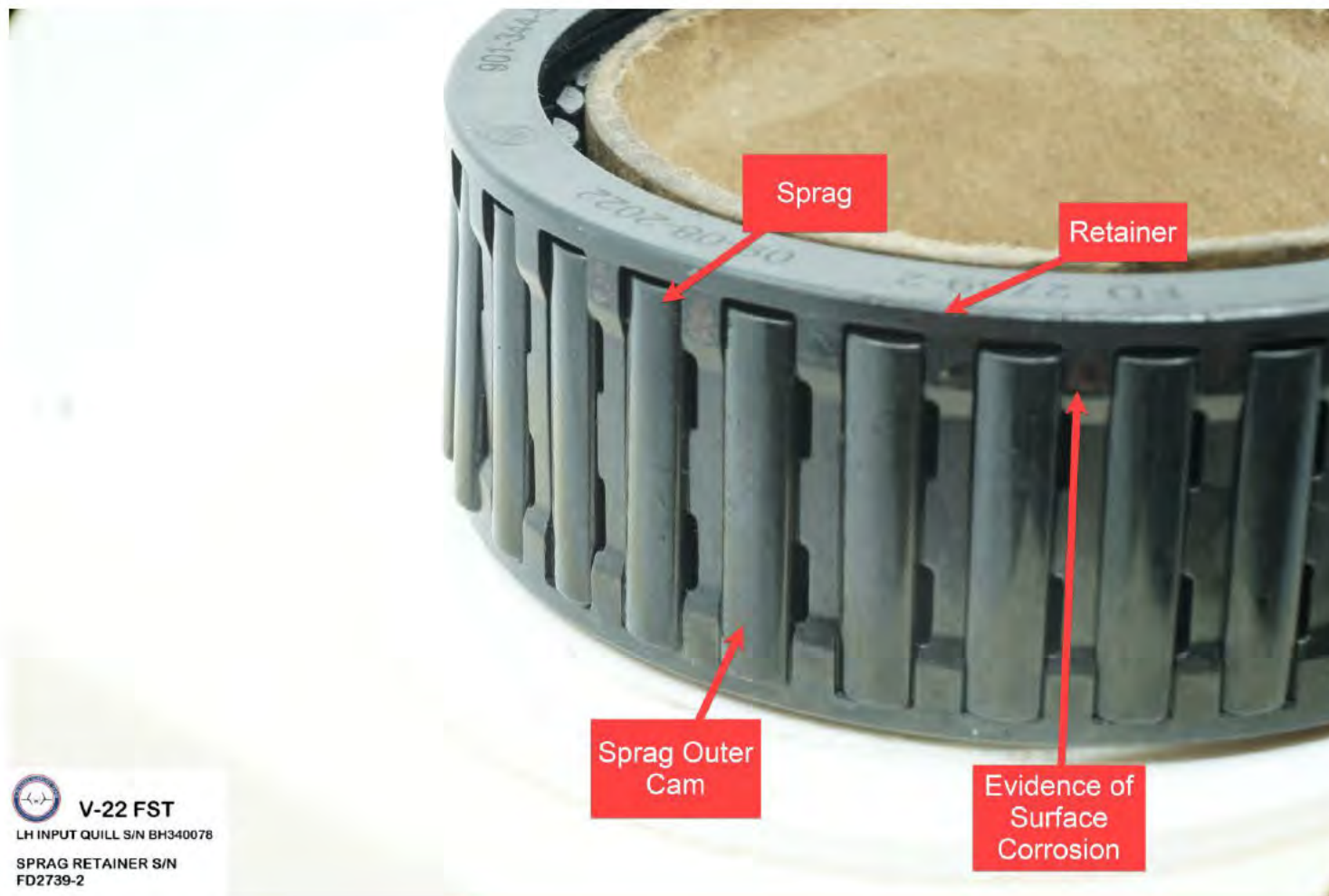
# LH Sprag Retainer Assembly, S/N FD2739-1





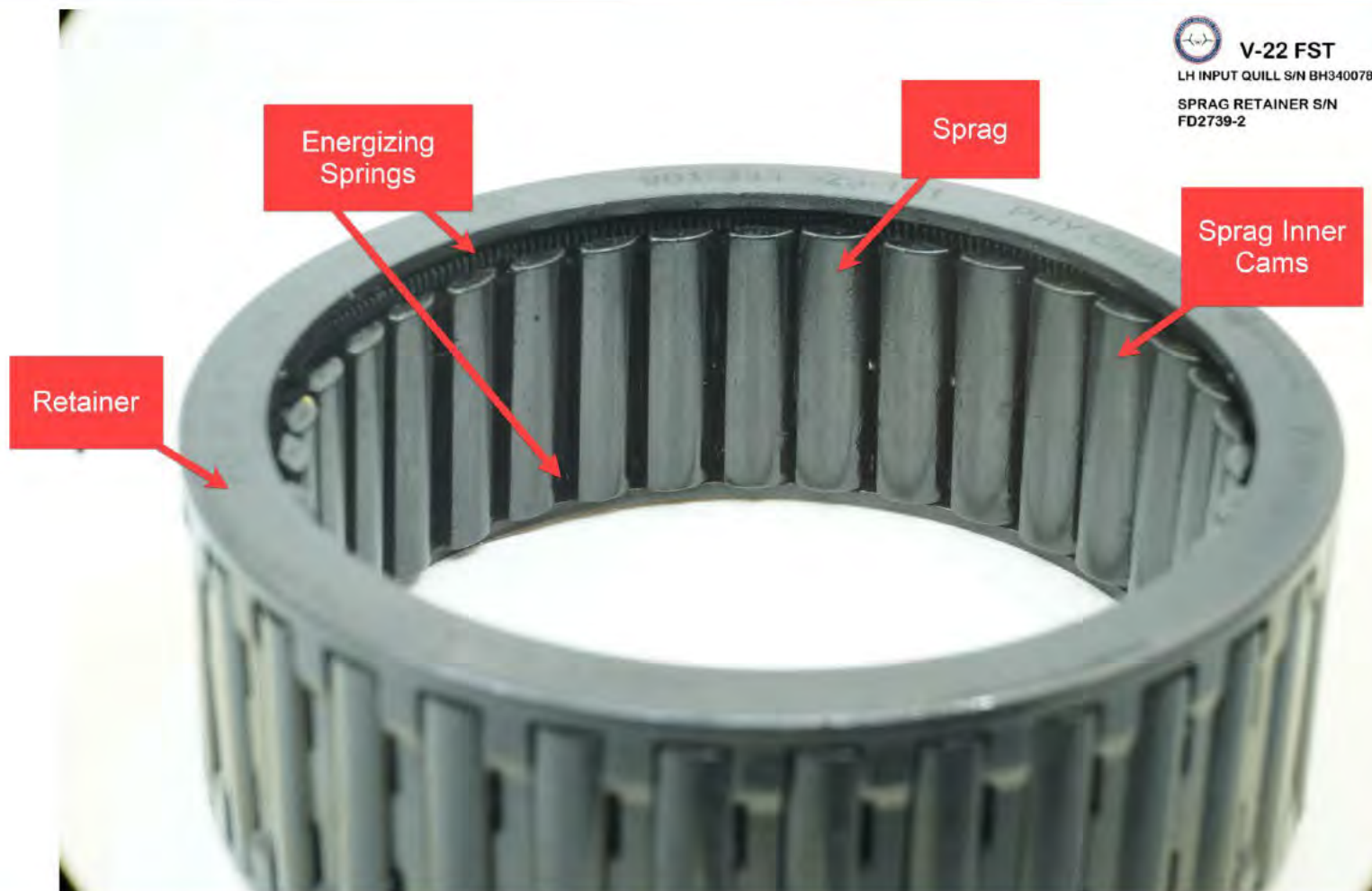


# LH Sprag Retainer Assembly, S/N FD2739-2





# LH Sprag Retainer Assembly, S/N FD2739-2







# RH IQ, S/N BH654903, Findings



- Focused inspection on Clutch Components
  - LH Clutch Inner Race, P/N 901-044-341-101, S/N VL00304357
  - LH Clutch Outer Race, P/N 901-044-337-101, S/N VL00299292
  - LH Sprag Retainer Assembly, P/N 901-344-529-101, S/N FD2607
    - FD2607-1 = Engine Side
    - FD2607-2 = PRGB Side
- No signs of Hard Clutch Engagement (HCE)
  - No signs of smeared metal/ material transfer on Clutch Inner Race, Clutch Outer Race, or Sprag cam surfaces
- Significant Fire Damage
  - Oil transfer tube melted
  - Axial lines at sprag spacing on Clutch Inner Race and Outer Race
    - Appears to be the resting position of the sprags during the fire
  - Brunt/ Charred appearance on all inspected components



# RH Clutch Inner Race, S/N VL00304357

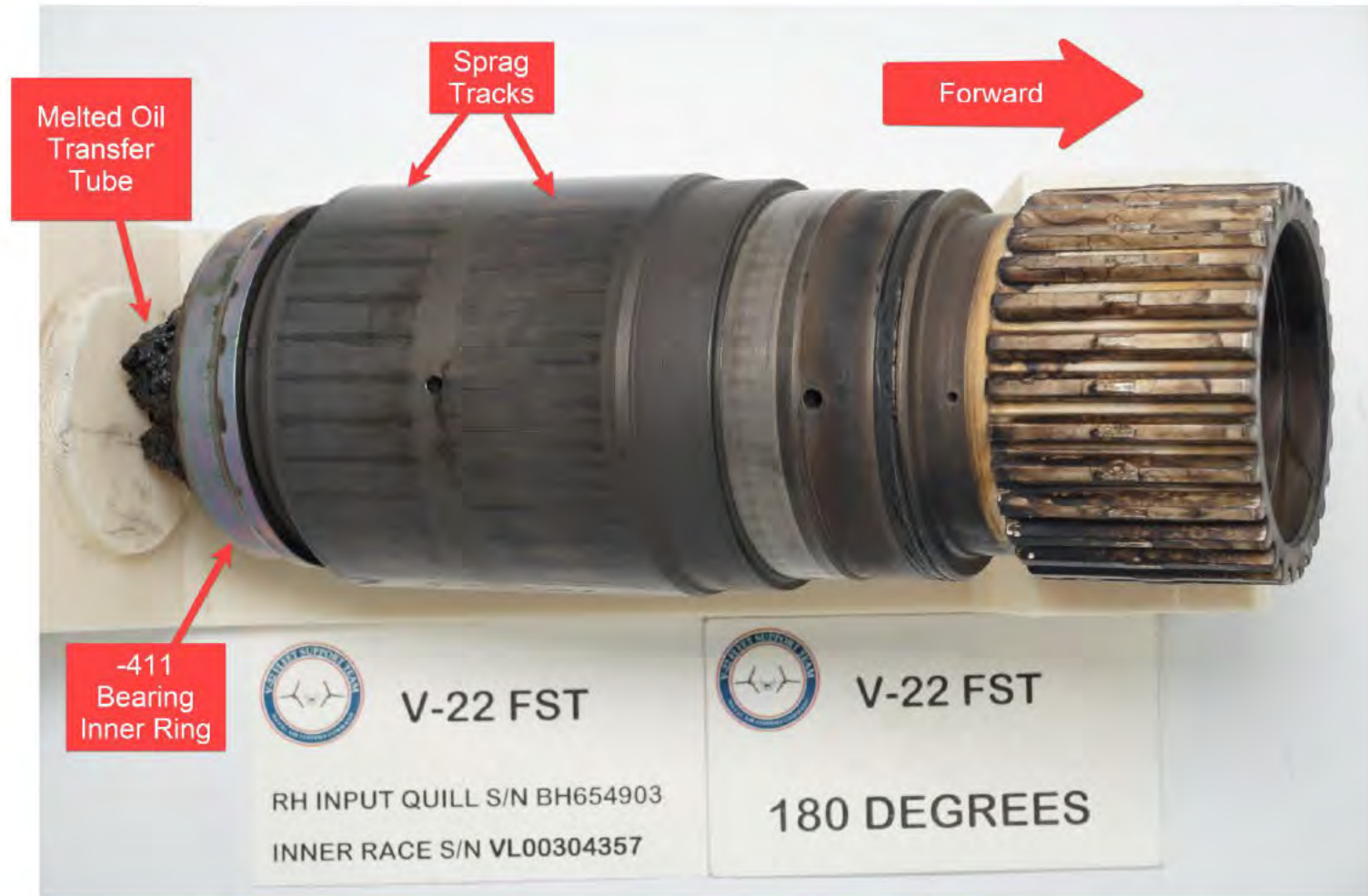


- Heavy fire damage on entire component
  - Burnt/ Charred look
- No signs of smeared metal/material transfer
  - Sprag track surfaces smooth to the touch. No raised material felt with probe.
- Slight axial chatter along sprag track edges and some excursions outside of tracks.
- Little to no silver plate wear on splines
- 901-344-411 Bearing Inner Ring still attached
  - Marks at ball spacing. Likely the resting position during fire.



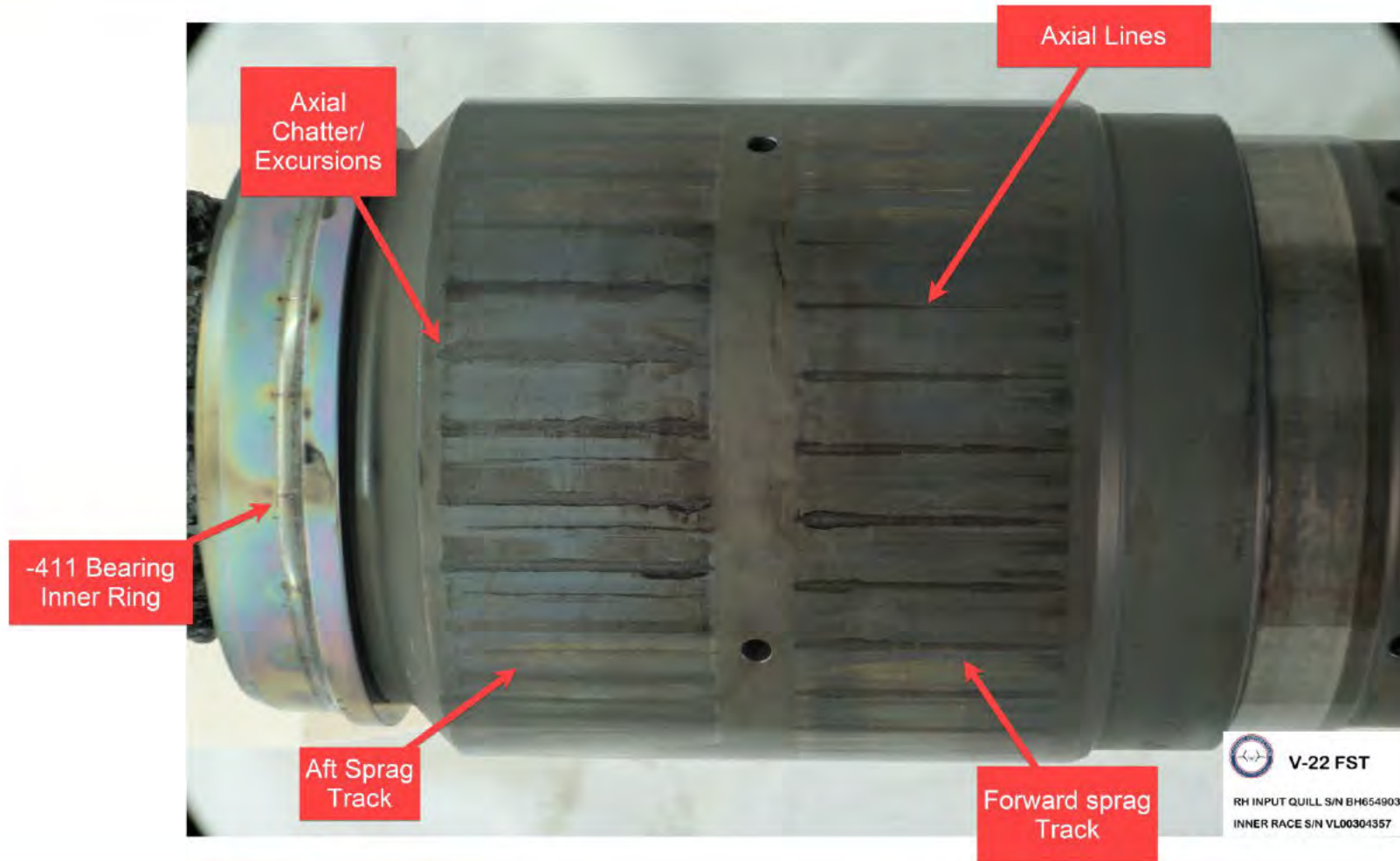


# RH Clutch Inner Race, S/N VL00304357





# RH Clutch Inner Race, S/N VL00304357







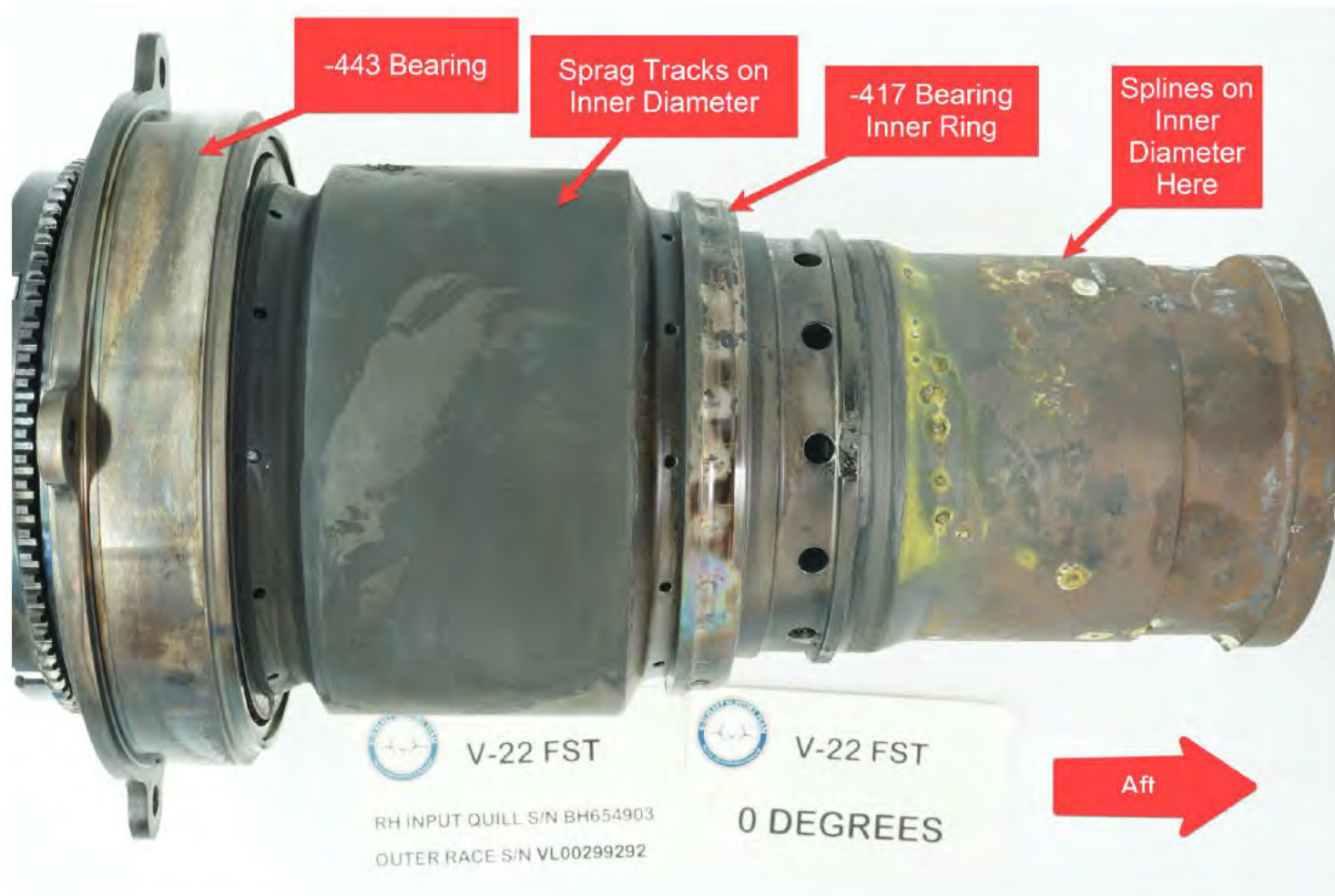
# RH Clutch Outer Race, S/N VL00299292



- Heavy fire damage on entire component
  - Burnt/ Charred look
- No signs of smeared metal/material transfer within sprag tracks
  - Sprag track surfaces smooth to the touch. No raised material felt with probe.
  - Lines at sprag spacing within sprag tracks
    - Shows resting position during fire
- 901-344-443 Bearing still installed
  - All four Mounting Tabs intact
  - Bearing rotates but not smoothly
- 901-344-417 Bearing Inner Ring still installed
  - Fire damage at ball spacing
    - Brinnelling within these marks



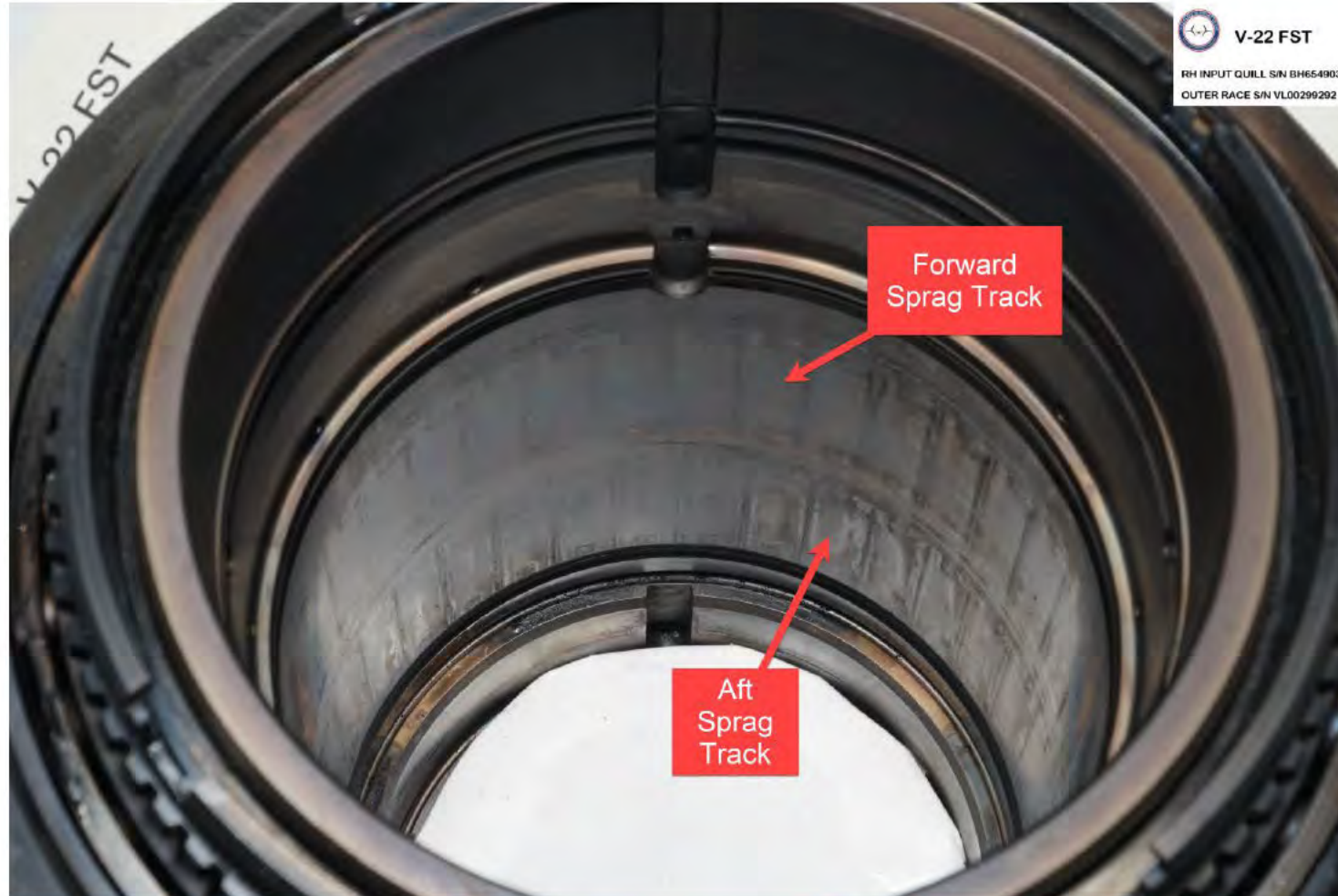
# RH Clutch Outer Race, S/N VL00299292







# RH Clutch Outer Race, S/N VL00299292





# RH Sprag Retainer Assembly, S/N FD2607



- FD2607-1 (Engine/Aft Side)

- Sprags fell out upon disassembly
  - Likely from energizing springs lost resistance
  - All 33 sprags accounted for
- Burnt/Charred appearance
- No signs of HCE
  - No heavily worn inner/outer cams
  - No flats or material loss on cams
  - No broken ears on sprags

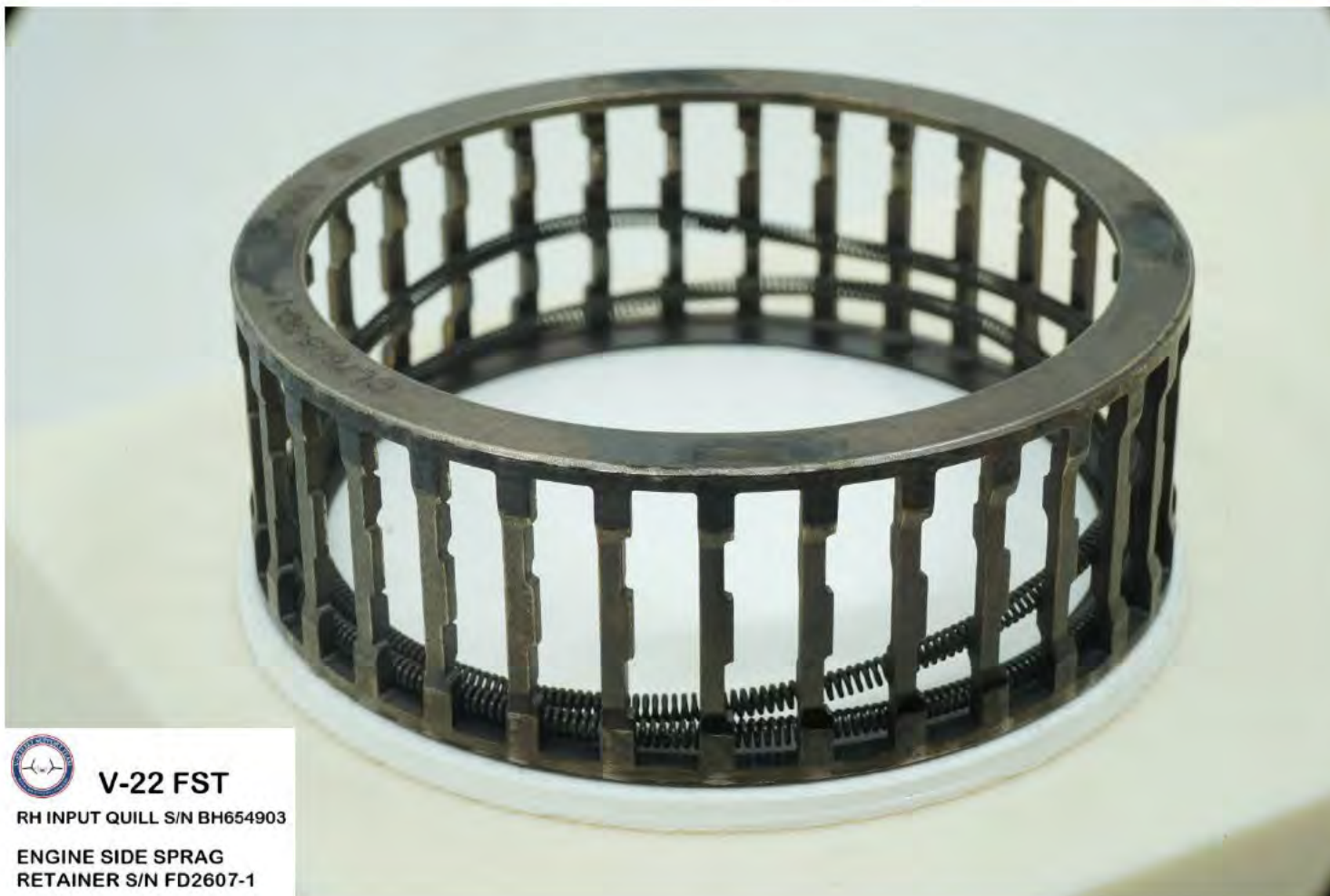
- FD2607-2 (PRGB/forward Side)

- Burnt/Charred appearance
  - Less fire damage as compared to other retainer assemblies
- No signs of HCE
  - No heavily worn inner/outer cams
  - No flats or material loss on cams
  - No broken ears on sprags
- Sprags very loose within retainer
  - Spring lost resistance
- Minor evidence of surface corrosion noted





# RH Sprag Retainer Assembly, S/N FD2607-1



Sprag Retainer with  
Sprags removed (fell  
out upon  
disassembly).



**V-22 FST**

RH INPUT QUILL S/N BH654903

ENGINE SIDE SPRAG  
RETAINER S/N FD2607-1



# RH Sprag Retainer Assembly, S/N FD2607-1

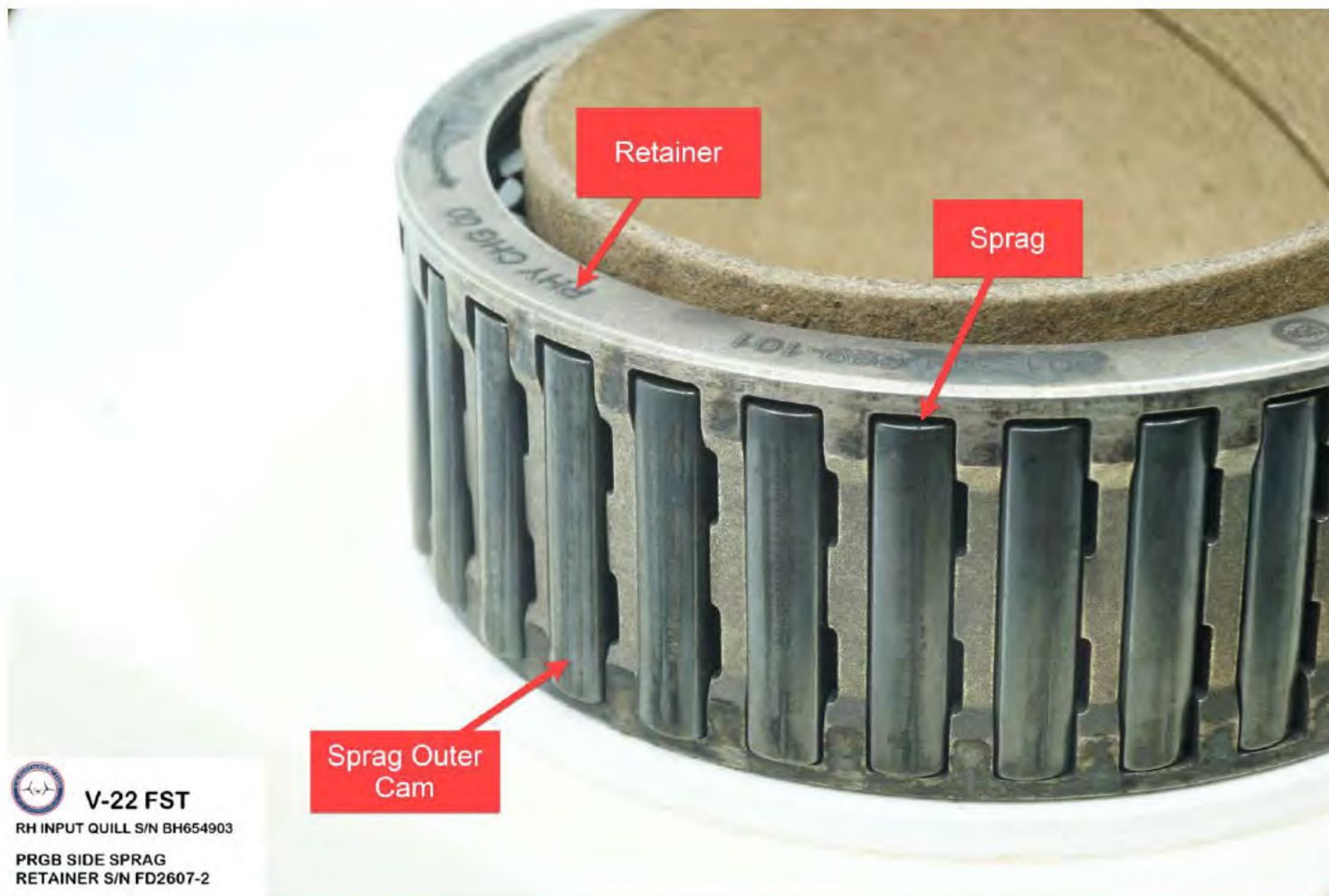


Sprag Inner Cams  
shown



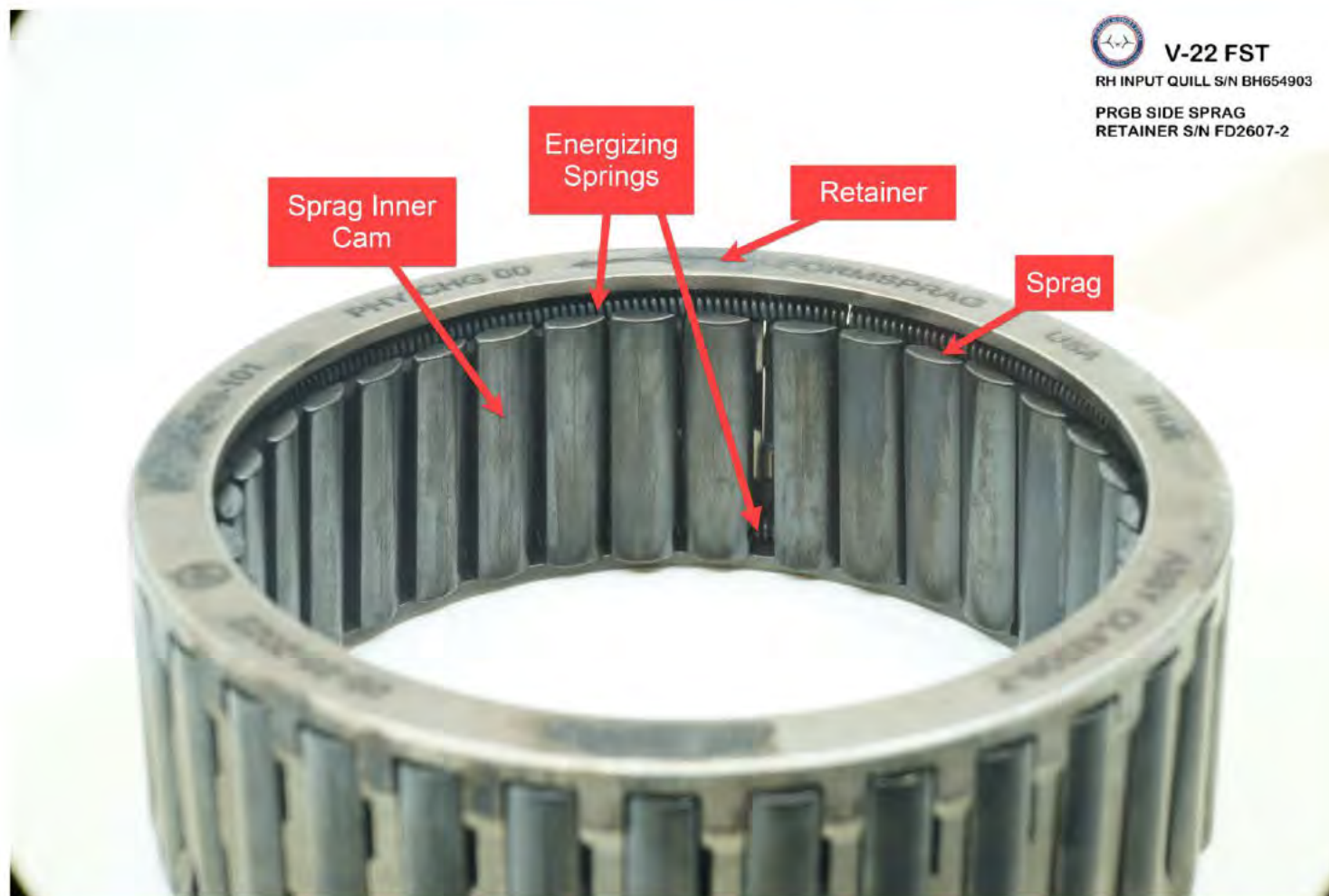


# RH Sprag Retainer Assembly, S/N FD2607-2





# RH Sprag Retainer Assembly, S/N FD2607-2



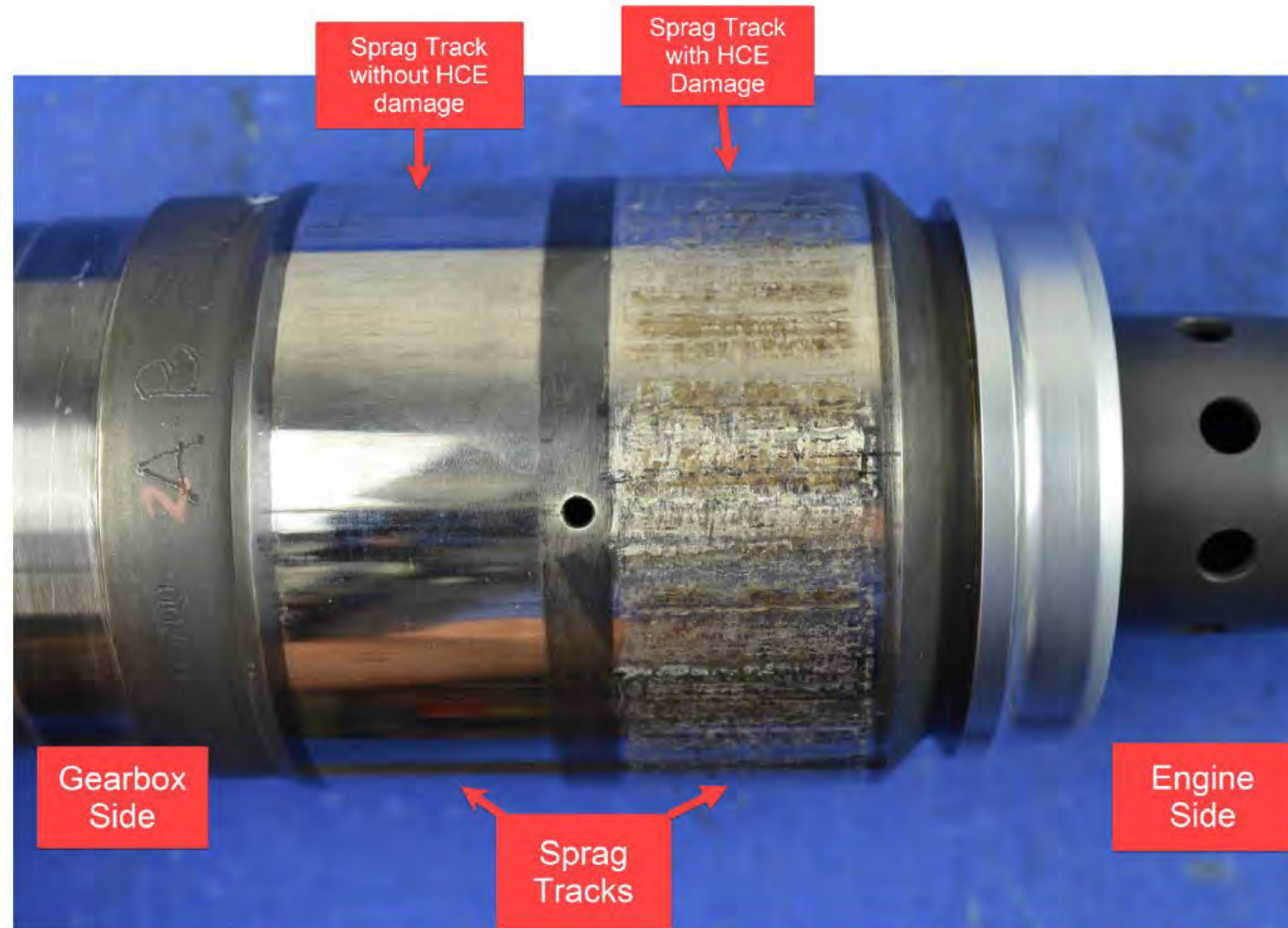




# Backup

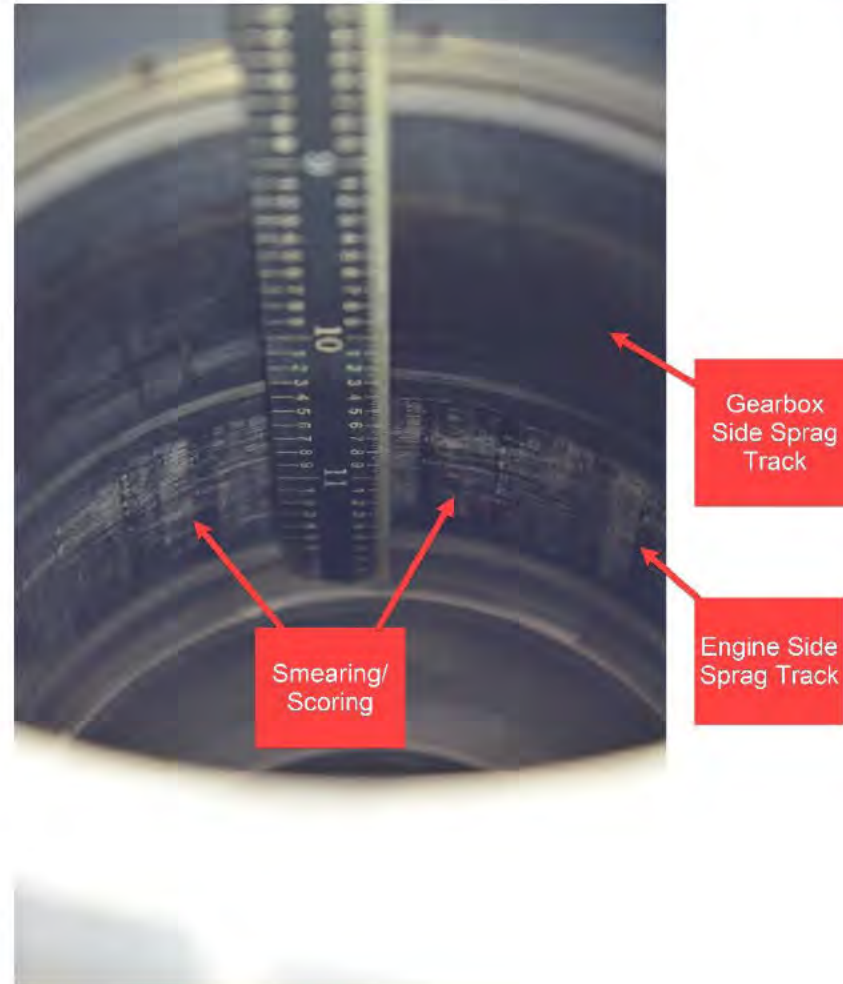


# HCE Damaged Components for Reference (from another event)





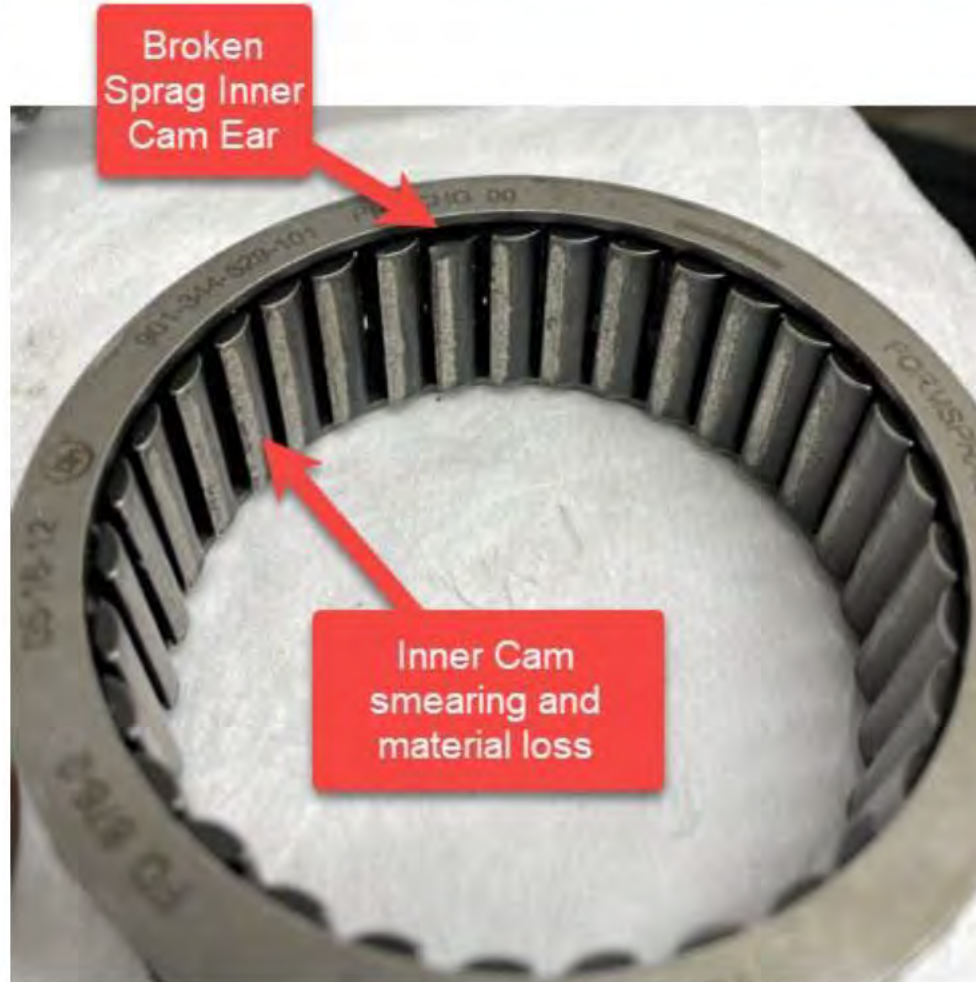
# HCE Damaged Components for Reference (from another event)







# HCE Damaged Components for Reference (from another event)





# 168616 Mishap (Darwin, Aus)

Rotor System



Controlled By: V-22 Fleet Support Team

CUI Category: CUI

Distribution/Dissemination Controls: C

(b) (6)

Controlled Unclassified Information

Enclosure (111)



# On-Site Pictures

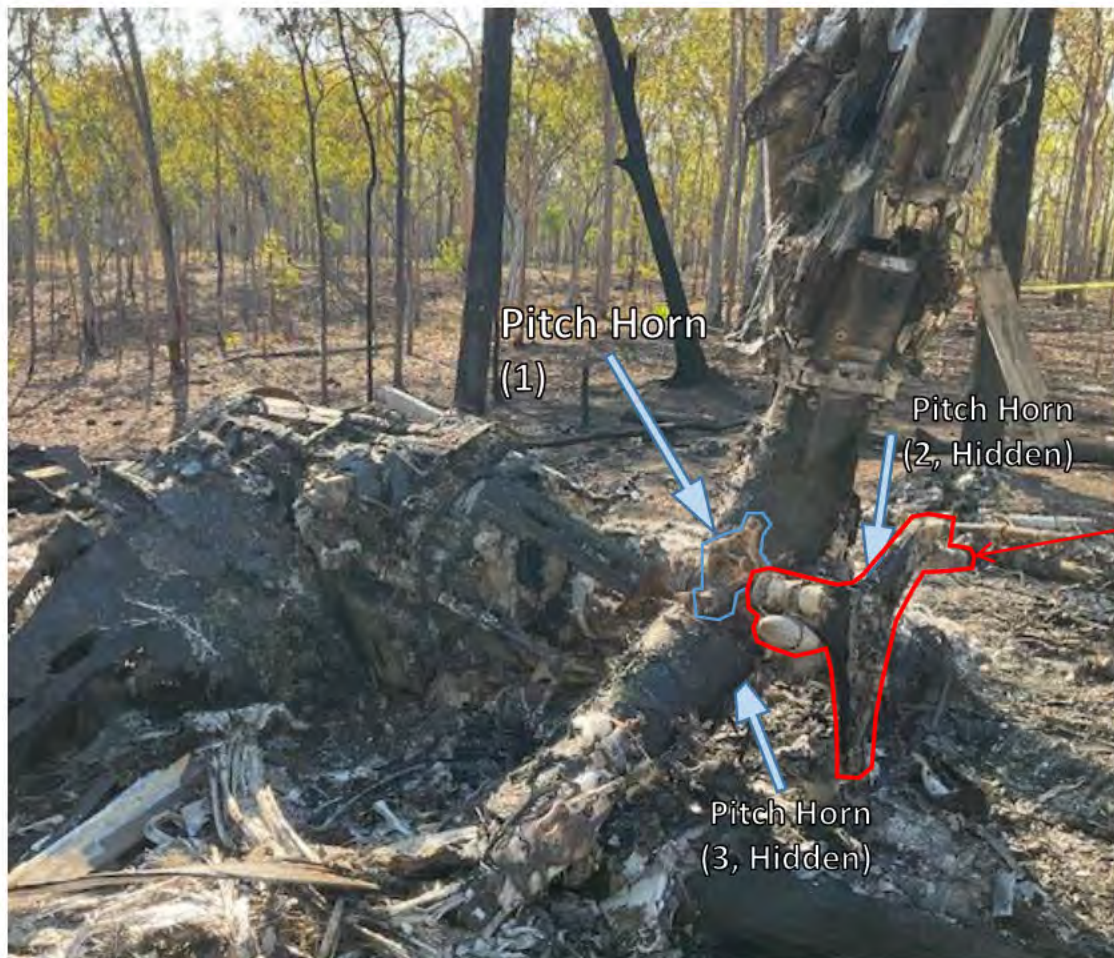


- Photos of the crash site were reviewed by FST Rotors.
- **No obvious evidence of rotor functional failure, other than fire/impact damage.**
- Extensive burn damage made the remaining composite exhibits susceptible to handling damage.
  - All 6 Pendulum damper yoke arms were largely intact at the mishap site. Pendulum damper yoke was likely damaged during transport/handling.
  - All 6 pitch horns were present. Left hand grips/pitch horns likely damaged during transport/handling.
- Portions of the left hand swashplate were likely destroyed (melted) away by fire.





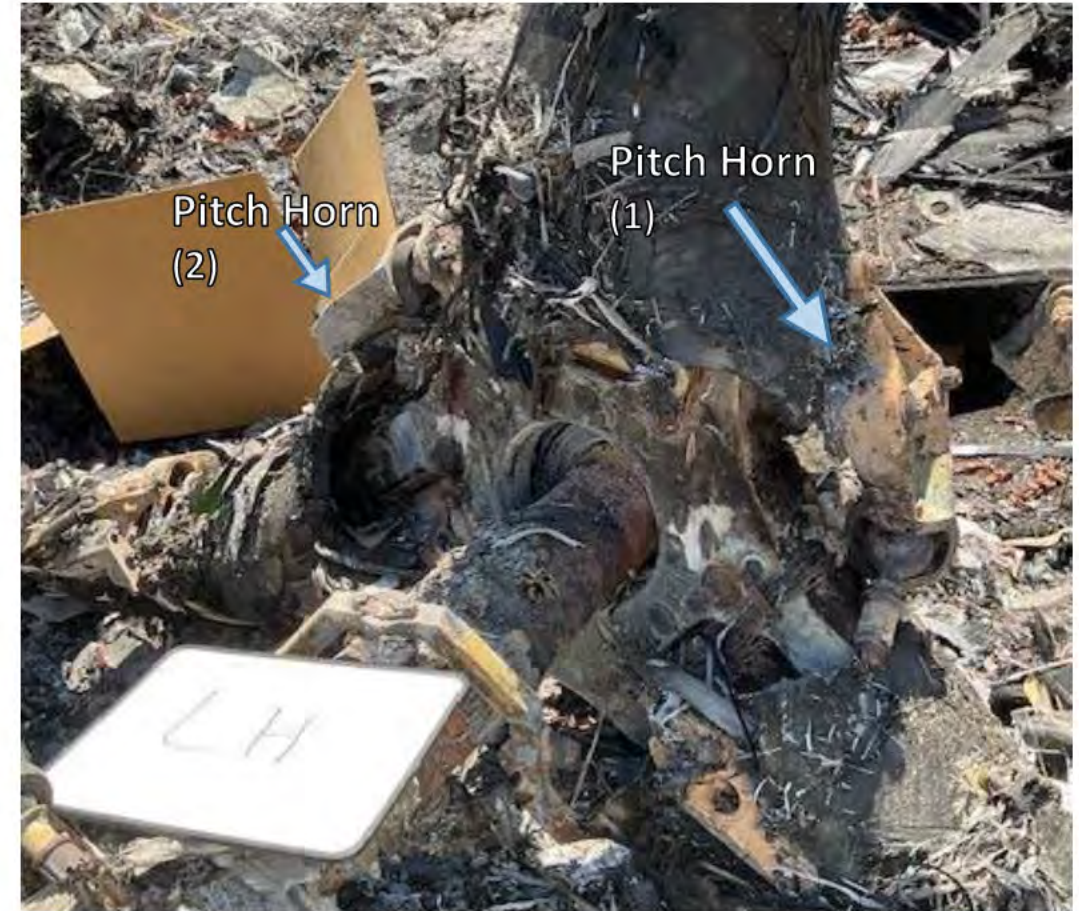
# Left Hand Rotor







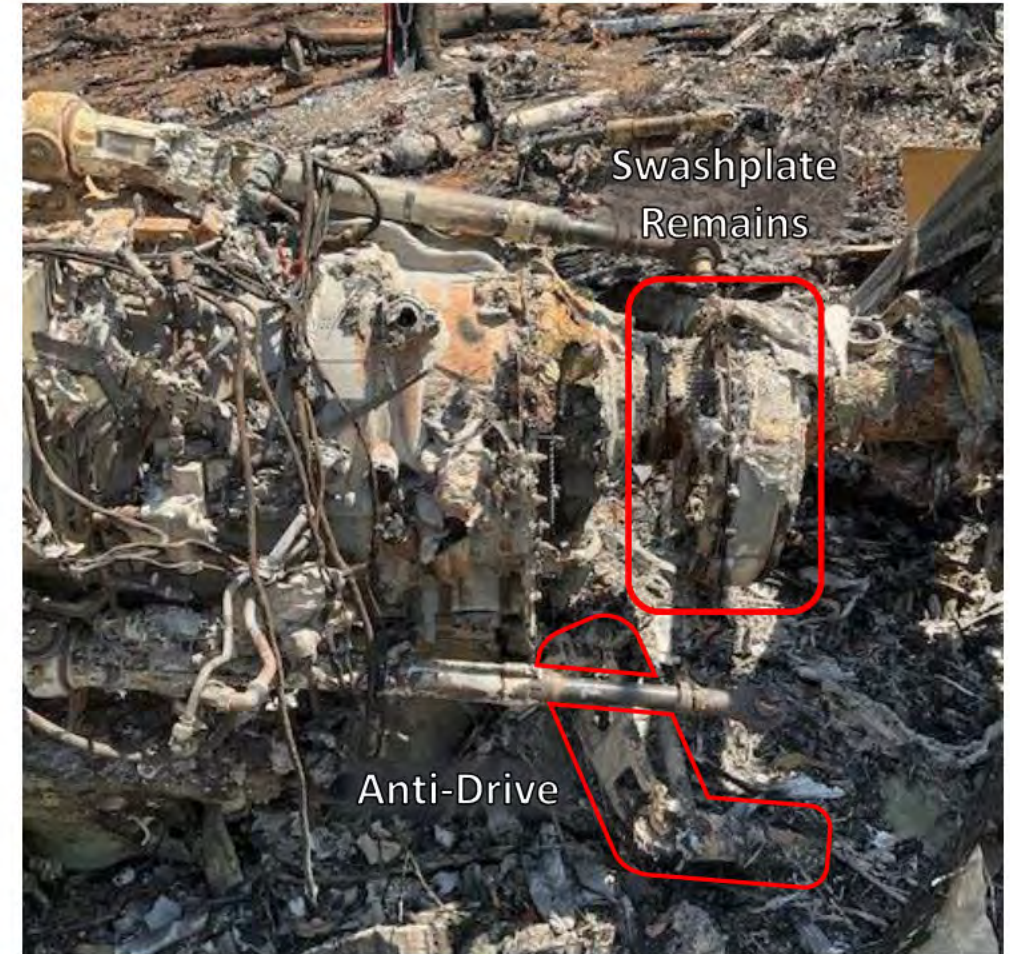
# Left Hand Hub







# Left Hand Swashplate







# Right Hand Rotor







# Right Hand Hub







# Rotor Summary



Both rotor hubs were delivered to Cherry Point individually wrapped. The masts were cut below the yoke (above the swashplate) to facilitate shipping. A cursory visual and touch inspection was performed on the hub exhibits.

- **No obvious evidence of rotor functional failure, other than fire/impact damage**
- Significant burn damage to hubs made teardown difficult, and inspection largely inconclusive.
  - Composite rotor components (Yoke, Grip, Fairings) were extremely weakened, likely due to thermal degradation of epoxy matrix.
  - Potential transport damage, due to weakened composites, generated uncertainty.
  - Thermal degradation to paint further masked potential witness marks on metallic surfaces.
- Yokes and grips were largely intact on both hubs.
  - Burn damage destroyed any evidence of possible delamination.
  - Left hand pitch horns were present at the mishap site and were likely damaged during transport.
- No major witness marks observed on both hub drive sections.
  - No apparent contact between drive links and pillow blocks.
  - No apparent contact between hub spring and mast.
  - Major hub flapping/mast bumping unlikely.
- Pendulum weights/yokes were likely damaged during transport/handling.
  - Pendulum yoke tips were still attached at the mishap site.





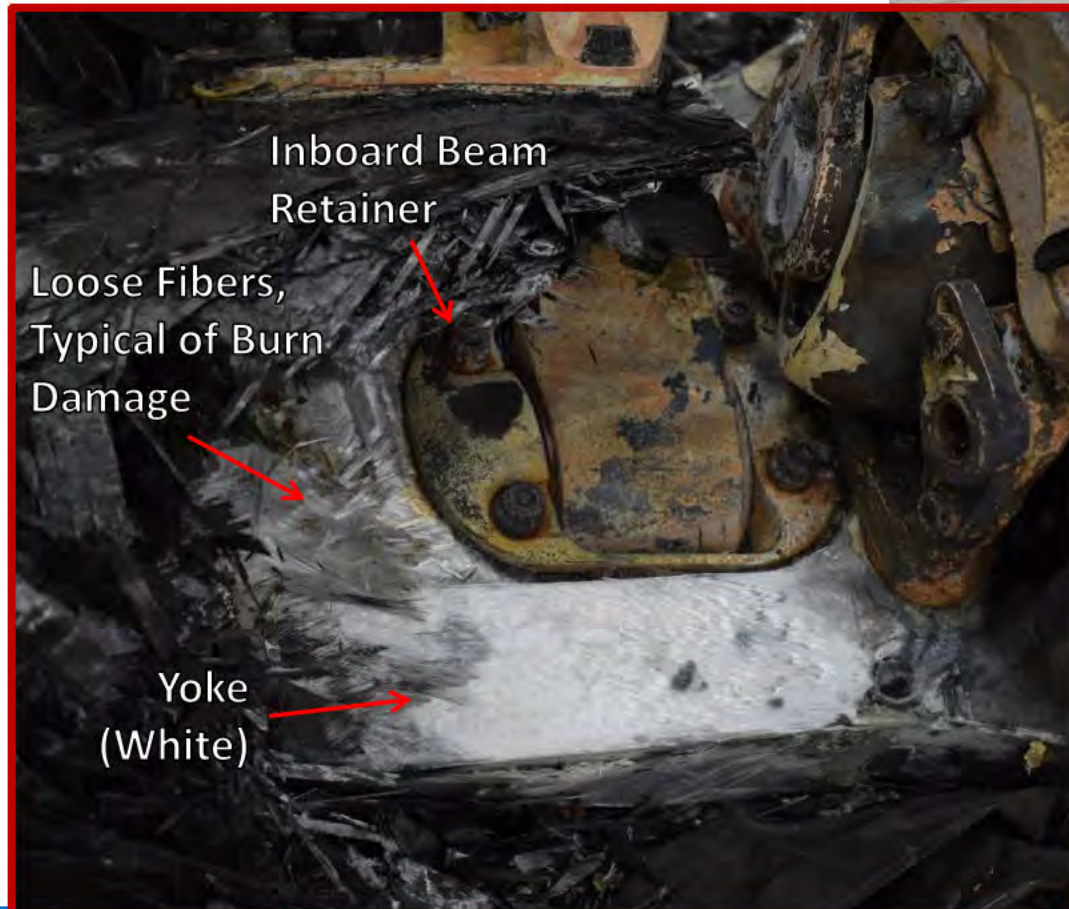
# LH Hub







# LH Grips and Yoke







# LH Drive Unit



Fire Likely Burnt  
away elastomers,  
Leaving behind  
only shims.







# Right Hand Hub







# Right Hand Hub, Drive Unit



Fire Likely Burnt  
away elastomers,  
Leaving behind  
only shims.





# Right Hand Hub, Drive Unit







# Swashplate and Rotating Controls Summary



Right hand swashplate was delivered to Cherry Point, still attached to the proprotor gearbox. A cursory visual/touch inspection was performed on right hand. Left hand swashplate was heavily damaged by fire and not delivered to Cherry Point. A review of on-site photos was performed on left hand.

**No obvious evidence of Swashplate and Rotating Controls functional failure, other than fire/impact damage.**

## Right Hand Swashplate

- Rotating rings could be turned by hand. No obvious signs of binding or seizing in triplex bearing.
- All fasteners present.
- All 6 right hand rod ends were present on pitch horns and swashplate. All pitch links separated in their pitch link tubes, exact cause undetermined.
- Anti Drive showed no obvious signs of deformation

## Left Hand Swashplate

- Rotating and non-rotating rings were not identifiable in the wreckage.
  - Left Hand swashplate components were not evaluated at Cherry Point.
- Gimbal ring, triplex bearings, and clamp ring were roughly identified in on-site photos.
- All 3 left hand upper rod ends were found still attached in the pitch horns. Lower rod ends were not identified/recovered.
- Anti-Drive showed no obvious signs of deformation in on-site photos
  - Anti-drive was found on the ground, just below the swashplate remains at the mishap site
  - Mount bolts were still in anti-drive mounts with no obvious signs of bending. The prop rotor gear box case most likely melted away from the anti-drive.





# Right Hand Swashplate







# Right Hand Anti-Drive







# Left Hand Swashplate







# Left Hand Swashplate





# Left Hand Anti-Drive



Anti-Drive  
Mount Bolts





[REDACTED]

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**From:** (b) (6) r@usmc.mil>  
**Sent:** Thursday, August 24, 2023 1:31 AM  
**To:** V31 Cmd Teams  
**Cc:** (b) (6); (b) (6)  
**Subject:** PRED RUN UPDATES: Air Assault Planning  
**Signed By:** (b) (6) @usmc.mil

Team,

All RAAF C27s are currently grounded due to a safety issue. There are no other RAAF aircraft available to support. That changes the SOM for the northern objective on Melville Island.

Talked with (b) (6) from the ACE.

MV-22s can support (3) hits of 2xMV-22s at ALPACA and (2) hits of 2xMV-22s at CHEETAH; creating no change to the SOM.

COAs as I see them are as follows:

COA1) Proceed as planned using the MV-22s on both objectives

COA2) Localize our forces to a singular OBJ (CHEETAH), allow 5RAR to conduct RIP, at which point they will SEIZE ALPACA

COA3) Reduce PAX footprint closer to min boots on deck required for both OBJ's ALPACA and CHEETAH. Minimal change to SOM with a hedging of bets for EXFIL if asset attrition occurs.

#### NOTES

- ACE reassured me that if there were to be asset attrition on the planned EXFIL date for USMC, that they could do the EXFIL with 1xMV-22 with an extended crew day. There is a level of risk involved in accepting that as an option.
- There remains the option to move PAX off of Melville via Australian surface connectors from the BLS
- US C130s are likely no-go for support given the difficulty of even getting parts and things flown out to Darwin, HOWEVER, will continue to explore possibility of US Aircraft to fly ISO 1BDE and PRED RUN

There is a planning meeting at 1 BDE tomorrow, 25 Aug at 1000.

BREAK

(b) (6): Can you look into the availability of anything from the US side of the house that could potentially be able to support, please? The ADF have been exceptional stewards, if we are able to return the favor that will go a long way. I understand the ask is a long haul and likely a no, but question not asked always goes unanswered.

R/S,

(b) (6)

Major, USMC

MRF-D Ground Combat Element (GCE)

3rd Battalion, 1st Marines  
Operations Officer (Brahma 3)  
C (USA): +1 571-275-1636  
C (AUS): +61 447 972 845

# Department of the Navy

## Certificate of Training

This is to certify that:

**(b) (6)**

Has satisfactorily completed the course of

**AOM FUNDAMENTALS**


**C-555-0034**

given at

Center for Naval Aviation and Technical Training, MCBH Kaneohe  
Bay, Hawaii on the 30th day of Aug 2022

  
AZC (AW/SW) MOSES

Instructor

  
AVCM (AW/SW) HASS

MCPOIC

---

From: (b) (6) @usmc.mil>

Sent: Thursday, September 7, 2023 6:37 PM

To: (b) (6)

Cc: (b) (6)

Subject: RE: MRF-D MAGTF CE Documents for Reference

Good Morning Sir,

Apologies for the delay getting back to you. We do not have an updated confirmation brief specifying support on that date. The brief was delivered at the beginning of August as the bulk of the command element and ACE were departing to the Philippines to support IPE/Ex Alon. This left several weeks for adjustments to be made to the original plan and timeline.

I have attached the ASR from 1BDE for MV-22 support on 27 August as well as the two email chains that I think best answer your question. The initial planning factor for 1BDE and V3/1 was no MV-22 support available on 27 August. The VMM-363 CO indicated in the confirmation brief that this was subject to change. Ultimately VMM-363 Ops offered 1x MV-22 on 27 August to supplement the primary RAAF C-27 lift.



As indicated in the attached email from (b) (6), V3/1 OPSO, the RAAF C-27s were downed the week prior due to a safety concern and VMM-363 offered 2x MV-22s for V3/1's insert on Melville Island. MRF-D Ops was kept informed of all these planning changes as they occurred.

I've added (b) (6) (V3/1 AirO), (b) (6) (VMM-363 AOPSO), and (b) (6) (VMM-363 OPSO) to the CC line to offer any other pertinent details.

Please let me know if you have any other questions.

Very Respectfully,

(b) (6)  
MRF-D Air Officer  
UH-1Y Pilot  
AUS DSN: 0889-836-868  
Signal: +1 (626) 551-7913  
(b) (6)

---

From: (b) (6)  
Sent: Thursday, September 7, 2023 12:49 PM  
To: (b) (6)  
Cc: (b) (6)  
(b) (6)  
Subject: RE: MRF-D MAGTF CE Documents for Reference

Couple of questions regarding the PR Conf Brief. Seems to be some discrepancies regarding days MV-22s were available for tasking (29/31 Aug) and the number of aircraft involved.

Is there another Conf Brief that covers when MV-22 support to PR was changed to the 27<sup>th</sup> and 2xMV-22s?

Thanks

(b) (6)  
I MEF G-37 Force Development Officer  
(b) (6)  
(b) (6)  
Comm: 760-725-9191  
Gov Cell: 760-212-6683 (Voice Only)  
VOSIP: 361-0730  
CISCO: 365-0013 158.235.210.66

---

From: (b) (6) <(b) (6)@usmc.mil>  
Sent: Wednesday, September 6, 2023 3:58 PM  
To: (b) (6); (b) (6)  
Cc: (b) (6)  
(b) (6)  
Subject: RE: MRF-D MAGTF CE Documents for Reference

Sir,

Attached are the MRF-D EXORD (UNCLAS), the Pred Run 23 Confirmation Brief, and the MRF-D FRAGO to the ACE for Pred Run 23 support.

Also attached is our MRF-D Air Operations SOP draft for reference. Production of this document began in June 2023 and the processes/procedures within have only been informally socialized with our MSEs.

I have added you to the MRF-D MAGTF Teams page, our repository for all MRF-D briefs and planning documents.

More to follow from Maj Knecht. Standing by for further questions sir.

Very Respectfully,

(b) (6)

MRF-D Air Officer

UH-1Y Pilot

AUS DSN: 0889-836-868

Signal: +1 (626) 551-7913

(b) (6)

---

From: (b) (6) (b) (6)

Sent: Wednesday, September 6, 2023 3:41 PM

To: (b) (6)

Cc: (b) (6)

Subject: RE: MRF-D MAGTF CE Documents for Reference

Sir,

Ack all. (b) (6) and (b) (6) will provide the requested documents. Everything should reside on NIPR except the TASKORD and DEPOD.

Our MRF-D SOP and Air Operations SOP are both in draft; none existed prior to our rotation. We will provide you both.

Let us know what else you need.

V/R,  
Phil

(b) (6)

USMC

Operations Officer

Marine Rotational Force-Darwin 23.3 (1st Marines)

"Inchon 3"

📞 Mobile: +1 540.998.0300

📞 Australian Mobile: +61 472.533.622

📞 Australian Office: +61 088.923.7395

(b) (6)

From: (b) (6)  
Sent: Wednesday, September 6, 2023 11:51 AM  
To: (b) (6) (b) (6) [usmc.mil](mailto:usmc.mil)>  
Cc: (b) (6)  
Subject: MRF-D MAGTF CE Documents for Reference

(b) (6),

As we expand our investigation beyond the mishap itself, I'm starting to look at COMREL, SOPs, reference to OPTEMPO and the like. Can you please provide me with the following if available on NIPR. If only on SIPR, will work with you on how to proceed, as I have no access to SIPR ATT.

- CE SOPs on operations
- MRF-D TEEP
- Predator Run Confirmation Brief
- Any other larger event supported by MRF-D units comparable to Predator Run for comparison. I'm not familiar with all your exercises.
- MFP/I MEF Tasking Order for MRF-D 23.3 rotation
- COMREL Slide

S/F and Thanks

(b) (6)

(b) (6)  
I MEF G-37 Force Development Officer

(b) (6)

Comm: 760-725-9191  
Gov Cell: 760-212-6683 (Voice Only)  
VOSIP: 361-0730  
CISCO: 365-0013 158.235.210.66



MARINE MEDIUM TILTROTOR SQUADRON THREE SIX THREE															
JULIAN	23239	DATE	27-Aug-23	(Z) OFFSET	9.5	SUNSET	1843	EENT	1929	HLL	1929-0135*	LLL	0246-0557		
C	S	A	EVENT/CALLSIGN	PRI	BU	CREW			TCN	INTRA	GOLD	CMRK			
1			DK 1-1			(b) (6)	(b) (6)		11Y	EMERALD*	BRASS	COPPER			
2			SIMA			(b) (6)	(b) (6)					RUST			
1			DK 1-2			LEWIS / LEBEAU			74Y			CRIMSON			
2			SMEAGOL			COLLART	(b) (6)								
5 % TORQUE WT			5 % TORQUE WT			10% TORQUE WT			10 % TORQUE			ESA			
YPDN						.CW1			.AI1			1.6			
WEAPONS															
4-1		M240D						x1							
4-2		M240D						x1							
COUNTERMEASURES															
IDs		TR													
O1		O2			CH			FL							
12		42			12			24							
NON IASE (LEGACY)															
ALE-47		OFF			MDF			MDS							
		1138			4114										
APR-39		A 240.1						A 414							
		C U362						C 3P10							
AAR-47		42.00													
IASE															
ALE-47		OFF			MDF			MDS							
		5102			4113										
APR-39		C U360						C 3P10							
		D U511						D 7P12							
AAQ-24		RP			UDM			TUDM							
		R28P07			UV28M3			UJ28M4							
SENSORS															
B/E		SENSORS			NAVAIDS										
LOS		YPDN			DAR 41X										
BFP		YPDN													
BNFP		YPDN													
TIMELINE															
EVENT		ZULU			LOCAL										
MAN		2245			0815										
		2255			0825										
RIO		21 C/S			22 C/S										
		1A			24A										
START		2300			0830										
PZ / LOAD		2315			0845										
TAXI		2325			0855										
TAKEOFF YPDN		2330			0900										
LAND CW		2350			0920										
TO CW		0000			0930										
LAND YPDN		0020			0950										
TO YPDN		0050			1020										
LAND AI		0105			1035										
TO AI		0115			1045										
LAND YPDN		0135			1105										
TO YPDN		0205			1135										
LAND AI		0225			1155										
TO AI		0235			1205										
CONT HOLD					ON CALL										
LAND YPDN		0330			1300										
BUMP															
STRAGGLE															
DELAY															
DROP DEAD															
MAX FUEL IN ZONE FOR 10% MARGIN CROW: 6.5K															
MAX FUEL IN ZONE FOR 10% MARGIN ANI: 6.7K															
FUELS															
BATTERY		9.2			TIGER FUELS/TIMES			BASE #			SPINS				
MSN		12.1						# / LTR			A / 59				
FROM		LZ CW			LZ AI			HA-CW-HA			PZ-AI-PZ				
TO		YPDN			YPDN			0.5 / 0+08			1.3 / 0+25				
JOKER		3.0			3.3			0.3 / 0+07			2.0 / 0+39				
BINGO		2.3			2.6			ALTITUDE			8000				
								HDG / AS			270° / 200				

MARINE MEDIUM TILTROTOR SQUADRON THREE SIX THREE															
JULIAN	23239	DATE	27-Aug-23	(Z) OFFSET	9.5	SUNSET	1843	EENT	1929	HLL	1929-0135*	LLL	0246-0557		
C	S	A	EVENT/CALLSIGN	PRI	BU	CREW			TCN	INTRA	GOLD	CMRK			
1			DK 1-1			(b) (6)	(b) (6)		11Y	EMERALD*	BRASS	COPPER			
2			SIMA			(b) (6)	(b) (6)					RUST			
1			DK 1-2			LEWIS / LEBEAU			74Y			CRIMSON			
2			SMEAGOL			COLLART	(b) (6)								
5 % TORQUE WT			5 % TORQUE WT			10% TORQUE WT			10 % TORQUE			ESA			
YPDN						.CW1			.AI1			1.6			
WEAPONS															
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4-2		M240D						x1							
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		D U511						D 7P12							
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		R28P07			UV28M3			UJ28M4							
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BFP		YPDN													
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TIMELINE															
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BINGO		2.3			2.6			ALTITUDE			8000				
								HDG / AS			270° / 200				



VMM-363 COMM CARD (21FEB2023)VMM-363 COMM CARD (21FEB2023)

\*\*\* \*\*

27-Aug		A/C + 4 CREW + MSN KIT + M240W/ MNT + 7.8K FUEL + 19 PAX(300#)									
(b) (6) / (b) (6) (b) (6)											
		1 - YPDN/A (DEPARTURE)					6 - .CW1 (DESTINATION)				
SURFACE TEMP / WINDS		32.0 °C / 0/0					31.6 °C / 0/0				
SURFACE PA / SURFACE DA		101 ft / 2069 ft					287 ft / 2252 ft				
HOVER ENGINES / ANTI-ICE		100 % / Off					100 % / Off				
BASIC WEIGHT		36689 lbs					36689 lbs				
+ CREW		880 lbs					880 lbs				
+ MISC (MSN SPEC. KITS)		334 lbs					334 lbs				
= OPERATING WEIGHT		37903 lbs					37903 lbs				
+ FUEL		7800 lbs					6779 lbs				
+ PAYLOAD		5700 lbs					5700 lbs				
= MISSION WEIGHT		51403 lbs					50382 lbs				
		C.G.		LIMITS (FWD-AFT)			C.G.		LIMITS (FWD-AFT)		
APLN MODE (inches)		392.5		381.0 - 395.2			392.7		380.5 - 395.2		
VTOL MODE (inches)		402.1		390.7 - 405.0			402.5		390.4 - 405.1		
		1 - YPDN/A (DEPARTURE)					6 - .CH1 (DESTINATION)				
MAST TORQUE AVAIL (N/I) (a)		(N)	100%	/(I)	117%	(N)	100%	/(I)	117%		
MAST TORQUE REQ (HOGE) (b)		(N)	NC	/(I)	111%	(N)	115%	/(I)	107%		
MAST TORQUE REQ (HIGE) (c)		(N)	111%	/(I)	103%	(N)	107%	/(I)	99%		
MAST TORQ MARG (HOGE) (a-b)		(N)	NC	/(I)	6%	(N)	-15%	/(I)	10%		
MAST TORQ MARG (HIGE) (a-c)		(N)	-11%	/(I)	14%	(N)	-7%	/(I)	18%		
MAX HOGE WT WITH TORQUE MARGIN (I) (d)		5 %TM 51699 lbs					10 %TM 50386 lbs				
OPERATING WEIGHT (e)		37903 lbs					37903 lbs				
MAX ALL. PAYLOAD (d-e)		13796 lbs					12483 lbs				
MAX HOGE WEIGHT (I) (ZERO TORQUE MARGIN) (f)		52810 lbs					52648 lbs				
FLIGHT DATA		WORST CASE LEG - 1					BEST CASE LEG - 6				
		2 - .LEE POINT					6 - .CH1				
SURFACE TEMP / SURFACE PA		32.2 °C / -2 ft					31.6 °C / 287 ft				
ALTITUDE / TEMP DEV		3500 ft / 17.2 °C					289 ft / 17.2 °C				
RAMP POSITION (Ramp/Door)		Closed/Closed					Closed/Closed				
DWS CONFIGURATION		Stowed					Stowed				
MISSION WEIGHT		51403 lbs					50479 lbs				
POWER REQ / MHGW 0% TM (g)		111% / 52901 lbs					108% / 52648 lbs				
MAX RANGE AIRSPEED (h)		221 KCAS					226 KCAS				
MAX ENDURANCE AIRSPEED (i)		146 KCAS					143 KCAS				
MAX ALT (APLN MODE) (j)		19457 ft @ 149 KCAS					19979 ft @ NC KCAS				
A/S ENVELOPE (APLN MODE) (k)		141 to 260 KCAS					139 to 265 KCAS				
BEST CRUISE ALTITUDE (l)		16014 ft					16555 ft				
STALL SPEEDS		WORST CASE					BEST CASE				
		POWER-ON		POWER-OFF			POWER-ON		POWER-OFF		
0 DEGREES ANGLE OF BANK (m)		118 KCAS		124 KCAS			116 KCAS		123 KCAS		
30 DEGREES ANGLE OF BANK (n)		128 KCAS		136 KCAS			126 KCAS		133 KCAS		
45 DEGREES ANGLE OF BANK (o)		NC KCAS		155 KCAS			143 KCAS		152 KCAS		
SINGLE ENGINE LEVEL FLIGHT		WORST CASE (95% ENG)					BEST CASE (95% ENG)				
MAX ALT OEI (APLN MODE) (p)		5285 ft @ NC KCAS		5880 ft @ NC KCAS			5880 ft @ NC KCAS		5880 ft @ NC KCAS		
A/S ENVELOPE (NAC 60) (q)		NC to NC KCAS		NC to NC KCAS			NC to NC KCAS		NC to NC KCAS		
A/S ENVELOPE (APLN MODE) (r)		136 to 178 KCAS		134 to 196 KCAS			134 to 196 KCAS		134 to 196 KCAS		

\*\*\* \*\*

27-Aug		A/C + 4 CREW + MSN KIT + M240W/ MNT + 7.8K FUEL + 19 PAX(300#)									
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30 DEGREES ANGLE OF BANK (n)		128 KCAS		136 KCAS			126 KCAS		133 KCAS		
45 DEGREES ANGLE OF BANK (o)		NC KCAS		155 KCAS			143 KCAS		152 KCAS		
SINGLE ENGINE LEVEL FLIGHT		WORST CASE (95% ENG)					BEST CASE (95% ENG)				
MAX ALT OEI (APLN MODE) (p)		5285 ft @ NC KCAS		5880 ft @ NC KCAS			5880 ft @ NC KCAS		5880 ft @ NC KCAS		
A/S ENVELOPE (NAC 60) (q)		NC		NC KCAS			NC		NC KCAS		
A/S ENVELOPE (APLN MODE) (r)		136		178 KCAS			134		196 KCAS		

T/O Time (Z): 23:30:00		FLTPLN: Combined Route NAVLOG - 3 waves.jrt-Path1				Total Fuel Onboard: 7900		
LDG Time (Z): 02:48:39		26-Aug-2023 15:53:38				Fuel Required: 9604		
ETE: 20+41+21		TOTAL DIST: 386.9				LDG Fuel OnBoard: 5896		
ESA: 1.6		NO WINDS				MSN BINDER: N/A		
		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# /TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
1 / /	S 12 24.674		103					
DARWIN INTL	E 130 52.241							
/ Departure /	52L GM 0336 2726							
YPDN/A / / /	103 FT /		0		386.9	23:30:00#	7900	51503
2 / /	S 12 19.804	15	3500	147C	5.1	00+01+54	9525	5700
	E 130 53.762						79	7900
1 / CRUS / AUTO	52L GM 0618 3622	17	3500	159G	381.9	23:31:55	7821	51424
.LEE POINT / / /	FT / 0			159T				
3 / /	S 12 15.915	62	3500	147C	8.8	00+03+18	9388	5700
JACKOS JUNCTION	E 131 01.806						137	0
2 / CRUS / AUTO	52L GM 2082 4328	64	3425	159G	373.1	23:35:14	7684	51287
.JACKJNCT / / /	75 FT / 0			159T				
4 / /	S 11 56.694	346	300	154C	19.5	00+07+22	9077	5700
CAPE GAMBIER	E 130 57.916						311	0
3 / CRUS / MANUAL	52L GM 1402 7878	349	300	159G	353.6	23:42:36	7373	50976
.CAPEGAMB / / /	FT / 0			159T				
4 / /	S 11 56.694	347	300	220C#	0	00+02+30	8942	5700
CAPE GAMBIER	E 130 57.916						135	0
4 / LOIT / AUTO	52L GM 1402 7878	349	300	227G#	353.6	23:45:06	7238	50841
.CAPEGAMB / / /	FT / 0			227T#				
5 / /	S 11 52.527	311	300	154C	6.1	00+02+17	8846	5700
IP SUBARU	E 130 53.377						96	0
5 / CRUS / AUTO	52L GM 0583 8652	313	300	159G	347.5	23:47:24	7142	50745
.SUBARU / / /	FT / 0			159T				
6 / /	S 11 45.724	353	300	154C	6.8	00+02+33	8738	5700
CROW NORTH	E 130 52.846						108	0
6 / CRUS / MANUAL	52L GM 0495 9907	356	11	159G	340.7	23:49:58	7034	50637
.CW1 / / /	289 FT / 0			159T				
7 / /	S 11 45.816	158	279	154C	0.1	00+00+02	8737	5700
CROW SOUTH	E 130 52.879						2	0
7 / CRUS / MANUAL	52L GM 0501 9890	160	0	159G	340.6	23:50:00#	7033	50636
.CW2 / / /	279 FT / 0			159T				
7 / /	S 11 45.816	358	279	0C#	0	00+10+00	8466	5700
CROW SOUTH	E 130 52.879						271	0
8 / IDLE / AUTO	52L GM 0501 9890	0	0	0G#	340.6	00:00:00	6762	50365
.CW2 / / /	279 FT / 0			0T#				

T/O Time (Z): 23:30:00		FLTPLN: Combined Route NAVLOG - 3 waves.jrt-Path1				Total Fuel Onboard: 7900		
LDG Time (Z): 02:48:39		26-Aug-2023 15:53:38				Fuel Required: 9604		
ETE: 20+41+21		TOTAL DIST: 386.9				LDG Fuel OnBoard: 5896		
ESA: 1.6		NO WINDS				MSN BINDER: N/A		
		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# /TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
1 / /	S 12 24.674		103			23:30:00#		
DARWIN INTL	E 130 52.241							
/ Departure /	52L GM 0336 2726							
YPDN/A / / /	103 FT /		0		386.9		7900	51503
2 / /	S 12 19.804	15	3500	147C	5.1	00+01+54	9525	5700
	E 130 53.762						79	7900
1 / CRUS / AUTO	52L GM 0618 3622	17	3500	159G	381.9	23:31:55	7821	51424
.LEE POINT / / /	FT / 0			159T				
3 / /	S 12 15.915	62	3500	147C	8.8	00+03+18	9388	5700
JACKOS JUNCTION	E 131 01.806						137	0
2 / CRUS / AUTO	52L GM 2082 4328	64	3425	159G	373.1	23:35:14	7684	51287
.JACKJNCT / / /	75 FT / 0			159T				
4 / /	S 11 56.694	346	300	154C	19.5	00+07+22	9077	5700
CAPE GAMBIER	E 130 57.916						311	0
3 / CRUS / MANUAL	52L GM 1402 7878	349	300	159G	353.6	23:42:36	7373	50976
.CAPEGAMB / / /	FT / 0			159T				
4 / /	S 11 56.694	347	300	220C#	0	00+02+30	8942	5700
CAPE GAMBIER	E 130 57.916						135	0
4 / LOIT / AUTO	52L GM 1402 7878	349	300	227G#	353.6	23:45:06	7238	50841
.CAPEGAMB / / /	FT / 0			227T#				
5 / /	S 11 52.527	311	300	154C	6.1	00+02+17	8846	5700
IP SUBARU	E 130 53.377						96	0
5 / CRUS / AUTO	52L GM 0583 8652	313	300	159G	347.5	23:47:24	7142	50745
.SUBARU / / /	FT / 0			159T				
6 / /	S 11 45.724	353	300	154C	6.8	00+02+33	8738	5700
CROW NORTH	E 130 52.846						108	0
6 / CRUS / MANUAL	52L GM 0495 9907	356	11	159G	340.7	23:49:58	7034	50637
.CW1 / / /	289 FT / 0			159T				
7 / /	S 11 45.816	158	279	154C	0.1	00+00+02	8737	5700
CROW SOUTH	E 130 52.879						2	0
7 / CRUS / MANUAL	52L GM 0501 9890	160	0	159G	340.6	23:50:00#	7033	50636
.CW2 / / /	279 FT / 0			159T				
7 / /	S 11 45.816	358	279	0C#	0	00+10+00	8466	5700
CROW SOUTH	E 130 52.879						271	0
8 / IDLE / AUTO	52L GM 0501 9890	0	0	0G#	340.6	00:00:00	6762	50365
.CW2 / / /	279 FT / 0			0T#				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
8 / /	S 11 51.132	123	500	220C	9.3	00+02+26	8335	5700
IP ENCLAVE	E 131 00.618						131	0
9 / CRUS / AUTO	52L GM 1900 8900	125	493	228G	331.3	00:02:26	6631	50234
.ENCLAVE / / /	7 FT / 0			228T				
9 / /	S 11 56.694	203	500	220C	6.1	00+01+36	8248	5700
CAPE GAMBIER	E 130 57.916						87	0
10 / CRUS / AUTO	52L GM 1402 7878	206	500	228G	325.2	00:04:03	6544	50147
.CAPEGAMB / / /	FT / 0			228T				
10 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	7982	5700
JACKOS JUNCTION	E 131 01.806						266	0
11 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	305.7	00:09:02	6278	49881
.JACKJNCT / / /	75 FT / 0			235T				
11 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	7862	5700
	E 130 53.762						120	0
12 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	296.9	00:11:17	6159	49762
.LEE POINT / / /	FT / 0			235T				
12 / /	S 12 23.581	229	500	220C	6	00+01+34	7778	5700
3NM RWY11	E 130 48.997						84	0
13 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	290.9	00:12:51	6074	49677
.3NM11 / / /	FT / 0			228T				
13 / /	S 12 24.674	107	103	220C	3.4	00+00+53	7731	5700
DARWIN INTL	E 130 52.241						48	0
14 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	287.6	00:13:44	6027	49630
YPDN/A / / /	103 FT / 0			227T				
13 / /	S 12 24.674	358	103	0C#	0	00+30+00	6915	5700
DARWIN INTL	E 130 52.241						816	0
15 / IDLE / AUTO	52L GM 0336 2726	0	0	0G#	287.6	00:43:44	5211	48814
YPDN/A / / /	103 FT / 0			0T#				
14 / /	S 12 19.804	15	3500	220C	5.1	00+01+16	6846	5700
	E 130 53.762						69	3000
16 / CRUS / AUTO	52L GM 0618 3622	17	3500	238G	282.5	00:45:01	8142	51745
.LEE POINT / / /	FT / 0			238T				
15 / /	S 12 15.915	62	3500	220C	8.8	00+02+12	6726	5700
JACKOS JUNCTION	E 131 01.806						119	0
17 / CRUS / AUTO	52L GM 2082 4328	64	3425	238G	273.7	00:47:14	8023	51626
.JACKJNCT / / /	75 FT / 0			238T				
16 / /	S 11 56.694	346	300	220C	19.5	00+05+08	6448	5700
CAPE GAMBIER	E 130 57.916						279	0
18 / CRUS / AUTO	52L GM 1402 7878	349	300	227G	254.2	00:52:22	7744	51347
.CAPEGAMB / / /	FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
8 / /	S 11 51.132	123	500	220C	9.3	00+02+26	8335	5700
IP ENCLAVE	E 131 00.618						131	0
9 / CRUS / AUTO	52L GM 1900 8900	125	493	228G	331.3	00:02:26	6631	50234
.ENCLAVE / / /	7 FT / 0			228T				
9 / /	S 11 56.694	203	500	220C	6.1	00+01+36	8248	5700
CAPE GAMBIER	E 130 57.916						87	0
10 / CRUS / AUTO	52L GM 1402 7878	206	500	228G	325.2	00:04:03	6544	50147
.CAPEGAMB / / /	FT / 0			228T				
10 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	7982	5700
JACKOS JUNCTION	E 131 01.806						266	0
11 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	305.7	00:09:02	6278	49881
.JACKJNCT / / /	75 FT / 0			235T				
11 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	7862	5700
	E 130 53.762						120	0
12 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	296.9	00:11:17	6159	49762
.LEE POINT / / /	FT / 0			235T				
12 / /	S 12 23.581	229	500	220C	6	00+01+34	7778	5700
3NM RWY11	E 130 48.997						84	0
13 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	290.9	00:12:51	6074	49677
.3NM11 / / /	FT / 0			228T				
13 / /	S 12 24.674	107	103	220C	3.4	00+00+53	7731	5700
DARWIN INTL	E 130 52.241						48	0
14 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	287.6	00:13:44	6027	49630
YPDN/A / / /	103 FT / 0			227T				
13 / /	S 12 24.674	358	103	0C#	0	00+30+00	6915	5700
DARWIN INTL	E 130 52.241						816	0
15 / IDLE / AUTO	52L GM 0336 2726	0	0	0G#	287.6	00:43:44	5211	48814
YPDN/A / / /	103 FT / 0			0T#				
14 / /	S 12 19.804	15	3500	220C	5.1	00+01+16	6846	5700
	E 130 53.762						69	3000
16 / CRUS / AUTO	52L GM 0618 3622	17	3500	238G	282.5	00:45:01	8142	51745
.LEE POINT / / /	FT / 0			238T				
15 / /	S 12 15.915	62	3500	220C	8.8	00+02+12	6726	5700
JACKOS JUNCTION	E 131 01.806						119	0
17 / CRUS / AUTO	52L GM 2082 4328	64	3425	238G	273.7	00:47:14	8023	51626
.JACKJNCT / / /	75 FT / 0			238T				
16 / /	S 11 56.694	346	300	220C	19.5	00+05+08	6448	5700
CAPE GAMBIER	E 130 57.916						279	0
18 / CRUS / AUTO	52L GM 1402 7878	349	300	227G	254.2	00:52:22	7744	51347
.CAPEGAMB / / /	FT / 0			227T				



		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
17 / /	S 11 51.366	310	300	220C	7.9	00+02+04	6336	5700
	E 130 52.010						112	0
19 / CRUS / AUTO	52L GM 0336 8868	312	251	227G	246.4	00:54:27	7632	51235
.UTAH1 / / /	49 FT / 0			227T				
18 / /	S 11 43.846	304	300	220C	12.5	00+03+18	6157	5700
	E 130 41.787						178	0
20 / CRUS / AUTO	52L FN 8488 0266	307	218	227G	233.9	00:57:45	7453	51056
.UTAH2 / / /	82 FT / 0			227T				
19 / /	S 11 40.322	305	300	220C	5.9	00+01+32	6074	5700
	E 130 37.004						83	0
21 / CRUS / MANUAL	52L FN 7623 0921	307	287	227G	228	00:59:17	7370	50973
.UTAH3 / / /	13 FT / 0			227T				
20 / /	S 11 37.139	301	300	220C	5.8	00+01+31	5992	5700
IP SUZUKI	E 130 32.105						82	0
22 / CRUS / AUTO	52L FN 6736 1513	303	300	227G	222.2	01:00:49	7288	50891
.SUZUKI / / /	FT / 0			227T				
21 / /	S 11 33.174	34	75	220C	4.9	00+01+17	5922	5700
ANI NORTH	E 130 35.011						70	0
23 / CRUS / MANUAL	52L FN 7268 2241	36	0	227G	217.4	01:02:06	7218	50821
.AI1 / / /	75 FT / 0			227T				
22 / /	S 11 33.249	212	75	220C	0.1	00+00+01	5921	5700
ANI SOUTH	E 130 34.959						1	0
24 / CRUS / MANUAL	52L FN 7258 2227	215	0	227G	217.3	01:02:07	7217	50820
.AI2 / / /	75 FT / 0			227T				
22 / /	S 11 33.249	358	75	0C#	0	00+10+00	5650	5700
ANI SOUTH	E 130 34.959						271	0
25 / IDLE / AUTO	52L FN 7258 2227	0	0	0G#	217.3	01:12:07	6946	50549
.AI2 / / /	75 FT / 0			0T#				
23 / /	S 11 36.807	128	300	220C	5.5	00+01+27	5575	0
IP ELVO	E 130 39.242						75	0
26 / CRUS / AUTO	52L FN 8033 1567	130	179	227G	211.8	01:13:34	6871	44774
.ELVO / / /	121 FT / 0			227T				
24 / /	S 11 40.322	210	300	220C	4.1	00+01+05	5518	0
	E 130 37.004						57	0
27 / CRUS / AUTO	52L FN 7623 0921	212	287	227G	207.6	01:14:40	6814	44717
.UTAH3 / / /	13 FT / 0			227T				
25 / /	S 11 43.846	125	300	220C	5.9	00+01+32	5438	0
	E 130 41.787						80	0
28 / CRUS / AUTO	52L FN 8488 0266	127	218	227G	201.8	01:16:13	6734	44637
.UTAH2 / / /	82 FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
17 / /	S 11 51.366	310	300	220C	7.9	00+02+04	6336	5700
	E 130 52.010						112	0
19 / CRUS / AUTO	52L GM 0336 8868	312	251	227G	246.4	00:54:27	7632	51235
.UTAH1 / / /	49 FT / 0			227T				
18 / /	S 11 43.846	304	300	220C	12.5	00+03+18	6157	5700
	E 130 41.787						178	0
20 / CRUS / AUTO	52L FN 8488 0266	307	218	227G	233.9	00:57:45	7453	51056
.UTAH2 / / /	82 FT / 0			227T				
19 / /	S 11 40.322	305	300	220C	5.9	00+01+32	6074	5700
	E 130 37.004						83	0
21 / CRUS / MANUAL	52L FN 7623 0921	307	287	227G	228	00:59:17	7370	50973
.UTAH3 / / /	13 FT / 0			227T				
20 / /	S 11 37.139	301	300	220C	5.8	00+01+31	5992	5700
IP SUZUKI	E 130 32.105						82	0
22 / CRUS / AUTO	52L FN 6736 1513	303	300	227G	222.2	01:00:49	7288	50891
.SUZUKI / / /	FT / 0			227T				
21 / /	S 11 33.174	34	75	220C	4.9	00+01+17	5922	5700
ANI NORTH	E 130 35.011						70	0
23 / CRUS / MANUAL	52L FN 7268 2241	36	0	227G	217.4	01:02:06	7218	50821
.AI1 / / /	75 FT / 0			227T				
22 / /	S 11 33.249	212	75	220C	0.1	00+00+01	5921	5700
ANI SOUTH	E 130 34.959						1	0
24 / CRUS / MANUAL	52L FN 7258 2227	215	0	227G	217.3	01:02:07	7217	50820
.AI2 / / /	75 FT / 0			227T				
22 / /	S 11 33.249	358	75	0C#	0	00+10+00	5650	5700
ANI SOUTH	E 130 34.959						271	0
25 / IDLE / AUTO	52L FN 7258 2227	0	0	0G#	217.3	01:12:07	6946	50549
.AI2 / / /	75 FT / 0			0T#				
23 / /	S 11 36.807	128	300	220C	5.5	00+01+27	5575	0
IP ELVO	E 130 39.242						75	0
26 / CRUS / AUTO	52L FN 8033 1567	130	179	227G	211.8	01:13:34	6871	44774
.ELVO / / /	121 FT / 0			227T				
24 / /	S 11 40.322	210	300	220C	4.1	00+01+05	5518	0
	E 130 37.004						57	0
27 / CRUS / AUTO	52L FN 7623 0921	212	287	227G	207.6	01:14:40	6814	44717
.UTAH3 / / /	13 FT / 0			227T				
25 / /	S 11 43.846	125	300	220C	5.9	00+01+32	5438	0
	E 130 41.787						80	0
28 / CRUS / AUTO	52L FN 8488 0266	127	218	227G	201.8	01:16:13	6734	44637
.UTAH2 / / /	82 FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
26 / /	S 11 51.366	125	300	220C	12.5	00+03+18	5267	0
	E 130 52.010						171	0
29 / CRUS / AUTO	52L GM 0336 8868	127	251	227G	189.3	01:19:31	6563	44466
.UTAH1 / / /	49 FT / 0			227T				
27 / /	S 11 56.694	130	2500	220C	7.9	00+02+00	5163	0
CAPE GAMBIER	E 130 57.916						103	0
30 / CRUS / AUTO	52L GM 1402 7878	132	2500	235G	181.4	01:21:31	6460	44363
.CAPEGAMB / / /	FT / 0			235T				
28 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	4907	0
JACKOS JUNCTION	E 131 01.806						257	0
31 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	161.9	01:26:30	6203	44106
.JACKJNCT / / /	75 FT / 0			235T				
29 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	4792	0
	E 130 53.762						115	0
32 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	153.1	01:28:45	6088	43991
.LEE POINT / / /	FT / 0			235T				
30 / /	S 12 23.581	229	500	220C	6	00+01+34	4710	0
3NM RWY11	E 130 48.997						81	0
33 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	147.1	01:30:19	6006	43909
.3NM11 / / /	FT / 0			228T				
31 / /	S 12 24.674	107	103	220C	3.4	00+00+53	4664	0
DARWIN INTL	E 130 52.241						46	0
34 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	143.8	01:31:12	5960	43863
YPDN/A / / /	103 FT / 0			227T				
31 / /	S 12 24.674	358	103	0C#	0	00+30+00	3848	0
DARWIN INTL	E 130 52.241						816	0
35 / IDLE / AUTO	52L GM 0336 2726	0	0	0G#	143.8	02:01:12	5145	43048
YPDN/A / / /	103 FT / 0			0T#				
32 / /	S 12 19.804	15	3500	220C	5.1	00+01+16	3779	5700
	E 130 53.762						69	6000
36 / CRUS / AUTO	52L GM 0618 3622	17	3500	238G	138.7	02:02:29	8076	51679
.LEE POINT / / /	FT / 0			238T				
33 / /	S 12 15.915	62	3500	220C	8.8	00+02+12	3660	5700
JACKOS JUNCTION	E 131 01.806						119	0
37 / CRUS / AUTO	52L GM 2082 4328	64	3425	238G	129.9	02:04:42	7956	51559
.JACKJNCT / / /	75 FT / 0			238T				
34 / /	S 11 56.694	346	300	220C	19.5	00+05+08	3381	5700
CAPE GAMBIER	E 130 57.916						279	0
38 / CRUS / AUTO	52L GM 1402 7878	349	300	227G	110.4	02:09:51	7678	51281
.CAPEGAMB / / /	FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
26 / /	S 11 51.366	125	300	220C	12.5	00+03+18	5267	0
	E 130 52.010						171	0
29 / CRUS / AUTO	52L GM 0336 8868	127	251	227G	189.3	01:19:31	6563	44466
.UTAH1 / / /	49 FT / 0			227T				
27 / /	S 11 56.694	130	2500	220C	7.9	00+02+00	5163	0
CAPE GAMBIER	E 130 57.916						103	0
30 / CRUS / AUTO	52L GM 1402 7878	132	2500	235G	181.4	01:21:31	6460	44363
.CAPEGAMB / / /	FT / 0			235T				
28 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	4907	0
JACKOS JUNCTION	E 131 01.806						257	0
31 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	161.9	01:26:30	6203	44106
.JACKJNCT / / /	75 FT / 0			235T				
29 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	4792	0
	E 130 53.762						115	0
32 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	153.1	01:28:45	6088	43991
.LEE POINT / / /	FT / 0			235T				
30 / /	S 12 23.581	229	500	220C	6	00+01+34	4710	0
3NM RWY11	E 130 48.997						81	0
33 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	147.1	01:30:19	6006	43909
.3NM11 / / /	FT / 0			228T				
31 / /	S 12 24.674	107	103	220C	3.4	00+00+53	4664	0
DARWIN INTL	E 130 52.241						46	0
34 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	143.8	01:31:12	5960	43863
YPDN/A / / /	103 FT / 0			227T				
31 / /	S 12 24.674	358	103	0C#	0	00+30+00	3848	0
DARWIN INTL	E 130 52.241						816	0
35 / IDLE / AUTO	52L GM 0336 2726	0	0	0G#	143.8	02:01:12	5145	43048
YPDN/A / / /	103 FT / 0			0T#				
32 / /	S 12 19.804	15	3500	220C	5.1	00+01+16	3779	5700
	E 130 53.762						69	6000
36 / CRUS / AUTO	52L GM 0618 3622	17	3500	238G	138.7	02:02:29	8076	51679
.LEE POINT / / /	FT / 0			238T				
33 / /	S 12 15.915	62	3500	220C	8.8	00+02+12	3660	5700
JACKOS JUNCTION	E 131 01.806						119	0
37 / CRUS / AUTO	52L GM 2082 4328	64	3425	238G	129.9	02:04:42	7956	51559
.JACKJNCT / / /	75 FT / 0			238T				
34 / /	S 11 56.694	346	300	220C	19.5	00+05+08	3381	5700
CAPE GAMBIER	E 130 57.916						279	0
38 / CRUS / AUTO	52L GM 1402 7878	349	300	227G	110.4	02:09:51	7678	51281
.CAPEGAMB / / /	FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
35 / /	S 11 51.366	310	300	220C	7.9	00+02+04	3269	5700
	E 130 52.010						112	0
39 / CRUS / AUTO	52L GM 0336 8868	312	251	227G	102.6	02:11:55	7566	51169
.UTAH1 / / /	49 FT / 0			227T				
36 / /	S 11 43.846	304	300	220C	12.5	00+03+18	3091	5700
	E 130 41.787						178	0
40 / CRUS / AUTO	52L FN 8488 0266	307	218	227G	90.1	02:15:13	7387	50990
.UTAH2 / / /	82 FT / 0			227T				
37 / /	S 11 40.322	305	300	220C	5.9	00+01+32	3008	5700
	E 130 37.004						83	0
41 / CRUS / MANUAL	52L FN 7623 0921	307	287	227G	84.2	02:16:46	7304	50907
.UTAH3 / / /	13 FT / 0			227T				
38 / /	S 11 37.139	301	300	220C	5.8	00+01+31	2926	5700
IP SUZUKI	E 130 32.105						82	0
42 / CRUS / AUTO	52L FN 6736 1513	303	300	227G	78.4	02:18:17	7222	50825
.SUZUKI / / /	FT / 0			227T				
39 / /	S 11 33.174	34	75	220C	4.9	00+01+17	2856	5700
ANI NORTH	E 130 35.011						69	0
43 / CRUS / MANUAL	52L FN 7268 2241	36	0	227G	73.6	02:19:34	7153	50756
.AI1 / / /	75 FT / 0			227T				
40 / /	S 11 33.249	212	75	220C	0.1	00+00+01	2855	5700
ANI SOUTH	E 130 34.959						1	0
44 / CRUS / MANUAL	52L FN 7258 2227	215	0	227G	73.5	02:19:35	7151	50754
.AI2 / / /	75 FT / 0			227T				
40 / /	S 11 33.249	358	75	0C#	0	00+10+00	2584	5700
ANI SOUTH	E 130 34.959						271	0
45 / IDLE / AUTO	52L FN 7258 2227	0	0	0G#	73.5	02:29:35	6880	50483
.AI2 / / /	75 FT / 0			0T#				
41 / /	S 11 36.807	128	500	220C	5.5	00+01+26	2509	0
IP ELVO	E 130 39.242						75	0
46 / CRUS / AUTO	52L FN 8033 1567	130	379	228G	68	02:31:02	6805	44708
.ELVO / / /	121 FT / 0			228T				
42 / /	S 11 40.322	210	500	220C	4.1	00+01+05	2453	0
	E 130 37.004						56	0
47 / CRUS / MANUAL	52L FN 7623 0921	212	487	228G	63.9	02:32:07	6749	44652
.UTAH3 / / /	13 FT / 0			228T				
43 / /	S 11 43.846	125	500	220C	5.9	00+01+32	2373	0
	E 130 41.787						80	0
48 / CRUS / AUTO	52L FN 8488 0266	127	418	228G	58	02:33:40	6669	44572
.UTAH2 / / /	82 FT / 0			228T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS				
35 / /	S 11 51.366	310	300	220C	7.9	00+02+04	3269	5700
	E 130 52.010						112	0
39 / CRUS / AUTO	52L GM 0336 8868	312	251	227G	102.6	02:11:55	7566	51169
.UTAH1 / / /	49 FT / 0			227T				
36 / /	S 11 43.846	304	300	220C	12.5	00+03+18	3091	5700
	E 130 41.787						178	0
40 / CRUS / AUTO	52L FN 8488 0266	307	218	227G	90.1	02:15:13	7387	50990
.UTAH2 / / /	82 FT / 0			227T				
37 / /	S 11 40.322	305	300	220C	5.9	00+01+32	3008	5700
	E 130 37.004						83	0
41 / CRUS / MANUAL	52L FN 7623 0921	307	287	227G	84.2	02:16:46	7304	50907
.UTAH3 / / /	13 FT / 0			227T				
38 / /	S 11 37.139	301	300	220C	5.8	00+01+31	2926	5700
IP SUZUKI	E 130 32.105						82	0
42 / CRUS / AUTO	52L FN 6736 1513	303	300	227G	78.4	02:18:17	7222	50825
.SUZUKI / / /	FT / 0			227T				
39 / /	S 11 33.174	34	75	220C	4.9	00+01+17	2856	5700
ANI NORTH	E 130 35.011						69	0
43 / CRUS / MANUAL	52L FN 7268 2241	36	0	227G	73.6	02:19:34	7153	50756
.AI1 / / /	75 FT / 0			227T				
40 / /	S 11 33.249	212	75	220C	0.1	00+00+01	2855	5700
ANI SOUTH	E 130 34.959						1	0
44 / CRUS / MANUAL	52L FN 7258 2227	215	0	227G	73.5	02:19:35	7151	50754
.AI2 / / /	75 FT / 0			227T				
40 / /	S 11 33.249	358	75	0C#	0	00+10+00	2584	5700
ANI SOUTH	E 130 34.959						271	0
45 / IDLE / AUTO	52L FN 7258 2227	0	0	0G#	73.5	02:29:35	6880	50483
.AI2 / / /	75 FT / 0			0T#				
41 / /	S 11 36.807	128	500	220C	5.5	00+01+26	2509	0
IP ELVO	E 130 39.242						75	0
46 / CRUS / AUTO	52L FN 8033 1567	130	379	228G	68	02:31:02	6805	44708
.ELVO / / /	121 FT / 0			228T				
42 / /	S 11 40.322	210	500	220C	4.1	00+01+05	2453	0
	E 130 37.004						56	0
47 / CRUS / MANUAL	52L FN 7623 0921	212	487	228G	63.9	02:32:07	6749	44652
.UTAH3 / / /	13 FT / 0			228T				
43 / /	S 11 43.846	125	500	220C	5.9	00+01+32	2373	0
	E 130 41.787						80	0
48 / CRUS / AUTO	52L FN 8488 0266	127	418	228G	58	02:33:40	6669	44572
.UTAH2 / / /	82 FT / 0			228T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
44 / /	S 11 51.366	125	500	220C	12.5	00+03+17	2202	0
	E 130 52.010						171	0
49 / CRUS / AUTO	52L GM 0336 8868	127	451	228G	45.5	02:36:57	6498	44401
.UTAH1 / / /	49 FT / 0			228T				
45 / /	S 11 56.694	130	2500	220C	7.9	00+02+00	2099	0
CAPE GAMBIER	E 130 57.916						103	0
50 / CRUS / AUTO	52L GM 1402 7878	132	2500	235G	37.6	02:38:58	6395	44298
.CAPEGAMB / / /	FT / 0			235T				
46 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	1842	0
JACKOS JUNCTION	E 131 01.806						256	0
51 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	18.1	02:43:57	6139	44042
.JACKJNCT / / /	75 FT / 0			235T				
47 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	1727	0
	E 130 53.762						115	0
52 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	9.3	02:46:12	6023	43926
.LEE POINT / / /	FT / 0			235T				
48 / /	S 12 23.581	229	500	220C	6	00+01+34	1646	0
3NM RWY11	E 130 48.997						81	0
53 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	3.4	02:47:46	5942	43845
.3NM11 / / /	FT / 0			228T				
49 / /	S 12 24.674	107	103	220C	3.4	00+00+53	1600	0
DARWIN INTL	E 130 52.241						46	0
54 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	0	02:48:39	5896	43799
YPDN/A / / /	103 FT / 0			227T				

		HDG	ALT	SPD	DIST	TIME	FUEL	REMARKS
TP# / WP# / TAG	LATITUDE	MH	MSL	CAS	LEG	ETE	CONT	LOAD
DESCRIPTION	LONGITUDE						LEG	ONLOAD
LEG# / TYPE / WPTSEQ	MGRS	TH	AGL	GS	REM	ETA (Z)	AVAIL	GWT
FIX / SVAR / FREQ / CH	ELEV / MSA			TAS		ADTOT (Z)		
44 / /	S 11 51.366	125	500	220C	12.5	00+03+17	2202	0
	E 130 52.010						171	0
49 / CRUS / AUTO	52L GM 0336 8868	127	451	228G	45.5	02:36:57	6498	44401
.UTAH1 / / /	49 FT / 0			228T				
45 / /	S 11 56.694	130	2500	220C	7.9	00+02+00	2099	0
CAPE GAMBIER	E 130 57.916						103	0
50 / CRUS / AUTO	52L GM 1402 7878	132	2500	235G	37.6	02:38:58	6395	44298
.CAPEGAMB / / /	FT / 0			235T				
46 / /	S 12 15.915	166	2500	220C	19.5	00+04+59	1842	0
JACKOS JUNCTION	E 131 01.806						256	0
51 / CRUS / AUTO	52L GM 2082 4328	169	2425	235G	18.1	02:43:57	6139	44042
.JACKJNCT / / /	75 FT / 0			235T				
47 / /	S 12 19.804	241	2500	220C	8.8	00+02+14	1727	0
	E 130 53.762						115	0
52 / CRUS / AUTO	52L GM 0618 3622	244	2500	235G	9.3	02:46:12	6023	43926
.LEE POINT / / /	FT / 0			235T				
48 / /	S 12 23.581	229	500	220C	6	00+01+34	1646	0
3NM RWY11	E 130 48.997						81	0
53 / CRUS / AUTO	52L FM 9749 2932	231	500	228G	3.4	02:47:46	5942	43845
.3NM11 / / /	FT / 0			228T				
49 / /	S 12 24.674	107	103	220C	3.4	00+00+53	1600	0
DARWIN INTL	E 130 52.241						46	0
54 / CRUS / MANUAL	52L GM 0336 2726	109	0	227G	0	02:48:39	5896	43799
YPDN/A / / /	103 FT / 0			227T				



# PZ DARWIN / 52L GM 0548 2610/ 103' MSL



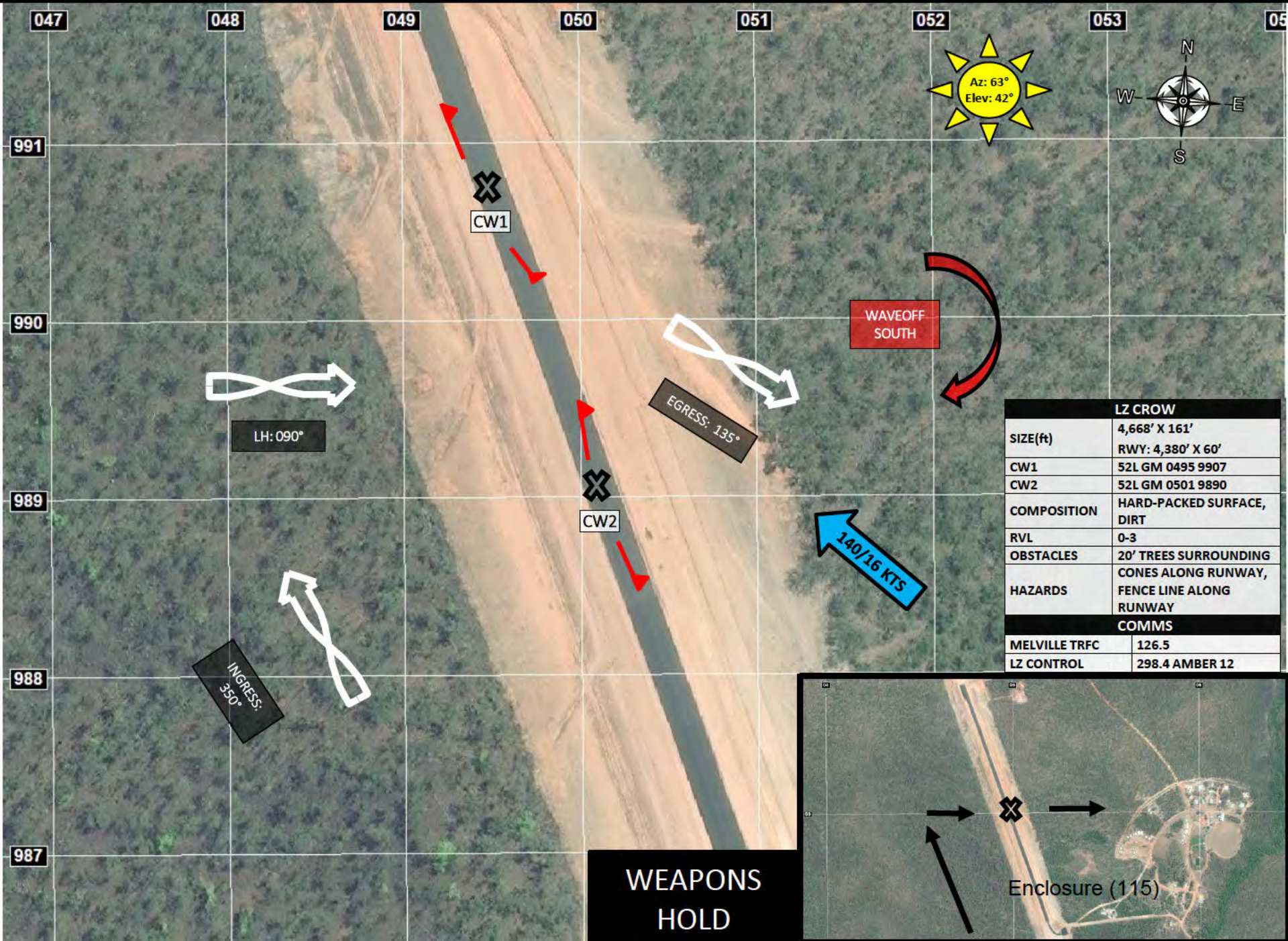


# PZ DARWIN / 52L GM 0548 2610/ 103' MSL





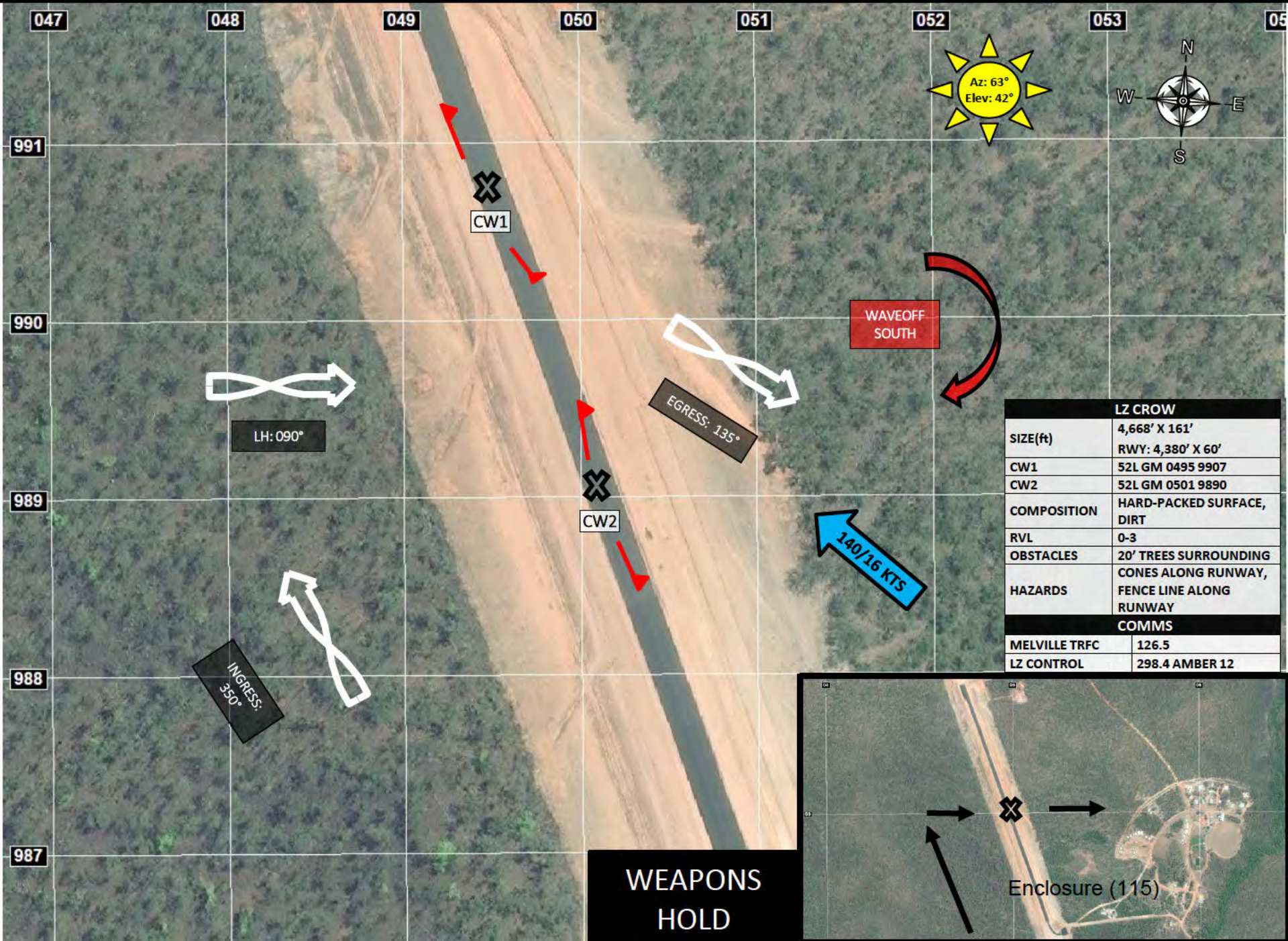
# LZ CROW / 52L GM 049 990 / 285' MSL



LZ CROW	
SIZE(ft)	4,668' X 161'
	RWY: 4,380' X 60'
CW1	52L GM 0495 9907
CW2	52L GM 0501 9890
COMPOSITION	HARD-PACKED SURFACE, DIRT
RVL	0-3
OBSTACLES	20' TREES SURROUNDING CONES ALONG RUNWAY, FENCE LINE ALONG RUNWAY
HAZARDS	
COMMS	
MELVILLE TRFC	126.5
LZ CONTROL	298.4 AMBER 12

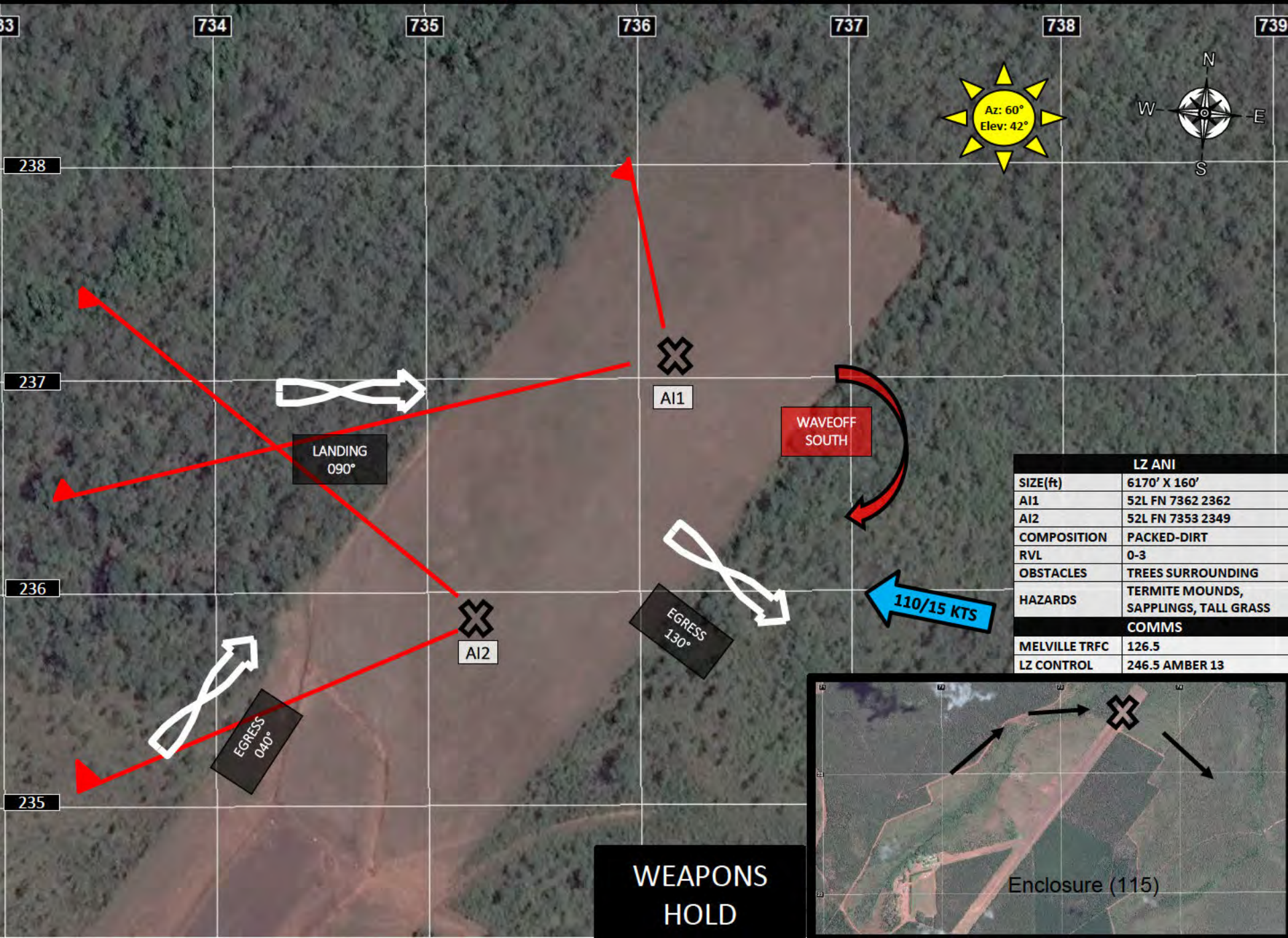


# LZ CROW / 52L GM 049 990 / 285' MSL

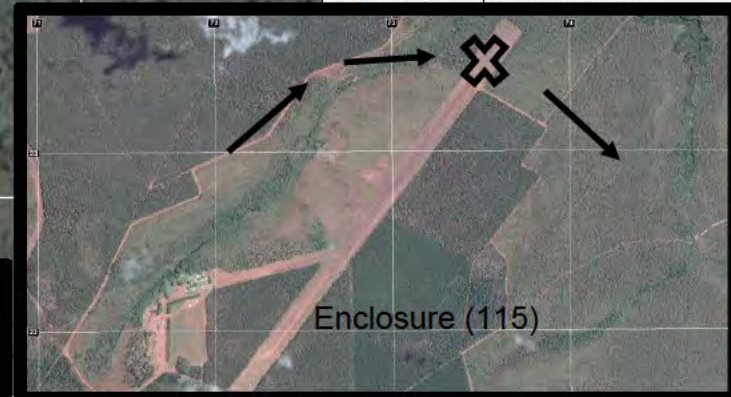




# LZ ANI / 52L FN 728 226/ 75' MSL

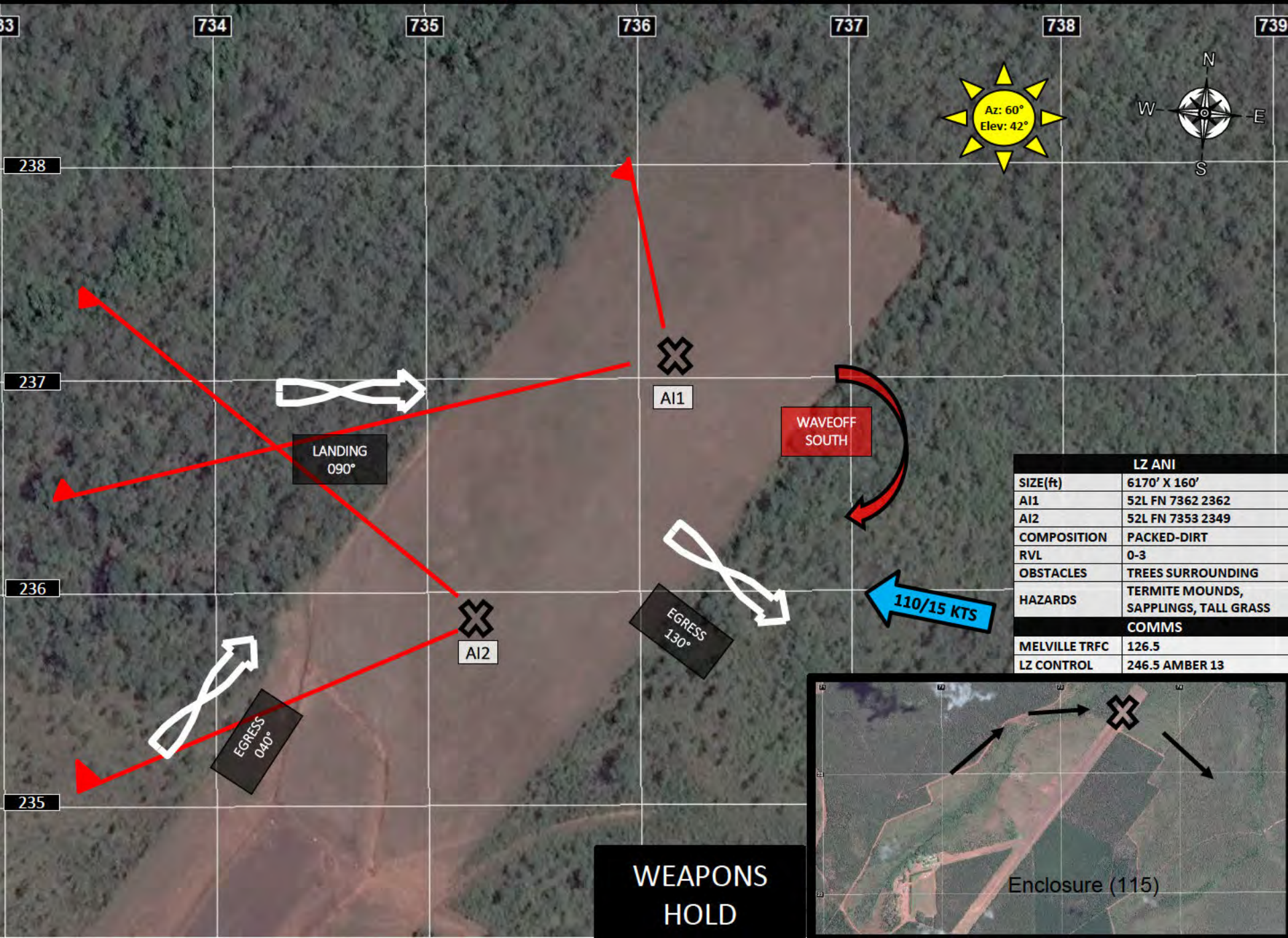


LZ ANI	
SIZE(ft)	6170' X 160'
AI1	52L FN 7362 2362
AI2	52L FN 7353 2349
COMPOSITION	PACKED-DIRT
RVL	0-3
OBSTACLES	TREES SURROUNDING
HAZARDS	TERMITE MOUNDS, SAPPLINGS, TALL GRASS
COMMS	
MELVILLE TRFC	126.5
LZ CONTROL	246.5 AMBER 13

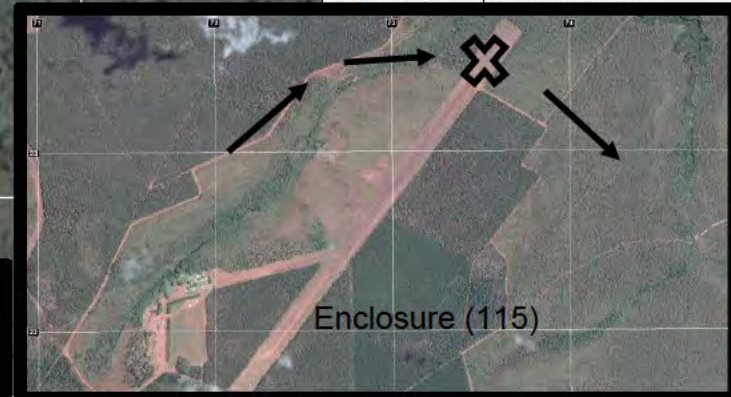




# LZ ANI / 52L FN 728 226/ 75' MSL



LZ ANI	
SIZE(ft)	6170' X 160'
AI1	52L FN 7362 2362
AI2	52L FN 7353 2349
COMPOSITION	PACKED-DIRT
RVL	0-3
OBSTACLES	TREES SURROUNDING
HAZARDS	TERMITE MOUNDS, SAPPLINGS, TALL GRASS
COMMS	
MELVILLE TRFC	126.5
LZ CONTROL	246.5 AMBER 13





DUMP TRUCK 1-1											
WAVE 2	1000	(b) (6)	1	PRC-152	300	15	315				
			1	PRC-117G	300	30	330				
			1		1200		1200				
			1								
			1								
			1								
			6	STICK WEIGHT:					1845		
	9000		1	PRC-152	300	15	315				
			1		300		300				
			1	PRC160/117G	600	45	645				
			1	PRC-152	300	15	315				
			1	MEDICAL KIT	300	15	315				
			1								
			6	STICK WEIGHT:					1890		
	1005		1		1800	30	1830	* BUMP			
			1								
			1								
			1								
			1								
			1								
			6	STICK WEIGHT:					1830		
	STICK TOTAL:				AIRCRAFT TOTAL:		18	TOTAL WEIGHT:		5565	
	DUMP TRUCK 1-2										

DUMP TRUCK 1-1											
WAVE 2	1000	(b) (6)	1	PRC-152	300	15	315				
			1	PRC-117G	300	30	330				
			1		1200		1200				
			1								
			1								
			1								
	6		STICK WEIGHT:				1845				
	1		PRC-152	300	15	315					
	1			300		300					
	1		PRC160/117G	600	45	645					
	1		PRC-152	300	15	315					
	1		MEDICAL KIT	300	15	315					
	6		STICK WEIGHT:				1890				
	1			1800	30	1830					
	1										
	1										
	1										
	1										
	6		STICK WEIGHT:				1830	* BUMP			
	STICK TOTAL:										
			AIRCRAFT TOTAL:		18	TOTAL WEIGHT:		5565			
	DUMP TRUCK 1-2										



WAVE 2	4015	(b) (6)	1	M240B	1500	90	1590	* BUMP	
			1		300		300		
			1						
			1						
			1						
			1						
	1010		6	STICK WEIGHT:			1890		
			1		1800		1800		
			1						
			1						
			1						
			1						
	1015		6	STICK WEIGHT:			1800		
			1	PRC-152	300	15	315		
			1		1500		1500		
			1						
			1						
			1						
	STICK TOTAL:								
	AIRCRAFT TOTAL:		18	TOTAL WEIGHT:			5505		

DUMP TRUCK 1-1									
WAVE 3	4010	(b) (6)	1	60MM MORTAR SYSTEM	1200	45	1245		
			1	PRC-117F	300	15	315		
			1	PRC-160	300	25	325		
			1						
			1						
			1						
	6		STICK WEIGHT:						1885
	8005		1	PRC-152	300	15	315		
			1	MECH BREACH KIT	1200	30	1230		
			1						
			1						
			1						
			1						
	5		STICK WEIGHT:						1545
	2000	1	PRC-152	300	15	315	* BUMP		
		1		1500		1500			
		1							
		1							
		1							
		1							
STICK TOTAL:				6	STICK WEIGHT:			1815	
AIRCRAFT TOTAL:			17	TOTAL WEIGHT:			5245		

DUMP TRUCK 1-2										
WAVE 3	2005	(b) (6)	1		1800		1800			
			1							
			1							
			1							
			1							
			1							
	6		STICK WEIGHT:				1800			
	2010		1		1800		1800			
			1							
			1							
			1							
			1							
			1							
	6		STICK WEIGHT:				1800			
	2015	1	PRC-152	300	15	315	* BUMP			
		1		600		600				
		1								
		3	STICK WEIGHT:			915				
	STICK TOTAL:				3	STICK WEIGHT:			915	
	AIRCRAFT TOTAL:			15	TOTAL WEIGHT:			4515		

ASSAULT SUPPORT LANDING TABLE											
WAVE	SERIALS	A/C CALL SIGN	FROM	TO				DESTINATION		TOTAL WEIGHT	PAX
			CARRIER (ORIGIN)	REPORT (LOAD)	LOAD	T/O	LAND	LZ	LS		
1	3000, 9005, 3005	DK11	YPDN	FRA	2315	2330	2350	CROW	CW1	5820	19
1	3010, 3015, 3020	DK12	YPDN	FRA	2315	2330	2350	CROW	CW2	5830	19
2	1000, 9000, 1005	DK11	YPDN	FRA	0030	0045	0105	ANI	AI1	5565	18
2	4015, 1010, 1015	DK12	YPDN	FRA	0030	0045	0105	ANI	AI2	5505	18
3	4010, 8005, 2000	DK11	YPDN	FRA	0145	0200	0220	ANI	AI1	5245	17
3	2005, 2010, 2015	DK12	YPDN	FRA	0145	0200	0220	ANI	AI2	4515	15

WAVE 2	4015	(b) (6)	1242449327	1	M240B	1500	90	1590	*
			1607618018	1		300		300	
			1598151152	1					
			1608198373	1					
			1549997950	1					
			1550524640	1					
				6	STICK WEIGHT:				
	1010		1547442705	1		1800		1800	
			1549041406	1					
			1572205157	1					
			1589361322	1					
			1549754909	1					
			1591202657	1					
				6	STICK WEIGHT:				
	1015		1594875890	1	PRC-152	300	15	315	
			1588645114	1		1500		1500	
			1595050983	1					
			1549316138	1					
			1568133737	1					
			1538610689	1					
STICK TOTAL:				6	STICK WEIGHT:		1815		
AIRCRAFT TOTAL:			18	TOTAL WEIGHT:			5505		

DUMP TRUCK 1-1										
WAVE 3	4010	(b) (6)	1	60MM MORTAR SYSTEM	1200	45	1245			
			1	PRC-117F	300	15	315			
			1	PRC-160	300	25	325			
			1							
			1							
			1							
			6	STICK WEIGHT:				1885		
	1		PRC-152	300	15	315				
	1		MECH BREACH KIT	1200	30	1230				
	1									
	1									
	1									
			5	STICK WEIGHT:				1545		
	1		PRC-152	300	15	315				
	1		1500		1500					
	1									
	1									
	1									
	2000			1					*	
				1						BUMP
1										
1										
1										
1										
STICK TOTAL:				6	STICK WEIGHT:				1815	
AIRCRAFT TOTAL:			17	TOTAL WEIGHT:				5245		

DUMP TRUCK 1-2										
WAVE 3	2005	(b) (6)	1		1800		1800			
			1							
			1							
			1							
			1							
			1							
	6		STICK WEIGHT:				1800			
	2010		1		1800		1800			
			1							
			1							
			1							
			1							
			1							
	6		STICK WEIGHT:				1800			
	2015		1	PRC-152	300	15	315			
			1		600		600			
			1							
			3	STICK WEIGHT:				915		
	STICK TOTAL:				3	STICK WEIGHT:			915	* BUMP
	AIRCRAFT TOTAL:			15	TOTAL WEIGHT:			4515		

ASSAULT SUPPORT LANDING TABLE											
WAVE	SERIALS	A/C CALL SIGN	FROM	TO				DESTINATION		TOTAL WEIGHT	PAX
			CARRIER (ORIGIN)	REPORT (LOAD)	LOAD	T/O	LAND	LZ	LS		
1	3000, 9005, 3005	DK11	YPDN	FRA	2315	2330	2350	CROW	CW1	5820	19
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3	4010, 8005, 2000	DK11	YPDN	FRA	0145	0200	0220	ANI	AI1	5245	17
3	2005, 2010, 2015	DK12	YPDN	FRA	0145	0200	0220	ANI	AI2	4515	15



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DATE	EVENT				MODEX			
PILOT	COPILOT				CREW			
	1 - (DEPARTURE)				7 - (DESTINATION)			
SURFACE TEMP / WINDS	32.0	°C /	0/0		31.6	°C /	90/20	
SURFACE PA / SURFACE DA	104	ft /	2073	ft	288	ft /	2253	ft
HOVER ENGINES / ANTI-ICE	100	% /	Off		100	% /	Off	
BASIC WEIGHT	36689 lbs				36689 lbs			
+ CREW	880 lbs				880 lbs			
+ MISC (MSN SPEC. KITS)	334 lbs				334 lbs			
= OPERATING WEIGHT	37903 lbs				37903 lbs			
+ FUEL	9500 lbs				8662 lbs			
+ PAYLOAD	5700 lbs				5700 lbs			
= MISSION WEIGHT	53103 lbs				52265 lbs			
	C.G.	LIMITS (FWD-AFT)			C.G.	LIMITS (FWD-AFT)		
APLN MODE (inches)	392.6	381.8	-	395.3	392.4	381.4	-	395.3
VTOL MODE (inches)	401.9	391.2	-	404.7	401.8	391.0	-	404.8
	1 - (DEPARTURE)				7 - (DESTINATION)			
MAST TORQUE AVAIL (N/I) (a)	(N)	100%	/(I)	117%	(N)	100%	/(I)	117%
MAST TORQUE REQ (HOGE) (b)	(N)	NC	/(I)	119%	(N)	NC	/(I)	116%
MAST TORQUE REQ (HIGE) (c)	(N)	119%	/(I)	110%	(N)	116%	/(I)	107%
MAST TORQ MARG (HOGE) (a-b)	(N)	NC	/(I)	-2%	(N)	NC	/(I)	1%
MAST TORQ MARG (HIGE) (a-c)	(N)	-19%	/(I)	7%	(N)	-16%	/(I)	10%
MAX HOGE WT WITH TORQUE MARGIN (I) (d)	5 %TM 51696 lbs				5 %TM 51543 lbs			
OPERATING WEIGHT (e)	37903 lbs				37903 lbs			
MAX ALL. PAYLOAD (d-e)	13793 lbs				13640 lbs			
MAX HOGE WEIGHT (I) (ZERO TORQUE MARGIN) (f)	52807 lbs				52647 lbs			
	WORST CASE LEG - 2				BEST CASE LEG - 6			
FLIGHT DATA	3 -				7 -			
SURFACE TEMP / SURFACE PA	32.1	°C /	76	ft	31.6	°C /	288	ft
ALTITUDE / TEMP DEV	3500	ft /	17.2	°C	389	ft /	17.2	°C
RAMP POSITION (Ramp/Door)	Closed/Closed				Open/Open			
DWS CONFIGURATION	Stowed				Stowed			
MISSION WEIGHT	53033 lbs				52306 lbs			
POWER REQ / MHGW 0% TM (g)	118%	/	52829	lbs	116%	/	52647	lbs
MAX RANGE AIRSPEED (h)	222 KCAS				213 KCAS			
MAX ENDURANCE AIRSPEED (i)	149 KCAS				147 KCAS			
MAX ALT (APLN MODE) (j)	18568	ft @	151	KCAS	17171	ft @	149	KCAS
A/S ENVELOPE (APLN MODE) (k)	143	to	259	KCAS	141	to	250	KCAS
BEST CRUISE ALTITUDE (l)	15081 ft				13697 ft			
	WORST CASE				BEST CASE			
STALL SPEEDS	POWER-ON	POWER-OFF			POWER-ON	POWER-OFF		
0 DEGREES ANGLE OF BANK (m)	120 KCAS	127 KCAS			118 KCAS	125 KCAS		
30 DEGREES ANGLE OF BANK (n)	131 KCAS	139 KCAS			128 KCAS	136 KCAS		
45 DEGREES ANGLE OF BANK (o)	NC KCAS	159 KCAS			NC KCAS	155 KCAS		
SINGLE ENGINE LEVEL FLIGHT	WORST CASE (95% ENG)				BEST CASE (95% ENG)			
MAX ALT OEI (APLN MODE) (p)	4258	ft @	NC	KCAS	4717	ft @	NC	KCAS
A/S ENVELOPE (NAC 60) (q)	NC	to	NC	KCAS	NC	to	NC	KCAS
A/S ENVELOPE (APLN MODE) (r)	139	to	171	KCAS	137	to	192	KCAS

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DATE	EVENT				MODEX			
PILOT	COPILOT				CREW			
	1 - (DEPARTURE)				7 - (DESTINATION)			
SURFACE TEMP / WINDS	32.0 °C / 0/0				31.6 °C / 90/20			
SURFACE PA / SURFACE DA	104 ft / 2073 ft				288 ft / 2253 ft			
HOVER ENGINES / ANTI-ICE	100 % / Off				100 % / Off			
BASIC WEIGHT	36689 lbs				36689 lbs			
+ CREW	880 lbs				880 lbs			
+ MISC (MSN SPEC. KITS)	334 lbs				334 lbs			
= OPERATING WEIGHT	37903 lbs				37903 lbs			
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	C.G.	LIMITS (FWD-AFT)			C.G.	LIMITS (FWD-AFT)		
APLN MODE (inches)	392.6	381.8 - 395.3			392.4	381.4 - 395.3		
VTOL MODE (inches)	401.9	391.2 - 404.7			401.8	391.0 - 404.8		
	1 - (DEPARTURE)				7 - (DESTINATION)			
MAST TORQUE AVAIL (N/I) (a)	(N)	100%	/(I)	117%	(N)	100%	/(I)	117%
MAST TORQUE REQ (HOGE) (b)	(N)	NC	/(I)	119%	(N)	NC	/(I)	116%
MAST TORQUE REQ (HIGE) (c)	(N)	119%	/(I)	110%	(N)	116%	/(I)	107%
MAST TORQ MARG (HOGE) (a-b)	(N)	NC	/(I)	-2%	(N)	NC	/(I)	1%
MAST TORQ MARG (HIGE) (a-c)	(N)	-19%	/(I)	7%	(N)	-16%	/(I)	10%
MAX HOGE WT WITH TORQUE MARGIN (I) (d)	5 %TM 51696 lbs				5 %TM 51543 lbs			
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FLIGHT DATA	WORST CASE LEG - 2				BEST CASE LEG - 6			
	3 -				7 -			
SURFACE TEMP / SURFACE PA	32.1 °C / 76 ft				31.6 °C / 288 ft			
ALTITUDE / TEMP DEV	3500 ft / 17.2 °C				389 ft / 17.2 °C			
RAMP POSITION (Ramp/Door)	Closed/Closed				Open/Open			
DWS CONFIGURATION	Stowed				Stowed			
MISSION WEIGHT	53033 lbs				52306 lbs			
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A/S ENVELOPE (APLN MODE) (k)	143 to 259 KCAS				141 to 250 KCAS			
BEST CRUISE ALTITUDE (l)	15081 ft				13697 ft			
STALL SPEEDS	WORST CASE				BEST CASE			
	POWER-ON	POWER-OFF			POWER-ON	POWER-OFF		
0 DEGREES ANGLE OF BANK (m)	120 KCAS	127 KCAS			118 KCAS	125 KCAS		
30 DEGREES ANGLE OF BANK (n)	131 KCAS	139 KCAS			128 KCAS	136 KCAS		
45 DEGREES ANGLE OF BANK (o)	NC KCAS	159 KCAS			NC KCAS	155 KCAS		
SINGLE ENGINE LEVEL FLIGHT	WORST CASE (95% ENG)				BEST CASE (95% ENG)			
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A/S ENVELOPE (NAC 60) (q)	NC	to	NC KCAS		NC	to	NC KCAS	
A/S ENVELOPE (APLN MODE) (r)	139	to	171 KCAS		137	to	192 KCAS	

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UNITED STATES MARINE CORPS  
MARINE MEDIUM TILTROTOR SQUADRON 363  
MARINE AIRCRAFT GROUP 24  
BOX 63059  
MCBH KANEOHE BAY HAWAII 96863-3059

IN REPLY REFER TO:  
3700  
S-3  
01 Feb 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 363 Reinforced  
To: Marine Medium Tiltrotor Squadron 363 Reinforced

Subj: MARINE MEDIUM TILTROTOR SQUADRON 363 REINFORCED OPERATIONS  
STANDARD OPERATING PROCEDURES

Ref: (a) WgO 3700.1D SOP for Air Operations (1MAW SOP)  
(b) GruO P3710.3E MAG-24 Flight Ops SOP (MAG-24 Flight Ops SOP)  
(c) CNAF M-3710.7 NATOPS General Flight and Operating Instructions  
(d) NAVAIR 01-H1AAC-1 (AH-1Z NATOPS Flight Manual)  
(e) 01-110HCG-1 (UH-1Y NATOPS Flight Manual)  
(f) A1-V22AB-NFM-000 MV-22B Tiltrotor NATOPS Flight Manual  
(g) Marine Forces Pacific Order 3710.4A  
(h) NTTP 3-22.5 ASTACSOP Tactical Pocket Guide USMC Assault Support Tactical SOP  
(i) A1-V22AB-CLG-000 MV-22B Tiltrotor Cargo Handling Manual  
(j) NAVMC 3500.14E Aviation Training and Readiness Program Manual  
(k) NTTP 3-22.5-AH1 Tactical Pocket Guide AH-1  
(l) Air NTTP 3-22.5-UH1 Tactical Pocket Guide UH-1  
(m) Air NTTP 3-22.3 MV-22, MV-22B Tiltrotor Combat Aircraft Fundamentals  
(n) NAVAIR 00-80T-103 Conventional Weapons Handling Procedures Manual (Ashore)  
(o) NTRP 3-22.4-UH1Y NAVAL AVIATION TECHNICAL INFORMATION PRODUCT (NATIP)  
(p) A1-RQ21A-NFM-000, RQ-21A PRELIMINARY NATOPS FLIGHT MANUAL  
(q) NAVMC 3500.122A, RQ-21A TRAINING AND READINESS MANUAL  
(r) COMNAVAIRFORINST 1542.7B, NAVY AND MARINE CORPS CRM PROGRAM  
(s) SECNAVINST 3820.3E  
(t) MCO 3800.2B  
(u) MCAS SOP P3710.2B MCAS Air Operations Manual

1. Purpose. To establish policies and standard operating procedures for flight operations in Marine Medium Tiltrotor Squadron 363 (VMM-363) Reinforced (REIN).

2. Action. Compliance with this order is mandatory for all personnel assigned to VMM-363 (REIN) or designated to operate in VMM-363 (REIN) aircraft. Only the Commanding Officer (CO) may approve deviations from the policies contained in this order. Flight leaders and aircraft commanders may deviate from the procedures contained in this order in the interest of safety or mission effectiveness provided such deviations are properly planned and briefed. If an alternate procedure is not briefed, compliance with the standard is expected. In no case should the policies or procedures contained in this order be interpreted to supersede more restrictive or conservative guidance contained in the references.

3. Change Procedures. This publication will be reviewed in its entirety annually. Recommendations for interim changes may be submitted to the Director of Safety and Standardization for review by the Standardization Board. Interim changes will be incorporated via Read and Initial. Upon review, all interim changes and local Read and Initial procedures will be reviewed and incorporated or retired.

4. Certification. Reviewed and approved this date.

(b) (6)

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## SUMMARY OF CHANGES

*The following changes have been cancelled or previously incorporated in this order:*

Change Number	Remarks / Purpose

*The following changes have been incorporated in this change / revision:*

Change Number	Remarks / Purpose



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- 5) CHAPTER 5 – RQ-21A OPERATIONS
- 6) CHAPTER 6 – MOTOR TRANSPORT OPERATIONS
- 7) APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION
- 8) APPENDIX B – MAINTENANCE STANDARDIZATION
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## **CHAPTER 1**

### **ADMINISTRATION**

#### **1000. AIRCREW COMPOSITION**

1. Aeronautically designated personnel riding in the aircraft are not considered crewmembers unless they are actually performing a standard crew duty. In such cases a current, qualified, and proficient crew is required for the mission profile being flown unless specifically authorized on the flight schedule.
2. Minimum crew composition for all events shall adhere to individual TMS T&R requirements.

#### **1001. QUALIFICATIONS, DESIGNATIONS AND ANNUAL REQUIREMENTS**

1. Advanced designations shall be discussed and recommendations forwarded to the Commanding Officer (CO) via the squadron Standardization Board. Advanced designation training events shall not be scheduled until the CO approves assignment to the syllabus.
2. Once an event is complete, the certifying instructor shall complete their portion of the ATF on MSHARP within 24 hours. The student will read, sign, and print their ATF and turn it into the ATF inbox located in Ops. If it is the last flight in a syllabus the designee for a qualification or designation shall route all of their ATFs for the syllabus to the NATOPS Officer. NATOPS Officer will then place the appropriate designation/qualification letter in the folder and route it to the CO for final approval. Upon signature, NATOPS Officer will place the original in the student's NATOPS, a copy in the student's APR, and log in the student's logbook.
3. A pilot or aircrew qualification or designation is not valid until a signed letter from the CO is placed in the Aircrew Performance Record (APR) and NATOPS Jacket, an appropriate entry has been made in the individual's logbook, and the Marine Sierra Hotel Aviation Readiness Program (M-SHARP) database is updated to reflect the new designation.
4. Pilots and aircrew requiring a NATOPS or Instrument Evaluation are responsible for completion of all academic prerequisites no later than the first day of the expiration month.
5. Instructors are not required to complete refresher ATF's for annual NATOPS and Instrument Evaluations. However, if a pilot or aircrew fails to demonstrate proficiency or is deemed Conditionally Qualified (CQ), the instructor shall complete an ATF.

#### **1002. CURRENCY REQUIREMENTS**

1. Designated aircraft commanders who have not had a flight in the aircraft within the last 60 days shall conduct one warm-up flight (or simulator flight on a case by case basis and upon approval of the CO) of at least 1.5 hours duration prior to signing for an aircraft. Operations shall schedule the warmup flight vice using the simulator to the maximum extent possible. Instrument procedures and confined area landings should be conducted.
2. Designated pilots who have not flown for over 90 days shall complete a warm-up syllabus as directed by the CO based on recommendations from the DOSS and OpsO.

#### **1003. FLIGHT SCHEDULE**

1. The following product development will occur monthly:
  - a. The Monthly Flight Schedule is a detailed single-source document produced by the Operations Department and should include all flight and simulator events, training priorities and pertinent activities that will impact any



squadron operations. A monthly Planning Board for Training (PB4T) will be completed by the third week of each month as the primary form for all departments to submit their operational and training schedule inputs.

b. A Weekly Flight Schedule will be developed to provide executable events in order to capture squadron training, progression, and solidify long term goals. A weekly PB4T will be conducted no later than Wednesday of each week to support the routing, submission, and dissemination in accordance with squadron policy. Particular emphasis shall be placed on external coordination, training resources, and aircraft configuration. Special fuel loads and aircraft configurations shall be annotated as required.

2. The OpsO, Aviation Maintenance Officer (AMO), Director of Safety and Standardization (DOSS), and Executive Officer (XO) shall review and initial the Daily Flight Schedule prior to its submission to the CO for signature. They may designate one or more representatives, who are authorized to review and initial the flight schedule in their absence in accordance with squadron policy.

Responsibilities:

Daily Schedule Writer	M-SHARP validation & ORM Risk Assessment Worksheets (RAW) w/controls
AMO	Aircraft Availability and configuration
DOSS	ORM validation to include SOP / T&R compliance
	Read and Initial / Emergency Procedures currency
OpsO	Resources and coordination / T&R compliance
XO	Final review / Command ORM

3. The Schedule Routing Binder shall include current copies of the following documents:

- a. T&R Syllabus Matrix
- b. Monthly Training Schedule
- c. Weekly Flight Schedule
- d. Pilot / Aircrew Qualification & Designation Matrix
- e. 30-60-90 day Qualification Expiration Matrix
- f. Pilot / Aircrew Flight Time HOTBoard
- g. Pilot / Aircrew T&R Event Proficiency Matrix
- h. Previous day's flight schedule
- i. 48 hour draft flight schedule

4. Additionally, the following documents specific to the daily flight schedule shall be included for review:

- a. M-SHARP Schedule Validation Summary
- b. Operational Risk Management (ORM) Risk Assessment Worksheets
- c. DOSS Daily Flight Schedule Review Checklist

5. The daily flight schedule and most current weekly should be delivered to the CO for approval no later than 1400 the day prior to execution.

6. The Operations Department will distribute electronic copies of the signed flight schedule to all squadron personnel. A printed copy of the signed schedule will be provided to the Operations Duty Officer (ODO) and serve as the master flight schedule during execution. Additionally, the Operations Department will also deliver printed copies of the flight schedule to the CO, XO, Sergeant Major (SgtMaj), OpsO, AMO, and common areas.

7. Squadron aircraft and aircrew shall not fly unless annotated on the flight schedule.

8. The CO shall approve all changes to flight crews, crew day extensions, missions, or extensions and slides in excess of 30 minutes. In the CO's absence, schedule changes shall be routed to the following in descending precedence: XO, OPSO, AMO, or Assistant Operations Officer (AOPSO).

a. Extensions or slides less than or equal to 30 minutes (provided Maintenance is able to support and no crew day extensions are required) shall be approved by the OPSO, AMO, or AOPSO.

b. Extensions or slides less than or equal to 15 minutes shall be approved by the ODO after consulting with the maintenance department for aircraft flight-hour extensions or special equipment requirements.

c. The CO will be notified of schedule changes to the maximum extent possible in an expeditious manner.

9. Ensure priorities are listed clearly via the daily flight schedule.

10. Division Flights shall have an embedded Section Leader.

#### 1004. FLIGHT CLEARANCES

1. All Visual Flight Rules (VFR) flight clearances in the local flying area will be per reference (c).

2. VFR flights should utilize flight following to the maximum extent practical.

3. All Instrument Flight Rules (IFR) flight clearances shall be filed via Marine Corps Air Station Kaneohe Bay (MCAS K-Bay) stereo flight plans, DD-1801, or other official means. A DD-1801 flight plan shall be filed for all IFR flights conducted outside of the local area or inside of the local flying area where a stereo route is not used.

4. DD-1801's may be filed with Base Operations during normal working hours. When Base Operations is secured or when filing away from a military field, a flight plan shall be filed with the local Flight Service Station (FSS).

5. The aircraft commander or flight leader is responsible for closing out the flight plan with base operations or the local FSS when the flight is completed away from home field or when executing a closed field recovery at home field.

6. Aircraft operating single ship shall maintain positive radio communication with either base or an external agency (range control, Air Traffic Control (ATC), FSS, etc.) at all times.

7. When flying outside the US Territory the Flight Lead shall be responsible for filing a DD-1801.

1005. RISK MANAGEMENT (RM). RM is an all-hands effort, especially in the time-critical sense. All VMM-363 personnel should continuously ask themselves two questions:

“What is different today?”

“What could go wrong as a result?”

While risk cannot be completely eliminated, it can be mitigated via command effort starting with the Pilot Training Officer building the monthly flight schedule through the aircraft commander executing the mission to ensure that we are managing risk appropriately and limiting our exposure to hazards that cannot be eliminated.

1. All VMM-363 flights shall be assessed utilizing the Risk Assessment Worksheet (RAW). The RAWs shall be generated by the Schedule Writer and then reviewed by the OpsO, ASO/DOSS, and the CO.

2. The aircraft commander shall review the assessed hazards and controls provided prior to the ODO Brief.

3. Flight leaders and aircraft commanders shall incorporate a discussion about Risk Management into their briefs. At a minimum, they shall brief the most hazardous aspects of the flight and the controls they have been provided or are implementing themselves utilizing the Tactical Risk Management (TRM) briefing steps in the Tactical Pocket Guide (TPG).

4. Aircraft commanders should integrate the NATOPS Emergency of the Day into their cockpit briefs.

5. Upon conclusion of the cockpit NATOPS brief, the aircraft commander shall complete and sign the RAW and load computation prior to walking to their aircraft.

6. It is the aircraft commander's responsibility to review the risk associated with a particular flight event and implement effective controls. Where risk cannot be mitigated to an acceptable level, aircraft commanders should seek assistance from the chain of command.

#### 1006. READ & INITIAL

1. Before flying with VMM-363, all aircrew, including aircrew from outside the squadron assigned to fly, shall have read and fully understand the contents of this order and all VMM-363 squadron policies as published by the VMM-363 Read & Initial (R&I) Board.

2. The Department of Safety and Standardization (DOSS) has the overall responsibility for maintaining the Squadron R&I Board via the Integrated Training System (ITS) website. However, both the Operations and Maintenance Departments have R&I's that require administration. Quality Assurance will service all maintenance R&I items. The primary means to track aircrew currency on R&I's will be through ITS. ODO's shall verify that all aircrew are current prior to the ODO Brief.

3. Minutes from the Squadron Standardization Board will be maintained on the R&I Board along with any pertinent policy letters signed by the CO or higher headquarters. Additions and deletions from the R&I Board require the approval of the CO and shall be coordinated through the DOSS.

4. The VMM-363 Read & Initial Board shall be reviewed no later than 1 January of each year by the Standardization Board in its entirety. The purpose is to remove any outdated policies and to implement standing policies as changes to this document.

5. Paper copies of the R&I will be updated and kept at the ODO desk for non-squadron personnel.

#### 1007. CREW DAY AND CREW REST

1. The Operations Department shall schedule and individual aircrew shall observe a 10 hour crew day limit for flights with a land time of sunset or later. Land times prior to sunset shall observe a 12 hour Crew Day. Crew Day calculations are based upon scheduled land times. The CO can authorize night crew to 12 hours. Aircrew should observe a 9.5 hour crew day to the max extent possible to allow for a potential 30 minute slide without the requirement to extend their crew day.

2. Aircrew should not be scheduled to brief for another flight less than 12 hours after the prior day's scheduled estimated time of return. At a minimum aircrew shall be afforded an opportunity for travel, sustenance, and eight hours of uninterrupted rest before their next brief.

#### 1008. FLYING WHILE STANDING DUTY BILLETS

1. The Squadron Duty standers are authorized to fly on the day of duty if they are scheduled to be on deck NLT 1500. Any request to land after 1500 requires the XO's approval and the supernumerary standing by to fulfill Squadron Duty Officer (SDO) obligations.

2. Flying while standing Group Duty will be in accordance with MAG-24 directives.

3. Duty standers shall not fly an aircraft event on the day following their duty.

4. The SDO shall not serve as the ODO. Deviations from this standard shall be approved on a case-by-case basis by the CO. The SDO is authorized to recover cross country (CCX) aircraft on weekends and holidays provided he or she is a qualified ODO.

5. Crew Rest does not apply for ODOs who are coming off of a Squadron or Group duty shift. Off-going SDOs and Group Duty Officers (GDO) are eligible to stand ODO, but their shift will account for the previous extended duty day.

6. Crew Rest and Crew Day does apply for oncoming ODOs (who are not coming off of SDO or GDO) in order to utilize them as a backup crew should the primary crew be unable to perform flying duties.

#### 1009. AIRCREW LEAVE AND SNIVELS

1. A snivel is a request and may be denied based on the needs of the squadron. It is the requestor's responsibility to follow up with the Operations Department prior to making any commitments. Officer Seminar Professional Military Education (PME) will be honored to the maximum extent possible. All snivels shall be placed into MSHARP no less than ten days in advance.

2. Pre-planned snivel requests shall be made as early as possible to allow for consideration during the monthly scheduling process.

3. Individuals shall make their requests through M-SHARP and an email to the Pilot Training Officer (PTO). The Operations Department shall notify individuals as soon as possible when snivel requests cannot be accommodated.

4. Requests made after the weekly schedule has been published should be directed to the Current Operations / Flight Officer or Enlisted Aircrew Training Manager (EATM) via email and "face-to-face" coordination.

5. All pilot / aircrew annual leave requires an approved snivel from the Current Operations / Flight Officer or the EATM.

a. To the maximum extent possible, pilots should coordinate with the monthly and weekly schedule writers prior to submitting leave to ensure coordination and deconfliction with the schedules. After this coordination has been completed, pilots should submit their leave to the XO and annotate in their request that coordination and deconfliction has occurred with the Operations Department.

b. To the maximum extent possible, Enlisted Aircrew should coordinate with the monthly and weekly schedule writers prior to submitting leave to ensure coordination and deconfliction. After this coordination has been completed, Enlisted Aircrew should submit their leave to their appropriate chain of command and annotate in their request that coordination and deconfliction has occurred with the Operations Department.

#### 1010. EMERGENCY PROCEDURES (EP) TRAINING

1. All aircrew shall complete a monthly NATOPS EP Quiz. Completion shall be logged in ITS and briefed by ODO prior to every flight event.

1. Unless deployed or insufficient simulator resources are available, an Emergency Procedures simulator event shall be conducted in accordance with a 90 day re-fly. The DOSS shall maintain standardized scenarios focusing on upcoming training and deployed environments and conditions.

2. Pilot Emergency Procedures events shall not be scheduled in the aircraft. This does not preclude pilots from logging emergency procedure T&R codes following a simulated or actual emergency in the aircraft.

#### 1011. PRE-FLIGHT PLANNING / EXTERNAL SUPPORT AND FRAGS

1. Pre-flight planning shall be completed prior to brief time unless a late mission change due to resources or weather requires adjustment. At that point, the OpsO shall evaluate if time compression is too great for effective execution. Pre-flight planning includes, but is not limited to, all required T&R related readings for the mission, Joint Mission Planning System (JMPS) file preparation and Removable Map Unit (RMU) / Data Transfer Module (DTM/DTD/DTR) loading, smart pack preparation, flight plan filing, and load computations. Additionally, the



flight leader or aircraft commander shall ensure the ODO receives a copy of the flight smart pack and filed flight plan.

## 2. Detachment Planning (Appendix A Insert)

## 3. FRAGs

a. The Operations Department shall begin planning with supported unit(s) upon acceptance of FRAG requests at the MAG Monthly Frag Conference. All tasking (Assault Support Request/Joint Tactical Air Request), initial planning results, and point(s) of contact (POC) shall be delivered to the supporting mission commander/flight leader no later than 72 hours prior to the aircrew brief.

b. It is the responsibility of the supporting mission commander/flight leader to ensure completed planning for flight events in support of external units and FRAGs, including but not limited to:

- (1) Frequency and call sign for the supported unit(s) and exercise controller(s).
- (2) Landing and pick-up zone study, including ITG planning.
- (3) Briefing and accountability plan for all passengers, including PZ plan.
- (4) Objective area airspace reservation, coordination, and de-confliction.
- (5) No-comm plan regarding action/coordination with supported unit(s) in objective areas.
- (6) Timeline of events, accounting for loading/unloading of PAX and cargo.
- (7) Special equipment and external support requirements through the supported POC.

c. Supporting mission commander/flight leader shall provide to the ODO prior to the flight brief:

- (1) Appropriate supported unit(s) POC
- (2) Flight smartpack
- (3) Brief of the general scheme of maneuver

d. Aircraft commanders and flight leads shall allow for +/-15 minutes on either side of the planned timeline to allow supported units the flexibility to support within their ability. If supported units cannot provide support within the planned and agreed upon window, the FRAG will be viewed as complete on the part of VMM-363, and normal training can resume. This allows flight leads/aircraft commanders the flexibility to either proceed with training portions of the flight schedule or remain in order to provide further support as timelines allow. This window does not account for reasonable delays or situations in which the supported unit contacts VMM-363 with good reason as to why the delay occurred.

## 1012. LOAD COMPUTATIONS AND TAKEOFF AND LANDING DATA CARDS

1. Load computations (load comps) shall be completed for all flights prior to launch, reviewed and signed by the aircraft commander, and left with the ODO.

## 1013. CALL SIGNS

1. All aircraft shall use their assigned TMS call sign plus their event number as assigned by the squadron flight schedule for normal flight operations. Lead aircraft for H-1 events will use rocket numbers with wingman call sign scheduled as lead rocket number plus one.

2. Operational missions flown during exercises, pre-deployment training, or while deployed shall use approved tactical call signs or as directed via the Air Tasking Order (ATO). Calls signs from an ATO have precedence.

## 1014. FUEL

1. The aircraft commander shall ensure a fuel packet has been signed out for all flights.

a. "Aircards" are to be used when purchasing fuel and services at contract agencies other than at military airbases. Special Form 44 (SF-44) are to be used when no other method of payment is accepted; SF-44's are government checks issued by the aircrew to the servicing agency to pay for fuel and services.

b. The aircraft commander shall ensure that all fuel receipts are saved and turned in to the fuel packet Responsible Office (RO).

3. If non-standard fuel loads are required, the Operations Department will coordinate the requested fuel load at the weekly PB4T. All non-standard fuel loads will be annotated on the weekly.

4. In the event there is a need for a non-standard fuel load that was not annotated on the weekly flight schedule, the Operations Department will notify the Maintenance Department immediately. The Maintenance Department will attempt to support the requested fuel load, but due to MCAS Kaneohe Bay and deployed airfield limitations the Maintenance Department may not be able to fulfill the request.

5. Unless otherwise indicated on the flight schedule or coordinated between event leads, events should be planned such that aircraft should be parked in the line at their estimated time of arrival (ETA) and refuel after the hotseat.

6. Maintenance Control should fuel all scheduled and backup aircraft to the standard fuel load prior to the beginning of flight operations unless otherwise annotated on the flight schedule or notified by the crew. This notification shall be annotated on the weekly flight schedule and shall come no later than publication of the daily flight schedule.

#### 1015. SEVERE WEATHER

1. Weather Watch (WW) bulletins are issued for areas where conditions are favorable for development of severe weather. Pilots shall adhere to the requirements of CNAF M-3710.7, paragraph 4.8.4.5, if considering filing into a WW. A WW bulletin may be located at the following link: <http://www.spc.noaa.gov/products/watch/>

2. Weather Warnings are issued by local National Weather Service forecast offices where severe conditions are actually occurring. Severe thunderstorm and tornado warnings should be treated similar to WW bulletins when flight planning, but does not preclude flight into a weather warning, i.e. Convective SIGMET. In any case, aircraft commanders shall not fly within 20 nautical miles of thunderstorms.

3. Thunderstorm Condition 1 (T-1) is defined as lightning within 10 miles or thunderstorm conditions pose an immediate threat within 1 hour. All outdoor activities, refueling, and ordnance operations shall cease. Outdoor exposure shall be limited to transit or other essential tasks and all personnel shall move to cover. Every effort shall be made in order to prevent personnel from working in this condition. No maintenance shall be performed and no hotseats shall be conducted during T-1.

4. Thunderstorm Condition 2 (T-2) is defined as lightning within 25 miles or thunderstorm conditions pose a threat within 6 hours. ODO shall notify all personnel. Be prepared to conform to T-1 restrictions. Every effort shall be made to secure operations prior to T-1.

#### 1016. OPERATIONS AWAY FROM HOME FIELD

1. Cross Country flight requests and approval will be vetted through MAG-24 or higher echelon operations departments.

2. The aircraft commander shall contact the ODO at the destination airfield and at all intermediate stops to provide status, hours flown, itinerary, and a phone number where the aircrew can be contacted.

3. The aircraft commander is responsible for determining appropriate locations to stop for refueling and remaining overnight (RON). Military airfields are preferred, but not always the best option. In lieu of military airfields, consideration should be given to the availability of contract fuel and local airfield security.

a. In most circumstances, executive airfields with Fixed Base Operations (FBO) provide the level of security and support required.

b. When traveling with special equipment, to include classified material / communications security equipment and/or weapons, personnel shall maintain personal custody of sensitive items unless the material has been properly secured aboard a military facility.

c. ODO's scheduled for weekend or holiday cross country recoveries shall be posted at the ODO desk no later than two hours prior to the expected time of arrival. The ODO's phone number shall be noted on the flight schedule. It is the responsibility of the flight lead or aircraft commander to contact the ODO prior to launch from the cross country site and all intermediate stops to keep the ODO updated on all pertinent issues and timelines.

4. The aircraft commander should review Federal Aviation Administration (FAA) preferred routing to ensure that the plan is compatible with normal FAA traffic flow in order to avoid significant unexpected changes to the routing.

5. When conducting flights in other countries, all entry/exits will be in accordance with the Foreign Clearance Guide (FCG).

6. After landing, pilots shall notify the command at all enroute stops and upon reaching their remain-overnight locations to provide status, hours flown, itinerary, and contact numbers.

#### 1017. CONFINED AREA LANDINGS (CAL) AND TACTICAL APPROACHES

1. The Operations Department shall schedule landing zones and appropriate airspace for all T&R events requiring CALs and/or tactical approaches to meet performance standards. These shall be annotated on the weekly and daily flight schedule. Aircraft Commanders reserve the right to utilize all available local landing zones commensurate with attaining training goals.

2. The weather minimum to conduct airplane (APLN) mode tactical approaches is 1,000 foot ceilings and 5 statute miles visibility, both day and night.

#### 1018. FIELD CARRIER LANDING PRACTICE (FCLP)

1. The Operations Department shall schedule the LHD Deck at MCBH or an approved FCLP zone for all events annotated by "FCLP" on the flight schedule.

#### 1019. ALTERNATE INSERTION/EXTRACTION (AIE)

1. The Helicopter Rope Suspension Technique (HRST) master is responsible to the aircraft commander for the safe conduct and supervision of the operation. He shall ensure that all participants under his supervision:

a. Comply with all applicable orders and SOPs.

b. Receive a thorough safety brief.

c. Comply with the aircrew's instructions.

2. Headsets for Troop Commanders. Troop commanders and HRST/JMs should be provided with an Intercommunications (ICS) cranial or flight helmet with two-way communications capability to allow them to talk with pilots, monitor tactical nets, and allow supervisory participation.

3. Water Insertion (Helo-casting). Helo-casting operations may be conducted subject to the following restrictions:

a. Casting and recovery operations are limited to day Visual Meteorological Conditions (VMC).

- b. The supported unit shall have a safety boat at the cast point during the insertion of swimmers.
- c. Two-way radio communication shall be maintained at all times between the safety boat and the aircraft.

## 1020. TRANSPORTATION OF TROOPS AND PASSENGERS

### 1. Definitions and Terms

- a. Tactical troop lift: Transport of cargo and troops involved in combat operations, contingencies, or combat training.
- b. Non-tactical lift: Movement of cargo and troops solely for the purpose of expeditious transportation from point to point. The flight is conducted without any intent for tactical training.
- c. Operational Necessity: A mission associated with war or peacetime operations in which the consequences of an action justify accepting additional risk. Determination of operational necessity shall be made by the CO and cannot be delegated.

2. Military Personnel are authorized to fly as passengers on squadron aircraft as vetted through the Operations Department and DOSS.

3. Passenger manifesting is the responsibility of the aircraft commander. This will be accomplished by one of the following methods:

- a. Manifested on Part-A of the Aircraft Discrepancy Book (ADB).
- b. Manifested on a flight plan.
- c. A written manifest left with the ODO or a responsible person at the point of departure.
- d. A verbal message passed by radio or phone to the ODO or FSS.

## 1021. AERIAL OBSERVER/GUNNER PREREQUISITES AND SYLLABI

- 1. Prospective Aerial Observer/Gunners (AO) will have a valid medical upchit prior to proposal, streamlining the process from STAN Board proposal to water survival scheduling and ultimately T&R event scheduling.
- 2. Prospective AOs should expect to be assigned to the Plane Captain syllabus in conjunction with AO to increase knowledge and overall flexibility.



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## 2000. PLANNING & BRIEFING

### 2001. MISSION PLANNING SYSTEMS

1. The Navigation Officer (NAVO) is responsible for the organization and maintenance of the squadron's mission planning equipment and network and the currency of all related data. The NAVO will be work in conjunction with squadron Joint Mission Planning System (JMPS) and/or Marine Air Ground Tablet (MAGTAB) officers.
2. Amplifying information for management and standardization of the JMPS is found in Appendix A.
3. Standard Military Training Route (MTR) JMPS drawing and Manual Chart Updating Manual (MCHUM) files will be maintained on the JMPS network. These files shall be updated upon the release of new Digital Almanac Flight Information Files (DAFIF).

### 2002. DIGITAL MAP DATA MANAGEMENT

1. Map loads for the local area are standardized.
2. Flights out of the local area may require a custom map load. This will be accomplished according to following procedures:
  - a. The flight lead will determine the required map coverage for the mission and is responsible for assigning a member of the flight to coordinate with Maintenance and the NAVO for map load file creation, and Removable Memory Unit (RMU) or pebble map loading (dependent on aircraft) no less than 72 hours prior to the mission.
  - b. The NAVO will support the mission planner responsible for creation of the map load file, and review it with the flight lead to ensure that the proper coverage has been selected no later than 48 hours prior to the mission.

### 2003. SMARTPACKS / KNEEBOARD CARDS / NAVIGATION BAGS

1. An appropriate number of smart packs and kneeboard cards shall be provided for each aircraft prior to the ODO brief. Smart pack content and layout is standardized by the squadron Standardization Board or H-1 Tactical Standard Operation Procedure (TACSOP) and introduced during initial co-pilot academic training.
2. Navigation bags should consist of the Flight Information Handbook (FIH), IFR and VFR supplements, sectionals, low charts, approach plates, and military installation maps for the operating area. Two tablets with appropriate and updated flight publications, and a backup battery pack may be substituted for a navigation bag with paper pubs.

### 2004. OPERATIONS DUTY OFFICER

1. The ODO is the direct representative of the CO and is directly responsible to the OpsO for the execution of duties in support of the daily flight schedule.
2. ODO qualification shall be conducted as follows:
  - a. All pilots new to the command shall stand a minimum of two ODO under training (UT) watches.
  - b. One watch shall be conducted during the first launch cycle of the day. This watch shall include briefing with maintenance control, flight crew briefing, schedule changes, and mishap procedures.
  - c. One watch shall be conducted during the last four hours of the scheduled flight window. This watch shall include flight debrief, equipment turn in, position reporting and close out of the corrected flight schedule.

3. The ODO shall ensure that all changes to the flight schedule are coordinated through the OpsO (Assistant / Current Operations Officer in the event the OpsO is unavailable) and approved by the CO (XO or OpsO in CO's absence) prior to implementation.
4. The ODO shall maintain the master flight schedule in the Ready Room. All additions, cancellations, and changes shall be annotated in red pen and signed by the CO or an authority.
5. An ODO will be posted during all ground turns with the exception of low power engine dry outs.
6. Approved Sources of Weather Information. ODO's shall use Station Weather, Flight Service, or the National Weather Service's Aviation Digital Data Service (ADDS) website (<http://adds.aviationweather.noaa.gov/> or <http://weather.aero/>) to monitor weather and brief pilots. Use of alternate sources may be approved by the OpsO.
7. During Thunderstorm Condition 2 (T-2), the ODO shall be responsible for coordinating fuel trucks at the intended time of landing.

#### 2005. MISSION BRIEFING

1. All crews shall conduct individual cockpit NATOPS briefs prior to flight.
2. Qualified crew chiefs and aerial observers should attend the flight brief to the maximum extent possible, particularly for LAT/TERF, Air Delivery, Externals, Aerial Gunnery, and Ground Threat Reaction (GTR) sorties. Crew chiefs and aerial observers receiving initial training shall attend the flight brief with their instructor for all flights. In cases where they do not attend the brief, aircraft commanders shall thoroughly brief their crew chiefs and aerial observers prior to flight.
3. FCF crews shall receive an ODO brief and conduct a NATOPS flight brief.
4. MV-22 briefs should be scheduled for 3.0 hours prior to take off or 2.0 hours prior to handoff. Instructor Under Training (IUT) brief times will be no less than 3.0 hours prior to take off. If additional time is required due to multi-squadron briefs, it should be coordinated during the preparation of the weekly flight schedule and annotated on the daily flight schedule.
5. H-1 flight briefs should be scheduled 3.0 hours prior to take-off for a tactical flight event and 2.5 hours prior to take-off for an administrative flight event. Aircraft commanders may coordinate with the operations department for any deviation to the scheduled brief time.

#### 2006. BRIEF FORMAT

1. For training events, flight leaders are encouraged to craft their presentation materials to best suit the situation and audience without becoming confined to a single format.
2. MV-22 pilots receiving initial core skill instruction should not brief their training event. Instructor pilots and flight leads retain the responsibility for a proper brief prior to execution.
3. H-1 instructor pilots will provide briefing requirements to the scheduled Pilot Under Instruction (PUI). H-1 PUIs normally will conduct the section brief for all core and mission skill events unless otherwise instructed by the section leader.

#### 2100. EXECUTION & DEBRIEF

##### 2101. BACKUP AIRCRAFT

1. To the max extent possible, maintenance shall provide a back-up aircraft for every aircraft launch.



2. While screening the Aircraft Discrepancy Book (ADB) for their assigned aircraft, pilots should review all back-up aircraft's ADBs to ensure "rolling to the back-up" is expedient while also ensuring a thorough review of primary and back-up ADBs has been completed.
3. Aircraft Commanders shall go into Maintenance Control to sign the electronic ADB, Fuel Packet, and maintenance DTM/DTD/DTR or AMU/HUMS card, as applicable, shall be in the aircraft to facilitate a seamless and timely transition to the backup aircraft.
4. Back-up aircraft will be provided by maintenance as follows:
  - a. T&R events: Scheduled aircraft plus one back-up.
  - b. FRAG / External support: Scheduled aircraft plus Go Criteria back-ups.
  - c. Distinguished Visitor / High Visibility: IAW with ref (a).
5. Unless otherwise advised, the back-up is cleared to shut down once the flight takes off.

#### 2102. HOTSEAT

1. Serialized flight equipment may be transferred to the oncoming crew provided the chain of custody is not broken.

#### 2103. AIRCRAFT SURVIVABILITY EQUIPMENT (ASE)

1. ASE shall be operated for the duration of every flight. During training, the CMDS should be set to training mode and tested to verify appropriate response.
2. Flight leaders shall brief range regulations to include airspace boundaries and minimum altitudes for chaff and flare release for all flights with CMDS ordnance.
3. All associated circuit breakers will be pushed in once CMDS magazines are installed and for all flights when the buckets are not installed.
4. Aircrew shall ensure Integrated Optical Sensor Converter (IOSC) lenses are clean.
5. For tactical operations, expendables buckets should be armed prior to departure and de-armed once the flight is clear of the hold short on the taxiway upon return. The primary means of inhibiting the ASE will be with the switches on the cockpit control panel. H-1 aircraft will be armed, safed, and dearmed IAW ref (d) and (e).
6. Only the MWS switch shall be disabled on the CMDS Cockpit Control Panel anytime the aircraft is below the minimum altitude authorized for flare release.

#### 2104. TAXIING

1. A taxi director is required to taxi an aircraft into or out of any parking spot that has an aircraft parked directly adjacent to one or both sides of the spot. Aircraft Commander is still responsible for the safe taxiing of the aircraft.
2. Taxi directors shall be used for all operations away from MCAS Kaneohe Bay. At non-military airfields, a qualified taxi director shall deplane and execute taxi direction.
3. Night taxi operations may be conducted aided or unaided; however, for NVD flights all crewmembers shall be goggled prior to crossing the hold short.
4. Maintenance shall ensure, to the maximum extent possible, taxi directors are available for all aircraft launches.

5. H-1s may hover taxi to a designated landing area without a taxi director if deemed safe by the aircraft commander.

#### 2105. AIR TO AIR TACAN (YARDSTICK)

1. Lead sets event number or rocket number with “Y” suffix (event 2-1 sets 21Y A/A). Lead may briefly switch to the required TACAN for navigation as required.

2. All wingmen set A/A mode using 63 channel separation from lead.

2106. BASE FREQUENCY. The purpose of this frequency is to coordinate flight schedule execution with the ODO, as well as maintenance troubleshooting and FCFs with Maintenance Control. Single aircraft events should monitor base when able during their flight. Flights of more than one aircraft should not use the base frequency as a flight common frequency; however, the flight lead should consider assigning an aircraft responsibility to scan the base frequency for pertinent updates.

2107. COCKPIT DUTIES. Unless briefed otherwise the division of cockpit tasks shall adhere to the Pilot Flying (Mission Monitor) / Pilot Not Flying (Mission Manager) concept described below.

##### 1. Pilot Flying (Mission Monitor)

###### a. Flight control inputs

- (1) Terrain Clearance Tasks (TCT)
- (2) Formation
- (3) Corrections over the spot or load

###### b. Follow FD commands during uncoupled operations

###### c. ***Monitor FD performance during coupled operations (direct changes to Cue – Command – Coupled selection)***

###### d. Intra-flight (C2) communication

###### e. Assume mission manager tasks as required during non-critical phases of flight

###### f. Monitor aircraft systems

##### 2. Pilot Not Flying (Mission Manager)

###### a. External agency (C1) communication

###### b. Mission Management

- (1) Checklists / Lighting
- (2) CMS: Flight / Fuel Plans, TOT, BINGO, etc.
- (3) IAP set-up and brief
- (4) Aircraft systems status
- (5) Weather Updates

###### c. Shed mission manager tasks as required during non-critical phases of flight

#### 2108. FENCE CHECKS

1. Fence checks will be conducted to the maximum extent possible on the line.

2. Once complete with the Fence Checklist, announce “FENCED IN” over the intra-flight frequency. Completion of the Fence Checklist should be made prior to the first probable point of enemy contact or as briefed by the Flight Lead.

3. H-1 aircraft will conduct Fence checks at a briefed enroute check point for non-ordnance tactical events. If aircraft are loaded with live ordnance, aircraft will not “FENCE IN” until established on the firing range. Aircraft will “FENCE OUT” prior to leaving the range boundary if conducting a mission with live ordnance.

2109. LEAD CHANGE. Lead changes should be conducted IAW platform specific maneuver description guides.

#### 2110. EN ROUTE SPEED

1. The speed at which aircraft fly en route is at the discretion of the flight lead or aircraft commander. When conducting flights in mountainous terrain or during turbulent conditions, airspeed should be adjusted accordingly.

#### 2111. EN ROUTE ALTITUDES

1. Aircraft shall avoid overflight of heavily populated areas below 1,500’ AGL unless complying with directed procedures such as instrument approach procedures or urban helicopter routes. If unable to fly 1,500’ AGL, avoid overflight of heavily populated areas by no less than 2,000’ horizontal radius per FAR Part 91.

#### 2112. HOLDING AND JOIN-UP

1. Holding Fix. Holding procedures shall be executed IAW platform specific maneuver description guides.

2. Join Up. Join up procedures shall be executed IAW platform specific maneuver description guides.

#### 2113. RENDEZVOUS

##### 1. On-Deck

a. Emissions control condition permitting, the first aircraft in the zone shall announce the approach course and final landing heading and land as far forward in the zone or on the runway as possible.

b. Subsequent aircraft arriving to the zone should land in cruise for an LZ or trail for a runway.

c. Once the flight has joined, the flight lead will conduct a lead change as required to ensure that the flight is in the correct order.

##### 2. Airborne

a. The flight shall join in accordance with section 3017. Emissions control conditions permitting, the first aircraft to arrive at holding shall report established and verify the fix/altitude.

b. After completing the rendezvous, each aircraft shall reset to the briefed lighting condition.

#### 2114. CAL / LANDING ZONE (LZ) OPERATIONS

1. If an LZ is unfamiliar or has not been used within the last ten days, a flyover should be conducted, unless tactics dictate otherwise.

2. During CAL training, the lead aircraft will pause in the zone after the last aircraft in the flight lands, brief the next approach (approach type, pattern turn direction, approach course, and final landing heading) prior to lifting.

a. If a delay is required on deck, the aircraft needing the delay should request one over the intra-flight frequency giving the reason and expected duration.

#### 2115. WAVEOFFS

1. WAVEOFF. All wave-off shall be conducted IAW platform specific maneuver description guides.

#### 2116. RETURN TO BASE (RTB)

1. At least one aircraft in the flight shall obtain and pass ATIS information prior to contacting approach or tower control.
2. When operating at locations other than MCAS K-Bay, specific course rules guidance will be provided through local area familiarization, course rules briefs, pilot handbooks, and the R&I binder.
3. Aircraft will adjust lighting as required upon approaching controlled airspace, at appropriate points in the landing pattern, and upon clearing the active runway. H-1 aircraft will adjust lighting as briefed by the designated flight lead or aircraft commander. No light changes should be made during a join-up.
4. On the last flight of the day per aircraft, all aircraft shall cycle through the appropriate rinse facility prior to shut down.

#### 2117. SHUTDOWN

1. Maintenance shall be prepared to conduct engine rinses for the last flight of each aircraft. Aircrew shall refuel aircraft per SOP prior to shutdown when directed by the ODO and/or Maintenance. Pilots will radio the ODO to report their return to the squadron flight line. Should the aircraft return with a maintenance discrepancy, the aircraft commander shall inform the ODO or maintenance control and request a troubleshooter. When practical, the aircraft shall remain turning to aid in fully diagnosing the problem for maintenance.

#### 2118. LOSS OF VISUAL CONTACT

1. A loss of visual contact will be executed IAW ref (h).

2121. VFR LOST COMMUNICATION. Lost communication procedures for a single aircraft shall be in accordance with the Flight Information Handbook or Ref (c). In the case of lost communication within a formation, the following procedures apply.

1. Lost communications procedures are built and executed around a section. Section integrity will be maintained at all times and lost communication signals will remain within the section. When executing lost communication procedures, the pilots on the inside of the formation should be at the controls.
2. Training will cease until the situation is resolved. Communication degradation procedures or alternate radios should be attempted. Troubleshooting should occur on deck or out of the LAT/TERF regime.

a. CAL. If lost communication occurs during CAL's, the lost communication aircraft shall hold on deck. The lost communication aircraft will utilize their lights to gain the attention of the good communication aircraft and send a runner to the good communication aircraft. The section will lift and RTB as a section with the good communication aircraft assuming tactical lead. This does not constitute a Precautionary Emergency Landing, but the good communication aircraft should advise ATC and Base as soon as practical.

b. LAT/TERF. If lost communication occurs during LAT/TERF, the lost communication aircraft shall discontinue training, climb out of the low altitude environment (Minimum Safe Altitude (MSA) as appropriate). When the situation is recognized, the good communication aircraft will discontinue training ("Knock-it-Off" call as



appropriate) and execute lost communication procedures in accordance with paragraph 3027 as appropriate or as briefed by the appropriate flight lead or aircraft commander.

c. Once a lost communication notification has been completed, all other wingmen in the flight should be notified on the radio of the situation.

d. The lost communication aircraft will be escorted back to home field or a suitable landing site.

#### 2119. PRECAUTIONARY EMERGENCY LANDINGS (PEL)

1. Landing criteria is based on NATOPS guidance. Landing to troubleshoot, reset a system, inspect the aircraft for loose panels, or following a bird strike is not necessarily a PEL. If the gripe that precipitated the landing has been cleared, or the results of a bird strike inspection indicate no damage, the aircraft commander may exercise their judgment to continue flight.

2. If an aircraft conducts a PEL, the aircraft commander shall attempt to notify the ODO via the phone or radio relay. The aircraft will not launch again without the approval of the CO. In the CO's prolonged absence, the XO or officer with CO approved "Acting" status may grant launch approval. If the aircraft commander is unable to contact the squadron, and repositioning the aircraft is required to ensure the safety of the aircrew or passengers, the aircraft commander may launch after careful consideration of the risks involved. This is a rare circumstance.

3. Maintenance recoveries shall not be conducted after sunset, before sunrise, or beyond the limits of crew day without the approval of the Group CO per Ref (b).

2120. BIRD STRIKES. In cases not covered by Ref (b), a landing should be made as soon as practical following a bird strike based upon suspected damage and aircraft handling qualities. After landing, a close inspection will be completed prior to further flight. Note the time and location of the strike and relay to the ODO. If practical, attempt to collect and preserve any bird remains for analysis.

#### 2121. DOWNED AIRCRAFT

1. Once descending through 500' AGL (MV-22) or 150' AGL (H-1) for landing, all troubleshooting shall cease and the crew shall focus solely on executing a safe landing.

2. Controlled Landing. Once the aircraft is safely on deck, the aircraft commander shall determine whether or not to shut down the aircraft. If able, the crew shall keep the APU running to allow communication with wingmen or other aircraft in the area. If not possible, use survival radios to contact other aircraft or cellular phones to contact the ODO.

3. Controlled Ditching. The PF shall execute the Ditching checklist in the PCL. When hovering over the water, the primary method of ditching will begin with egress of the aircrew, co-pilot, life raft, and survivability equipment off the ramp, simultaneously if possible. The pilot will then move the aircraft a safe distance away from the rest of the crew to ditch the aircraft.

#### 3. Uncontrolled Landing

a. The PF should attempt to notify the crew of an impending crash. Aircrew should strap themselves into seats for impact protection. If unable, lay flat away from exit points and cinch gunner's belt.

b. Prior to touchdown, the PF should minimize rate of descent and airspeed. Keep flying the aircraft until it comes to a complete halt.

c. Conduct an emergency shutdown.

d. Once all violent motion has stopped, all crew should egress the aircraft through their primary egress location, cabin door, or the ramp. If able, announce your intent over the ICS prior to jettisoning a window/door.

e. All personnel shall move to the 12 o'clock of the aircraft or upwind of any smoke and flames to identify survivors and conduct first aid. Once all personnel are accounted for, move to an upwind position if not there already. If personnel remain unaccounted for, the senior Marine present will make a determination whether it is safe to re-enter the aircraft to search for survivors.

## 5. Uncontrolled Ditching

a. The PF should attempt to notify the crew of an impending ditch. Aircrew should strap themselves into seats that best support a water egress. If able, aircrew should unstrap the raft and place it in a location where it can be easily removed from the aircraft upon water impact.

b. All aircrew shall activate the appropriate explosive egress hatch prior to entering the water. If able, announce your intent over the ICS prior to jettisoning a window. If passengers are aboard, blow all emergency egress hatches to best aid in their survival.

c. Prior to touchdown, the PF should minimize rate of descent and airspeed. Keep flying the aircraft until it comes to a complete halt. Less than 30 KCAS on touchdown will provide the best chance of survival during a ditch.

d. Conduct an emergency shutdown.

e. Once all violent motion has stopped, all crew should utilize their Helicopter Aircrew Breathing Device (HABD) bottles, find a reference point, release their harness, and egress from the aircraft through their primary egress location, cabin door, or the ramp utilizing hand over hand movement. Assist other during egress if required. Inflate the LPU using a down and then outward motion once clear of the aircraft.

f. All personnel will muster at the life raft, if one is available, for accountability. Personnel shall not reenter a sinking aircraft to search for survivors.

g. If anyone is injured, use basic first aid to minimize further injury or death. Utilize cell phones, radios, and survivability equipment to coordinate a rescue effort.

## 6. On-Scene Commander (OSC)

a. If a mishap site is encountered and no OSC is on station, the senior aircraft commander in the flight shall assume the duties of OSC. If a more senior/qualified aviator from another squadron is present in the flight or subsequently arrives on scene, control of the crash site should be passed to that individual as soon as practical.

b. Within the limits of crew experience and aircraft capabilities, personnel are expected to execute tasking in support of the OSC's scheme of maneuver; however, it is not the intent of this policy to diminish the authority of flight leaders and aircraft commanders to make safety of flight decisions.

c. Set a bingo and remain on station until relieved by a more capable asset, reach your bingo, or have an emergency of your own.

## 2122. NON-TACTICAL PASSENGER TRANSPORTATION / VERY IMPORTANT PERSON (VIP) LIFTS

1. Prior to takeoff, non-tactical passengers will be briefed on the use of personal survival equipment and aircraft safety procedures, to include egress and personal survival equipment. These passengers will be instructed that the crew chief controls all of their actions in the aircraft cabin and that their instructions will be obeyed at all times.

a. All non-tactical passengers will wear cranial protection or approved flight helmets with integral sound suppressors. Cranials will be donned prior to approaching the rotor arc.

b. As appropriate, the most senior passenger should be issued an ICS cranial and will be advised of the status of the mission.

c. All passengers will wear flotation devices (LPUs) for flight over open water per ref (d). Float coats shall not be worn by embarked personnel. If transported, auto inflation mechanisms shall be disabled.

d. Passengers shall disembark prior to hot refueling.

e. Passengers will remain seated whenever the aircraft is moving. However, once safely airborne, and with the consent of the aircraft commander, an individual may come forward to brief with the pilots. Passengers will not remove cranials until they have exited the rotor arc.

2. Very Important Person (VIP) Lifts. Personnel are considered VIPs if they are O-6 and above for military, GS-15 and above for civilian, or as designated by the Department of Defense (DOD). VIP lifts will be scheduled as section events at a minimum and should be planned to arrive at the pick-up zone 15 minutes early. The flight will consist of sufficient aircraft to safely carry the required number of passengers with a flying backup. On flights where a non-NATOPS qualified VIP will be flying at the controls of a squadron aircraft, the TAC shall be a designated (Assistant) NATOPS Instructor and passengers shall not be embarked on that aircraft.

a. VIP Kits. The VIP aircraft (and the flying back-up if required) will be configured with the following equipment at a minimum, and with any additional items required/requested:

(1) Two clean, op-checked, ICS-cranials with cords, for the VIP's use.

(2) Enough clean and serviceable cranials for all other passengers.

3. Two enlisted crewmembers will be assigned to VIP aircraft. One will greet the VIPs beyond the rotor arc and provide their cranials and LPUs, while the other crewman remains up ICS with the pilots. Maintenance shall coordinate the following:

a. Operational Environmental Control System

b. Clean, dry ramp and cabin deck areas

c. Foam ear plugs (one set per passenger)

d. airsickness bags (one per passenger)

4. All aircrew shall be in a clean and serviceable flight suit and boots.

5. Crew chiefs will greet all VIPs well clear of the rotor arc, render a salute, and introduce themselves. Cranials (and LPUs if required) will be distributed at this time. An egress brief will also be given for any passengers not familiar with the aircraft cabin. Crew chiefs will assist VIPs into the aircraft. Entry will be conducted via the crew door (except during shipboard operations as directed by combat cargo). An announcement shall be made over ICS prior to plugging the VIP into the ICS. Any remaining ICS cranials will be made available to additional VIPs. Crew chiefs will politely ensure all VIPs and passengers are properly secured in their seats before takeoff.

6. Pilots will fly the safest, most direct route to the VIP's destination, with consideration given to alternates. VIP flights shall remain over land, or within gliding distance of shore, whenever possible. Weather, maintenance, or safety of flight diverts will be made as necessary in the judgment of the VIP aircraft commander.

7. Pilots will provide the ODO status reports and advise him of any changes to the VIP's scheduled itinerary.

8. Upon arrival at the VIP's destination, the aircraft commander will:

- a. Land only mission essential aircraft in the LZ. The backup aircraft will normally remain airborne with standoff from the LZ, but stay within radio range.
- b. Arrive at the destination on time. If due to the VIP's desires, an early ETA is projected, warn the destination point of contact (via the ODO if possible) of the new ETA as soon as possible.
- c. Update/confirm any subsequent pick-up times with the aide or embarked point of contact.
- d. Crew chiefs shall escort the VIPs clear of the rotor arc via the crew door exit and collect any flight gear as required.

2123. TROOP LIFT CONSIDERATIONS. The carrying of weapons, wearing of body armor/web gear, packs, and personal flotation devices shall be standardized as described below:

1. Seatbelts. Seatbelts shall be worn from takeoff to landing. For AIE missions, they should be worn until the last moment compatible with AIE procedures.
  - a. Gunner's belts may be worn by embarked personnel IAW paragraph 3040 as required for the mission.
  - b. Personnel retention straps may be used in lieu of troop seats with approval of the 1st MAW Commanding General or Marine Air Ground Task Force (MAGTF) Commander.
  - c. Personnel handhold straps shall be installed for all AIE / AD profiles requiring personnel operating on or near a level ramp, regardless of gunner's belt usage.
2. Helmets shall be worn with chinstraps tightly fastened. If helmets are not being used by the supported unit, the squadron will provide cranials for wear while embarked. Cranials may be donned/doffed aboard the aircraft.
3. ICS cranials will be provided to unit leaders as available. Both the jump seat and troop commander seats and ICS stations will be prepared and available for use.
4. Embarked unit Standard Operating Procedures will dictate the wear of the body armor during over water flights.
5. Stow all rucks on the deck at the feet of the passenger, placed on their lap, or on the seat beside them if space permits.
6. Passenger weapons shall be carried muzzles down and on safe, unless prior coordination is made with the supported agency. Weapons condition is at the discretion of the embarked unit commander, but Condition 3 is recommended until exiting the aircraft due to the movement required to release and clear the five-point retention system.
7. Personal flotation device or LPU. Worn for all overwater flights and provided by the squadron, these are to be donned prior to boarding the aircraft and removed once on deck of the destination ship or over dry land.
8. Float coats are not authorized for wear in lieu of LPUs. Automatic inflation devices shall be removed from float coats being transported inside the cabin.
9. Upon landing, the ramp will be lowered to the deck completely for embark/debark of troops.
10. Passengers shall debark prior to hot refueling.
11. Passengers will remain seated whenever the aircraft is moving. However, once safely airborne, and with the consent of the aircraft commander, an individual may come forward to brief with the pilots.
12. During tactical troop movements passenger safety and egress briefings should be conducted by their Troop Commanders or Combat Cargo.



## 2124. EXTERNAL CARGO AND AIR DELIVERY

1. Lifts of external cargo shall be conducted in accordance with existing NATOPS directives. The cargo hook and pendant will be thoroughly preflighted prior to conducting external cargo operations.
2. The Aircraft Commander shall conduct a thorough brief with all crew members regarding voice procedures and emergency jettison. External operations require two enlisted aircrew. Additional crew members may be embarked for training purposes.
3. When conducting air delivery operations (cargo or personnel), the Aircraft Commander shall confirm all pre-mission planning items, such as the Calculated Air Delivery Release Point (CARP) is performed and that coordination with the Maintenance Department has been made to ensure the cabin is configured for the mission.
4. The Aircraft Commander shall conduct a brief with the Helicopter Support Team (HST) leader and/or Jump Master prior to the event. This will be face-to-face to the maximum extent possible. When not feasible, a brief via telephone is acceptable. Whether conducting single or multiple aircraft external operations, the first crew in zone will conduct a brief with the HST leader in the LZ to confirm normal and emergency procedures.

2125. FLIGHT OPERATIONS AWAY FROM HOME BASE. After landing, pilots will phone the ODO/SDO at all enroute stops, and upon reaching the remain-overnight (RON) location. If landing at civilian airfields, pilots will ensure that their flight plans have been closed out. Upon shutdown, pilots will ensure that all aircraft are fueled and properly secured. All inspections and fuel samples will be completed IAW appropriate directives.

## 2200. POSTFLIGHT & DEBRIEF

### 2201. POSTFLIGHT

1. The Aircraft Commander shall debrief the Maintenance Controller on duty of any changes to the status of their assigned aircraft. Prior to departing Maintenance Control for flight debrief, the Aircraft Commander will ensure two NAVFLIRs and the aircraft maintenance brick are turned into control. The Aircraft Commander will ensure that all MAF's clearly describe the problem, list the in-flight troubleshooting steps and include the rank/name of any troubleshooter who witnessed and/or diagnosed the problem.
2. If on cross-country, the Flight Lead or Aircraft Commander shall verbally update the ODO on their status and inform Maintenance Control of any relevant aircraft issues.

2202. MISSION RE-CREATION. As required, each flight shall download their mission recreation file to the mission planning network. Additionally, these files will be archived and organized for 30 days to support safety and maintenance investigations into Things Falling Off Aircraft (TFOA) events, Near Mid-Air Collisions (NMAC), airspace violations, and other incidents that may occur. After 30 days, the NAVO may delete mission recreation files.

2230. DEBRIEFS. Unless briefed otherwise, all pilots in the flight will proceed to the ready room after returning their gear to Flight Equipment and completing all post-flight paperwork. Flight debriefs should follow the format in the TPG.

### 2204. AVIATION TRAINING FORM (ATF)

1. Training codes requiring an ATF shall be indicated on the daily flight schedule. Any event with an "X" requires an ATF. "R" coded events only require ATF's if the PUI is a (Modified) Refresher (i.e. FRS required). An ATF is required if any portion of the training event was completed.

2. Instructors shall ensure ATFs are completed, printed, signed, and turned into the ATF Officer for each ATF within three working days of the training event. Events resulting in unsatisfactory performance are due within one working day.
3. The ATF Officer will deliver all applicable flight syllabus event ATFs to the NATOPS Officer for routing to the Director of Safety and Standardization (DOSS), Operations Officer (OPSO), Adjutant, Executive Officer (XO), and finally the Commanding Officer (CO) for signature. Once signed, all paperwork will be returned to the NATOPS Officer for paper and electronic processing. Once processed, ATFs will be returned to the ATF Officer for inclusion into the aircrew's Aircrew Performance Records (APR).
3. The Operations Department shall ensure all ATF's are catalogued appropriately in the APR.
4. The Operations Department shall forward all ATF's for a stage resulting in a qualification or designation to DSS for required routing with the designation paperwork.

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## **CHAPTER 3**

### **MV-22B**

#### **3000. AIRCREW COMPOSITION**

1. For all Cross Country / Self-Deploy flights outside of the Hawaiian Island chain or deployed local operating area, minimum aircrew should be scheduled in order to permit the use of on board oxygen. The standard crew composition is a pilot / copilot / crew chief, and aerial observer or two crew chiefs.
2. Flights with personnel occupying the copilot seat that are not qualified as a Tiltrotor Second Pilot at a minimum, shall be paired with a Naval Air Training and Operating Procedures Standardization (NATOPS) Instructor or Assistant NATOPS Instructor as a Tiltrotor Aircraft Commander (TAC). Passengers shall not be carried in these instances.

#### **3001. FLIGHT SCHEDULE**

1. In addition to the published flight schedule, the following events may be flown and logged for a proficiency update provided all T&R requirements are met and it is not an initial training flight for anyone in the aircraft: Day / Night / Night Systems (NS) Familiarization (FAM), Instruments (INST), Confined Area Landings (CAL), Field Carrier Landing Practice (FCLP), Simulated Air Delivery (AD), and Mountain Area Training (MAT). Additionally, RVL profiles RQD-2280/2281 should be flown and updated on every CAL flight in which the aircrew was current.

#### **3002. LOAD COMPUTATIONS AND TAKEOFF AND LANDING DATA CARDS**

1. Load comps shall assume a 95% engine performance when either engine's EPP is below 100%, regardless of the average EPP.
2. Shore-based vertical takeoff and/or landing shall plan for a 5% Hover Out of Ground Effect (HOGE) torque margin for the specific aircraft in use. Takeoff and landing operations with less the 5% HOGE power margins shall be approved by the CO, XO, OPSO, AMO, or Detachment OIC.
3. Pilots planning on executing external operations, vertical landings where RVL conditions exist, or where DA exceeds 6,000 feet, shall perform load computations for a 10% HOGE margin. Aircraft Commanders and Flight Leads may be granted a waiver by the CO from these load computation directives based on mission precedence.
  - a. External operations shall include weight of external load.
  - b. Shipboard operations shall be planned in accordance with NATOPS Chapter 4.
4. Pilots shall not manipulate PA to reach the desired/forecast DA. This will ensure accurate load computations that are in line with the VMPS performance charts algorithms. Utilize the METOC-provided PA/OAT when inputting data into JMPS.

#### **3003. FUEL**

1. Standard fuel loadouts for MV-22B operations are as follows:
  - a. Land-based operations: High level shut off or 11,200 lbs.
  - b. Shipboard operations: 7,500 lbs with no fuel in the wing auxiliary tanks.
2. The minimum planned landing fuel shall be no less than 1,200 lbs.

#### **3004. MISSION AUXILIARY TANKS (MAT) / ADGR KIT / DWS**

1. For missions requiring Mission Auxiliary Tanks, ADGR Kits, and/or DWS the Operations Department shall coordinate with the Maintenance Department no less than ten days prior to execution. This configuration shall be annotated on the monthly, weekly, and daily flight schedule.

### 3005. BINGO / FPLN MIN FUEL COMPUTATION

1. Bingo fuel is defined as the “fuel state needed for recovery.” Joker fuel is defined as “fuel state above Bingo at which separation / bugout / event termination should begin.” Due to the options available in the V-22 for fuel calculation, VMM-363 further defines “Joker / Bingo Direct” to be associated with the BINGO FUEL caution in the Cockpit Management System (CMS) and “Joker / Bingo Flight Plan” to be associated with the FPLN MIN FUEL caution in the Cockpit Management System (CMS).

2. Planners shall compute fuel loads using MV-22 NATOPS minimums and CNAF M-3710 requirements.

a. For local area operations, this equates to an **SOP BINGO of 1600 lbs**: 600 lbs (NATOPS 300 lbs /side) + 700 lbs (At ISA, with a 39,000 lb aircraft, fuel required to fly at maximum endurance at 10,000 ft MSL for 20 minutes) + an additional 300 lbs for pattern, conversion, and landing. This will be the standard for both “Bingo Direct” (based upon BINGO (NO) FPLN) and “Bingo Flight Plan” (based upon FPLN MIN FUEL). (Figure 2-1)

b. For en route operations, the CNAF M-3710.7 planning factor is adjusted to 10% (not less than 20 minutes) or Instrument Meteorological Condition (IMC) requirements.

3. During execution, if the Aircraft Discrepancy Book (ADB) or a Power Assurance Check (PAC) indicates an engine is at or below 97%, 6% additional fuel (100 lbs for every 2000 lbs required) will be added to the planning factor.

4. For “Joker Direct / Flight Plan,” a minimum of 700 lbs should be added for an **SOP JOKER of 2300 lbs**. This is mission dependent and may be changed at flight lead / aircraft commander discretion.

5. The “Bingo Flight Plan” fuel state shall be used to create the JMPS flight plan navigation log in order to provide an accurate route fuel ladder.

6. The “Joker Direct / Flight Plan” fuel state should be set in JMPS and transferred to the aircraft.

7. The Flight Lead should brief “Joker Direct / Flight Plan” and “Bingo Direct / Flight Plan” parameters during the flight brief. These should be annotated on the standard VMM-363 cover page.

8. With 2300 lbs (1600 lbs Bingo + 700 lbs Joker) set into the BINGO FPLN and BINGO NO FPLN, the aircraft commander will have 4 possible Bingo fuel conditions in flight, dependent upon INAV setting.

a. The BINGO FPLN waypoint does not have to be the destination waypoint, it may be the departure waypoint or an appropriate en route divert. The BINGO NO FPLN waypoint should be utilized for a divert airfield.

b. Regardless of INAV setting being used, aircraft commanders will report “LUCKY x-x, JOKER DIRECT” to the flight lead when BINGO FUEL posts with “Joker Direct” fuel state set (typically 2300 lbs) indicating that the aircraft has approximately 10-15 minutes of flight time remaining until a mandatory divert to the BINGO waypoint via direct routing and the computed BINGO profile. (Figure 2-2)

c. The aircraft commander will then reset the BINGO (NO) FPLN to the briefed “Bingo Direct” fuel state (typically 1600 lbs).

d. Once BINGO FUEL posts with 1600 lbs set (or briefed “Bingo Direct” fuel state), the aircraft commander will report “LUCKY x-x, BINGO DIRECT” to the flight lead and proceed direct to the BINGO waypoint at the calculated BINGO profile.

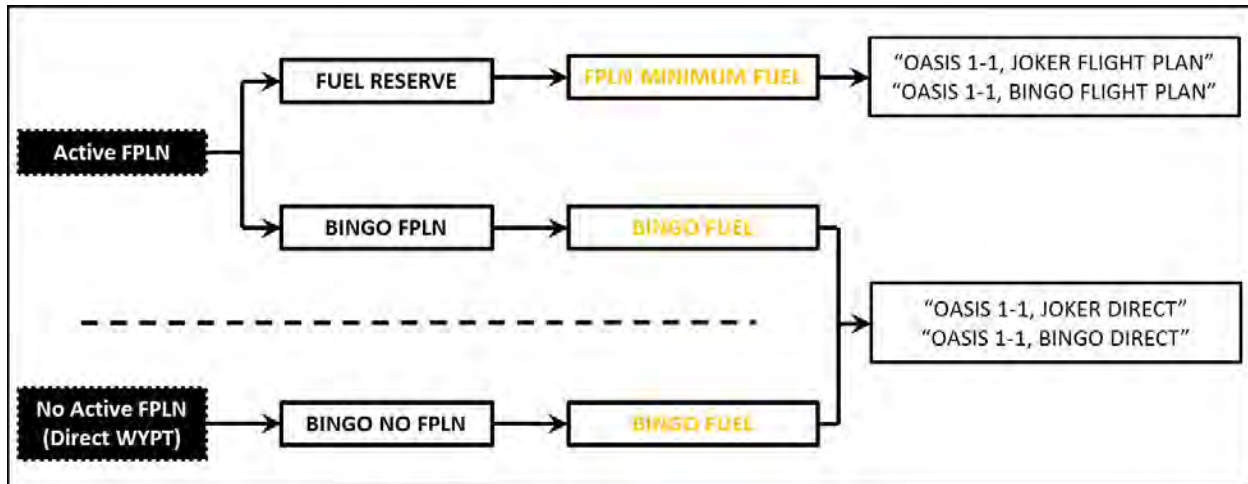


Figure 2-1

9. FPLN MIN FUEL will be set in the same manner as BINGO (NO) FPLN.

a. When FPLN MIN FUEL posts at 2300 lbs, the aircraft commander will report “LUCKY x-x, JOKER FLIGHT PLAN” to the flight lead, indicating that the fuel on deck at the destination waypoint, flying the flight plan via the JASS/CMS profile, is 2300 lbs.

b. The aircraft commander will then reset FPLN MIN FUEL to 1600 pounds via FPLN Menu 2, FUEL RESERVE.

c. When FPLN MIN FUEL posts at 1600 lbs, the aircraft commander will report “LUCKY x-x, BINGO FLIGHT PLAN” to the flight lead, indicating that the aircraft will arrive at the destination waypoint flying the flight plan via the JASS/CMS profile with 1600 lbs.

10. The standard BINGO (NO) FPLN CMS profile is 200 KCAS and 2000’ MSL for operations at home field. The ‘Ramp Closed/Door Open’ configuration and max day/night surface temperature should be used. This should be set during JMPS mission planning and confirmed during cockpit setup, prior to taxi.

11. The standard en route BINGO (NO) FPLN CMS profile is 190 KCAS and 10,000’ MSL. The ‘Ramp Closed/Door Open’ configuration and max day/night surface temperature (with lapse rate for 10,000’ MSL) should be used.

12. Planned altitude and airspeed profile should be transferred from JMPS to the aircraft with zero or worst case winds. In flight, future leg data should be regularly updated with changes to flight profile and en route winds to provide the most accurate fuel calculations.

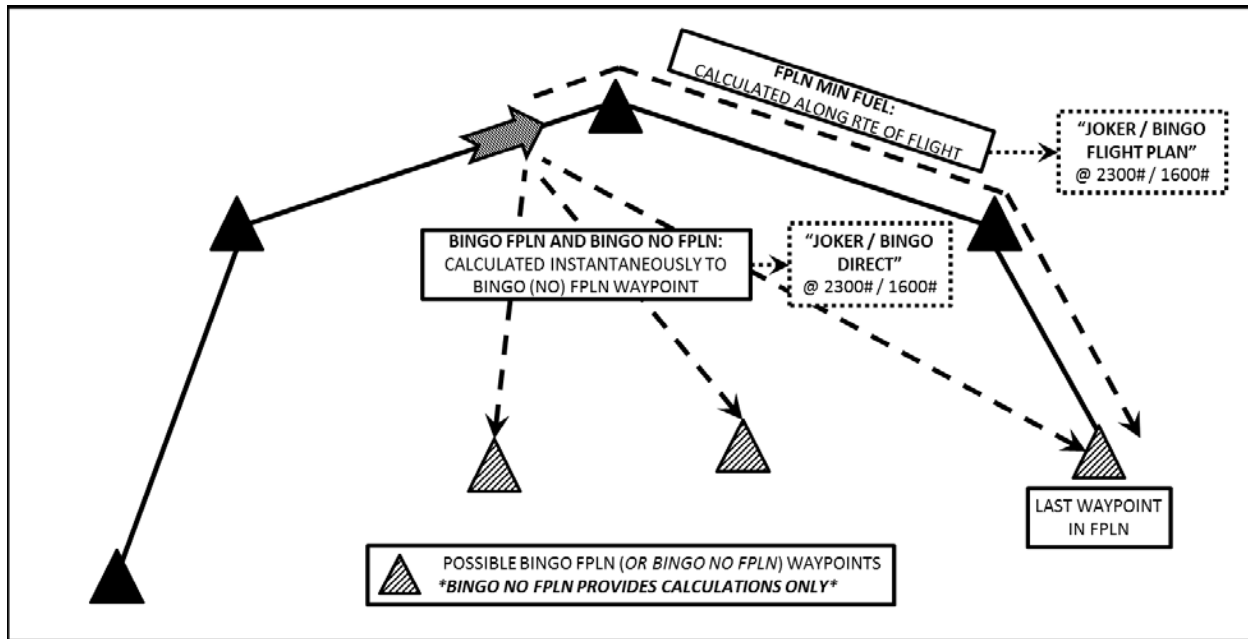


Figure 2-2

#### 3006. DTM / DTD LOAD

1. Winds, weights, loiter legs, and idle legs shall be omitted from the DTM/DTD load.

#### 3007. BRIEF FORMAT

1. The ANTTP 3-22.5-MV-22 TPG or 3-22.5-USMC Assault Support TACSOP Briefing Guide shall be used as a starting point for all briefs. Flight leaders may alter the format of the brief in the interest of clarity and brevity as required.
2. Pilots in the TAC syllabus should execute the NATOPS brief to the max extent possible. Aircraft Commanders shall afford them the opportunity to do so during flight events whenever possible.

#### 3008. BACKUP AIRCRAFT

1. As directed by the flight schedule the back-up aircraft should be manned by a qualified Plane Captain, Pre-Start Checklist complete, NLT 30 minutes prior to scheduled launch time.

#### 3009. AIRCRAFT ENTRY/SETUP

1. Aircrew shall ensure their cockpit seat is left in the full down and aft position, the pedals are full forward, and all harnesses are loosened prior to exiting the aircraft.
2. Oxygen hoses shall be retained by their caps to prevent interference with seat adjustment and stroking mechanisms.
3. The MV-22 ANTTP TPG FENCE Checklist should be used to prepare the cockpit for flight operations.
4. Pilots shall configure their hover page prior to taxi for every flight.
5. Aircrew shall not secure their flight bag nor any personal baggage to the backs of the passenger seats to include the top or any of the circular cut outs in order to prevent damage to the seats. Utilize the D-rings located throughout the cabin.



### 3010. HOTSEAT

1. The flight schedule should allow 45 minutes during both daytime and nighttime hours between land time for the off going crew and takeoff time for the oncoming crew. Oncoming aircrew are expected to account for fueling and taxi time in their pre-takeoff routine.
2. Landing gear pins shall be inserted during all hotseat evolutions and/or anytime aircrew enter or exit the cockpit with the rotors turning or the Auxiliary Power Unit (APU) engaged.

### 3011. IN-FLIGHT HOTSEAT

1. When the mission dictates, hot seating in-flight will be authorized by the CO via the signed flight schedule. The aircraft shall be coupled above 3,000 ft AGL to FD airspeed, heading / course, and altitude. The TAC shall ensure the cabin walkway is clear, hot seating pilots are connected to the ICS during the hotseat evolution, and the ECL's are guarded. The hotseat pilot shall ensure the seat is fully lowered, the armrest is lowered, the pedals are pushed forward, the harness straps are fully extended, and the cockpit window pin is installed prior to exiting the cockpit. If in-flight hot seating is to be conducted during TAAR, the TAC should coordinate additional separation from the tanker to reduce formation flying workload and increase safety margins.

### 3012. AIRCRAFT SURVIVABILITY EQUIPMENT (ASE)

1. For training flights without ALE-47 ordnance installed, the ALE-47 safety pin may be removed outside of designated ranges IOT facilitate crew chief training. Removal of the ALE-47 safety pin (Step 10 of the Pre-Taxi/ Breakdown Checklist / Step 5-C of the FENCE Checklist) with ALE-47 ordnance installed, shall be delayed until entry onto the authorized range. The pin shall be reinserted prior to exiting the range. The cabin safety pin will only be removed or inserted when called for by the aircraft commander during checklist execution.
2. For aircraft with the legacy ALE-47 control panel, only the MWS switch shall have a two-inch plastic straw enabling ease of identification. No other switches will have straws installed.

### 3013. TURN UP AND CHECK-IN

1. The standard RIO will be COMM1 BTN21 C/S, 1A; COMM2 BTN22 C/S, 4A. If Satellite Communications (SATCOM) is available, SATCOM checks should be conducted during the RIO.

### 3014. TAXIING

1. Once subordinate aircraft commanders in the flight are ready to taxi they will inform their flight leaders by making a "ramps up" call on the intra-flight frequency from back to front. The call will contain the aircraft's call sign, fuel state, status of fence checks, number of passengers, and an alpha check to the first waypoint in the flight plan. For example a "ramps up" call should sound like this, "Lucky 22 ramps up, 8.5 lbs, fenced in with exceptions, 6 pax, Alpha Check to HELUX 004 at 14.3".

### 3015. DEPARTURE

1. Taxi/Runway Lineup. For a section takeoff, the lead aircraft will take the downwind side of the active runway and the second aircraft will take the upwind side. During a Light Division (three planes) takeoff, the division will file up in an evenly spaced, upwind echelon stagger across the width of the runway, space permitting. The echelon will keep each subsequent aircraft out of its preceding aircraft's "dirty" air. Any flight greater than three aircraft will set up as sections in trail with appropriate upwind and downwind placement of aircraft.
2. Pre-Takeoff Procedures. Takeoff and departure CRM is IAW ANTP table 3.14.

3. Short Takeoff (STO). A 60-degree STO shall be the standard full runways length departure and IAW Takeoff and Landing Data (TOLD). A 75-degree STO is the standard departure for any runway intersection departure except PHNG runway 04 at Fox taxiway, which should be 60-degree STO. Prior to a STO, the aircrew shall configure the cabin and crew door for an immediate APLN mode transition. The flight lead will ensure a full length departure is approved when operating at PHNG. The lead aircraft will initiate takeoff once the last aircraft's nacelles are positioned and the proper lighting condition is configured for the whole flight.

4. Vertical Takeoff (VTO). Based on mission profile, consideration should be given to performing hover power checks prior to departure.

5. After Takeoff Procedures. Once committed to forward flight, the PF shall initiate after takeoff checklist IAW ANTTP table 3.14.

6. Transition. Flights shall transition to APLN mode after takeoff unless briefed otherwise.

a. After takeoff, lead will raise gear and smoothly transition to APLN mode.

b. The flight will join in cruise formation after completing the initial turn off the departure end of the runway.

c. Lead will hold 180 KCAS until all aircraft have joined and the flight is clear of tower's airspace. If flying single ship or in IFR en route climbs will be made at 180 KCAS and 2,000 fpm until 10,000' MSL. Above 10,000' MSL climbs should be made at 1000 fpm.

7. To the max extent possible, sections should depart and practice IFR formation IAW MV-22 ANTTP.

#### 3016. ABORTS

1. Single Aircraft. If an aircraft malfunction or system failure constituting a severe threat to airworthiness develops after initial power application, the crew member who first recognizes the problem shall call "ABORT, ABORT, ABORT." over the ICS. The PF will maneuver straight ahead to complete a normal landing while the PNF verifies the landing checks are complete. The desired type of landing is a slow roll-on. If, in the opinion of the PF, a safe landing cannot be made straight ahead, the PF shall call "COMMITTED" over ICS and transition to achieve single engine fly-away parameters as soon as obstacles permit. Once safely airborne, make all required lighting changes or radio calls and treat any emergency as a flying emergency in accordance with NATOPS.

2. Multiple Aircraft. The aborting aircraft shall make a radio call to the remainder of the flight as soon as possible. Aircraft ahead of the aborting aircraft should continue the takeoff. Aircraft behind the aborting aircraft, that have not yet become airborne, should abort behind the aborting aircraft. Aircraft behind the aborting aircraft that are already airborne or unable to abort should offset laterally and continue their departure. The flight leader is responsible for reporting aborts to the controlling agency. The flight leader should determine if the flight should enter the local pattern or establish an overhead holding pattern to regain flight integrity and assess the mission.

#### 3017. FENCE CHECKS

1. Once airborne, and in an approved test fire area or range, CMDS checks should be conducted using SEMI PRGM 3 with 01, CH, and FL inhibited. Ramp Mounted Weapon System (RMWS) checks will only be conducted in an approved test fire area or range and should be conducted using a 10-15 round test link.

#### 3018. FORMATION

1. The standard local area departure and arrival formation is NATOPS cruise.

2. The standard formation for extended transit is trail defined as 1.0 nm in trail with 200 feet of vertical separation.

3. Combat spread and combat cruise formations should be regularly trained to during LAT training and applied tactically when appropriate.
4. The flight lead shall carry the squawk, except during trail, at which time the tactical lead will carry the squawk.

#### 3019. LEAD CHANGE

1. For administrative (self-deploy and cross-country flights) or tactical flights above 3,000' AGL, the standard en route airspeed is  $V_r$  max (190-200 KCAS). Consideration should be given to flying max range regardless of planned leg length in order to maximize options available in case of un-forecasted weather or other en route delays.

#### 3020. EN ROUTE ALTITUDES

1. En route flight should normally be conducted at 1,500' AGL or above. Consideration should be given to remaining clear of clouds when selecting an en route altitude above 1,500' MSL in the Hawaiian Island chain.
2. Flights should be planned at profiles requiring supplemental oxygen usage in order to build individual comfort and exercise aircraft systems.

#### 3021. CAL / LANDING ZONE (LZ) OPERATIONS

1. The standard progression for section and division CALs is one tactical straight-in approach followed by three conversion mode approaches as required prior to a lead change. If additional approaches are required by the T&R Manual, this will be highlighted during the flight brief. Instructor pilots will adjust during execution as required based on student proficiency.
2. During CAL training, the lead aircraft will pause in the zone after the last aircraft in the flight lands, brief the next approach (approach type, pattern turn direction, approach course, and final landing heading) prior to lifting.
  - a. For tactical training, the standard for departure following a CAL shall be a VTO in dash order followed by transition to forward flight.
  - b. 80 Jump takeoffs should be reserved for empty departures from a degraded visual environment with no obstacles in the immediate departure corridor.
3. During tactical operations, the flight will ripple "RAMP'S UP" from back to front with serials and fuel state during pickup-zone (PZ) operations and numbers of passengers and fuel state during extracts. Serials in, numbers out.
4. If the zone has RVL conditions, each aircraft shall call "ON DECK", "LIFTING", AND "CLEAR AT XX FEET" as appropriate over intra-flight on every departure from which a reverse echelon landing was performed. The "CLEAR AT XX FEET" call is the signal that the lifting aircraft is both abeam and visual with the next aircraft in the flight due to lift from the LZ. The standard RVL method is the "hand-flown" to a no hover landing. RVL profiles including automation should also be practiced on each RVL training evolution after proficiency is attained with the "hand-flown" no hover method. When practicing RVLs, pilots should 'warm-up' their RVL scan in a non-RVL zone, then execute RVLs in accordance with the flight schedule. Execute the number of RVLs required to achieve training, but give consideration to the impact of RVLs on the propeller blades and engines.

#### 3022. LOW ALTITUDE TACTICS (LAT)

1. Objective area operations and tactical approaches are excluded from the LAT definition.
2. LAT events shall be scheduled, briefed, and flown in accordance with all applicable references.

3. T&R Program Manual altitude restrictions do not apply to simulator events. Minimum Altitude Capable (MAC) should be introduced during SLAT-2630.

3023. AIR DELIVERY OPERATIONS. Air delivery and parachute operations may be conducted by squadron aircraft subject to the following restrictions:

1. Air delivery and parachute operations shall be conducted only in authorized drop zones.

2. The aircraft commander is responsible for the safe conduct of the flight. The aircraft commander shall ensure that:

a. A thorough face-to-face brief is conducted with the jump master prior to conducting air delivery. This briefing, at a minimum, shall include the briefing items listed in the appropriate TMS Tactical Pocket Guide.

b. Aircraft static line parachute jump equipment is inspected by the aircraft commander, crew chief, and the jump master (JM).

c. When required, five minutes prior to the jump radio communications shall be established with the appropriate airspace controlling agency and maintained until the last jumper reaches the ground.

d. Positive communication is maintained with the drop zone safety officer (DZSO) throughout air delivery operations.

3024. TRANSPORTING NIGHT VISION GOGGLES (NVGs)

1. NVGs shall not be worn by crew members when walking to and from the aircraft or during hotseat evolutions.

2. All aircrew in the cabin shall wear NVG lanyards while conducting flight operations with NVGs.

3025. AERIAL GUNNERY AND LASER TRAINING

1. The aircraft commander shall ensure all members of their crew are aware of the local range regulations.

2. The aircraft commander shall ensure that all weapons and related equipment are serviceable, in proper working order, and that Aerial Gunners (AG) and/or AG's under training have proper personal protective equipment (PPE).

3. Weapons shall only be armed in the target area, on command from the aircraft commander.

4. Dumping brass and links out of the aircraft is strictly prohibited. Brass and links departing the aircraft during normal operation of firing the weapon is acceptable.

5. Lasers shall be treated as a direct fire weapon system. All laser firings shall be logged in the squadron laser fire logbook located in the Ordnance Office. Laser eye protection (visors or spectacles of the correct wavelength and optical density) shall be worn by all personnel within each laser firing area.

6. It is the responsibility of all aircrew to ensure they have an up to date Laser Eye Baseline Exam in their medical record. POC is the VMM-363 Flight Doctor.

7. The TGI shall recheck the weapons, mounts, and associated equipment for proper operation prior to loading and shall supervise the handling and loading of ammunition.

8. All barrel changes shall be made with the gun stowed in the maintenance mode in order to prevent Things Falling Off Aircraft (TFOA).



### 3026. SECTION IFR LOST COMMUNICATION

1. If VMC, rejoin into combat cruise and execute procedures IAW paragraph 3026.

2. If IMC, execute the following:

a. The lost communication aircraft will squawk 7600, increase vertical separation to 500 feet, and adjust airspeed to achieve 2.0 A/A DME.

b. The good communication aircraft should maintain briefed parameters and attempt to make contact with their wingman.

c. If communication cannot be established, the good communication aircraft will maintain briefed parameters and monitor the A/A DME.

d. The good communication aircraft will then contact the current controlling agency and inform them of the non-standard formation, status of the lost communication aircraft, and coordinate for a separate squawk.

e. The lost communication aircraft will IDENT the new squawk, indicating they are capable of receiving transmissions.

f. The lost communication aircraft will execute FAA / ICAO lost communication procedures, while the good communication aircraft coordinates for a recovery to affect a join-up on deck.

3027. INADVERTENT INSTRUMENT METEOROLOGICAL CONDITIONS (IIMC). When weather degrades, all efforts should be made to posture the flight for possible IMC penetration. Flight leaders should attempt to break up the flight prior to entering IMC. If it is not possible to break up the flight, consideration should be given to moving the wingmen into position for a possible IIMC breakup. All aircrew must remain aware of the surrounding terrain and the flight formation.

a. Single Aircraft

(1) PF: Establish an instrument scan. Transition to coupled modes when able to prevent spatial disorientation.

(2) PF: Commence a controlled climb to the ESA.

(3) PF: Obstacles permitting, level the wings. Coordinate configuration changes with the crew.

(4) PF: Once established in a climb, turn away from known obstacles.

(5) PNF: Back up the PF instrument scan. Select the appropriate displays and level of automation.

(6) PNF: Squawk 7700 (emergency) if needed.

(7) PNF: Tune and identify any required navigation aids.

(8) PNF: Contact the appropriate controlling agency for IFR handling.

b. Multiple Aircraft. The standard IIMC procedure is the ASTACSOP Fan Break. The reversal may be used as terrain, airspace, or other hazards dictate.

### 3028. PLANNED IMC PENETRATION / FORMATION BREAK UP

1. Planned IMC Penetration. Penetration should be considered for en route climbs or descents through IMC layers, or continued flight under IFR. Prior to encountering IMC, the flight leader shall direct aircraft in the flight to "PREPARE FOR IMC PENETRATION." Unless briefed otherwise or altered by the flight leader, aircraft commanders shall maneuver to trail formation (1.0 nm and 200 feet of vertical separation between aircraft) based on position within the flight (dash-2 1.0 nm in trail, 200 feet above lead, dash-3 2.0 nm in trail, 400 feet above lead, etc.). The flight lead shall coordinate nonstandard formations with the controlling agency as required prior to entering IMC.

2. Flight Break Up. When instrument approach procedures are required in the terminal area, initiate the flight break up prior to commencing the approach or Standard Terminal Arrival (STAR). Allow enough time for the controlling agency to process the request. Initiation should occur early enough that traffic density and ATC workload allow for timely establishment of individual handling before commencing the approach or STAR. The flight lead will coordinate flight break-up with the controlling agency for individual handling or approaches. The flight break-up normally begins with a modification to the formation (directed by the flight lead) and concludes with execution of ATC instructions (addressed specifically to individual aircraft). Aircraft are detached from formation requirements once ATC reports receiving their transponder code and the wingman acknowledges ATC instructions over the ATC frequency.

3029. EMERGENCIES. Aircraft and system malfunctions shall be handled in accordance with the TMS specific NATOPS Flight Manual and Pocket Checklist (PCL). Aviate, navigate, and communicate, in that order.

1. The first crewmember to recognize a system malfunction or emergency shall verbally announce the condition to the rest of the crew.

2. The PF/Mission Monitor shall execute any immediate action steps that require control inputs and, as soon as practical, inform other aircraft in the flight of the situation. If the nature of the emergency does not require specific control inputs, the PF is expected to minimize non-essential maneuvering and establish the most conservative flight profile practical (gently climb to a safer altitude, reduce excess power, et cetera).

3. The PNF shall back up the PF on control-input immediate action steps and execute any immediate action steps that do not require control inputs, announcing each step to the crew as it is completed. Once the immediate action steps are complete, the PNF will look up the appropriate emergency procedure in the PCL.

4. Crew duties permitting, a crew chief on the ramp shall look up and recite the appropriate emergency procedure in the PCL. The crew chief in the tunnel shall provide backup to the pilots, and assist with dual concurrence.

5. The first crewmember to find the emergency procedure in the PCL shall announce the procedure title; verify whether it is a warning, caution or advisory; and state the page in the PCL on which the procedure can be found. The crewmember reading the procedure shall read all associated notes, cautions, and warnings before proceeding to the next step. The effects of pulling any circuit breakers will be discussed before the action is performed.

6. Dual concurrence is required prior to moving the ECL's from the fly position while in flight, arming the fire T-handles, securing a hydraulic system, or pressing the discharge button. The ECL's will be paused in start to confirm the appropriate engine response before securing completely.

7. Once all of the emergency procedures have been completed, the aircraft commander will determine the appropriate course of action based on the landing criteria in NATOPS.

8. Primary Flight Control System (PFCS) resets shall be announced, but countdowns are not required.

### 3030. NVD FAILURE

1. In order to minimize the possibility of an aborted mission due to an NVD failure, all aircraft operating on NVDs shall carry a spare set of NVDs. Custody shall be maintained when hot seating via the flight equipment logbook.

2. In the event of an NVD failure, aircrew should first attempt to remedy the situation by selecting their alternate battery pack. If their NVDs are still inoperative, the following procedures shall apply:

a. Pilot Flying NVD Failure. If experienced during the en route phase, the PF shall establish an instrument scan, announce the failure, and initiate a control change. During the terminal phase of an approach or on takeoff, the PF should announce the failure, initiate a wave-off utilizing an Instrument Takeoff (ITO), and initiate a control change.

b. Pilot Monitor NVD Failure

(1) The PNF shall announce the failure to the crew. Crew duties permitting, a crew chief will move to the cockpit tunnel to cover the PNF's scan area.

(2) If the failure occurs during the terminal phase of an approach, it is at the aircraft commander's discretion to continue the approach to landing or call for a waveoff.

c. Aircrew NVD Failure. Advise the aircraft commander and switch crew positions as required to maintain scan and clearance to land calls. All maneuvering not in the interest of safety should cease until all crewmembers are ready to continue.

3. If any aircrew has an NVD failure during LAT/TERF, climb to MSA to ensure terrain and obstacle clearance. Remain above MSA until all crewmembers have functional NVDs.

#### 2131. GUNNER'S BELT USAGE

1. According to the mission, the gunner's belt shall be connected to the cargo tie-down ring that is best suited for the current operation.

2. The gunner's belt shall be removed from the crewmember or disconnected from the aircraft if the crew is to be strapped into a crash survivable seat. Remaining on the gunner's belt while strapped into a seat creates an additional obstacle for egress of the aircraft.

3. Prior to performing an airborne crew position change, the crew shall notify the aircraft commander and ensure the ramp and door are closed prior to disconnecting. The evolution is complete when all crew members are connected to the aircraft in their new positions.

4. Aircrew shall avoid connecting to a cargo tie-down ring that is currently being used to secure cargo. At no time shall a gunner's belt be connected to a cargo tie-down ring located on the ramp. Aircrew who are secured to the ramp are at an increased risk of becoming imbalanced with ramp movement. Further, should aircrew fall off the aircraft while attached to the ramp, they are likely to be suspended below the aircraft as the gunner's belt is too long to maintain aircrew inside the aircraft. If cargo or mission auxiliary tanks prevent attaching to tie-downs in the cabin, aircrew may attach to the ramp side wall gunner's belt attachment points.

#### 3032. RETURN TO BASE (RTB)

1. The Pyramid Rock break or mid-field break via Fort Hase is the standard day VFR arrival to the runway. Direct entry into the downwind is the standard night VFR arrival to the runway. Wingmen shall establish appropriate echelon cruise formation prior to entering tower's airspace. Practice instrument approaches are at the TAC's discretion.

#### 3033. RUN ON LANDINGS (ROL)

1. To the maximum extent practical, each crew should execute one ROL per flight event. If time permits, both pilots should execute a ROL at the controls.

2. Prior to executing a ROL, recommended touchdown speed, landing nacelle, and landing distance shall be verified via the Cockpit Management System performance calculator using current environmental conditions and accurate weights and briefed to crew.

3. ROLs shall be executed in accordance with NATOPS Chapter 7 procedures.

4. For reference, the following altitudes and distances from intended point of landing will be used to establish a DME/altitude relationship on final:

3 <sup>o</sup> GS	DME	2.0	1.5	1.0	0.5	0.3
	Alt (AGL)	600'	450'	300'	150'	100'
	A/S (KCAS)	As Req.	As Req.	As Req.	TD+10kts	TD+10kts

5. Waveoff Parameters

- a. 50' AGL or higher at runway threshold
- b. 10 KCAS faster than calculated airspeed at threshold

3034. LOSS OF VISUAL CONTACT

1. During LAT training, rejoin will occur at the next Checkpoint (CP). Lead will arrive at the next CP at the pre-briefed altitude (default is MSA) and commence a right-turn holding pattern inbound to that CP at 190 KCAS. Wing will arrive at the CP at Base Alt (MSA) +500' and rejoin high to low once visual. The Flight Lead is responsible to ensure that the rejoin remains within the MTR structure or LAT Corridor as appropriate. Elements that maintain visual contact will retain visual contact and execute these procedures as elements. If multiple aircraft experience loss of visual contact, 500' intervals will be established based upon position in flight at time of the lost contact.

3035. VFR LOST COMMUNICATION.

1. Lead Aircraft Has Lost Communications

a. The lead aircraft will initiate lost communications lead change procedures by setting position lights to flashing and gaining the attention of the wingman via alternately closing and leveling the ramp, or executing a wing flash. Lead aircraft will maintain current airspeed.

b. The wingman will mimic the lead aircraft's lighting configuration and move toward an abeam position to indicate they are in position to take the lead.

c. The lost communication aircraft will set position lights back to steady to pass the lead.

d. Wingman will turn position lights to steady to acknowledge that they have the lead.

e. After reestablishing the formation, all aircraft reset lighting in accordance with appropriate directives.

f. Execute RTB and advise ATC.

2. Wingman Has Lost Communications

a. The wingman will turn position lights to flash and level their ramp, move toward the outside abeam position of the aircraft to the immediate front.

b. The aircraft abeam the lost communication aircraft will mimic the lost communications aircraft's lighting configuration.

c. The wingman will switch position lights back to steady, close their ramp, and return to the original position in flight.

d. After reestablishing the formation, all aircraft reset lighting in accordance with appropriate directives.

e. Execute RTB and advise ATC.

3. Training will cease until the situation is resolved. Communication degradation procedures or alternate radios should be attempted. Troubleshooting should occur on deck or out of the LAT regime.



a. AD/AG/GTR. If lost communication occurs during other training missions where the aircraft configuration does not immediately support departing the range complex, the section shall orbit within the range complex until ready to exit. The lost communication aircraft shall indicate their configuration is safe to depart by flashing the Aerial Refuel Probe light twice.

### 3036. RAMP CONFIGURATION

1. Training Environment. The default position of the ramp is the closed position. Departing an airfield or landing zone the ramp shall be closed. As a general rule, when inbound for landing, the ramp should be positioned to level following the landing gear being cycled to the down position. For training missions, the ramp may be positioned in accordance with the following table, but in all cases, the decision to level the ramp remains with the TAC.

<b>Mission</b>	<b>Ramp Open</b>	<b>Ramp Closed</b>	<b>Ramp Level</b>
Confined Area Landing	When embarking / offloading passengers & cargo	Prior to each takeoff	Ramp may be lowered to level following landing gear positioned down
Tail Gunnery		When complete with gunnery	When deploying RMWS
Ground Threat Reaction		During all maneuvering unless employing RMWS	When employing RMWS
Air Delivery		From takeoff until directed IAW references	IAW NATOPS & ANTTP
Defensive Combat Maneuvering (DCM)			Ramp level during conduct of DCM

2. Tactical Environment. Departing an airfield or a landing zone, the ramp may be level in order to allow the aerial gunner greater visibility of the ground. In transit, the ramp should be in the closed position. The ramp may be lowered to the level position at the aircraft commander's discretion to provide adequate time for the gunner to deploy the weapon system prior to level-out for threat engagement and obstacle clearance in the descent. The aircraft commander shall execute good judgment for scenarios which may require modification due to threat levels.

### 3037. EXTERNAL CARGO AND AIR DELIVERY

1. Overflight of roads or populated areas with an external load requires specific authorization from the CO.

### 3038. POSTFLIGHT

1. A 5060 test should be completed and nacelle covers installed prior to configuration in maintenance mode. This will assist Maintenance in periodic inspections to include daily and turnarounds.

2. For land-based operations, MV-22Bs will be kept in maintenance mode unless otherwise directed by Maintenance Control.

#### 3039. MISSION KITS

1. Standard mission kit is 50lbs and includes the ladder (30lbs) and the Pre-Flight Kit (PFK, 20lbs).
2. The raft and other standard items carried in flight are included on the Form-F's maintained by the MMCO.

#### 3040. AVIATION TRAINING FORMS (ATFs)

1. All aircrew shall use M-SHARP as the primary system for completing ATFs.

#### 3041. SPECIAL PROCEDURES CHECKLISTS

1. The BFWS checklist (PCL, Tab 9 Special Procedures) shall be opened and used during all BFWS operations.
2. This guidance shall be adhered to for all checklists in Tab 9 Special Procedures.

#### 3042. NAVFLIR STANDARDIZATION

1. The MAWTS-1 published RVL Stan Notes shall be the reference for NAVFLIR landing code documentation.

## CHAPTER 4 – AH-1Z / UH-1Y OPERATIONS

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## **CHAPTER 4**

### **AH-1Z / UH-1Y**

4000. EMERGENCY PROCEDURES (EP) TRAINING. H-1 DOSS shall log completion of EP Quizzes in MSHARP. The SFAM 2801E (EP Simulator) shall focus on autorotations and EPs that present conditions that cannot be simulated in the aircraft. When a simulator is unavailable, aircrew may log the SFAM 2801E in the aircraft if flown with an instructor. The focus when flown in the aircraft should be familiarization and simulated EPs. The SFAM 2801 shall be logged every 90 days for all pilots.

4001. FUNCTIONAL CHECK FLIGHT (FCF). In the case of FCF, any pilot or aircrew on flight orders is authorized to occupy a pilot seat, as a qualified observer, with a designated Functional Check Pilot (FCP). Pilots not NATOPS qualified in Type/Model/Series (T/M/S) shall complete egress training and should complete an Open Book NATOPS exam prior to flying and shall not manipulate the controls unless the Aircraft Commander is a BIP.

4002. PASSENGERS. Due to the flexibility required to accomplish the utility mission, qualified crews are authorized to carry passengers. A copy of the manifest will be kept on file at the point of departure IAW reference

a. The UH-1Y is authorized to carry up to eight passengers.

b. Simulated EPs shall not be conducted in aircraft carrying passengers IAW applicable publications.

4003. MISSION CHANGES. Changes to the mission must allow adequate time to discuss, plan, and brief the new mission profile. All events are authorized to conduct familiarization, Confined Area Landings (CAL), and instrument flying if their primary mission is complete or becomes untenable. All other mission changes shall be coordinated and approved through the OPSO.

4004. MASTER HAZARD MAP. The Master Hazard Map will be displayed in the Ready Room and maintained by the H-1 DOSS Representative. In addition to graphical updates, the H-1 DOSS representative shall provide a text list of all updates to the baseline map.

4005. AH-1Z STANDARD CONVENTIONAL LOADS (SCL). The SCLs listed below are baseline station configurations. The "A," "B," and "C" modifiers indicate the captive stores required (i.e. SCL 1A = SCL 1 configuration and a CATM-114).

SCL 1: STA 1: LAU-7 / STA 2: LAU-61 / STA 3: M299 / STA 4: AUX / STA 5: LAU-61 / STA 6: LAU-7

SCL 2: Same as SCL 1 with the following exception; STA 4: M299

SCL 3: Same as SCL 1 with the following exception; STA 4: LAU-68F/A

A: CATM-114

B: CATM-9M

C: CATM-114 and CATM-9M

4006. WEIGHT AND POWER COMPUTATION CARD (WPCC). Aircraft Commanders are responsible for the preparation and validation of the aircraft WPCC. Current Operations will prepare WPCC binders for the ODO Shack and deployment boxes. The AMO will provide the most current aircraft Weight and Balance and aircraft hardware/software configuration information to Current Operations to include in the binders. The analysis and conclusions from the WPCC shall be discussed during the crew coordination brief. A signed copy of the WPCC shall be turned in to the ODO prior to flight.



4007. PREFLIGHT GROUND TURNS (PFGT). To max extent practical, PFGT should be completed prior to scheduled flight events. The ODO is responsible for assigning pilots to PFGT primary and backup aircraft. PFGTs give junior pilots more “touch time” with the aircraft and systems and reduce the number of maintenance delays and cancellations, ultimately enabling successful execution of the flight schedule. Any NATOPS qualified pilot is approved to conduct PFGTs. To the maximum extent practical, PFGTs should be completed prior to scheduled flight events. The ODO is responsible for assigning pilots to PFGT primary and backup aircraft and shall coordinate with Maintenance Control accordingly.

4008. MISSION LOADS. Aircrew shall prepare and carry mission data loads for all flights. This facilitates efficient cockpit management, lowers pilot workload, increases situational awareness, and enhances safety of flight. This also validates the functioning of the mission planning systems, mission data cards, and aircraft systems. The standard local mission load is the minimum requirement for all flight events. If a mission data card is hot-seated with the aircraft, the receiving Aircraft Commander shall coordinate with the ODO to ensure proper accountability.

4009. DATA TABLETS. Data tablets are maintained by the Tactics Division and available for issue while assigned to the squadron. Aircrew are responsible for the accountability, currency, and security of tablets in their possession. The Tactics Division shall maintain current data loads and inform aircrew when updates become available. Tablet use and cockpit security shall be briefed in detail when used.

4010. NIGHT VISION GOGGLES. In the UH-1Y, a spare set of NVGs shall be available in the cockpit during all NVG flights and secured in a location that is accessible to all aircrew. Due to space limitations in the AH-1Z cockpit, the decision to bring spare NVGs is at the discretion of the Aircraft Commander, but should be available to the maximum extent practical. Chemlights should be carried on night flights for signaling ground crew.

#### 4011. AIRCRAFT SECURING GEAR

1. AH-1Z. When the ammo can is not installed, Plane Captains shall store all securing gear in a standardized package inside the ammo bay. When an ammo can is installed, space for securing gear is limited and storing it in the tail boom has the potential to affect exposed control tubes. At a minimum, the tail rotor tie down shall be carried.

2. UH-1Y. Flight Equipment shall equip each UH-1Y with one large parachute bag with a securing gear inventory sheet sewn inside. Plane Captains and Crew Chiefs shall ensure all items listed on the inventory sheet are present prior to flight. Any discrepancies shall be addressed with Quality Assurance. Pilots shall ensure parachute bags are appropriately secured between the avionics racks in order to minimize the TFOA risk in flight.

4012. UH-1Y CREW DOOR RETAINING PIN. Cargo doors shall either be secured in the aft position with the doors pinned or verified closed by attempting to pull aft on the doors IAW reference (h). Aircrew shall inspect the door and pins for proper placement and ensure that cabin doors in the open position are secured with two pins each. When the crew doors are closed, the pins shall be retained by the crew and the door will be properly latched.

4013. HOVER CHECKS AND BUMP PLAN. To avoid unnecessary hot-seat procedures, aircraft identified as “bump aircraft” in the contingency plan shall delay hover checks until after priority aircraft/aircrew have conducted hover checks. The Aircraft Commander shall inform the ODO of any changes to briefed aircraft assignments.

#### 4014. FLIGHT LINE LIGHTING, HAND AND ARM SIGNALS

1. Position Lights. Flashing position lights indicates a low rotor RPM state.

2. Signals for Day Operations. Ordnance: touch fingertips and thumbs of both hands to form a circle. Arm/De-arm CADs: “ordnance” signal followed by single hand “C” signal. Avionics: touch fingertips and thumbs to form an “A.” Airframes: extend and touch thumbs with palms facing out to form a “U.”

3. Signals for Night Operations. Overt searchlight flash indicates approval for personnel to enter/exit the rotor arc. Aircrew shall carry blue or green chemlights to communicate hand and arm signals at night. Ordnance: chemlight

moved in a circle pattern. Arm/De-Arm: single chemlight raised in conjunction with “hands up” checklist item. Avionics: chemlight moved in an inverted “V” pattern. Airframes: chemlight moved in a “U” pattern.

4. AH-1 Hot Fueling Hand Signals. Extend index and pinky finger followed by a “thumbs up” to indicate correct function of the fuel pre-check plungers. Move hand, palm up, in a horizontal motion to indicate correct function of the fuel vent. Twist hand vertically to indicate the fuel cap is secured. Wipe arms to indicate removal of the grounding wire.

5 Aircraft Survivability Equipment (ASE). ASE shall be energized every flight to validate function and software configuration. ALE-47 shall be set to Training Mode. If APR-39 failures are reported, to the maximum extent practical, the aircrew should run an “IBIT”, observe the failure reported on the EW page, and initiate a maintenance action form (MAF) following the flight.

#### 4015. RADIO COMMUNICATIONS AND EMISSIONS

1. Electronic Counter-Countermeasures Remote Fill (ERF) and Time-of-Day (‘Mickey’) Procedures. Crews sending and receiving ERFs or Mickeys to other flight members shall use the following procedures to maximize efficiency and minimize communications. The receiver will usually initiate the ERF/Mickey based on an internally identified requirement to update aircraft systems. Receiver shall initiate the exchange once the aircraft system is ready to receive the signal.

*Receiver: “LY91, SF92 request ERF F830/Mickey on Comm 1”*

*Sender: “Standby for ERF/Mickey” – transmit ERF/Mickey*

*Receiver: “Good catch”*

If the flight lead is pushing an ERF or Mickey as part of the RIO procedure, the receivers should have their systems ready to receive before the RIO. Lead will confirm the flight is ready to receive and subsequent aircraft will report ready in dash order. Once all aircraft are ready, the flight lead will transmit the ERF/Mickey.

*Lead: “LY90 Flight report ready for ERF/Mickey”*

*-2: “LY91 open window”*

*-3: “LY92 open window”*

Lead transmits ERF/Mickey

*-2: “LY91 good catch”*

*-3: “LY92 resend, open window”*

2. Intra-flight Net, Tactical Air Navigation (TACAN), and Laser Code Deconfliction. Intra-flight nets shall be deconflicted by flight leads. Air-to-Air TACAN channels are assigned based on lead’s rocket number. Laser codes shall be assigned IAW reference (h).

#### 4016. TAXI, TAKEOFF, AND JOIN-UP

1. Taxi. Flights of two or more aircraft shall taxi with two-aircraft-length separation at 7-10’ hover height. Taxiing over unprepared surfaces shall be at a height appropriate for obstacle and brownout avoidance. Wing aircraft should mirror lead (if lead lands, wingman lands) and sets the interval/spacing.

2. Takeoffs and Join-Ups. All takeoffs, join-ups, and planned/unplanned rendezvous shall be briefed by the flight lead. Deviations from tactical SOPs shall be covered at a minimum.

a. Reduced Visibility Takeoffs (RVTs). RVTs shall be conducted with a simultaneous formation takeoff or an interval takeoff once the next aircraft in the formation is clear of the signature from the previous aircraft. RVT is defined as a condition that will greatly obscure the aircrew’s visual ability from the takeoff position to above single engine airspeed. Lead will call a departure direction and takeoff to the departure heading, holding 80 Knots Indicated Airspeed (KIAS) until joined. At night, lead will activate the Infrared (IR) searchlight once clear of any takeoff obscurants to facilitate join-up.

b. Join Up Procedures. All other tasks shall be secondary in nature while a join up is in progress. All aircrew not leading the join-up shall avoid secondary tasks until the entire flight is safely joined. To the maximum extent possible, all aircrew shall be "heads up" during all join-ups. Step-up or step-down shall be maintained throughout the join-up. Once visual and able to judge aspect and closure, the joining aircraft will call for lead to secure the anti-collision light, as required. The joining aircraft shall call "on board, left/right side" once joined in the appropriate formation.

-2: "LY92 visual"

-2: "LY92 on board, left side"

Lead shall acknowledge the "on board" call by setting the briefed lighting condition and accelerating to the enroute airspeed as appropriate. Flights of three or more aircraft shall maintain flight integrity with joined elements, maintaining formation and flying the altitude block of the lead. Lighting configuration shall be IAW formation procedures per reference (i). Air-to-Air TACAN should be used for situational awareness during join-ups to the maximum extent practical.

#### 4017. ENROUTE FLIGHT

1. Formations. Flights of two or more aircraft operating in controlled airspace should fly in parade unless otherwise directed. Flights entering controlled airspace should transition to parade prior to entering the airspace. Enroute flight formation should be cruise unless otherwise briefed. Formation changes should be tied to "triggers" to the maximum extent possible in order to reduce intra-flight communications and increase predictability (e.g. parade position two miles from course rules checkpoints). Aircraft shall not change to trail formation on short final unless directed by lead or required for safety reasons. All un-briefed formation changes shall be positively called over the intra-flight frequency. Tac Form maneuvers should be called unless specifically briefed.

2. Minimum Altitudes. The minimum enroute altitude is 200 feet Above Ground Level (AGL) unless a lower altitude is required for safety. The minimum hard deck for operations other than Terrain Flight (TERF), landing, takeoff, and ordnance operations is 200 feet AGL. The minimum hard deck "feet dry" is 500 feet AGL in accordance with reference (d).

3. MAG-24 OAHU VFR CRUISING ALTITUDES. All MAG-24 aircraft transiting IVO Oahu shall use the following cruising altitudes: clockwise 500-700' AGL, counter-clockwise 800-1000' AGL unless a lower altitude is required for safety or weather. Aircrew are advised that other military aviation units outside of MAG-24 on the island of Oahu do not abide by these restrictions.

4018. LANDING FORMATIONS / WAVE-OFF PROCEDURES. All landing formations and single-ship/flight wave-off procedures shall be briefed by the flight lead. The standard landing formation for tactical landings is sections in cruise.

4019. WEAPONS CHECK PROCEDURES. Weapons checks or simulated weapons checks shall be conducted at a briefed location or event. Aircrew should test laser designators and verify laser spot (as applicable), IR pointers, 20mm/crew served weapons (CSW), and expendables. The flight lead shall call an attack and pull direction for 20mm/CSW tests. Upon completion, the flight shall report weapons complete with any exceptions from dash last forward. Training flights with live ordnance shall arm ordnance only after entering an approved training range and once in compliance with applicable range restrictions. Laser Designators shall only be tested on approved laser ranges.

*Lead (AH): "LY91 capture" – Lead tests laser and verifies HELLFIRE spot*

*-2 (UH): "LY92 capture, 1111 set"*

*Lead: "Laser On"*

*-2: "Lasing 1111"*

*Lead: "Spot, cease laser"*

-2: *"Cease laser"*

Lead: *"Trail, left pull"*

-2: *"Trail, left pull"* – Lead and -2 execute 3-5 second burst of 20mm and CSW

Lead: *"Off left, testing"* – Lead tests expendables and sets ALE Manual Program for the mission

-2: *"Off left, visual, testing"* – -2 tests expendables and sets ALE Manual Program for the mission

-2: *"LY92 bent .50 cal"*

4020. FORWARD ARMING AND REFUELING POINT (FARP) OPERATIONS. To the maximum extent practical, aircraft should conduct an overflight of all FARP sites and set up to break over the assigned landing spots to verify landing criteria and identify potential hazards. The Lost Communications signal for "FARP fouled/do not land" is landing-spot lights off/covered and/or flashing vehicle headlights. The final approach course should be directly into the wind unless restricted due to obstacles, FARP layout, and/or traffic patterns. When hot fueling the AH-1, one pilot shall exit the helicopter and conduct/monitor fueling operations.

4021. CROSS-COUNTRY OPERATIONS. Cross-country flights should not be planned longer than 72 hours from initial takeoff to final landing IOT preserve the daily and turnaround inspections on the aircraft. Cross-country flights should include a UH-1Y to the maximum extent possible and include Collateral Duty Inspectors (CDI) from Airframes, Avionics, and Flightline. Aircraft should only plan fuel stops to airfields that have Department of Defense (DOD) Contract fuel. All remain overnight (RON) locations shall be military airfields or manned civilian airfields with suitable flight line security. The flight lead shall coordinate with the Operations Department to ensure the cross-country request is routed through the CO and submitted to MAG-24 S-3 NLT 10 days prior to execution. The flight lead shall also coordinate a meeting with the CO for all aircrew and passengers prior to the flight brief.

4022. ORDNANCE PROCEDURES. All arm/de-arm operations shall be conducted by qualified ordnance personnel except in the event of a contingency or hot fueling operations at home station with CADs. If operationally necessary, aircrew are authorized to de-arm weapon systems IAW references (f), (h), and (r). All aircrew shall receive annual training from Ordnance regarding contingency arming/de-arming. The DOSS shall track this requirement.

1. UH-1Y ROCKET AND GUN EMPLOYMENT. There have been three known instances of CSW projectiles impacting rockets when both systems are employed from the same side of the aircraft simultaneously. In two of those instances, fragments of the rocket and/or projectile impacted the aircraft, causing significant damage. In one instance, a crew chief sustained minor injuries from the fragments. A warning is present in the appendix of reference (s), however, the hazard to aircrew and aircraft warrants additional emphasis on the precautions that must be taken to prevent additional occurrences. Employing rockets and CSW simultaneously, from the same side of the aircraft, is prohibited.

2. SPECIFIC WEAPONS DELIVERY HARD DECK. Current policies and procedures establish minimum altitudes for specific mission sets but are not inclusive of all missions and phases of flight. Due to the increased risk associated with Specific Weapons Delivery (SWD), the establishment of a hard deck will standardize the conduct of flights and serve as a Crew Resource Management (CRM) safety backstop during ordnance delivery profile; simulated or actual. All flight events conducting SWD shall brief a hard deck for ordnance employment in a dive prior to flight and the actions to be taken upon reaching the established hard deck. The hard deck should take into consideration and be appropriate for the environmental factors, obstacles, crew proficiency and currency, and mission set. At a minimum, night flights shall have a hard deck no lower than 200' AGL and no closer than 300m to target. Daytime flights shall have a minimum hard deck of 100' AGL and no closer than 300m to target. These hard decks apply to aircraft in the chute. Aircraft may conduct egress and ingress at lower altitudes. If a hard deck is breached all tactical scenarios will cease and a "terminate" will be declared by the flight lead or aircraft commander. Once established in a safe flight profile, the flight will return to the previously established holding area and the aircrew will then determine whether to continue training or declare a "knock it off."

4023. ROTOR BRAKE USE. H-1 upgrade main rotor gearboxes (MRGB) continue to experience high numbers of chips. One source of MRGB chips is rotor brake quill failures. Reducing stress on the system by engaging the rotor brake at lower rotor RPM (Nr) is expected to increase the MRGB's flight hours before failure due to chips. When shutting down, aircrew should engage the rotor brake between 40-25% Nr and shall release the rotor brake prior to 0% Nr to avoid sudden stoppage. For shipboard operations, aircrew should adhere to the above procedure to the



max extent practical. Rotor brake starts should also be avoided unless, in the judgement of the Aircraft Commander, high winds or sea state pose a hazard to low-rpm conditions. This policy does not restrict the use of the rotor brake within NATOPS limitations. Aircraft Commanders may apply the rotor brake between 60-25% in accordance with NATOPS if any wind, environmental, or mission-related factor requires it.

4024. MISSILE FIRING REPORTS (MFR). MFRs shall be completed and routed to the Ordnance Division when any Precision Guided Munition (PGM) is fired. Pilots should keep a copy for their records.

4025. ENGINE DESALINIZATION RINSE. Engine desalination rinses shall be conducted after the last flight of the day, to the maximum extent practical while the aircraft are located at MCAS Kaneohe Bay. Pilots conducting rinse shall conduct the engine wash IAW the applicable NATOPS publication and shall be within their crew day. Engine desalination is authorized closed field, however Crash Fire Rescue shall be notified prior to starting the engines for post-wash ground turn.

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## CHAPTER 5

### RQ-21A

#### 5000. RQ-21 GENERAL FLIGHT OPERATIONS

##### 5001. RESPONSIBILITIES

###### 1. S-2 Responsibilities and Timelines

###### a. The day of flight operations:

(1) Turn on, test, and configure the Tactical Intelligence Surveillance Reconnaissance (ISR) Processing Exploitation Dissemination (PED) System (TIPS) and Tactical Exploitation Group (TEG) No Later Than (NLT) 90 minutes prior to scheduled launch.

(2) Provide required white cell injects as needed for sortie (UAC directed).

###### 2. Maintenance Responsibilities and Timelines

a. NLT close of business one day prior to flight operations, maintenance control shall have the air vehicle (AV) lineup prepared and provided to aircrew for flight planning via email.

###### b. The day of flight operations:

(1) Ensure operator workstation (OWS) is configured and functional.

(2) Ensure the completion of all AV and system ground equipment inspections.

(3) Ensure aircraft data books are current and available for review NLT 2 hours prior to scheduled launch.

c. Quality Assurance and Maintenance Control shall ensure that the launch and recovery site is setup IAW local area procedures.

###### 3. S-6 Responsibilities and Timelines

###### a. Work day prior to flight operations:

(2) Ensure GPS and Communication Security (COMSEC) keys are acquired and available for the flight.

(3) Identify the radio and communication requirements needed for the execution of the sortie.

(4) Ensure the TIPS is setup correctly IAW the TIPS operating manual.

(5) Conduct OPCHECK of satellite communications and networking equipment.

###### b. The day of flight operations:

(1) Turn on and test the satellite communications and networking equipment in order to test the communications between the OWS, TIPs and TEG.

(2) Establish required communication architecture needed for execution of sortie and test for functionality.

(3) Conduct communications check between GCS and ODO 90 minutes prior to scheduled launch.



(4) Coordinate with S-2 and S-3 to provide the proper Internet Protocols (IP) for Full Motion Video (FMV) dissemination.

#### 4. UAS Crewmembers (UASC) Responsibility and Timeline

- a. First UASC shall arrive at the GCS NLT 90 minutes prior to scheduled launch time.
- b. Handoff UASC shall arrive NLT 30 prior to scheduled handoff time.

#### 5002. FLIGHT ELIGIBILITY

##### 1. Operation of VMU-3 RQ-21A aircraft:

- a. Only RQ-21A NATOPS qualified aircrew shall operate RQ-21A aircraft.
- b. Augment UASC shall comply with the following prior to commencing flight operations:
  - (1) The Operations Department shall ensure augment UASC are authorized to fly.
  - (2) The DOSS shall ensure augment UASC comply with all requirements specified in CNAF 3710, and ODOs will verify augment UASC compliant prior to commencing flight operations.
  - (3) UASC are ultimately responsible for ensuring that every member of the crew possesses the requisite qualifications, designations, and prerequisite flight event requirements prior to flight unless waived by the Commanding Officer via a signed flight schedule.

#### 5003. GCS ACCESS

1. Only personnel with a need to access the GCS shall be permitted. Cockpits are considered sterile environments within Naval aviation, especially during terminal operations. The GCS is considered to be the cockpit of the RQ-21A encompassing any facility or setup where a minimum of one OWS stack is in use, to include spoke operations. UAS operations often necessitate situations in which personnel other than the assigned flight crews for the current sortie require access to the GCS. The aircrew assigned to the current sortie have the right to clear and remove any personnel from the GCS at their discretion.

- a. The use of recording devices must comply with the site security measures.

2. Mission essential non-UASC must complete Security clearance verification in the Joint Personnel Adjudication System (JPAS) by the squadron S-2 and be approved by the UAC prior to observing any flight when the site is classified secret or higher.

3. Any personnel, military or civilian, on official business to include but not limited to military personnel without mission involvement, civilian dependents, and members of the general public shall meet the following requirements prior to observing any flights.

- a. Comply with all site security measures.
- b. Be escorted at all times by VMU personnel not involved in the flight.
- c. Approved by the UAC.

#### 5004. AIRCREW CURRENCY AND PROFICIENCY

1. Regardless of T&R proficiency requirements, all aircrew shall perform a minimum of one 2101 Emergency Procedure (EP) simulator (sim) every 30 days.
2. In order to track NATOPS live flight currency, scheduling shall utilize the SOTC-6300 code for all live flights in which the aircrew conduct a launch AND a recovery. A planned missed approach may be used to satisfy the requirements for a recovery. Completing the pre-flight checklist up to step 19 of the launch checklist may be used to satisfy the requirements for a launch.
  - a. If the launch aircrew is unable to execute a missed approach prior to the handoff, they shall inform the "hotseat" aircrew so that they do not log the 6300 code for them on the NAVFLIR. If the recovery crew is unable to execute the pre-flight checklist, they will not log the 6300 code.
  - b. Only the AVO and UAC on the controls shall log the 6300. The instructor or additional aircrew not sitting at the AV controls shall not get credit for the 6300.
3. Aircrew that are not current IAW the NATOPS or proficient on 2101 shall not conduct any other simulations or live flights until they complete the requirements.

#### 5005. SCHEDULING

1. Range deconfliction must adhere to geographic, altitude, or time separation. Deconfliction may not be accomplished by the "see and avoid" principle only.
2. Aircrew should be scheduled in such a manner that relatively junior aviators are always paired with a senior aviator or an instructor to the maximum extent practical.
  - a. Typical RQ-21A crew: (1) UAC and (2) AVO. An instructor of the appropriate crew position may supplement as required.
  - a. Minimum RQ-21A crew: (1) UAC and (1) AVO. A maximum of (2) instructors are allowed in the GCS.
  - b. S-2 Personnel shall be assigned by name on the flight schedule for all flight events that require intelligence integration.
3. Simulator Events:
  - a. Core Skills Familiarization (SFAM) events the crew will consist of (1) student and (1) instructor.
  - b. Mission Skills Phase: (1) UAC, (1) AVO, (1) intelligence Marine, and (1) instructor at a minimum.

#### 5006. CREW REST AND CREW DAY

1. UASC shall arrive at work no earlier than a time that allows for 2 hours of crew day remaining after their last scheduled event, in order to (IOT) allow for schedule deviations or flight delays.
2. UASC shall arrive NLT 1 hour prior to brief to allow time for the collection and refinement of mission essential information.
3. Maximum daily flight time for normal operations should not exceed 6.5 hours. CO approval up to 8.0 hours. MAG/CE CO approval beyond 8.0.
4. Following a 24-hour duty shift, UASC may be scheduled for simulator events provided a land time NLT 1200 local.

#### 5007. INCLEMENT WEATHER CONDITIONS

2. At T-2 (lightning within 25mi or 6hrs), RQ-21A flight operations shall be suspended and all required gear stored while using the minimum number of required personnel.

#### 5008. CERTIFICATE OF WAIVER OR AUTHORIZATION AND FLIGHT OUTSIDE RESTRICTED AIRSPACE AND WARNING AREAS

1. UASC shall not operate an Unmanned Aircraft System (UAS) within the National Airspace System (NAS), outside of restricted airspace and warning areas, unless operations are approved by the FAA or governing authority. Establishment or modification falls under the cognizance of the DOSS.

#### 5009. INTELLIGENCE OVERSIGHT AND DOMESTIC USE OF IMAGERY

1. UASC shall ensure that imagery collected during UAS flights is in accordance with reference (s) and (t)

#### 5010. PROPOSED QUALIFICATIONS AND DESIGNATIONS

1. In addition to T&R and NATOPs requirements, the following recommendations are set forth prior to start of RQ-21A syllabi:

a. Basic Instructor Pilot (BIP)

(1) Complete 2 periods of instruction on MTD operation and scenario development

(2) Teach 1 period of academic instruction on appropriate phase level academics.

b. Weapons Training Officer (WTO)

(1) 150 flight hours

c. Weapons and Tactics Instructor (WTI)

(1) 250 flight hours

d. Crew Resource Management Facilitator (CRMF) / Crew Resource Management Instructor (CRMI)

(1) Be a previously designated an ANI or NI

#### 5011. OPERATIONAL AIRBORNE LASER FIRING

1. Pre-Mission Requirements. UASC shall ensure the following procedures are performed for all laser missions.

a. Refer to specific laser range safety procedures and regulations for the applicable laser range complex for use during mission planning. Consult Range Control for assistance when specific concerns require.

b. Brief mission personnel on the appropriate laser eye protection to be used as determined by the Laser System Safety Officer.

c. Ensure laser firing is reported to Maintenance Control and logged in the Laser Fire Log appropriately.

2. Mission Requirements. UASC may only lase targets on certified laser ranges with approval from Range Control. All lasing must be within the laser certification parameters of the range being used.

a. Lasing will be terminated, if necessary, to preclude any possibility of the laser beam leaving the immediate area. The beam should not enter the buffer zone. The beam shall not be directed at or above the horizon.

b. Care shall be exercised that no specular reflectors (shiny surfaces) are lased. The target and vicinity should be inspected with this in mind. For example, standing water could conceivably reflect the beam outside the permissible lasing area.

c. Deliberate lasing of wildlife is strictly forbidden.

3. Lasing shall not be allowed until the laser system has locked onto the target, or is manually tracking on the target.

5102. LASING MANNED GROUND TARGETS. Manned ground targets may only be lased when the following criteria is met:

1. The UASC has verified from target personnel, or been relayed through a properly designated source, that personnel being lased have the proper protective eyewear, and all personnel have been briefed concerning the use and the possible consequence of not using protective eyewear.

2. Positive two-way radio communication is established immediately prior to each laser firing, and permission to fire is received from the appropriate, pre-coordinated station.

## **5100. RQ-21 NORMAL OPERATIONS**

### **5101. PLANNING AND BRIEFING**

1. Flights shall be planned to operate under Visual Flight Rules (VFR) IAW all published and applicable guidance governing the flight of the RQ-21A.

### **5102. LOCATION OF GROUND EQUIPMENT AT FOXTROT TAXIWAY**

1. The Ordnance Assembly Area (OAA) located on the Northwest corner of west field has a 1250 foot hazard zone that precludes personnel from being inside that distance if there is ordnance present. Spray paint will be used to mark the edge of the 1250 foot arc. If personnel or equipment are setup within this arc and the OAA is active with ordnance, VMU-3 flight operations from West field are prohibited. The Quality Assurance Department shall ensure that the arc is repainted periodically and all equipment (SRS, SLS, HMMWV) is outside of the arc during emplacement. Refer to Foxtrot layout for equipment locations.

### **5103. GROUND PROCEDURES AND PREFLIGHT**

1. During ground operations involving UASC and maintenance personnel, any action requiring physical manipulation of the AV and its associated systems (i.e. control surfaces, throttle settings, pitot heat, etc.), shall be conducted as a "Challenge & Response" between the aircrew and the plane captain (PC). The PC is the "eyes and ears" for the aircrew outside of the control station. As such, the application of solid CRM between aircrew and maintenance during ground operations is incumbent upon all personnel involved, to ensure safe operations and prevent mishaps.

#### **2. Preflight Responsibilities**

a. The UAC shall accept the aircraft from maintenance in accordance with applicable appendices. The UAC shall screen all ADBs for aircraft and applicable ground equipment that have been assigned to the flight (primary and backup). The UAC shall then complete the remaining AV Preflight checklists IAW NATOPS.



b. The AVO should proceed directly to the GCS and begin completion of the Prelaunch checklist IAW the NATOPS. In addition, the OWS Configure checklist shall be completed for all work stations applicable for the flight. If multiple crewmembers are present, the checklist and its execution may be divided in order to expedite its completion for multiple work stations.

c. The Communication Relay Payload (CRP) shall be loaded with frequencies for every local flight regardless of event to ensure Radio Operators proficiency is maintained. The UASC should plan to use the CRP and conduct all checklist items relating to it for every flight.

3. All checklists shall be conducted IAW the current NATOPS manual. Should the Squadron publish further or more restrictive guidance, that guidance will be adhered to by all aircrew and enforced by the UAC during flight. Furthermore, it is the responsibility of the UAC to ensure that all crewmembers are following the most up to date guidance with the most current publications. Thus, ensuring all aircrew are using the same publications.

4. The UAC shall verify the current direction of the retriever and ensure it is set up for a recovery aligned with the prevailing wind direction prior to beginning the NATOPS Air Vehicle On checklist.

a. During the Route Check checklist, if the prevailing wind direction is favoring a North or South approach, the approach in the direction of launch will be loaded. If the winds favor a West recovery, then the West approach shall be loaded. The pilot flying will be required to drag and drop the aircraft into the Air Traffic Control approved acquisition once the AV exits takeoff logic and enters mission tracking logic.

5. During the AV Load on Launcher checklist, aircrew shall set minimum RPM limits consistent with the brief as to whether or not the payload will be on or off at time of launch. Should payload status at launch not be briefed, aircrew shall ensure the payload is off at time of launch and the minimum RPM be set accordingly during the AV Load on Launcher checklist. All flights utilizing the CRP shall launch with the CG Bay power on and shall set the minimum RPM in accordance with the NATOPS.

6. The RQ-21A launcher calculator is specific for each SLS. The launch calculator completes its calculations by using the inputs from the operator, but also integrates calculations pulled from launch logs (Log Sheet tab of the STUAS Launcher Calc Rev 9, tab 3).

a. Aircrew (specifically the UAC) for all flights shall ensure STUAS Launch Calc Rev 9 is used to compute launch pressure, which coincides with the Small Tactical Unmanned Aerial Systems (STUAS) Launcher System (SLS) to be used for that flight. Additionally, aircrew (specifically the UAC) for all flights shall ensure launch parameters are recorded in the Log Sheet of the STUAS Launcher Calc Rev 9 during the Post Launch checklist.

7. FOD is a hazard to all participants of aviation. A local FOD check shall be performed prior to any flight operations. All personnel operating on the flight shall remain vigilant of FOD considerations at all times. This shall include, but is not limited to, ensuring that anything taken to the flight line is removed with the individual and that all gear and uniforms remain FOD free.

8. Prior to starting the engine, aircrew and ground personnel should ensure that strobe lights are on and overt IOT alert others that the engine is about to start.

9. During the Launch Checklist, VMU-3 UASC shall turn on the Pitot Heat instead of "As Required" as stated in the NATOPS. Pitot Heat will remain on for the duration of the flight.

10. All other procedures shall be conducted IAW with the current NATOPS and/or local flight directives specific for the operating site.

#### 5104. LAUNCH

1. The GCS should be treated as a cockpit and given the respect that would be shown to any aircrew operating in that environment. The GCS should be treated as a sterile environment to the maximum extent possible. A sterile

cockpit shall be honored during all terminal phases of flight or upon the request of any of the aircrew. In all instances, the UAC has the final authority over the GCS.

2. Launch procedures and checklists shall be conducted IAW the NATOPS, course rules and all other local directives, which are enforced by the UAC.

3. Due to the close proximity of housing and the OAA, the left and right lateral limits for a launch to the North shall be between 355 and 035 degrees true when the SLS is on the East side of Foxtrot Taxiway. The UAC shall verify a safe launch direction within the specified limits prior to launch. At no time shall the AV overfly the OAA at or below 500 ft AGL.

4. Launching the AV to the South will require the SLS to be moved across Foxtrot Taxiway and positioned either on the taxiway or on the west side of the taxiway. Maintenance will require extra time to reposition the launcher and shall be notified of intentions to launch to the South as early as possible. The UAC is responsible for ensuring that the AV will not overfly any personnel and/or equipment prior to launch.

#### 5105. CLIMBOUT

1. During the transition from commanding launch to AV climbout, as in all critical or terminal phases of flight, aircrew shall prioritize scan and monitoring of flight control inputs and feedback IOT ensure proper control of the AV. Aircrew must ensure the AV is under control and climbing away from the ground before entering any other inputs. Aircrew should confirm and voice seeing two positive rates of climb, altitudes passing, headings, revolutions per minute (RPM), cylinder head temperature (CHT), configuration changes, and any other applicable parameters prior to conducting Post Launch checklist.

2. Post launch procedures and checklists shall be conducted IAW the NATOPS and all other local directives, as enforced by the UAC.

#### 5106. ADMINISTRATIVE FLIGHT OPERATIONS

1. Due to the current nature of regulations governing the flight of all UAS, and specifically that of Group 3 UAS, special consideration and understanding must be given to the conduct of flight operations by all aircrew.

2. All routes shall not fly over heavily populated areas.

3. The UAC will report take off and SOD times to the ODO.

4. UASC shall address any forecasted weather on the RAW that exceeds weather limitations of the RQ-21A during any portion of their flight. Should forecasted and actual weather be out of limits, the UAC shall delay until the forecast and actual weather is in limits, or the decision to cancel the sortie has been made. UASC shall seek all available weather information to include ADDS, Tower, METOC, and the ODO. If forecast weather conditions change during a flight, UASC must modify their plan accordingly as not to exceed weather limitations for flight or recovery.

5. The UAC shall notify the PC of any aircraft, GCS, or other issues that may require a MAF. This will allow maintenance personnel to begin troubleshooting as early as possible and potentially alleviate any "unable to replicate" situations after the flight lands.

#### 5107. RECOVERY

1. Recovery shall be IAW NATOPS and all local procedures for the operating area. All aircrew shall be familiar with and adhere to the published course rules.

2. The UAC shall ensure that the PC is notified at least thirty minutes prior to landing or when the aircraft is RTB, whichever is less. The UASC will verify landing direction with maintenance.

a. If the UASC determines the retriever needs to be rotated for recovery from a different direction, the PC will power off the GEM and disconnect the cables to avoid damaging the GEM. If needed for a quick as possible recovery, UAC may direct PC to leave the GEM on and add an additional person to watch the cable and ensure it does not get damaged.

4. Once the AV has passed FAF and is on final approach course, executing its final approach, the AVO and UAC shall monitor all applicable flight parameters to include closing speed, altitude, glide slope, and distance from capture point.

a. Once the AV is on final approach, UASC shall announce to the PC “AV on final.” From there, UASC will give altitude and airspeed calls to the PC every 1000ft. PC will respond with “continue.” This will continue until the PC calls “AV in sight.”

b. The AVO shall ensure that the AV does not violate NATOPS parameters, and maintains a flight profile which maximizes its chance for a successful capture without damage.

5. Due to the close proximity of Hale Koa Beach and the OAA to the flight path of the West Recovery Procedure, the final true course (FTC) is limited to 093 degrees True with an adjustment up to 103 degrees True. Adjustments of the West Recovery FTC less than 093 degrees True will potentially put personnel at Hale Koa Beach inside the NATOPS recovery hazard zone. Adjusting the West recovery FTC greater than 103 degrees True will encroach on the no fly zone that extends from surface to 500 feet AGL above the OAA in the event of a wave off. The UAC shall verify a safe recovery direction within the specified limits prior to commanding recovery from West Acquisition.

#### 5108. MISSED CAPTURE

1. Onshore, missed approach shall only refer to cancelling or rejecting an approach and the execution of a go-around. Should the AV need to execute any sort of missed capture, procedures will be IAW NATOPS and published local guidance (course rules, LOA, etc).

2. Aircrew must remember that although the autopilot may autonomously command a missed approach, it is the responsibility of the aircrew to ensure a safe and successful recovery. Consideration must be given to airspeed or capture speed, winds, and gross weight. All different scenarios cannot be accounted for within this document; thus, the aircrew must understand the effects of these factors.

3. When executing a recovery from West approach, Wave Off is the only missed capture type that may be used.

4. If operating at a controlled field which requires landing clearance from air traffic control (ATC), consideration must be given to the flow of traffic and sequencing of other aircraft. Additionally, consideration to the level of understanding that other agencies possess concerning RQ-21A flight logic must also be given IOT ensure proper integration with other assets.

5. Although UAS traffic pattern training does not occur, at times, aircrew may need to conduct planned missed approaches to meet NATOPS currency and T&R requirements. As such, aircrew must communicate intentions for a “planned missed approach” to the controllers in the tower and the PC prior to executing actions. Current traffic, weather, and equipment locations must be considered when choosing an approach direction to execute the missed approach.

#### 5109. CAPTURE & POST CAPTURE

1. Capture and post capture procedures shall be executed IAW NATOPS and all other governing publications.

2. In the event aircrew or maintenance personnel notice a discrepancy requiring a MAF, the individual creating the MAF shall provide details of what the discrepancy is, how it occurred and in what phase of flight. Additionally, note

any troubleshooting steps taken to overcome the discrepancy as applicable. The context of the MAF shall be detailed in nature providing enough information for maintenance to troubleshoot and diagnose the issue effectively.

3. The UAC shall complete a NAVFLIR, ASAP report, and Post Flight Mission Report prior to securing from the flight.
4. All flights shall be formally debriefed IAW MAWTS-1 Debriefing guide. UASC shall emphasize lessons learned, instructional techniques, execution, tactics, RM, and recommended actions for improvement.
5. Instructors shall ensure that Aircrew Training Forms (ATF) are completed for all occasions specified in reference (c).

#### 5110. FUEL REQUIREMENTS & PLANNING

1. BINGO. This fuel state will account for transit fuel derived from the NATOPS fuel planning charts to fly from the working area to capture via course rules plus 0.5 LBS for missed approach.
2. JOKER. This fuel state is intended to be tactically relevant to the mission requirements which will allow sufficient fuel remaining above BINGO once clear of the objective area.
3. Fuel loads shall be IAW RQ-21 Fuel Calculations Chart, unless the UAC properly plans and requests an alternate fuel load from maintenance.

#### 5111. HOT SEAT PROCEDURES

1. A crew change or "hot seating" occurs when one UASC replaces another at a specific flight position at any point of the flight for any duration.
2. All crew changes must be scheduled on the flight schedule.
3. Any UASC who conducts a crew change shall conduct a flight brief and debrief.
4. At a minimum, briefed flight parameters will include current AV flight parameter settings, altitudes and timers, routes, approaches, and network explorer setup.
5. If UACs conduct a scheduled crew change, both UACs must sign the A-Sheet prior to performing aircrew functions within their scheduled flight times.

a. Maintenance Control shall initiate a new Aircraft Inspection and Acceptance Record (A-Sheet) in OOMA when conducting a hot seat for a scheduled flight. The initial flight will be generated in OOMA per normal operating procedures. The hot seat will be contingency due to split site operations and OOMA database is not accessible.

b. Maintenance Control shall ensure the debarking pilot signs the Safe for Flight block. To do this Maintenance Control shall take the A-Sheet to the GCS and have the debarking and embarking UAC both sign.

c. Maintenance Control shall complete a contingency A Sheet as soon as possible. The A Sheet is expected to be completed prior to the embarking pilot taking control of the aerial vehicle.

d. Due to operational constraints, it may be required that the embarking UAC signs the A-Sheet before the debarking UAC. However, the debarking UAC shall sign the A-Sheet within 30 to 60 minutes of the embarking UAC signing.

#### 5112. NIGHT OPERATIONS



1. Night Operations shall only occur in a Restricted or Warning Areas.
3. When available, the UAC may utilize Night Vision Devices to aid situational awareness of other aircraft operating in the vicinity of the airfield.
4. UASC should practice light discipline at the GCS and MCS during night operations with the exception of preflight. UASC shall conduct preflight using adequate lighting to ensure that preflight inspections are properly completed. Final walk around should be accomplished using a white flashlight. Personal Electronic Devices (PED) shall not be used as a white flashlight.

## **5200. RQ-21 EMERGENCY OPERATIONS**

### **5201. ENGINE OUT EMERGENCIES**

1. Engine Out planning for flights inside the Class D airspace shall address ditch locations as well as a plan to recover at taxiway foxtrot if the situation permits.
2. The Letter of Agreement (LOA) between VMU-3 and MCAS Kaneohe Bay establishes pre-approved forced landing and ditch site procedures for emergency recoveries. Aircrew should plan and brief to these requirements and locations for emergency recoveries.
  - a. Engine out routes over land should terminate no closer than 100 meters from structures, ground equipment, or personnel.
  - b. Engine out routes at sea should be no closer than half a nautical mile from a ship.
  - c. The ditch location shall be away from personnel, vehicles, and boats.
3. The recommended procedure for a belly landing at foxtrot is:
  - a. Choose a landing direction from the North or South
  - b. Use the range and bearing tool to draw a line from the center point of taxiway Foxtrot to 1 NM out in the opposite direction of landing
  - c. Drop an orbit that allows the AV to intercept final at the 1 NM position. (Orbit from the South should be counter-clockwise and orbits to the North should be clockwise).
  - d. Edit the orbit size utilizing the orbit flyout so that the orbit is 984 feet (~1 NM in circumference).
  - e. Monitor the VSI while aircraft is in orbit, noting differences in upwind and downwind readings.
  - f. Enter into "direct to" the engine out route at an appropriate altitude and use airspeed adjustments to control your descent.

### **5202. LOST OR DEGRADED COMMUNICATIONS PROCEDURES**

1. Comply with preplanned lost communications procedures and instructions specified within the FAA COA, airspace course rules, Range Regulations, or exercise/evolution SPINS. For cases not covered in those documents, or if the documents do not exist, the following procedures apply.
  - a. If routing instructions have been issued, comply with those instructions. Hold at the terminal point along the route at last assigned altitude until communication has been reestablished.

b. If operating within tactical airspace, hold within the last assigned Airspace Control Measure (ACM) or at the last directed control point at the last assigned altitude. Maintain the smallest possible orbit. Remain in holding until communication has been reestablished.

c. If communications are not reestablished and the aircraft reaches “Joker” fuel, make radio calls in the blind and depart the airspace for the recovery site at the last assigned altitude via the safest and most expedient route. The safest and most expedient route may not be the most direct route, for example, circumnavigating an active gun target line or attack ingress route.

2. Notify ODO and other UASC operating in close proximity as soon as possible. Attempt to reestablish communications by all means available and use alternate communication paths to the greatest extent possible (telephone, Internet Relay Chat [IRC], runner, etc.).

#### 5203. LOST LINK PROCEDURES

1. Lost link should be used to refer to lost command and control (C2) link between the GCS and the AV. In this case the AV’s flight logic will command the AV’s autopilot to fly the preprogrammed lost link route. This route shall be established IAW NATOPS and published guidance for the local area (course rules) prior to flight. The route shall be continually monitored and updated as required for the sortie flown.

2. Lost Link (LL) Procedures shall be established for all airspace within which the squadron conducts flight operations. LL routes flown by all crews shall be as standardized as practical, and if possible, published under FAA COA, airspace course rules, Range Regulations, or evolution/exercise SPINS. If LL occurs, the UAC will immediately notify the agency or station under which the aircraft is being controlled.

a. Should be planned to avoid over flight of heavily populated areas. When developing Return Home profiles, flight safety concerns are paramount and every effort shall be made to ensure that the safety of civilian or military personnel or property is not in jeopardy.

b. UASC shall coordinate with all affected units when planning Lost Communication Timer and Wait at Home Timer settings.

c. LL transponder code shall be set to 7400.

3. When making a LL notification, the UAC shall include time, altitude, and position at link loss. The UAC will be prepared to provide return home route information if requested.

5204. NEAR MIDAIR COLLISION REPORTING. UASC who suspect they have been involved in a near midair collision shall immediately notify the ODO, OPSO, and ASO, who will report the incident.

#### 5205. SEARCH AND RECOVERY PROCEDURES.

1. In the event of a downed aircraft, the ODO shall execute the Mishap Plan to initiate the recovery effort with the appropriate agency.

2. The UAC shall attempt to establish the exact location of the downed aircraft via video recording, last known position data, and environmental conditions.

a. If another aircraft is in flight and has sufficient flight time remaining, sensor contact with the downed aircraft should be made.

b. If the location of the downed AV is in the water, the UASC shall pass the location in LAT/LONG to the ODO.

#### 5206. EMERGENCY PROCEDURE (EP) TRAINING

1. EP sims shall be a dedicated sim period in which a malfunction drives some sort of recovery decision. EP sims shall not be conducted along with another T&R coded event nor consist of any tactical scenario.

a. Each EP sim shall be scheduled 1.0 hours per each personnel scheduled to execute the T&R event.

b. Scenarios should include multiple types of EPs including night time emergencies and at least one landing that terminates in a belly landing and emergencies that are common trends seen throughout the fleet.

e. EP sims shall include a launch and at a minimum, a missed approach.

#### 5207. SIMULATED EMERGENCY PROCEDURES DURING LIVE FLIGHTS

1. When simulating emergencies on live flights, altitudes shall not be changed as a part of the simulation.

2. In no case shall the engine be intentionally cut during a live flight as a part of a simulated EP.

3. Simulated emergencies conducted during live flight sorties shall be thoroughly briefed on deck, prior to execution. All aircrew shall be aware that simulated emergency training is in progress by prefacing with "SIMULATED, SIMULATED, SIMULATED" followed by the emergency or conditions for the simulated emergency.

## CHAPTER 6 – MOTOR TRANSPORT OPERATIONS

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## CHAPTER 6 – MOTOR TRANSPORT OPERATIONS

### 6000. GENERAL MOTOR TRANSPORTATION OPERATIONS

#### 6001. RESPONSIBILITIES

##### 1. Dispatch

a. Ensure all vehicle pre-operations preventative maintenance checks and services are completed and vehicles are road worthy, validated by Quality Control.

b. Validate operators' certification and ensure drivers have in their possession the following items at a minimum:

- (1) Military Identification Card
- (2) Valid state driver's license
- (3) Valid OF 346 U.S. Government Motor Vehicle Operator's Identification Card
- (4) Proof of Driver/Operator's Improvement training (if Marine is under the age of 26)
- (5) NAVMC 10627 Vehicle and Equipment Operational Record
- (6) SF 91 Motor Vehicle Accident (Crash) Report
- (7) SF 94 Statement of Witness Form
- (8) DD 518 Accident – Identification Form
- (9) Assistant Drivers shall provide of Assistant Driver certification.
- (10) Emergency response numbers
- (11) Current medical certificate (explosives endorsement) (as required)
- (12) Vehicle operator's license must have a SOFA certification for the respective country (as required)
- (13) USFJ Form 19EJ (toll road)

##### 2. Vehicle Operators

a. Operators shall not operate equipment within 12 hours of drinking alcohol. Operators are subject to random breathalyzer prior to being dispatched.

b. Operators shall not use tobacco products while operating a government vehicle.

c. Operators shall not operate any equipment while under the influence of any prescription or over the counter drugs which may inhibit judgment or reaction time.

d. Wearing of portable headphones, earphones, or other listening devices while operating a motor vehicle is prohibited.

e. Use of cell phone by Driver or Assistant Driver is prohibited while vehicle is moving.

f. All personnel, to include Driver, Assistant Driver, and Passengers, of Tactical Vehicles shall wear Personal Protective Equipment to include flak jacket, Kevlar, seat belts, and troop straps (as appropriate).

g. Operators shall conduct final vehicle checks prior to movement, ensuring all cargo, trailers, and canvas are secured, lights are turned on and ready for movement.

h. Operators are responsible for the safe operation of their vehicle and shall observe a maximum speed limit of 45 miles per hour. Operators shall adjust speed according to road and environmental conditions. Caution shall be observed during operations in vicinity of wildlife and other vehicles.

i. Blackout operations are prohibited without written authorization from the Commanding Officer. Black out hours are as follows: 0600-0800, 1600-1800.

### 3. Ground Guides

a. Ground guides shall exit the vehicle and provide ground support when:

- (1) Reversing
- (2) Maneuvering through areas of high population
- (3) Where quarters are congested or narrow
- (4) Any time the driver determines ground guide support is required
- (5) Entering and exiting the Motor Pool
- (6) When any sign is posted (ground guide required)

b. Ground guides shall utilize glow sticks when guiding at night.

c. Ground guides shall not run.

d. Ground guides shall remain on the left or right of the vehicle and maintain visibility and eye contact with the operator at all times.

e. Escort vehicles shall be utilized when weight or dimensions of cargo exceeds the physical dimensions of the carrying vehicle.

### 6002. CREW REST AND CREW DAY

1. Vehicle crews shall be afforded a minimum of 8 hours of uninterrupted rest prior to commencing vehicle operations.

2. Maximum daily drive time for normal operations should not exceed 8 hours.

3. If a movement exceeds 8 hours, operators shall be afforded 8 hours of uninterrupted rest prior to resuming vehicle operations.



APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

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## APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

GENERAL. In order to standardize aircraft DTM/DTD loads, flight briefing products, and handouts, as well as to provide better organization, the following standards and policies apply.

The Navigation Officer is responsible for the organization and maintenance of the JMPS mission planning network and equipment, but it is incumbent upon every pilot to follow these policies to maintain version control and an organized collaborative workspace.

The Navigation Officer will ensure that squadron preferences are replicated across all JMPS machines, both networked and remote. Additionally, when new Digital Almanac Flight Information Files (DAFIF) are received, the Navigation Officer will ensure they are loaded on all machines and pilots are notified in order to update standardized products for which they are responsible.

The Navigation Officer will ensure that local area map coverage is loaded on all JMPS machines. Additional CONUS and worldwide coverage will be available via the JMPS network. If machines are removed from the network to support planning, exercises, or off site training, coordination will be made with the navigation officer to ensure appropriate coverage is available via the local hard drive or an external hard drive is provided.

The JMPS network will be established to maximize collaborative planning. Individual machines will be maintained off of the network to allow remote planning as required. The Navigation Officer will ensure that the remote systems are maintained with current DAFIF and map data, along with standard mission planning reference data files and templates.

The JMPS network will be established with a host machine and external hard drives for data storage. Individual files should not be saved to local machines on the network. The Navigation Officer will establish two files locations on the network for data storage:

“Pilot Folders” where each pilot will have a sub-folder assigned with their last name.

“Mission Folders” for product compilation. Sub-folders underneath the “Mission Folders” will be named, “YYMMDD *Mission*.”

Within “Mission Folders” a “Mission Recreation” folder will be created. These files will be labeled “YYMMDD *TAC*.” Every flight should download their mission recreation and save it to this location for future reference in case of maintenance (TFOA), Near-Mid Air Collision, or other event requiring investigation.

JMPS MISSION BINDERS. The only standing mission binder will be “PHNG FCF FAM INST LAT.” This will include the basic files required for a DTM/DTD load to support local area flying. It will include the current Communications Plan, Local Waypoint Set, MCHUM, Approved Routes, and Special Use Airspace (SUAS) DRW files.

Specific mission binders will be created with the following naming convention:

“yymmdd LNAME or MISSION” (Ex. 100210 BROWN or 140817 ITX AAC)

This is intended to support version control and eliminate outdated files from being retained in mission binders vice the current files in the mission data folders. Be aware that there is a character limit to the mission binder that will create a DTM/DTD transfer error without clearly identifying the cause of the error.

These mission binders will be deleted after the event. If a specific file, such as a drawing file or mission recreation is desired to be saved, save it to a personal pilot folder resident on the JMPS network. The Navigation Officer will delete all mission binders for the week at the conclusion of flight operations on Friday, with the exception being any mission being planned for the next week that should be annotated with a future date.

## APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

FILE NAMING CONVENTION. The following naming convention will be used for mission data:

*“what\_yymmdd.ext”*

HAWAII\_SUAS\_180706.drw

PHNG\_A188\_180706.wpt

NAVROUTE\_180706.drw

The “what” will clearly state the geographic or mission area supported. This results in alphabetical organization of the mission data folder when all files are located in sequence. The date will reflect the currency of the file and be the first indication of outdated data or version control issues.

MASTER FILES. The following master files will be created and maintained by the Navigation Officer. A status board will reflect the current version of each file. These files shall be used when creating new mission binders. Using older files or mission binders allows for non-current data to be retained.

Communications Plan: The standard Communications Plan will include two scan plans. The primary scan plan, preset 31 (presets 22-25) is designed to allow flight leaders to work the tactical frequency while scanning the base frequency. Preset 22 will be set to squadron TAC to allow it to function as the scan master frequency. The secondary scan plan, preset 32 (presets 26-29) is designed to support operations in the Oahu TFTA. The local communications plan will include versions to support HAVEQUICK MWOD’s.

Waypoint Set: The standard local area waypoint set will support local area IFR and VFR flight training. See “Waypoint Set Organization” for further amplification. The waypoint set will be updated by the Navigation Officer with each new DAFIF release.

SUAS DRAW: All HAWAII SUAS boundaries will be included in one drawing file. See “JMPS Standards” for further amplification. Use the DAFIF SUAS overlay to generate drawing (.drw) files, it is more accurate than tracing map lines.

PHNG MCHUM: Due to evolving distribution policies and accuracy, creating accurate MCHUM files currently requires coalescing data from multiple sources. As ECHUM is phased out, Obstruction Change Files (OCF) are being distributed as an interim solution. This data only reflects changes from the current charts, but does not apply to all scales. VVOD is replacing ECHUM, but has not been fully implemented. Additionally, VFR Sectional Charts (along with the AP/1B for MTR’s) shall be reviewed. The Hawaii Navigation Route MCHUM file shall be incorporated into the HAWAII MCHUM file.

MTR Files: MTR DRW, MCHUM, and Threat files will be created and retained to ensure standardization, currency, and accuracy. A communications plan may be created and maintained to support ATC and ranges associated with the route. DSS has oversight for standardization and implementation of this program.

- Each MTR will be assigned to a LATI and T2P for file creation and standardization. Upon release of new DAFIF and AP/1B, the T2P shall update the applicable files. The LATI shall review the files and notify the NavO when complete. The NavO will ensure that old files are deleted and the status board is updated.
- The MCHUM file will incorporate DAFIF ECHUM/OCF, VVOD, AP/1B, and VFR Sectional data. It will be updated upon the release of new DAFIF and AP/1B. The file will be compared to the MAG-24 master hazard file to ensure both files are complete and accurate. Any discrepancies with the MAG-24 master file shall be passed to MAG-24 DSS immediately.

## APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

- The DRW file will be updated upon release of a new AP/1B. Two drawing files will be created for each MTR. One file will incorporate MTR corridors. A separate file will incorporate AP/1B data to include avoid areas, boundaries and altitude restrictions.
- See “JMPS Standards” for further amplification.

JMPS STANDARDS. The following standards will be used when assigning properties to JMPS data files.

### Routes

- |   |           |         |                                                                 |
|---|-----------|---------|-----------------------------------------------------------------|
| • | Primary   | Magenta | stands out during briefing / matches CRS line                   |
| • | Alternate | Orange  | strong contrast for multiple routes                             |
| • | Selection | White   |                                                                 |
| • | Corridor  | Green   | default 5NM unless adjusted by AP/1B or tactical considerations |
| • | Escorts   | Yellow  |                                                                 |

SUAS Drawing Files. The default drawing line is a solid line unless noted.

- |   |                                         |        |
|---|-----------------------------------------|--------|
| • | Restricted Area                         | Red    |
| • | Military Operating Area                 | Blue   |
| • | Alert Area                              | Cyan   |
| • | Warning Area                            | Red    |
| • | FIR Boundaries or Noise Sensitive Areas | Yellow |

MTR Drawing Files. MTR planning standards also apply to tactical low level routes. The default drawing line is a solid line unless noted.

- |   |                              |                     |
|---|------------------------------|---------------------|
| • | Corridors                    | Green               |
| • | Avoid Areas                  | Red                 |
| • | Increase Altitude            | Red (dashed line)   |
| • | Decrease Altitude            | Green (dashed line) |
| • | Airspace                     | Blue                |
| • | Avoid/Populated Area         | Red                 |
| • | MSA obstacles / 1000' towers | Yellow Square       |
| • | ESA obstacles / 2000' towers | Red Square          |

### Tactical Drawing Files

All tactical missions should include appropriate Airspace Control Measures and Fire Support Coordination Measures for in flight reference. At a minimum, any control measure or deconfliction measure appearing on an objective area diagram shall be transferred to JMPS. The default drawing line is a solid line unless noted.

- |   |                      |         |
|---|----------------------|---------|
| • | MV Holding Area      | Magenta |
| • | RW Holding Area      | Yellow  |
| • | Battle Position      | Red     |
| • | Mission Control Area | Blue    |
| • | Gun Target Line      | Red     |
| • | DZ Safety Box        | Blue    |
| • | Killbox / Keypad     | Red     |

## APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

- FSCM Red
- ROZ Red
- TRP Red Triangle (waypoints)

Airspace. (Included in a threat database) can be utilized as a redundant training aid.

- Class B SA-2 (lethal: 30NM)
- Class C SA-13 (lethal: 10NM)
- Class D SA-9 (lethal: 5NM)
- Class E SA-9 (lethal: 5NM)
- Uncontrolled / Avoid SA-7 (lethal: 3NM)

### MCHUM

- MSA and ESA obstacles
- All vertical obstructions within MTR / LAT corridor – 100' below authorized flight altitude (200' or AP/1B restriction, regardless of currency).
- All power lines within route corridor.
- All vertical obstructions greater than 500' AGL within 5NM of MTR / LAT corridor.
- All obstacles (incl. power lines) for routes / legs where CONV mode LAT is planned.
- All obstacles (incl. power lines) within 10NM of landing zones being utilized for tactical approaches.
- All obstacles (incl. power lines) within Special Use Airspace or other designated areas being used for TACFORM, CAL's, LAT, AD, AG, MAT, or GTR.

WAYPOINT MANAGEMENT. Waypoint organization is critical. The following categories and DMS symbols / colors will be used to support declutter and visual identification when creating a waypoint set for either the local area or offsite operations.

Cat #	Category	Color	Symbol	Notes
1	Tactical			*See below
2	Routes	Pri: Magenta Alt: Yellow	Triangle	*See below
3	Local	White	Airport VORTAC Star Triangle Initial Point 2	PHNG NGF INS Update Point RW: PHNG24, etc IP: IP24, etc
4	Large	Orange	Airport	> 6000' RWY Length
5	Small	White	Airport	< 6000' Length
6	NAVAIDs	Green	VORTAC	
7	Range	Orange	Initial Point Alpha Circle	
8	LZ's	Orange	Triangle	
9				
10	MTR-LAT	Green	Triangle	AP/1B OR LOCAL NAV ROUTE AGREEMENT
11	En Route	Blue	Triangle	
12	Terminal	White	Triangle	Only discrete names

\*Note: 'Triangle' refers to the default 'Waypoint' symbol (solid triangle).



## APPENDIX A – JOINT MISSION PLANNING SYSTEM (JMPS) STANDARDIZATION

### Tactical Waypoints

Waypoint names will not include the ‘type’ prefix. e.g. IP NISSAN is labeled ‘NISSAN.’

If the control measure is greater than 8 characters, utilize the first eight characters; do not attempt to abbreviate as that induces confusion.

•	Primary Route	Magenta	Waypoint (solid triangle)
•	Alternate Route	Orange	Waypoint (solid triangle)
•	MRR / MTR	Green	Waypoint (solid triangle)
•	Primary LZ	Green	Objective (open triangle)
•	Alternate LZ	Orange	Objective (open triangle)
•	Tertiary LZ	Blue	Objective (open triangle)
•	Primary IP	Green	Initial Point (open square)
•	Alternate IP	Orange	Initial Point (open square)
•	Tertiary IP	Blue	Initial Point (open square)
•	Landing Pt	Green	Numeric Circle
•	Target Reference Pt	Red	Objective (open triangle)

## APPENDIX B – MAINTENANCE STANDARDIZATION

<u>CREW DAY / CREW REST</u> .....	2
<u>FUNCTIONAL CHECK FLIGHT (FCF)</u> .....	2
<u>GROUND TURNS (GT)</u> .....	2
<u>PRELAUNCH TROUBLESHOOTERS</u> .....	2
<u>PREFLIGHT</u> .....	3
<u>HEADS UP DISPLAYS</u> .....	4
<u>TROUBLESHOOTING</u> .....	4
<u>STANDARD CABIN CONFIGURATION</u> .....	4
<u>STATIC DISPLAYS</u> .....	5

## **APPENDIX B – MAINTENANCE STANDARDIZATION**

### **CREW DAY / CREW REST**

1. Standard crew day for maintenance personnel shall be 12 hours, extendable by Squadron CO up to 14 hours.
2. Crew rest for maintenance personnel shall provide for 8 hours of uninterrupted rest.

### **FUNCTIONAL CHECK FLIGHT (FCF)**

1. The AMO is responsible for the overall FCF program and will oversee prospective Functional Check Pilot (FCP) recommendations and training.
2. FCP training shall be standardized by the Quality Assurance Officer (QAO).
3. The AMO and QAO should be designated as FCF Standardization pilots.
4. No one is authorized to conduct an FCF procedure without approval via the daily flight schedule.
5. FCF crews shall receive a weather and field status brief from the ODO prior to manning the aircraft.
6. The FCP shall record appropriate information on the FCF card in pencil.
7. FCF crew members shall be available at all times during the day. If it becomes necessary to depart the squadron spaces, FCF crew members shall notify the ODO and Maintenance Control that they will be out of the area. If the aircrew member will be out of the area, a recall number shall be provided.
8. If an aircraft breaks during a training flight or FCF and the aircrew is not needed to fly an additional aircraft, the aircrew will remain with the broken aircraft to assist maintenance to the maximum extent possible.

### **GROUND TURNS (GT)**

A ground turn is defined as the movement of an ECL past the CRANK position with the Rotor Positioning Unit (RPU) unlocked and no intent for aircraft movement.

1. Non-scheduled aircrew are authorized to conduct a GT provided they have not exceeded their crew day.
2. The minimum crew for a GT not associated with an FCF card is a qualified aircraft commander.
3. The GT pilot shall review the ADB and initial the Part-A, accepting the aircraft for GT only.
4. In the case of a spinning backup, the pilot shall review the ADB prior to engine start.
5. GTs may be conducted for bleed/hot air leaks after sunset. With the AMO's approval, fluid leak checks may be conducted after sunset with the sole purpose of conducting the final inspection in order to close out a maintenance action after removal and replacement of a component. This leak check shall be conducted with adequate white light. GTs for troubleshooting leaks from an unknown source are prohibited after sunset.

### **PRELAUNCH TROUBLESHOOTERS**

1. Maintenance troubleshooters from Flightline, Airframes, and Avionics shall be on the flight line for all launches to support the timely troubleshooting of any issues that arise and to minimize associated launch delay.
2. Avionics troubleshooters shall be prepared to quickly re-load the ARC-210 secure fills, Identification, Friend, or Foe (IFF) data and GPS Day Keys.

## APPENDIX B – MAINTENANCE STANDARDIZATION

### PREFLIGHT

1. Due to the possibility of de-gloving, metal or hard plastic rings should not be worn on the flight line or on any VMM-363 aircraft. Silicon or rubber rings may be worn.
2. Crew chiefs shall ensure that cockpit windows are cleaned during the preflight, subsequent hot seats, and upon shutdown post flight.
3. Crew chiefs shall complete the appropriate checklists with the FCS PFBIT complete NLT 35 minutes prior to scheduled departure time.
4. Crew chiefs should load the mission data while preparing the aircraft for engine start.
5. Crew chiefs should confirm time sync, secure, anti-jam, and satellite communications checks and GPS DAY KEY in order to troubleshoot discrepancies prior to the flight radio check-in.
6. Crew chiefs should turn on all Aircraft Survivability Equipment (ASE).
7. Pilots shall conduct a thorough aircraft preflight walk around inspection prior to their man time.
  - a. A preflight shall also be conducted during hotseat operations.
  - b. Preflight checks will place particular emphasis on secured hatches and panels, leaks, loose gear/equipment, antennae, and TFOA watch list items.
  - c. The Crew chiefs will brief the pilots on any discrepancies or servicing requirements prior to manning utilizing the acronym GFASS as outlined below:

**G: Ground Refuel/Defuel Panel (GRDP).** Report status to include the current state of all aircraft servicing.

**F: Fuel Load.** Report current fuel load; be prepared to discuss the fuel loads of all individual fuel cells.

**A: All Tools Accounted For (ATAF).** Including, but not limited to:

- All tool containers currently on the aircraft.
- All aircraft covers removed and stowed.
- All communication equipment currently on the aircraft, to include internal communication system (ICS) cranials, long/short cords, etc.
- All support equipment (SE), such as ladders, testing and troubleshooting gear, chains, etc.
- All consumable items that may be present such as, throwaway rags, trash receptacles, etc.

**S: Step number in Pocket Check List (PCL).** Ensure the aircraft is at the appropriate step in the PCL for the aircraft to be considered ready for engine start procedures.

### **S: Status of aircraft**

- Any discrepancies noted on the aircraft Present System Status page that do not have a current maintenance discrepancy annotated in the ADB.
- Any maintenance discrepancies that were noted in the ADB that may limit aircraft mission capabilities, (i.e. four multifunction displays are required for night flight operations, two currently operational).



## **APPENDIX B – MAINTENANCE STANDARDIZATION**

Any trouble-shooting that was required to have the aircraft ready to conduct engine start.

**HEADS UP DISPLAYS.** Crews will check out NVG HUDs for each night flight as appropriate. Crews will return HUDs to Flight Equipment at the completion of the flight, ensuring they are not left in the aircraft.

### **TROUBLESHOOTING**

1. Hydraulic fluid levels shall be checked within limits by the oncoming crew chiefs. When fluid levels are outside normal operating limits, the levels should be serviced or de-serviced by airframes personnel from the proper hydraulic system ports. Shuttling fluid utilizing the HYD STAT page is not a normal operating procedure and should only be used when proper servicing procedures are not available.

### **CAUTION**

**FCC CBs shall not be pulled when there is hydraulic power applied to the aircraft.**

### **NOTE**

**At no time will an FPMU CB be pulled when the aircraft is spinning.**

### **STANDARD CABIN CONFIGURATION**

Squadron aircraft shall be configured as follows. Items denoted with an asterisk (\*) are not normally carried on training flights. If these items are carried on board, they will be stowed as mentioned below.

1. The Combat Lifesaver (CLS) bag, life raft, VIP kit, aircrew NVGs and spare HUDs shall be secured to the ladder via a D-ring to allow easy access (Figure 3-7: B).\*
2. The toolbox will be placed in front the ladder on the deck when in garrison (Figure 3-6: C) and directly behind the ladder on the deck for flights while deployed (Figure 3-7: C).
3. The cooler will be positioned adjacent the toolbox with a cargo strap in place retaining the cooler and toolbox (Figure 3-7: D).\*
4. (4) sheets of plywood shall be secured to the deck at station 330 with (2) cargo straps (Figure 3-7: F).\*
5. Each aircraft shall be configured with (24) cargo straps, (4) used to secure configuration items and (20) for use in securing cargo as the mission dictates. The cargo straps will be placed on the right hand side of the cabin (4) in each stowage pouch.
6. The M240D egress kit shall be placed in the back left ramp stowage pouch with the shoulder strap secured to the ramp actuator (Figure 3-7: H).\*

## APPENDIX B – MAINTENANCE STANDARDIZATION

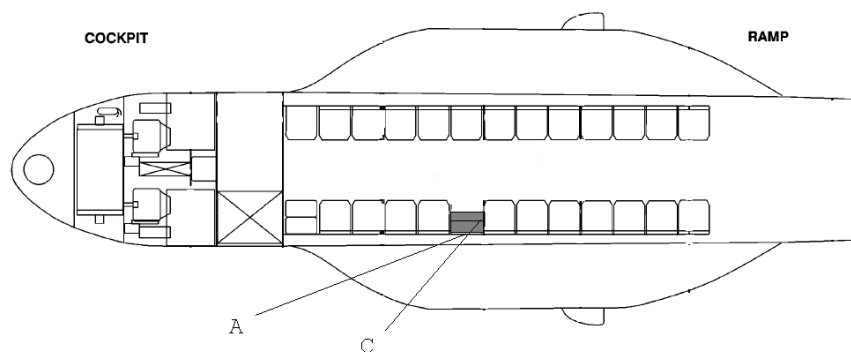


Figure 3-6

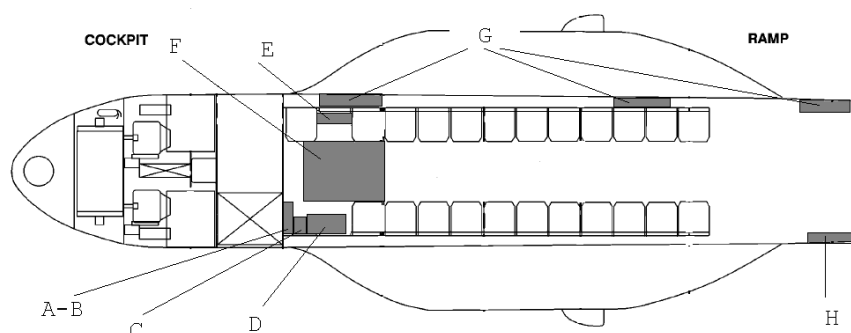


Figure 3-7

### STATIC DISPLAYS

1. The aircraft will be configured in accordance with the most current NAVAIR instruction which dictates what equipment may be observed by the general public.
2. Safety pins will be installed on all seats and egress hatches.
3. CAD actuated handles or buttons will be taped and zip-tied.
4. The aircraft will have all access panels secured, intake and exhaust covers on, brakes set, chocks in, and the battery disconnected. Additionally, the ramp and floor will be clean and dry, cargo roller rails will be installed rollers down, low overhead equipment will be marked.
5. All aircrew will wear clean and serviceable flight suits with polished boots. Additionally, at least one member of the aircrew shall man the static display when spectators are present. Visitors shall not occupy pilot's seats without CO approval.
6. Reference 1<sup>st</sup> MAW SOP for further static display guidance.

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

This document is designed as a tool for the ACE planner to use during site surveys, leaders reconnaissance visits, planning conferences, or as part of an advance party during preparation for an exercise or contingency operation. This is a living document that contains useful questions and considerations that have been developed by this squadron as well as many others that were used successfully by other ACE's during MEU deployments. This document will help the ACE planner develop a plan of action and be well prepared to conduct a successful planning trip or liaison visit.

### OVERALL

- ☐ What is the mission?
- ☐ Where is the deployment?
- ☐ Named operation or exercise?
- ☐ Deployment for contingency operation, deployment for exercise or training detachment?
- ☐ Expected length of deployment?
- ☐ Is there a prepare to deploy order, warning order or execute order?
- ☐ Ensure that personnel who remain behind at the Squadron or on ARG shipping are able to run the Squadron to include FCPs, schedule writers, S-1 personnel, maintenance personnel, S-4 personnel, Safety, and flight instructors if training will be conducted.

### S-1

- ☐ Roster of personnel participating in the exercise/detachment broken down into officer, SNCO and enlisted. Additionally, the roster should include: dates, times, name, rank, SS #, MOS, billet assignment for DET, and MISC column for special notes. Special notes should identify who is going by what type of transportation and any peculiar departure and return dates for certain individuals. As required, a rear DET roster should be distributed identifying the rear DET OIC and any specific duties or assignments for remaining personnel.
- ☐ Pass the number of personnel to S-4 of who is Advance Party, Main body, Layover Det, Rear Det, etc. for TOP inputs. Each of these should be a separate roster.
- ☐ What type of orders will we be on, field or TAD?
  - ☐ Are NATO orders required?
  - ☐ Who provides appropriation data?
  - ☐ When and by whom will prepare the orders?
  - ☐ Rations/messing?
- ☐ Will TAD advances be issued, when, by whom?
- ☐ Cash for host nation services?
- ☐ Are passports or visas required?
  - ☐ Who requires them?
  - ☐ Have they been requested?
- ☐ Customs requirements?
- ☐ Budget information.
- ☐ Message dissemination plan/Unclassified/Classified.
- ☐ Mail/Drop and Distribution.
- ☐ Who will provide legal/SJA support?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

### S-2

- ☐ Maps of the operating area
- ☐ Country/area briefs
- ☐ Enemy or other armed activities OOB
- ☐ CADRG CDs of the operating area from 1:500K to greatest detail possible
- ☐ Topscene configuration/data for operating area
- ☐ Imagery of landing sites/landing zones
- ☐ Imagery of airfields
- ☐ Intel/Imagery dissemination plan
- ☐ Antiterrorism/Force Protection requirements
- ☐ Classified computer capability

### S-3

- ☐ Who is the Future Ops Action Officer?
- ☐ When is the IPC, MPC, FPC?
  - ☐ Has an airlift request been submitted to get to conferences?
  - ☐ Recon /liaison trips?
  - ☐ Have orders been requested/typed for attendees?
  - ☐ Has a DIP clearance been requested for attendees?
- ☐ Identify the mix of aircraft and pass to maintenance.
- ☐ Identify what pilots will be flying the aircraft and who will go with the main body. Pass to S-1.
  - ☐ Ensure the flight schedule reflects this.
- ☐ What maps and types (JOGAIR, 1:50,000, helo low level routes, street maps) will be required for the exercise/detachment for mission planning? Pass to S-2 for CADRG ordering.
  - ☐ NAV BAG/PUBS - Identify required IFR/VFR charts, APP plates, supplements, etc. Are any special approach plates from JEPPSONS required? Are any foreign pubs/charts required. Ensure necessary lead-time for ordering. (Europe, Caribbean, etc)
    - ☐ What mission supplies will be required?
    - ☐ Have the supplies been ordered through S-4?
    - ☐ Have they been included in the TOT?
- ☐ Fuel Packet requirements?
- ☐ Prepare the flight schedule for the first couple of days of the exercise prior to deployment.
  - ☐ Who receives a copy of the flight schedule in addition to the normal distribution?
  - ☐ How will it get reproduced?
  - ☐ How will it be distributed back to VMM-365(REIN)? The MEU? The JFACC?
  - ☐ Does it cover us for filing purposes? If not, how do we file?
- ☐ Prepare the ASSLT if required for the first couple of days of the exercise prior to deployment.
- ☐ Prepare the airflows and air plan input for the first couple of days of the exercise prior to deployment.
- ☐ Has DIP clearance been requested per the Foreign Clearance Guide? When is it due by? To whom? MEU? TACRON?
- ☐ Has airspace been reserved (NOTAM) if required per the Foreign Clearance Guide?
- ☐ Has support been requested via Naval message to supporting airfields?
- ☐ Are we required to write the OPORDER, to what extent, and when is it due?
- ☐ Publish a PCH to include frequencies, controlling agencies, RIO procedures, routes, LZ's, etc.
- ☐ Develop a training schedule.
  - ☐ Pass the planned flight hours of all T/M/S to maintenance.



## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Has all coordination been made for ranges (deconfliction with the ground forces)?
- ☐ Is any special equipment required for training or to support the mission (i.e. MATS, fastrope bar, hoist, etc.)?
- ☐ Notify maintenance of requirements.
- ☐ Request the ordnance well in advance (some facilities require 45 or more days in advance).
- ☐ Arm/De-arm area available?
- ☐ Is a RSO/RSNCOIC required and must they be designated in writing?
- ☐ Has coordination been made for the airfield/EAF we will be using?
- ☐ MAWTS airfield safety survey completed? (Focuses on Aviation Ground Support available at facilities)
- ☐ Detailed list of POCs with phone numbers from Base Ops to CFR to tenant squadrons and the Base Commanding Officer.
- ☐ Location and layout/makeup of: runways/taxiways, parking area, refueling area (can they support weight/thrust/etc.)?
- ☐ Special training (EXT, NVG, FAM, AR etc.)?
- ☐ Weather briefing requirements? ☐ Special IFF considerations?
- ☐ No fly/Restricted/Danger/Prohibited Areas?
- ☐ Jettison areas?
- ☐ What are the airfield hours and services provided?
- ☐ Is a brief required prior to using the range/training area?
- ☐ Is an LZ list available with pictures/videos of the LZ's? What obstacles are associated with the LZ's?
- ☐ Are NAV/TERF/LAT routes available or do we need to generate and certify them?
- ☐ Has the host nation approved self-generated routes and CAL sites.
- ☐ Can we accomplish any ground training? (rifle, pistol, PFT, NBC, MCMAP)
- ☐ Has the range/training area been scheduled/coordinated?
- ☐ Do we need to bring targets, pasties, score cards, staple guns, special equipment?
- ☐ Is a corpsman required and has he been requested?
- ☐ Coordinate the frags with the requesting units and ensure they do not interfere with other frags or our training and that they are supportable.
- ☐ Coordinate an Intel brief for advance party and main body prior to departure if required.
- ☐ Are there any PMC requirements? (aircraft parts, personnel transfer, etc.)
- ☐ Is a FARP required? Notify the S-4.
- ☐ Will we RGR/AR enroute to and from the det site?
  - ☐ Coordinate with VMGR, with the airfield, for the airspace.
  - ☐ Coordinate any fixed wing transportation requirements for pax & cargo (poss NAV pathfinder).
  - ☐ Will AR track require diplomatic clearance?
- ☐ Plan the flight route to/from det site. ☐ Make fueling arrangements.
  - ☐ Is Foreign Area Clearance required?
  - ☐ Coordinate PPRs for enroute stops.
  - ☐ Coordinate any GSE requirements.
  - ☐ Coordinate any security requirements w/ airport.
  - ☐ Make billeting, chow arrangements at RON site. Box lunches from Air Force are great. Order them the day/night prior. Who are the POC's?
  - ☐ Get local transportation for the flight crews at RON site. POC's?
  - ☐ Schedule ramp or hangar space at RON site.

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Arrange for possible after hours/weekend arrival/departures.
- ☐ Make a smart pack that has all this info and POCs.
- ☐ Is an ICAO flight plan required and when does it need to be submitted?
- ☐ Is an Overhead message coming out and when, where do we pick it up?
- ☐ DET airfield/site POC w/ phone # to include the same for intermediary flights.
- ☐ What is the seasonal forecast, weather, temp. at Det site?
  - ☐ What type of cold weather gear is required?
  - ☐ Publish moon data for the op area.
- ☐ Is Crash Crew required at Det site?
  - ☐ How is it requested and when is the request due?
  - ☐ Are fire bottles available? How many are there?
  - ☐ If not, have they been added to our TOT?
  - ☐ Where is the location of crash crew?
  - ☐ How do we contact crash crew: telephone #, UHF/VHF freq.?
- ☐ Is the ACE required to provide a MEDEVAC aircraft?
  - ☐ When, where, how, many for how long?
  - ☐ What is MEDEVAC launch authority?
  - ☐ Have MEDEVAC smart packs been made up?
  - ☐ Maps/flight pubs.
  - ☐ Location of hospitals, freqs.
  - ☐ Flight plan.
  - ☐ Fuel stops.
  - ☐ Hospital trauma levels.
  - ☐ Hospital LZ specifics.
  - ☐ Any special procedures?
- ☐ Is security required for the aircraft, workspaces, billeting?
  - ☐ Who will provide that security and when is it required?
  - ☐ Is a phone watch required?
  - ☐ When and where?
  - ☐ What are the phone numbers?
- ☐ What will our comm requirements be, radios and telephones? Has the S-6 been notified?
  - ☐ What type of radios: UHF/VHF/FM/Motorolas?
  - ☐ Will we require SATCOM and a radio operator?
  - ☐ Will covered comm be required?
  - ☐ Notify maintenance of requirements.
  - ☐ How many batteries will be required? Notify S-4 for BOM inputs.
  - ☐ Who requires phones and what type of lines? Do we require a cellular phone?
- ☐ When is higher headquarters OpOrder/LOI due out?
  - ☐ When will our OpOrder/LOI be done? Strive for 2 weeks prior to deploying.
  - ☐ Ensure all pertinent information is included: ☐ Gear list to include gas masks, bullet bouncers, cold WX gear, etc.
    - ☐ Route of flight
    - ☐ Embarkation timeline
    - ☐ Bus/aircraft sticks
    - ☐ Alpha roster of who's going and when
    - ☐ Camp diagram and regulations

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Training plan
- ☐ Phone number list
- ☐ Is a general course rules brief required before departing?
- ☐ Is EAF lighting required?
- ☐ What participation will MACG play? i.e.: ATC, airfield defense, DASC, range control, etc.?
- ☐ Can MWSS/METOC become involved to support weather requirements?
- ☐ Where will the Ready Room be set up?
- ☐ Does the ODO have all the POCs and phone numbers to give a thorough ODO brief?
- ☐ When is the After Action due?
  - ☐ Collect after action items continuously from all shops.
- ☐ What is the inclement weather plan (hurricane, high winds, low IFR)?
- ☐ Coordinate a Det Trip brief for all participating Marines.
- ☐ Coordinate a SHOTEX if immunizations are required.
- ☐ Is an interpreter required?
- ☐ Review old After Actions to aid in planning.

### S-4 AIRCRAFT FUEL

- ☐ What are our daily fuel requirements? Create a fuel requirements matrix.
- ☐ How and to whom do we transmit our fueling requirements?
  - ☐ Fuel request procedures?
  - ☐ How far in advance must we request fuel?
- ☐ What quantity of fuel is available?
- ☐ What type of fuel is available? JP-5? JP-8?
  - ☐ Plan for JP-5 prior to RTB ship?
- ☐ How do we pay for fuel?
  - ☐ What are procedures and points of contact?
  - ☐ Is contracting required by MEU?
  - ☐ Are fuel cards required?
- ☐ How, when and by whom is fuel tested?
- ☐ Is established fueling available at site?
- ☐ Are hot fuel pits available?
  - ☐ Number of points?
  - ☐ Nozzle compatibility?
  - ☐ Head pressure and flow rate?
  - ☐ Fire bottles/ARFF?
  - ☐ Entry/exit/course rules diagram?
  - ☐ Safety survey completed?
  - ☐ # personnel required to man fuel pits?
- ☐ Are fuel trucks available?
  - ☐ # of trucks?
  - ☐ Truck capacity?
  - ☐ Nozzle compatibility?
  - ☐ Head pressure and flow rate?
  - ☐ Who provides drivers?
- ☐ Are defuelers available?
- ☐ Is fuel available from ARG shipping?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Distance and turnaround to ARG shipping?
- ☐ Is bulk fuel available to refill our FARP?
  - ☐ Turnaround time to replenish FARP?

### FARP

- ☐ Is a FARP required?
  - ☐ How many bladders will be required?
  - ☐ How often will it be filled and by whom?
  - ☐ What are the working hours of the fuel supply people and will we have to pay them overtime? ☐

When is the request for fuel due and to whom?

- ☐ What special equipment will be required to transfer the fuel from the truck/trailer to the bladders? From a trailer to the aircraft?
  - ☐ Will fuel bladders be externally lifted?
  - ☐ Is a site/EPA inspection req'd, how do we set it up, and with whom?
  - ☐ How many fuelers will be required?
  - ☐ When does the FARP have to be operational?
  - ☐ Provide a radio and frequency for the FARP (include in PCH).
  - ☐ Plan to drain the FARP with aircraft on last day of usage.
  - ☐ Establish course rules for the FARP (include in PCH).
  - ☐ Ensure to take spill kit and fire extinguishers.
  - ☐ What are procedures for waste fuel disposal?

- ☐ Other HAZMAT considerations?
- ☐ Maintenance troubleshooter requirements

### OTHER FUELS

- ☐ Types required
- ☐ Quantities and storage facilities?
- ☐ 5 gallon cans
- ☐ Environmental and HAZMAT concerns(waste fuel)?
- ☐ Location of fuels?
- ☐ Transportation of fuels?

#### Diesel

- ☐ Quantity required?
- ☐ Source?
- ☐ Cost? Payment procedures?
- ☐ POC

### MOGAS

- ☐ Quantity required?
- ☐ Source?
- ☐ Cost? Payment procedures?
- ☐ POC

Coleman Fuel/White Gas (Peak 1 stoves/lanterns)

- ☐ Source/cost/POC

Kerosene

- ☐ Source/cost/POC



## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

### PERSONAL WEAPONS/ORDNANCE

#### FARP ORDNANCE

- ☐ Will there be ordnance at the FARP?
- ☐ What are daily ordnance requirements? Create a ordnance requirements matrix.
- ☐ What is the ordnance mix at FARP?
- ☐ How many reloads at FARP?
- ☐ Any ordnance restrictions?
- ☐ What are MHE requirements to move ordnance in FARP?
- ☐ Source/cost/POC
- ☐ Where arm/dearm aircraft? Is an additional LZ required?
- ☐ Location of jettison area?
- ☐ Location of ASP?
- ☐ How long will it take the ASP to provide ordnance?
- ☐ Existing armory?
- ☐ Armory location?
- ☐ Armory hours of operation?
- ☐ Required prior notice to draw weapons?
- ☐ Weapons/ammo draw procedures?
- ☐ Ammo transportation?
- ☐ EOD considerations
- ☐ Armory security requirements?

### BATTERIES

- ☐ Type batteries by type of equipment?
- ☐ Quantities required by type/day. Create a battery requirements matrix.
- ☐ What are battery procurement procedures?
  - ☐ Source/cost/POC?
- ☐ What are battery disposal procedures?

### FOOD REQUIREMENTS

- ☐ Is there a messhall?
- ☐ How do we get there? (transportation/directions)
- ☐ Source and cost? ☐ Messhall POC?
- ☐ Meal hours?
- ☐ Do we have to provide messmen and cooks?
- ☐ How do we provide food for maintenance, aircrew, and FARP personnel?
- ☐ Midrats for night crew?
- ☐ Pickup/return hours?
- ☐ Vat cans – from where?
- ☐ MREs?
- ☐ Advance requests through MEU.
- ☐ Augment with locally procured fresh fruit/baked goods/food truck.
- ☐ Create an MRE requirements matrix.
- ☐ Box lunches?
- ☐ Cost/POC.
- ☐ Roster/pickup times.

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Pickup location
- ☐ Drinks – hot and cold
- ☐ Augments - Fresh fruits, baked goods, etc?
- ☐ Utensils/condiments/napkins?
- ☐ Refrigerators?
- ☐ Catering, food truck, food kiosks?
- ☐ Medical checks on locally sourced meals?

### WATER REQUIREMENTS

- ☐ Fresh water?
- ☐ Availability/source/cost/POC?
- ☐ Potability/medical check.
- ☐ Location
- ☐ Distribution
- ☐ Bottled water?
- ☐ Availability/source/cost/POC?
- ☐ Potability/medical check.
- ☐ Distribution.
- ☐ Water Bull?
- ☐ Availability.
- ☐ Source for resupply/cost/POC?
- ☐ Potability/medical check.
- ☐ Location.
- ☐ Canteens/camelbacks/5 gallon jugs?
- ☐ Ice - availability/source/cost/POC?
- ☐ Water for aircraft and vehicle washdown?
- ☐ Aircraft wash water runoff – where/enviro impact?
- ☐ Security of water sources?
- ☐ Is demineralized water available for AV-8B operations?

### SANITATION/HYGIENE SERVICES

- ☐ Head facilities
- ☐ Cost/source/POC
- ☐ Permanent vs. temporary (trench, portajohn)?
- ☐ Servicing and maintenance?
- ☐ Toilet paper source?
- ☐ Bathing/Shaving facilities
- ☐ Cost/source/POC
- ☐ Permanent vs. temporary?
- ☐ Servicing and maintenance?
- ☐ Garbage disposal/dumpster emptied.
- ☐ trash bags.
- ☐ Recyclable? Sorted by paper, plastic, metal?
- ☐ Laundry services?
- ☐ Washers and dryers? Where? How many?
- ☐ Detergent?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ CLB laundry service?
- ☐ Contract laundry service?
- ☐ Where? Procedures? ☐ Flightsuits, utilities & coveralls?
- ☐ Working party requirements?
- ☐ Assign a mayor of the camp. State who it is in the LOI.
- ☐ How long must he be there, when arrive/depart?
- ☐ What assistance will he require, materials and personnel?
- ☐ Will he require a security guard for equipment during down times?
- ☐ What gear will be required to set up workspaces?
- ☐ Tables, chairs, tents, cots, lighting, electrical power? How many of each required?
- ☐ Who will provide these items?
- ☐ Who will set up the shops and when?
- ☐ Are eye wash stations and first aid kits available?
- ☐ Water bull, generator?
- ☐ Port-a-Johns, trash receptacles?
- ☐ Do we need to provide space heaters?
- ☐ Is computer support available from local units?

### BILLETING

- ☐ How many Marines need to be billeted?
- ☐ Where do we billet: BOQ/barracks/hotel/tents?
- ☐ Source/cost/POC
- ☐ General conditions and suitability?
- ☐ How do we get there: transportation/directions?
- ☐ Distance from chow and work?
- ☐ Heating/AC/lighting
- ☐ Electrical power supplies – US or are adapters required?
- ☐ Communications – telephones/DSN lines/fax/copiers?

### ESTABLISHED BILLETING

- ☐ Bedding – linen or sleeping bags?
- ☐ Maid service
- ☐ Does it provide running water for showers and sinks?
- ☐ Are field showers and Port-a-Johns required?

### EXPEDITIONARY BILLETING

- ☐ GP tents? How many?
- ☐ CP tents? How many?
- ☐ North Face tents?
- ☐ Tent heaters?
- ☐ Cold WX liners?
- ☐ Tent flooring?
- ☐ Mosquito netting?
- ☐ Appropriate tent stakes for environmental conditions
- ☐ Ours? On-site?
- ☐ Where do tentage and accessories come from?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Do we need to bring sleeping bags and isopor mats?
- ☐ How many cots do we need?
- ☐ Pest control
- ☐ Drainage
- ☐ Is electrical power provided for lighting?
- ☐ Do we need to provide office space heaters?
- ☐ Do we need to provide a fire watch?
- ☐ Is POV/rental vehicle transportation allowed?

### TRANSPORTATION OF GEAR

- ☐ How will our gear be transported?
  - ☐ How will our bonded cargo get there?
  - ☐ Does it require a guard and who will provide it?
  - ☐ Will our ordnance be transported by bonded cargo?
  - ☐ Is the driver qualified to carry ordnance?
  - ☐ If carried by military aircraft, has the special inspection been coordinated for? (check with ordnance)
- ☐ What is our TOT?
  - ☐ Has it been specifically broken down into who is transporting what?
  - ☐ When will it be picked up, and when will it arrive?
  - ☐ Commercial carrier requirements?
  - ☐ What is exactly flying on each aircraft, have S-4 or maintenance make a list? (include in LOI)
  - ☐ List should be made available for each aircraft and ODO.
  - ☐ Banding gear for retrograde.
- ☐ What is our TOP? (include in LOI)
  - ☐ Have bus/vehicle sticks been made and stick leaders identified?
  - ☐ When and where do they muster, when do they depart and arrive?
  - ☐ Have aircraft sticks been made and stick leaders identified?
  - ☐ When and where do they muster, when do they depart and arrive?
  - ☐ Are MREs required for chow or will they get chow on the way?
- ☐ Has transportation been coordinated to support the DET? (for personnel, gear, maintenance supplies, logistics)
- ☐ Is a crane required for maintenance work, tactical vehicles for ordnance/FARP, forklift for S-4, etc.?
- ☐ Coordinate ordnance/weapons arrival, storage, local transport, and departure. Notify Ordnance.
- ☐ Medical and dental facilities?
- ☐ Cammie netting?
- ☐ Sand bags?
- ☐ Bug repellent?

### GROUND TRANSPORTATION

- ☐ Squadron HMMWVs
- ☐ Vans, buses, trucks available for pax movement
  - ☐ Source/cost/POC?
- ☐ Sedans
  - ☐ Source/cost/POC?
- ☐ Ordnance trucks and trailers?



## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Source/cost/POC?
- ☐ How much HE can be handled at one time?
- ☐ Restrictions/rules to transport ordnance on roads
- ☐ LVS/tractor trailer?
  - ☐ Source/cost/POC?
- ☐ Forklifts?
  - ☐ Source/cost/POC?
  - ☐ Must fit under MV-22B
- ☐ What are fuel requirements?
  - ☐ Source/cost/POC?
- ☐ What are vehicle servicing requirements and procedures?
  - ☐ Source/cost/POC?
- ☐ Must we provide drivers?
- ☐ What are licensing requirements?
  - ☐ How many of each type licensed drivers in squadron?
- ☐ Vehicle movement schedule to work spaces, flightline, billeting, chow?
  - ☐ Time and distances between stops?
- ☐ Vehicle control procedures?
- ☐ What is road trafficability?

## ENGINEERING SUPPORT REQUIREMENTS/CONSIDERATIONS

- ☐ Who provides engineering support?
  - ☐ CLB?
  - ☐ Contract
  - ☐ Source/cost/POC
- ☐ Who provides construction/engineering equipment?
  - ☐ Source/cost/POC
- ☐ Who provides construction/engineering materials?
  - ☐ Source/cost/POC
- ☐ Snow removal
- ☐ Mine clearing
- ☐ Bunker construction
  - ☐ Wood CP bunkers
  - ☐ Conex boxes/Quadcons
- ☐ Hardening of billeting
- ☐ Hardening of workspaces
- ☐ ASP revetments
- ☐ FARP revetment
  - ☐ Aircraft revetments
- ☐ CONEX boxes/construction materials
- ☐ MG bunkers
- ☐ 2-man fighting positions
- ☐ HMMWV/5-ton deep cut positions
- ☐ Obstacles/concertina/sandbags

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

### CAMO NETTING

- ☐ Organic assets?
- ☐ Who supplies?
  - ☐ Source/cost/POC?
- ☐ Requirements?
  - ☐ Tentage
  - ☐ Aircraft
  - ☐ Hangar/workspaces
  - ☐ FARP

### TOOLS

- ☐ Shovels/e-tools
- ☐ Mallets/sledge hammers
- ☐ Banding equipment and material
- ☐ Claw hammers
- ☐ Saws
- ☐ Nails, rope, ordnance tape
- ☐ Source/cost/POC

### HST SUPPORT

- ☐ Who provides HST?
  - ☐ USMC?
  - ☐ Other?
- ☐ HST trained with MV-22Bs?
- ☐ How many teams available?
- ☐ Location of teams?
- ☐ How many sets of slings available?
- ☐ Single or dual point rigging?
- ☐ Comm/radio assets?
- ☐ Who controls

### ADMIN SUPPORT

- ☐ FAX and copiers
  - ☐ Source/cost/POC/location
- ☐ Computers and printers available?
- ☐ Available admin/serve-mart supplies
  - ☐ Source/cost/POC

### S-5

- ☐ Morale and welfare.
  - ☐ Local liaison?
  - ☐ Local area attraction/tours?
  - ☐ Local area transportation/trains/busses/cabs/rental vehicles? Cost?
  - ☐ City maps, bus and train schedules?
  - ☐ Party/MCCS funds available?
  - ☐ Squadron functions?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Where is the PX, hours?
- ☐ When and where are religious services?
- ☐ Laundromats, hours?
- ☐ After working hours activities info.
- ☐ What should S-5 bring, sports equipment, coolers, movies, books, games, etc.?
- ☐ Telephones to call home?
- ☐ Are telephone cards required, how much do they cost, where do we buy them?
- ☐ Beer? Alcohol?
- ☐ Banks, ATMs, check cashing facilities, money exchange?
- ☐ Gym available where, when, fees?
- ☐ ID bad neighborhoods/establishments to avoid.

### S-6/Comm/MACG

- ☐ ADP support/LAN/Message traffic capability.
- ☐ Communications capability/local/two echelons higher
  - ☐ How will we communicate with the ship?
  - ☐ How will we communicate with the MEU CE?
  - ☐ How will we communicate with the JFACC?
  - ☐ How will we communicate with other HHQ?
  - ☐ Connectivity between flightline, ops and billeting?
- ☐ How will our flights transmit to the ATO?
- ☐ Fax and Copiers/Source/Location/Cost/POC.
- ☐ Computer and Printer requirements.
- ☐ Power converters.
- ☐ Secure FAX
- ☐ STU-III
- ☐ SIPRNET availability
- ☐ NIPRNET availability
- ☐ Cell phones

### DSS

- ☐ Conduct a site survey.
- ☐ Has an aircraft parking plan been made (distances, weight limits, obstacles)?
- ☐ Embark mishap kit
- ☐ Has a pre-mishap plan been completed?
  - ☐ Specific chain of command and reporting/communication links.
  - ☐ Any changes to the mishap reporting chain?
  - ☐ Any OPREP-3 changes/reporting?
  - ☐ Any joint mishap investigating requirements?
  - ☐ Has a hazard map been made?
- ☐ Is there a Public Affairs Officer available: name, telephone #?
- ☐ Is there a station ASO: name and telephone #?
- ☐ Is there a station operations representative: name and telephone #?
- ☐ Is there a photo lab available: telephone #?
- ☐ Is there a SAR facility located near by?
  - ☐ What are their capabilities?

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ How do we contact them: telephone #, UHF/VHF freq.?
- ☐ How do we contact the military/civilian police: telephone #?
- ☐ Is there a chaplain available: name and telephone #?
- ☐ Is there a message center available: telephone #, message format required?
  - ☐ Who in the squadron has message releasing authority?

### MAINTENANCE

#### Facilities

- ☐ What facilities are available: ☐ Hangar space with overhead cover
  - ☐ Hangar space with overhead hoist?
  - ☐ Crane? Pettibone?
  - ☐ Can we use?
  - ☐ Licensing requirements?
  - ☐ Last inspection date? By whom?
  - ☐ Is it certified to lift what we want it to lift?
  - ☐ Running water and hoses for aircraft washes?
  - ☐ Are water outlets functional? Do they require adapters?
  - ☐ Drainage for aircraft and engine washes?
  - ☐ Pressurized air and nitrogen?
  - ☐ Air compressors?
  - ☐ Grounding points?
  - ☐ Electrical power? Are the outlets functional?
  - ☐ Do we require generators?
  - ☐ US or power converters required?
  - ☐ Office spaces?
  - ☐ How many?
  - ☐ What size?
  - ☐ Furnished?
  - ☐ Provisions to set up NALCOMIS?
  - ☐ What equipment must we bring?
  - ☐ Det tapes?
  - ☐ Compass rose?
  - ☐ Communications- telephone/DSN/fax/copiers?
  - ☐ Working hours of the host: weekends and nights?
  - ☐ Computer assets/printers available

#### POLs

- ☐ What are POL requirements?
  - ☐ Need a POL req't matrix for each T/M/S per 30 days
- ☐ What POLs are available?
  - ☐ Can we purchase? How? From whom?
  - ☐ How do we dispose of POLs? Forms? Cost? Procedures?
- ☐ What are the phase plans, inspection dates, NDI requirements, etc. for the aircraft?
- ☐ What special aircraft parts/equipment will be required for the operating environment? (eg austere environment inspections)
- ☐ Is there tool calibration support available?



## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

- ☐ Determine the number of repairables and consumables required.
- ☐ Will phase kits be required?
- ☐ Identify high time components.
- ☐ Is there support available for ECM/COMSEC parts?

### AVIATION SUPPLY

- ☐ What local supply support is available?
- ☐ What I-Level support is available? (eg 440, NDI)
- ☐ Are there procedures in place for support from the rear?
- ☐ What type of support will be provided by COMFAIRMED?
- ☐ How will parts be transported and documents passed?
  - ☐ Timeline from ship to location?
  - ☐ Timeline if transported via KC-130?
  - ☐ Located near suitable airfield for KC-130?
- ☐ Request parts pack-up
  - ☐ Consumables and Repairables by T/M/S
- ☐ Request supply personnel from MALS/ship.

### GSE

- ☐ Do we need T/M/S peculiar GSE?
- ☐ See Battle Book GSE requirements matrix.
- ☐ Has a request for MALS/AIMD gear and the PM records for the gear been made?
- ☐ Has a request been made for local support/ COMFAIRMED or will we ship it out with the components as needed
  - ☐ Is a license required?
  - ☐ What are the checkout procedures?
- ☐ Here is a list of commonly required GSE:

Item	Part no.	Notes
TA75B TOW TRACTOR		1.
AM27T-5 HYD SERV UNIT	68A4J1000-1	
3 GAL HSU	630AS100-1	
PORTABLE NITRO CYLINDER	60A80D1	
NAN 4 CART	1317AS100-1	
AM42M-2 LIGHT UNIT	1676AS100-1	
ACU 20M AIR COMPRESSOR	30-35113	
CORROSION CONTROL CART	65A102J1	
NC-10 ELEC POWER UNIT	NC-10B	2.
B-4 WORK STAND	54J6345	
B-1 WORK STAND	47R16420	3.
ALLBAR-20	1479AS200-1	4.
12 TON JACK	CJ69J1270	5.
25 TON JACK	810D1100	6.
10 TON JACK	2943	7.
3 TON JACK	2979-010	8.
5 TON AXLE JACK	1161AS100	9.
15 TON AXLE JACK	CJ67D0250-1	10.
AS32K1-C SATS LOADER	67A252H1	11.

## APPENDIX C – VMM-363 DETACHMENT PLANNING CHECKLIST

WEAPONS TRAILER	A/M32K4	11.
Aircraft pre-heaters		
Deicing Equipment		
SM. UNIV. WEPS CRADLE	2560340	11.
Tactical vehicle		11.

Notes: 1. Min 40,000 lb towing capacity for MV-22B.

2. NC-8 or NC-2 also acceptable. Need 28V DC for skids and 115V AC for assaults.

3. For assaults only.

4. Nosewheel-type for transports, tow-ring type for skids.

5. MV-22. 2 ea.

6. Assaults only. 3 ea.

7. Assaults or skids. 1 ea.

8. Skids only. 4 ea.

9. Assaults only. 4 ea.

10. MV-22B only. 2 ea.

11. Ordnance use only.

- ☐ Have all HAZMAT requirements/problems been addressed? (disposal or spills)
- ☐ See Battle Book HAZMAT requirements matrix.
- ☐ How will our ordnance be stored and who guards it?
  - ☐ Is it readily available? What is the lead time for requests?
  - ☐ How will it be transported from the storage area to the aircraft?
  - ☐ Where can we arm/dearm/up-load/down-load ordnance?
  - ☐ What gear will be required for up-load/down-load, and is it feasible?
  - ☐ Are there any HERO conditions required?
- ☐ What special aircraft equipment will be required to meet our frags, such as Schlommer Frames/fastrope bar?
- ☐ How will gear left on the ship be stored and who will provide its security?

### MEDICAL

- ☐ What medical requirements are needed?
  - ☐ How many corpsman/flight surgeons are required?
  - ☐ Where will they set up a first aid station/BAS?
  - ☐ Will they work in the higher headquarters aid station?
  - ☐ When and where is sick call?
  - ☐ Are flight physicals/eye exams/audiograms needed to be done?
  - ☐ Try to get all such physicals done before the DET to include swim qual, physiology, helo dunker.
  - ☐ What medical equipment is required such as litters, etc.?
  - ☐ Is a shot fair required? Coordinate through S-3.
  - ☐ Are any preventive immunizations required before deployment?
  - ☐ Are any special medications required for the area of operations such as Malaria pills?
  - ☐ How, where, and when will the medication be distributed? How often do we take the medication?

# APPENDIX D – LIST OF APPLICABLE SOPs AND PUBLICATIONS

	PUBLICATION	PUBLICATION DESCRIPTION	DATE	IC Number
<b>CNAF</b>	CNAF M-3710.7	NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS MANUAL	30-Oct-18	
<b>T&amp;R</b>	NAVMC 3500.14D Aviation Training and Readiness Program Manual	AVIATION TRAINING AND READINESS PROGRAM MANUAL		
	NAVMC 3500.11F	MV-22B TRAINING AND READINESS MANUAL	12-Sep-19	
	NAVMC 3500.11F CH2	MV-22 PILOT/7532 TRAINING AND READINESS MANUAL	12-Sep-19	
	NAVMC 3500.11F CH3	MV-22 CREW CHIEF/6176 TRAINING AND READINESS MANUAL	12-Sep-19	
	NAVMC 3500.11F CH4	MV-22 AERIAL GUNNER/OBSERVER/6199 TRAINING AND READINESS MANUAL	12-Sep-19	
<b>V-22</b>	A1-V22AB-CLG-000	TECHNICAL MANUAL CARGO HANDLING MANUAL	1-Dec-18	9/9
	A1-V22AB-NFM-000	NATOPS FLIGHT MANUAL MV-22	30-May-19	90/85
	A1-V22AB-NFM-200	NATOPS FLIGHT MANUAL PERFORMANCE DATA SUPPLEMENT MV-22	1-Dec-18	2/2
	A1-V22AB-NFM-500	NATOPS PILOTS/AIRCREW POCKET CHECKLIST	30-May-19	67/62
	A1-V22AB-NFM-510	MV-22 EMERGENCY AND NORMAL CHECKLIST	1-Dec-18	3/3
	A1-V22AB-NFM-700	NATOPS FUNCTIONAL CHECKFLIGHT CHECKLIST	1-Dec-18	15/15
	A1-V22AB-NFM-800	NATOPS CREWCHIEFS POCKET CHECKLIST	1-Dec-18	2/2
	ANTTP 3-22.3-MV-22	AIR NAVAL TACTICS, TECHNIQUES, AND PROCEDURES COMBAT AIRCRAFT FUNDAMENTALS	Nov-17	
	HOW TO PLAN A HELICOPTERBORNE ASSAULT	HOW TO PLAN A HELICOPTERBORNE ASSAULT	26-Jun-02	
	MAWTS-1 MV-22 COURSE CATELOG	MARINE AVIATION WEAPONS AND TACTICS SQUADRON ONE MV-22 COURSE CATELOG	31-Jan-18	
	MAWTS-1 MV-22 COURSE CATELOG PART II: MV-22 ENLISTED AIRCREW	MV-22 ENLISTED AIRCREW TAIL GUNNERY INSTRUCTOR (TGI) PROGRAM GUIDE	31-Jan-18	
	MAWTS-1 NVD MANUAL	MAWTS-1 NIGHT VISION DEVICE (NVD) MANUAL 10TH EDITION	1-Oct-18	
	MCTP 3-01B	AIR ASSAULT OPERATIONS	22-Feb-19	
	NAVAIR 4.8.1.5	V-22 MEDIUM LIFT TILTROTOR SHIPBOARD BRAIN BOOK	1-Nov-17	
	NTTP 3-22.5-ASTACSOP TPG	TACTICAL POCKET GUIDE USMC ASSAULT SUPPORT TACTICAL SOP	Oct-19	
	NTTP 3-22.5-MV-22 TACTICAL POCKET GUIDE	MV-22 TACTICAL POCKET GUIDE	Nov-17	
	NTTP 3-22.5-MV-22 TACTICAL POCKET GUIDE	MV-22 TACTICAL POCKET GUIDE	Nov-17	
<b>GEN.</b>	00-08R-14	NATOPS U.S. NAVY AIRCRAFT FIREFIGHTING AND RESCUE MANUAL	1-Jun-18	22/22
	00-08T-115	U.S. MARINE CORPS EXPEDITIONARY AIRFIELD AND AIRCRAFT RECOVERY OPERATIONS NATOPS MANUAL	1-Jan-16	2/2
	00-80R-14-1	NATOPS U.S. NAVY AIRCRAFT EMERGENCY RESCUE INFORMATION MANUAL	1-Aug-14	6/1
	00-80R-19	NATOPS U.S. NAVY AIRCRAFT CRASH & SALVAGE OPERATIONS MANUAL (AFLOAT)	1-Aug-14	5/2
	00-80R-20	NATOPS U.S. NAVY AIRCRAFT SALVAGE OPERATIONS MANUAL (ASHORE)	15-Jun-16	2/1
	00-80T-103	NATOPS CONVENTIONAL WEAPONS HANDLING PROCEDURES MANUAL (ASHORE)	1-Aug-19	12/12
	00-80T-104	LANDING SIGNAL OFFICER NATOPS MANUAL	15-Jun-15	20/17
	00-80T-105	CV NATOPS MANUAL	15-Jun-15	48/46
	00-80T-109	AIRCRAFT REFUELING NATOPS MANUAL	1-Oct-19	10/10
	00-80T-111	V/STOL SHIPBOARD AND LANDING SIGNAL OFFICER NATOPS MANUAL	1-Nov-15	4/4
	00-80T-112	NATOPS INSTRUMENT FLIGHT MANUAL	15-Nov-06	0/0
	00-80T-113	AIRCRAFT SIGNALS NATOPS MANUAL	1-Apr-18	1/1
	00-80T-114	NATOPS AIR TRAFFIC CONTROL MANUAL	1-Jan-19	14/14

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	00-80T-120	CVN FLIGHT/HANGAR DECK NATOPS MANUAL	30-Nov-18	26/26
	00-80T-122	AIRCRAFT OPERATING PROCEDURES FOR AIR-CAPABLE SHIPS NATOPS MANUAL	15-Dec-18	21/21
	00-80T-123	AIRCREW SYSTEMS NATOPS MANUAL	1-May-19	
	00-80T-124	AIRFIELD OPERATIONS MANUAL	1-Aug-19	0/0
	ATP-3.3.4.2USN/USMC	US NAVY/US MARINE CORPS AAR OPERATIONS	1-Nov-19	0/0
	MIL-DTL-85025B(AS)	NATOPS PROGRAM TECHNICAL PUBLICATIONS AND PRODUCTS: STYLE, FORMAT, AND COMMON TECHNICAL CONTENT	28-Sep-07	
	MPP_02VIIA1 Multi-nation X deck	MULTINATIONAL THROUGH-DECK AND AIRCRAFT CARRIER CROSSDECK OPERATIONS	1-Sep-19	
	MPP-02(H)(2) Vol 1 XDeck Ops	HELICOPTER OPERATIONS FROM SHIPS OTHER THAN AIRCRAFT CARRIERS (HOSTAC)	1-May-18	
	MPP-02.1(A)(5) Aircrew PG	CROSSDECK OPERATIONS TECHNICAL SUPPLEMENT: NATIONAL PROCEDURES AND SHIP DATA	1-Oct-18	
	MPP-02.1.1(A)(15) Matrix	SHIP/AIRCRAFT INTEROPERABILITY MATRIX AND ADVANCE NATIONAL INFORMATION	1-Nov-19	
	MPP-02.2(A)(5) Ship PG	CROSSDECK OPERATIONS TECHNICAL SUPPLEMENT: NATIONAL AIRCRAFT DATA	1-Oct-18	
	MPP-02.3(A)(5) Standards	CROSSDECK ADDENDUM	1-Feb-19	
	NA 00-80T-106	LHA/LHD NATOPS MANUAL	15-Jun-19	0/0
	NAEC-ENG-7576	SHIPBOARD AVIATION FACILITIES RESUME	1-Jun-19	
	SI-ACS-AFB-1N	AIR CAPABLE SHIP AVIATION FACILITIES BULLETIN NO. 1N	1-Mar-19	
<b>DOD</b>	GENERAL PLANNING	GENERAL PLANNING	2-Jan-20	
	AREA PLANNING AP3	PACIFIC-AUSTRALIA-ANTARTICA	26-Mar-20	
	AREA PLANNING AP3A	PACIFIC-AUSTRALIA-ANTARTICA SPECIAL USE AIRSPACE	30-Jan-20	
	FLIGHT INFORMATION HANDBOOK	FLIGHT INFORMATION HANDBOOK (ENROUTE)	13-Aug-20	
	FLIGHT INFORMATION PUBLICATION (ENROUTE) SUPPLEMENT	FLIGHT INFORMATION PUBLICATION (ENROUTE) SUPPLEMENT PACIFIC, AUSTRALASIA, AND ANTARCTICA	26-Mar-20	
	FLIGHT INFORMATION PUBLICATION (ENROUTE) IFR	FLIGHT INFORMATION PUBLICATION (ENROUTE) IFR - SUPPLEMENT UNITED STATES	30-Jan-20	
	FLIGHT INFORMATION PUBLICATION (ENROUTE) VFR	FLIGHT INFORMATION PUBLICATION (ENROUTE) VFR - SUPPLEMENT UNITED STATES	27-Feb-20	
	FLIGHT INFORMATION PUBLICATION (TERMINAL) U.S.	FLIGHT INFORMATION PUBLICATION (TERMINAL) HIGH AND LOW ALTITUDE UNITED STATES	30-Jan-20	
	FLIGHT INFORMATION PUBLICATION (TERMINAL) PAC, AUS, ANT	FLIGHT INFORMATION PUBLICATION (TERMINAL) HIGH AND LOW ALTITUDE PACIFIC, AUSTRALASIA, AND ANTARCTICA	30-Jan-20	
<b>MEF</b>	IIIMEF-MCIPAC MCBBO 5230.1 PPEP Policy	THIRD MARINE EXPEDITIONARY FORCE/MARINE CORPS INSTALLATIONS PACIFIC-MCB CAMP BUTLER ORDER 5230.1	28-Dec-16	
<b>MAW</b>	WgO 3700.2 Ch 1 1st MAW Flt Ops SOP (App G update)	1ST MARINE AIRCRAFT WING ORDER	8-Nov-09	
<b>MAG</b>	20180829 RI 18-05 Change 1 MAG-24 Laser Mitigation and Reporting Procedures	MAG-24 READ AND INITIAL 18-05 CHANGE 1(MAG-24 LASER MITIGATION AND REPORTING PROCEDURES)	29-Aug-18	
	GruO P3710.1D wCh1 MAG-24 Flt Ops SOP	STANDARD OPERATING PROCEDURES FOR MARINE AIRCRAFT GROUP 24 FLIGHT OPERATIONS	25-Nov-15	
	MAG 24 OAHU TRANSITING ALTITUDES	MARINE AIR GROUP 24 OAHU TRANSITING ALTITUDES	6-Feb-18	
	MAG-24 Hawaii LZ Policy (signed)	MARINE AIRCRAFT GROUP 24 READ AND INITIAL 18-04: LANDING ZONES IN HAWAII	30-May-18	
	MAG-24 In Flight Guide	MARINE AIR GROUP 24 IN FLIGHT GUIDE	26-Sep-14	
	MAG-24 Thunderstorm Conditions	MAG-24 READ AND INITIAL 18-03: THUNDERSTORM CONDITIONS AND IMMEDIATE ACTION PROCEDURES	15-Mar-18	
<b>MCAS</b>	MCASO 3710.2A AOM	MARINE CORPS AIR STATION KANEOHE BAY AIR OPERATIONS MANUAL	25-Jun-19	
<b>PTA</b>	IMHW-PTA-ZA MEMORANDUM	U.S. ARMY GARRISON POHAKULOA TRAINING AREA STANDARD OPERATING PROCEDURES	30-Nov-15	



## APPENDIX D – LIST OF APPLICABLE SOPs AND PUBLICATIONS

FAA	00-08T-80	AERODYNAMICS FOR NAVAL AVIATORS	Jan-65	
	ADVISORY CIRCULAR 00-45H	AVIATION WEATHER SERVICES	8-Jan-18	
	ADVISORY CIRCULAR 00-6B	AVIATION WEATHER	23-Aug-16	
	FAA CHART SUPPLEMENT PACIFIC	FEDERAL AVIATION ADMINISTRATION CHART SUPPLEMENT PACIFIC	30-Jan-20	
	FAA CLASS B ENHANCEMENT GRAPHICS	HONOLULU CLASS B AIRSPACE	2020	
	FAA NOTICES TO AIRMAN	FEDERAL AVIATION ADMINISTRATINO NOTICES TO AIRMEN	2-Jan-20	
	FEDERAL AVIATION REGULATION / AERONAUTICAL INFORMATION MANUAL	FEDERAL AVIATION REGULATION / AERONAUTICAL INFORMATION MANUAL	15-Aug-19	

## APPENDIX E – H-1 PREFLIGHT GROUND TURN CHECKLISTS

### E.1. UH-1Y Preflight Ground Turn Checklist

Screen ADB

Preflight

Complete normal preflight

Weapons installed correctly and secure

Correct rocket loadout and security

RKTS intervalometer set to “A” for ARM

POD-single

APKWS-LASER codes dialed in per SOP

ALE buckets installed, secure, and loaded

AAR-47 sensors clean

Securing gear removed and stowed

Complete NATOPS start checklist through takeoff checks

Comm

C1: \_\_\_\_\_ Clear \_\_\_\_\_ Secure \_\_\_\_\_ Active \_\_\_\_\_ Presets

C2: \_\_\_\_\_ Clear \_\_\_\_\_ Secure \_\_\_\_\_ Active \_\_\_\_\_ Presets

C3: \_\_\_\_\_ Clear \_\_\_\_\_ Secure \_\_\_\_\_ Active \_\_\_\_\_ Presets

SATCOM

FLIR

Laser codes loaded

FIT

Tracker Scenario: Scene Lock

CCD: all FOV

Auto White Balance

FLIR: all FOV

Turret parameters: 50 Linear/10 Cubic

ASE Stat page

Check software per ASE Kneeboard card

APR-39 BIT

ALE-47 sensors

ALE-47 loadout displayed correctly

Inventory reset (as required)

Mission card – load and confirm

Waypoints

Threats (ROZ's)

Weapons page setup

Shut down and cock

Normal shut down checklist

Prime APU

Confirm weapon C/Bs are out, all others are in

Confirm pedestal panels are set for start

CSC: all radios in, nav out, mic to 2, RMT

Lights – off

Mission card remains in AMU

ROVER/BFT battery (as required)

Advise ODO/maintenance control of status

Turn-in PFGT sheet and sign ADB

Write MAFs as required

Pilot \_\_\_\_\_ Date/Time: \_\_\_\_\_ A/C: \_\_\_\_\_

APPENDIX F – RQ-21 FOXTROT EMPLACEMENT OPERATIONS

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## APPENDIX F – RQ-21A FOXTROT EMPLACEMENT OPERATIONS

### 8000. GENERAL PROCEDURES

1. The purpose of this Appendix is to provide standardization for site set up and set priorities of work in order to improve the unit's efficiency in a full system emplacement at Foxtrot taxiway. This template is a scalable foundation and should be considered when emplacing the RQ-21A system in combat or other operations, enabling the MAGTF commander to get eyes on the battle space and make informed decisions. This SOP and the examples provided serve as a planning template for a single system site emplacement. While this SOP serves as a guide, it shall not take precedence over safety and the sound judgment of every individual involved in the site set up.

a. Site Emplacement and displacement requires multiple entities to come together in order to allow the squadron to effectively employ the RQ-21A Blackjack STUAS and accomplish its assigned mission.

b. This SOP provides guidance for the RQ-21A site emplacement and displacement procedures and clarifies expected tasks.

2. The emplacement or displacement of equipment necessary to operate the RQ-21A is a combined maximum effort. The squadron operates under a detachment construct; however, emphasis must be placed on the process of emplacing or displacing the site as an all hands effort. Duties and responsibilities will be shared throughout the squadron. It is incumbent on the site Officer-in-Charge (OIC) and Staff Non-Commissioned Officer-in-Charge (SNCOIC) to ensure maximum employment of all personnel at the site.

3. The site OIC should be designated with sufficient time in order to ensure proper coordination takes place between sections, a proper site survey is conducted, proper inventories and pack ups occur and all personnel that will be directly supporting the emplacement are identified. At the completion of the emplacement, prior to commencing flight operations, the site OIC should conduct a site walkthrough, identify any hazards, and mitigate them.

4. Once the system is completely emplaced, the unit is able to support flight operations from the site, and offer the full range of support to the adjacent units, site emplacement is considered complete.

### 8001. SUBORDINATE TASKS

1. Sections are not limited to these specified tasks. They should make every effort to assist adjacent sections at the site during emplacement or displacement if they are not otherwise tasked. Completion of designated tasks does not preclude assisting other sections with tasks or authorize departing the site until set up is complete. Maximum participation is expected from all sections.

#### a. Operations Officer

(1) Designate a site OIC no later than 5 working days prior to the planned evolution. This may be a detachment OIC or the senior person in spoke site operations.

(2) Provide to the site OIC a date and time of the first sortie to be produced by the squadron. This piece of information enables the site OIC to backwards plan and ensure that their timeline is able to support the overall mission.

(3) Consideration should be given to the UAC T&R 3600X code for site emplacement. If an officer is not a UAC or has not completed the 3600X, this does not preclude them from functioning as the site OIC.

(4) Create a turn over binder that site OICs may reference in planning for emplacement/displacement, and contribute to at the completion of an emplacement/displacement evolution.

#### b. Site OIC

(1) Coordinate designation of a SNCOIC. In the detachment this may be the detachment SNCOIC.



## **APPENDIX F – RQ-21A FOXTROT EMPLACEMENT OPERATIONS**

(2) Make positive contact with all personnel that are tasked with directly supporting the emplacement or displacement.

(3) Develop a load plan that will allow components to be offloaded and work to be started in a way that supports Priorities of Work (POW).

(4) Conduct a site survey as required. When complete, develop a site map and ensure it is made available to supporting sections. An example can be seen in Figure 8-1.

(5) Publish a Letter of Instruction (LOI), as required.

(6) Provide a confirmation brief to Headquarters (Operations Officer or Commanding Officer).

(7) Supervise all personnel and provide guidance as necessary to maintain the POW.

(8) Produce an after action report not later than 48 hours after the completion of the emplacement and displacement and deliver to the OPSO via the Emplace/Displace Turnover Binder.

### **c. Site SNCOIC**

(1) Assist the OIC. Coordinate between sections, attend meetings, and assist with the site survey as required.

(2) Maintain accountability of all personnel specifically tasked with site emplacement or displacement.

(3) Ensure that personnel designated drivers and a-drivers have the appropriate qualifications.

(4) Supervise the completion of the POW and ensure that all personnel are appropriately employed.

(5) Ensure that all quadcons are clearly marked so the forklift driver and ground guide can easily identify them and place them where they are required in accordance with the site map.

(6) Coordinate with S-4/Medical for Corpsman support and water purification.

### **d. S-2**

(1) Provide the site OIC with imagery in support of the site survey as required.

(2) Emplace/displace concertina wire around the entire site. Ensure that concertina wire gloves are available for personnel handling concertina wire. Verify engineering stakes are available for concertina wire.

(3) Ensure all requests are submitted to broadcast full motion video (FMV) per higher headquarters (HHQs) timelines.

### **e. S-3**

(1) Coordinate with the designated OIC and ensure that Initial Planning Conference (IPC) or any other required meetings are put on the flight schedule.

(2) Ensure the Operator Workstations (OWS) have the appropriate map data required for flight operations.

### **f. S-4**

(1) Ensure that all trucks and any other support equipment to include any forklifts are properly tripped out to the drivers.

(2) Construct a power distribution plan.

## **APPENDIX F – RQ-21A FOXTROT EMPLACEMENT OPERATIONS**

- (3) Emplace/displace all required generators and environmental control units (ECU).
- (4) Ensure the water source is filled, tested by a Corpsman, and available at the site.
- (5) Coordinate with any external agencies for additional support equipment or load plans as required.
- (6) Ensure loading of tactical vehicles is in accordance with the load plan and supports the efficient offload in support of the POW.
- (7) Ensure the HAZMAT bladders are emplaced and serviceable.
- (8) Ensure required fuel for generators is obtained.
- (9) Provide S-2 with concertina wire gloves.

### **g. S-6**

- (1) Emplace required communications equipment.
- (2) Emplace any tents required for Comm.
- (3) Ensure that the Communications Electronics Operations Instruction is distributed and frequencies are requested and confirmed.
- (4) Ensure all required communications equipment is sub-custodied to respective work centers upon request.
- (5) Request appropriate satellite times per HHQs timelines.

### **h. Maintenance**

- (1) Emplace/Displace all RQ-21A Equipment.
- (2) Coordinate acquisition of all aircraft fuel and ensure proper storage.
- (3) Configure maintenance workspaces to include Maintenance Control.
- (4) Emplace/Displace all maintenance tents.

### **i. Ground Safety Officer/ Ground Safety Manager (GSO/GSM)**

- (1) Ensure all stakes, concertina wire, lines, or any other hazards are identified and clearly marked.
- (2) Ensure that water is emplaced, tested by Corpsman, and deemed potable.
- (3) Provide an ORM sheet to the OIC.
- (4) Enforce any safety standards in regards to PPE, the use of ground guides, and appropriate standoff from sound hazards.

### **j. Medical Corpsman**

- (1) Ensure water purification is done prior to start of flight operations.

## **8002. PRIORITIES OF WORK**

## **APPENDIX F – RQ-21A FOXTROT EMPLACEMENT OPERATIONS**

1. The following tasks are prioritized in descending order. It is incumbent on the site OIC to use discretion when deviating from the POW in the delegation of tasks. This list is not all inclusive of the tasks required to emplace the system.

- a. HAZMAT Pits emplaced.
- b. Quadcons containing RQ-21A components offloaded and configured.
- c. Tents and other equipment is offloaded and configured.
- d. S-6 and Comm gear is offloaded and configured.
- e. Generators and ECUs placed in HAZMAT pits. This enables maintenance and S-6 to commence configuring their equipment.
- f. Concertina Wire is offloaded and emplaced. It is important that Concertina Wire is completed last in order to allow freedom of movement for any support equipment.

2. In order to ensure that the site is set up in a timely manner it is imperative that the site OIC and SNCOIC ensure that personnel with special qualifications prioritize their work on tasks that require their expertise. This includes most maintenance tasks and the configuration of communication gear. Special consideration may be made for set up of any tents or shelters prior to other tasks in the event of forecast foul or hazardous weather.

### **WARNING**

**Ensure that no work is being conducted and personnel are safely sheltered in the event of lightning or thunderstorm within 20 nautical miles of the site.**

#### **8003. SITE DISPLACEMENT**

1. Tasks should be done in reverse order as displacement. Vehicles and quadcons should be loaded in a manner that plans for and considers efficient offload for the next emplacement, taking into consideration the emplacement priorities of work.

APPENDIX F – RQ-21A FOXTROT EMPLACEMENT OPERATIONS

FOXTROT TAXIWAY LAYOUT

Figure 8-1





## APPENDIX G – RQ-21 WESTFIELD WEATHER MITIGATION PLAN

Weather Plan. The weather mitigation plan for VMU-3 is conducted in 3 conditions.

1. Condition I. Year round weather mitigation due to the climatology of MCBH. This condition focuses on GDT emplacement, as well as best practices to prevent equipment from being affected by average winds and precipitation. Safety of personnel is higher priority than protection of equipment. At no time shall personal safety be compromised to complete condition requirements. Condition I is comprised of:

a. Securing all GDTs with ground stakes (ground emplaced) or ratchet straps (QUADCON emplaced). At a minimum, each GDT shall have:

(1) One (1) ground stake per tripod leg (ground emplaced)

(2) Minimum three (3) ratchet straps to corners of QUADCON, and one (1) ratchet strap to secure the AIM.

b. When not in operation, GDTs shall be pointed in the downwind direction of predominant wind (If wind is from the east, point GDT west).

c. Shelter air vehicles and transport boxes within the LME tent or other shelter to prevent unnecessary exposure to precipitation.

d. During site emplacement utilizing expeditionary tent structures for workspaces, consideration should be given to utilize QUADCONs around the edges of the structures to block wind and provide additional anchor points. Additionally, utilize sand bags around the base of expeditionary tent structures to secure sides and prevent lifting from wind gusts.

2. Condition II. Seasonal weather mitigation from November to February, or at the discretion of the CO if necessary. Condition II is comprised of all Condition I measures, with the addition of:

a. Removal of GDT dish assembly during periods when no flights are scheduled within the next 24 hours.

b. Increased vigilance for signs of corrosion on equipment emplaced at Foxtrot taxiway.

c. Stow SLS and SRS and cover to protect from weather and prevent weather related failures.

3. Condition III. Severe weather mitigation measures.

a. Condition III weather may be enacted by the CO, or if the following conditions are forecasted:

(1) National Weather Service High Wind Advisory, High Wind Warning, or Small Craft Advisory in effect.

(2) Aviation Weather Center or MCBH Tower forecast of winds > 35 knots. National Weather Service Thunderstorm Warning, Flash Flood Warning

b. Condition III is comprised of all Condition I and II measures, with the addition of:

(1) Secure all equipment at Foxtrot taxiway under 100lbs.

(2) If possible, remove air vehicles and sensitive equipment from Foxtrot taxiway. In the event time/mission do not permit, shelter air vehicles within LME tent.

(3) If severe weather imminent, personnel at Foxtrot should seek immediate cover in appropriate structures.

(4) Stow SLS and SRS and cover to protect from weather. If flight operations are complete, bring SLS and SRS back to Hangar 103.

## APPENDIX G – RQ-21 WESTFIELD WEATHER MITIGATION PLAN

(5) If conditions permit and flight operations are complete, remove GDT dish assemblies and point in direction of wind.

c. If QUADCONs or MALS Vans are not placed around expeditionary tent structures to sufficiently block wind and anchor tents, utilize available vehicles to block wind gusts and anchor tents in place.

4. Analysis. Proposed preventative measures have associated advantages and disadvantages. These factors must be considered when balancing operations planning with weather considerations and site requirements.

a. Prevention Measure Using sandbags, stakes, and ratchet straps to secure GDTs and AIM.

(1) Advantages

(a) Increased GDT wind protection with little change to operational requirements.

(2) Disadvantages

(b) 30 minutes additional time during site setup to place additional straps and test GDTs for stability.

(3) Requirements

(a) Four (4) ratchet straps, three (3) ground stakes, three (3) sand bags per GDT/AIM assembly

(b) Two (2) Marines to setup/teardown

b. Prevention Measure. Remove GDT dish from assembly when predicted winds >40 Knots and site not in use.

(1) Advantages

(a) Surface area of GDT reduced, lowers center of gravity.

(2) Disadvantages

(a) One (1) hour additional time to setup/teardown GDTs each time dishes are removed.

(b) Increased risk to personnel climbing atop QUADCONs daily to assemble/disassemble dishes.

c. Prevention Measure Removing system SLS and SRS from Foxtrot taxiway at the end of daily operations to prevent corrosion overnight.

(1) Advantages

(a) SLS/SRS sheltered from the weather in hangar.

(b) Reduced chances of corrosion related failure.

(2) Disadvantages

(a) Risk of traffic accidents trailering SLS/SRS daily.

(b) Increased wear on HMMVWs making additional trips between Foxtrot taxiway and hangar.

(c) One (1) hour additional time for setup prior to flight operations, Forty (40) minutes to de-configure upon completion of flight operations.

## APPENDIX G – RQ-21 WESTFIELD WEATHER MITIGATION PLAN

(d) Increased wear on SLS due to requirement for a dummy launch with towrope replacement every 50 launches, and increased compressor/generator hours.

### (3) Requirements

(a) Two (2) trips by one (1) HMMVW each movement.

(b) Four (4) Marines for setup/teardown.

d. Prevention Measure. Storing air vehicle and transport boxes within LME tent whenever possible.

### (1) Advantages

(a) Aircraft and transport boxes are always located within LME tent during maintenance

(b) Sheltered from precipitation.

### (2) Disadvantages.

(a) Negligible delays in configuring/de-configuring air vehicles due to space constraints within LME tent.

e. Prevention Measure Utilizing QUADCONs to protect expeditionary structures from damaging winds.

### (1) Advantages

(a) Heavy, hard sided structures can be placed around expeditionary structures to block high winds and provide more robust anchor points to prevent tent stakes from being pulled from the ground during gust conditions.

### (2) Disadvantages

(a) In the event of site re-organization, QUADCONs will need to be moved to reflect new expeditionary structure locations, requiring support from S-4 for heavy equipment.

## APPENDIX H – RQ-21 TIPS OPERATIONS

### 1001. Responsibilities

#### 1. S-2 Responsibilities and Timelines

##### a. Work day prior to flight operations:

- (1) Coordinate with aircrew for flight planning (UAC-directed).
- (2) Provide UAC and AVO all planning products requested with sufficient lead time.

##### b. The day of flight operations:

- (1) Attend the flight brief (brief as required – UAC directed).
- (2) Prepare and deliver preflight threat briefing according to instructor training objectives.
- (3) Provide required white cell injects as needed for sortie (UAC or instructor directed).
- (4) Check-out from the S-2 vault, secure, and prepare for transport the necessary hard drives for both the Tactical Intelligence Surveillance Reconnaissance (ISR) Processing System (TIPS) and Tactical Exploitation Group (TEG) NLT 120 minutes prior to scheduled launch.
- (5) Transport and complete installation of necessary hard drives into TIPS and TEG NLT 90 minutes prior to scheduled launch.
- (6) Turn on and test the TIPS and TEG NLT 75 minutes prior to scheduled launch.
  - (a) Install classified hard drives into the TIPS.
  - (b) Turn on TIPS and log in.
  - (c) Setup the correct IP for both the TIPS and TEG with the below steps applied to each item.
    1. Get user Internet Protocol (IP) from the Gateway Access Authorization (GAA) (coordinate with S6 Data Marines).
    2. Open “Network and Sharing Center”
      - a. Open interface for port connecting to Secret Inter Protocol Routing (SIPR) Wide Area Network (WAN) Service Module (WSM)
      - b. Input user IP and subnet mask into port settings
    3. Open “TIPS Manager” on TIPS
      - a. Click dropdown menu on port that connects to SIPR WSM.
      - b. Select the appropriate user IP for each system.

#### 2. S-6 Responsibilities and Timelines

##### a. Work day prior to flight operations (e.g. Friday in event of Monday flight):



## APPENDIX H – RQ-21 TIPS OPERATIONS

- (1) Coordinate with aircrew for flight planning (UAC-directed).
- (2) Ensure GPS and Communication Security (COMSEC) keys are acquired and available for the flight.
- (3) Identify the radio and communication requirements needed for the execution of the sortie.
- (4) Ensure the TIPS is setup correctly IAW the TIPS operating manual and the below steps.

(a) Stage all cases in appropriate locations.

1. Ensure the cases are positioned in close enough proximity to the Unmanned Aerial System (UAS) Ground Control Station (GCS) and the SIPR infrastructure to make the required connections.

2. Ensure the case is positioned within 12-foot run of cable from the power source.

3. Position the transit case on a flat, level surface.

4. Allow at least 12 inches of ventilation space behind the rear of the case.

5. Ensure the Uninterruptable Power Supply (UPS) is turned on.

(b) Inside the GCS, install both Communications Cases (“Comm case”).

1. Unhook the rear and front lids.

2. Provide power from the UPS to both Comm cases (power is plugged into rear panel port, top left with 3 prongs).

3. Insert the Army Navy Portable Radio Communication 117G (AN/PRC-117Gs) into the Comm cases, ensuring that they are snug and the power is connected.

4. Connect the two special purpose cables to the AN/PRC-117G. The left cable must be connected to the data port of the 117G. The right cable must be connected to the antenna port.

5. Preferably, stack both comm cases on top of each other. They should be centered under the table between the AVO and UAC positions.

(c) Install the Processing Case and Intercom System (ICS) case.

1. Connect the UPS to both the ICS and Processing case.

2. Connect the labeled special purpose cables from the Comm cases to the ICS case. It is important to insert the properly labelled cable into the specified port. Note: just because it fits DOES NOT mean it is the correct place.

3. The cases should be located to the right of the Comm Cases, stacked vertically with the Processing case on top of the ICS case.

4. **IMPORTANT NOTE:** TIPS hard drives must be inserted prior turning on the Processing case. If this is not done properly then the configurations inside the processing case will be zeroed, leaving the system useless.

(d) Install the four computer monitors.

1. Remove the base plate for the monitors, lying it down horizontally on the table.

2. Take center rod and screw it into the bottom of the base.

## APPENDIX H – RQ-21 TIPS OPERATIONS

3. Take each monitor support arms and screw them into the center rod.
4. Take each monitor and slide them/place them into their respective slots.
5. Connect all associated HDMI cables from monitors to their respective ICS HDMI ports.
  - a. Each screen **MUST** be connected to the correct port.
    - (1) Screen 1 connects to port 0.
    - (2) Screen 2 connects to port 1.
    - (3) Screen 3 connects to port 2.
    - (4) Screen 4 connects to port 3.
  - (e) Run a red CAT-5E cable from the Processing Case to the SIPR WSM, and from the processing case to the TEG into specific ports IAW manuals and diagrams.
  - (f) Run a red CAT-5E cable from the TEG to the SIPR WSM.
  - (g) Provide the user IP from the GAA to S2 for TEG and TIPS setup.
- (5) Conduct OPCHECK of satellite communications and networking equipment.
- b. The day of flight operations:
  - (1) Turn on and test the satellite communications and networking equipment to test the TIPS with the TEG.
  - (2) Attend the flight Brief (as required – UAC directed).
  - (3) Establish required communication architecture needed for execution of sortie and test for functionality.
  - (4) Conduct communications check between GCS and ODO 90 minutes prior to scheduled launch.
  - (5) Coordinate with S-2 and S-3 to provide the proper IPs for FMV dissemination.

# APPENDIX I – RQ-21 FUEL CALCULATIONS

RQ-21 FUEL CALCULATIONS										
	1HR	2HRS	3HRS	4HRS	5HRS	6HRS	7HRS	8HRS	9HRS	10HRS
1K	10	12	13	15	16	18	20	21	23	25
2K	10	12	13	15	16	18	20	21	23	24
3K	10	12	13	15	16	18	20	21	23	24
4K	10	12	13	15	16	18	20	21	23	24
5K	10	12	13	15	16	18	20	21	23	24
6K	10	12	13	15	17	18	20	21	23	24
7K	10	12	14	15	17	18	20	21	23	24
8K	11	12	14	15	17	18	20	22	23	25
9K	11	12	14	15	17	18	20	22	23	25
10K	11	13	14	16	17	19	21	22	24	25
		STANDARD DAY 32 DEGREES C								

## APPENDIX J – RQ-21 AIRCRAFT ACCEPTANCE

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### OOMA

1. Ensure that your password and pin is active prior to the scheduled flight.
2. Select the red screw driver.
3. Right click on the scheduled aircraft and scroll down to AADB.
4. Select the daily and turnaround tabs (on the bottom of the screen). Ensure that they are completed (completion times) and the scheduled flight does not exceed drop dead times.
  - a. Dailies are good for 72 hours total. If flown, it is good for 24 hours after the launch time, not to exceed a total of 24 hours.
  - b. Turnarounds are good for 24 hours unless flown and a new one is required upon engine shutoff.
  - c. The decision is up to the SFF if a new D/T is needed in the event minor maintenance is completed.
5. Verify XML file is signed as verified in the ADB (Tab 10).
  - a. The XML verification should be signed within 24 hours of scheduled flight by a CDI/CDQ/FSR.
  - b. It should include the date and version of XML. Example it should not indicate it's a PTA file.
6. Select Open Work Orders tab (across the top).
  - a. Within Open Work Orders tab, there are subtabs: technical directives, conditionals... you should familiarize yourself with changes. Look for major changes or things that can affect your flight. Things to pay close attention to are downing or Partial Mission Capable discrepancies and things that affect center of gravity or requires a weight and balance such as nose mod, PMU, fuselage, and CG bay.
7. Select Closed Work Orders tab (across the top).
  - a. Within Closed Work Orders tab, there are subtabs: technical directives, conditionals... you should familiarize yourself with changes. Look for major changes or things that can affect your flight. Things to pay close attention to are downing or Partial Mission Capable discrepancies and things that affect center of gravity or requires a weight and balance such as nose mod, PMU, fuselage, and CG bay.
8. Verify Inspection Near Due and Removal Near Due tabs (across the top).
  - a. If the aircraft has an inspection in the window or if it is scheduled to fly for more hours than left on the component, notify the SFF. Example, the 7 day is red or at -1 day or if the flight is for 6 hours and there is 5 hours left on the component.
9. Return to the main screen by selecting Acceptance for Flight tab (across the top).
  - a. On this screen you should be checking the notes such as fuel loads, associated equipment (GCS, SLS, SRS, Hot Seat, Basic Weight...) and system limitations.
10. Go through the associated subcomponents (GCS, SLS, and SRS) open MAFs, Closed MAFs, TDs, and inspections to component readiness.



APPENDIX K – RQ-21 RELEASING AIRCRAFT SAFE FOR FLIGHT CHECKLIST

AV: \_\_\_\_\_ SRS: \_\_\_\_\_ SLS: \_\_\_\_\_ GCS: \_\_\_\_\_ DATE / TIME: \_\_\_\_\_

INT

\_\_\_ \*SCREEN DAILY AND TURNAROUND CARDS FOR COMPLETION AND VALIDITY.

DAILY AV \_\_\_\_\_ SRS \_\_\_\_\_ SLS \_\_\_\_\_ GCS \_\_\_\_\_

TURNAROUND AV \_\_\_\_\_ SRS \_\_\_\_\_ SLS \_\_\_\_\_

\_\_\_ VERIFY AIRCRAFT AGAINST THE FLIGHT SCHEDULE.

\_\_\_ VERIFY XML FILES ARE CORRECT ON MAF AND LOG SHEET.

\_\_\_ \*SCREEN OPEN MAF SECTION TO ENSURE THERE ARE NO OUTSTANDING DOWNING DISCREPANCIES.

AV \_\_\_ SRS \_\_\_ SLS \_\_\_ GCS \_\_\_

\_\_\_ \*SCREEN LAST TEN FLIGHTS CLOSED MAF SECTION.

AV \_\_\_\_\_ SRS \_\_\_\_\_ SLS \_\_\_\_\_ GCS \_\_\_\_\_

\_\_\_ \*REVIEW THE AIRCRAFT AND ENGINE LOG. VERIFY ALL HIGH TIME/SPECIAL/SCHEDULED/ ETC. ARE WITHIN ALLOWABLE TOLERANCES FOR SCHEDULED FLIGHT DURATION. VERIFY ASSOCIATED MAPS TO VERIFY THE LOG SHEETS AND TRACKERS ARE ALSO UPDATE AND PRESENT.

AV \_\_\_ SRS \_\_\_ SLS \_\_\_ GCS \_\_\_

\_\_\_ VERIFY APPROPRIATE AMOUNT OF FUEL HAS BEEN LOADED INTO AIRCRAFT AND FUEL LOG. VERIFY A GOOD SAMPLE HAS BEEN TAKEN.

\_\_\_ VERIFY W&B OF AIRCRAFT IS UP TO DATE WITH CURRENT CONFIGURATION THAT IS BEING FLOWN.

\_\_\_ \*SCREEN TD SECTION TO VERIFY GEAR HAS NO DOWNING TDS.

AV \_\_\_ SRS \_\_\_ SLS \_\_\_ GCS \_\_\_

\_\_\_ COMPLETION OF PART “A”

\_\_\_ BLOCK 1: AV TAIL NUMBER

\_\_\_ BLOCK 2: RQ-21

\_\_\_ BLOCK 3: VMU-3

\_\_\_ BLOCK 4: N/A

\_\_\_ BLOCK 5: JP5/QTY FROM FUEL LOG

\_\_\_ BLOCK 6: 50:1 (FUEL OIL MIXTURE)

\_\_\_ BLOCK 7: DATE ENTERED UPON SIGNING FOR AIRCRAFT

\_\_\_ BLOCK 8: ENTER COMPONENTS INTENDED FOR USE DURING FLIGHT AV WEIGHT IS CALCULATED FROM LAST W&B AND FUEL ADDED

\_\_\_ BLOCK 9: VERIFY A QUALIFIED PLANE CAPTAIN HAS SIGNED

\_\_\_ BLOCK 10: RELEASE AIRCRAFT SAFE FOR FLIGHT (MUST BE DESIGNATED BY CO)

\_\_\_ BLOCK 11: UAC SIGNS FOR AV AND ENTERS DATE IN BLOCK

\*\*\*HOT SEAT\*\*\*

\_\_\_ HOT SEAT IS CONDUCTED BY OFF-GOING UAC SIGNING BLOCK 10 AND ONCOMING UAC SIGNING BLOCK 11. ENSURE “HOT SEAT” IS WRITTEN IN BLOCK 8.

\*\*\*ITEMS MARKED WITH A RED ASTERISK ALSO APPLY TO GROUND EQUIPMENT\*\*\*

# APPENDIX L – RQ-21 RISK ASSESSMENT WORKSHEET

Event Date:		Phantom 51			Phantom 52			Phantom		
Schedule Writer:		UAC	JAC	INST	AVO	AVO	INST	AVO	INST	AVO
DOSS Rep:										
<p>CO: <u>Schedule Writer's Risk Assessment (48hr)</u></p>										
<p>1. Mission Type</p> <p>Low= Squadron / MAGTF Med= Non-MAGTF Frago without prior detailed coordination</p> <p>2. Mission Planning Time - Flight Schedule publication to takeoff time</p> <p>Low= &gt; 3 hrs prior to takeoff Med= &lt; 3 hrs prior to takeoff</p> <p>3. Brief Time</p> <p>Low= Adequate time for aircrew to stabilize circadian rhythm</p> <p>Med= 2300-0300 and/or insufficient time to stabilize circadian rhythm</p>										
<p>4. Crew Rest</p> <p>Low= &gt; 10 hrs scheduled Med= 8-10 hrs High= &lt; 8 hrs</p> <p>5. Crew Day</p> <p>Low= &lt; 12 hrs Med= 12-14 hrs High= &gt; 14 hrs</p> <p>6. Aircrew Factors - include all aircrew regardless of crew position</p> <p>a. T&amp;R Proficiency</p> <p>Low= Has flown event within the listed early interval</p> <p>Med= Outside proficiency interval</p> <p>High= Initial event with deferral of flight</p> <p>b. Flight Currency</p> <p>Low= Crew Member is current IAW NATOPS crew req's for &lt; 45</p> <p>Med= SNM is current IAW NATOPS crew req's for &gt; 45</p> <p>High= SNM is current IAW NATOPS crew req's for &gt; 90</p>										
<p>Overall Schedule Writing Process Risk Assessment - Route with Flight Schedule</p> <p>Missing Notes: This does not change the risk assessment above but serves to notify the chain of command.</p>										
<p>Department of Safety and Standardization (DOSS) Risk Assessment (24hr)</p> <p>1. Review of Schedule Writer's Risk Assessment</p> <p>Yes/Colour with above</p> <p>2. Does mission require a deviation from the SOP/ST/10/NATOPS/IRAP? (Do not include items that have been previously mitigated to low through SOP / R&amp;I)</p> <p>Low= No Med= Yes</p> <p>3. Two Qualified AVO's on the crew?</p> <p>Low= Yes Med= No</p> <p>4. Planned Task (ops / Electronic Line of Sight Issues)?</p> <p>Low= No Med= Yes</p> <p>5. Actual No Comm. Handoff Planned?</p> <p>Low= No Med= Yes</p> <p>6. Are flights being conducted from a familiar and safe location?</p> <p>Low= Yes / No, but Site Survey and Course Rules/COA Brief has been scheduled to be completed prior to flight</p> <p>Med= No and site survey or course rules/COA brief has not been scheduled to be completed prior to flight</p> <p>7. Airspace and Flare Deconfliction and Integration plan</p> <p>Low= Approved airspace with no other aircraft or shared airspace with positive or procedural control</p> <p>Med= Shared airspace without positive or procedural control, unrestricted airspace, or uncontrolled airspace</p>										
<p>8. NATOPS Qualified and current Flight Physical - Documented in NATOPS Jacket</p> <p>Low= NATOPS paperwork is current and complete to include instructor designations. Paperwork can be submitted with the flight schedule for signature.</p> <p>Med= Missing NATOPS Jacket.</p> <p>Overall DOSS Risk Assessment - After Deliberate ORM Completed below</p>										

## L-2

Enclosure (117)



N-1

Enclosure (117)



APPENDIX N – RQ-21 MISSION REPORT (MISREP)  
MISSION REPORT (MISREP)

**Date:**  
**UAC/SIGNER:**  
**INSTRUCTOR(s):**  
**AVO(s):**  
**Flight Times (Scheduled/Actual):**  
**AV Tail:**  
**Launcher:**  
**Call-sign:**  
**Range:**  
**Mission:**

**COMMENTS AND CONCERNS**

**Safety:**

**Operations:**

**Intel:**

**Maintenance:**

**Communications:**

- 
- CRP Check:
  - o Freqs loaded: Front \_\_\_\_\_ Back \_\_\_\_\_
  - o Comments:

LASER FIRING REPORT

Time of Firing	Mission Commander	User Name	Type of Laser	# Firings	Range Name	Location (GRID)	HDG	Known Ground Personnel

BLUE / OTHER AIR PERFORMANCE

# APPENDIX O – RQ-21 EXTERNAL FLIERS CHECKLIST

External Flyer's Name: \_\_\_\_\_ Rank: \_\_\_\_\_

MSHARP Audit		
	Current: Circle One	Expiration
Flight Physical	Yes      No	
NATOPS Check (6100)	Yes      No	
CRM Check (6101)	Yes      No	
EP/System Limits Test	Yes      No	
Designations	Required? Circle One	Date received:
UAC	Yes      No	
BIP	Yes      No	
IDFI	Yes      No	
CASI	Yes      No	
SCARI	Yes      No	
WTO	Yes      No	
WTI	Yes      No	
CRMF	Yes      No	
CRMI	Yes      No	
ANI	Yes      No	
NI	Yes      No	
NE	Yes      No	
Authorized to Fly Letter	Verified By: _____	Signature: _____
R&I's Reviewed and Signed	Verified By: _____	Signature: _____
NATOPS Changes	Verified By: _____	Signature: _____
Course Rules Brief	Date received	_____

ODO Verified Before First Flight: