



UNITED STATES MARINE CORPS
2D MARINE AIRCRAFT WING
II MARINE EXPEDITIONARY FORCE
FLEET MARINE FORCES
POSTAL SERVICE CENTER BOX 8050
CHERRY POINT, NC 28533-0050

IN REPLY REFER TO:

5800

CG

JUN 29 2022

FIRST ENDORSEMENT on (b)(6), (b)(7)c, (b)(3) 5800/IO of 14 Jun 22

From: Commanding General, 2d Marine Aircraft Wing, FMF
To: Files

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT
OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

1. The findings of fact, opinions and recommendations of the investigating officer are approved. The investigation is closed.
2. On 18 March 2022, an MV-22B from Marine Medium Tiltrotor Squadron 261 (VMM-261), call sign "Ghost 31," crashed into the steep side of a valley near Bodø, Norway during Exercise COLD RESPONSE. The mishap resulted in the tragic and untimely deaths of Corporal Jacob M. Moore, Gunnery Sergeant James W. Speedy, Captain Ross A. Reynolds, and Captain Matthew J. Tomkiewicz.
3. Any accident that results in the death of a Marine demands an investigation that is both exhaustive and transparent. In order to achieve this in the aftermath of the Ghost 31 mishap, I appointed two highly-experienced investigating officers. (b)(3), (b)(6), (b)(7)c has already commanded a squadron and is currently slated to command a Marine Aircraft Group. He was assisted by (b)(3), (b)(6), (b)(7)c an MV-22B pilot with extensive tactical knowledge of the aircraft who has served as both a squadron operations and maintenance officer. Both investigating officers are Weapons and Tactics Instructors. They traveled to Norway to inspect the crash site, reviewed hundreds of pages of documents and conducted extensive interviews. During their investigation, they looked closely at aircrew readiness, aircraft maintenance, squadron planning and procedures, and external and environmental factors such as weather. Lastly, they carefully reconstructed the final moments of the flight in order to reach conclusions about what exactly happened to Ghost 31, and why. They produced a very thorough and insightful investigation.
4. The investigation focused first on causal factors for the mishap. A causal factor is an error that can be directly tied to the accident and without which the accident would not have occurred. The investigation shows, from the recovered video and flight data, that the causal factor for the Ghost 31 mishap was pilot error. Though we cannot determine which pilot was at the controls, it is clear that the aircraft made a series of maneuvers through the Gråtådalén Valley that caused a loss of altitude, airspeed, and turning-room from which Ghost 31 was unable to recover.

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5. The investigation also explored five other factors to determine if they contributed to the mishap: weather and environmental factors, procedures for low-altitude training, errors in maintenance paperwork, inexperience in mountainous environments, and the use of recording devices. While there were errors of commission and failures to adhere to procedure, none of the five factors investigated were causal or could reasonably be considered contributory.

a. *Weather and environmental factors.* Adverse weather - including high winds, blowing snow and freezing rain - made it impossible for search-and-rescue personnel to reach the crash site in the hours after they located the wreckage of Ghost 31. The investigative team initially surmised that similar weather may have played a role in the crash itself. The evidence later proved this was not the case. Video footage recovered from the site shows that the weather in the Gråtådal Valley immediately prior to the mishap featured visibility greater than five miles and scattered clouds well above the altitude at which Ghost 31 was flying. There are indications of an approximately 24-knot tailwind just before the accident. While it is possible that this tailwind adversely affected the turning performance of the aircraft, similar winds were experienced the previous day by an MV-22B flight that flew through the same valley without incident. It is the opinion of the investigating officers that weather was not a significant factor in this mishap, and I concur.

b. *Procedures for scheduling and authorizing low-altitude training (LAT).* Both the Training and Readiness Manual and a 2d Marine Aircraft Wing order establish procedures for scheduling and authorizing LAT. VMM-261 did not follow all of these procedures while deployed to Norway for COLD RESPONSE. In particular, the squadron scheduled LAT in areas not officially designated for that purpose, and did not set minimum altitudes for some LAT flights. In light of these facts, the investigating officers make several recommendations that could improve how LAT for the MV-22B is defined, planned and scheduled across the Marine Corps. Although these recommendations could play a role in preventing future mishaps, there is no evidence to suggest that the squadron's failure to follow LAT procedures had any impact on the Ghost 31 mishap. Even when required administrative procedures were not scrupulously followed, VMM-261 safely carried out LAT in Norway when those evolutions were scheduled and authorized by the commander. It would be speculation to suggest that a failure to properly schedule LAT on other days influenced or impacted the decision by the pilots of Ghost 31 to conduct LAT on a flight when it was neither scheduled nor authorized.

c. *Administrative errors in maintenance paperwork.* The investigating officers carefully examined the maintenance performed on the mishap aircraft in the days, weeks and months prior to the accident. They found the aircraft was functionally capable of performing the mission, and that there is no evidence of any catastrophic component failure that might have contributed to the crash. There were numerous administrative discrepancies on the maintenance paperwork, such as missing signatures and other

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documentation errors. These errors were likely the result of limited computer and printer assets in the deployed environment. Nevertheless, in **every** instance where a signature or comment was missing from a document, a later entry establishes that the maintenance in question was properly conducted and annotated. I have no doubt the Ghost 31 aircraft was safe for flight, and that maintenance malpractice did not play a role in the mishap.

d. *Inexperience in mountainous terrain.* Aviators who are stationed in eastern North Carolina have fewer opportunities to fly in mountainous terrain than their counterparts on the West Coast. The investigation recommends that squadrons deploying to Norway or other mountainous areas pursue pre-deployment opportunities to cover this potential training gap. In this case, VMM-261's pilots completed an additional tailored training syllabus prior to Exercise COLD RESPONSE that considerably exceeded the requirements of the Training and Readiness Manual. While it is possible that inexperience in the mountains played a role in the Ghost 31 mishap, it is clear the squadron took every reasonable step to mitigate that possibility.

e. *Use of unauthorized personal recording devices and absence of official recording devices.* A personal GoPro device was found at the crash site, and the recovered footage shows it was in use as the aircraft conducted low-altitude maneuvers in the Gråtådal Valley. Such devices are prohibited on grounds that they can incentivize risk-taking and serve as a distraction; that **may** have been the case with Ghost 31. But the investigating officers raise an important corollary: if an unauthorized device could contribute to risky decisions, it is very likely that the mandatory employment of a video and voice recording system provided by the Marine Corps would have the opposite effect. Unfortunately, the MV-22B does not yet possess such a capability. The investigation recommends that this deficiency be remedied as quickly as possible, by whatever means are available, and I wholeheartedly concur.

6. The Marine Corps aviation community will utilize the findings of this investigation to make us better in both practice and execution. On behalf of the entire 2d Marine Aircraft Wing, I extend my deepest condolences to the families of our fallen Marines. I hope this investigation will provide some reassurance of the efforts put forth to discover what happened to their loved ones, why it happened, and what steps are being taken to reduce the possibility of such mishaps in the future.



M. S. CEDERHOLM

Copy to:
Casualty Branch
DCA
CG, II MEF
CO, MAG-26
CO, VMM-261
COMMSTRAT



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IO

JUN 14 2022

From: (b)(3), (b)(6), (b)(7)c USMC
To: Commanding General, 2d Marine Aircraft Wing, II MEF, FMF
Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE
Ref: (a) JAGINST 5800.7G
(b) NAVMC 3500.14E Training and Readiness Program Manual
(c) NAVMC 3500.11F Ch 1-4 MV-22B Training and Readiness Manual
(d) CNAF M-3710.7
(e) WgO 3710.38D 2d MAW Flight Operations SOP
(f) GruO 3710.32B MAG-26 Flight Operations SOP
(g) SqdnO 3710.1B VMM-261 Flight Operations SOP
(h) NTRP 3-22.4-MV22B Naval Aviation Technical Information Product
(i) 2d MAW Portable Electronic Device Policy
(j) MAG-26 Portable Electronic Device Policy
(k) COMNAVAIRFORINST 4790.2D
(l) A1-V22AB-NFM-000 MV-22B NATOPS 15 Jan 2020
(m) NTTP 3-22.5 MV-22B Tactical Pocket Guide
(n) NTTP 3-22.3 MV-22B Air Naval Tactics, Techniques, and Procedures
Encl: (1) Appointment Ltr from CG, 2d MAW, dtd 23 Mar 22
(2) Extension Ltrs
(3) VMM-261 18 Mar 22 COLD RESPONSE Flight Schedule
(4) Capt Tomkiewicz NATOPS Jacket
(5) Capt Tomkiewicz Logbook
(6) Capt Tomkiewicz Aircrew Performance Record Summary
(7) Capt Reynolds NATOPS Jacket
(8) Capt Reynolds Logbook
(9) Capt Reynolds Aircrew Performance Record Summary
(10) Cpl Moore NATOPS Jacket
(11) Cpl Moore Logbook
(12) Cpl Moore Aircrew Performance Record Summary
(13) GySgt Speedy NATOPS Jacket
(14) GySgt Speedy Logbook
(15) GySgt Speedy Aircrew Performance Record Summary
(16) Interview Summary: (b)(3), (b)(6), (b)(7)c
(17) VMM-261 Personnel Interviews
(18) VMM-261 COLD RESPONSE Training Syllabus
(19) VMM-261 Standardization Board Minutes
(20) MV-22B Academic Lecture 2610, Low Altitude Tactics I (excerpts)
(21) VMM-261 Schedule Validation Report: 18 Mar 22 Schedule
(22) VMM-261 Risk Assessment Worksheet: GT31 / 18 Mar 22
(23) VMM-261 Operations Duty Officer Brief: GT31 / 18 Mar 22
(24) VMM-261 Operations Duty Officer Logbook for 18 Mar 22
(25) VMM-261 GT31 Mission Brief 18 March 22
(26) VMM-261 COLD RESPONSE Flight Schedules (1/5/17 March 22)
(27) VMM-261 GT31 Mission Brief 17 Mar 22
(28) Norwegian Air Force Route Authorization Email

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- (29) GT31 Flight Plan Submissions, 18 Mar 22
- (30) LAT Flight Recreations
- (31) NAOC COLD RESPONSE Flight Safety Brief
- (32) NAOC COLD RESPONSE Flight Safety Brief Training Record
- (33) 2d MAW COLD RESPONSE Weather Cancellation Tracker
- (34) BUNO 168330 KVADR Data Recorder Record: 18 Mar 22
- (35) BUNO 168330 KVADR Data Recorder Record: 17 Mar 22
- (36) Norwegian Air Traffic Control Track Data, Ghost 31, 18 Mar 22
- (37) GT31 Recovered Video Footage, GoPro Camera (still images)
- (38) Fleet Support Team Flight Recreation for Mishap Flight
- (39) Interview Summary: Search and Rescue Aircrew, 330 Squadron
- (40) 330 Squadron Mission Report (translated), 18 Mar 22
- (41) BUNO 168330 Scheduled Inspections Report
- (42) BUNO 168330 NALCOMIS OMA Misc History Report
- (43) BUNO 168330 Flight Record
- (44) BUNO 168330 Electronic Acceptance Sheet - 18 March 2022
- (45) BUNO 168330 Safe For Flight Screening Checklist
- (46) VMM-261 ASM Qual/Cert/License/Medical Cross-Tab Report
- (47) Discrepancy Work Orders, MCN: 28QT7KX, 28T088A, 28T0883, 28T088B
28T0888
- (48) BUNO 168330 Turnaround / Daily Inspection Maintenance Record 18
March 2022
- (49) (b)(3), (b)(6), (b)(7)c QCL/QPT ASM Report: Plane Captain Designation
- (50) BUNO 168330 Active Work Order Query, MCN: 28T887
- (51) Completed Work Orders, MCN: 28T08E9, 28T08E8, 28T08EH, 28T08CM,
28T08C1, 28T08D3, 28T088C
- (52) BUNO 168330 Historical Work Order Query
- (53) FST Engineering Assessment
- (54) MWSS-272 Bodø Fuel Test Results
- (55) Mishap Site Photos
- (56) Glossary of Acronyms and Terms

Executive Summary

1. On 18 March 2022, an MV-22B Osprey with Marine Medium Tiltrotor Squadron 261 (VMM-261), call-sign Ghost 31 (GT31), departed from Bodø, Norway on a training flight in support of Exercise COLD RESPONSE 22. There were four Marines aboard: Captain Matthew J. Tomkiewicz, the aircraft commander; Captain Ross A. Reynolds, the co-pilot; Corporal Jacob M. Moore, the crew chief; and Gunnery Sergeant James W. Speedy, the aerial observer.
2. GT31 returned to base for fuel without incident after conducting local area familiarization flights and confined area landings to the north of Bodø. After re-fueling, GT31 departed on an approved flight plan in clear conditions to the south of Bodø. GT31 maintained voice communications with Norwegian air traffic control until 1510 local time, and remained in radar contact until 1538 when the track deviated to the north in the vicinity of the airport at Brønnøysund. GT31 contacted two additional Norwegian airports to advise of transiting their airspace northbound. The last noted air traffic control position for GT31 was N66 41.23 / E014 10.53 at an altitude of 2900 feet above mean sea level at 1619L hours. Through analysis of flight planning products and aircraft data, it is estimated that GT31 entered the Gråtådal Valley at 1622L. It is estimated that the aircraft impacted the eastern side of the valley at approximately 1623L. The crash resulted in the total loss of the aircraft and the death of all four Marines aboard.

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3. It is assessed that the mishap was the result of pilot error. Specifically, analysis of the recovered aircraft data shows that GT-31, while maneuvering within the Gråtådal Valley, made a left turn at 68 degrees angle-of-bank. The steepness of this turn resulted in a loss of both airspeed and altitude when GT 31 over corrected with a right turn in excess of 80 degrees from which the aircraft could not recover. It is not known which pilot had control of the aircraft at the time.

Preliminary Statement

1. In accordance with reference (a), this report marks completion of the command investigation conducted into the fatal aviation mishap involving an MV-22B, BUNO 168330, during exercise COLD RESPONSE in Bodø, Norway.

2. Both the Investigating Officer (IO) and Assistant IO (AIO) are Weapons and Tactics Instructors. The IO has commanded a squadron and is slated for command of a Marine Aircraft Group. The AIO is an MV-22B pilot with extensive tactical knowledge of the airframe having served as both a squadron operations and maintenance officer.

3. The IO collected all reasonably available evidence and met each convening authority directive found in enclosure (1). Of note, the IO decided not to delay conclusion of the investigation in order to wait for a toxicology report from the Armed Forces Medical Examiner. Based on interviews, along with three hours of uneventful flight prior to the mishap, there is no reason to believe that any of the Marines aboard GT31 were impaired by alcohol or illicit substances.

4. The 2d Marine Aircraft Wing (2d MAW) Office of the Staff Judge Advocate (OSJA) provided legal support.

5. Prior to questioning, the IO advised witnesses of the purpose of the JAGMAN investigation and reasons for apparent duplication of effort with the Aviation Mishap Board (AMB). All personnel cooperated fully with this investigation. Since none of the personnel interviewed were suspected of an offense under the Uniform Code of Military Justice, warnings pursuant to Article 31(b) were not necessary.

6. The IO and AIO conducted extensive analysis of data recovered from mission recorders found at the crash site. Additionally, the IO requested a flight recreation based on flight data, recorded mission time, and modeled atmospheric from the analysts and engineers of the MV-22B Fleet Support Team (FST) in Patuxent River, Maryland.

7. Line-of-duty determinations were made separately pursuant to section 0212 of reference (a). All four Marines involved in the mishap were found in the line of duty.

8. Enclosures (1) through (56) contain material pertinent to this investigation. All enclosures are original or true and accurate copies of the documents they represent. The enclosures, additional photos, and all full-motion video associated with the investigation will remain on file with the 2d MAW OSJA.

9. All times in this report are local Norway time unless otherwise indicated. At the time of the mishap, the local time in the vicinity of Bodø was UTC+1.

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10. All photographs listed in the enclosures were either taken by 2d MAW Strategic Communications Marines or Norwegian search-and-rescue (SAR) personnel. Norwegian SAR aircrew provided photos and video of the mishap site taken the day after the mishap.

11. Video footage from a personal "GoPro" device found at the crash site showed approximately twelve minutes and thirty-six seconds of flight time prior to the mishap. This video footage was given to the IO by Norwegian authorities via the AMB.

12. Original items of physical evidence are in the custody of the AMB aboard MCAS New River, NC.

13. References (b) and (d) provide the specific definitions used for human factors, currency, proficiency, crew resource management, and other relevant considerations.

14. The IO focused on four areas while investigating facts pertaining to the mishap on 18 March 2022: 1) aircrew readiness and/or ability to complete the assigned mission; 2) aircraft readiness and/or ability to complete the assigned mission; 3) procedures relevant to the mishap; and 4) external/environmental factors. The IO/AIO worked top-down through the evidence and data, first investigating potential flaws in training pipelines and aircraft readiness before moving to the chain-of-command and then down to the mishap crew. The investigative team employed this methodology to gain the most comprehensive understanding of all factors associated with the mishap.

15. The IO's reviewed flight planning, briefing, and execution procedures designed to mitigate the dynamic arctic weather conditions and mountainous terrain of Norway. These included the Naval Service Training and Readiness (T&R) Manuals and tactics publications for MV-22B platforms, guiding documents from higher headquarters, flight operations briefs from the country of Norway, and a supplemental training syllabus designed at the squadron level that included specific procedures designed for the Norwegian environment. The review provided a comprehensive understanding of how the Marine Corps trains aviators for mountainous and cold weather operations and what measures tactical units took beyond the institutional minimums.

16. Aircrew readiness was researched with information derived from squadron interviews, Marine Sierra Hotel Aviation Readiness Program (MSHARP), review of the aircrew's Naval Air Training and Operating Procedures Standardization (NATOPS) jackets, and Aircrew Performance Records.

17. A limited review of data from the U.S. Naval Safety Center was conducted to gain a historical perspective on mishaps in mountainous regions. No historical mishaps were discovered that were closely correlated enough to be of use.

18. For aircraft readiness, the IO and senior maintenance representative reviewed digital and printed records from VMM-261 Advanced Skills Management (ASM), Naval Aviation Logistics Command Management Information System (NALCOMIS)/Optimized Organizational Maintenance Activity (OOMA), and interviews of squadron maintenance personnel.

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19. The IO obtained information concerning the local weather from the AMB, which consulted Norwegian experts who produced a rigorous model for the weather patterns on 18 March 2022.

20. The findings of fact are organized as follows: 1) summary of training and qualification for mishap aircrew to include flight time, aeromedical clearance, medical history, and human factors/personal stressors; 2) summary of the scheduling, planning, and mission briefing of the flight; 3) summary of the mishap aircraft's maintenance records; 4) the operational guidance and added measures employed to prepare for Cold Response; and 5) a summary of the mishap flight re-created from aircraft recorded data, viewing of flight recreations, and a brief timeline of SAR efforts to recover aircrew on 18 March 2022.

Findings of Fact

Part One: Training and Qualification of Mishap Aircrew

Captain Tomkiewicz (Aircraft Commander):

1. Captain Tomkiewicz was the aircraft commander for GT31. [Encl (3)]
2. On 18 March 2022, Captain Tomkiewicz was on active duty, executing "Duties Involving Flying - Operational" orders in the regular Marine Corps. [Encl (4)]
3. Captain Tomkiewicz was designated a Naval Aviator on 25 April 2019. [Encl (4)]
4. Captain Tomkiewicz completed undergraduate pilot training with a Navy Standard Score (NSS) of 52.7 and one unsatisfactory event. Captain Tomkiewicz's NSS is considered above-average. [Encl (4)]
5. Captain Tomkiewicz's sole unsatisfactory event occurred during the C4205 advanced syllabus event, where he had trouble with headwork and situational awareness. [Encl (4)]
6. Captain Tomkiewicz was designated a T2P (co-pilot) on 9 October 2019. [Encl. (4)]
7. On 18 March 2022, Captain Tomkiewicz held a current aeromedical certification to participate in aviation duties. The certification was valid through 30 June 2022. [Encl. (4)]
8. On 18 March 2022, Captain Tomkiewicz was not prescribed any medications by the military health system. [Encl. (17)]
9. Captain Tomkiewicz possessed a current MV-22B NATOPS qualification and associated open / closed book exams. These were valid through 28 February 2023. [Encl (4)]
10. Captain Tomkiewicz possessed a current Standard Instrument Rating which was valid through 31 July 2022. [Encl. (4)]

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11. On 18 March 2022, Captain Tomkiewicz was current with annual Emergency Egress, Water Survival, and Crew Resource Management (CRM) requirements for flight operations. [Encl. (4)]
12. Captain Tomkiewicz was designated a tiltrotor aircraft commander (TAC) on 9 February 2022. [Encl. (4)]
13. Captain Tomkiewicz was designated a TAC after 450.1 total flight hours with 159.1 MV-22B simulator hours. [Encl. (4), (5)]
14. Minimum flight hours to be designated a TAC is 500 hours, of which 10% may be accounted for with Type / Model / Series syllabus simulator time. This equates to minimum requirements of 450 flight hours and 50 MV-22B syllabus simulator hours to be designated a TAC. [Ref (d)]
15. A review of Captain Tomkiewicz's Aviation Performance Record history and squadron interviews indicated no enduring deficiencies as an MV-22B pilot. Captain Tomkiewicz was generally described as "solid" with average to above-average situational awareness. [Encl. (6), (17)]
16. Captain Tomkiewicz's TAC syllabus event aviation training forms described him as a little slow with aircraft checklists and requiring work on his CRM skills. CRM became a strength by the end of the syllabus along with knowledge, situational awareness, and risk management. [Encl. (6)]
17. Prior to the mishap, Captain Tomkiewicz had not reported any abnormal life stressors, nor had any events of significance been discussed during the preceding three months of VMM-261 Human Factors Councils. [Encl. (16), (17), (22)]
18. Captain Tomkiewicz's roommate did not report any abnormal sleep patterns from Captain Tomkiewicz prior to 18 March 2022. [Encl. (17)]
19. Captain Tomkiewicz logged completion of VMM-261's COLD RESPONSE low-altitude training (LAT) and mountain area training (MAT) simulator event on 2 February 2022. [Encl (5), (18)]
20. Captain Tomkiewicz was provided the Norwegian Air Operations Center (NAOC) Safety Brief on 21 February 2022. [Encl. (31), (32)]
21. Captain Tomkiewicz's 30/60/90-day total flight times on the date of the mishap were 18.6/29.7/32.9. [Encl. (5), (22)]
22. Captain Tomkiewicz's flight time on 18 March 2022 was 468.7 total hours, with 269.9 MV-22B hours. [Encl. (5)]
23. Captain Tomkiewicz's last fly date prior to the mishap was 17 March 2022, the day prior. [Encl. (5), (26)]
24. Captain Tomkiewicz's last emergency procedure simulator event was completed on 1 February 2022. [Encl. (5)]
25. Prior to 18 March 2022, Captain Tomkiewicz had conducted flight operations in Norway seven times. [Encl (5)]

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Captain Reynolds (Co-Pilot):

26. Captain Reynolds was the co-pilot for GT31. [Encl. (3)]
27. On 18 March 2022, Captain Reynolds was on active duty, executing "Duties Involving Flying - Operational" orders in the regular Marine Corps. [Encl. (7)]
28. Captain Reynolds was designated a Naval Aviator on 7 August 2020. [Encl. (7)]
29. Captain Reynolds completed undergraduate pilot training with an NSS of 50.4 and no unsatisfactory events. Captain Reynolds' NSS is considered average. [Encl (7)]
30. Captain Reynolds was designated as a T2P (co-pilot) on 1 March 2021. [Encl. (7)]
31. On 18 March 2022, Captain Reynolds held a current aeromedical certification to participate in aviation duties. The certification was valid through 31 March 2023. [Encl. (7)]
32. On the day of the mishap, Captain Reynolds was not prescribed any medications by the military health system. [Encl (17)]
33. Captain Reynolds possessed a current MV-22B NATOPS qualification and associated open / closed book exams. These were valid through 31 March 2023. [Encl. (7)]
34. Captain Reynolds possessed a current Standard Instrument Rating which was valid through 28 February 2023. [Encl. (7)]
35. A review of Captain Reynolds' Aviation Performance Record, along with squadron personnel interviews, indicated generally above-average performance with no specified enduring deficiencies as an MV-22B pilot. [Encl. (9), (17)]
36. On 18 March 2022, Captain Reynolds was current with annual Emergency Egress, Water Survival, and CRM requirements for flight operations. [Encl. (7), (21)]
37. Prior to 18 March 2022, Captain Reynolds had not reported any abnormal life stressors, nor had any events of significance been discussed during the preceding three months of VMM-261 Human Factors Councils. [Encl. (16), (17)]
38. Captain Reynolds' roommate did not report any abnormal sleep patterns from Captain Reynolds prior to 18 March 2022. [Encl. (17)]
39. Captain Reynolds logged LAT and MAT codes in accordance with the COLD RESPONSE training syllabus on 7 February 2022 while conducting his annual NATOPS evaluation. [Encl (7), (8)]
40. Captain Reynolds was provided the NAOC Safety Brief on 21 February 2022. [Encl. (31), (32)]
41. Captain Reynolds' 30/60/90-day total flight time on the date of the mishap were 6.8/17.8/17.8. No flights were logged between 10 December 2021 and 26 January 2022. [Encl (8), (22)]

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42. Captain Reynolds' flight time on 18 March 2022 was 280 total hours, including 91.4 MV-22B hours. [Encl (8)]

43. Captain Reynolds' last fly date before the mishap was 17 March 2022, the day prior. [Encl (8), (26)]

44. Captain Reynolds' last emergency procedure simulator event was completed on 8 February 2022. [Encl (8)]

45. Prior to 18 March 2022, Captain Reynolds had conducted flight operations in Norway five times. [Encl (8)]

Corporal Moore (Crew Chief):

46. Corporal Moore was the crew chief for GT31. [Encl. (3)]

47. On 18 March 2022, Corporal Moore was on active duty, executing "Temporary-Indefinite Crewmember Flight Orders" in the regular Marine Corps. [Encl. (10)]

48. Corporal Moore's "volunteer for flying duty" form was signed 29 January 2019. [Encl. (10)]

49. Corporal Moore was designated an MV-22B Crew Chief on 5 December 2019. [Encl. (10)]

50. On 18 March 2022, Corporal Moore held a current aeromedical certification to participate in aviation duties. The certification was valid through 31 December 2022. [Encl. (10)]

51. On 18 March 2022, Corporal Moore was not prescribed any medications by the military health system. [Encl (17)]

52. Corporal Moore possessed a current NATOPS qualification and associated open / closed book exams. These were valid through 28 February 2023. [Encl. (10)]

53. On 18 March 2022, Corporal Moore was current with annual Emergency Egress, Water Survival, and CRM requirements for flight operations. [Encl. (10), (21)]

54. A review of Corporal Moore's Aviation Performance Record indicated generally high situational awareness with occasional lapses of self-confidence and microphone-wind mitigation techniques during landing. [Encl. (12)]

55. Prior to 18 March 2022, Corporal Moore had not reported any abnormal life stressors, nor had any events of significance been discussed during the preceding three months of VMM-261 Human Factors Councils. [Encl. (16), (17), (22)]

56. Corporal Moore's roommate did not report any abnormal sleep patterns from Corporal Moore prior to the mishap. [Encl. (17)]

57. No specific COLD RESPONSE training events were mandated for enlisted aircrew. [Encl. (17), (18)]

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58. Corporal Moore's 30/60/90-day total flight time on the date of the mishap were 31.8/38.4/42.8. [Encl (11), (22)]

59. Corporal Moore's total flight time as of 18 March 2022 was 486.1 total hours, all of which were in the MV-22B. [Encl. (11)]

60. Corporal Moore's last fly date was 17 March 2022, the day prior to the mishap. [Encl. (11), (26)]

61. Corporal Moore's last emergency procedure simulator event was completed on 1 February 2022. [Encl (11)]

62. Prior to 18 March 2022, Corporal Moore had conducted flight operations in Norway eleven times. [Encl (11)]

Gunnery Sergeant Speedy (Aerial Observer):

63. Gunnery Sergeant Speedy was the aerial observer for GT31. [Encl. (3)]

64. On 18 March 2022, Gunnery Sergeant Speedy was on active duty, executing "Temporary-Indefinite Non-Crewmember Flight Orders" in the regular Marine Corps. [Encl. (13)]

65. Gunnery Sergeant Speedy's "volunteer for flying duty" form was signed 2 December 2020. [Encl. (13)]

66. Gunnery Sergeant Speedy was assigned to the MV-22B Aerial Observer / Gunner syllabus. [Encl. (14), (15), (21)]

67. Gunnery Sergeant Speedy had not completed the MV-22 Aerial Observer / Gunner Core Syllabus and was not NATOPS qualified, but was authorized to fly with a qualified crew chief instructor. Cpl Moore was a Basic Instructor Crew Chief. [Encl. (10), (13), (15), (21)]

68. On 18 March 2022, Gunnery Sergeant Speedy held a current aeromedical certification to participate in aviation duties. The certification was valid through 30 June 2022. [Encl. (13)]

69. On the day of the mishap, Gunnery Sergeant Speedy was not prescribed any medications by the military health system. [Encl (17)]

70. On 18 March 2022, Gunnery Sergeant Speedy was not current with annual Emergency Egress and CRM - Flight requirements. Gunnery Sergeant Speedy possessed a valid Water Survival training qualification and CRM - Ground training. [Encl. (13), (21)]

71. In order to log the CRM - Flight training event, the MV-22B Aerial Observer / Gunner syllabus requires the completion of a NATOPS evaluation, which occurs at the end of the Core Skill training phase. The Emergency Egress refresher is also conducted with the NATOPS check. [Ref (c)]

72. Prior to 18 March 2022, Gunnery Sergeant Speedy had not reported any abnormal life stressors, nor had any events of significance been discussed during the preceding three months of VMM-261 Human Factors Councils. [Encl. (16), (17), (22)]

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73. Gunnery Sergeant Speedy's roommate did not report any abnormal sleep patterns from Gunnery Sergeant Speedy prior to the mishap. [Encl. (17)]

74. No specific pre-COLD RESPONSE training events were mandated for enlisted aircrew. [Encl. (17), (18)]

75. Gunnery Sergeant Speedy's 30/60/90-day total flight times on the date of the mishap was 0/0/0. [Encl. (14), (22)]

76. Gunnery Sergeant Speedy's total flight time as of 18 March 2022 was 78.4 hours. [Encl. (14)]

77. Gunnery Sergeant Speedy's last fly date prior to the mishap was 4 November 2021. [Encl (14), (22)]

78. Gunnery Sergeant Speedy's last emergency procedure simulator event was completed on 20 September 2021. [Encl. (14)]

79. Prior to 18 March 2022, Gunnery Sergeant Speedy had not conducted flight operations in Norway. [Encl. (14)]

Part Two: Scheduling, Planning and Briefing of GT31 Mission

80. The four Marines aforementioned were scheduled to fly as GT 31 on 18 March 2022. [Encl (3)]

81. GT31 was assigned to conduct single-aircraft Confined Area Landings (CALs) and Air Logistics Support (ALS) to support on-call COLD RESPONSE tasking. [Encl. (3)]

82. The crew had the required proficiency to conduct the assigned missions and Training and Readiness Manual assigned events. [Encl. (3), (4), (6), (9), (12), (15), (21), (22)]

83. The composition of the GT31 crew met the requirements for planned flight operations for CALs and ALS. [Encl. (3), (4), (7), (10), (13), (21), (22), Ref (c)]

84. Captain Tomkiewicz was current and qualified to sign for the aircraft. [Encl. (3), (4), (5), Ref (b-g)]

85. The GT31 crew was afforded sufficient rest between completion of the previous day's flight events and the brief time for the mishap mission on 18 March 2022. [Encl. (3), (17), (22), (26), Ref (d)]

86. The 18 March 2022 VMM-261 flight schedule was validated in M-SHARP for anomalies. Annotations were made by the schedule writer consistent with common squadron practices. [Encl. (21)]

87. The 18 March 2022 VMM-261 flight schedule was digitally signed by the commanding officer and annotated as having been reviewed by representatives from the Operations, Maintenance, and Safety & Standardization departments. [Encl. (3), (16)]

88. The Risk Assessment Worksheet (RAW) was signed by the squadron commanding officer acknowledging Low Risk for the flight. [Encl. (22)]

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89. The crew was scheduled to conduct operations within the allowable standard crew day. [Encl. (3), Ref (d-g)]

90. Captain Tomkiewicz conducted a scheduled low-altitude tactics (LAT) event on 17 March 2022 along the same route utilized by GT31 on 18 March 2022. [Encl. (17), (26), (30), (35)]

91. The LAT profile flown on 17 March 2022 through the Gråtådal Valley, in vicinity of the next day's mishap location, was between 1800' - 2000' above mean sea level (MSL), 220 knots calibrated airspeed (KCAS), with angles of bank of approximately 55 degrees. Above ground level (AGL) altitudes varied between 575' and 1000'. [Encl. (30), (35)]

92. Tiltrotor LAT is defined as flight where the briefed intent is to conduct tactical flight where terrain avoidance is a significant factor. Tiltrotor LAT is further defined as the briefed intent to fly at or below 500' AGL in order to develop terrain avoidance skills. Tiltrotor LAT is composed of both low-level and contour flight profiles. [Ref (b)]

93. GT31 was not scheduled to conduct LAT on the date of the mishap. [Encl. (3)]

94. Unscheduled LAT is strictly prohibited. [Ref (b), (e)]

95. Tactical flight is not defined in the references. [Ref (b), (d-g)]

96. Low-level flight is defined as flight conducted at a selected altitude to minimize or avoid enemy detection or observation. Aircrews conducting low-level flight pre-select a route that generally consists of straight-line navigation, constant airspeed and constant altitude above mean sea level. [Encl. (20), Ref (b), (e)]

97. Low-altitude flight shall be conducted in restricted airspace, military operating areas, on military training routes, or other low-altitude training areas as designated by the Wing or Task Force commander. [Encl. (20), Ref (b), (e)]

98. The "Bravo" route is one of two navigation routes provided by the Norwegian Air Force in which aircraft may fly as low as 500' AGL. [Encl. (28)]

99. The "Bravo" route flown by GT31 was not designated a low-altitude training area by the Wing commander on 18 March 2022. [Encl (16), (17), (28)]

100. MV-22B pilots are instructed that reasons to conduct LAT can be classified as threat (enemy) considerations and weather. [Encl (20)]

101. Captain Tomkiewicz and Corporal Moore were qualified, proficient, and current to conduct LAT if properly scheduled on 18 March 2022. [Encl. (3), (4), (5), (6), (10), (11), (12), Ref (b), (c)]

102. Captain Reynolds was qualified and proficient to conduct LAT, but lacked currency due to not having flown LAT within the preceding 30 days prior to 18 March 2022. [Encl. (7), (8), (9), Ref (b), (c)]

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103. Gunnery Sergeant Speedy's APR contained an unsigned Day LAT designation letter. He was not listed as LAT-qualified according to his MSHARP qualification report. Unqualified personnel must fly with a proficient LAT Instructor. [Encl. (13), (15), Ref (b), (e)]

104. Corporal Moore was not designated a LAT Instructor. [Encl. (10)]

105. VMM-261 scheduled training events that included an intent to perform LAT on 1 March, 5 March and 17 March 2022. [Encl. (26)]

106. The flight schedules on 1, 5, and 17 March 2022 did not include a minimum altitude in accordance with ref (d). [Encl. (26)]

107. Of the 1, 5, and 17 March 2022 flight schedules, only the 17 March 2022 schedule indicated the low altitude training area to be utilized. [Encl. (26)]

108. GT31 was not scheduled to conduct mountain area training (MAT) on 18 March 2022. [Encl. (3)]

109. The purpose of mountain area training is to develop proficiency in day and night vision device (NVD) mountainous terrain operations. Aircraft landings shall be conducted at zones above 6000' DA and where mountainous terrain is a significant factor. [Ref (b)]

GT31 Mission Brief

110. The GT31 mission brief was conducted at 0900 local time on 18 March 2022. [Encl. (3), (17), (23), (24)]

111. GT31 was scheduled to fly from 1100 to 1800 hours for a total of 6.6 hours of flight time. [Encl. (3)]

112. The radar picture at approximately 0620 that morning displayed isolated areas of moisture along both the northern and southern portions of the planned route. The forecast for the duration of the mission called for "visual meteorological conditions," (VMC), meaning that the weather would be sufficient for the aircraft to maintain visual separation from the terrain and other aircraft. [Encl. (23)]

113. The weather model outlook for Bodø forecasted ceilings between 1400 feet for departure and 1600 feet for recovery with thunderstorms in the vicinity of the airfield. [Encl. (23)]

114. There were no warnings involving Significant Meteorological Information (SIGMETs) or Airman's Meteorological Information (AIRMETs) active at the time of the mission brief. SIGMETs and AIRMETs are used to warn pilots of potentially hazardous weather conditions. [Encl. (23)]

115. A 1000' ceiling with visibility at or greater than three statute miles is considered visual meteorological conditions (VMC), in which aircraft may execute flights under visual flight rules (VFR). Flights conducted under VFR conditions are done when aircraft have sufficient cloud layers and visibility to maintain separation from terrain and other aircraft. [Ref. (d)]

116. The weather minimums, as directed by the VMM-261 commanding officer, were a 1000-foot ceiling and three statute-mile visibility for airplane-mode

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operations. Below that aircrew were expected to operate in conversion mode, and were expected to operate in conversion mode to an altitude as low as the weather minimums for instrument approaches, similar to a helicopter. [Encl. (16), (17)]

117. The standard VMM-261 mission brief template includes a reminder to aircrew that "There is no mission in training worth compromising the safety of our Marines." [Encl. (23)]

118. The flight mission brief was conducted by Captain Tomkiewicz. [Encl. (17), (25)]

119. The mission brief contained visual depictions of the planned northern and southern routes, including map chips of individual flight legs which included terrain relief depictions via Digital Terrain and Elevation Data (DTED) and Minimum Safe Altitudes (MSAs). This provided enhanced terrain awareness as well as altitudes along the route which would provide at least 500' of clearance from terrain in case of an emergency. [Encl. (25)]

120. Captain Tomkiewicz briefed the risk to forces as "poor weather calls with confining terrain and icing." The mitigation was briefed as (a) in case of weather less than 5000' / 5sm at coastal airports, no inland LAT would be performed; (b) in case of weather less than 1000' / 3sm, flight would be in conversion mode only; and (c) weather less than 500' / 1sm would be a "no-go." [Encl. (25)]

121. "No Go" refers to conditions that would prevent the aircraft from launching. [Ref (n)]

122. The risk assessment provided in the brief by Captain Tomkiewicz on 18 March 2022 mirrored the briefed risk assessment annotated on the 17 March 2022 mission brief. [Encl. (25), (27)]

123. A digital copy of the risk assessment worksheet was filled out and marked as signed by Captain Tomkiewicz. Weather factors to mission were highlighted as "low risk" for weather greater than 1000' / 3mi visibility. The area of greatest risk was annotated by Captain Tomkiewicz as "FLIGHT IN MOUNTAINOUS TERRAIN IN POOR WX [WEATHER]." The mitigation measures were listed as "WX TRIGGERS TO NOT CONDUCT THAT FLIGHT PROFILE". [Encl. (22)]

124. Flight plans were submitted for GT31 along both the northern and southern routes of flight. The requested transit altitudes were listed as 1,500 feet above ground level. [Encl. (29)]

125. The southern route of flight was planned to require 6,700 pounds of fuel in order to land with VMM-261 standard operating procedure (SOP) fuel of 1,400 pounds. Planned takeoff fuel was 10,500 pounds. [Encl. (25), (30), Ref (g)]

126. The planned fuel remaining after completion of the southern route (3800 pounds above minimum landing fuel) equates to approximately 1 hour and 15 minutes of additional flight time available. [Encl. (25), (30), Ref (m)]

127. GT31 was planned for a transit altitude of 1000 feet above ground level. [Encl. (30)]

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128. The minimum safe altitudes along the route of flight were annotated between 2700 feet and 6100 feet above mean sea level. [Encl. (30)]

129. The route in vicinity of the mishap location was planned directly between checkpoints provided by the Norwegian Air Force. GT 31 planned no intermediate checkpoints along the intended route through the terrain. [Encl. (25), (30)]

130. Any planned flight below 1000 feet above ground level required a confirmation with the Norwegian Air Operations Center and either a face-to-face or video conference brief between the NAOC and the aircrew prior to launch. [Encl. (31)]

131. An exception to the requirement for a face-to-face brief existed for flights operating on an authorized route down to 500' AGL. [Encl. (28)].

132. GT31 did not conduct a low-altitude brief with the NAOC prior to executing their mission on 18 March 2022. [Encl. (17)]

133. The weather update brief with Bodø Air Operations (Lion Ops) was conducted by the Operations Duty Officer for the crew of GT31. [Encl. (17)]

134. On 18 March 2022, 19 fixed-wing USMC flights supporting COLD RESPONSE cancelled operations due to winds exceeding take-off minimums for ejection seat envelopes. [Encl (33)]

Part Three: Maintenance History for the Mishap Aircraft (BUNO 168330)

135. The mishap aircraft was an MV-22B Osprey, Aircraft 14, BUNO 168330, assigned to VMM-261. [Encl (42)].

136. The aircraft was inducted into Planned Maintenance Interval (PMI) involving extensive airframe and aircraft systems inspections, component replacements, and technical directive integration at MCAS Cherry Point from 13 February 2021 through 8 November 2021. [Encl (42)]

137. The aircraft was transferred from VMM-365 to VMM-261 on 18 November 2021. [Encl (42)]

138. On 18 March 2022, the aircraft had 1685.7 flight hours on the airframe prior to the mishap flight. [Encl (41)]

139. The aircraft had 222.0 flight hours remaining prior to the next Phase Inspection. [Encl (41)]

140. The aircraft was flown nine times in Norway, including twice on 17 March 2022, for a total of 6.6 flight hours. [Encl (43)]

131. The aircraft was released as safe for flight (SFF) on 18 March 2022 by (b)(3), (b)(6), (b)(7)c [Encl (44)]

142. (b)(3), (b)(6), (b)(7)c used a SFF checklist to safe the aircraft prior to releasing the aircraft for flight on 18 March 2022. [Encl (45)]

143. (b)(3), (b)(6), (b)(7)c is qualified to safe an aircraft for flight as of 21 May 2020. [Encl (46)]

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144. On 18 March 2022, the aircraft had five open Partial Mission Capable (PMC) discrepancies (MCN: 28QT7KX, MCN: 28T088A, MCN: 28T0883, MCN: 28T088B, MCN: 28T0888) which contained documentation errors. [Encl (47)]

145. Work orders are required to have the number of the toolbox used, and the signature of the technician that performed the tool container inventory to verify that all tools were accounted for. (par. 15.3.8.1.B) [Ref. (k)]

146. Work orders are also required to have the name of the assigned worker and the toolbox number utilized annotated under the "Worker Hours" section on the form. (par. 15.3.8.2.C) [Ref. (k)]

147. Work orders are required to have in-process inspection comments annotated on the form to document the type of work that was accomplished. Required comments include, but are not limited to, functional testing, adjusting, assembly of components, servicing, installation, or witnessing application of torque during installation. (par. 7.1.4.b.2) [Ref (k)]

148. Work orders are required to document that the work center supervisor or Collateral Duty Inspector (CDI) and the technician assigned to the task conducted a joint inventory and inspection of the tool container and its contents prior to starting work and at each work stoppage. (par. 10.12.3.6.2) [Ref (k)]

149. On WO MCN: 28QT7KX (Right Outboard Vortex Generator Removed and Discarded in Flight Line), only (b)(3), (b)(6), (b)(7)c signed under the "Worker Hours" section on the work order. The Worker and the CDI in-process comments for the maintenance performed were not annotated. [Encl. (47)]

150. (b)(3), (b)(6), (b)(7)c is a qualified Airframes Collateral Duty Quality Assurance Representative (CDQAR). [Encl. (46)]

151. On WO MCN: 28T088A, the Right Green Blade Temperature Sensor F (P) was troubleshot on 13 March 2022 by (b)(3), (b)(6), (b)(7)c and (b)(3), (b)(6), (b)(7)c. The CDI in-process comments for the maintenance and reinstallation of the right-hand spinner dome were not annotated. [Encl. (47)].

152. (b)(3), (b)(6), (b)(7)c and (b)(6), (b)(7)c, (b)(3) are not CDIs and do not have authority to make CDI in-process comments. [Encl. (46)]

153. The reinstallation of the right-hand spinner dome with associated application of torque and properly documented CDI in-process comments was annotated on WO MCN: 28T0887 on 14 March 2022. [Encl. (50)]

154. On WO MCN: 28T088A, the CDI block on the work order was signed by (b)(6), (b)(7)c, (b)(3), (b)(6), (b)(7)c. (b)(3), (b)(6), (b)(7)c is not a CDI or a work center supervisor for the personnel who worked on the task. [Encl. (47), (46)]

155. (b)(3), (b)(6), (b)(7)c did not physically verify the inventory of toolbox 200-3-4 on WO MCN: 28T088A on 13 March 2022. Toolbox 200-3-4 was correctly inventoried on 14 March 2022 on WO MCN: 28T0887. [Encl. (47), (50)]

156. On WO MCN: 28T0883, the Left Pen Damp Heaters F (P) were troubleshot on 14 March 2022 by (b)(3), (b)(6), (b)(7)c and (b)(3), (b)(6), (b)(7)c. The CDI in-

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process comments for the maintenance and reinstallation of the left-hand spinner dome were not annotated. [Encl. (47)]

157. (b)(3), (b)(6), (b)(7)c and (b)(3), (b)(6), (b)(7)c are not CDIs and do not have authority to make CDI in-process comments. [Encl. (46)]

158. The reinstallation of the left-hand spinner dome with associated application of torque and properly documented CDI in-process comments were annotated on WO MCN: 28T08C1 on 17 March 2022. [Encl. (51)]

159. On WO MCN: 28T088B, the Left Spinner Temperature Sensor Zone 10 was troubleshot on 13 March 2022 by (b)(3), (b)(6), (b)(7)c The toolbox used and the worker were not annotated. [Encl. (47)]

160. On WO MCN: 28T0888, the Right Spinner Temperature Sensor 2 F (P) was troubleshot on 13 March 2022 by (b)(3), (b)(6), (b)(7)c The toolbox used and the worker were not annotated. [Encl. (47)]

161. (b)(3), (b)(6), (b)(7)c is a qualified Avionics CDQAR as of 16 November 2021. [Encl. (46)]

162. The mishap aircraft's Daily and Turnaround Inspection was completed on 18 March 2022 at 0925 by (b)(3), (b)(6), (b)(7)c prior to the mishap flight. [Encl. (48)]

163. (b)(3), (b)(6), (b)(7)c is a qualified Plane Captain as of 7 April 2020. [Encl. (49)]

164. The mishap aircraft had 23 open work order discrepancies when the aircraft was signed safe for flight. Of the 23 open work orders, 16 were PMC-Equipment Operational Capability (EOC) coded discrepancies, which inform maintenance control and the pilot as to what missions the aircraft is mechanically capable of executing. The other seven were non-EOC coded general discrepancies. [Encl. (50)]

165. The mishap aircraft had 41 Technical Directive work orders open when the aircraft was signed safe for flight. The Technical Directives were either due to be implemented, or had been deferred for completion, until after the aircraft returned from Norway. [Encl. (50)]

166. Three WO's were signed off between 17 March 2022 at 2205Z and the mishap flight: MCN: 28T08E9, MCN: 28T08E8, and MCN: 28T08EH. [Encl. (51)]

167. WO MCN: 28T08E9 and MCN: 28T08E8 concerned the removal and replacement of aircraft fire extinguishers. The work orders were inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

168. (b)(3), (b)(6), (b)(7)c is a qualified flight equipment CDI as of 1 February 2022. [Encl. (46)]

169. (b)(3), (b)(6), (b)(7)c is a qualified Safe for Flight maintenance controller as of 5 January 2022. [Encl. (46)]

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170. On WO MCN: 28T08EH, the right-hand engine was serviced with 36 ounces of MIL-PRF-23699 oil. The work order was inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

171. (b)(3), (b)(6), (b)(7)c is a qualified Power Line CDI as of 9 September 2021. [Encl. (46)]

172. The mishap aircraft had four major components removed and replaced within the last 10 flights; MCN: 28T08CM, MCN: 28T08C1, MCN: 28T08D3, and MCN: 28T088C. [Encl. (51)]

173. On WO MCN: 28T08CM, the Right-Hand System 3 Thermal Control Valve was removed and replaced. The work order was inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

174. (b)(3), (b)(6), (b)(7)c is a qualified Airframes CDI as of 16 November 2021. [Encl. (46)]

175. On WO MCN: 28T08C1, the left hand Central De-ice Distributor (CDD) was removed and replaced. The work order was inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

176. On WO MCN: 28T08D3, the Upper Crew Door Window was removed and replaced. The work order was inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

177. (b)(3), (b)(6), (b)(7)c is a qualified Airframe CDI as of 25 May 2021. [Encl. (46)]

178. On WO MCN: 28T088C, the Shaft Driven Compressor was removed and replaced. The work order was inspected by (b)(3), (b)(6), (b)(7)c and maintenance control was signed off by (b)(3), (b)(6), (b)(7)c [Encl. (51)]

179. A review of the previous five months of completed work orders indicated no administrative discrepancies that would pertain to this mishap. [Encl. (42), (47), (50), (51), (52)]

180. Post-mishap K-series Voice and Data Recorder (KVADR) analysis by the MV-22B Fleet Support Team (FST) indicates the only recorded mechanical anomaly as a spike in right-hand prop-rotor gearbox (PRGB) torque just after GT31's closest proximity to the western valley wall. [Encl. (34), (53)]

181. KVADR data does not indicate any catastrophic component failure as potentially attributable to the PRGB torque spike. [Encl. (53)]

182. Computer and other information technology shortcomings which occurred after arriving in Norway left the squadron with limited paper printer capability. This resulted in mission products such as cover pages and navigation logs being produced on computers and then photographed for reference on Marine Air Ground Tablets (MAGTAB). This also resulted in the electronic routing and signature of documents like flight schedules, RAWs, and other paper products used daily in squadron activities. It may also have been a contributing factor in missing signatures or entries on maintenance documents. [Encl. (16), (17)]

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Part Four: Guidance and Added Measures to Prepare for COLD RESPONSE

183. The Commanding General of 2d MAW directed the commanding officer of VMM-261 to provide pilots with approximately 15 hours of flight time within the 30 days prior to executing COLD RESPONSE. (Encl. (16))

184. The VMM-261 commanding officer directed pilots that were to participate in COLD RESPONSE to complete at least ten flight hours and five simulator hours prior to departing for the exercise. [Encl. (16), (17)]

185. A dedicated syllabus was created by the VMM-261 Operations Department, modeled after the MV-22B Training and Readiness Manual. It consisted of three simulator events covering COLD RESPONSE specific training. These events covered icing systems and emergency procedures, MAT, LAT, and Reduced Visibility Landings (RVL) in snow ("white out") conditions. [Encl. (16-18)]

186. The squadron procured additional cold weather survival equipment prior to departing for COLD RESPONSE to aid in crew sustainment if forced to land away from an airfield. This equipment was packaged and installed onto aircraft for the duration of the exercise. Aircrew were briefed on the possibility of this occurrence, and conducted a live, overnight test of the equipment to validate supportability and confidence in the systems. [Encl. (16-17), (31)]

Part Five: The GHOST 31 Flight and Post-Mishap Identification

187. GT31 conducted initial takeoff from Bodø Airport at 1100 on 18 March 2022 to conduct the first portion of the planned flight to the north. [Encl. (24), (34), (36)]

188. GT31 flew the northern portion of the flight without incident and returned to Bodø Airport for fuel at 1402. [Encl. (17), (24), (34)]

189. GT31 departed Bodø Airport for a second time at 1433 with 11,142 pounds of fuel on board. [Encl. (17), (24), (34), (36)]

190. A post-mishap fuel sample obtained by MWSS-272 indicated no issues with fuel taken aboard the mishap aircraft. [Encl. (54)]

191. At 1442, MC reported "Southbound" to Norwegian air traffic control (callsign Polaris Control) on radio frequency 118.55Mhz. [Encl. (36)]

192. At approximately 1510Z, Polaris Control transmitted "Unreadable" and directed GT31 to "contact Stokka frequency 120.4Mhz". There was no further communication from GT31 on frequency 118.55Mhz between 1511 and 1630. [Encl. (36)]

193. The radar track from Polaris Control indicates GT31 traveled along the pre-planned route until approximately 1538 when the aircraft deviated to the north in the vicinity of the airport at Brønnøysund. [Encl. (36)]

194. Polaris Control recorded operating altitudes for GT31 between 300 and 1200 feet above ground level along its route of flight. Altitudes below 500 feet above ground level were correlated with available data and indicated the aircraft was either over water, operating in conversion mode, or both. [Encl. (36)]

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195. Polaris Control's last observed position for GT31 was N66 53.6 / E012 51.16, at 900 feet above ground level and turning southeast. [Encl. (36)]

196. GT31 was in contact with Mosjøen Airport between 1558 and 1601. [Encl. (36)]

197. GT31 made contact with Mo i Rana Airport between 1604 and 1610, entering its airspace from the west and leaving to the north. [Encl. (36)]

198. The last noted air traffic control position for GT31 was at N66 41.23N / E014 10.53, at 2900 feet above mean sea level at 1619 as determined through Identify Friend/Foe return. [Encl. (36)]

199. At approximately 1622, flight recorder data indicates GT31 entered the Gråtådal valley at 1241 feet above ground level (2926 feet above mean sea level) at an airspeed of 223 knots, heading northeast. [Encl. (34), (38)]

200. The floor of the Gråtådal valley lies approximately between 1500 and 1000 feet above mean sea level, sloping down towards the north. [Encl. (27), (30)]

201. At the time, the weather in the Gråtådal Valley appeared to be scattered clouds higher than 5000 feet above mean sea level and visibility approximately five statute miles or more. [Encl. (37)]

202. Winds within the valley were recorded at approximately from 229 degrees at 24 knots by onboard aircraft systems, indicating a south-to-north tailwind for the aircraft. [Encl. (34)]

203. At approximately 1622:08, GT31's cyclic position was moved forward, initiating a descent from 3045 feet above mean sea level/ 1145 feet above ground level. The cyclic did not return to the previous longitudinal position until approximately 1622:40, as the aircraft reached approximately 1568 feet above mean sea level / 532 feet above ground level. [Encl. (34), (38)]

204. Following the descent, the radar altimeter for GT31 did not register an altitude above 557 feet above ground level for the rest of the flight. [Encl. (34), (38)]

205. After conducting the descent, GT31 began maneuvering at greater than 45 degrees angle of bank (AOB) while transiting around terrain along the Gråtådal valley at speeds of up to 259 knots calibrated airspeed (KCAS), 39 knots faster than VMM-261's default LAT planning airspeed. [Encl. (34), (38), Ref. (g)]

206. GT31 conducted a left-hand turn to follow the river valley. During this turn, the aircraft reached 68 degrees AOB. [Encl. (34), (38)]

207. The NATOPS limit for AOB in an MV-22B is 60 degrees. [Ref. (1)]

208. An MV-22B is unable to maintain both altitude and airspeed at 68 degrees AOB in any published airplane configuration flight regime published in Energy-Maneuverability Diagrams. [Ref. (h)]

209. GT31 lost altitude and airspeed following the left-hand turn and began rapidly closing the distance to the western wall of the valley. In an effort

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON
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to avoid the terrain, GT31 conducted a right-hand turn that reached 89 degrees AOB. At the time of this right-hand turn, GT31's airspeed was 202 KCAS and its altitude was 1261 feet above mean sea level. GT31 came as close as 27 feet from the western valley wall during the maneuver. [Encl. (34), (37), (38)]

210. Attempting to complete the turn at 89 degrees AOB placed the aircraft well outside of the tested aircraft maneuverability capabilities. The highest AOB depicted on any MV-22B airplane configuration Energy-Maneuverability Diagram is 75 degrees. Flight in this regime is unsustainable and results in the aircraft rapidly descending. [Encl. (38), Ref (h)]

211. During the right-hand turn, the thrust control lever (TCL) position was reduced to full aft for approximately 2-3 seconds, followed by a rapid increase to the full forward soft stop (4"). [Encl. (34), (38)]

212. A reduction in airspeed while maintaining angle of bank and altitude may cause an increase in turn-rate and a decrease of intended turn radius, meaning a tighter and "faster" turn. [Ref (h)]

213. The near 90-degree AOB turn resulted in a rate of descent as high as 4000 feet per minute. [Encl. (34), (38)]

214. The recorded aircraft telemetry and fault data ends at approximately 1623:02. [Encl. (34)]

215. Extrapolation based on the last recorded aircraft speed and locations indicates that GT31 crashed into the eastern wall of the Gråtådal Valley at approximately 1623:04. [Encl. (30)]

216. The impact resulted in complete structural failure and separation of all major airframe components. [Encl. (55)]

217. The photographic evidence suggests that all four Marines aboard GT31 were killed by the impact. [Encl. (55)]

218. When GT31 failed to return as expected at 1800, efforts were made to establish communications with the aircraft. These were unsuccessful. Of note, satellite communication networks were not available for use by the aircraft. Communication with the ODO was often limited to the local area due to line-of-sight communications being restricted by the terrain. Aircrew were often only able to update status and location during missions via cellular phone text messages when on deck at intermediate locations. (Encl. (16-17))

219. Overdue aircraft procedures were initiated by VMM-261 at 1830, 30 minutes after GT31's expected return. This is standard procedure and accounts for normal delays in operations. The squadron began executing the COLD RESPONSE pre-mishap plan which included notification of higher headquarters, and initial coordination for search and rescue assets. [Encl. (16-17)]

220. A Norwegian search-and-rescue (SAR) squadron received tasking from the Joint Rescue Coordination Center for an overdue aircraft at 1900. A SAR helicopter was launched at 1935 due to delays associated with weather planning. [Encl. (39), (40)]

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221. The Norwegian SAR standard operating procedure is to launch within 15 minutes of notification. [Encl. (39)]

222. The SAR helicopter was initially directed to the last known GT31 radar return location. While enroute, it was updated with GT31's route of flight. It then proceeded to the Gråtådal Valley. [Encl. (39), (40)]

223. The SAR helicopter initially identified the crash site via GT31's automatic Emergency Locator Transmitter (ELT). The ELT transmits on the VHF-Guard frequency (121.5 Mhz). The SAR helicopter did not pick up the ELT signal until the second overflight; due to the terrain, it was only able to receive the signal while directly overhead. This was followed by visual observation of an infrared strobe light and evidence of the crash in the terrain at approximately 2105. [Encl. (39), (40)]

224. The SAR helicopter attempted to lower first responders to the crash site to search for survivors. They were forced to abort and depart the area due to deteriorating weather. The weather at 2100 was assessed to be overcast ceilings at approximately 2000 feet above mean sea level with blowing snow and freezing rain. The SAR crew reported low confidence of survivors based on observations of the crash site. [Encl (39), (40)]

225. Two personal electronic devices (PEDs) were located at the crash site, including an iPad and a GoPro camera. The GoPro footage was collected by Norwegian personnel and shared with both the IO and the AMB. [Encl. (37), (55)]

226. The VMM-261 commanding officer reported that non-approved PEDs are not authorized for use during flight operations, in accordance with 2d MAW and Marine Aircraft Group 26 policy. [Encl. (16), (17), Ref (i), (j)]

227. The squadron is equipped with an approved Marine Air Ground Tablet (MAGTAB) set. Aircrew routinely utilized them to record and transport pre-flight planning documents to the aircraft for use in flight. [Encl. (17)]

Opinions

1. The IO and AIO were tasked by enclosure (1) with addressing six different issues. The opinions of the IO and AIO are summarized as follows:

a. *The circumstances of GT31's tasking and the degree to which the mission was necessary.* GT31 was tasked on 18 March 2022 with supporting the COLD RESPONSE training exercise with Air Logistics Support (ALS). If the COLD RESPONSE scenario did not require ALS, then GT31 was authorized to conduct unit-level training such as familiarization, instrument, and Mountain Area Training in order to maintain aircrew proficiency, develop Captain Tomkiewicz's flight leadership experience, and progress the squadron towards its annual flight hour goals. The degree to which the flight was necessary is a matter of nuance. No sortie scheduled by 2d MAW in support of COLD RESPONSE was absolutely necessary, since the exercise took place in training rather than a real-world combat or crisis-response environment. However, conducting realistic training is an important component of ensuring real-world readiness in the event of a conflict or crisis. Since the weather conditions were met for the training flight, the aircrew were qualified, and the airframe was properly maintained and airworthy, the GT31 mission on 18

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

March 2022 was as necessary as any that is assigned on a daily flight schedule across the Marine Corps. [FF 1-79, 80-89, 110-123, 134, 135-178]

b. *Whether the mission could or should have been delayed or cancelled due to weather or any other factor.*

(1) It is clear that the mission could have been delayed or cancelled had weather concerns or any other safety-of-flight factor been present. 2d MAW squadrons supporting COLD RESPONSE in Norway had adequate sources of weather forecasting, authority to adjust or cancel missions, and lines of communication between aircrew and operations duty officers to receive weather updates in a timely manner. The ability of squadrons to cancel flights due to weather is evident from the fact that numerous fixed-wing sorties were cancelled on 18 March 2022 due to winds exceeding ejection-seat limits. [FF 110-134]

(2) It is also clear that there was no weather-related reason to delay or cancel the GT31 mission specifically. The weather brief received by the GT31 aircrew on the morning of 18 March 2022 contained data from the United States National Weather Service, the United States Air Force Global Air-Land Weather Exploitation Model (GALWEM), and Norwegian agencies. The holistic forecast showed the weather remaining sufficient for GT31 to conduct flight under "visual flight rules" conditions for the planned duration of the mission. [FF 110-123]

(3) In addition, two findings are indicative that the weather developed as forecast. The first is the conduct of the pilots during flight operations. GT31 initially launched at 1100 and flew for approximately three hours before returning to Bodø for fuel. After re-fueling, the aircraft commander (Captain Tomkiewicz) made the decision to continue with the mission; it can be assumed that he would not have done so if the weather had been adverse. The second is the GoPro footage recovered from the wreckage, which reveals that the weather immediately prior to the mishap and in vicinity of the mishap location was greater than five miles of visibility with a scattered cloud deck at an altitude greater than 5000 feet above mean sea level. It is possible that the tailwind encountered in the valley may have adversely affected the turning performance of the aircraft in proximity to the terrain just prior to impact. However, similar winds were experienced by the 17 March LAT flight. Any adverse influence of the winds on the mishap aircraft's performance were a result of the profile and maneuvers conducted in the valley by the crew of GT31. It is the opinion of the IO that the weather was sufficient to conduct the assigned mission and was not a causal factor in the mishap. [FF 110-134, 187-189, 201]

c. *Whether the pilots and aircrew were sufficiently qualified, experienced and prepared to fly the mission under the conditions that were known to exist or which could reasonably have been expected.*

(1) VMM-261's commanding officer made a reasonable and risk-mitigated decision to assign the crew to the 18 March 2022 flight schedule supporting COLD RESPONSE tasking and squadron training. The squadron had established procedures that demonstrated an elevated level of respect for the dynamic nature of the Norwegian weather patterns and aviation risks associated with mountainous operations. Prior to deploying to Norway, the squadron exceeded requirements by conducting a customized training syllabus with proscribed academics and simulation events to prepare aircrew for mountainous and cold weather operations. Both Captain Tomkiewicz and Captain Reynolds took part

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON
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in the pre-deployment training, received the flight safety briefs from Norwegian officials, and had ample exposure to squadron risk mitigation measures concerning terrain and weather. [FF 1-79, 184-186]

(2) An extensive review of training records shows that all four personnel aboard GT31 were qualified and prepared to carry out the mission as assigned. Regarding experience levels, Captain Tomkiewicz had flown seven events in Norway, equating to 18.6 flight hours, and overflew the planned route of flight the day prior. Captain Reynolds had flown five events in Norway totaling 6.8 flight hours. Corporal Moore had 31.8 hours of flight time in Norway. Although Gunnery Sergeant Speedy had not flown for over 130 days and was still in the Aerial Observer training syllabus, he was qualified to carry out the assigned mission. Holistically, the crew of GT31 had sufficient pre-deployment training, country briefs, mission planning and execution considerations, and exposure to Norwegian conditions to safely conduct the assigned mission. [FF 1-79, 81-90, 110-123, 183-186]

d. Whether the aircraft had any known or suspected mechanical problems, and the extent to which these problems were resolved prior to the mission.

(1) Interviews of VMM-261 maintenance personnel, an extensive review of BUNO 168330 maintenance records, and data recovered from BUNO 168330 were examined to determine if maintenance malpractice or catastrophic component failure were contributors to the mishap. The historical maintenance records for the preceding twelve months indicate that the aircraft was functionally capable to support the mission for which it was assigned. Although several administrative discrepancies are noted in the findings, these are not believed to be indicative of maintenance malpractice. The administrative discrepancies involved documentation errors and were most likely the result of limited computer and printer assets in the maintenance department. On maintenance work orders where component installation was improperly documented, the components in question were properly installed, documented, and annotated on follow-on work orders prior to the aircraft's next flight. [FF 135-182]

(2) Additionally, the IO consulted with the MV-22B Fleet Support Team to validate assumptions concerning recovered KVADR data. The validation process included a flight recreation and an associated engineering evaluation based on GT31's flight characteristics during the mishap flight. The post-mishap engineering assessment of recovered KVADR data indicate a single anomaly involving a right-hand PRGB torque spike. The cause of this spike was not assessed to have resulted from component failure or the loss of any component. We assess that the torque spike was most likely the result of the rotor hitting a treetop shortly before the crash. [FF 180-181]

(3) Although the existence of open work orders without in-process documentation should have administratively prevented the release of the aircraft as safe for flight, the maintenance performed was sufficient to render the aircraft actually safe to fly. The investigation discovered no indications that a maintenance action or catastrophic component failure contributed to the mishap. [FF 135-182]

e. Any evidence of wrongdoing, negligence, or failure to follow required procedures or best practices.

(1) It is evident that the squadron did not conform to the Training and Readiness Program Manual requirements for low-altitude tactics

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON
18 MARCH 2022 DURING EXERCISE COLD RESPONSE

scheduling. No LAT training areas were properly certified by qualified aircrew, nor was the required certification acknowledgement by the 2d MAW Commanding General (G-3) ever processed. Additionally, schedules written by the squadron with the intent to conduct LAT failed to specify the minimum altitudes authorized in accordance with 2d MAW standard operating procedures. Though the squadron may have attempted to apply the scheduling of LAT as a risk mitigation measure, their application process was flawed. [FF 90-109]

(2) The profile flown by GT31 was commensurate with weather conditions and the terrain until approximately 90 seconds before the crash. Upon entering the Gråtådal Valley, GT31 deviated from the planned and filed altitudes and descended into the valley. After descending, GT31 began conducting high-angle of bank turns along the valley floor, at speeds approaching 260 KCAS, while maneuvering to avoid terrain at approximately 500 feet above ground level. This required significant maneuvering and placed the flight in a low-altitude tactics regime which it was not authorized to conduct and not qualified to execute with the crew onboard. This profile resulted in the crew maneuvering the aircraft in such a way as to exceed NATOPS limits, and placed the aircraft into a regime of flight that neither the crew nor the aircraft could recover from due to proximity to terrain. [FF 93-94, 100-104, 187-215]

(3) A member of GT31's aircrew was using an unauthorized GoPro video recorder during the mission and in the timeframe immediately preceding the crash. Without audio to accompany the GoPro flight footage, the IO cannot determine to what degree the unauthorized device influenced the aircrew's decision-making process. [FF 225-226]

f. Any steps that should have been taken that would have allowed GT31 to have been flown more safely?

(1) The chain of command for GT31 took all reasonable steps to prepare the squadron for operations in Norway's arctic environment. Sufficient pre-deployment expectations and guidance were issued by 2d MAW, MAG-26, and the VMM-261 commanding officer which resulted in the squadron conducting an extensive training syllabus of flights/simulators and education outside of Training and Readiness Manual requirements, the development of unique flight procedures, and cold weather equipment supplementation which demonstrated a respect for the risks of flight operations in Norway. [FF 19, 39, 184-186]

(2) Although VMM-261 did fail to conduct proper administrative procedures regarding the scheduling and certification of the LAT route, this failure did not result in a "normalization of deviance" within the squadron with regards to the execution of LAT by aircrew. When LAT was deliberately scheduled - as evidenced by the 17 March 2022 mission - the squadron conducted it safely and within the performance capabilities of both the aircraft and aircrew. To illustrate this further, the crews on 17 March 2022 were scheduled to conduct LAT on the "Bravo" route. It is reasonable to assume that they understood that they were executing the mission in accordance with all governing directives since they were executing a schedule signed by the squadron commanding officer. They understood the route to be authorized and approved to fly on, and then flew it according to policy. It is unlikely that further efforts by VMM-261 to certify the route beforehand would have significantly changed the flight events or profile of 17 March 2022. Any possible influence of the 17 March 2022 flight on the decisions made by the crew of GT31 could only have been mitigated by not scheduling the

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON
18 MARCH 2022 DURING EXERCISE COLD RESPONSE

17 March 2022 LAT mission. However, it is impossible for the squadron to have predicted any such possible influence on the mishap crew because GT31 was not scheduled or authorized to conduct LAT on the day of the mishap. Without specific guidance given via the flight schedule, the choice to conduct the route of flight that ended in GT31's crash was a deliberate decision to disregard policy. [FF 90-99]

2. The IO and AIO thoroughly pursued the possibility that dynamic arctic weather patterns were a significant contributor to the mishap. This theory was supported, at least initially, by SAR weather accounts at the mishap site, temporary forecast lines taken from weather reports, pilot interviews, first-hand observation of local weather patterns, and post-mishap weather analysis products. The last thirty-five seconds of the GT31 flight recreation, and the reconstruction of the flight path into the Gråtådalén Valley would also support this hypothesis when viewed through the lens of weather avoidance. The recovered GoPro footage, however, clearly shows that while degraded weather was encountered earlier in the flight, it was not a significant factor in the vicinity of the mishap location. [FF 112-116, 120-123, 187-202, 220-225]

Recommendations

1. No further investigation is needed, and no punitive actions are required.
2. Video debriefing techniques are accepted practices across several platforms in the Marine Corps. However, the MV-22B community does not possess a video or active voice recording system. Without such a system, the ability to analyze post-flight information is reduced to raw number interpretation, aircrew recollection, maintenance data visualization, or two-dimensional position and orientation information. The lack of full-motion video (FMV) recording in the MV-22B has been highlighted as a deficiency during numerous Aviation Safety Operational Advisory Groups and was included as a recommendation following a 2014 MV-22B wire strike mishap. The capability has yet to be incorporated into the MV-22B, but should be acquired as quickly as possible through aircraft engineering or commercial off-the-shelf means. An ancillary effect of adding FMV to the MV-22B cockpit may be the impact on the cognitive processes of the aircrew. If the unauthorized employment of a video recording device can be construed as negatively influencing aircrew to make bad decisions, then the authorized employment of an institutional video recording device may encourage sound decisions and positive safety outcomes.
3. The squadron put extensive rigor into developing an additive syllabus beyond Training and Readiness Manual requirements to prepare aircrew for expected operating conditions in Norway. This syllabus should be promulgated as a "Best Practice" for future MV-22B cold-weather/arctic operations and serve as a standard to replicate for units deploying to unique and challenging environments.
4. East Coast MV-22B squadrons are at a disadvantage regarding exposure frequency to operations in mountainous terrain compared to other MV-22B units. As part of pre-deployment training, squadron deployments to locations providing exposure to general flight and LAT operations in mountainous terrain should be supported and funded as critical mission requirements.
5. The verbiage utilized by the Training and Readiness Program Manual conflates the term "low altitude tactics" as "low altitude training" in such

Subj: COMMAND INVESTIGATION INTO THE MV-22B AVIATION MISHAP THAT OCCURRED ON
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a way as to restrict an MV-22B commander's ability to utilize LAT proficiency and currency as a risk mitigation tool. The unique operating envelope of the MV-22B crosses fixed-wing and rotary-wing profiles, allowing for situations in which an MV-22B may operate routinely below 500 feet above ground level safely. If a commander wishes to take advantage of the proficiency and currency management of MSHARP in a situation in which crews may expect to encounter conditions which drive them to "low altitude", it must be scheduled. However, as the policy is written, a commander who does so may face scrutiny for the scheduling of LAT without an "approved LAT training area". The verbiage of the Training and Readiness Program Manual should be updated for MV-22B LAT to clarify the differences between the execution of LAT and the application of guidelines towards specified LAT "training."

6. The flight characteristics and normal operating envelope of the MV-22B create unique challenges when attempting to define and mitigate the risk of low altitude flight. The Training and Readiness Program Manual definition allows for much open-ended interpretation. This definition may allow for flexibility on a commander's behalf for conducting flight operations, but also may lead to a false sense of security when certain listed components of LAT are not met. LAT considerations are also not applied when discussing MAT, where the focus of training is not on en-route operations (where terrain and/or weather may drive personnel into a LAT regime) but on the landing environment. The MV-22B community, along with MAWTS-1, must convene a working group to discuss the issue of better defining LAT and integrating LAT / MAT together into more cohesive concepts.

(b)(3), (b)(6), (b)(7)c



UNITED STATES MARINE CORPS
2D MARINE AIRCRAFT WING
II MARINE EXPEDITIONARY FORCE
FLEET MARINE FORCES
POSTAL SERVICE CENTER BOX 8050
CHERRY POINT, NC 28533-0050

IN REPLY REFER T

5800

SJA

MAR 23 2022

From: Commanding General, 2d Marine Aircraft Wing, FMF
To: (b)(3), (b)(6), (b)(7)c USMC

Subj: COMMAND INVESTIGATION INTO THE MV-22 AVIATION MISHAP THAT
OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

Ref: (a) JAGINST 5800.7F w/ch 1 (JAGMAN)

1. This letter appoints you, per chapter II of the reference, to investigate the MV-22 aviation mishap that occurred in the vicinity of Bodo, Norway on 18 March 2022 and resulted in the death of four Marines. At a minimum, your investigation will address the following issues:

a. The circumstances under which the MV-22 mission, call-sign Ghost 31, was tasked and the degree to which the mission was necessary.

b. Whether the mission could or should have been delayed or cancelled due to weather or any other factor.

c. Whether the pilots and aircrew were sufficiently qualified, experienced and prepared to fly the mission under the conditions that were known to exist or which could reasonably have been expected.

d. Whether the aircraft had any known or suspected mechanical problems, and the extent to which those problems were resolved prior to the mission.

e. Any steps that should have been taken that would have allowed the Ghost 31 mission to have been flown more safely.

f. Whether there was wrongdoing, negligence, or failure to follow required procedures or best practices by any member of 2d Marine Aircraft Wing.

2. You will provide your findings of fact, opinions and recommendations in writing no later than 21 April 2022. This investigation is your primary duty until it is completed. Request additional time via the Staff Judge Advocate if you believe an extension is needed.

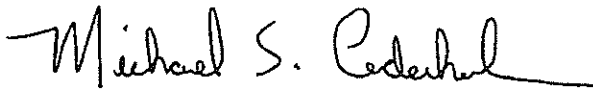
3. (b)(3), (b)(6), (b)(7)c U.S. Marine Corps, is appointed hereby as an assistant investigating officer (IO). (b)(3), (b)(6), (b)(7)c will provide technical expertise regarding the MV-22 platform, and is

Enclosure (1)

Subj: COMMAND INVESTIGATION INTO THE MV-22 AVIATION MISHAP THAT
OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

available to help in the compilation of your report in whatever manner
may be necessary.

4. You are directed to seek the assistance of the Office of the Staff
Judge Advocate before beginning your investigation. The point-of-
contact is Colonel Joseph M. Jennings, who can be reached at (252)466-
8163 or via e-mail at: joseph.m.jennings@usmc.mil.


M. S. CEDERHOLM

Enclosure (1)



UNITED STATES MARINE CORPS
2D MARINE AIRCRAFT WING
II MARINE EXPEDITIONARY FORCE
FLEET MARINE FORCES
POSTAL SERVICE CENTER BOX 8050
CHERRY POINT, NC 28533-0050

IN REPLY REFER TO:

1920

SJA

MAY 22 2022

From: Commanding General, 2d Marine Aircraft Wing, FMF
To: (b)(3), (b)(6), (b)(7)c USMC

Subj: COMMAND INVESTIGATION INTO THE MV-22 AVIATION MISHAP THAT
OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

Ref: (a) JAGINST 5800.7F w/ch 1 (JAGMAN)

1. The request for an extension has been approved. Your investigation is now due close of business 21 June 2022.

2. The point of contact for questions or concerns is the Office of Staff Judge Advocate, (b)(6), (b)(7)c at (252)466-3559 or via e-mail at: (b)(6), (b)(7)c.

(b)(6), (b)(7)c

J. M. JENNINGS
By direction

Copy to:
Files

Enclosure (2)



UNITED STATES MARINE CORPS
2D MARINE AIRCRAFT WING
II MARINE EXPEDITIONARY FORCE
FLEET MARINE FORCES
POSTAL SERVICE CENTER BOX 8050
CHERRY POINT, NC 28533-0050

IN REPLY REFER TO:
1920
SJA

APR 21 2022

From: Commanding General, 2d Marine Aircraft Wing, FMF
To: (b)(3), (b)(6), (b)(7)c USMC

Subj: COMMAND INVESTIGATION INTO THE MV-22 AVIATION MISHAP THAT
OCCURRED ON 18 MARCH 2022 DURING EXERCISE COLD RESPONSE

Ref: (a) JAGINST 5800.7F w/ch 1 (JAGMAN)

1. The request for an extension has been approved. Your investigation is now due close of business 21 May 2022.

2. The point of contact for questions or concerns is the Office of Staff Judge Advocate, (b)(6), (b)(7)c at (252)466-3559 or via e-mail at: (b)(6), (b)(7)c.

JENNINGS,JOSEPH.MC
PH.MCPHERSON
Digitally signed by
JENNINGS,JOSEPH.MC
Date: 2022.04.27
10:27:24 -04'00'

J. M. JENNINGS
By direction

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Enclosure (2)



UNITED STATES MARINE CORPS
 MARINE MEDIUM TILTROTOR SQUADRON 261 (-) REINFORCED, COLD RESPONSE DETACHMENT
 MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
 POSTAL SERVICE CENTER BOX 21016
 JACKSONVILLE, NC 28545-1016



MISSION: SUPPORT THE MAGTF COMMANDER BY PROVIDING ASSAULT SUPPORT TRANSPORT OF COMBAT TROOPS, SUPPLIES AND EQUIPMENT, DAY OR NIGHT, UNDER ALL WEATHER CONDITIONS DURING EXPEDITIONARY, JOINT, OR COMBINED OPERATIONS.

FLIGHT SCHEDULE FRIDAY, 18 MARCH 2022 (2077)

ODO:	(b)(3), (b)(6), (b)(7)c	0830-LPOD	SCHEDULED HOURS	MAR (GOAL/SCHEDULED/EXECUTED)
DO (OPS 5):			6.6	210.1 / 130.9 / 87.1
AD (OPS 5):				QTR
SCHEDULE (24)				600.3 / 493.4 / 378.9
				FY
				2426.0 / 799.9 / 673.9

ENBO	FIELD HOURS: 24 HRS QUIET HOURS: NONE	BMNT / SR: 0412 / 0611	SS / EENT: 1812 / 2013	MR / MS: 1815 / 0703	ILLUM: 100%	LLL: NONE HLL: 2013-0407*
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EVENT	TMR	BRF	ETD	ETR	HRS	AIRCREW	TRAINING CODES	MISSION	NOTES	CONFIG
GHOST 3-0 MV-22B	2K2	0900	TBD	TBD	TBD	(b)(3), (b)(6), (b)(7)c		FCF		
GHOST 3-1 MV-22B	1A1	0900	1100	1800	6.6	CAPT TOMKIEWICZ, M. CAPT REYNOLDS, R. CPL MOORE, J. GYSGT SPEEDY, J.	2240, 3040 2240, 3040 2240, 3040 2240P, 3040P	ALS / MARLOG	1	

@ AIR MISSION COMMANDER / # FLIGHT LEAD / ** DIVISION LEAD / * SECTION LEAD / X ATF REQUIRED / R NOT PROFICIENT / P PROFICIENCY EXPIRES W/I 90 DAYS

** UNLESS OTHERWISE INDICATED, ALL FLIGHTS WILL ORIGINATE AND TERMINATE AT BODØ AIR BASE (ENBO) **

FLIGHT NOTES:

- TBD: CREW TO MARLOG AT ENKJ.

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
0900	0930	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	(b)(3), (b)(6), (b)(7)c
0930	1030	CAVES	INTEL BRIEF	S-2 PERSONNEL TO ATTEND	
1030	TBD	OPS 5	TRAP PLANNING CELL	ALL AVAILABLE PILOTS	
1200	1200	CAVES	RETROGRADE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	
1330	1400	MS TEAMS	APB	ASRs FOR FOLLOWING DAYS VERIFICATION	
1400	1445	OPS 5	TRAP FORCE REHEARSAL MEETING	ALL 19 MARCH TRAP FORCE TO ATTEND	
NLT	1500	INDIVIDUAL SPACES	SITREP INPUTS DUE TO S-3	ALL SHOPS TO SUBMIT	
NLT	1600	OPS 5	SITREP DUE TO MAW G-3	S-3 TO SUBMIT	
NLT	1600	OPS 5	ATO INPUTS DUE TO MAW G-3	OPS CLERKS TO SEND TO (b)(3), (b)(6), (b)(7)c	
1900	1930	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	

OPS: /S/
 DSSN: /S/
 MAINT: /S/

(b)(3), (b)(6), (b)(7)c

COMMANDING OFFICER



VMM-261 NATOPS AUDIT SHEET



NAME: TOMKIEW IZZ

DATE: 26/30/21

AUDITOR: (b)(3), (b)(6), (b)(7)c

SECTION I - GENERAL

PRIVACY ACT STATEMENT - SIGNED AND DATED / RECORD OF DISCLOSURE

PART A

- ▲ NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET REVIEW AND CERTIFICATION RECORD (3760/32A)
 - REVIEWED & CERTIFIED - REPORTING ANNUALLY CHANGE IN FLIGHT STATUS

PART B

- ▲ PILOTS - ONLY MOST CURRENT PCS (DIFOP) ORDERS
- ▲ ENLISTED AIRCREW - VOLUNTARY FLIGHT STATUS LETTERS
- ▲ LETTERS OF SUSPENSION / REVOCATION PERMANENTLY RETAINED

PART C

- ▲ MOST RECENT ANNUAL FLIGHT PHYSICAL CHIT (6410/2) (Only the most recent)
- ▲ ALL GROUNDING AND SUBSEQUENT UP CHITS SINCE ANNUAL
- ▲ WAIVER FORMS PERMANENTLY RETAINED

PART D

- ▲ FLIGHT EQUIPMENT RECORDS CS (DIFOP) ORDER (3760/32B) (NATOPS sign the bottom)

SECTION II - QUALIFICATIONS AND ACHIEVEMENTS

PART A

- ▲ PERMANENT RECORD OF ALL FUNCTIONAL DESIGNATIONS (3760/32C) (All previous letter from CO)
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL DESIGNATIONS (3760/32C)
(Ensure an ATF entered ion APR and logbook updated)

PART B

- ▲ PERMANENT RECORD OF ALL QUALIFICATIONS NOT INCLUDED IN PART A
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL QUALIFICATIONS (3760/32C)
(Ensure an ATF entered and logbook updated)

PART C

- ▲ PERMANENT RECORD OF CRM TRAINING AND FLIGHTS
(Matches NATOPS/Inst Check / retain annual class roster / CRM/T logged)

SECTION III - TRAINING

PART A

- ▲ RECORD OF ALL SCHOOLS AND COURSES ATTENDED (3260/32E) (GWOLE 1-5 no longer req)
- ▲ COPY OF ALL TRAINING COMMAND / FRS SUMMARIES SINCE 01 JAN 88

PART B

- ▲ PERMANENT RECORD OF ALL SURVIVAL TRAINING (3760/32F)
- ▲ NITE LAB TRAINING DOCUMENTATION
- ▲ ANNUAL EGRESS TRAINING DOCUMENTATION (3760/32F)
(Check EMER EGRESS completed on NATOPS check)

PART C

- ▲ ALL EXAMS PERTINENT TO AVIATION QUALIFICATIONS
(Current ICS, OPEN/CLOSED book, update coverpage SEC III.C exams)

PART D

- ▲ ALL NATOPS EVALUATION RECORDS (3710/7) (Kneeboard card and report, numerical grade for open/closed book, ensure egress/CRM complete, update SEC III.C. Misc and SEC III.B. Egress, update logbook)

PART E

- ▲ ALL INSTRUMENT RATING REQUESTS (3710/2)
(Kneeboard card/application, applicant signed application, update CRM/Egress as req, update logbook)
- ▲ INSTRUMENT QUALIFICATION WAIVERS

SECTION IV - FLIGHT RECORDS

PART A

- ▲ (No longer req, MSHARP)

PART B

- ▲ PERMANENT RECORD OF ALL AIRCRAFT/MISHAPS FLIGHT VIOLATIONS INVOLVING AN AIRCREW CAUSAL FACTOR, AND FNAEB RESULTS. FNAEB ENTRY SHALL CONTAIN: ENTRIES AUTHORIZED BY PARAGRAPH 10.5.2.8, DATE OF THE FNAEB, AND CO COMMENTS. CO MAY NOT DELEGATE THIS RESPONSIBILITY. (3760/32H)

ATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IA - REVIEW AND CERTIFICATION RECORD

NAME (Last, first, middle initial)

TOMKIEWICZ, MATTHEW, J.

SSN

1. This jacket shall be reviewed by the Commanding Officer or a designated representative as follows:
 - a. Upon reporting to a unit.
 - b. Annually, within 30 days of birthday.
 - c. Upon change in flying status.
2. This jacket shall be certified by the Commanding Officer or a designated representative upon detachment of the individual.

RECORDS OF REVIEW

DATE	SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE
3 Feb 18	(b)(3), (b)(6), (b)(7)c				
26 JUL 18					
03 JUN 19					
11 DEC 19					
23 JUN 20					
30 JUN 21					

DETACHMENT CERTIFICATION

UNIT	DATE	SIGNATURE	UNIT	DATE	SIGNATURE
VT3	8 JUN 18	(b)(3), (b)(6), (b)(7)c			
H78	5 NOV 18				
VT35	3 May 19				
VMU-204	18 Nov 19				

OPNAV 3760/32A (APR 1981)



UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION, NEW RIVER
PSC BOX 21015
JACKSONVILLE, NORTH CAROLINA 28543

1300
1300
1300
21 Nov 19

FIRST ENCLOSURE on OMC Washington DC Basic Orders of 19 October 2019

From: Director, Installation Personnel Administration Center, Marine Corps
Air Station New River
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7599 USMC

Subj: PERMANENT CHANGE OF ASSIGNMENT ORDERS

1. Delivered. Effective 0800, 21 November 2019 you will stand detached from your present station and duties and report by 1500, 21 November 2019 to COMMANDING OFFICER, VMM-261 MAG-26 2D MAW, PSC BOX 21015, JACKSONVILLE, NORTH CAROLINA 28543 (MCC VM2) for duty.
2. No entitlements are authorized in connection with these orders.
3. Upon arrival at your new duty station you are required to recertify your entitlement to BAH per the JTR Ch 10 para 10100.C.
4. REQUEST FOR RETIREMENT/RESIGNATION WILL BE IN ACCORDANCE WITH MCO 1001.12.
5. ~~These orders are~~ Permanent Change Of Assignment Orders. Duty in a flying status involving operational flights (DIFOP).

(b)(6), (b)(7)c

by direction

Copy to:
Files

RECEIVING ENDORSEMENT

1. I have read and understand the contents of my orders. I received these orders at Jacksonville, North Carolina at 0800 on 21 November 2019. I understand that I am to report no later than 1500, 21 November 2019, to COMMANDING OFFICER, VMM-261 MAG-26 2D MAW, PSC BOX 21015, JACKSONVILLE, NORTH CAROLINA 28543 VM2 for duty. I have in my possession my medical and dental records.

M. J. TOMKIEWICZ



MARINE CORPS BASIC ORDER

RANK: CAPT

NAME: MATTHEW J TOMKIEWICZ

EDIP: 1512971110

PMOS: 7532

OC: VM2

PRESENT COMMAND: 2D MAW (STUD PERS) JACKSONVILLE NC

HQMC ORDER DETAILS - 20191022

FMCC:

VM2

FUTURE COMMAND:

VMM 261 MAG 26 2DMAW NEW
RIVER NC

TOUR:

48 MONTHS, CONUS (OPERATIONAL-NO COST
REASSIGNMENT OR PCA)

ESTIMATED DETACH DATE:

20191120

REPORT NO LATER THAN:

20191121

BILLET:

7532, O3, DIFOP

THIS IS AN INVOLUNTARY ASSIGNMENT.

A SECRET SECURITY CLEARANCE IS REQUIRED FOR THIS ASSIGNMENT.

20191022 - Original Order

PCA (DIFOP) (TOUR LENGTH 48 MONTHS)

1. DIR SNO RPT NLT 21 NOV 2019 TO COM VMM 261 MAG 26 2DMAW NEW RIVER NC (MCC VM2) DUTY IN FLYING STATUS INVOLVING OPERATIONAL FLIGHTS (DIFOP).
2. INCLUDE IN ORDERS ISSUED: REQUEST FOR RETIREMENT/RESIGNATION WILL BE IN ACCORDANCE WITH MCO 1900.16.
3. NO ENTITLEMENTS ARE AUTHORIZED IN CONNECTION WITH THIS ASSIGNMENT.

TRAVEL FUNDING DETAILS

There is no travel funding associated with these no-cost orders



ORIGINAL ORDERS

UNITED STATES MARINE CORPS
MARINE AVIATION TRAINING SUPPORT GROUP 22
TRAINING COMMAND
271 FIFTH STREET
NAS CORPUS CHRISTI, TEXAS 78419

IN REPLY REFER TO:

1320

S-1

7 May 19

SECOND ENDORSEMENT on CMC Washington DC Basic Orders of 25 Apr 19

From: Commanding Officer, Marine Aviation Training Support Group 22
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7531 USMC

Subj: MODIFICATION TO PERMANENT CHANGE OF STATION ORDERS (DUINS)

1. The following modifications to paragraph (1) of PCS Orders are authorized:

Delivered. Effective 0800, 17 May 2019 you will stand detached from your present station and duties and report by 2359, 31 May 2019 to COMMANDING OFFICER, VMMT-204, MAG 26, 2D MAW NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28540 (MCC J9V) for duty under instructions (DUINS).

2. The point of contact for this matter is (b)(6), (b)(7)c at (361) 961-3486
or (b)(6), (b)(7)c

(b)(6), (b)(7)c

By direction

Required documents:

Reporting endorsements, All Original PCS/TEMINS/DUINS orders, Web Orders,
Port Calls (Coming from Overseas), Lodging Receipts (As applicable),
Bus/Flight Itineraries

Sgt's and below W/O Depns not issued a meal card: NAVMC 10522 signed by CO

Married Member to Member: Last 12 Months of LES for spouse (If spouse in another
service)

Accession Pipeline: Boot Camp Orders and MCT Orders MOS School Orders Training
Certificates, Awards, Reclassification Message

Appointment Date: 20190531 Time: 1400

MCAS NEW RIVER IPAC
YOU REPORTED TO IPAC INBOUND
AT 0914 ON 20190531
MEAL CARD ISSUED Y/N
WILL GOV'T QTRS BE ASSIGNED Y/N
CHECKED IN BY

(b)(6), (b)(7)c



UNITED STATES MARINE CORPS
MARINE AVIATION TRAINING SUPPORT GROUP 22
TRAINING COMMAND
271 FIFTH STREET
CORPUS CHRISTI, TEXAS 78419

IN REPLY REFER TO:
1320
S-1
14 May 19

FIRST ENDORSEMENT on CMC Washington DC Basic Orders of 25 April 2019

From: Commanding Officer, Marine Aviation Training Support Group 22
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7599 USMC

Subj: PERMANENT CHANGE OF STATION ORDERS

Encl: (1) PERMANENT CHANGE OF STATION (PCS)

1. Delivered. Effective 0800, 17 May 2019 you will stand detached from your present station and duties and report by 2359, 31 May 2019 to COMMANDING OFFICER, VMMT-204, MAG 26, 2D MAW NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28540 (MCC J9V) for duty.

2. You are authorized 0 day(s) proceed, 0 day(s) PDMRA, 9 day(s) delay chargeable as annual leave, and 5 day(s) travel via 2 Private Vehicles in reporting to your new duty station. Your projected leave balance upon completion of authorized delay is 41.5 day(s) accrued. Your dependents authorized travel under these orders are:

(b)(6), (b)(7)c

3. Should an emergency arise and you determine that more leave is required, contact your new command. Your request must include the reason, number of days requested, leave address, telephone number and your leave balance. You have given your leave address as: (b)(6), (b)(7)c telephone number: (b)(6), (b)(7)c. You have given the person to be notified in case of emergency as: (b)(6), (b)(7)c address as: (b)(6), (b)(7)c; telephone number (b)(6), (b)(7)c. Any change of leave address shall be reported to the Commanding Officer of your new duty station.

4. Before making any rental or lease agreements or purchasing a home, you will report to the local military family housing office at your new duty station. You will submit your travel claim to the disbursing officer at your new duty station within 5 days after completion of travel to settle travel expenses. Failure to comply will result in your pay account being checked for your travel advance. Additionally, elapsed time will be charged as leave if your travel claim has not been submitted to the disbursing officer within 30 days after completion of travel under these orders.

5. Your estimated travel entitlement is \$4,219.00 based on MCTFS data at the time the order was issued. It does not include any adjustments based on your outbound interview answers. Limit your GTCC use to no more than 80% of this amount. If traveling on Government procured transportation your reimbursement amount will be lower than this estimate. The actual amount of final entitlements will be computed upon settlement of your travel claim. Also at the time of settlement you are required to split disburse all charges placed on your card during your PCS move. Any GTCC use outside of PCS entitlements constitutes misuse. Contact your APC for any GTCC related questions and your supporting personnel administrative center for any PCS entitlement questions.

Subj: PERMANENT CHANGE OF STATION ORDERS

Your estimated travel entitlements are as follows:

<u>Travel Allowance Estimates</u>	
Member Military Air Commercial Travel:	\$0.00
Member Per Diem:	\$745.00
Member Mileage Allowance:	\$265.00
Family Member Military Air Commercial Travel:	\$0.00
Family Member Per Diem:	\$558.00
Dislocation Allowance:	\$2,651.00

Member Total Allowances:	\$3,661.00
Family Member Total Allowances:	\$558.00

6. A Temporary Lodging Expense (TLE) allowance is authorized for a total of 10 days (or 5 days, if from a Permanent Duty Station (PDS) in CONUS to a PDS outside CONUS) in connection with permanent change of station. These temporary lodgings must be in fact a temporary place of residence, acquired in the vicinity of your old or new PDS or both. You should try to obtain government quarters first. If available, you must obtain a statement of non-availability from the local commander, if you intend to claim TLE. If your old or new PDS where the TLE was incurred is not located at a post, camp, station, base, or depot or if it is in a city or metropolitan area, the statement of non-availability is not required.

7. Upon arrival at your new duty station you are required to recertify your entitlement to BAH within 30 days of joining the command per reference(s).

8. You are further advised that in accordance with MCO 1000.6 you may be eligible for 10 days permissive TAD house hunting, upon arrival to your new duty station.

9. For emergency medical care while traveling go to the nearest emergency room and contact your Primary Care Manager (PCM) or Tricare Regional Representative within 24 hours in order to notify Tricare that services have been received. For non-emergency, urgent or routine care please contact your present Tricare Region as these items may require a referral from your PCM. It is recommended that all routine care be completed prior to detaching from your current command. A list of Tricare regions, resources and guidance on obtaining care while en route is available at:
<http://tricare.mil/GettingCare/Traveling.aspx> or by calling 1-800-TRICARE (874-2273).


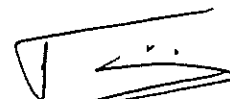
(b)(6), (b)(7)c

By direction

Subj: PERMANENT CHANGE OF STATION ORDERS

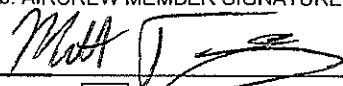
RECEIVING ENDORSEMENT

1. I have read and understand the contents of my orders. I received these orders at Corpus Christi, Texas 78419 on 17 May 2019. I understand that I am to report no later than 2359, 31 May 2019, to COMMANDING OFFICER, VMFT-204, MAG 26, 2D MAW NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28540 (MCC J9V) for duty. I have in my possession my medical and dental records.

 
M. J. TOMKIEWICZ

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY

(Read Privacy Act Statement and Instructions on back before completing form.)

1. TO: CO: VMM-261		2. FROM: Flight Surgeon: MCAS New River		3. DATE (YYYYMMDD) 20210823	
4. MEMBER NAME (Last, First, Middle Initial) TOMKIEWICZ, MATTHEW J		5. IDENTIFICATION NUMBER 1512971110		6. GRADE CAPT	
7. DATE OF BIRTH (YYYYMMDD) 19940620		8. ORGANIZATION USMC		9. TYPE OF DUTY DIACA SG1	
10. FLIGHT PHYSICAL DATE (YYYYMMDD) (If applicable) 20210823					
11. UP: THE ABOVE INDIVIDUAL HAS BEEN FOUND QUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <input type="checkbox"/> CLEARED AFTER (X): <input type="checkbox"/> Temporary medical disqualification <input type="checkbox"/> Waiver recommended (Not USAF) <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Reporting to new duty station <input type="checkbox"/> Waiver granted <input type="checkbox"/> Other (See remarks) <input checked="" type="checkbox"/> CLEARED AFTER FLIGHT DUTY MEDICAL EXAMINATION					
b. EFFECTIVE DATE (YYYYMMDD) 20210823			c. EXPIRATION DATE (YYYYMMDD) 20220630		
12. DOWN: THE ABOVE INDIVIDUAL HAS BEEN FOUND DISQUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <input type="checkbox"/> TEMPORARY DISQUALIFICATION DUE TO (X): <input type="checkbox"/> Illness or Injury <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Other (See remarks) MAY PARTICIPATE IN (X): <input type="checkbox"/> Simulator duties <input type="checkbox"/> Ground based flight line duties <input type="checkbox"/> Other (See remarks) <input type="checkbox"/> PERMANENT DISQUALIFICATION					
b. EFFECTIVE DATE (YYYYMMDD)			c. ESTIMATED DURATION OF GROUNDING		
13. REMARKS/LIMITATIONS					
<input type="checkbox"/> VISION CORRECTION DEVICES REQUIRED IN THE PERFORMANCE OF FLIGHT DUTIES. <input type="checkbox"/> MUST CARRY EXTRA SPECTACLES.					
14. (X one): <input checked="" type="checkbox"/> FLIGHT SURGEON <input type="checkbox"/> OTHER (Countersignature required for Air Force and Navy upslip)					
a. TYPED NAME (Last, First, Middle Initial) (b)(6), (b)(7)c		b. GRADE LCDR		c. PROVIDER SIGNATURE (b)(6), (b)(7)c	
d. DATE SIGNED (YYYYMMDD) 20210823		e. TYPED NAME (Last, First, Middle Initial)		f. GRADE	
g. FLIGHT SURGEON COUNTERSIGNATURE		h. DATE SIGNED (YYYYMMDD)			
15. MEMBER CERTIFICATION					
a. I certify that I understand the above recommendations and that I: <input checked="" type="checkbox"/> MAY <input type="checkbox"/> MAY NOT perform flight duties.			b. AIRCREW MEMBER SIGNATURE 		c. DATE SIGNED (YYYYMMDD) 20210823
16. ACTION TAKEN BY COMMANDER (Not required for Air Force and Navy)					
<input type="checkbox"/> APPROVE <input type="checkbox"/> DISAPPROVE					
a. TYPED NAME (Last, First, Middle Initial)		b. TITLE		c. SIGNATURE	
d. DATE SIGNED (YYYYMMDD)					

DD FORM 2992, JAN 2015

REPLACES DA FORM 4186, AF FORM 1042, AND NAVMED FORMS 6410/1 AND 6410/2, WHICH ARE OBSOLETE.

Adobe Designer 9.0

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

NAME (Last, first, middle initial)

TOMKIEWICZ, MATTHEW. J.

SSN

(b)(3), (b)(6), (b)(7)c

44

ENCLOSURE

(4)



UNITED STATES MARINE CORPS
MARINE AIRCRAFT GROUP 26
33 MARINE AIRCRAFT WING
U S MARINE CORPS FORCES COMMAND PSC BOX 11011
JACKSONVILLE NC 28545-1111

IN REPLY REFER TO
3710
DSSN
8 Feb 22

From: Commanding Officer, Marine Aircraft Group 26
To: Captain Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: TILTROTOR AIRCRAFT COMMANDER DESIGNATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11
(c) GruO 3710.32

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated Tiltrotor Aircraft Commander.

2. This letter will be maintained in your Naval Aviation Training and Standard Operating Procedures Standardization Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APP
Logbook entry



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR TRAINING SQUADRON 204
MARINE AIRCRAFT GROUP 26
2D MARINE AIRCRAFT WING
PSC BOX 21018
JACKSONVILLE, NC 28545-1018

3710
DSSN
09 Oct 19

From: Commanding Officer, Marine Medium Tiltrotor Training Squadron 204
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: DESIGNATION

Ref: (a) CNAF M-3710.7
(b) NAVMC 3500.11F
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Tiltrotor Second Pilot (T2P).
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry



DEPARTMENT OF THE NAVY
TRAINING AIR WING FOUR
245 FIFTH STREET SUITE 105
CORPUS CHRISTI TX 78419-5008

1500
Ser N00/ **0.358**
APR 25 2019

From: Commander, Training Air Wing FOUR
To: First Lieutenant Matthew J. Tomkiewicz 7531 USMC

Subj: DESIGNATION AS A NAVAL AVIATOR

Ref: (a) CNATRAINST 1500.4H

1. Pursuant to the provisions of reference (a), and having demonstrated those qualities of sound judgment and professional competence in your completion of the Advanced Multi-Engine Flight Training Syllabus of the Naval Air Training Command, you are designated a Naval Aviator effective 3 May 2019.

2. Congratulations on a job well done!

(b)(3), (b)(6), (b)(7)c

Copy to:
VT-35
PERS-4320
MATSG-22

SECTION IIB - MISSION QUALIFICATION RECORD

NAME (Last, first, middle initial)

TOMKIEWICZ, MATTHEW, J.

SSN

(b)(3), (b)(6), (b)(7)c



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

3710
DSSN
13 May 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: NIGHT SYSTEMS LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
23 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: NIGHT SYSTEMS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are Night Systems qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
4 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: DAY LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
2 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Matthew J. Tomkiewicz 1512971110/7532 USMC

Subj: HIGH LIGHT LEVEL NIGHT SYSTEMS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby High Light Level Night Systems qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710.7
DOSS
29 Nov 19

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Director of Safety and Standardization

Subj: OPERATIONS DUTY OFFICER

Ref: (a) GruO 3710.32A

1. Based on the training conducted in accordance with Marine Air Group 26 Standard Operating Procedures, the following are hereby qualified as Operations Duty Officer.

Rank Name

(b)(3), (b)(6), (b)(7)c

1stLt Tomkiewicz

(b)(3), (b)(6), (b)(7)c

CRM TRAINING & EVALUATION RECORD

CNAFINST 1542.7(Series)
2 MAY 2016

1. NAME (Last, first, middle initial): <u>TOMKIEWICZ, MATTHEW, J</u>	2. RANK: <u>2nd Lt</u>	3. EDIPT NUMBER: <u>1512971110</u>
---	---------------------------	---------------------------------------

Note: This form shall be permanently maintained in the NATOPS Flight Personnel Training/Qualification Jacket (Section II, Part C).

CRM IMM Instructor Course	4. Date: _____	5. Location: _____
---------------------------	----------------	--------------------

CRM FACILITATOR TRAINING

6. T/M AIRCRAFT	7. UNIT	8. DATE

GROUND TRAINING / FLIGHT EVALUATIONS

Note: Valid for 12 months from the last day of the month in which training/evaluation was completed.

Note: Renewal flight evaluations may be completed within 60 days preceding the expiration of the current qualification.

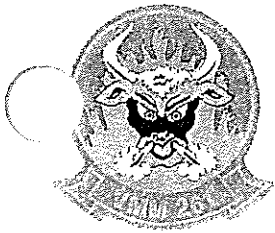
9. T/M AIRCRAFT	10. UNIT	11. GROUND / FLIGHT	12. INITIAL / RENEWAL	13. DATE COMPLETED	14. EXPIRATION DATE
T-6B	TW 5	G	I	29 SEPT 2017	30 SEPT 2018
F157	H+8	GAD	F	20 SEP 18	30 SEP 19
T44C	VT35	G	I	14 DEC 19	31 DEC 20
MV22B	VMFT-204	G	I	4 JUN 19	30 JUN 20
MV22B	VMFT-204	F	I	9 OCT 19	31 OCT 20
MV22B	261	G	R	3 JAN 20	31 JAN 21
MV22B	261	F	R	25 SEP 20	30 SEP 21
MV22B	261	G	R	4 JAN 21	31 JAN 22
MV22B	261	F	R	20 AUG 21	30 SEP 22
MV22B	261	G	R	4 JAN 22	31 JAN 23

EXTENSIONS

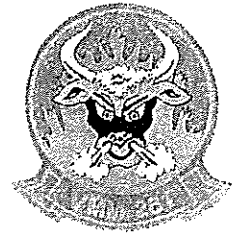
15. T/M AIRCRAFT	16. UNIT	17. GROUND / FLIGHT	18. AUTHORITY	19. EXPIRATION DATE

(REV 3/2016)

Enclosure (3)



VMM-261 TRAINING ROSTER

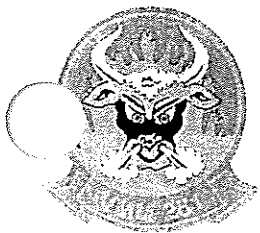


Topic: CRM Awareness

Date: 1/11/22

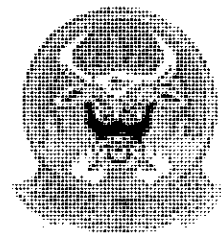
Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2	TOMKIEWICZ M.J.	CAPT	[Signature]
3	(b)(3), (b)(6), (b)(7)c		
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CRM

VMM-261 TRAINING ROSTER



Topic: CRM

Date:

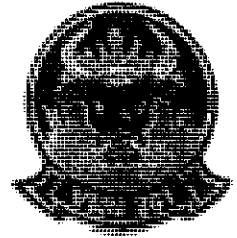
Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI, MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2			
3			
4			
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6			
7			
8	Speedy, James W	GSgt	[Signature]
9			
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VMM-261

2021 Back In The Saddle

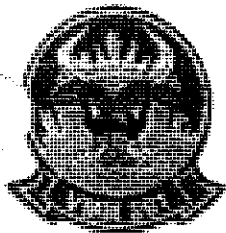


Topic: CRM

Date: 04 JAN 2021

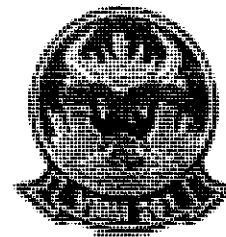
Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
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21	DOMKIEVICZ M. J.	CAPT	Matt S. J.
22	(b)(3), (b)(6), (b)(7)c		
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VMM-261

2021 Back In The Saddle

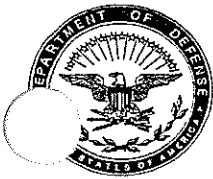


Topic: CRM

Date: 04 JAN 2021

Instructor: _____

	Last Name, FI. MI.	Rank	Signature
36	(b)(3), (b)(6), (b)(7)c		
37			
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48			
49	MODRE, JACOB M.	Lt Col	<i>[Signature]</i>
50	(b)(3), (b)(6), (b)(7)c		
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UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

3710
DSSN
3 Jan 20

From: VMM-261 Department of Safety and Standardization
To: NATOPS Officer, VMM-261

Subj: CRM/ORM TRAINING 2020

Ref: (a) CNAF-M 3710.7
(b) CNAF 1542.7B

1. The following personnel completed Annual CRM/ORM training as required by reference (a) and (b).

	LAST	FULL FIRST	RANK
1	(b)(3), (b)(6), (b)(7)c		
2			
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26			
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28			
29	TOMKIEWICZ	MATTHEW	1STLT
30	(b)(3), (b)(6), (b)(7)c		
31			
32			
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34			
35			

36	(b)(3), (b)(6), (b)(7)c
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(b)(3), (b)(6), (b)(7)c

CRM Initial/Refresher Course

Rank	Last Name	First Name	Middle Int.	Unit
(b)(3), (b)(6), (b)(7)c				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT 204
				VMMT-204
				VMMT-204
1st Lt	TOMKIEWICZ	MATTHEW	J.	VMMT - 204
(b)(3), (b)(6), (b)(7)c				VMMT-204
				VMMT-204
				VMMT-204
				VMMT-204
				VMMT-204

CRM Training has been conducted
 Date: 4 June 2019 Signature: _____

(b)(6), (b)(7)c, (b)(3)

CLASS 20-1

ENCLOSURE (4)

IF PREREQUISITES ARE INCOMPLETE YOU WILL NOT RECIEVE CREDIT FOR THE CLASS.
YOU WILL RECEIVE A PINK SHEET. YOU WILL COMPLETE THE PREREQUISITES AND
REATTEND THE CLASS

SUBJECT: PR1 CRM

INSTRUCTOR: VT-3

(b)(3), (b)(6), (b)(7)c

PRINT

	LAST NAME	FIRST NAME	RANK	SOD	CLASS
1	(b)(3), (b)(6), (b)(7)c				1749
2	TOMKIEWICZ	MATTHEW	2nd Lt	VT-3	1749
3	(b)(3), (b)(6), (b)(7)c				1749
4					1749
5					1749
6					1749
7					1749
8					1749
9					1749
10					1749
11					1742
12					1749
13					1749
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30					
31					
32					

DATE: 29 Sept 17

TIME: 1215-1415

BLDG: 3B25

ROOM: 112

CODE: 60105

TOT HRS: 2.0

ENTERED BY: (b)(3), (b)(6), (b)(7)c

SECTION IIIA - SCHOOL/COURSE ATTENDANCE RECORD

NAME (Last, first, middle)

TOMKIEWICZ, MATTHEW, J.

SSN

RECORD ALL SPECIALIZED, FORMAL AVIATION SCHOOLS, INCLUDING:

MAINTENANCE (3M) COURSES

(b)(3), (b)(6), (b)(7)c

NAVAL AVIATOR AVIATION TRAINING JACKET (AT), SUMMARY CARD

NAME (LAST, FIRST, AND MIDDLE) TOMKIEWICZ, MATTHEW J.		RANK/SERVICE 1STLT/USMC	DOD IDNUMBER (10-digit) XXX	SEX/RACE/ETHNIC CODE MEX	
AGE 21	MAJOR/DEGREE PROFESSIONAL FLIGHT	PROCUREMENT SOURCE 29	AQR 6	PFAR/FOFAR 6	DATE OF COMMISSION 18JUN16
CARRIER QUALIFICATION INFORMATION (GPA/BOARDING RATE) XXXX		CARRIER QUALIFICATION DATE (MONTH/YEAR) XXXX			XXXX
TYPE OF TRAINING <input checked="" type="checkbox"/> PILOT <input type="checkbox"/> STRIKE <input type="checkbox"/> MARITIME <input type="checkbox"/> E-2/C-2 <input type="checkbox"/> E-6 <input type="checkbox"/> HELICOPTER <input checked="" type="checkbox"/> MV-22 <input type="checkbox"/> NFO <input type="checkbox"/> NAV <input type="checkbox"/> STRIKE <input type="checkbox"/> STRIKE FIGHTER <input type="checkbox"/> ATDS (E-2/C-2)				AVW <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	ANTHROPOMETRIC CODE 10-12-4-5

PHASE OF TRAINING	DATE REPORTED	DATE COMPLETED	RAW SCORES				NSS	
			FLIGHT/DEVICE	ACAD	# UNSAT	# MARG	PHASE	ACAD
NIFE								
PREFLIGHT	21JUN17	08AUG17		94				48
PRIMARY	18SEP17	06JUN18	1.222	92.6			58.9	46.5
PRIMARY 2 (NFO)								
INTERMEDIATE 1	26JUL18	22OCT18	1.051	94			53.4	53.2
INTERMEDIATE 2								
ADVANCED	16NOV18	1MAY19	1.1079	96.33	1		52.7	55.2

* Indicates the NSS Phase value displayed is the Flight/Device NSS score.

SUMMARY OF FLIGHT AND SIMULATOR TRAINING IN THE NAVAL AIR TRAINING COMMAND

SQUADRON	A/C / SIM MODEL	TOTAL NUMBER OF EVENTS		TOTAL NUMBER OF HOURS		FIRST PILOT HOURS		CO-PILOT HOURS		SPECIAL CREW HOURS		NIGHT HOURS		NVG HOURS	INSTRUMENT HOURS	
		SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL		ACTUAL	SIMULATED
VT3	2F207B	9		11.7		11.7										6.5
VT3	2F208B	29		37.7		37.7						7.8				19.4
VT3	T6B	54	4	81.5	2.4	68.1		13.4	2.4			9.8	1.2		5	13.4
HT8	2B42	9	2	11.7	2.6	10.4	1.3	1.3	1.3							7.8
HT8	2C67	5		6.5		6.5										
HT8	TH57B	13		22.3		15.2		7.1								
HT8	TH57C	7		15.9		9.4		3.5		3		3.5				
VT35	T44C	38		77.2		59.1		18.1		15		10.8			12.8	15.5
VT35	T44C/OFT	34		92.8		50.6		42.2				1.3				40.5

REASON FOR ATTRITION (ENTER CODE)		PHASE/STAGE AT TIME OF ATTRITION		DATE OF ATTRITION	PIPELINE CHANGE/PROGRAM CHANGE APPROVED <input type="checkbox"/> YES <input type="checkbox"/> NO
DATE OF DESIGNATION 03MAY19	FLEET REPLACEMENT SQUADRON ASSIGNMENT VMMT-204 MCAS New River, NC		NEW PIPELINE/PROGRAM		

NAVAL AVIATOR AVIATION TRAINING JACKET (ATJ) SUMMARY CARD

PRIOR FLIGHT TIME

PILOT CERTIFICATE: <input type="checkbox"/> PRIVATE <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> ATP	
CIVILIAN TOTAL HOURS:	IFS: <input type="checkbox"/> COMPLETE <input checked="" type="checkbox"/> WAIVED
DESIGNATED MILITARY AVIATOR <input type="checkbox"/>	TOTAL HOURS: _____ AIRCRAFT COMMANDER HOURS: _____

TRAINING REVIEW BOARD ACTIONS

PHASE	STAGE	REASON FOR BOARD	CTW RECOMMENDATION

CARRIER QUALIFICATIONS (FOR STUDENT NAVAL PILOTS ONLY)

PHASE	DATE QUAL	A/C MODEL	LANDINGS		REMARKS
			T & G	ARRESTED	
IMMEDIATE					
ADVANCED					

COMMENTS:

NAME (LAST, FIRST, AND MIDDLE) TOMKIEWICZ, MATTHEW J.	RANK/SERVICE 1STLT/USMC	DOD IDNUMBER (10-digit) XXXX
---	-----------------------------------	--

ADVANCE PHASE

CNATRAINST 1000.

NAVAL AVIATOR TRAINING STAGE GRADES - PROP

a. Enter Stage Grade on Each Newly Designated NA (CNATRA PROVIDED ADVANCE STAGE AVERAGE PERIODICALLY.)

b. Retain Original IN ATJ.

NAME:	Advance Squadron	Designation Date	Assignment
1stLt Tomkiewicz, Matthew J.	VT-35	3-May-19	MCAS New River, NC

STAGE	Squadron Average	Student's Grades	Flight Waived	Remarks: (Specific comments required on below average block of training)
CONTACT	N/A	1.140		
INSTRUMENT	N/A	1.092		
NAV(ONAV)	N/A	0.000		
NAV(VNAV)				
NAV(SAR)				
NAV(LL)				
USMC FORM	N/A	1.036		
USAF FORM				

CO'S APPRAISAL OF FRS PREPAREDNESS.

1stLt Tomkiewicz successfully completed the advanced flight training syllabus. The syllabus consisted of 38 flights in the T-44 aircraft and 34 events in the T44-OFT flight simulator. He will be a welcomed asset to his next command. This officer meets all criteria and is prepared for the successful completion of the FRS curriculum.

SIGNATURE	DATE
(b)(3), (b)(6), (b)(7)c	5/3/19

CNATRA 1542/5B (REV.8-88)

ENCLOSURE

(4)

PINK SHEET SUMMARY (FRONT)

Record all flight violations, accidents, incidents, unsatisfactory events, delinquency reports and administrative actions on this sheet. Information concerning accidents/incidents REQUIRE SPECIAL HANDLING IAW OPNAVINST 3750.6. An entry shall be made from each activity/squadron listing NONE where appropriate-if no adverse events occurred in each section 1, 2, and 3.

SECTION 1 - FLIGHT VIOLATIONS/ACCIDENTS/INCIDENTS

DATE	ACTIVITY/SQUADRON	BRIEF DESCRIPTION	CAUSE	
09AUG17	NASC	API	NONE	CLERK
06JUN18	VT-3	PRIMARY	NONE	CLERK
23OCT18	HT-8	INT/HELO	NONE	LH
03MAY19	VT-35	ADVANCED	NONE	KT

SECTION 2 - UNSATISFACTORY EVENTS (Include all PINK and YELLOW sheet events)

DATE	TRNG SQUADRON	STAGE/EVENT	MAJOR DIFFICULTY	
09AUG17	NASC	API	NONE	CLERK
06JUN18	VT-3	PRIMARY	NONE	CLERK
23OCT18	HT-8	INT/HELO	NONE	LH
12FEB19	VT-35	ADV/ C4205	HW/SA	KT

SECTION 3 - STUDENT TRAINING REVIEW BOARDS/PROGRESS CHECKS

DATE	TRNG SQUADRON	TRB/IPC/FPC/APC	DISPOSITION	
09AUG17	NASC	API	NONE	CLERK
06JUN18	VT-3	PRIMARY	NONE	CLERK
23OCT18	HT-8	INT/HELO	NONE	LH
03MAY19	VT-35	ADVANCED	NONE	KT

REMARKS

STUDENT'S NAME (LAST, FIRST AND MIDDLE INITIAL)
TOMKIEWICZ, MATTHEW J.

RANK
1STLT

DOD ID NUMBER
XXXX

CNATRA 1542/90 (Rev 10/17)

PINK SHEET SUMMARY
(REVERSE SIDE CONTINUATION SHEET – PAGE 2)

Record all flight violations, accidents, incidents, unsatisfactory events, delinquency reports and administrative actions on this sheet. Information concerning accidents/incidents REQUIRE SPECIAL HANDLING IAW OPNAVINST 3750.6. An entry shall be made from each activity/squadron listing NONE where appropriate-if no adverse events occurred in each section 1, 2, and 3.

SECTION 1 - FLIGHT VIOLATIONS/ACCIDENTS/INCIDENTS (Continued)

DATE	ACTIVITY/SQUADRON	BRIEF DESCRIPTION	CAUSE	

SECTION 2 - UNSATISFACTORY EVENTS (Include all PINK and YELLOW sheet events) (Continued)

DATE	TRNG SQUADRON	STAGE/EVENT	MAJOR DIFFICULTY	

SECTION 3 - STUDENT TRAINING REVIEW BOARDS/PROGRESS CHECKS (Continued)

DATE	TRNG SQUADRON	TRB/IPC/FPC/APC	DISPOSITION	

REMARKS

STUDENT'S NAME (LAST, FIRST AND MIDDLE INITIAL)
TOMKIEWICZ, MATTHEW J.

RANK
1STLT

DOD ID NUMBER
XXXX

CNATRA 1542/90 (Rev 10/17)

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

OPNAV 3760/32F (Rev 4-90) S/N 0107-LF-009-7700

SECTION IIIB – OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, first, middle initial)

RANK/RATE SSN

COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
MV 22 AEROMED 2022	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	4 JAN 22	P	261									
	SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		

TRAINING ACTIVITIES

1. Pensacola, FL	8. Barbers Point, HI	15. Brunswick, ME
2. Miramar, CA	9. Cecil Field, FL	16. FASOTRAGRUPAC
3. Norfolk, VA	10. Cherry Point, NC	17. FASOTRAGRULANT
4. Corpus Christi, TX	11. Whidbey Island, WA	18. MCAS New River, NC
5. Lemoore, CA	12. Beaufort, SC	19. Okinawa
6. El Toro, CA	13. Point Mugu, CA	20. Other (List)
7. Jacksonville, FL	14. Patuxent River, MD	21.

23 NOV 2009

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32F (REV4-90) S/N 0107-LF-009-7700

SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, First, Middle Initial)

TOMKIEWICZ, MATTHEW

RANK/RATE
2NDLT

SSN

000-00-0000

COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
INTERMEDIATE WATER SURVIVAL TRAINING	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
							10-Jul-17	Q	20			
	SIGNATURE			SIGNATURE			SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE		
LAND SURVIVAL TRAINING COMPLETED AT NASC	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
										31 JUL 17	Q	20
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE (b)(3), (b)(6), (b)(7)c		
T-6B LEVEL-A EGRESS	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	4 Oct 17	Q	TWS	4 Oct 17	Q	TWS						
	SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE		
Class: 7 Exp. AUG 2021	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
							9/21/18	Q	HTB			
	SIGNATURE			SIGNATURE			SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE		
LEVEL A TRAINING	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
SENSORY PROBLEMS/ SPATIAL D	7/31/18	Q	HTB									
	SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE			SIGNATURE			SIGNATURE		
TH-57 EMERGENCY EGRESS DRILL	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
ALSS				7/21/18	Q	HTB						
	SIGNATURE			SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE			SIGNATURE		
NITE Lab Training INDOC	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
System: ANVIS-9	7/18	Q	TWS									
	SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE			SIGNATURE			SIGNATURE		
Sensory Problem/ Spatial D	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	7/18	Q	HTB									
	SIGNATURE (b)(3), (b)(6), (b)(7)c			SIGNATURE			SIGNATURE			SIGNATURE		

TRAINING ACTIVITIES

1. Pensacola, FL	8. Barbers Point, HI	15. Brunswick, ME
2. Miramar, CA	9. Cecil Field, FL	16. FASOTRAGRUPAC
3. Norfolk, VA	10. Cherry Point, NC	17. FASOTRAGRULANT
4. Corpus Christi, TX	11. Whidbey Island, WA	18. MCAS New River, NC
5. Lemoore, CA	12. Beaufort, SC	19. Okinawa
6. El Toro, CA	13. Point Mugu, CA	Other (List)
7. Jacksonville, FL	14. Patuxent River, MD	20. NASC, Pensacola, FL
		21.



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
340 HULSE ROAD
PENSACOLA FL 32508-1089

IN REPLY REFER TO
3760
2 Feb 2021

From: Officer in Charge, Naval Survival Training Institute
To: **CAPTAIN MATTHEW TOMKIEWICZ**
Subj: NASTP TRAINING QUALIFICATION LETTER
Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **CAPTAIN MATTHEW TOMKIEWICZ** has received AC REF CLASS 3 on 2 Feb 2021 at Aviation Survival Training Center **CHERRY POINT**.

2. **CAPTAIN MATTHEW TOMKIEWICZ** received a grade of Q. All required modules were completed.

3. This qualification expires on 28 Feb 2025 unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, H-72, H-92, OH-58C, TH-57, UH-1, V-22

Aircrew Endurance Vest training consisted of an overview and in water familiarization of either the AE Vest or PRU-70 as applicable. In water familiarization included performing underwater problem solving, underwater egress, survival swimming, treading water, survival floating, life-preserver inflation, multi-place life raft boarding and helicopter rescue procedures. Subject named training specific to the AE Vest at Aviation Survival Training Center Cherry Point.

(b)(3), (b)(6), (b)(7)c

By direction

3710/5100

DSS

04 Jan ~~21~~

22 RAB

From: Aeromedical Safety Officer, Marine Aircraft Group 26

To: VMM-261 Department of Safety and Standardization

Subj: AEROMEDICAL TRAINING

Ref: (a) CNAF M-3710.7

(b) WgO 5100.29

1. The following personnel completed Annual Aeromedical training as required by reference (a) and (b). Topics include Sensory Problems / Situational Awareness, Radios, Human Factors, Human Performance, and FAILSAFE Program.

	LAST	FULL FIRST	RANK	PLATFORM	SQUADRON
1	(b)(3), (b)(6), (b)(7)c				261
2					261
3					261
4					261
5					261
6	TOMKIEWICZ	MATTHEW	CAPT	V-22	261
7	(b)(3), (b)(6), (b)(7)c				261
8					261
9					261
10					261
11					261
12					261
13					261
14					261
15					261
16					261
17					261
18					261
19					261
20					261
21					261
22					261

/s/

(b)(3), (b)(6), (b)(7)c

VMM-261 AEROMEDICAL

6-Jan-20

Name

Signature

(b)(3), (b)(6), (b)(7)c

CENTER FOR SECURITY FORCES

Certificate of Completion

**Survival, Evasion, Resistance, and Escape Course
A-2D-4635**

**Commanding Officer
Center for Security Forces**

Takes pleasure in granting a certificate of completion to

1STLT MATTHEW TOMKIEWICZ

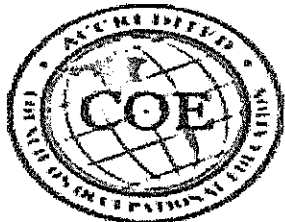
Given this 15th day of November 2019

(b)(6), (b)(7)c

(b)(6), (b)(7)c

CAPTAIN, USN

**COMMANDING OFFICER
CENTER FOR SECURITY FORCES**



ENCLOSURE

(4)

29 Nov 18

MEMORANDUM

From: Aeromedical Safety Officer, TW-4
To: NATOPS Officer

Subj: CNAF M-3710.7 LEVEL A ANNUAL ADJUNCTIVE TRAINING

1. The personnel listed below have completed the following
CNAF M-3710.7 NASTP Level A Annual Adjunctive Training on 29 Nov
2018:

Sensory Problems/Spatial Disorientation

<u>Rank</u>	<u>Name</u>	<u>Squadron</u>
(b)(3), (b)(6), (b)(7)c		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-35
		VT-35
		VT-35
		VT-35
1STLT	TOMKIEWICZ, MATTHEW J.	VT-35
(b)(3), (b)(6), (b)(7)c		VT-35
		VT-35
		VT-31
		VT-35
		VT-35

(b)(3), (b)(6), (b)(7)c

31 Jul 18

From: Aeromedical Safety Officer, TW-5
To: CTW-5 NATOPS Officers

Subj: CNAF M-3710.7 LEVEL A ANNUAL AEROMEDICAL TRAINING

1. The listed personnel have completed the following CNAF M-3710.7 Level A Annual Training Requirements on July 31, 2018.

a. Sensory Problems/Spatial disorientation

(b)(3), (b)(6), (b)(7)c		8
Tomkiewicz, Matthew	1stLt	8
(b)(3), (b)(6), (b)(7)c		8
		8
		8
		8
		8
		18
		18
		18
		18
		18
		18
		18
		28
		28
		28
		28
		28
		28

(b)(3), (b)(6), (b)(7)c



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
55 RADFORD BOULEVARD, SUITE 211
PENSACOLA FL 32508-1091

IN REPLY REFER TO
3760
27 Jun 2018

From: Officer in Charge, Naval Survival Training Institute

To: **2ND LIEUTENANT MATTHEW TOMKIEWICZ**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **2ND LIEUTENANT MATTHEW TOMKIEWICZ** has received **AC INDOC CLASS 3** on **27 Jun 2018** at Aviation Survival Training Center **PENSACOLA**.

2. **2ND LIEUTENANT MATTHEW TOMKIEWICZ** received a grade of **Q**. All required modules were completed.

3. This qualification expires on **31 Aug 2021** unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, TH-57, UH-1, V-22

(b)(3), (b)(6), (b)(7)c

04 Oct 17

From: Aeromedical Safety Officer, TW-5
To: CTW-5 NATOPS Officers

Subj: CNAF M-3710.7 LEVEL A ANNUAL AEROMEDICAL TRAINING

1. The listed personnel have completed the following CNAF M-3710.7 Level A Annual Training Requirements on October 04, 2017.

- a. Sensory Problems/Spatial Disorientation
- b. Aeromedical Aspects of Ejection
- c. T-6B Ejection Seat Training
- d. T-6B Emergency Ground Egress
- e. Hypoxia Awareness Training
- f. G-LOC and G-Tolerance Improvement Program
- g. Aviation Life Support Systems (ALSS)
- h. Decompression Sickness (DCS)

(b)(3), (b)(6), (b)(7)c		2
		2
		2
		2
		3
		3
		3
Tomkiewicz, Matthew	2ndLt	3
(b)(3), (b)(6), (b)(7)c		3
		6
		6
		6
(b)(3), (b)(6), (b)(7)c		6
		6



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
55 RADFORD BOULEVARD, SUITE 211
PENSACOLA FL 32508-1091

IN REPLY REFER TO
3760
8 Aug 2017

From: Officer in Charge, Naval Survival Training Institute
To: 2ND LIEUTENANT MATTHEW TOMKIEWICZ
Subj: NASTP TRAINING QUALIFICATION LETTER
Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), 2ND LIEUTENANT MATTHEW TOMKIEWICZ has received AIRCREW INDOCTRINATION NASTP TRAINING FOR CLASS 1 AIRCRAFT on 8 Aug 2017 at Aviation Survival Training Center PENSACOLA.

2. 2ND LIEUTENANT MATTHEW TOMKIEWICZ received a grade of Q. All required modules were completed.

3. This qualification expires on 31 Aug 2021 unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 1: AV-8, EA-6, F/A-18, F-16, S-3, T-2, T-38, T-45, T-6B

Class 4: C-12, C-130T, C-20, C-21, C-26, C-35, C-37, C-40, C-9, E-4, E-6, P-8, T-1A, T-39, T-44

(b)(3), (b)(6), (b)(7)c

NAME (Last, first, middle initial)

2nd Lt TOMKIEWICZ, MATTHEW, J.

SSN

NATOPS EXAMS

[illegible]



VMM-261 PILOTS OPEN BOOK NATOPS

Revised 03 Feb 2021

NAME: TOMKIEU, MATTHEW

DATE: 05 JAN 2022

GRADE: 4.0

GRADED BY: (b)(3), (b)(6), (b)(7)c

1. The MV-22 is a multi-mission aircraft within many applications. These applications include the following:

- a. Medium Lift Assault Support
- b. TRAP
- c. Emergency Evac
- d. Fleet Logistics Support
- e. Logistics Support Ashore
- f. Long Range Logistics Support
- g. Medical Evac

2. The maximum VTOL gross weight of the V-22 is 52,000 lbs sea level; maximum Short Takeoff (STO) gross weight is 57,000 lbs; and maximum alternate gross weight is 60,500 lbs.

3. The nose to tail length of the V-22 is 57 ft 4 in.

4. Each DEU controls operation of 2 MFDs, with the capability of controlling all 4 MFDs in the event of a DEU failure.

5. There are five main Aircraft Interface Units (AIUs) on the aircraft: the Avionics Bay Interface Unit (ABIU), two Nacelle Interface Units, the Wing Interface Unit, and the Drive Systems Interface Unit (DSIU).

6. The DSIU, located on the midwing forward equipment shelf, monitors and controls the Emergency Lubrication System, and monitors for oil debris in the PRGD, TAGBs, MWGBs, and both engines.

7. The APN-194 radar altimeter provides aircraft altitude above ground level (AGL) from 0 to approximately 4500 ft.

8. Stall warning is provided for nacelle angles between 0° and 35°.

9. The Sink rate warning is initiated when the vertical velocity exceeds the vertical velocity limit with airspeed less than 60 kts and nacelle angle greater than 65°.

10. If the aircraft was Shut down without a proper system log off, the MCs will attempt to restore the aircraft configuration available prior to loss of power. This is referred to as a Warm Start.



VMM-261 PILOTS CLOSED BOOK NATOPS

(b)(2)



This is to certify that

1st Lt Matthew Tomkiewicz

has successfully completed the following training course:

IGS - Tiltrotor Credit Course

Identifier: B7863B9592494A2F984B07F80C74209A

07/19/2021

Marine Corps Aviation Learning Management System Enterprise

Evaluatee UIC2, MATTHEW
 EDDPI 1512971110
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight _____
 Total Hours 446.9
 Model Hours 248.1
 Flight Duration _____
 Bono _____
 Date of Last Evaluation 20 AUG 21
 Expires 30 SEP 2022

Open Book Date and Grade 10 JAN 22 / 4.0
 Closed Book Date and Grade 10 JAN 22 / 4.0

Turn in completed ATF to S-3 Pilot Training
 Correct TMR code entered into MSHARP

Phase I Ground Evaluation

Open/Closed Book
 Oral Exam

Phase II Flight Evaluation

1. Preflight:

- *a. Records check
- *b. Crew briefing
- *c. Flight Planning

DTM load procedure

d. Preflight check

2. Start/engage/post-engagement:

- a. Start/Engage
- b. Post-engagement

*3. Taxi:

- a. Procedures
- b. Taxi

4. Takeoff/transition:

- *a. procedures
- b. Type takeoff

* (1) Vertical

* (2) STO

(3) Crosswind

(4) Maximum Gross

*c. Transition to airplane mode

5. Climb/cruise

- *a. Procedures
- *b. Power control
- *c. Aircraft control
- *d. CMS utilization/knowledge

(1) CDU/EICAS

(2) MFDs

(3) Digital Map

(4) FLIR

(5) Key Pad functions

e. Slow flight airplane mode

f. Steep turns

g. Stalls

*6. Approach and landing:

- a. Procedures
- b. Power control

- c. Aircraft control
- d. Type of lift
- * (1) Vertical
- * (2) ROL
- * (3) No-Hover
- (4) Crosswind
- (5) Maximum gross
- (6) Steep
- a. Normal
- b. Nose Low
- (7) Confined area landing

*7. Emergency Procedures (critical area/sub area)

- a. Procedures
- b. Aircraft control

*8. Cockpit Resource Management

- a. Decision Making
- b. Assertiveness
- c. Mission analysis
- d. Communication
- e. Leadership
- f. Adaptability/Flexibility
- g. Situational Awareness

9. Shutdown/ post-flight

- a. Shutdown
- b. Post flight inspection

*10. Debriefing

Phase III Mission Evaluation Areas

1. Confined area landing (critical area/sub area):

- a. Procedures
- (1) Zone evaluation
- b. Approach
- c. Power control
- d. Aircraft control

2. Navigation

3. Instrument Procedures

4. LAT

5. Special/Other

Narrative of Flight:

Strengths

Weaknesses

Notes

ENCLOSURE

(4)

NATOPS EVALUATION REPORT

1. NAME (Last, first, middle initial)		2. RANK:	3. EDIPI NUMBER:	4. DATE OF LAST EVALUATION:
Tomkiewicz, Matthew J.		Capt	1512971110	20-Aug-2021
5. UNIT:	6. CREW POSITION & QUALIFICATIONS:		7. HOURS IN MODEL:	8. DATE OF CHECK FLIGHT:
VMM-261	Aircraft Commander		248.1	08-Feb-2022
9. TOTAL FLIGHT HOURS:	10. AIRCRAFT MODEL:	11. AIRCRAFT BUNO:	12. FLIGHT DURATION:	13. EXPIRATION DATE:
446.9	MV-22B	168019	2.6	28-Feb-2023

NATOPS EVALUATION

14a. REQUIREMENT	14b. DATE COMPLETED	14c. GRADE		
		Q	CQ	U
OPEN BOOK EXAMINATION	10-Jan-2022	Q		
CLOSED BOOK EXAMINATION	10-Jan-2022	Q		
ORAL EXAMINATION	08-Feb-2022	Q		
EVALUATION FLIGHT	08-Feb-2022	Q		

OVERALL FINAL GRADE: QUALIFIED

14d. REMARKS OF EVALUATOR:

Narrative:

Capt Tomkiewicz flew a NATOPS evaluation flight as defined by the MV-22B NATOPS Flight Manual, CNAF M-3710.7, and applicable Federal Aviation Regulations (Part 91). He demonstrated sound knowledge of aircraft capabilities and limitations and displayed effective crew resource management. He is qualified to hold a NATOPS rating in the MV-22B aircraft. ***NOTE: Capt Tomkiewicz will be qualified to be designated an Aircraft Commander in the MV-22B once reaching 450 total flight hours.***

Strengths: Aircraft Control

Weakness: Adaptability/Flexibility

Annual Egress was performed IAW CNAF M-3710.7 Series.

Annual CRM evaluation flight conducted IAW CNAFINST 1542.7D

15a. PRINT NAME OF EVALUEE:	15b. RANK:	15c. DATE:	15d. SIGNATURE:
M. J. Tomkiewicz	Capt	08-Feb-2022	<i>[Signature]</i>
16a. PRINT NAME OF INSTRUCTOR:	16b. RANK:	16c. DATE:	16d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		08-Feb-2022	(b)(3), (b)(6), (b)(7)c

17. REMARKS OF UNIT COMMANDER:

450 HRS ACHIEVED ON 9 FEB 2022. CONGRATS!

18a. UNIT COMMANDER:	18b. RANK:	18c. DATE:	18d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		9-FEB-2022	(b)(3), (b)(6), (b)(7)c

VMM-261 INSTRUMENT EVALUATION FORM

Evaluatee DOMKIEWICZ MATTHEW
 Evaluatee EDIPI 1517971110
 DOB 06/20/1954
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight 21 JULY 21
 Buno CFO-6
 Total years flying 4
 Total flight time(all years) 381.9
 Total flight time (MV-22) 183.1
 Date of last instrument Check 07/31/2020

Approaches			
	Last 6 Months	Last 12 Months	Total All Years
Precision	6	24	N/A
Non-Precision	7	12	N/A
Flight Time			
Actual	5.2	14.5	38.1
Simulated	8.9	15.2	76.5

Instrument Ground School

Date Attended 07/19/21
 Test Grade 88

☐
☐

Phase I Ground Evaluation


Brief ☒ CQ ☐ U
 Flight Planning ☒ ☐ ☐

Phase II Flight Evaluation

- Instrument Take-Off ☒ ☐ ☐
- Turn Pattern ☒ ☐ ☐
- Climbs/Descents ☒ ☐ ☐
- Unusual Attitudes ☒ ☐ ☐
- Partial Panel ☒ ☐ ☐
- Instrument Approaches
 - Tacan ☒ ☐ ☐
 - ILS ☒ ☐ ☐
 - PAR ☒ ☐ ☐
 - ASR ☒ ☐ ☐
- Communication ☒ ☐ ☐
- Navigation ☒ ☐ ☐
- Emergency Procedures ☒ ☐ ☐

ENCLOSURE (4)

NATOPS INSTRUMENT RATING REQUEST

1. NAME (Last, first, middle initial): TOMKIEWICZ, MATTHEW J.		2. RANK: CAPT		3. EDIPI NUMBER: 1512971110		4. DATE OF LAST EVALUATION: 31 JULY 2020		
5. UNIT: VMM-261		6. CREW POSITION & QUALIFICATIONS: T2P		7. HOURS IN MODEL: 183.1		8. DATE OF CHECK FLIGHT: 21 JULY 21		
26. AIRCRAFT MODEL: MV-22B		10. AIRCRAFT BUNO: CFTD-6		11. FLIGHT DURATION: 2.0		12. EXPIRATION DATE: 31 JULY 2022		
13. MISCELLANEOUS SUMMARY				18. INSTRUMENT PILOT TIME				
ITEM		LAST 6 MO.		LAST 12 MO.		TOTAL ALL YEARS		
PRECISION APPROACHES		6		24		ACTUAL 14.5 5.2 38.1		
						SIMULATED 15.2 8.9 76.5		
NON-PRECISION APPROACHES		7		12		INSTRUMENT PILOT TIME TOTAL 29.7 14.3 114.6		
						TOTAL YEARS FLYING EXPERIENCE (Military and Commercial) 4		
14. TOTAL PILOT TIME		381.9		19. THIS IS TO CERTIFY THAT THE APPLICANT HAS...				
15. CURRENT RATING: STANDARD				<input checked="" type="checkbox"/> SATISFACTORILY <input type="checkbox"/> UNSATISFACTORILY				
16. ISSUED RATING: STANDARD				COMPLETED THE WRITTEN EXAMINATION FOR AN INSTRUMENT RATING AS REQUIRED BY THE NATOPS INSTRUMENT FLIGHT MANUAL.				
17. SIGNATURE OF APPLICANT: 				20. 1ST EXAM(Grade): PASS		21. 2ND EXAM(Grade): PASS		
				23. EXAMINING OFFICER: MCALMS WEBSITE, VERIFIED		24. RANK: O-3		
				25. UNIT: VMM-261		26. DATE OF EXAM: 19 Jul 2021		
FLIGHT EVALUATION	27. PART ONE (Basic Instruments)		Q	U	28. PART TWO (Instrument flight within control areas with emphasis on VOR/TACAN where feasible)		Q	U
	1 INSTRUMENT TAKEOFF (Optional)	X		1 FLIGHT PLANNING	X			
	2 CLIMBING, DESCENDING, AND TIMED TURNS*	X		2 CLEARANCE COMPLIANCE	X			
	3 STEEP TURNS*	X		3 INSTRUMENT APPROACHES	X			
	4 RECOVERY FROM UNUSUAL ATTITUDES*	X		4 COMMUNICATIONS AND NAVIGATION EQUIPMENT	X			
	5 VOR/TACAN POSITIONING	X		5 EMERGENCY PROCEDURES	X			
	6 PARTIAL PANEL AIRWORK*	X		6 VOICE PROCEDURES	X			
	7			7				
* Not required when evaluation is conducted under actual instrument conditions.								
29. FLIGHT EXAMINER: (b)(6), (b)(7)c		30. RANK:		31. DATE: 22 JUL 21		32. SIGNATURE: (b)(3), (b)(6), (b)(7)c		
33. REMARKS: SIM was a local area instrument round robin to KILM, KMYR, KFAY, and back to KNCA. Upon takeoff, SNM received a landing gear malfunction with a GPS fail. SNM elected to remain below the clouds and troubleshoot the landing gear. The gear malfunction cleared but the GPS failure didn't clear. SNM switched from INAV to ENAV with some prompting and then proceeded with the flight. Remember to always back yourself up with ENAV when you're flying pure IFR. SNM shot a TACAN A to a low approach. SNM elected to leave the gear up but received an engine failure passing through 200'. SNM conducted a good roll on. Proceeding up to KFAY, we conducted the unusual attitudes and partial panel work. By the end of the flight the INS drift was enough to be disorienting. Good learning points all around. Good to progress. Strengths: Basic air work, EP procedures Areas for Improvement: Remember to back up with ENAV.								
34. UNIT COMMANDER: (b)(3), (b)(6), (b)(7)c		35. RANK:		36. DATE: 23 Jul 2021		37. SIGNATURE: (b)(3), (b)(6), (b)(7)c		

NAME TOMKIEWICZ, MATTHEW J

FILE OR SERIAL NO. 426925

DESIGNATION: NO. USMC

DATE NOV 2017

LOG NO. 1 FROM NOV 2017

TO _____

ENCLOSURE (5)

IF FOUND, PLEASE RETURN TO

CHIEF OF NAVAL OPERATIONS

NAVY DEPARTMENT

WASHINGTON, D.C. 20350

OPNAV FORM 3740-31 REV (4-83)

1

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

QUALIFICATION	DATE	SIGNATURE
COMPLETED	8 JUN 18	(b)(3), (b)(6), (b)(7)c
MILITARY CHECKOUT AS PIC IN F-6B		VF-3
INSTRUMENT CHECK	1 May 19	(b)(3), (b)(6), (b)(7)c
Naval Aviation	25 Apr 19	
COMPLETED MILITARY CHECKOUT AS PILOT IN COMMAND/T-44	3 May 19	
MVZB T2P/NATOPS	9 OCT 19	(b)(3), (b)(6), (b)(7)c VMMT-
MVZB INSTA ✓	24 SEP 19	VMMT-
MVZB HLL NSQ	2 APR 20	
MVZB DAY LAT	4 APR 20	
MVZB NSQ	23 APR 20	
MVZB NSLAT	15 MAY 20	
MVZB INST	31 JUL 20	(b)(3), (b)(6), (b)(7)c
MVZB NATOPS	25 SEP 20	
MVZB INST	21 JUL 21	
MVZB NATOPS	20 AUG 21	

Make entries on lines, or in rubber stamp impressions anywhere on the page.

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy) 5

[illegible]

Make entries on lines, or in rubber stamp impressions anywhere on the page.

(To summarize flight data in this log and last months of previous log)

[illegible]

Enter year and item (e. g. model) on lines; transfer data from log)

[illegible]

	F —ADF	L —LF range	T —TACAN
* Automatic	G —GCA	O —OMNI	S —Simulated
• ICA	I —ILS	R —Radar	J —Jet

[illegible]

Proficiency	Supervisor	Observer	Incomplete				
Instructor Name	Event	Method	Needs Additional Training	Overview	Plan/Brief	Execution	Instructor Comments
	FAM(1)-1030						
	FAM(1)-1031						
	FAM(1)-1032						
	FAM(1)-1033						
	FAM(1)-1034						
	FAM(1)-1035						
	FAM(1)-1036						
	FAM(1)-1037						
	FAM(1)-1038						
	FAM(1)-1039						
	FAM(1)-1070						
	FAM(1)-1071						
	FAM(1)-1072						
	FAM(1)-1073						
	FAM(1)-1074						
	FAM(1)-1075						
	FAM(1)-1076						
	FAM(1)-1077						
	FAM(1)-1078						
	FAM(1)-1080						
	FAM(1)-1081						
	FAM(1)-1082						
	FAM(1)-1083						
	FAM(1)-1084						
	FAM(1)-1085						
	FAM(1)-1086						
	NAV(1)-1130						
	NAV(1)-1131						
	NAV(1)-1132						
	INST(1)-1230						
	INST(1)-1231						
	INST(1)-1232						
	INST(1)-1233						
	INST(1)-1240						
	INST(1)-1241						
	INST(1)-1242						
	CAL(1)-1330						
	CAL(1)-1331						
	CAL(1)-1332						
	CAL(1)-1333						
	CAL(1)-1340						
	CAL(1)-1341						
	CAL(1)-1342						
	CAL(1)-1343						
	FORM(1)-1430						
	FORM(1)-1440						
	FCLP(1)-1530						
	FCLP(1)-1540						
	NS(1)-1630						
	NS(1)-1631						
	NS(1)-1632						
	NS(1)-1633						
	NS(1)-1634						
	NS(1)-1640						
	NS(1)-1641						
	NS(1)-1642						
	REV(1)-1830						
	REV(1)-1831						
	REV(1)-1832						
	REV(1)-1840						
(b)(3), (b)(6), (b)(7)c	NAV(1)-1130	Baselined	No				Event Baselined
(b)(3), (b)(6), (b)(7)c	FAM(2)-2030	Logged	No	Conducted a PAR at KNCA with good proficiency	Planned a PAR at KNCA	Execution of the PAR was good. Glideslope control was on point throughout the approach. Good job on the use of the flight director and converting at the appropriate time.	See above
(b)(3), (b)(6), (b)(7)c	NAV(1)-1130	Logged	No	Tac Form was flown in the W-122 area. Each aircraft in the section took the lead to conduct maneuvers. Break up and rejoin was conducted per ANITP. All Tac Form maneuvers were conducted appropriately and within.	Solid discussion and good demonstration of knowledge	All the maneuvers were performed well. Good job executing the hard turns within parameters. All the maneuvers were conducted correctly. Good SA on when and how to turn. Basic air work was on point.	No issues or negative trends noted
(b)(3), (b)(6), (b)(7)c	FORM(1)-1430	Logged	No	Tac form was conducted using the VR-084 route in order to demonstrate trail maneuvers. All maneuvers conducted in accordance with ANITP. Brief was solid	Good brief	Good job calling turns and course intercepts. Remember that if stuff gets hairy in the clouds or you are vectored more than two turns in IMC just go ahead and break up the flight. It is important to be predictable to ATC and do not wait until you are with the terminal controller to break up a flight.	No issues or negative trends noted
c, (b)(3), (b)(6), (b)(7)c	FORM(1)-1430	Logged	No	TACFORM executed in the W-122	Good understanding of ANITP and all required briefing items	Well executed. Good, aggressive maneuvering with limited coaching	Keep utilizing the rest of the crew to build SA.
	CAL(2)-2230						

	CAL(2)-2231						
	CAL(2)-2240						
	CAL(2)-2241						
(b)(3), (b)(6), (b)(7)c	CAL(2)-2242	Logged	No	Executed SEC Cals in oak grove after TACFORM	Proficient with all briefing items Build standard LZ diagram	Executed multiple landings in lead and -2 positions. Both CONV and high speed tactical approaches	Good landing procedures. Keep working on utilizing radius of turn to maintain position
(b)(3), (b)(6), (b)(7)c	RVL(2)-2270	Logged	Yes	Event incomplete due to time - cyclic lost controllability. Sim conducted in CFTD-6. Flight departed KNCA blue line for LZ Bluebird. Environmental conditions were right, clear skies, with	Plan and brief adequately prepared crew for scheme of maneuver and sequence of events. Parts were derailed with sim issues, loss of comms and loss of feel in the cyclic resulting in a system reset	Insufficient time to run through approach mode profiles, incomplete	Next time
(b)(3), (b)(6), (b)(7)c	RVL(2)-2271	Logged	No	Completed automated RVL profiles that were incomplete in previous sim	Good job reviewing the discuss items. Stay in the books	Completed RVLs at LZ Falcon. Started with most automation and did an approach mode to hover coupled landing. It can be overwhelming looking at all of the OIDs on the PFD and overhead panel, just keep looking at the ANTTP and NATIP to get more familiar with what you are looking at on the glass. Even though George has the controls, always back him up in case he puts off and remember to get the gear. The next approach we did was the hover coupled. Remember to anticipate the hard deck that you set in the hover altitude box so that you don't go below it and potentially go in the cloud. Big thing to remember for these approaches is that you don't have to be in position hold IOT to alt ref down. As long as you are on a safe profile, alt refing down in pos sel is fine. The last type of approach we did was assisted no hover. We spent the	Good job with your profiles, just watch your speed down low and don't be afraid to pull the controls out of detent to help George slow down.
(b)(3), (b)(6), (b)(7)c	RVL(2)-2272	Logged	No	Sim conducted in CFTD-6. Flight departed KNCA blue line for LZ Bluebird. Environmental conditions were right, clear skies, with light winds from the North. Comms with lead were intermittent. Following a loss of cyclic control, repositioned to KNCA to complete training	Plan and brief adequately prepared crew for scheme of maneuver and sequence of events. Parts were derailed with sim issues, loss of comms and loss of feel in the cyclic resulting in a system reset	We started this portion of the sim with hover drills in LZ Bluebird (coming off section HLL CALs). Remember this is a technique for the sim, in the aircraft we do not want to spend excessive time in the dust. Your scan (inside and out) improved each landing, and you recognized your tendency to have a heavy left foot in the last 50 feet. Remember its an outside scan (pattern), transitioning to the glass as the dust begins to build. The sim takes you immediately from 0-100% obscuration, real world, you might have time to recognize. Also, call when you're transitioning to the glass. For the patterns, as lead you were a stable base. In -2 you recognized how deviations from the planned profile (getting slow, high) can jam up subsequent aircraft. Initially tending to be stepped up high, you corrected to a good -2 position.	Keep doing great things
(b)(3), (b)(6), (b)(7)c	RVL(2)-2273	Logged	No	Proceeded as section VFR from KNCA to LZ Emu IVO Oak Grove (13NC) established at EMU, student completed RVL training per the T&R. Training complete	Landing plan and ingress appropriately and safely planned. Student was able to brief various profiles correctly as well as wave-off criteria and limitations.	All patterns, profiles, landings, and CAL/RVL work complete per the T&R	Solid flight, progress
(b)(3), (b)(6), (b)(7)c	RVL(2)-2274	Logged	No	Proceeded as section VFR from KNCA to LZ Emu IVO Oak Grove (13NC) established at EMU, student completed RVL training per the T&R. Training complete	Landing plan and ingress appropriately and safely planned. Student was able to brief various profiles correctly as well as wave-off criteria and limitations.	All patterns, profiles, landings, and CAL/RVL work complete per the T&R	Solid flight, progress
(b)(3), (b)(6), (b)(7)c	RVL(2)-2275	Logged	No	Proceeded as section VFR from KNCA to LZ Emu IVO Oak Grove (13NC) established at EMU, student completed RVL training per the T&R. Training complete	Landing plan and ingress appropriately and safely planned. Student was able to brief various profiles correctly as well as wave-off criteria and limitations.	All patterns, profiles, landings, and CAL/RVL work complete per the T&R	Solid flight, progress

(b)(2)Low, (b)(6), (b)(7)c	03/24/2022	Logged	No	Conducted NS NVG SS CALS at LZ Bat. We conducted a few conv mode patterns, and one of each of the tactical approaches.	T&R brief was good. Good demonstration of knowledge.	Overall solid execution of SS CALS. Each pass got progressively better. Make sure you keep scanning out to the 45 bearing to enhance your ability to visually acquire horizontal and vertical closure rates. It can be a little difficult with the 40 degree FOV on the NVGs but if you keep your visual scan moving, you can reduce the impact of a small FOV. Basic airwork was maintained well within parameters. HUD precision approach is a very good tool to use but remember to shoot a visual approach to maintain safe distances from obstacles. Sensor integration can also help you here. Use a good scan between the HUD visual scan and the FLIR to help increase your SA in the night environment.	Overall solid event.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Sim conducted in CFTD-6. Flight departed KNCA, blue line for LZ Bluebird. Environmental conditions were night, clear skies, with light winds from the North. Comms with lead were intermittent. Following a loss of cyclic control, repositioned to KNCA to complete training.	Plan and brief adequately prepared crew for scheme of maneuver and sequence of events. Parts were detailed with sim issues: loss of comms and loss of feel in the cyclic resulting in a system reset.	Good recognition of the course rules and zone as we proceeded to LZ Bluebird. You elected to land abeam, and slightly reverse echelon of lead. With initially little contrast, this made it difficult to judge your position relative to his aircraft, but you safely picked a spot that granted you a clear landing and wave-off land. Your scan (inside and out) improved each landing, and you recognized your tendency to have a heavy left foot in the last 50 feet. For the patterns, as lead you were a stable base. In -2 you recognized how deviations from the planned profile (getting slow, high) can jam up subsequent aircraft initially tending to be stepped up high, you corrected to a good -2 position.	Overall, great work. Don't break the cyclic next time.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Flight conducted day into night out of KABQ. Sky was clear with light winds from the North. We departed for the auxiliary pad south of the airfield for day mat landings. After multiple conversion mode patterns, we were confined to straight-ins from the south due to boundaries surround the pad. After refueling, conducted night landings to the aux pad until 0-130 paraops began in the area. We transitioned to double eagle airfield, a small towered airport north east of KABQ for the night mat and CALS.	Adequate for mission success.	You correctly interpreted and recognized the elevation changes, and used an appropriate dma margin to compensate for it. Conversion mode patterns were solid. For the straight-ins from the south, you flew the edge of the boundary to allow a good approach into the spot--well done. For the night MAT and CALS, you power pulls reflected a good understanding of high / hot / heavy conditions. Your communication was a little faint, which seemed to be predicated on the mic not overtaking. Ensure you are reading back calls from the back, and this approved as the night progressed. On one of the 180s into Double Eagle we had a quick, unintentional descent which you corrected and verbalized--good recognition. Keep forcing yourself to use the HUD when it works, but it is good you are not reliant on it.	Good work. ATFs will be identical for day / night mat and ss cal
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Flight departed VFR from KNCA and conducted HLL CALS in the local training.	Landing plan and ingress planned appropriately and safely.	All pattern, profiles, landings, and HLL NS CAL work complete per the T&R.	Solid flight, progress.

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 Capt TOMKIEWICZ, MATTHEW J - MV-22B Pilot
 Crew Performance between 1/1/2015 - 3/18/2022
 Generated on 03/24/2022 1044 UTC-04:00

Capt LADHA, SHAFIQ WILLIAM	VR-084	Logged	No	Flew from LZ Bat to VR-084 B-E. L-Hour into LZ Bat, followed by SS RVLS to Rwy 19, then joined with other sim to complete SEC Cals	Good job on discuss items, no major issues noted on mission planning products. Talked through different techniques on NAVLOG creation / utilization.	Flew as -2 for this portion of the sim to the VR-084. We talked about staying closer to lead so that we can pick up closure rate. It's a lot harder to do if you're more than an 3 away, especially in LLL conditions. Executed vertical maneuvers and TACFORM with no real issues. Good procedures and control inputs. We were passed an L-Hour and talked through different ways to work it. After initial landing at LZ Bat, we repositioned to RWY 19 as a single to conduct our NS RVLS. Overall good job tonight. Big thing we talked about was to get the aircraft in a trimmed state before giving it over to George. Help him help you, and by giving him a stable platform to start with, its less likely that we'll have to intervene and defeat the purpose of using automation. After we were complete with the RVLS, we joined lead at LZ Bat and conducted conversion mode, and low altitude tactical approaches in.	Overall good job, it was a long sim with lots of codes but you stayed engaged and we were able to complete all of the training.
(b)(3), (b)(6), (b)(7)c	VR-084	Logged	No	Flew from LZ Bat to VR-084 B-E. L-Hour into LZ Bat, followed by SS RVLS to Rwy 19, then joined with other sim to complete SEC Cals	Good job on discuss items, no major issues noted on mission planning products. Talked through different techniques on NAVLOG creation / utilization.	Flew as -2 for this portion of the sim to the VR-084. We talked about staying closer to lead so that we can pick up closure rate. It's a lot harder to do if you're more than an 3 away, especially in LLL conditions. Executed vertical maneuvers and TACFORM with no real issues. Good procedures and control inputs. We were passed an L-Hour and talked through different ways to work it. After initial landing at LZ Bat, we repositioned to RWY 19 as a single to conduct our NS RVLS. Overall good job tonight. Big thing we talked about was to get the aircraft in a trimmed state before giving it over to George. Help him help you, and by giving him a stable platform to start with, its less likely that we'll have to intervene and defeat the purpose of using automation. After we were complete with the RVLS, we joined lead at LZ Bat and conducted conversion mode, and low altitude tactical approaches in.	Overall good job, it was a long sim with lots of codes but you stayed engaged and we were able to complete all of the training.
(b)(3), (b)(6), (b)(7)c	VR-084	Logged	No	Departed KNCA as a single, Northeast Creek Bridge to the redline, and ultimately LZ Gul. It was a LLL night, skies clear with light/variable winds. Conducted training to the Southern portion of the zone, varying using a waypoint and an IR chemstick for our landings. Returned via Redline to KNCA.	Plan / LZ diagram adequate for flight. Knowledge for brief demonstrated good preparation.	Tendency to let heading drift a little to the right 50° and below you fought this throughout the night and were able to correct it quickly. You navigated a tricky zone (divets and holes throughout), responding to the crews feedback well, and finding a good spot. With the waypoint active, you flew a solid pattern, and flew smooth/appropriate control inputs in the endgame for landing. For our first landing to ITG (IR chemstick), we stalled out a little coming into the zone. Keeping your scan to the 45 and 90 will help you pick up that closure rate. Your subsequent landings without a waypoint were solid, as well as your tactical approaches. Overall good work—you had a solid scan going and made corrections early.	Good work

(b)(3), (b)(6), (b)(7)c	Deparied KNCA as 2 and headed to VR-084. Conducted NAV route at 1500' doing TACFORM maneuvers. Proceeded to LZ BAT to conduct HLL CALS as -2 and lead. Early RTB due to WX.	Plan i LZ diagram adequate for flight. Knowledge for brief demonstrated good preparation.	Tendency to let heading drift a little to the right 50' and below, you fought this throughout the night and were able to correct it quickly. You navigated a tricky zone (divets and holes throughout) responding to the crews feedback well, and finding a good spot. With the waypoint active, you flew a solid pattern, and flew smooth/appropriate control inputs in the endgame for landing. For our first landing to JTG (IR chemstick), we stalled out a little coming into the zone. Keeping your scan to the 45 and 90 will help you pick up that closure rate. Your subsequent landings without a waypoint were solid, as well as your tactical approaches. Overall, good work—you had a solid scan going and made corrections early.	Good work. Comments are reflected in 2380
(b)(3), (b)(6), (b)(7)c	Deparied KNCA as 2 and headed to VR-084. Conducted NAV route at 1500' doing TACFORM maneuvers. Proceeded to LZ BAT to conduct HLL CALS as -2 and lead. Early RTB due to WX.	no issues	Good job today. We had to call a knock it off during TACFORM due to close proximity with lead A/C. Talked as a flight about situation and continued training. For your CALS, no issues noted, good job keeping your scan outside and not fixating on one spot.	Press
(b)(3), (b)(6), (b)(7)c	Deparied KNCA as 2 and headed to VR-084. Conducted NAV route at 1500' doing TACFORM maneuvers. Proceeded to LZ BAT to conduct LLL CALS as -2 and lead. Early RTB due to WX.	no issue	Good job today. We had to call a knock it off during TACFORM due to close proximity with lead A/C. Talked as a flight about situation and continued training. For your CALS, no issues noted, good job keeping your scan outside and not fixating on one spot.	press
(b)(3), (b)(6), (b)(7)c	Sim departed KNCA and followed Blue Line course rules from L-K. Rendezvous with KC-130J off coast of K. Day TAAR executed on both left and right hoses. Event complete IAW the T&R manual.	Knowledge was solid.	Remember to focus on flying form off the tanker. Don't stare at and chase the basket when making a play. Establish yourself in a stable astern before making your play. Once in the basket, focus your scan on maintaining the "T" with the hose and tanker's wing and adjust your position with the hose and the pod. When breaking contact, try and put the basket back where you found it.	Continue to progress.
(b)(3), (b)(6), (b)(7)c	Sim departed KNCA and followed Blue Line course rules from L-K. Rendezvous with KC-130J off coast of K. NS TAAR executed on both left and right hoses. Event complete IAW the T&R manual.	Knowledge was solid.	Remember to focus on flying form off the tanker. Don't stare at and chase the basket when making a play. Establish yourself in a stable astern before making your play. Once in the basket, focus your scan on maintaining the "T" with the hose and tanker's wing and adjust your position with the hose and the pod. When breaking contact, try and put the basket back where you found it. Utilize your probe light if necessary for better viz of the basket and hose.	Continue to progress.
(b)(3), (b)(6), (b)(7)c	Day TG to BT-11 SS/SEC for two crew chiefs day repunch 1200 rounds 7 52	Solid brief and discussion. Remember that base ROEs are consistent throughout an AO, however local commanders can be more restrictive. Weapons conditions, sectors of fire, STAR reports and fields of fire IAW ROE to IO POC and PID allows for brevity and responsive suppressive fires.	Good use of weapons commands, threat call-outs, and flying a stable platform.	Continue with syllabus. No discrepancies noted.
(b)(3), (b)(6), (b)(7)c	Deparied KNCA to BT-9 LLL right doing TG over the water 1+30, departed and proceeded direct to VR 084	IAW TR	See overview	Good job keeping level platform for the guys in the back. We had a very important take away with making sure those guys are cleaned up prior to use executing our next phase of flight. Always ensure that those guys are set prior to going fast.

Capt TOMKIEWICZ, MATTHEW J - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022

Generated on 03/24/2022 1044 UTC-04:00

(b)(3), (b)(6), (b)(7)c	Lat 2640	Logged	No	The flight departed out of MCAS Yuma, and flew a LAT route north of the airfield. The LAT route was created by the student and was Pennsylvania routing.	Instructors briefed the route the students prepped. Students also prepared a NAVLOG that included a L-Hour into a designated landing zone.	The flight departed out of MCAS Yuma, and flew a LAT route north of the airfield. The LAT route was created by the student and was Pennsylvania routing. The flight executed the route originally as singles to conduct single ship maneuvers, then later joined up for section LAT. An L-hour was shot into an LZ designated by the students.	The student's knowledge on LAT conduct was well proficient.
(b)(3), (b)(6), (b)(7)c	Lat 2640	Logged	No	The flight departed out of MCAS Yuma, and flew a LAT route north of the airfield. The LAT route was created by the student and was Pennsylvania routing.	Instructors briefed the route the students prepped. Students also prepared a NAVLOG that included a L-Hour into a designated landing zone.	The flight departed out of MCAS Yuma, and flew a LAT route north of the airfield. The LAT route was created by the student and was Pennsylvania routing. The flight executed the route originally as singles to conduct single ship maneuvers, then later joined up for section LAT. An L-hour was shot into an LZ designated by the students.	The student's knowledge on LAT conduct and CMS management were well proficient.
(b)(3), (b)(6), (b)(7)c	Lat 2640	Logged	No	Flew from LZ Bat to VR-084 B-E. L-Hour into LZ Bat followed by SS RVLS to RWY 19 then joined with other sim to complete SEC Cals.	Good job on discuss items, no major issues noted on mission planning products. Talked through different techniques on NAVLOG creation / utilization.	Flew as -2 for this portion of the sim to the VR-084. We talked about staying closer to lead so that we can pick up closure rate. It's a lot harder to do if you're more than an 3 away, especially in LLL conditions. Executed vertical maneuvers and TACFORM with no real issues. Good procedures and control inputs. We were passed an L-Hour and talked through different ways to work it. After initial landing at LZ Bat, we repositioned to RWY 19 as a single to conduct our NS RVLS. Overall good job tonight. Big thing we talked about was to get the aircraft in a trimmed state before giving it over to George. Help him help you, and by giving him a stable platform to start with, it's less likely that we'll have to intervene and defeat the purpose of using automation. After we were complete with the RVLS, we joined lead at LZ Bat and conducted conversion mode, and low altitude tactical approaches in.	Overall good job. It was a long sim with lots of codes but you stayed engaged and we were able to complete all of the training.
(b)(3), (b)(6), (b)(7)c	LAT(2)-2640	Logged	No	Flew Sec Lat on VR-084 with a L-hour into BAT	Solid plan, student focused on building a detailed and thorough NAVLOG. Try building flexibility into your products to allow you to quickly analyze the mission and make changes on the fly.	Well executed tac descent, vertical maneuvers, and quick stop. Ensure to make use of the whole corridor where it makes sense to, we are not restricted just to the course line. Keep being assertive with crew call outs. L-hour management was successful, despite us having to roll L-hour once due to admin constraints. We talked through the benefits of rolling L-hour an minimally as possible vs rolling it generously.	Well executed, continue progressing.
(b)(3), (b)(6), (b)(7)c	Lat 2640	Logged	No	Flight departed KNCA and conducted HLL SEC LAT on the VR-084 from checkpoints B-F. L-Hour executed in to LZ BAT at MCOLF Oak Grove and SEC Cals followed. Event completed IAW the T&R Manual and all maneuvers executed IAW NATOPS and the ANTP.	Knowledge was solid regarding discuss items. Remember to think about how the discuss items apply tactically IOT make the connection between our initial 2000 level events and follow-on mission codes. Everything builds on itself.	No major issues noted. We talked about the different ways to manage our position relative to our wingman IOT help us maintain visual. Staying ahead of the plane is critical IOT to continue to fight the formation down range and utilize the appropriate TACFORM maneuvers given the current position of the members within the flight.	Continue to progress!
(b)(3), (b)(6), (b)(7)c	Lat 2640	Logged	No	Departed as heavy division from KNCA as -3. Proceeded to VR-086 and conducted LAT as a section with -4. Joined on deck LZ Caledonia for the hotseat.	No issues noted.	Nice job tonight staying engaged with a flexible plan and flying with 3 squadrons. For the LAT portion, remember standard CRM calls keeps everyone on the same page with regards to where everyone is in the flight. No big issues noted for maneuvers. Talked about L-Hour management and also dealt with not having a RADALT. Overall nice job.	Nice job tonight staying engaged.

(b)(3), (b)(6), (b)(7)c	2020-2730	Logged	No	Day MAT conducted at Bridgeport	Overall T&R brief was good with no deficiencies in knowledge noted. MAT ACADs completed prior to sim so knowledge was fresh	We executed multiple landings at Bridgeport in the MAT environment. Remember the name of the game is power required vs power available!! Don't forget that planning and calculations in real time are critical to safety of flight. Keep working the CMS and honing those skills. Overall aircraft performance suffers at altitude so waveoff early, slow down sooner and scan the FFR gauge in conv mode	Overall great sim
(b)(3), (b)(6), (b)(7)c	2020-2730	Logged	No	Same SOM as 2730 but now in the night environment!	Brief was solid. MAT ACADs completed prior to the sim	See debrief notes from 2730 ATF. All these notes apply here. Remember what is different, difficult or dangerous about flying in MAT at night. What is different is distance estimation. Distance estimation is degraded so make up for it using your instruments. Seeing minor deviations in slope can be difficult and dangerous at night. Make sure you are scanning outside to pick up on this. Overall the name of the game is still power available vs power required	No issues noted
(b)(3), (b)(6), (b)(7)c	2020-2730	Logged	Yes	Sim was conducted at Bridgeport in conjunction with 2730 and 2730. Overall recommend Lt Tomkiewicz get some more reps on high hot and heavy operations due to available sim time. We hit the requirements but it would be beneficial to keep practicing	See notes from 2730 and 2731	Overall good sim, just a bit rushed. ALWAYS double check your numbers on the CMS. Remember garbage in = garbage out. If you are operating on the wrong numbers (i.e. power available, gross weight, altitude, temp) you may put the aircraft in a dangerous situation where you can not recover. This is the key concept to take away from this sim. Know the aircraft and know your operating environment and plan accordingly	No deficiencies noted, good sim event overall. Recommend more practice sims
(b)(3), (b)(6), (b)(7)c	2020-2730	Logged	No	Event conducted in conjunction with DIVCAL initial event. Flown as -2, division lead by Capt Lazortz (VMM-254) DIV TACFORM in the W-122. CALS in LZ Falcon	Plan was to execute form on the VR-084 at altitude, div cals in Falcon. Flew to TACFORM in the W-122. Briefed by div-lead, Capt Lazortz	1stLt Tomkiewicz was at the controls for much of the flight during his DIV CAL/FORM initial. He is confident in his Tacform, which is rare for copilots of his experience, and he has well-above-average airmanship when maneuvering in airplane mode. However, he sometimes was sucked and long during conversion mode, which created problems during pattern work	Coachable, average SA, above average airwork in the TACFORM. Push
(b)(3), (b)(6), (b)(7)c	2020-2730	Logged	No	Event conducted in conjunction with DIV FORM event. Flown as -2 in a three ship division. Conducted DIV Form in W122, div cals in LZ Falcon	Briefed by actual division leader, Capt Lazortz of VMM-254. 1stLt Tomkiewicz has a good knowledge base regarding the division formations	Departed as a section initially while -3 troubleshoot, which was good opportunity to warm up. After div form, we returned to falcon for CALS. As -2 or -3, you have to always be conscious of where you're putting -3 or -4, respectively. Being wide, sucked, high, fast, etc. can set you up for a bad and game, which is where our mission is most critical. Your pattern work was average, and has room to improve, but you are safe in my eyes. Just watch out for some of the off-normal conditions like being 10 degrees nose up at 80 Nacelle, and trying to slow below 140 while still on the downstops	Ready to proceed to HLL div CALS

(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Flight conducted in conjunction with a 5331 Division Lead event. The flight executed section and single ship training at Rota before the division regrouped and departed. The flight executed division trail enroute to Moron followed by division CAL training at Moron until the flight's land time.	Mission products were adequate for mission success. The PUI had a good understanding of the discuss items and was able to back brief the CAL training plan after the flight brief.	The HLL Division CAL training was conducted during the last hour of the flight window. Multiple conversion mode patterns were flown to the departure end of RWY 20 with the PUI in the -3 position. The flight then transitioned to tactical patterns, this time to the approach end of RWY 02. After the final pattern, the flight was complete and taxied back into the line at Moron.	You were constantly high during your conversion mode patterns throughout the night. Remember that once you have your approach line, get yourself to a solid glideslope as quickly as possible. You want to make the big corrections early in the approach so that you make the end game that much easier. It would also help if you utilized the "hubs on the horizon" technique to match your descent with the other aircraft in the flight. You were within performance standards by the end of the night and your tactical approaches were the highlights of your performance. Keep working on your conversion mode sight picture and stay in the books.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Deferred Logged	No No	LLL CALs as part of a tactical event with sister squadron PUI planned with adjacent unit and occupied the last position for CALS. CALS conducted at Bladen Lakes.	Event planned to depart KNCA for Bogue to PZ required troops, then fly via MRR (VR-042) to LZ Bladen Lakes. Event briefed by DLUI. T&R brief with PUI showed no deficiencies. PUI assisted in the creation of planning/briefing products.	Flight sequence ran as briefed. At Bladen Lakes the DL had to RTB for a malfunction leaving the remaining 3 planes in the zone. CONV and AFLN mode CALS completed from the last position. Tendency was to remain too high around the pattern and sucked with lead to a long final with too much energy at the end. Improvements made throughout.	Event Deferred Continue in stage.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Deferred Logged	No No	Flight was conducted in conjunction with VMF-182 as a flight of three. Div Lat was conducted on the VR-084.	In the brief we discussed the responsibilities of the aircrew and the CRM required during division tac form.	Division LAT was executed as a three ship. Multiple maneuvers and tac form maneuvers were conducted IAW the NTPP.	Event Deferred Great job ready to continue to the airplane.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Event completed in conjunction with Section GTR sim and GTR walkthrough. We started with the brief in the ready room, walked to the hangar to talk through GTR comms and range procedures. Sim followed with Capt Ziegler and 1stLt Scott in the wingman sim. Sim execution took place at KNYL ranges with threats across the spectrum, including small arms, ZPU, ZSU, SA-9, SA-6 and MANPADS.	Good knowledge of the ASE installed, remember to chair flight your profile to make the most of the range time.	1stLt Tomkiewicz demonstrated a standard/fair performance during the single ship GTR sim. He was slow to produce the correct maneuver and intraflight CRM call in responses to the threats. Needs work on memorizing the line numbers before the GTR flight. While not proficient by the end of the sim, this represented a good first exposure and 1stLt Tomkiewicz is in-line with his peers for progression through the core skills.	Ready for follow on GTR events.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Follow on sim to 1stLt Tomkiewicz GTR syllabus. Event conducted with Capt Ziegler and 1stLt Scott in the wingman position on the Yuma GTR ranges. Threats included variety of RF (SAM).	Good discussion regarding systems, training for GTR VS actual GTR, and the difficulty of acquiring proficiency in this skill. Fair knowledge of NTPP procedures and CRM cadences.	Conducted following the single ship sim and GTR walkthrough, we performed all the GTR line numbers against simulated threats in the Yuma ranges.	Its a difficult set of skills to master, but the surface-air-threat counter tactics matrix, if read and understood, will greatly aid in your progression. It's fair to say that you are limited in your ability to individually execute GTR due to experience and knowledge. Your flight will help in building your comfort with the CRM and procedures, but should drastically retract your confidence in our ASE equipment. Ready to proceed to GTR flight.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Day VFR section to Atlantic with both RF and IR emitters. Winds 280/7.	Brief conducted by WTL. PUI assisted in the creation of planning products. PUI demonstrated sufficient knowledge in the T&R brief for flight execution.	Flight departed as a section from KNCA to 12NC. Conducted lines 1, 5, 6, 9, 10, and 11. PUI has a firm grasp of both the functions of the ASE and the maneuvers required to successfully react to a threat. Control inputs and expendable releases were IAW the ANTPP and likely would have resulted in successful disengagement.	PUI is well prepared to continue in syllabus.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Executed multiple landings to LHD and LPD in simulator.	Discussed CQ considerations and T&R items.	Dropped an LHD and LPD SE of point K. Executed multiple breaks and practice approaches to multiple spots on each ship with winds changing throughout the flight. Also demoed single engine failure and discussed general emergency procedure considerations at the ship.	All learning objectives achieved.
(b)(3), (b)(6), (b)(7)c	03/24/2022	Logged	No	Conducted night CQ on LHD off California coast. Conducted Type A and B conversion mode approaches.	None noted.	Remember that on your base turn to final, you're only having to lose ~200' of altitude vice the normal 300' for normal CALS, so don't set the same RCD you normally do or you'll end up shallow like we saw today. Your lineup and speed control were good at night just work on the glideslope. You'll see that in the plane. CC calls will help tremendously with drift and line up over the spot.	Nice job.

Capt TOMKIEWICZ, MATTHEW J - MV-22B Pilot
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(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	Took off KNCA to do FCLPs at N Davis, brc 190. Completed multiple charter patterns, landings, STCs, and reviewed tax procedures. We went through all the normal	Completed	Above average stick skills over the spot. On the STO, student tends to pick up too much during the capture 3-5 deg nose up portion of the STO. No other issues noted	Good brief, stay in the books and always review the boat book before going to the boat
(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	Elvis21 was SL for flight of 2 departing returning to KNCA. Wx marginal VFR with occasional showery gusts, winds 220@25G40, vs 3-6 SM HLL right with OVC layer near 8-8k. Intermittent SCT layer near 1k. Weather conditions were a definite factor during planning and execution of this hop, and PUI handled them well given low 30:50/90 day flight time and first goggle flight in >50 days	Elvis 21 was intended to be 3 of 4 ship division w/ VMM-266. Due to maintenance, VMM-266 backed out of division, so a hasty plan/brief was passed and executed to capture FCLP X's in both aircraft. PUI did a good job adapting to a short-notice change in the mission plan in order to maximize training value. Of note, PUI participated in the planning and creation of division work products at 266 (though they ultimately were not utilized)	Elvis 21 flight departed KNCA for the red line to Davis N FCLP deck, where they executed approximately 20 FCLP patterns (PUI had 13 as the PF). PUI and P utilized on deck periods to discuss real world considerations (securing POS lights once on deck, communications with tower, LSE position, LLL vs HLL considerations, etc.) Elvis 21/22 acted as tower for each other in order to help build/replicate the correct CRM cadence. Once complete with FCLPs, section conducted a Tango to Kilo transition over surf city in conversion mode to transition to LZ Bluebird. At this point, weather became temporarily marginal due to band from a nearby tropical storm passing through, on top of the gusty winds (40 knots at pattern altitude). Section conducted 6 conversion mode patterns in to LZ Bluebird before returning to KNCA for a second day of operations.	PUI showed strong improvement throughout the night. Initially, PUI had tendency to stall at deck edge OR cross with excessive closure, resulting in large amplitude control inputs over the spot. Once PUI had closure/light picture under control, the focus was on the mechanics of the "nose-left tail right." Remember, it is fine to come completely over the spot and execute that nose turn. As you become proficient and experienced, you can combine your forward closure with the realignment in order to minimize time over the spot. Nice job. Slightly above average event. PUI is well qualified to proceed to conduct NSCQ. The difficult winds and weather conditions experienced during this event were great preparation for actual conditions at the boat
Mat TORRES, MANUEL ANTONIO	Completed	Logged	No	Division flight executed IVO Fort Bragg ISO 3rd BCT and exercise Panther Storm II. Flight departed New River for PZ operations at in the R-5311 PAX and MRZRs loaded onto the aircraft at LZ Jessica and inserted into LZ Sicily. The flight returned to Jessica to pick up a second wave and inserted them into a separate landing site in LZ Sicily. After 2nd insert, a	Capt Tomkiewicz performed well in mission planning during the day of the mission with managing product development and gaining additional exposure to the assault support planning process.	Flight was executed as planned within the R-5311 ASTACSOP objective area calls and tactics were reviewed prior to the first iteration of PZ operations. A total of 48 PAX and 1 MRZR4 were picked up at LZ Jessica and inserted into two separate landing sites within LZ Sicily, supporting the recon force's scheme of maneuver in the AO.	Good work staying engaged throughout mission planning and during the execution of the mission. While the execution did not provide a definitive example of how the Marine Corps executes assault support, it was useful to see how the army/joint force executes air assaults. Continue to ask questions and maximize what you can learn when participating in large, complex exercises like Panther Storm. I believe it was great exposure for you, so do your best to share what you've learned with your peers.
(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	Conducted multiple CASEVAC drills while posturing for both alert 5 and alert 15 in the local airspace of MCAS New River. DASC	Brief was conducted by a WTI	PUI demonstrated a high knowledge of the CMS and quickly inserted information as required to minimize our response time.	No issues, progress
(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	HASTV TRAP EVENT EXECUTED AS PART OF LOCAL SECTION READINESS. MORON, SP	PLAN PER ASTACSOP WITH SIMULATED UAS AS OSC AND RESCORT USING CHECKPOINT BRAVO AS IPIHA. AUTHENTICATION COMPLETE BY OSC. AND USE THE SNATCH METHOD. BRIEF PER ASTACSOP AND BRIEFED BY SECTION LEAD	PER ASTACSOP WITH SECTION LEAD RUNNING THE EVENT. EXECUTE FROM CHECKPOINT BRAVO, WITH A SNATCH METHOD.	NONE
(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	Flight conducted as a TRAP mission within the Imperial Valley area originated from Tucson	Flight brief conducted as a chalk talk emphasizing the communications and information flow from all personnel recovery players to the rescue vehicle and then emphasized objective area mechanics.	Executed as planned	Capt Tomkiewicz did a great job maintaining SA and ensuring the information flow in the cockpit kept everyone informed.
(b)(3), (b)(6), (b)(7)c	Completed	Logged	No	LLL LAT and Cals as part of a tactical event with sister squadron. PUI planned with adjacent unit and occupied the last position for CALS. CALS conducted at Bladen Lakes. Mission was to insert a force with escort from RW CAS and RPA aircraft.	Event planned to depart KNCA for Bogue to PZ required troops, then fly via MRR (VR-042) to LZ Bladen Lakes. Event briefed by DLUI, T&R brief with PUI showed no deficiencies. PUI assisted in the creation of planning/briefing products.	Flight departed as planned and transitioned to PZ Bogue. Remember with a real boat or real PAX, don't plan anything less than 45 mins when you're PZing a flight of four or more. Timing was constructive for this event. DLUI elected to depart later due to planned excess time for a flight join. Flight entered the VR route as planned and flew LAT without incident. Remember there are no scenarios where the MV-22s will be the only ones around. Provide position updates, reach out for mission SA and generally engage with the rest of the team more than happened in this event. RPA and RW CAS painted a variety of technical threats and attrited prior to V-22s coming on station. Good job staying on course line during the approach, be sure to include the altitude into your scan, we ended up with too much energy at fire and had to let down to the landing. At Bladen Lakes the DL had in RTR for a malfunction.	Continue in stage

(b)(3), (b)(6), (b)(7)c	AD(4)-4081	Logged	No	ELVIS 1-3 EVENT COMPLETE DURING HUNTER AAF DFT IVO SAVANNAH GA AND R3007 OP TOWNS VEGAS SO 165TH ASOS JTAC (18X) PZ HUNTER LZ SONGBR RD OBJ AREA MECHANICS AND CONTINGENCIES	PLAN DEVELOPED THROUGHOUT THE WEEK WITH 165TH FOCUSING ON MUTUALLY SUPPORTIVE TRAINING OBJECTIVES SIMPLE PLAN TO INSERT CONDUCT LOW ALTITUDE MRR BACK TO OBJECTIVE FOR MULTIPLE OBJECTIVE AREA FLOW TO INCLUDE CASEVAC 9LINES EXTRACT A PORTION OF THE 18X FORCE THEN RTB FOR COLD FUEL AND HOTSEAT BRIEF COMPLETE BY DIVISION LEAD VIA PPT ADEQUATE FOR MISSION SUCCESS	STTO AND INGRESS WAS IAW BRIEF INITIAL LZ WAS UNTENEABLE (FOULED) FLIGHT SHIFTED TO ALTERNATE LZ AND INSERT WAS COMPLETE (1 HOUR MISSED DUE TO LZ CONDITION) FLIGHT DEPARTED THE RANGE TO COMPLETE DIV LAT AND CAL HOWEVER 1-3 EXPERIENCED AN ELS FAIL AND RTBD AFTER TROUBLESHOOTING FLIGHT REJOINED AND ATTEMPTED TO COMPLETE LAT CAL HOWEVER 1-1 RTBD DUE TO OIL LEAK 1-2 AND 1-3 CONSTITUTED THE SECTION AND COMPLETED REMAINING TRAINING FLIGHT JOINED ON DECK FOR COLD FUEL AND THEN DEPARTED AS A DIVISION FOR THE OBJECTIVE AREA JTACS "VENOM" MADE MULTIPLE OBJECTIVE AREA CALLS AND EACH AIRCRAFT (OR AS ELEMENTS) WERE CALLED INTO AIRPORT OF	PUI WAS WELL ENGAGED IN MISSION PLANNING AND PRODUCT CREATION DURING EXECUTION PUI MAINTAINED A SAFE LEVEL OF SITUATIONAL AWARENESS AND WAS ACTIVELY PARTICIPATING IN THE MISSION EXECUTION PUI'S BAW WAS NOT IMPACTED BY CHANGES IN THE PLAN OR DISTRACTING MISSION COMMS
(b)(3), (b)(6), (b)(7)c	AD(4)-4082	Logged	No	Conducted PARAOPS at DZ Pheasant at North Davis	This is something we don't do very often so when planning on JMPS break out the AD guide its a separate JMPS manual that deals with this exclusively	Rew from KNCA to DZ Pheasant to conduct face to face brief Talked through the TPG brief and importance of covering all of the checklist item Took off and climbed to 10,000' MSL to conduct MFF Big thing here is to be smooth and precise on the controls You don't want the guys in the back getting sick or injured with abrupt control inputs We talked through using the checklist and how those are your bid to success in making sure you are set up appropriately for the evolution conducted several iterations with you flying and running checklist No issues	Press
(b)(3), (b)(6), (b)(7)c	AD(4)-4083	Logged	No	Event conducted in support of squadron FRAIG with 3rd Marine Raider Bn conducting LLSL and MFF operations. PUI was 2 CP	PUI participated in all aspects of planning to include building a chute from ballistic data planning a no-wind CARP/wind CARP, winded HARP, and building brief/bnck products PUI is commended on his level of participation PUI came well prepared to discuss AD checklists and walked away from T&R with a solid grasp on how to accomplish the event	PUI was responsible for PNF duties throughout the conduct of the event, which he accomplished successfully PUI was responsible for conducting Load Comp on CMS, running AD checks, and maintaining SA on status of lead aircraft to ensure adequate deconfliction in the DZ for jumpers	PUI was well prepared for event Knowledge was good SA and Comms as PNF were also solid for PUI's position in syllabus Only feedback was to be more directive with conduct of checklists following the AD drop As the PF I am concerned with the position of the flaps so that we can speed up and get out of the DZ PUI is well qualified to conduct this code as a member of a proficient crew
(b)(3), (b)(6), (b)(7)c	AD(4)-4042	Logged	No	Conducted External Operations in a confined landing zone	Plan and brief IAW the NTTP, T and R, and NATOPS	Conducted multiple External picks and drops IAW the NATOPS and T and R	na
	AD(4)-4081						
	AD(4)-4083						
	AD(4)-4140						
	AD(4)-4141						
	AD(4)-4142						
	AD(4)-4143						

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(b)(3), (b)(6), (b)(7)c	2015-03-03	Logged	No	Flight conducted day into night out of KABQ. Sky was clear with light winds from the North. We departed for the auxiliary pad south of the airfield for day mat landings. After multiple conversion mode patterns, we were confined to straight-ins from the south due to boundaries surround the pad. After refueling, conducted night landings to the aux pad until 0130 paraops began in the area. We transitioned to double eagle airfield, a small towered airport north east of KABQ for the night mat and CALS.	Adequate for mission success	You correctly interpreted and recognized the elevation changes, and used an appropriate dme margin to compensate for it. Conversion mode patterns were solid. For the straight-ins from the south, you flew the edge of the boundary to allow a good approach into the spot--well done. For the night MAT and CALS, your power pulls reflected a good understanding of high / hot / heavy conditions. Your communication was a little faint, which seemed to be predicated on the mic not overtaking. Ensure you are reading back calls from the back, and this approved as the night progressed. On one of the 180s into Double Eagle we had a quick, unintentional descent which you corrected and verbalized--good recognition. Keep forcing yourself to use the HUD when it works, but it is good you are not reliant on it.	Good work. ATFs will be identical for day / night mat and as cal.
(b)(3), (b)(6), (b)(7)c	2015-03-04	Logged	No	Flight conducted day into night out of KABQ. Sky was clear with light winds from the North. We departed for the auxiliary pad south of the airfield for day mat landings. After multiple conversion mode patterns, we were confined to straight-ins from the south due to boundaries surround the pad. After refueling, conducted night landings to the aux pad until 0130 paraops began in the area. We transitioned to double eagle airfield, a small towered airport north east of KABQ for the night mat and CALS.	Adequate for mission success	You correctly interpreted and recognized the elevation changes, and used an appropriate dme margin to compensate for it. Conversion mode patterns were solid. For the straight-ins from the south, you flew the edge of the boundary to allow a good approach into the spot--well done. For the night MAT and CALS, your power pulls reflected a good understanding of high / hot / heavy conditions. Your communication was a little faint, which seemed to be predicated on the mic not overtaking. Ensure you are reading back calls from the back, and this approved as the night progressed. On one of the 180s into Double Eagle we had a quick, unintentional descent which you corrected and verbalized--good recognition. Keep forcing yourself to use the HUD when it works, but it is good you are not reliant on it.	Good work. ATFs will be identical for day / night mat and as cal.
	DWS(4)-4242						
	DWS(4)-4245						
	DCM(4)-4330						
	DCM(4)-4340						
	CBRN(4)-4430						
	CBRN(4)-4431						
	CQ(4)-4470						
(b)(3), (b)(6), (b)(7)c	2015-03-09	Logged	No	Departed out of LEMO as a PAX and hot seated into the left seat while at spot 2. Conducted 7 initial landings at various spots on the Spanish ship "Juan Carlos". Executed a VFR departure back to LEMO where we conducted instruments and pattern work.	Plan was more than adequate for mission success. Discuss items were previously briefed in several attempts to complete the X in the past. We still covered the briefing items and you were very prepared for the flight. Remember to review the LH-2 and other instrument procedures before going to a US ship.	Once in the left seat at the Juan Carlos, I demonstrated the first takeoff from spot 2 and re-positioned to spot 8. You then conducted 4 landings to spot 6 then a landing to spot 5. I then took a pattern and then you completed to additional landings before executing the departure back to LEMO.	You were not able to execute the initial approach to the boat due to hot seating into the aircraft. I suggest the next time you go to the boat that you ensure you are able to do this. Once in the left seat I demonstrated the first landing. You made the standard calls as we approached the flight deck and did all CRM required items as the pilot not flying. As the flying pilot your takeoffs and side stepping from the flight deck were very strong. Just remember not to exceed 75 kts prior to 40 knots. Your basic air-work was on point. The hardest part about landing on the boat is the last 2-1 on final. As the flight progressed your perception of closure rate and altitude above the flight deck greatly increased. When approaching the last 5 feet above the spot, make sure to stick the landing with a good rate of descent to avoid the lateral drift. Overall, great flight!
	CQ(4)-4481						
	CQ(4)-4482						
	CQ(4)-4483						
	HTT(4)-4490						

(b)(3), (b)(6), (b)(7)c	██████████	Logged	No	PUI assisted a PWTI division lead for a heavy division launching and recovering from the ship under on period of darkness. Mission required the timely insert and extract of personnel and vehicles IOT sabotage an ally's power plant. This event preceded TLAM strikes on several dams and bridges to destabilize an allied countries newly elected government. PUI assisted in the mission planning cell, but the PWTI briefed and led the flight. Exercise Control executed from NECC.	Plan required a four ship to launch from naval shipping along a training flight route to the insert location. Post insert, the flight moved to Holtsville to continue "training" while waiting for the extract call. After extracting, the flight recovered to the ship via MRR, in EMCON, at night. DL elected to recover the flight via the LH-2 with CDA finals. All briefing products and mission loads sufficient for mission success.	Flight launched on time, inserted as expected, and then was called to extract prior to expected timeline. Small mobility assets like dirt bikes and MRZR have an outsized effect on the speed of missions. In this case, the customer even had enough time to kill a camel to augment MIDRATs. Above on headwork. DL stepped out of the scenario during the EMCON retrograde to request ASE demos for each of the crews. Excellent use of the training time allotted to increase the proficiency of the aircrews assigned.	Well prepared to continue in stage
	RVE(4)-4580						
	ADGR(4)-4640						
	BI(4)-4740						
	AD(4)-4840						
	AC2(4)-4940						
	BIP(5)-5030						
	BIP(5)-5031						
	FRS(5)-5130						
	FRS(5)-5131						
	FRS(5)-5132						
	FRS(5)-5133						
	FRS(5)-5134						
	FRS(5)-5135						
	FRS(5)-5136						
	FRS(5)-5137						
	FRS(5)-5138						
	FRS(5)-5139						
	NSF(5)-5150						
	NSF(5)-5151						
	NSF(5)-5152						
	FRS(5)-5170						
	FRS(5)-5171						
	AAR(5)-5330						
	AAR(5)-5340						
	LAT(5)-5630						
	LAT(5)-5631						
	LAT(5)-5632						
	RVLI(5)-5730						
	RVLI(5)-5731						
	RVLI(5)-5732						
	DCM(5)-5830						
	DCM(5)-5831						
	DCM(5)-5832						
	NSK(5)-5930						
	NSK(5)-5931						
	NSK(5)-5932						
	NSK(5)-5933						
	NSK(5)-5934						
	NSK(5)-5935						
	NTPS(6)-6030						
	NTPS(6)-6031						
	NTPS(6)-6032						
(b)(3), (b)(6), (b)(7)c	██████████	Logged	No	EP review complete for real time handling of ECS off overtemp flying IVO R5306 and LZ Gull.	EP review complete for real time handling of ECS off overtemp flying IVO R5306 and LZ Gull.	EP review complete for real time handling of ECS off overtemp flying IVO R5306 and LZ Gull.	EP review complete for real time handling of ECS off overtemp flying IVO R5306 and LZ Gull.
	INST(6)-6060						
	INST(6)-6061						
	CRM(6)-6080						
	CRM(6)-6091						

(b)(3), (b)(6), (b)(7)c	TAG(0)-6191	Logged	No	<p>Event was a single ship ASR out of Yuma (KNYL) in a theoretical medium threat scenario. PUI was tasked with assisting the MACCS and MWSS in establishing security and communications, as well as providing fuel for a HERS bladder within hostile territory in support of establishing an EABO. Mission assets were 1 x V-22, 1 x KC-130J (TAAR) and 1 x MQ-9 (Recon/Escort).</p> <p>Enemy threat situation included SA-15 and SA-21 RF threats, as well as EW radars with low proficiency (read: no IADS). SMARMS and MANPADS were threat considerations as well.</p> <p>Genesis of the problem for PUI to tackle was RGR coordination/planning, tight fuel and power margins, and red threat mitigation tactics. Specified task was ALS with implied tasks of theater CASEVAC and TRAP.</p>	<p>PUI had the opportunity to brief this event during his oral TAC board. This brief was a definite improvement given some of the initial feedback. Briefing ability was strong for a pilot at his hours with very few "briefisms" and a logical flow. General brief feedback: PUI did a good job with "god, man, me" orientation on relevant map chips, but remember to expand on why that matters for us as the aircrew. Is the mountain range identifiable (TG)? Is it a catching feature, or is a blue risk to force? Why do I care about MSRs paralleling our flight path from point A to point B? Draw out the relevance in your god/man/me so that it helps build SA during the flight event.</p> <p>Risk to force/mismission. This requires more thought on the part of the PUI. What are we doing that is different/difficult/dangerous? If it is "more of the same" (thorough NATOPS brief, use CRM), then think again. What are you going to implement as that is unique to this scenario?</p> <p>SNM acted as the aircraft commander and PNF for the duration of the flight. Remember to pull information from ATC until you are confident of what your aircraft is doing in time and space and why.</p>	<p>PUI was initially slow to get out of the chocks and was easily distracted during normal checklist flow. As a result, a couple things were missed: updating the aircraft BW in the ACFT NIT page, late to acknowledge a PRGB CHIP BURN advisory, and a misdiagnosed comm fail when his selector switch was on comm 3.</p> <p>PUI faced several EPs during the en route portion: PRGB CHIPS (memory), FCC 1/2 FAIL (memory), and ECS OFF-OVERTEMP. These EPs were all handled promptly (from memory as required) and thoroughly. I was pleased with PUI's decision-making during these evolutions.</p> <p>PUI's shortcomings on this event came from a couple CRM items that were below expectations of an aircraft commander, specifically assertiveness and communication. PUI allowed SNM to take over the aircraft, and PUI did not allow SNM to take over the aircraft, and PUI did not allow SNM to take over the aircraft.</p>	<p>PUI has not flown in 40 days and I think this showed. He was a bit rusty with basic aircraft tasks, checklists, CRM assertiveness, communication, and flight leadership. However, his situational awareness was generally high, telling me that he prepared for the tactical event while not accounting for how his low currency might affect his performance. This event was executed without any clear "safety of flight" issues, but a re-emphasis on proper CRM during critical phases of flight was necessary during the debrief.</p> <p>PUI passed this event due to his solid knowledge, brief preparation, and situational awareness during a unique scenario. He was admittedly below expectations on some basic prospective-TAC core skills as PF/PNF. I do believe that given a more consistent schedule in the aircraft and simulator that this would have been much less of a factor in this scenario. I recommend at least one flight at night, preferably two flights (one day and night) prior to evaluation in the aircraft for a night TAC review. This will allow him to dust off the cobwebs, improve his PNF "flow" and refine PNF CRM tasks during critical phases of flight.</p> <p>Tomkat: This was a novel planning scenario and you handled it well. Don't forget about "brilliance in the basics" by overthinking the task at hand. Landing the RVL in the next 15 seconds matters more than the SA-21 you'll have to mitigate in the next 15 minutes. Walk away from this event knowing that you have room to grow but confident in your underlying abilities and experience in the aircraft. I fully expect that you will do well on a night TAC review given the opportunity to get back in a steady training rhythm.</p>
(b)(3), (b)(6), (b)(7)c	TAG(0)-6191	Logged	Yes	<p>Weather prevented the bulk of the part task training events that would make the evaluation a better measure of the students capability.</p>	<p>Weather prevented the bulk of the part task training events that would make the evaluation a better measure of the students capability.</p>	<p>Weather prevented the bulk of the part task training events that would make the evaluation a better measure of the students capability.</p>	<p>Weather prevented the bulk of the part task training events that would make the evaluation a better measure of the students capability.</p>
(b)(3), (b)(6), (b)(7)c	TAG(0)-6191	Logged	Yes	<p>Flight planned as Dash 2 with LLL LAT / CALS IVO KNCA. Planned to kiss off IOT, complete the TAC Review post section work. Due to MX delays, the instructor only had an hour remaining to conduct the evaluation. Logged incomplete due to insufficient observation time. WX was VFR with winds out of the North.</p>	<p>PUI was the Dash 2 T2P. PUI was heavily involved in the Flight Planning process and assisted the Section Lead as the prospective TAC. The training plan was sound, however, I do not recommend planning to conduct LAT to a TOT using 240KCAS in the climb / enroute, and 220KCAS on the route. It's not physically possible for the aircraft to do that #1 and you are guaranteed to miss L-Hour. Sure you could cut legs, but you may not always have that option. Review your lighting conditions and switchology again, prior to conducting this event again.</p>	<p>Hotseat was conducted without issue. A little slow on the checklist, but the important thing is that you didn't skip anything. Don't get rushed getting out of the chocks, as Pre-tax breakdown was largely skipped due to Lead pushing us to the pits. This resulted in not having your A/A TACAN squinted away and comms all set up for taxi. Don't get bullied into taxiing rushed, but also get more efficient with the checklist so that we can taxi on time. It is ok to have your T2P monitor the fuel taking hot gas, but you should definitely have the page pulled up as well, as it will be your fault when you burst a bag. Always Always have ground up in a radio when conducting the RIO in the pits. You have to play the radio swap game, but they will be very upset with you if there is an emergency and can't get ahold of you. We rolled to the other aircraft. IOT get something out of the flight. Be careful with evaluation.</p>	<p>Incomplete. Recommend cleaning up the listed discrepancies and completing the evaluation at the next available opportunity.</p>

(b)(3), (b)(6), (b)(7)c	SL(6)-6230	Logged	No	THIS EVENT COMPLETES THE PREVIOUS AIRCRAFT 6131 INCOMPLETE DUE TO WX MISSION - SINGLE SHIP ASR FROM USS SHIP(LHD) TO CAMP BILLY MACHEN (R2507W) 6XPAX AND CARGO (-3500#) WX SHIP-BKN010 ENROUTE- MULTIPLE CLOUD DECKS WITH LT-MOD ICING LZ- 270/15 SCT-BKN025 BLDU	PLAN PER THE MISSION OVERVIEW AND MET INTENT OF THE ASR. ALL PRODUCTS SUPPORTED MISSION SUCCESS TO INCLUDE AN ABOVE AVERAGE NAVLOG. HOWEVER ONE DISCREPANCY WAS THE LACK OF DIVERT FUEL DATA FROM SHIP TO SHORE - PUI WAS ABLE TO SPEAK TO IT. BRIEF HALF POWERPOINT/HALF TABLE TOP WITH LZ DIAGRAM AND MAP-ADEQUATE FOR MISSION SUCCESS. CRM BRIEF WAS CLEAR AND CONCISE WHICH ALLOWED FOR DELIBERATE TASKING OF THE CREW. PUI NEEDED MORE EMPHASIS ON COMM FLOW AND CONTINGENCIES	DEPARTED THE SHIP WITH GPS FAIL. WITH A PLAN IN PLACE TO UPDATE INS ALONG THE WAY (UNFORTUNATELY THE SIM DID NOT REPLICATE THIS ACCURATELY AND CAUSED CONFLICTING MAP INFORMATION - PROCEDURES WERE SOUND). AFTER DEPARTURE ENROUTE TO THE SHORE, AIRCRAFT EXPERIENCED A NAC BLOWER FAIL DUE TO PROXIMITY TO THE SHORE (MIRAMAR) AND LACK OF NIGHT SHIP EXPERIENCE. PUI OPTED TO PROCEED DIRECT TO THE AIRFIELD FOR A ROL. RESET AC AND DEPARTED FROM KNIX ENROUTE TO LZ DURING THE ENROUTE PORTION AIRCRAFT HAD MODERATE ICING WITH AN ADS/ADA IPS FAIL (WITH ADS 2 FAIL). ADDITIONALLY CENTER FORCED A CLIMB AND REROUTE. PUI WAS ABLE TO MANAGE THE SITUATION IN LIVING	PUI IS READY FOR THE AIRCRAFT STRENGTH. CRM (ASSERTIVENESS/DECISION MAKING) - PUI WAS ABLE TO CLEARLY TASK THE CREW TO EXECUTE DURING A DYNAMIC MISSION. PUI'S DECISIONS WERE SOUND AND ALIGNED WITH EXPERIENCE AND COMFORT LEVEL. PUI'S RM WAS ABOVE AVERAGE - CONSERVATIVE AND SAFE. PUI ERROD OF THE SIDE OF CAUTION DUE TO LACK OF EXPERIENCE DURING PARTICULAR SCENARIOS. PUI'S ABILITY TO ARTICULATE INTENT, REASONING, AND PLAN OF ACTION WAS COMMENSURATE WITH LEVEL OF EXPERIENCE. WEAKNESS - BAW - PUI WAS RUSTY IN THE LOW ALTITUDE AND RVL ENVIRONMENTS. IN ALL CASES, PUI WAS SAFE HOWEVER LACK CONSISTENCY IN APPROACH CHECKPOINTS. SOME OF THIS WAS DUE TO OLDER SIM VISUALS WHICH WAS A DISTRACTION. CONFIDENT THIS WILL NOT BE AN ISSUE IN THE AIRCRAFT
(b)(3), (b)(6), (b)(7)c	SL(6)-6231	Logged	No	Day IMC flight to Columbia Regional from MCAS New River followed by NATOPS maneuvers at KCAE and IFR return to KNCA. PUI sat right seat and performed all aircraft commander duties without instructor assistance	PUI planned an IFR route outside of the local area to mitigate a second weather cancellation. Mission-style brief was delivered via PowerPoint followed by a standard NATOPS brief and risk assessment	Takeoff was significantly delayed for GPS troubleshooting. During the transit to the working area, we discussed whether or not the GPS would have been necessary for this flight. IFR navigation was accomplished via the waypoint set vice TACAN/Airway navigation. PUI maintained good SA and resource management throughout this phase and the rest of the flight. NATOPS maneuvers at KCAE were the PUI's first time at the controls on this flight. The first couple landings to the runway were a little rough (<10 kt x-wind), but PUI quickly warmed up and improved on subsequent patterns. On departure, PUI was given a simulated hung gear scenario and simulated PRGB HOT caution, forcing him to transition to APLN mode below 150 kts. Although slow, his basic aircraft control was very precise and accomplished this non-standard maneuver without error. The flight occurred to	Good aircraft control and basic air-work. We knew we would be short on time due to the late takeoff and would not have had the time to execute a planned CLIN complex round-robin on the backside. Although we flew over numerous VFR runways between KNCA and KCAE, PUI elected to continue to the planned destination. More adaptability/flexibility on the PUI's part could have accomplished all NATOPS maneuvers at a closer airfield and preserved the opportunity to run through the restricted areas on the way home. At in all, a good check. PUI will be just short of 450 hours after this flight due to the late takeoff. He is ready to be an Aircraft Commander once that threshold is crossed.
	SL(6)-6232						
	SL(6)-6233						
	SL(6)-6234						
	SL(6)-6240						
	DL(6)-6330						
	DL(6)-6331						
	DL(6)-6332						
	DL(6)-6333						
	DL(6)-6340						
	FL(6)-6430						
	FL(6)-6440						
	AMC(6)-6530						
	AMC(6)-6540						
	FCPI(6)-6630						
	FCPI(6)-6631						
	TRK NS SS						
(b)(3), (b)(6), (b)(7)c	SL(6)-6500	Logged	No	Abandoned mining complex IVO KCRW Charleston WV	SNM was well prepared for RVL procedures and approaches	SNM conducted the landings under day time conditions. Excellent training opportunities due to complex terrain and approach profiles.	Good to progress.

Event Proficiency VMM-261 - MV-22B Pilot

Generated on 05/10/2022 1033 UTC-04:00

Days Until Expired as of 05/10/2022

>= 90 Days

60-89 Days

30-59 Days

< 30 Days

Expired

"W" indicates Waived, "D" indicates Deferred

	Familiarization (FAM(2))							
	ACAD: MV-22 SINGARS	ACAD: MV-22 SATCOM	ACAD: MV-22 Tablet Fam	LAB: Radio Demo	LAB: Tablet Fam	SFAM: FAM	SFAM: INST	ACAD: CAL Procedures
	2010	2011	2012	2020	2021	2030	2031	2210
Permanent								
Capt TOMKIEWICZ, MATTHEW J.	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly	03/11/2023	No Refly

ENCLOSURE

(6)

Confined Area Landings (CAL(2))					Low A					
SCAL: Single CAL	SCAL: Section CAL	CAL: Single CAL Visual	CAL: Single CAL Wypt	CAL: Section CAL	ACAD: LAT I	ACAD: LAT II	ACAD: LAT III	ACAD: Ps E/M	ACAD: Tactics in Night Env	LAB: LAT Walk Through
2230	2231	2240	2241	2242	2610	2611	2612	2613	2614	2620
No Refly	03/17/2023	No Refly	No Refly	03/17/2023	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly

ENCLOSURE (6)

Altitude Tactics (LAT(2))							Mountain Area Training (MAT(2))			
SLAT: LAT Maneuvers / Rte	SLAT: Section LAT	SNS LAT: NS Section LAT	LAT: LAT Maneuvers / Rte	LAT: Section LAT	NS LAT: HLL Section LAT	NS LAT: LLL Section LAT	ACAD: High Altitude Ops	ACAD: Advanced MV-22 Aero	SMAT: Day MAT Sim	SMAT: NS MAT Sim
2630	2631	2632	2640	2641	2642	2643	2710	2711	2730	2731
No Refly	03/17/2023	01/25/2023	No Refly	03/17/2023	09/22/2022	07/24/2022	No Refly	No Refly	02/02/2023	01/05/2023

ENCLOSURE (6)

	Air Logistics Support (ALS(3))		Requirement, Qualification, Designation (RQD(6))				Emergency Procedures (EP(6))	Instrument (INST(6))		
SMAT: High/Hot/Heavy SIM	ACAD: ALSO Intro / Planning	ALS: ALS Msn	NATOPS Open Book	NATOPS Closed Book	NATOPS Oral Exam	NATOPS Eval	6033	IGS	Instrument Exam	Instrument Oral Exam
2732	3010	3040	6010	6011	6012	6030	6033	6040	6041	6042
02/02/2023	No Refly	03/11/2023	08/31/2022	08/31/2022	08/31/2022	02/23/2023	05/31/2022	07/31/2022	07/31/2022	07/31/2022

ENCLOSURE

(6)

	Crew Resource Management (CRM(6))		TAC(6)			
INST Eval	CRM Refresher	CRM Eval	Oral TAC Board	TAC Review	Night TAC Review	TAC Check
6060	6070	6080	6110	6130	6131	6132
07/31/2023	01/31/2023	02/28/2023	No Rely	No Rely	No Rely	No Rely

ENCLOSURE

(6)



VMM-261 NATOPS AUDIT SHEET



NAME: REYNOLDS

DATE: 8 Jun 21

AUDITOR:

(b)(3), (b)(6), (b)(7)c

SECTION I - GENERAL

PRIVACY ACT STATEMENT - SIGNED AND DATED / RECORD OF DISCLOSURE

PART A

- ▲ NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET REVIEW AND CERTIFICATION RECORD (3760/32A)
 - REVIEWED & CERTIFIED - REPORTING / ANNUALLY / CHANGE IN FLIGHT STATUS

PART B

- ▲ PILOTS - ONLY MOST CURRENT PCS (DIFOP) ORDERS
- ▲ ENLISTED AIRCREW - VOLUNTARY FLIGHT STATUS LETTERS
- ▲ LETTERS OF SUSPENSION / REVOCATION PERMANENTLY RETAINED

PART C

- ▲ MOST RECENT ANNUAL FLIGHT PHYSICAL CHIT (6410/2)(Only the most recent)
- ▲ ALL GROUNDING AND SUBSEQUENT UP CHITS SINCE ANNUAL
- ▲ WAIVER FORMS PERMANENTLY RETAINED

PART D

- ▲ FLIGHT EQUIPMENT RECORDS CS (DIFOP) ORDER (3760/32B)(NATOPS sign the bottom)

SECTION II - QUALIFICATIONS AND ACHIEVEMENTS

PART A

- ▲ PERMANENT RECORD OF ALL FUNCTIONAL DESIGNATIONS (3760/32C) (All previous letter from CO)
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL DESIGNATIONS (3760/32C)
(Ensure an ATF entered ion APR and logbook updated)

PART B

- ▲ PERMANENT RECORD OF ALL QUALIFICATIONS NOT INCLUDED IN PART A
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL QUALIFICATIONS (3760/32C)
(Ensure an ATF entered and logbook updated)

PART C

- ▲ PERMANENT RECORD OF CRM TRAINING AND FLIGHTS
(Matches NATOPS/Inst Check / retain annual class roster / CRM/I/F logged)

SECTION III - TRAINING

PART A

- ▲ RECORD OF ALL SCHOOLS AND COURSES ATTENDED (3260/32E)(GWOLE-1-5 no longer req)
- ▲ COPY OF ALL TRAINING COMMAND / FRS SUMMARIES SINCE 01 JAN 88

PART B

- ▲ PERMANENT RECORD OF ALL SURVIVAL TRAINING (3760/32F)
- ▲ NITE LAB TRAINING DOCUMENTATION
- ▲ ANNUAL EGRESS TRAINING DOCUMENTATION (3760/32F)
(Check EMER EGRESS completed on NATOPS check)

PART C

- ▲ ALL EXAMS PERTINENT TO AVIATION QUALIFICATIONS
(Current IGS, OPEN/CLOSED book, update coverage SEC III.C exams)

PART D

- ▲ ALL NATOPS EVALUATION RECORDS (3710/7) (Kneeboard card and report, numerical grade for open/closed book, ensure egress/CRM complete, update SEC III.C. Misc and SEC III.B. Egress, update logbook)

PART E

- ▲ ALL INSTRUMENT RATING REQUESTS (3710/2)
(Kneeboard card/application, applicant signed application, update CRM/Egress as req, update logbook)
- ▲ INSTRUMENT QUALIFICATION WAIVERS

SECTION IV - FLIGHT RECORDS

PART A

- ▲ (No longer req, MSHARP)

PART B

- ▲ PERMANENT RECORD OF ALL AIRCRAFT/MISHAPS FLIGHT VIOLATIONS INVOLVING AN AIRCREW CAUSAL FACTOR, AND FNAEB RESULTS. FNAEB ENTRY SHALL CONTAIN: ENTRIES AUTHORIZED BY PARAGRAPH 10.5.2.8, DATE OF THE FNAEB, AND CO COMMENTS. CO MAY NOT DELEGATE THIS RESPONSIBILITY. (3760/32H)

ENCLOSURE

(7)



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS EAST-MARINE CORPS BASE
PSC BOX 20005
CAMP LEJEUNE, NORTH CAROLINA 28542-0005

IN REPLY REFER TO:
1320
PCA
12 Mar 21

FIRST ENDORSEMENT on CMC Washington DC Basic Orders of 19 February 2021

From: Commanding General, Marine Corps Installations East
To: First Lieutenant Ross A. Reynolds 1470694730/7599 USMC

Subj: PERMANENT CHANGE OF ASSIGNMENT ORDERS

1. Delivered. Effective 0800, 12 March 2021 you will stand detached from your present station and duties and report by 1500, 12 March 2021 to COMMANDING OFFICER, ~~VMM-261 MAG-26 2D MAW~~, PSC BOX 21015, JACKSONVILLE, NORTH CAROLINA 28545 (MCC VM2) for duty.
2. No entitlements are authorized in connection with these orders.
3. Upon arrival at your new duty station you are required to recertify your entitlement to BAH per the JTR Ch 10 para 10100.C.
4. These orders are Permanent Change of Assignment Orders. ~~Duty in a flying status involving operational flights (DIFOP).~~
5. Request for retirement/resignation will be in accordance with Marine Corps Order 1900.16.

Digitally signed for authenticity with a trusted DOD Certificate on behalf of:

(b)(6), (b)(7)c

By direction

RECEIVING ENDORSEMENT

1. I have read and understand the contents of my orders. I received these orders at Jacksonville, North Carolina at 0800 on 12 March 2021. I understand that I am to report no later than 1500, 12 March 2021, to COMMANDING OFFICER, VMM-261 MAG-26 2D MAW, PSC BOX 21015, JACKSONVILLE, NORTH CAROLINA 28545 VM2 for duty. I have in my possession my medical and dental records.

R. A. REYNOLDS



MARINE CORPS BASIC ORDER

ANK: CAPT

NAME: ROSS A REYNOLDS

EDIPI: 1470694730

PMOS: 7532

JC: VM2

PRESENT COMMAND: 2D MAW (STUD PERS) JACKSONVILLE NC

HQMC ORDER DETAILS - 20210221

FMCC:

VM2

FUTURE COMMAND:

VMM 261 MAG 26 2DMAW NEW
RIVER NC

TOUR:

48 MONTHS, CONUS (OPERATIONAL-NO COST
REASSIGNMENT OR PCA)

ESTIMATED DETACH DATE:

20210311

REPORT NO LATER THAN:

20210312

BILLET:

7532, O3, DIFOP

THIS IS AN INVOLUNTARY ASSIGNMENT.

A SECRET SECURITY CLEARANCE IS REQUIRED FOR THIS ASSIGNMENT.

20210221 - Modification

PCA (DIFOP) (TOUR LENGTH 48 MONTHS)

1. DIR SNO RPT NLT 12 MAR 2021 TO CO VMM 261 MAG 26 2DMAW NEW RIVER NC (MCC VM2) DUTY IN FLYING STATUS INVOLVING OPERATIONAL FLIGHTS (DIFOP).
2. INCLUDE IN ORDERS ISSUED: REQUEST FOR RETIREMENT/RESIGNATION WILL BE IN ACCORDANCE WITH MCO 1900.16.
3. NO ENTITLEMENTS ARE AUTHORIZED IN CONNECTION WITH THIS ASSIGNMENT.

TRAVEL FUNDING DETAILS

There is no travel funding associated with these no-cost orders

ORDERS HISTORY

Original Order:

HQMC ORDER DETAILS - 20210218

FMCC:

VM2

FUTURE COMMAND:

VMM 261 MAG 26
2DMAW NEW RIVER NC

TOUR:

48 MONTHS, CONUS
(OPERATIONAL-NO COST
REASSIGNMENT OR PCA)

ESTIMATED DETACH

DATE:

REPORT NO LATER

THAN:

BILLET:

7532, O3, DIFOP



UNITED STATES MARINE CORPS
MARINE AVIATION TRAINING SUPPORT GROUP 22
TRAINING COMMAND
271 FIFTH STREET
CORPUS CHRISTI, TEXAS 78419

IN REPLY REFER TO:
1320
S-1
14 Aug 20

FIRST ENDORSEMENT on CMC Washington DC Basic Orders of 28 July 2020

From: Commanding Officer, Marine Aviation Training Support Group 22
To: First Lieutenant Ross A. Reynolds 1470694730/7599 USMC

Subj: PERMANENT CHANGE OF STATION ORDERS

Encl: (1) PERMANENT CHANGE OF STATION (PCS)

1. Delivered. Effective 0800, 17 August 2020 you will stand detached from your present station and duties and report by 2359, 22 August 2020 to COMMANDING OFFICER, VMMT-204, MAG 26, 2D MAW NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28545 (MCC J9V) for duty.

2. You are authorized 0 day(s) proceed, 0 day(s) PDMRA, 0 day(s) delay chargeable as annual leave, and 5 day(s) travel via Private Vehicle in reporting to your new duty station. Your projected leave balance upon completion of authorized delay is 68.5 day(s) accrued. Your dependents authorized travel under these orders are: none

3. Should an emergency arise and you determine that more leave is required, contact your new command. Your request must include the reason, number of days requested, leave address, telephone number and your leave balance. You have given the person to be notified in case of emergency as: (b)(6), (b)(7)c address as: (b)(6), (b)(7)c telephone number: (b)(6), (b)(7)c Any change of leave address shall be reported to the Commanding Officer of your new duty station.

4. Before making any rental or lease agreements or purchasing a home, you will report to the local military family housing office at your new duty station. You will submit your travel claim to the disbursing officer at your new duty station within 5 days after completion of travel to settle travel expenses. Failure to comply will result in your pay account being checked for your travel advance. Additionally, elapsed time will be charged as leave if your travel claim has not been submitted to the disbursing officer within 30 days after completion of travel under these orders.

5. Your estimated travel entitlement is \$3,143.00 based on MCTFS data at the time the order was issued. It does not include any adjustments based on your outbound interview answers. Limit your GTCC use to no more than 80% of this amount. If traveling on Government procured transportation your reimbursement amount will be lower than this estimate. The actual amount of final entitlements will be computed upon settlement of your travel claim. Also at the time of settlement you are required to split disburse all charges placed on your card during your PCS move. Any GTCC use outside of PCS entitlements constitutes misuse. Contact your APC for any GTCC related questions and your supporting personnel administrative center for any PCS entitlement questions.

ENCLOSURE (7)

Subj: PERMANENT CHANGE OF STATION ORDERS

Your estimated travel entitlements are as follows:

<u>Travel Allowance Estimates</u>	
Member Military Air Commercial Travel:	\$0.00
Member Per Diem:	\$755.00
Member Mileage Allowance:	\$250.00
Dislocation Allowance:	\$2,138.00

Member Total Allowances:	\$3,143.00

6. A Temporary Lodging Expense (TLE) allowance is authorized for a total of 10 days (or 5 days, if from a Permanent Duty Station (PDS) in CONUS to a PDS outside CONUS) in connection with permanent change of station. These temporary lodgings must be in fact a temporary place of residence, acquired in the vicinity of your old or new PDS or both. You should try to obtain government quarters first. If available, you must obtain a statement of non-availability from the local commander, if you intend to claim TLE. If your old or new PDS where the TLE was incurred is not located at a post, camp, station, base, or depot or if it is in a city or metropolitan area, the statement of non-availability is not required.

7. Upon arrival at your new duty station you are required to recertify your entitlement to BAH within 30 days of joining the command per reference(s).

8. You are further advised that in accordance with MCO 1000.6 you may be eligible for 10 days permissive TAD house hunting, upon arrival to your new duty station.

9. For emergency medical care while traveling go to the nearest emergency room and contact your Primary Care Manager (PCM) or Tricare Regional Representative within 24 hours in order to notify Tricare that services have been received. For non-emergency, urgent or routine care please contact your present Tricare Region as these items may require a referral from your PCM. It is recommended that all routine care be completed prior to detaching from your current command. A list of Tricare regions, resources and guidance on obtaining care while en route is available at:
<http://tricare.mil/GettingCare/Traveling.aspx> or by calling 1-800-TRICARE (874-2273).

10. These orders constitute assignment to VMMT-204, MAG 26, 2D MAW NEW RIVER for duty under instructions (DUINS) in a flying status involving operational or training flights and intermediate flight training for a period in excess of 20 weeks.

(b)(6), (b)(7)c

By direction

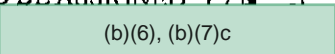
Subj: PERMANENT CHANGE OF STATION ORDERS

RECEIVING ENDORSEMENT

1. I have read and understand the contents of my orders. I received these orders at Corpus Christi, Texas 78419 on 17 August 2020. I understand that I am to report no later than 2359, 22 August 2020, to COMMANDING OFFICER, VMFT-204, MAG 26, 2D MAW NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28545 (MCC J9V) for duty. I have in my possession my medical and dental records.



R. A. REYNOLDS

MCAS NEW RIVER IPAC
YOU REPORTED TO IPAC INBOUND
AT 0800 ON 20200909
MEAL CARD ISSUED Y/N
WILL GOV'T QTRS BE ASSIGNED Y/N
CHECKED IN BY 

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY

(Read Privacy Act Statement and Instructions on back before completing form.)

1. TO: CO:VMM-261		2. FROM: FLIGHT SURGEON NAVAL HEALTH CLINIC NEW RIVER AVIATION MEDICINE		3. DATE (YYYYMMDD) 20220203	
4. MEMBER NAME (Last, First, Middle Initial) REYNOLDS, ROSS		5. IDENTIFICATION NUMBER 1470694730	6. GRADE CAPT	7. DATE OF BIRTH (YYYYMMDD) 19950303	
8. ORGANIZATION USMC		9. TYPE OF DUTY DIACA SG1	10. FLIGHT PHYSICAL DATE (YYYYMMDD) (If applicable) 20220203		
11. UP: THE ABOVE INDIVIDUAL HAS BEEN FOUND QUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input checked="" type="checkbox"/> CLEARED AFTER (X): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input type="checkbox"/> Temporary medical disqualification <input type="checkbox"/> Reporting to new duty station </div> <div> <input type="checkbox"/> Waiver recommended (Not USAF) <input type="checkbox"/> Waiver granted </div> <div> <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Other (See remarks) </div> </div> </div> <div> <input checked="" type="checkbox"/> CLEARED AFTER FLIGHT DUTY MEDICAL EXAMINATION: </div> </div>					
b. EFFECTIVE DATE (YYYYMMDD) 20220203			c. EXPIRATION DATE (YYYYMMDD) 20230331		
12. DOWN: THE ABOVE INDIVIDUAL HAS BEEN FOUND DISQUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input type="checkbox"/> TEMPORARY DISQUALIFICATION DUE TO (X): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input type="checkbox"/> Illness or Injury <input type="checkbox"/> MAY PARTICIPATE IN (X): <input type="checkbox"/> PERMANENT DISQUALIFICATION </div> <div> <input type="checkbox"/> Simulator duties <input type="checkbox"/> Ground based flight line duties </div> <div> <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Other (See remarks) </div> </div> </div> <div> <input type="checkbox"/> Other (See remarks) </div> </div>					
b. EFFECTIVE DATE (YYYYMMDD)			c. ESTIMATED DURATION OF GROUNDING		
13. REMARKS/LIMITATIONS					
<input checked="" type="checkbox"/> VISION CORRECTION DEVICES REQUIRED IN THE PERFORMANCE OF FLIGHT DUTIES. <input type="checkbox"/> MUST CARRY EXTRA SPECTACLES.					
14. (X one): <input checked="" type="checkbox"/> FLIGHT SURGEON <input type="checkbox"/> OTHER (Countersignature required for Air Force and Navy upslip)					
a. TYPED NAME (Last, First, Middle Initial) (b)(3), (b)(6), (b)(7)c		b. GRADE O-3	c. PROVIDER SIGNATURE (b)(3), (b)(6), (b)(7)c		d. DATE SIGNED (YYYYMMDD) 20220203
e. TYPED NAME (Last, First, Middle Initial) REYNOLDS, ROSS A.		f. GRADE O-3	g. FLIGHT SURGEON COUNTERSIGNATURE (b)(3), (b)(6), (b)(7)c		h. DATE SIGNED (YYYYMMDD) 20220203
15. MEMBER CERTIFICATION					
a. I certify that I understand the above recommendations and that I: <input checked="" type="checkbox"/> MAY <input type="checkbox"/> MAY NOT perform flight duties.			b. AIRCREW MEMBER SIGNATURE		c. DATE SIGNED (YYYYMMDD)
16. ACTION TAKEN BY COMMANDER (Not required for Air Force and Navy)					
<input type="checkbox"/> APPROVE <input type="checkbox"/> DISAPPROVE					
a. TYPED NAME (Last, First, Middle Initial)		b. TITLE	c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)

DD FORM 2992, JAN 2015

REPLACES DA FORM 4186, AF FORM 1042, AND NAVMED FORMS 6410/1 AND 6410/2, WHICH ARE OBSOLETE.

Adobe Designer 9.0

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

NAME (Last, First, Middle Initial)

DoD ID Number

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR TRAINING SQUADRON 204
MARINE AIRCRAFT GROUP 26
2D MARINE AIRCRAFT WING, FMF
PSC BOX 21018
JACKSONVILLE, NC 28545-1018

3710
DSSN
01 Mar 21

From: Commanding Officer, Marine Medium Tiltrotor Training Squadron 204
To: First Lieutenant Ross A. Reynolds 1470694730/7532 USMC

Subj: DESIGNATION

Ref: (a) CNAF M-3710.7
(b) NAVMC 3500.11F
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Tiltrotor Second Pilot (T2P).
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry



DEPARTMENT OF THE NAVY
TRAINING AIR WING FOUR
245 FIFTH STREET SUITE 105
CORPUS CHRISTI TX 78419-5008

1500
Ser N00/0766
07 AUG 2020

From: Commander, Training Air Wing FOUR
To: First Lieutenant Ross A. Reynolds, 7531, USMC

Subj: DESIGNATION AS A NAVAL AVIATOR

Ref: (a) CNATRAINST 1500.4J

1. Pursuant to the provisions of reference (a), and having demonstrated those qualities of sound judgment and professional competence in your completion of the Advanced Multi-Engine Flight Training Syllabus of the Naval Air Training Command, you are designated a Naval Aviator effective 07 August 2020.

2. Congratulations on a job well done!

(b)(3), (b)(6), (b)(7)c

Copy to:
VT-35
MATSG-22

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IIB - MISSION QUALIFICATION RECORD

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3500
DSSN
27 Oct 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Ross A. Reynolds 1470694730/7532 USMC

Subj: NIGHT SYSTEMS LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) NAVMC 3500.14
(b) NAVMC 3500.11
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook entry
M-SHARP

ENCLOSURE (7)



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3500
DSSN
27 Oct 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Ross A. Reynolds 1470694730/7532 USMC

Subj: NIGHT SYSTEMS LOW LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14
(b) NAVMC 3500.11
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook entry
M-SHARP



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3710
DSSN
15 Jun 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Ross A. Reynolds 1470694730/7532 USMC

Subj: NIGHT SYSTEMS HIGH LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program
Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems High Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook Entry
MSHARP



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3500
DSSN
20 May 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: First Lieutenant Ross A. Reynolds 1470694730/7532 USMC

Subj: DAY LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry

CRM TRAINING & EVALUATION RECORD

1. NAME (Last, first, middle initial): <i>Reynolds, R.</i>	2. RANK:	3. EDIPI NUMBER: <i>1470694730</i>
---	----------	---------------------------------------

Note: This form shall be permanently maintained in the NATOPS Flight Personnel Training/Qualification Jacket (Section II, Part C).

CRM IMM Instructor Course	4. Date:	5. Location:
---------------------------	----------	--------------

CRM FACILITATOR TRAINING

6. T/M AIRCRAFT	7. UNIT	8. DATE

GROUND TRAINING / FLIGHT EVALUATIONS

Note: Valid for 12 months from the last day of the month in which training/evaluation was completed.

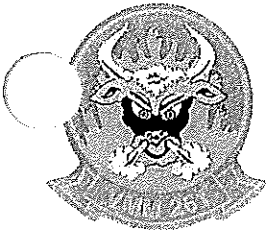
Note: Renewal flight evaluations may be completed within 60 days preceding the expiration of the current qualification.

9. T/M AIRCRAFT	10. UNIT	11. GROUND / FLIGHT	12. INITIAL / RENEWAL	13. DATE COMPLETED	14. EXPIRATION DATE
<i>T-44B</i>	<i>VT28</i>	<i>GIF</i>	<i>I</i>	<i>19 Feb 19</i>	<i>29 Feb 20</i>
<i>T44C</i>	<i>VT35</i>	<i>G</i>	<i>I</i>	<i>26 Mar 20</i>	<i>31 Mar 21</i>
<i>MV22B</i>	<i>VMMT-204</i>	<i>G</i>	<i>I</i>	<i>29 SEP 20</i>	<i>30 SEP 21</i>
<i>MV22B</i>	<i>204</i>	<i>G</i>	<i>R</i>	<i>4 JAN 21</i>	<i>31 JAN 22</i>
<i>MV22B</i>	<i>204</i>	<i>F</i>	<i>I</i>	<i>1 MAR 21</i>	<i>31 MAR 22</i>
<i>MV22B</i>	<i>261</i>	<i>G</i>	<i>R</i>	<i>4 JAN 22</i>	<i>31 JAN 23</i>
<i>MV22B</i>	<i>261</i>	<i>F</i>	<i>R</i>	<i>7 FEB 22</i>	<i>31 MAR 23</i>

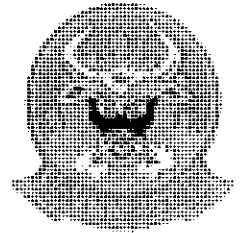
* SEE SURVIVAL TAB FOR ROSTER

EXTENSIONS

15. T/M AIRCRAFT	16. UNIT	17. GROUND / FLIGHT	18. AUTHORITY	19. EXPIRATION DATE



VMM-261 TRAINING ROSTER



Topic: CIRM Awareness

Date: 1/11/22

Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2	TOMKIEWICZ M.J.	CAPT	[Signature]
3	(b)(3), (b)(6), (b)(7)c		
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17	REYNOLDS, ROSS A	CAPT	[Signature]
18	(b)(3), (b)(6), (b)(7)c		
19			
20			
21			
22			
23			
24			
25			
26			
27			
28	MARRE, J.M.	COL	[Signature]
29	(b)(3), (b)(6), (b)(7)c		
30			
31			
32			
33			
34	Spezdy, James W	Aviator	[Signature]
35	(b)(3), (b)(6), (b)(7)c		
36			
37			
38			

CLASS 21-05 CRM Initial/Refresher

CRM training was conducted IAW CNAF 1542.7(series)

Rank	Last Name	First Name	M.I.	Service	Category
(b)(3), (b)(6), (b)(7)c				USMC	I/A
				USMC	I/A
				USMC	I/A
				USMC	I/A
				USMC	I/A
				USAF	I/A
				USAF	I/A
				USMC	I/A
				USMC	I/A
1st Lt	REYNOLDS	ROSS	A	USMC	I/A
(b)(3), (b)(6), (b)(7)c					

Date: 29 Sept 2010 Signature

(b)(3), (b)(6), (b)(7)c

DoD ID Number

1470694730

MAINTENANCE (3M) COURSES

(b)(3), (b)(6), (b)(7)c

NAVAL AVIATOR AVIATION TRAINING JACKET (ATJ) SUMMARY CARD

NAME (LAST, FIRST, AND MIDDLE) REYNOLDS, ROSS A.		RANK/SERVICE 1STLT/USMC		DOD IDNUMBER (10-digit)		SEX/RACE/ETHNIC CODE MCX		
COLLEGE WORCESTER STATE UNIVERSITY		MAJOR/DEGREE CRIMINAL JUSTICE		PROCUREMENT SOURCE 27		AQR 6		
				PFAR/FOFAR 6		DATE OF COMMISSION 13MAY2017		
CARRIER QUALIFICATION INFORMATION (GPA/BOARDING RATE)				CARRIER QUALIFICATION DATE (MONTH/YEAR)				
TYPE OF TRAINING							ANTHROPOMETRIC CODE	
<input checked="" type="checkbox"/> PILOT <input type="checkbox"/> STRIKE <input checked="" type="checkbox"/> MARITIME <input type="checkbox"/> E-2/C-2 <input type="checkbox"/> E-6 <input type="checkbox"/> HELICOPTER <input type="checkbox"/> MV-22 <input type="checkbox"/> NFO <input type="checkbox"/> NAV <input type="checkbox"/> STRIKE <input type="checkbox"/> STRIKE FIGHTER <input type="checkbox"/> ATDS (E-2/C-2)							11-7-4-5	
PHASE OF TRAINING		DATE REPORTED	DATE COMPLETED	RAW SCORES			NSS	
				FLIGHT/DEVICE	ACAD	# UNSAT	# MARG	PHASE ACAD
NIFE								
PREFLIGHT		24OCT2018	12DEC2018		93			50
PRIMARY		04FEB2019	10SEP2019	1.202	94.62			47.7 50.9
PRIMARY 2 (NFO)								
INTERMEDIATE 1		31OCT2019	25FEB2020	1.048	94.0			47.4 48.5
INTERMEDIATE 2								
ADVANCED		06MAR2020	07AUG2020	1.0967	98.18			50.4 57.8
								COMPOSITE SCORE 198

* Indicates the NSS Phase value displayed is the Flight/Device NSS score.

SUMMARY OF FLIGHT AND SIMULATOR TRAINING IN THE NAVAL AIR TRAINING COMMAND

SQUADRON	A/C / SIM MODEL	TOTAL NUMBER OF EVENTS		TOTAL NUMBER OF HOURS		FIRST PILOT HOURS		CO-PILOT HOURS		SPECIAL CREW HOURS		NIGHT HOURS		NVG HOURS	INSTRUMENT HOURS	
		SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL	SYL	N-SYL		ACTUAL	SIMULATED
VT-28	T-6B	47		76.3		59.7		16.6				11.7			4.2	15.2
VT-28	UTD-OFT	38		49.4		49.4										27.3
HT-18	2B42	9	1.0	11.7	1.3	10.4	1.3	1.3								9.1
HT-18	2C67	5		6.5		6.5										
HT-18	TH57B	14		23		17.7		5.3								
HT-18	TH57C	7		12.5		7.9		4.6				2.9		1.0		
VT-35	T-44C	35		72.7		59.4		13.3			12.3	5.4		7.5	13	
VT-35	T-44/OFT	34		83.8		50.6		33.2				4.3			32.5	

REASON FOR ATTRITION (ENTER CODE)		PHASE/STAGE AT TIME OF ATTRITION		DATE OF ATTRITION		PIPELINE CHANGE/PROGRAM CHANGE	
						APPROVED <input type="checkbox"/> YES <input type="checkbox"/> NO	
E OF DESIGNATION 07AUG2020		FLEET REPLACEMENT SQUADRON ASSIGNMENT VMMT-204 MCAS NEW RIVER, NC		NEW PIPELINE/PROGRAM			

NAVAL AVIATOR AVIATION TRAINING JACKET (ATJ) SUMMARY CARD

PRIOR FLIGHT TIME

FAA PILOT CERTIFICATE:	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> ATP
CIVILIAN TOTAL HOURS:	IFS:		<input checked="" type="checkbox"/> COMPLETE <input type="checkbox"/> WAIVED
DESIGNATED MILITARY AVIATOR <input type="checkbox"/>	TOTAL HOURS:	AIRCRAFT COMMANDER HOURS:	

TRAINING REVIEW BOARD ACTIONS

PHASE	STAGE	REASON FOR BOARD	CTW RECOMMENDATION

CARRIER QUALIFICATIONS (FOR STUDENT NAVAL PILOTS ONLY)

PHASE	DATE QUAL	A/C MODEL	LANDINGS		REMARKS
			T & G	ARRESTED	
INTERMEDIATE					
ADVANCED					

COMMENTS:

NAME (LAST, FIRST, AND MIDDLE) REYNOLDS, ROSS A.	RANK/SERVICE 1STLT/USMC	DOD IDNUMBER (10-digit)
---	----------------------------	-------------------------

ADVANCE PHASE

CNATRAINST 1500.4

NAVAL AVIATOR TRAINING STAGE GRADES - PROP

a. Enter Stage Grade on Each Newly Designated NA (CNATRA PROVIDED ADVANCE STAGE AVERAGE PERIODICALLY.)

b. Retain Original In ATJ.

NAME:				Advance Squadron	Designation Date	Assignment
1stLt Reynolds, Ross A.				VT-35	07-Aug-20	MCAS New River, NC
STAGE	Squadron Average	Student's Grades	Flight Waived	Remarks: (Specific comments required on below average block of training)		
CONTACT	N/A	1.140				
INSTRUMENT	N/A	1.074				
NAV(ONAV)	N/A	0.000				
NAV(VNAV)						
NAV(SAR)						
NAV(LL)						
USMC FORM	N/A	1.051				

CO'S APPRAISAL OF FRS PREPAREDNESS.

1stLt Reynolds successfully completed the advanced flight training syllabus. The syllabus consisted of 35 flights in the T-44 aircraft and 34 events in the T44-OFT flight simulator. He will be a welcomed asset to his next command. This officer meets all criteria and is prepared for the successful completion of the FRS curriculum.

SIGNATURE

(b)(3), (b)(6), (b)(7)c

DATE

4 AUG 2020

CNATRA 1542/5B (REV.8-88)

ENCLOSURE

(7)

PINK SHEET SUMMARY (FRONT)

Record all flight violations, accidents, incidents, unsatisfactory events, delinquency reports and administrative actions on this sheet. Information concerning accidents/incidents REQUIRE SPECIAL HANDLING IAW OPNAVINST 3750.6. An entry shall be made from each activity/squadron listing NONE where appropriate-if no adverse events occurred in each section 1, 2, and 3.

SECTION 1 - FLIGHT VIOLATIONS/ACCIDENTS/INCIDENTS

DATE	ACTIVITY/SQUADRON	BRIEF DESCRIPTION	CAUSE	
12DEC2018	NASC	API	NONE	
12SEP2019	VT-28	PRIMARY	NONE	
25FEB2020	HT-18	INTERMEDIATE/HELO	NONE	
07AUG2020	VT-35	ADVANCED	NONE	

SECTION 2 - UNSATISFACTORY EVENTS (Include all PINK and YELLOW sheet events)

DATE	TRNG SQUADRON	STAGE/EVENT	MAJOR DIFFICULTY	
12DEC2018	NASC	API	NONE	
12SEP2019	VT-28	PRIMARY	NONE	
25FEB2020	HT-18	INTERMEDIATE/HELO	NONE	
07AUG2020	VT-35	ADVANCED	NONE	

SECTION 3 - STUDENT TRAINING REVIEW BOARDS/PROGRESS CHECKS

DATE	TRNG SQUADRON	TRB/IPC/FPC/APC	DISPOSITION	
12DEC2018	NASC	API	NONE	
12SEP2019	VT-28	PRIMARY	NONE	
25FEB2020	HT-18	INTERMEDIATE/HELO	NONE	
07AUG2020	VT-35	ADVANCED	NONE	

REMARKS

STUDENT'S NAME (LAST, FIRST AND MIDDLE INITIAL)
REYNOLDS, ROSS A.

RANK
1STLT

DOD ID NUMBER

CNATRA 1542/90 (Rev 10/17)

PINK SHEET SUMMARY

(REVERSE SIDE CONTINUATION SHEET – PAGE 2)

Record all flight violations, accidents, incidents, unsatisfactory events, delinquency reports and administrative actions on this sheet. Information concerning accidents/incidents REQUIRE SPECIAL HANDLING IAW OPNAVINST 3750.6. An entry shall be made from each activity/squadron listing NONE where appropriate-if no adverse events occurred in each section 1, 2, and 3.

SECTION 1 - FLIGHT VIOLATIONS/ACCIDENTS/INCIDENTS (Continued)

DATE	ACTIVITY/SQUADRON	BRIEF DESCRIPTION	CAUSE	

SECTION 2 - UNSATISFACTORY EVENTS (Include all PINK and YELLOW sheet events) (Continued)

DATE	TRNG SQUADRON	STAGE/EVENT	MAJOR DIFFICULTY	

SECTION 3 - STUDENT TRAINING REVIEW BOARDS/PROGRESS CHECKS (Continued)

DATE	TRNG SQUADRON	TRB/IPC/FPC/APC	DISPOSITION	

REMARKS

STUDENT'S NAME (LAST, FIRST AND MIDDLE INITIAL)
REYNOLDS, ROSS A.RANK
1STLT

DOD ID NUMBER

CNATRA 1542/90 (Rev 10/17)

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, First, Middle Initial)

RANK/RATE

DoD ID Number

TYPE OF TRAINING

COURSE CATEGORY

AVIATION PHYSIOLOGY

EMERGENCY EGRESS

WATER SURVIVAL

LAND SURVIVAL DWEST, SERE

DATE

GRADE

UNIT

DATE

GRADE

UNIT

DATE

GRADE

UNIT

DATE

GRADE

UNIT

MV-22 EMERGENCY
EGRESS

SIGNATURE

SIGNATURE

SIGNATURE

SIGNATURE

(b)(3), (b)(6), (b)(7)c

DATE

GRADE

UNIT

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GRADE

UNIT

AEROMED

SIGNATURE

SIGNATURE

SIGNATURE

SIGNATURE

(b)(3), (b)(6), (b)(7)c

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UNIT

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UNIT

MV-22 EMERGENCY
EGRESS

SIGNATURE

SIGNATURE

SIGNATURE

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(b)(3), (b)(6), (b)(7)c

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UNIT

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GRADE

UNIT

2022 AEROMED

SIGNATURE

SIGNATURE

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SIGNATURE

(b)(3), (b)(6), (b)(7)c

(b)(3), (b)(6), (b)(7)c

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TRAINING ACTIVITIES

1. Pensacola, FL

4. Lemoore, CA

7. Patuxent River, MD

2. Miramar, CA

5. Jacksonville, FL

8. Whidbey Island, WA

3. Norfolk, VA

6. Cherry Point, NC

9. Other (List)

10. Other Information

ENCLOSURE

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET												
SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING												
NAME (Last, First, Middle Initial)								RANK/RATE		DoD ID Number		
REYNOLDS, ROSS								2NDLT		1470694730		
COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
INTERMEDIATE WATER SURVIVAL TRAINING							9-Jul-18	Q	1			
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
							(b)(3), (b)(6), (b)(7)c					
LAND SURVIVAL TRAINING										03-Dec-18	Q	1
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
										(b)(3), (b)(6), (b)(7)c		
T-LEB Level A egress												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	(b)(3), (b)(6), (b)(7)c			(b)(3), (b)(6), (b)(7)c								
Class: 1+4 Exp. 31 Dec 2022												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
							(b)(3), (b)(6), (b)(7)c					
Level A Training SENSORY PROBLEMS/ SPATIAL D ALSS												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	(b)(3), (b)(6), (b)(7)c			(b)(3), (b)(6), (b)(7)c								
Class: 3 Exp. 31 Dec 2022												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
							(b)(3), (b)(6), (b)(7)c					
ITE Lab Training INDOC System: ANVIS-9												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	(b)(3), (b)(6), (b)(7)c											
SP/SD												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
	(b)(3), (b)(6), (b)(7)c											
TRAINING ACTIVITIES												
1. Pensacola, FL				4. Lemoore, CA				7. Patuxent River, MD				
2. Miramar, CA				5. Jacksonville, FL				8. Whidbey Island, WA				
3. Norfolk, VA				6. Cherry Point, NC				9. Other (List)				
10. Other Information												

Date 4 JAN 2021

ENCLOSURE (7)

[illegible]

(b)(3), (b)(6), (b)(7)c

Sign

(b)(3), (b)(6), (b)(7)c

Subj: AEROMEDICAL TRAINING (04 Jan 21)

	LAST	FULL FIRST	RANK	PLATFORM	SQUADRON
23	(b)(3), (b)(6), (b)(7)c			V-22	261
24				V-22	261
25	KEYNOLDS	ROSS	CAPT	V-22	261
26	(b)(3), (b)(6), (b)(7)c			V-22	261
27				V-22	261
28				V-22	261
29				V-22	261
30				V-22	261
31				V-22	261
32				V-22	261
33				V-22	261
34				V-22	261
35					
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60					

/S/

(b)(3), (b)(6), (b)(7)c

3710/5100
DSS
04 Jan 21

From: Aeromedical Safety Officer, Marine Aircraft Group 26
To: VMM-261 Department of Safety and Standardization

Subj: AEROMEDICAL TRAINING

Ref: (a) CNAF M-3710.7
(b) WgO 5100.29

1. The following personnel completed Annual Aeromedical training as required by reference (a) and (b). Topics include Sensory Problems / Situational Awareness, Radios, Human Factors, Human Performance, and FAILSAFE Program.

	LAST	FULL FIRST	RANK	PLATFORM	SQUADRON
1	(b)(3), (b)(6), (b)(7)c				
2					
3					
4					
5					
6	TOMKIEWICZ	MATTHEW	CAPT	V-22	261
7	(b)(3), (b)(6), (b)(7)c				
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

/S/

(b)(3), (b)(6), (b)(7)c

13 Mar 20

MEMORANDUM

From: Aeromedical Safety Officer, TW-4
To: NATOPS Officer

Subj: CNAF M-3710.7 LEVEL A ANNUAL ADJUNCTIVE TRAINING

1. The personnel listed below have completed the following CNAF M-3710.7
NASTP Level A Annual Adjunctive Training on 13 Mar 2020:

T-44 Emergency Egress Training
ALSS Items
Sensory Problems/Spatial Disorientation
Laser Hazards

Rank	Name	Squadron
(b)(3), (b)(6), (b)(7)c		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-31
		VT-35
		VT-35
		VT-35
		VT-35
		VT-35
		VT-35
		VT-35
		VT-35
	1STLT	REYNOLDS, ROSS A.
	(b)(3), (b)(6), (b)(7)c	VT-35

(b)(3), (b)(6), (b)(7)c



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
55 RADFORD BOULEVARD, SUITE 211
PENSACOLA FL 32508-1091

IN REPLY REFER TO
3760
20 Nov 2019

From: Officer in Charge, Naval Survival Training Institute

To: **2ND LIEUTENANT ROSS REYNOLDS**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **2ND LIEUTENANT ROSS REYNOLDS** has received **AC INDOC CLASS 3** on **20 Nov 2019** at Aviation Survival Training Center **PENSACOLA**.

2. **2ND LIEUTENANT ROSS REYNOLDS** received a grade of **Q**. All required modules were completed.

3. This qualification expires on **31 Dec 2022** unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, H-72, H-92, OH-58C, TH-57, UH-1, V-22

(b)(6), (b)(7)c

~~By direction~~

(b)(6), (b)(7)c

05 Nov 19

From: Assistant Aeromedical Safety Officer, TW-5
To: CTW-5 NATOPS Officers

Subj: CNAF M-3710.7 LEVEL A ANNUAL AEROMEDICAL TRAINING

1. The listed personnel have completed the following CNAF M-3710.7 Level A Annual Training Requirements on November 05, 2019.

- a. Sensory Problems/Spatial Disorientation Training
- b. ALSS
- c. AN/PRC-90 Radio

(b)(3), (b)(6), (b)(7)c		8
		8
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		8
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		8
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		18
		18
		18
Reynolds, Ross	1 st Lt	18
(b)(3), (b)(6), (b)(7)c		18
		28
		28
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		28
		28
		28
		28

(b)(3), (b)(6), (b)(7)c

22 Feb 19

MEMORANDUM

From: Aeromedical Safety Officer, TW-4
To: NATOPS Officer

Subj: CNAF M-3710.7 LEVEL A ANNUAL ADJUNCTIVE TRAINING

1. The personnel listed below have completed the following
CNAF M-3710.7 NASTP Level A Annual Adjunctive Training on 22 Feb
2019:

T-6B Ejection Seat Training
T-6B Emergency Egress Training
Aeromedical Aspects of Ejection
Hypoxia Awareness Training
G-LOC/G-tolerance Improvement Procedures
Sensory Problems/Spatial Disorientation
ALSS Items

<u>Rank</u>	<u>Name</u>	<u>Squadron</u>
	(b)(3), (b)(6), (b)(7)c	VT-28
		VT-28
		VT-28
		VT-28
2NDLT	REYNOLDS, ROSS A.	VT-28
		VT-28
		VT-28
		VT-27

(b)(3), (b)(6), (b)(7)c



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
55 RADFORD BOULEVARD, SUITE 211
PENSACOLA FL 32508-1091

IN REPLY REFER TO
3760
10 Dec 2018

From: Officer in Charge, Naval Survival Training Institute

To: **2ND LIEUTENANT ROSS REYNOLDS**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **2ND LIEUTENANT ROSS REYNOLDS** has received **AC INDOC CLASS 1** on **10 Dec 2018** at Aviation Survival Training Center **PENSACOLA**.

2. **2ND LIEUTENANT ROSS REYNOLDS** received a grade of **Q**. All required modules were completed.

3. This qualification expires on **31 Dec 2022** unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 1: AV-8, EA-6, F/A-18, F-16, S-3, T-2, T-38, T-45, T-6

Class 4: C-12, C-130T, C-20, C-21, C-26, C-35, C-37, C-38A, C-40, C-9, E-4, E-6, NU-1B, P-8, T-1A, T-39, T-44, U-6A

For

(b)(6), (b)(7)c

By direction

(b)(6), (b)(7)c

SECTION IIIC - EXAMINATION RECORD

NAME (Last, First, Middle Initial)

REYNOLDS, Ross A

DoD ID Number

1470694730

[illegible][illegible]



VMM-261 PILOTS OPEN BOOK NATOPS

Revised 03 Feb 2021

NAME: CAPT ROSS REYNOLDS

DATE: 43 02 FEB 2022

GRADE: 3-99

GRADED BY: (b)(3), (b)(6), (b)(7)c

1. The MV-22 is a multi-mission aircraft within many applications. These applications include the following:

- Medium lift assault support
- Tactical Recovery of Aircraft and Personnel (TRAP)
- Emergency evacuation
- Fleet logistics support
- Logistics support ashore
- Long range logistics support
- Medical Evacuation

2. The maximum VTOL gross weight of the V-22 is 52,600 lbs sea level; maximum Short Takeoff (STO) gross weight is 57,000 lbs; and maximum alternate gross weight is 60,500 lbs.

3. The nose to tail length of the V-22 is 57 ft 4 in.

4. Each DFU controls operation of two MFDs, with the capability of controlling all four MFDs in the event of a DFU failure.

5. There are five main Aircraft Interface Units (AIUs) on the aircraft: the Avionics Bay Interface Unit (ABIU), two Nacelle Interface Units, the Wing Interface Unit, and the Drive Systems Interface Unit (DSIU).

6. The DSIU, located on the midwing forward equipment shelf, monitors and controls the Emergency Lubrication System, and monitors for oil debris in the PRGB, TAGBs, MWGBs, and both engines.

7. The APN-194 radar altimeter provides aircraft altitude above ground level (AGL) from 0 to approximately 4500 ft.

8. Stall warning is provided for nacelle angles between 0° and 35°.

9. The Safe rate warning is initiated when the vertical velocity exceeds the vertical velocity limit with airspeed less than 60 kts and nacelle angle greater than 65°.

10. If the aircraft was Shut down without a proper system log off, the MCs will attempt to restore the aircraft configuration available prior to loss of power. This is referred to as a warm start.

NEED CLOSER

BOIL



This is to certify that

1st Lt Ross Reynolds

has successfully completed the following training course:

IGS - Tiltrotor Credit Course

Identifier: B7863B9592494A2F984B07F80C74209A

12/14/2021

Marine Corps Aviation Learning Management System Enterprise

ENCLOSURE (7)

Evaluatee CARLOS REYNOLDS
 EDIPI 1470694730
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight 02 FEB 22
 Total Hours 268.4
 Model Hours 79.8
 Flight Duration 2.0
 Buno FD-1
 Date of Last Evaluation 01 MAR 2021
 Expires 3 MAR 2022

Open Book Date and Grade 02 FEB 22 / 3.99
 Closed Book Date and Grade 02 FEB 22 / 4.0

Turn in completed ATF to S-3 Pilot Training
 Correct TMR code entered into MSHARP

Phase I Ground Evaluation

Open/Closed Book
 Oral Exam

Phase II Flight Evaluation

1. Preflight:

- *a. Records check
- *b. Crew briefing
- *c. Flight Planning

DTM load procedure

d. Preflight check

2. Start/engage/post-engagement:

- a. Start/Engage
- b. Post-engagement

NOT START - FIRE

*3. Taxi:

- a. Procedures
- b. Taxi

4. Takeoff/transition:

- *a. procedures
- b. Type takeoff

(1) Vertical

(2) STO

(3) Crosswind

(4) Maximum Gross ☒

*c. Transition to airplane mode

5. Climb/cruise

- *a. Procedures
- *b. Power control
- *c. Aircraft control
- *d. CMS utilization/knowledge

(1) CDU/EICAS

(2) MFDs

(3) Digital Map

(4) FLIR

(5) Key Pad functions

e. Slow flight airplane mode

f. Steep turns

g. Stalls

*6. Approach and landing:

- a. Procedures
- b. Power control

c. Aircraft control

d. Type of landing

* (1) Vertical

* (2) ROL - single engine

* (3) No-Hover

(4) Crosswind

(5) Maximum gross - HIGH DA

(6) Steep

a. Normal

b. Nose Low

(7) Confined area landing

*7. Emergency Procedures (critical area/sub area)

a. Procedures - ADS #3 FAIL - GEAR UNSAFE

b. Aircraft control - ENG FAIL

*8. Cockpit Resource Management

a. Decision Making

b. Assertiveness

c. Mission analysis

d. Communication

e. Leadership

f. Adaptability/Flexibility

g. Situational Awareness

9. Shutdown/ post-flight

a. Shutdown

b. Post flight inspection

*10. Debriefing

Phase III Mission Evaluation Areas

1. Confined area landing (critical area/sub area):

a. Procedures

(1) Zone evaluation

b. Approach

c. Power control

d. Aircraft control

2. Navigation

3. Instrument Procedures

4. LAT

5. Special/Other

Narrative of Flight: 0222 PTP - BRIDGEPORT TO MULTIPLE FIELDS FOR
DAY PICK + ISOP. PATTERN WORK, MULTIPLE EPS +
SYS FAIL - SINGLE ENG, ICING, ADS, UNSAFE GEAR,
ABNORMAL START.

Strengths NAVLOG + LOAD COMP

Weaknesses EP PROCEDURE + CRM

Notes

NATOPS EVALUATION REPORT

1. NAME (Last, first, middle initial)		2. RANK:	3. EDIPI NUMBER:	4. DATE OF LAST EVALUATION:
REYNOLDS, ROSS, A		CAPT	1470694730	01-Mar-2021
5. UNIT:	6. CREW POSITION & QUALIFICATIONS:		7. HOURS IN MODEL:	8. DATE OF CHECK FLIGHT:
VMM-261	T2P		83.1	07-Feb-2022
9. TOTAL FLIGHT HOURS:	10. AIRCRAFT MODEL:	11. AIRCRAFT BUNO:	12. FLIGHT DURATION:	13. EXPIRATION DATE:
271.7	MV-22B	CFTD-1	2.0	31-Mar-2023
NATOPS EVALUATION				
14a. REQUIREMENT		14b. DATE COMPLETED	14c. GRADE	
			Q	CQ
OPEN BOOK EXAMINATION		02-Feb-2022	3.9	
CLOSED BOOK EXAMINATION		02-Feb-2022	4.0	
ORAL EXAMINATION		07-Feb-2022	Q	
EVALUATION FLIGHT		07-Feb-2022	Q	
OVERALL FINAL GRADE: QUALIFIED				
14d. REMARKS OF EVALUATOR:				
<p>Mission overview - CR22 PTP (high altitude, snow/ice enviro). Originated at Bridgeport, route to airfield for pax pickup, MGW takeoff, to another airfield for ROL pax drop. Second ASR to expeditionary airfield for pax pickup into LZ. Multiple patterns at zone (white out RVL). STTO at Bridgeport had abnormal starts, enroute multiple EPs (e.g. single engine approach due to ice build up and comp stall, IPS failures, ADS Fail, unsafe gear, and multiple display failures).</p> <p>Capt Reynolds performed his NATOPS check in the MV-22B Simulator. He demonstrated sound judgment and adherence to flight procedures. Capt Reynolds responded well to dynamic flight profiles in a challenging environment, during the safe execution of the mission.</p> <p>Capt Reynolds is well qualified as a T2P in the MV-22B.</p> <p>Strengths: Mission Planning - NAVLOG and Load Comp</p> <p>Weakness: EP Procedures and CRM (Communication)</p> <p>Annual Egress was performed IAW CNAF M-3710.7 Series.</p> <p>Annual CRM evaluation flight conducted IAW CNAFINST 1542.7C.</p>				
15a. PRINT NAME OF EVALUEE:		15b. RANK:	15c. DATE:	15d. SIGNATURE:
R. A. REYNOLDS		CAPT	09-Feb-2022	REYNOLDS.ROSS.ARTHUR.1470 694730 Digitally signed by REYNOLDS.ROSS.ARTHUR.1470694730 Date: 2022.02.09 15:25:29 -0500
16a. PRINT NAME OF INSTRUCTOR:		16b. RANK:	16c. DATE:	16d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c			09-Feb-2022	(b)(3), (b)(6), (b)(7)c
17. REMARKS OF UNIT COMMANDER:				
18a. UNIT COMMANDER:		18b. RANK:	18c. DATE:	18d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c			10 Feb 22	(b)(3), (b)(6), (b)(7)c

VMM-261 INSTRUMENT EVALUATION FORM

Evaluate CAR E/NOLOD, ROSS
 Evaluate EDIPI 1470694730
 DOB 02 MAR 95
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight 31 JAN 21
 no _____
 Total years flying 3
 Total flight time(all years) 263.4
 Total flight time (MV-22) 74.8
 Date of last instrument Check 28 FEB 21

Approaches			
	Last 6 Months	Last 12 Months	Total All Years
Precision	<u>13</u>	<u>20</u>	N/A
Non-Precision	<u>7</u>	<u>14</u>	N/A
Flight Time			
Actual	<u>0.0</u>	<u>5.4</u>	<u>18.3</u>
Simulated	<u>4.2</u>	<u>9.0</u>	<u>58.0</u>

Instrument Ground School

Date Attended 14 DEC 21
 Test Grade PASS

17
14

Phase I Ground Evaluation


	Q	CQ	U
Brief	<u>17</u>	<u>11</u>	<u>11</u>
Flight Planning	<u>17</u>	<u>11</u>	<u>11</u>

Phase II Flight Evaluation

1. Instrument Take-Off	<u>17</u>	<u>11</u>	<u>11</u>
2. Turn Pattern	<u>17</u>	<u>11</u>	<u>11</u>
3. Climbs/Descents	<u>17</u>	<u>11</u>	<u>11</u>
4. Unusual Attitudes	<u>17</u>	<u>11</u>	<u>11</u>
5. Partial Panel	<u>17</u>	<u>11</u>	<u>11</u>
6. Instrument Approaches			
a. Tacan	<u>17</u>	<u>11</u>	<u>11</u>
b. ILS	<u>17</u>	<u>11</u>	<u>11</u>
c. PAR	<u>17</u>	<u>11</u>	<u>11</u>
d. ASR	<u>17</u>	<u>11</u>	<u>11</u>
7. Communication	<u>17</u>	<u>11</u>	<u>11</u>
8. Navigation	<u>11</u>	<u>11</u>	<u>11</u>
9. Emergency Procedures	<u>17</u>	<u>11</u>	<u>11</u>

NATOPS INSTRUMENT RATING REQUEST

1. NAME (Last, first, middle initial): REYNOLDS, ROSS.		2. RANK: CAPT	3. EDIPI NUMBER: 1470694730	4. DATE OF LAST EVALUATION: 28 FEB 2021
5. UNIT: VMM-261	6. CREW POSITION & QUALIFICATIONS: T2P		7. HOURS IN MODEL: 74.8	8. DATE OF CHECK FLIGHT: 31 JAN 22
26 AIRCRAFT MODEL: MV-22B	10. AIRCRAFT BUNO: CFTD-6	11. FLIGHT DURATION: 2.0		12. EXPIRATION DATE: 28 FEB 2023

13. MISCELLANEOUS SUMMARY			18. INSTRUMENT PILOT TIME			
ITEM	LAST 6 MO.	LAST 12 MO.	ITEM	LAST 12 MO.	LAST 6 MO.	TOTAL ALL YEARS
PRECISION APPROACHES	13	20	ACTUAL	3.5	0.0	18.3
			SIMULATED	15.0	7.2	58.0
NON-PRECISION APPROACHES	7	14	INSTRUMENT PILOT TIME TOTAL	18.5	7.2	76.3
			TOTAL YEARS FLYING EXPERIENCE (Military and Commercial)	3		
14. TOTAL PILOT TIME			263.4			
15. CURRENT RATING: STANDARD			19. THIS IS TO CERTIFY THAT THE APPLICANT HAS... <input checked="" type="checkbox"/> SATISFACTORILY <input type="checkbox"/> UNSATISFACTORILY COMPLETED THE WRITTEN EXAMINATION FOR AN INSTRUMENT RATING AS REQUIRED BY THE NATOPS INSTRUMENT FLIGHT MANUAL. 20. 1ST EXAM(Grade): PASS 21. 2ND EXAM(Grade): 22. 3RD EXAM(Grade): 23. EXAMINING OFFICER: MCALMS WEBSITE, VERIFIED 24. RANK: O-3 25. UNIT: VMM-261 26. DATE OF EXAM: 14 DEC 2021			
16. ISSUED RATING: STANDARD						
17. SIGNATURE OF APPLICANT: 						

FLIGHT EVALUATION	27. PART ONE (Basic Instruments)		Q	U	28. PART TWO (Instrument flight within control areas with emphasis on VOR/TACAN where feasible)		Q	U
	1	INSTRUMENT TAKEOFF (Optional)	X		1	FLIGHT PLANNING	X	
	2	CLIMBING, DESCENDING, AND TIMED TURNS*	X		2	CLEARANCE COMPLIANCE	X	
	3	STEEP TURNS*	X		3	INSTRUMENT APPROACHES	X	
	4	RECOVERY FROM UNUSUAL ATTITUDES*	X		4	COMMUNICATIONS AND NAVIGATION EQUIPMENT	X	
	5	VOR/TACAN POSITIONING	X		5	EMERGENCY PROCEDURES	X	
	6	PARTIAL PANEL AIRWORK*	X		6	VOICE PROCEDURES	X	
	7				7			

* Not required when evaluation is conducted under actual instrument conditions.

29. FLIGHT EXAMINER: (b)(3), (b)(6), (b)(7)c	30. RANK:	31. DATE: 7 FEB 2022	32. SIGNATURE: (b)(3), (b)(6), (b)(7)c
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33. REMARKS:
SIM was a quick round robin flight IVO of Miramar and San Diego airfields. The flight executed the LAKEE3 departure to KNKX to a LOC/DME-B approach. The flight went missed approach and had to conduct no-gyro vectors to a PAR. The rapid transition and non-standard climb gradients provided a valuable learning point for all participants. During this rapid flight evolution, minor and major emergency procedures coupled with a rather varsity IFR procedure provided a good evaluation for all aircrew members. SNM handled a black cockpit due to dual DEU failures as well as an elevator hard over. Good learning points all around. Good to progress.

Strengths: IFR planning

Areas for Improvement: Memory Eps and mission handling.

34. UNIT COMMANDER: (b)(3), (b)(6), (b)(7)c	35. RANK:	36. DATE: 10 FEB 22	37. SIGNATURE: (b)(3), (b)(6), (b)(7)c
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NAME Reynolds, Ross A

FILE OR SERIAL NO. 1470694730

DESIGNATION: NO. USMC

DATE 4 Feb 19

LOG NO. 1 FROM 11 APR 2019

TO _____

IF FOUND, PLEASE RETURN TO

CHIEF OF NAVAL OPERATIONS
NAVY DEPARTMENT
WASHINGTON, D.C. 20350

OPNAV FORM 3760-31 REV. (4-63)

1

ENCLOSURE (8)

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

Make entries on lines, or in rubber stamp impressions anywhere on the page.

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

Make entries on lines, or in rubber stamp impressions anywhere on the page.

MONTH FEBRUARY YEAR 2022

F - ADF
G - GCA
I - ILS

L - LF range
O - OMNI
R - Radar

T —TACAN
S —Simulated
J —Jet

DAY	AIRCRAFT		KIND OF FLIGHT CODE	PILOT TIME				SPECIAL CREW TIME
	MODEL	SERIAL NUMBER		TOTAL PILOT TIME	FIRST PILOT	CO-PILOT	A/C COMDR.	
1	MV22B	166719	1A1	5.0	2.5	2.5		2.5
8	MV22B	168651	1A1	3.3	1.7	1.6		
9	MV22B	166719	1A9	1.5	0.8	0.7		1.5
19	MV22B	166685	2J2	1.0	0.5	0.5		
TOTAL THIS PAGE				10.8	5.5	5.3		4.5
BROUGHT FORWARD		262.9		10.3	5.3	5.0		20.6
TOTAL TO DATE		273.7		21.1	10.8	10.3		25.1
*See page 2 for codes.				TOTALS, THIS FISCAL YEAR				

[illegible]

Pilot-time report submitted through last (or, -----) day of this month; notes: **WORLD CLOSURE**
12 (initials)

YEAR 2022

A Automatic
C CCA

F —ADF
G—GCA
I —ILS

L — LF range
O — OMNI
R — Radar

T - TACAN
S - Simulated
J - Jet

DAY	AIRCRAFT		KIND OF FLIGHT CODE*	PILOT TIME			
	MODEL	SERIAL NUMBER		TOTAL PILOT TIME	FIRST PILOT	CO-PILOT	A/C COMDR.
08	MVMB	NL685	IAT	0.2	0.2		
9	MV27D	168330	JM4	2.8	1.4	1.4	
10	MV27B	168330	IAH	2.3	1.2	L.I	
TOTAL THIS PAGE							
BROUGHT FORWARD				21.1	10.8	10.3	
TOTAL TO DATE							
*See page 2 for codes.	TOTAL ACCUM. PILOT TIME		TOTALS, THIS FISCAL YEAR				

[illegible]

Pilot-time report submitted through last (or, _____) day of this month; notice of exposure received by _____ (date).

STMS

TOTALS, THIS FISCAL YEAR

C.O. or authorized deputy

(8)

ENCLOSURE

Page 1
~~OR OFFICIAL USE ONLY~~

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[illegible]

UNCLASSIFIED//FOR OFFICIAL USE ONLY
 Capt REYNOLDS, ROSS A - MV-22B Pilot
 Crew Performance between 1/1/2015 - 3/18/2022
 Generated on 03/24/2022 1043 UTC-04:00

Proficiency	Satisfactory	Unsatisfactory	Incomplete					
Instructor Name	Event	Method	Needs Additional Training	Overview	Plan/Brief	Execution	Instructor Comments	
(b)(3), (b)(6), (b)(7)c	FAM(1)-1030	Logged	No	na	na	na	na	
	FAM(1)-1031	Logged	No	na	na	na	na	
	FAM(1)-1032							
	FAM(1)-1033							
	FAM(1)-1034							
	FAM(1)-1035							
	FAM(1)-1036							
	FAM(1)-1037							
	FAM(1)-1038							
(b)(3), (b)(6), (b)(7)c	FAM(1)-1039	Logged	No	C	C	C	C	
	FAM(1)-1070							
	FAM(1)-1071							
(b)(3), (b)(6), (b)(7)c	FAM(1)-1072	Logged	No	Good.	Good.	Good.	Good.	
	FAM(1)-1073							
	FAM(1)-1074							
	FAM(1)-1075							
	FAM(1)-1076							
	FAM(1)-1077							
	FAM(1)-1078							
	FAM(1)-1080							
	FAM(1)-1081							
	FAM(1)-1082							
	FAM(1)-1083							
	FAM(1)-1084							
	FAM(1)-1085							
	FAM(1)-1086							
	(b)(3), (b)(6), (b)(7)c	NAV(1)-1200	Logged	No	Pass/Complete	Pass/Complete	Pass/Complete	Pass/Complete
NAV(1)-1201		Logged	No	Pass/Complete	Pass/Complete	Pass/Complete	Pass/Complete	
NAV(1)-1202		Logged	No	c	c	c	c	
(b)(3), (b)(6), (b)(7)c	INST(1)-1230							
	NAV(1)-1231	Logged	No	C	C	C	C	
	NAV(1)-1232	Logged	No	C	C	C	C	
	NAV(1)-1233	Logged	No	C	C	C	C	
	INST(1)-1240							
	INST(1)-1241							
(b)(3), (b)(6), (b)(7)c	INST(1)-1242							
	NAV(1)-1243	Logged	No	c	c	c	c	
	NAV(1)-1244	Logged	No	c	c	c	c	
	CAL(1)-1332							
	CAL(1)-1333							
	CAL(1)-1340							
	CAL(1)-1341							
	CAL(1)-1342							
(b)(6), (b)(7)c, (b)(3)	CAL(1)-1343							
	FORM(1)-1440	Logged	No	Complete IAW T&R.	Complete IAW T&R.	Complete IAW T&R.	Complete IAW T&R.	
	FORM(1)-1440							
	FCLP(1)-1530							
(b)(3), (b)(6), (b)(7)c	FCLP(1)-1540							
	NAV(1)-1630	Logged	No	na	na	na	na	
	NAV(1)-1631	Logged	No	C	C	C	C	
	NS(1)-1632							
	NS(1)-1633							
	NS(1)-1634							
	NS(1)-1640							
	NS(1)-1641							
	NS(1)-1642							
	REV(1)-1830							
	REV(1)-1831							
	REV(1)-1832							
(b)(3), (b)(6), (b)(7)c	REV(1)-1840							
	REV(1)-1841							
(b)(3), (b)(6), (b)(7)c	FAM(1)-1030	Logged	No	Local area Lejeune complex and Oak Grove familiarization simulator.	SNM prepared by reviewing all applicable SOPs and being able to talk through the comm sequence of all the local controlling agencies. SNM was well prepared for the brief.	The flight departed down the blue line into the Camp Lejeune range complex and SNM was shown all the local course rules south of the airfield. The flight then proceeded to Oak Grove where we conducted CALs/RVLs and finally some exposure to TAAR.	Good to progress. Good warm up simulator event.	
(b)(3), (b)(6), (b)(7)c	FAM(1)-1030	Logged	No	Local area Lejeune complex and Oak Grove familiarization simulator.	SNM prepared by reviewing all applicable SOPs and being able to talk through the comm sequence of all the local controlling agencies. SNM was well prepared for the brief. Additionally, SNM was able to talk through the squadron's SOP for IFR operations in trail.	The flight departed down the blue line into the Camp Lejeune range complex and SNM was shown all the local course rules south of the airfield. The flight then proceeded to Oak Grove where we conducted CALs/RVLs and finally some exposure to TAAR.	Good to progress. Good warm up simulator event	

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Capt REYNOLDS, ROSS A - MV-22B Pilot

Crew Performance between 1/1/2015 - 3/18/2022

Generated on 03/24/2022 1043 UTC-04:00

(b)(3), (b)(6), (b)(7)c	Valid Mission	Logged	No	Simulator event was a IFR trail departure to TAVFORM maneuvering in Single Ship and Section CALs. Weather was 1000' BKN at the departure airfield with 15-25 kt winds on deck and enroute. CAVU inside the LZ and during the conduct of the TACFORM.	SNM planned a valid section landing plan at LZ Caledonia, taking into consideration the ANTPP recommended landing site dimensions as well as potential RVL parameters. During the brief SNM knew the material well and that translated into his situational awareness being high through the event.	During execution SNM made all the required section communications during the IFR trail portion. This involved numerous off route deviations and unplanned climbs/descents. Once conducting TACFORM, initially performed the maneuvers while the instruction made the communications. These roles switch part of the way through. CAL training began with a straight in MATA from 7000' to a 50' MSL elevation straight in tactical approach. After the initial approach SNM performed all of the ANTPP approaches as both the lead and D2 aircraft. SNM was well trimmed and flew stable profiles to the deck.	Remember to fly all your profiles and maneuvers as if you are a part of a larger flight. Stay stable and on predictable parameters based off the codified procedures. When you have to deviate, do it early and get back on profile quickly.
(b)(3), (b)(6), (b)(7)c	Valid Mission	Logged	No	Simulator event was a IFR trail departure to TAVFORM maneuvering in Single Ship and Section CALs. Weather was 1000' BKN at the departure airfield with 15-25 kt winds on deck and enroute. CAVU inside the LZ and during the conduct of the TACFORM.	SNM planned a valid section landing plan at LZ Caledonia, taking into consideration the ANTPP recommended landing site dimensions as well as potential RVL parameters. During the brief SNM knew the material well and that translated into his situational awareness being high through the event.	During execution SNM made all the required section communications during the IFR trail portion. This involved numerous off route deviations and unplanned climbs/descents. Once conducting TACFORM, initially performed the maneuvers while the instruction made the communications. These roles switch part of the way through. CAL training began with a straight in MATA from 7000' to a 50' MSL elevation straight in tactical approach. After the initial approach SNM performed all of the ANTPP approaches as both the lead and D2 aircraft. SNM was well trimmed and flew stable profiles to the deck.	Remember to fly all your profiles and maneuvers as if you are a part of a larger flight. Stay stable and on predictable parameters based off the codified procedures. When you have to deviate, do it early and get back on profile quickly.
(b)(3), (b)(6), (b)(7)c	Valid Mission	Logged	No	Section flight east of the R-5306D over the Atlantic Ocean. Winds 320/5 CAVU.	Planning products and brief prepared by IP. Flight brief conducted by the IP via PowerPoint. T&R brief conducted prior to flight without issues. Planned to depart KNCA via Hospital Point to P1 K, conduct TACFORM and then split the flight for single ship training.	Departed KNCA as a section to the ocean. Flight paralleled the beach line in combat spread. Flight conducted a crawl, walk, run approach using first Check turns, then TAC turns, and Pumps. PUI did a good job of getting the aircraft quickly to 60 AOB while holding alt and airspeed; the definition of a hard turn. IP discussed the importance of both aircraft maintaining their flight contracts, hard level turns on call to maintain predictability. Remember, always cheat, after pumps clean up the trail. TACFORM maneuvers are useful to both navigate the flight but also to help get the flight back into position.	IP intentionally didn't conduct Cross or Split turns due to low relevance in tactical and training missions.
(b)(3), (b)(6), (b)(7)c	Valid Mission	Logged	No	Simulator event was an IFR trail departure to TAVFORM maneuvering in Single Ship and Section CALs. Weather was 1000' BKN at the departure airfield with 15-25 kt winds on deck and enroute. CAVU inside the LZ and during the conduct of the TACFORM.	SNM planned a valid section landing plan at LZ Caledonia, taking into consideration the ANTPP recommended landing site dimensions as well as potential RVL parameters. During the brief SNM knew the material well and that translated into his situational awareness being high through the event.	During execution SNM made all the required section communications during the IFR trail portion. This involved numerous off route deviations and unplanned climbs/descents. Once conducting TACFORM, initially performed the maneuvers while the instruction made the communications. These roles switch part of the way through. CAL training began with a straight in MATA from 7000' to a 50' MSL elevation straight in tactical approach. After the initial approach SNM performed all of the ANTPP approaches as both the lead and D2 aircraft. SNM was well trimmed and flew stable profiles to the deck.	Remember to fly all your profiles and maneuvers as if you are a part of a larger flight. Stay stable and on predictable parameters based off the codified procedures. When you have to deviate, do it early and get back on profile quickly.

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(b)(3), (b)(6), (b)(7)c	UNCLASSIFIED//FOR OFFICIAL USE ONLY	Logged	No	Simulator event was a IFR trail departure to TAVFORM maneuvering in Single Ship and Section CALs. Weather was 1000' BKN at the departure airfield with 15-25 kt winds on deck and enroute. CAVU inside the LZ and during the conduct of the TACFORM.	SNM planned a valid section landing plan at LZ Caledonia, taking into consideration the ANTPP recommended landing site dimensions as well as potential RVL parameters. During the brief SNM knew the material well and that translated into his situational awareness being high through the event.	During execution SNM made all the required section communications during the IFR trail portion. This involved numerous off route deviations and unplanned climbs/descents. Once conducting TACFORM, initially performed the maneuvers while the instruction made the communications. These roles switch part of the way through. CAL training began with a straight in MATA from 7000' to a 50' MSL elevation straight in tactical approach. After the initial approach SNM performed all of the ANTPP approaches as both the lead and D2 aircraft. SNM was well trimmed and flew stable profiles to the deck.	Remember to fly all your profiles and maneuvers as if you are a part of a larger flight. Stay stable and on predictable parameters based off the codified procedures. When you have to deviate, do it early and get back on profile quickly.
(b)(3), (b)(6), (b)(7)c	UNCLASSIFIED//FOR OFFICIAL USE ONLY	Logged	No	Section flight with TACFORM prior and section CALs following. Winds 320/5 CAVU.	Planning products and brief prepared by IP. Flight brief conducted by the IP via PowerPoint. T&R brief conducted prior to flight without issues. Planned to depart KNCA via Hospital Point to Pt K, conduct TACFORM and then conduct single ship CALs to both ITG and Waypoints.	Conducted Cals in LZ Bluebird with LH to South due to shifting winds. Student conducted CONV and APLN mode patterns to a landing point without obscuration. BAW was above average for this stage. Tendency is to remain high on final, typically this was 50-70 feet high at both .5 and .3. Ultimately this manifests itself with a higher descent rate at end game to get rid of vertical energy. Correction is either a much greater TCL reduction after turning final or a 200 FPM descent at the 180 turn (IP understands this is counter to the MDG). With either correction, remember that your left thumb has to be connected to the left wrist. As you pull the nacelles off the thrust vector becomes more vertical which means you must exaggerate your TCL reduction.	Unable to conduct high speed 90 APLN mode approaches.
(b)(3), (b)(6), (b)(7)c	UNCLASSIFIED//FOR OFFICIAL USE ONLY	Logged	No	Section flight with TACFORM prior and section CALs following. Winds 320/5 CAVU.	Planning products and brief prepared by IP. Flight brief conducted by the IP via PowerPoint. T&R brief conducted prior to flight without issues. Planned to depart KNCA via Hospital Point to Pt K, conduct TACFORM and then conduct single ship CALs to both ITG and Waypoints.	Conducted Cals in LZ Bluebird with LH to South due to shifting winds. Student conducted CONV and APLN mode patterns to a landing point without obscuration. BAW was above average for this stage. Tendency is to remain high on final, typically this was 50-70 feet high at both .5 and .3. Ultimately this manifests itself with a higher descent rate at end game to get rid of vertical energy. Correction is either a much greater TCL reduction after turning final or a 200 FPM descent at the 180 turn (IP understands this is counter to the MDG). With either correction, remember that your left thumb has to be connected to the left wrist. As you pull the nacelles off the thrust vector becomes more vertical which means you must exaggerate your TCL reduction.	Unable to conduct high speed 90 APLN mode approaches.
(b)(3), (b)(6), (b)(7)c	UNCLASSIFIED//FOR OFFICIAL USE ONLY	Logged	No	Section flight with TACFORM and single CALs prior. Winds 320/5 CAVU. Operations conducted in LZ Bluebird.	Planning products and brief prepared by IP. Flight brief conducted by the IP via PowerPoint. T&R brief conducted prior to flight without issues. Planned to depart KNCA via Hospital Point to Pt K, conduct TACFORM and then conduct single ship CALs to both ITG and Waypoints. Flight to reconstitute in Bluebird for section CALs.	Passed the lead to the -2 aircraft once on deck in Bluebird. Conducted multiple CONV and APLN mode patterns to waypoints without obscuration. Focus on the cruise principles and flying tight formation. Staying close to the lead aircraft will minimize the need to change energy states on the aircraft as you turn final. Ultimately this will allow you to intercept the final on parameters. Continue to manage the art of flying form off lead and getting on the course line to the landing point.	Overall good event. Would have been smoother if lead had been capable, but it's just not an excuse. Do what you need to do to get into your lane on profile. Remember for the next time you're lead. Always fly like you have a division behind you, hit the numbers, fly smooth, climb predictably.

(b)(3), (b)(6), (b)(7)c	11/1/2021	Logged	No	Single ship flight within the R-5306D into LZ Bluebird. CAVU conditions with no winds.	PUI compiled all briefing and mission products which were satisfactory for this stage. PUI developed and loaded a turning APPR mode into the zone as instructed. T&R brief covered all applicable discussion items in detail and PUI demonstrated a strong understanding of planning, procedures, automation systems, and common sense when flying in obscuration. Well prepared for the event.	PUI departed KNCA as a single and flew his planned route to the LZ for the APPR mode. En route, the IP directed the editing of the APPR parameters, which the PUI successfully did on the CMS without incident. As the IP narrated the PUI executed an APPR mode to a fully Hover Coupled landing. PUI then flew multiple CONV and APLN mode patterns to the spot using No-Hover, Assisted No-Hover, Hover Coupled, and the "Double Tap." Assisted No-Hover from APPR mode hand off. On the whole, the landings were safe, and >90% were within the ANTPP parameters. PUI has a slight tendency to be fast at the 20' checkpoint but corrects by adding power prior to descending. Carrying the approach faster and higher will actually correct for this tendency since the PUI tends to be slightly slow at the 50' check point. Assisted No-Hovers were consistently fast due to using the counter	Above average performance for this stage, very good BAW, good feel for the simulator's performance. Keep up the good work.
(b)(3), (b)(6), (b)(7)c	11/1/2021	Logged	No	Single ship flight within the R-5306D into LZ Bluebird. CAVU conditions with no winds.	PUI compiled all briefing and mission products which were satisfactory for this stage. PUI developed and loaded a turning APPR mode into the zone as instructed. T&R brief covered all applicable discussion items in detail and PUI demonstrated a strong understanding of planning, procedures, automation systems, and common sense when flying in obscuration. Well prepared for the event.	PUI departed KNCA as a single and flew his planned route to the LZ for the APPR mode. En route, the IP directed the editing of the APPR parameters, which the PUI successfully did on the CMS without incident. As the IP narrated the PUI executed an APPR mode to a fully Hover Coupled landing. PUI then flew multiple CONV and APLN mode patterns to the spot using No-Hover, Assisted No-Hover, Hover Coupled, and the "Double Tap." Assisted No-Hover from APPR mode hand off. On the whole, the landings were safe, and >90% were within the ANTPP parameters. PUI has a slight tendency to be fast at the 20' checkpoint but corrects by adding power prior to descending. Carrying the approach faster and higher will actually correct for this tendency since the PUI tends to be slightly slow at the 50' check point. Assisted No-Hovers were consistently fast due to using the counter	Above average performance for this stage, very good BAW, good feel for the simulator's performance. Keep up the good work.
(b)(3), (b)(6), (b)(7)c	11/1/2021	Logged	No	Flight departed as a section to 13NC with winds 180/10 CAVU. Planned to conduct single ship CALS followed by section CALS once complete.	Planned to enter 13NC as singles with one aircraft working in EMU and the other in BAT. Conduct all variations of RVL profiles in a simulated RVL environment. Flight brief conducted by SL and T&R discussion found no deficiencies. Planning and briefing products created by SL with help from PUI.	Entered LZ BAT on a INAV Direct APPR mode to a double tap. No issues, you should have confidence using the APPR mode, it works, ask to use it. PUI then conducted a hand flow to Hover Coupled approach to demo how this technique could be used to land inside a very tight area with obscuration. Remaining time split between No-Hover and Assisted No-Hover approaches. While these approaches are faster and require less power, they are more perishable. Tendency was to slow down just a little too much and then shallow out the rate of descent while feeling for the ground. Remember the acceleration cue should be just a little ahead of the destination waypoint marker, and you'll still be on the numbers for the approach. Keep the rate of descent coming as you close with the ground, this is actually safer than trying to grease it on and starting to dance around at 2 feet with a 50k	Overall, this was an above average event. PUI demonstrates both strong trimming habits and a sound scan. Flight only conducted one Assisted No-Hover due to a landing gear malfunction that required a return to home base.

(b)(3), (b)(6), (b)(7)c	Planned	Logged	No	Flight departed as a section to 13NC with winds 180/10 CAVU. Planned to conduct single ship CALS followed by section CALS once complete.	Planned to enter 13NC as singles with one aircraft working in EMU and the other in BAT. Conduct all variations of RVL profiles in a simulated RVL environment. Flight brief conducted by SL and T&R discussion found no deficiencies. Planning and briefing products created by SL with help from PUI.	Entered LZ BAT on a INAV Direct APPR mode to a double tap. No issues, you should have confidence using the APPR mode, it works, ask to use it. PUI then conducted a hand flow to Hover Coupled approach to demo how this technique could be used to land inside a very tight area with obscuration. Remaining time split between No-Hover and Assisted No-Hover approaches, while these approaches are faster and require less power, they are more perishable. Tendency was to slow down just a little too much and then shallow out the rate of descent while feeling for the ground. Remember the acceleration cue should be just a little ahead of the destination waypoint marker, and you'll still be on the numbers for the approach. Keep the rate of descent coming as you close with the ground, this is actually safer than trying to grease it on and starting to dance around at 3 feet with a 50K.	Overall, this was an above average event. PUI demonstrates both strong trimming habits and a sound scan. Flight only conducted one Assisted No-Hover due to a landing gear malfunction that required a return to home base.
(b)(3), (b)(6), (b)(7)c	Planned	Logged	No	Flight departed as a section to 13NC with winds 180/10 CAVU. Planned to conduct single ship CALS followed by section CALS once complete.	Planned to enter 13NC as singles with one aircraft working in EMU and the other in BAT. Conduct all variations of RVL profiles in a simulated RVL environment. Flight brief conducted by SL and T&R discussion found no deficiencies. Planning and briefing products created by SL with help from PUI.	Entered LZ BAT on a INAV Direct APPR mode to a double tap. No issues, you should have confidence using the APPR mode, it works, ask to use it. PUI then conducted a hand flow to Hover Coupled approach to demo how this technique could be used to land inside a very tight area with obscuration. Remaining time split between No-Hover and Assisted No-Hover approaches, while these approaches are faster and require less power, they are more perishable. Tendency was to slow down just a little too much and then shallow out the rate of descent while feeling for the ground. Remember the acceleration cue should be just a little ahead of the destination waypoint marker, and you'll still be on the numbers for the approach. Keep the rate of descent coming as you close with the ground, this is actually safer than trying to grease it on and starting to dance around at 3 feet with a 50K.	Overall, this was an above average event. PUI demonstrates both strong trimming habits and a sound scan. Flight only conducted one Assisted No-Hover due to a landing gear malfunction that required a return to home base.
(b)(3), (b)(6), (b)(7)c	Planned	Logged	No	SNM planned a LZ IVO Yuma, AZ. The SIM consisted of single and section HLL CALS and culminated in a few RVLs for practice.	SNM planned an LZ diagram which he briefed for the execution of the SIM. The landing plan was good and the diagram was appropriate for the scope of the learning objectives of the sim. The brief was an exposure opportunity which was used to highlight the points necessary to convey to the crew in order to show what is different dangerous or difficult about this flight today. Remember to think through the SLAP considerations. Its not just another data point. It has implications to the execution of your flight.	During the sim SNM struggle to keep his scan moving. Particularly his VVI. The profiles for the various CAL patterns were good and provided repeatable sight pictures at 5 nm out from the zone. The featureless terrain of the desert further emphasized the need to back up the outside scan with an inside scan of your instruments. After 5-6 landings in the lead aircraft, SNM conducted 5-6 landings in the D2 position. Throughout the event the VVI scan was the common trend. His profiles became more stable towards the end of the sim before fatigue set in.	This takes practice. Knowing what to look and what is providing valuable data is difficult for night operations. Always be able to fall back on your instrument scan.

(b)(3), (b)(6), (b)(7)c	REYNOLDS, ROSS A	Logged	No	SNM planned a LZ IVO Yuma, AZ. The SIM consisted of single and section HLL CALs and culminated in a few RVLs for practice.	SNM planned an LZ diagram which he briefed for the execution of the SIM. The landing plan was good and the diagram was appropriate for the scope of the learning objectives of the sim. The brief was an exposure opportunity which was used to highlight the points necessary to convey to the crew in order to show what is different dangerous or difficult about this flight today. Remember to think through the SLAP considerations. Its not just another data point. It has implications to the execution of your flight.	During the sim SNM struggle to keep his scan moving. Particularly his VVI. The profiles for the various CAL patterns were good and provided repeatable sight pictures at 5 nm out from the zone. The featureless terrain of the desert further emphasized the need to back up the outside scan with an inside scan of your instruments. After 5-6 landings in the lead aircraft, SNM conducted 5-6 landings in the D2 position. Throughout the event the VVI scan was the common trend. His profiles became more stable towards the end of the sim before fatigue set in.	This takes practice. Knowing what to look and what is providing valuable data is difficult for night operations. Always be able to fall back on your instrument scan.
(b)(3), (b)(6), (b)(7)c	REYNOLDS, ROSS A	Logged	No	Event was flown in Dash 2 under VFR conditions with marginal weather in the W-122 during day TG. Weather improved over the course of the flight into the night window. Flight conducted in the W-122, followed by Bladen Lakes, Hotseat, then night operations at Oak Grove	PUI had a solid plan to encompass all training goals. All products were to standard and conducive to mission success. The PUI was well versed on all discuss items and required only minor rudder steers. Overall good knowledge of the material during the T&R Brief and was well prepared for execution.	The flight departed KNCA and went straight to the W-122. Your STARS during day TG were rough starting out, but with practice you were able to smooth out your commands. Remember, the next time you do these could be in combat, so chair these when you can, so that you can efficiently / effectively walk your crew chief onto the threat for quick attention. Good job remaining relaxed during marginal weather. Remember, its not always sunshine and rainbows during training. Remain calm and collected, continue to fly the aircraft, and proceed safely. Good job being assertive when uncomfortable. Continue to practice. Night TG was cancelled due to aircraft MX.	Stay in the books and continue in syllabus.
(b)(3), (b)(6), (b)(7)c	REYNOLDS, ROSS A	Logged	No	Event was flown in Dash 2 under VFR conditions with marginal weather in the W-122 during day TG. Weather improved over the course of the flight into the night window. Flight conducted in the W-122, followed by Bladen Lakes, Hotseat, then night operations at Oak Grove. Both the single and Section HLL CALS were flown at Oak Grove.	PUI had a solid plan to encompass all training goals. All products were to standard and conducive to mission success. The PUI was well versed on all discuss items and required only minor rudder steers. Overall good knowledge of the material during the T&R Brief and was well prepared for execution	Overall not a bad SS and SEC CAL flight conducted under night systems for the first time. Much like we discussed during the T&R brief, your biggest friend when flying goggles is your scan. More specifically, keeping your scan moving IOT pick up on longitudinal and lateral drift cues in the hover. We utilized several ITG tools to include an IR chem stick as well as the IR strobe. You were able to land to the waypoint as well as ITG very well, and got consistently better with practice. Each of your practice landings were different, some high, some low, some fast, some slow. This is just indicative of something different dropping out of your scan during each pattern attempt. Eventually, you were able to identify your errors and tied it all together for a few good patterns. The importance of the scan will become much more important when you conduct this execution in the LLL.	Proceed in syllabus and continue to build experience.
(b)(3), (b)(6), (b)(7)c	REYNOLDS, ROSS A	Logged	No	SIM was conducted in conjunction with the section LLL CAL sim. SNM alongside the other student prepared an LZ diagram and pulled an ECOTDA for the LZ. LZ was west coast in the desert at a dirt runway.	SNM was well prepared for the brief and was able to accurately describe the mechanics of the goggles as well as the impacts LLL has vice HLL. His knowledge was on par with that expected of a student at this stage. Keep it up.	During execution SNM was far ahead of the plane in his situational awareness as well as his trim control. His deviations were due to a slow scan which, when identified, were rapidly corrected. Safe landings were conducted on most landings with only 1 waveoff call needed due to a poor approach profile. His ability to fly the LLL RVLs was undiminished when we transitioned to the section event. Remember to set yourself up on a long final and trim in to be hands off. The rest is a video game.	Great event for 1st Lt Reynolds.

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Capt REYNOLDS, ROSS A - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022
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(b)(3), (b)(6), (b)(7)c	NSLL(2)-2380	Logged	No	SIM was conducted in conjunction with the section LLL CAL sim. SNM alongside the other student prepared an LZ diagram and pulled an EOTDA for the LZ. LZ was west coast in the desert at a dirt runway.	SNM was well prepared for the brief and was able to accurately describe the mechanics of the goggles as well as the impacts LLL has vice HLL. His knowledge was on par with that expected of a student at this stage. Keep it up.	During execution SNM was far ahead of the plane in his situational awareness as well as his trim control. His deviations were due to a slow scan which, when identified, were rapidly corrected. Safe landings were conducted on most landings with only 1 waveoff call needed due to a poor approach profile. His ability to fly the LLL RVLS was undiminished when we transitioned to the section event. Remember to set yourself up on a long final and trim in to be hands off. The rest is a video game.	Great event for 1st Lt Reynolds.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2380	Logged	Yes	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.
	NSLL(2)-2381	Logged	No	Flight originated at KCRW and all of the training was executed in the nearby Nicholas County Training Area. All of the flight time was dedicated to LLL CAL training. The first half of the flight focused on landings to a visual point, with chem sticks utilized as ITG. The second half of the flight was dedicated to INAV waypoint landings to a different LZ. Flown in conjunction with 2381.	Simple plan and basic products were adequate for mission success. The PUI had a strong grasp of LLL considerations and an understanding of all CAL procedures.	Flight commenced from KCRW after a hotseat and refueling evolution. We executed a VFR departure direct to the training area. The lack of cultural lighting in the area forced a sensor integration discussion as the PUI quickly noticed the lack of detail in his NVG image. The IP executed the first landing, and the crew chiefs marked the zone with red chemsticks to provide some additional visual cues to the PUI. Multiple CAL patterns were flown, to include tactical straight-ins, 90s, and 180s. The rolling terrain in the area made it difficult to judge pattern altitudes. Overall tendency was to be slow and high, with some loss of nose control at the bottom of the approach (heading and nose up/high). We then moved to a different zone, identified an ideal landing point, and again executed multiple landings while varying the approach types. Tendencies remained the same, with the PUI.	You performed well, given that you had a much darker environment and had more terrain to contend with than your peers on their initial LLL flight IVO KNCA. That being said, you need to ensure that you begin working on getting your head outside to help you determine your closure rates. You were very vertical and you being off profile earlier in the approach. Once you incorporated a more deliberate outside scan, your approach profiles were smoother and you made less large control inputs at endgame. Remember to make all of your big corrections early in the approach, so that everything from 0.3 inbound is predictable and repeatable. Lastly, use everything you have to your advantage, to include the environment. If your NVGs aren't working well, incorporate the FLIR into your scan. If there's significant terrain around, ensuring your HAT is activated can help you find a clean approach corridor. If there are trees around, use them and the optical flow they provide to help you determine how fast you're moving over the ground. Keep these things in mind as you move through the rest of the LLL syllabus. Good work.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2381	Logged	Yes	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.	Incomplete due to aircraft malfunction.
	NSLL(2)-2381	Logged	No	Flight originated at KCRW and all of the training was executed in the nearby Nicholas County Training Area. All of the flight time was dedicated to LLL CAL training. The first half of the flight focused on landings to a visual point, with chem sticks utilized as ITG. The second half of the flight was dedicated to INAV waypoint landings to a different LZ. Flown in conjunction with 2381.	Simple plan and basic products were adequate for mission success. The PUI had a strong grasp of LLL considerations and an understanding of all CAL procedures.	Flight commenced from KCRW after a hotseat and refueling evolution. We executed a VFR departure direct to the training area. The lack of cultural lighting in the area forced a sensor integration discussion as the PUI quickly noticed the lack of detail in his NVG image. The IP executed the first landing, and the crew chiefs marked the zone with red chemsticks to provide some additional visual cues to the PUI. Multiple CAL patterns were flown, to include tactical straight-ins, 90s, and 180s. The rolling terrain in the area made it difficult to judge pattern altitudes. Overall tendency was to be slow and high, with some loss of nose control at the bottom of the approach (heading and nose up/high). We then moved to a different zone, identified an ideal landing point, and again executed multiple landings while varying the approach types. Tendencies remained the same, with the PUI.	You performed well, given that you had a much darker environment and had more terrain to contend with than your peers on their initial LLL flight IVO KNCA. That being said, you need to ensure that you begin working on getting your head outside to help you determine your closure rates. You were very vertical and you being off profile earlier in the approach. Once you incorporated a more deliberate outside scan, your approach profiles were smoother and you made less large control inputs at endgame. Remember to make all of your big corrections early in the approach, so that everything from 0.3 inbound is predictable and repeatable. Lastly, use everything you have to your advantage, to include the environment. If your NVGs aren't working well, incorporate the FLIR into your scan. If there's significant terrain around, ensuring your HAT is activated can help you find a clean approach corridor. If there are trees around, use them and the optical flow they provide to help you determine how fast you're moving over the ground. Keep these things in mind as you move through the rest of the LLL syllabus. Good work.

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(b)(3), (b)(6), (b)(7)c	2.411	Logged	No	<p>Flight of 2 MV-22s from KNCA executing VR-084 with CALs at LZ Bat. Due to 2 copilots in -2 aircraft and multiple initial Xs for this PUI, entire VR route was executed twice with a hotseat back at KNCA in between. CALs conducted after both iterations with L-HR management discussed on both the TACFORM/NAV and LAT initial Xs.</p> <p>Wx was LLL (no moon). CAVU, winds out of the north at 5-15 knots on the LAT route. Dry air presented a definable horizon, even when feet wet.</p> <p>Note that portions of this gradesheet will appear on the following codes due to their simultaneous completion: 2382X, 2383X, 2643X.</p>	<p>PUI participated in all aspects of mission planning. A couple big learning points during mission planning: planning a turning approach mode on JMPS, validation of all waypoint names/locations versus briefing aids to ensure accurate depiction; airspace consideration when conducting LAT/NAV.</p> <p>A thorough T&R brief was conducted on all three initial Xs. PUI's knowledge was a little bit rusty but met the standard required of his position in syllabus.</p>	<p>TACFORM was conducted for 80NM at 1000' AGL along the route confines of the VR-084. Following a 20° PPV tip-in to the route, the flight executed more than a dozen maneuvers including pumps, TAC turns, check turns, and shackles. PUI was exposed to the use of these maneuvers in order to control L-HR timing, reset the formation in 1.0NM spread, or alter downrange course while fixing an improper intraplane DME.</p> <p>PUI's scan was a little slow at first, as is expected for both an initial X and for a pilot who has not flown nights in >55 days. That being said, his ability to hold a level VVI was quite good until reaching 55-60 degrees ACB. At this ACB, tendency was to let the VVI drop out of scan and develop a high ROC/ROD. This tendency improved throughout the conduct of the event.</p>	<p>This was a good initial X for the Lt Reynolds. There are definite areas of improvement to build upon for subsequent flights, and the fact that he had not even flown in the previous 30 days resulted in us "knocking off some rust" as we went through the flight. Combined with an initial X and PUI's second or third time (ever) flying in LLL conditions, I'd say this was a slightly above average showing.</p> <p>PUI displayed during this event that he was ready for section CALs and LLL LAT, which were executed later on this hop.</p>
(b)(3), (b)(6), (b)(7)c	2.411	Logged	No	<p>Flight of 2 MV-22s from KNCA executing VR-084 with CALs at LZ Bat. Due to 2 copilots in -2 aircraft and multiple initial Xs for this PUI, entire VR route was executed twice with a hotseat back at KNCA in between. CALs conducted after both iterations with L-HR management discussed on both the TACFORM/NAV and LAT initial Xs.</p> <p>Wx was LLL (no moon). CAVU, winds out of the north at 5-15 knots on the LAT route. Dry air presented a definable horizon, even when feet wet.</p> <p>Note that portions of this gradesheet will appear on the following codes due to their simultaneous completion: 2382X, 2383X, 2643X.</p>	<p>PUI participated in all aspects of mission planning. A couple big learning points during mission planning: planning a turning approach mode on JMPS, validation of all waypoint names/locations versus briefing aids to ensure accurate depiction; airspace consideration when conducting LAT/NAV.</p> <p>A thorough T&R brief was conducted on all three initial Xs. PUI's knowledge was a little bit rusty but met the standard required of his position in syllabus.</p>	<p>PUI did a good job of CALs were conducted in LZ Bat with an initial landing via a section turning approach mode to land heading 010. On deck lead change was initially conducted in order to get reps from the -2 position. Overall, 2 approaches from lead and 7 approaches from -2 position were executed, the majority of which were conversion mode CALs due to time constraints. One tactical approach was completed at the end of the event.</p> <p>PUI did a nice job given this was his second LLL CAL event (ever) and first in >50 days. In downwind, PUI tended to get sucked due to insufficient lead angle turn to downwind, but was able to correct his position with a little forward nacelle. Recommend for subsequent patterns that the instructor demo and emphasize the importance of maintaining a good lead angle on TAC lead in order to close distance between flight before downwind. This will be more</p>	<p>This was a strong event, overall above average given the PUI's proficiency and currency in the environment. With the caveat that PUI needs more exposure in LLL conditions to prevent currency lapses of 50-60 days in these conditions, PUI is well qualified to be designated NSQ.</p> <p>Congrats!</p>
(b)(3), (b)(6), (b)(7)c	2.411	Logged	No	<p>SNM event was conducted in conjunction with the night TAAR simulator.</p>	<p>SNM was well prepared for the brief and discussion items. Stay in the books, there is a lot of information in the SRD / ATP that is pertinent and helpful (eg. fuel capacity/burn rates for various platforms, specific aircraft limitations for both us and the refueling asset).</p>	<p>SNM struggled with trim and maintaining a stable position behind the basket in an astern position. He seemed to do better with a longer run in profile which speaks to the lack of trim immediately behind the basket. Remember that if you have a trimmed astern position (10-15' behind the basket) is way closer than you think! then you will have a much easier time making that last power input for the contact. When you aren't the pilot at the controls, the CRM cadence of calling out the baseline mast torque and whether you are falling behind or ahead of that is huge. Keep that in your scan and TRIM!</p>	<p>Tanking in the simulator is notoriously difficult. When you do this in the plane you will find it to be much easier. Keep it up and keep practicing when you have the chance in the sim.</p>

(b)(3), (b)(6), (b)(7)c	AAR(2)-2440	Logged	No	SIM event was conducted in conjunction with the day TAAR simulator.	SNM was well prepared for the brief and discussion items. Stay in the books, there is a lot of information in the SRD / ATP that is pertinent and helpful (eg. fuel capacity/burn rates for various platforms, specific aircraft limitations for both us and the refueling asset).	SNM struggled with trim and maintaining a stable position behind the basket in an astern position. He seemed to do better with a longer run in profile which speaks to the lack of trim immediately behind the basket. Remember that if you have a trimmed astern position (10-15' behind the basket is way closer than you think) then you will have a much easier time making that last power input for the contact. When you aren't the pilot at the controls, the CRM cadence of calling out the baseline mast torque and whether you are falling behind or ahead of that is huge. Keep that in your scan and TRIM!	Tanking in the simulator is notoriously difficult. When you do this in the plane you will find it to be much easier. Keep it up and keep practicing when you have the chance in the sim.
(b)(3), (b)(6), (b)(7)c	AAR(2)-2441	Logged	No	Event was flown in Dash 2 under VFR conditions with marginal weather in the W-122 during day TG. Weather improved over the course of the flight into the night window. Flight conducted in the W-122, followed by Bladen Lakes. Hotseat, then night operations at Oak Grove	PUI had a solid plan to encompass all training goals. All products were to standard and conducive to mission success. The PUI was well versed on all discuss items and required only minor rudder steers. Overall good knowledge of the material during the T&R Brief and was well prepared for execution.	The flight departed KNCA and went straight to the W-122. Your STARS during day TG were rough starting out, but with practice you were able to smooth out your commands. Remember, the next time you do these could be in combat, so chair these when you can, so that you can efficiently / effectively walk your crew chief onto the threat for quick attrition. Good job remaining relaxed during marginal weather. Remember, its not always sunshine and rainbows during training. Remain calm and collected, continue to fly the aircraft, and proceed safely. Good job being assertive when uncomfortable. Continue to practice. Night TG was cancelled due to aircraft MX.	Stay in the books and continue in syllabus.
(b)(3), (b)(6), (b)(7)c	TG(2)-2543	Logged	No	SS LAT on the VR-1266 during Day VFR conditions. Winds 180/10. Scenario and guidance provided by the PTO. Once complete, join a section to conduct section LAT.	Flight planned by PUI based on inputs from PTO for an unfamiliar area. PUI produced all landing diagrams, and mission load products. Flight brief conducted by PTO, a LATI. T&R brief covered all applicable discussion items with no major deficiencies noted.	Flight departed MCAS Yuma as a single and proceeded to VR-1266 without incident. PUI conducted a tactical descent from 4500 to the surface and began LAT maneuvering. After discussing speed rush baseline, optical flow, and TCIs the crew moved to vertical maneuvers. Bunts and rolls were conducted over terrain along the route. All oblique variations were conducted after demos from the IP. Tendency was for the student to exaggerate or float the vertical component and overbank on the slice back to the deck. Remember this is a fluid motion whose intention is to get away from defensive flares and then return as quickly as possible to the safety of the low altitude environment. None of the maneuvers were unsafe and the PUI has a strong academic understanding of the procedures.	Training complete the flight joined for section LAT.
(b)(3), (b)(6), (b)(7)c	LAT(2)-2544	Logged	No	Section LAT on the VR-1266 during Day VFR conditions. Winds 180/10. Scenario and guidance provided by the PTO.	Flight planned by PUI based on inputs from PTO for an unfamiliar area. PUI produced all landing diagrams, and mission load products. Flight brief conducted by PTO, a LATI. T&R brief covered all applicable discussion items with no major deficiencies noted. Planning products incorrectly annotated times and FPM based on an APPR mode landing, this led to the missing of L-Hour.	Flight departed MCAS Yuma as a section and proceeded to VR-1266 without incident. PUI conducted a tactical descent from 4500 to the surface and began LAT maneuvering. All oblique variations were conducted in combat spread. IP emphasized the planning, and execution of formation maneuvering in combat spread. Contour flight and low level flight were conducted in varying terrain as required. LATI discussed the merits and drawbacks of both. Flight missed L-Hour due to planning issues.	Well prepared to continue in stage.

Capt REYNOLDS, ROSS A - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022
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(b)(3), (b)(6), (b)(7)c	Latent	Logged	No	<p>Event executed on a LAT route in Michigan that is being concurrently planned for an upcoming ETR. Conditions in sim were set to CAVU, winds 090@10, HLL conditions (new moon, 50' elev, +15 brightness).</p> <p>Section departed KMMN for entry in to LAT route which terminated at KAPN. Event covered lighting conditions and FENCE checks en route, followed by TACFORM and all vertical maneuvers (executed two times at a minimum). Sys TOT discussion held throughout with conversion mode LAT for 20NM on the LAT route.</p>	<p>PUI prepared the event in conjunction with a second copilot, who was the -2 PF for this event. Brief and smartpack products were produced smartly. Issues with the brick prevented draw files from being displayed on DIGMAP, but this will be corrected for subsequent flights on this route.</p>	<p>Section departed KMMN and conducted a demo of L2-L6 en route, lead change, repeat. Once complete with light show, crew executed FENCE checks - make sure you have a copy of the TPG fence checks readily available! (MAGTAB, kneeboard, etc.).</p> <p>Entry conducted in to LAT environment using 50% rule from 4,500' MSL to 600' MSL to display potential to overspeed aircraft utilizing max performance dive. Once level, TOT discussion ensued to display how to utilize TACFORM to manage timing.</p> <p>PUI executed PF duties during LAT to practice maneuvering en route. TACFORM and vertical maneuvers executed within standard. Tendencies noted: slight overbanks while maneuvering, small deviations from assigned heading in spread, and VVI deviations during max performance/hard turns. All of these can be...</p>	<p>Good event for PUI. Knowledge was solid, preparation evident. Some small PF skills to clean up with additional reps. Ready for progression in the aircraft.</p>
(b)(3), (b)(6), (b)(7)c	Latent	Logged	No	<p>Flight originally planned as a section but was reduced to a single due to mx issues. Weather was VFR with winds variable.</p>	<p>The PUI was heavily involved in the flight planning process and assisted both the Section Land Dash 2 TAC with all planning and products. Student had an excellent working knowledge of all T&R discuss items and was well prepared for the flight.</p>	<p>The day SS LAT into Caledonia went without any major issues. You were smooth and controlled on all pilot inputs, to include all LAT maneuvers. You did a good job keeping us on timeline as well, and properly oriented on the LAT route. TOT was shot into LZ Caledonia and we executed numerous SS CALS for training. All landings were within the ANTP standard and each improved throughout.</p>	<p>Solid work today, proceed in syllabus.</p>
(b)(3), (b)(6), (b)(7)c	Latent	Logged	No	<p>Flight was 2x V-22 "Elvis 11" departing KNCA for entry on VR-042 from D to I. PUI was PF for -2 aircraft on a 2.5 hour sortie. Wx CAVU, winds calm, BASH extreme (moderate per AHAS).</p>	<p>PUI participated in mission planning and conducted T&R discuss for initial code prior to execution. Mission planning (a joint effort amongst the copilots) was well done, mission products were useful and timely, and the plan worked well. PUI was prepared for discuss items. Knowledge was average.</p>	<p>PUI acted as PF for duration of the event. Section conducted VFR trail procedures for 0440 en route to VR-042. In the LAT environment, multiple TACFORM and vertical maneuvers were conducted. Vertical maneuvers were generally good. TACFORM maneuvers suffered from a slow scan, which resulted in insufficient AOB during the turns and excess TCL upon roll out. Resulting tendency was to end up closer to TAC lead than anticipated (once instance saw IP take controls due to A/A of 4 DME) and subsequent acceleration due to failure to reset TCL following roll-out.</p> <p>As LAT progressed, PUI's scan improved, as well as CRM w/ brevity codes and call outs. TCTs were executed well. As -2, IP and PUI had a constant discussion regarding L-HR, planning/management techniques, and decision-making. In support of this...</p>	<p>Big takeaways from this event: PUI was perhaps a little rusty from inadequate currency and he is still a very new copilot in the squadron. Recommend on subsequent flights and sims to work in a HUD/instrument crosscheck scan to support TACFORM maneuvers. Reaching 30° AOB (check turns) or 60° AOB (all hard turns) does not need to be "jerky", but it needs to be deliberate. You should have recognized how uncomfortable it was to go "belly up" to lead at endgame due to an inadequate initial AOB.</p> <p>PUI has a solid understanding and PTT proficiency on vertical maneuvers.</p> <p>While no additional training in AC is required, additional chair flying/simulator practice on developing TACFORM PF skills is recommended, specifically with regards to establishing an effective instrument crosscheck and developing a sight picture for hard/max performance turns.</p> <p>Ready to progress to NS LAT events.</p>
(b)(3), (b)(6), (b)(7)c	Latent	Logged	No	<p>Section flight under HLL conditions along the VR-084 to LZ Bat. Winds 230/5 CAVU.</p>	<p>Flight planning and briefing products produced by the PUI were adequate for mission success. Its easier to start the planning in Z times and then you don't have to remember to convert from L to Z when you run the NAVLOGs. Flight brief conducted by the NSI, T&R Brief showed no issues.</p>	<p>Flight departed on time and entered the VR-084 at CP B. Flight conducted vertical maneuvers and TACFORM to orient and train in the NS LAT environment. PUI BAW was above average and NSI demo'd the roles of the PF and PNF WRT Terrain Clearance tasks and mission management. Flight maneuvered to stay on timeline and shot an approach to RWY 23 at 13NC vice LZ Bat due to adjacent traffic.</p>	<p>Good event, continue in stage.</p>

Capt REYNOLDS, ROSS A - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022
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(b)(3), (b)(6), (b)(7)c	MAUTHE	Logged	No	<p>Flight of 2 MV-22s from KNCA executing VR-084 with CALs at LZ Bat. Due to 2 copilots in -2 aircraft and multiple initial X's for this PUI, entire VR route was executed twice with a hotseat back at KNCA in between. CALs conducted after both iterations with L-HR management discussed on both the TACFORM/NAV and LAT initial X's.</p> <p>Wx was LLL (no moon), CAVU, winds out of the north at 5-15 knots on the LAT route. Dry air presented a definable horizon, even when feet wet.</p> <p>Note that portions of this gradesheet will appear on the following codes due to their simultaneous completion: 2382X, 2383X, 2643X.</p>	<p>PUI participated in all aspects of mission planning. A couple big learning points during mission planning: planning a turning approach mode on JIMPS, validation of all waypoint names/locations versus briefing aids to ensure accurate depiction, airspace consideration when conducting LAT/NAV.</p> <p>A thorough T&R brief was conducted on all three initial X's. PUI's knowledge was a little bit rusty but met the standard required of his position in syllabus.</p>	<p>LAT was executed on second iteration of VR-084, with 80 NM of the 100NM route executed in combat spread. This iteration of LAT was a direct build on 1.25 hours prior, when the route was executed above the LAT environment.</p> <p>PUI's tip in to the LAT environment was noteworthy; it is the closest I've ever seen a PUI get to actually achieving a 20' FPV down. Nice job not overspeeding the aircraft and recovering uneventfully to establish aircraft at 500' AGL.</p> <p>TACFORM was executed interspersed with vertical maneuvers. Vertical maneuvers were strong and no instruction was required. However, the TACFORM maneuvers were struggling, likely due to the onset of fatigue in the PUI who had been flying for >2 hours in the LLL environment at this point. Tendency was to lose altitude control at 600' AGL, as well as</p>	<p>All things considered, this initial X was average. PUI displayed a lot of common copilot tendencies that will improve with subsequent exposure to this environment and (hopefully) fewer lapses in currency. I believe there was a substantial amount of valuable exposure and training that occurred during this hop.</p> <p>Lt Reynolds- carry these lessons learned to your next LLL LAT event. It may be with a BIP, not an NSI...it is incumbent upon YOU to assess risks, communicate this to your crew, fly at your comfort level and execute the mission. Glad you finally got this code knocked out.</p>
(b)(3), (b)(6), (b)(7)c	MAUTHE	Logged	No	<p>Sim was conducted at Bridgeport during day time conditions with calm winds. Stair stepped power reductions from a 10% HIGE margin down to a 0% HIGE margin to demonstrate the various handling qualities.</p>	<p>SNM planned a TOLD/Load Comp with all appropriate components calculated to provide a feasibility of support for conducting operations at a 6000-7000 foot elevation airfield with a 900' rwy. SNM was well prepared for the brief and understood the performance limiting factors that drive the constrained operating environment of high altitude LZs.</p>	<p>During the event SNM flew smooth stable approach profiles. His tendency was to fly high and result in a steep, slow approach profile. After the completion of the landings, we flew numerous single engine profiles to demonstrate the reduced climb performance and difficult in handling during high altitude mountainous operations. We concluded the sim with pinnacle and slope landings.</p>	<p>Good to progress</p>
(b)(3), (b)(6), (b)(7)c	MAUTHE	Logged	No	<p>Sim was conducted at Marine Corps Mountain Warfare Training Center, Bridgeport, CA, in HLL conditions, CAVU, wind calm.</p>	<p>PUI's mission planning involved a site survey of a zone that was approximately 10nm from the training center and the production of a load comp for both Bridgeport and the LZ. PUI was quick to notice during the brief that the torque margins were not in accordance with the squadron SOP. PUI conducted a NATOPS brief that was adequate for mission success. Discussion included the T&R items, load computations, NATOPS procedures for MAT, and a SIF review. Excellent knowledge throughout the discussion, well done!</p>	<p>In the sim, the aircraft was positioned at step 19, with the PUI running all checklists. After a quick review of the load comp on the glass, we conducted 3 conversion patterns and 2 airplane patterns with increasing fuel loads to the runway. PUI had a tendency to cut off the pattern at the abeam, leading to an undershooting final, but was within standards on his last attempt. During the airplane patterns, we discussed terrain and aircraft performance awareness. Following the landings to the runway, we conducted the W.A.P.E.S checklist to enter the preplanned zone into RVL conditions, followed by 2 pinnacle landing. The final pinnacle landing was conducted to the highest peak in the local area, demonstrated by the instructor, that exceeded the NATOPS slope limitations and led to the feared red screen of death.</p>	<p>PUI was well prepared for the event, demonstrated through his above average knowledge for all required and not required items. Excellent job making accurate load computations on the glass. Going forward, remember that if you are off parameters (altitude, airspeed, etc.) make larger correction early in the profile to avoid an uncomfortable aircraft state close to the ground. Progress.</p>
(b)(3), (b)(6), (b)(7)c	MAUTHE	Logged	No	<p>Sim was conducted at Bridgeport during day time conditions with calm winds. Stair stepped power reductions from a 10% HIGE margin down to a 0% HIGE margin to demonstrate the various handling qualities.</p>	<p>SNM planned a TOLD/Load Comp with all appropriate components calculated to provide a feasibility of support for conducting operations at a 6000-7000 foot elevation airfield with a 900' rwy. SNM was well prepared for the brief and understood the performance limiting factors that drive the constrained operating environment of high altitude LZs.</p>	<p>During the event SNM flew smooth stable approach profiles. His tendency was to fly high and result in a steep, slow approach profile. After the completion of the landings, we flew numerous single engine profiles to demonstrate the reduced climb performance and difficult in handling during high altitude mountainous operations. We concluded the sim with pinnacle and slope landings.</p>	<p>Good to progress</p>

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Capt REYNOLDS, ROSS A - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022
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(b)(3), (b)(6), (b)(7)c	2780-2784	Logged	No	Day VMC on VR-084 into LZ Bat at MCOLF Oak Grove. Sortie was a combination of 2780, 2781, and 2784 training events in a VMM-East light division with 2 adjacent squadrons participating. -3 position for the entire flight. Light winds out of the southwest. PUI sat left seat, no Day HUD.	PUI fully supported the flight lead's planning efforts. Flight lead conducted all mission briefing. IP conducted the NATOPS brief. PUI was fully prepared for the T&R discussion.	PUI's training began at MCAS New River. Flight progressed to VR-084, conducting fluid 4 TACFORM along the way. Our aircraft acted as a separate "maneuver element" as if we had a -4 in cruise position behind us. Numerous TAC turns, pumps, a cross turn, and a straight oblique completed without significant errors. Majority of the route was flown in combat cruise and a NATOPS IIMC fan break was conducted at the route exit for practice. Multiple conversion mode CALs were done into LZ bat in echelon right formation without any significant errors. Trend on the conversion patterns was to be high and fast at 0.3 DME, a common trend as -3 on the inside of a turn. All landings were visual within 0.03 DME.	Lots of training and new things today on a relatively short flight. Good work keeping up with the aircraft and always working to maintain a good form position - whether combat spread or cruise.
(b)(3), (b)(6), (b)(7)c	2780-2784	Logged	No	Day VMC on VR-084 into LZ Bat at MCOLF Oak Grove. Sortie was a combination of 2780, 2781, and 2784 training events in a VMM-East light division with 2 adjacent squadrons participating. -3 position for the entire flight. Light winds out of the southwest. PUI sat left seat, no Day HUD.	PUI fully supported the flight lead's planning efforts. Flight lead conducted all mission briefing. IP conducted the NATOPS brief. PUI was fully prepared for the T&R discussion.	PUI's training began at MCAS New River. Flight progressed to VR-084, conducting fluid 4 TACFORM along the way. Our aircraft acted as a separate "maneuver element" as if we had a -4 in cruise position behind us. Numerous TAC turns, pumps, a cross turn, and a straight oblique completed without significant errors. Majority of the route was flown in combat cruise and a NATOPS IIMC fan break was conducted at the route exit for practice. Multiple conversion mode CALs were done into LZ bat in echelon right formation without any significant errors. Trend on the conversion patterns was to be high and fast at 0.3 DME, a common trend as -3 on the inside of a turn. All landings were visual within 0.03 DME.	Lots of training and new things today on a relatively short flight. Good work keeping up with the aircraft and always working to maintain a good form position - whether combat spread or cruise.
	DIV(2)-2782						
	DIV(2)-2783						
(b)(3), (b)(6), (b)(7)c	2780-2784	Logged	No	Day VMC on VR-084 into LZ Bat at MCOLF Oak Grove. Sortie was a combination of 2780, 2781, and 2784 training events in a VMM-East light division with 2 adjacent squadrons participating. -3 position for the entire flight. Light winds out of the southwest. PUI sat left seat, no Day HUD.	PUI fully supported the flight lead's planning efforts. Flight lead conducted all mission briefing. IP conducted the NATOPS brief. PUI was fully prepared for the T&R discussion.	PUI's training began at MCAS New River. Flight progressed to VR-084, conducting fluid 4 TACFORM along the way. Our aircraft acted as a separate "maneuver element" as if we had a -4 in cruise position behind us. Numerous TAC turns, pumps, a cross turn, and a straight oblique completed without significant errors. Majority of the route was flown in combat cruise and a NATOPS IIMC fan break was conducted at the route exit for practice. Multiple conversion mode CALs were done into LZ bat in echelon right formation without any significant errors. Trend on the conversion patterns was to be high and fast at 0.3 DME, a common trend as -3 on the inside of a turn. All landings were visual within 0.03 DME.	Lots of training and new things today on a relatively short flight. Good work keeping up with the aircraft and always working to maintain a good form position - whether combat spread or cruise.
(b)(3), (b)(6), (b)(7)c	2780-2784	Logged	No	Simulator was a section event in the Mohawk Valley against an SA-8 and a SA-29.	SNM assisted in the planning and threat assessment for the SA-8 and SA-29. During the brief the students were asked questions about these systems and demonstrated proper understanding of the strengths, weaknesses, and tactics effective at countering them.	The first half of the simulator was an ASE familiarization and CRM rehearsal. SNM demonstrated a working knowledge to turn on each system, BIT it, and operate it in a static environment against a known threat. After that the flight rejoined and departed to conduct all the GTR line numbers in the Mohawk valley.	SNM was slow on his call outs and a bit hesitant on his flare dispense. Keep practicing these maneuvers in the simulator and in the LAT environment. Use the training mode to "dispense" when conducting LAT maneuvers. Consider practicing the CRM calls inside that training environment as well. Once engaged, your job is survival first and then to consider the flight. Don't worry about what -2 is doing when you have a MANPADS flying at you.

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(b)(3), (b)(6), (b)(7)c	GTR(2)-2840	Logged	No	Simulator was a section event in the Mohawk Valley against an SA-8 and a SA-29.	SNM assisted in the planning and threat assessment for the SA-8 and SA-29. During the brief the students were asked questions about these systems and demonstrated proper understanding of the strengths, weaknesses, and tactics effective at countering them.	The first half of the simulator was an ASE familiarization and CRM rehearsal. SNM demonstrated a working knowledge to turn on each system, BIT it, and operate it in a static environment against a known threat. After that the flight rejoined and departed to conduct all the GTR line numbers in the Mohawk valley.	SNM was slow on his call outs and a bit hesitant on his flare dispense. Keep practicing these maneuvers in the simulator and in the LAT environment. Use the training mode to "dispense" when conducting LAT maneuvers. Consider practicing the CRM calls inside that training environment as well. Once engaged, your job is survival first and then to consider the flight. Don't worry about what -2 is doing when you have a MANPADS flying at you.
(b)(3), (b)(6), (b)(7)c	GTR(2)-2840	Logged	No	Day SS sortie to LHD-3 within the W-122. Entered via the break, conducted Charlie patterns before moving to NS CQ via the LH-2.	Planning products and brief prepared by PUI. T&R discussion items found no lack of knowledge. PUI questions displayed a genuine study of the material. Continue to study at this level.	Entered the pattern via the overboard break APLN mode. IP demo'd the 10 nm arc to allow for a flight to align with BRC prior to the initial. Always fly like you have a division behind you. Charlie pattern demo'd by IP and then passed to PUI. Above average BAW and correction based on feedback. Tendencies to be high on glideslope and slow to stagnation prior to the deck edge dominated. Improved throughout the sortie. Remember when you come out of translational lift you want to be right at the deck edge and you have to lean forward on the cyclic as you increase TOL or the aircraft will stop short in a HOGUE. Allow the spot to come under the aircraft, anticipate the left cyclic needed to scrub off remaining drift, and make minor corrections on your own as you descend smoothly to the deck.	Above average with improvement throughout.
(b)(3), (b)(6), (b)(7)c	GTR(2)-2840	Logged	No	NS SS sortie to LHD-3. Started on the ship departed and re-entered via the LH-2. Charlie patterns until training complete.	Planning products and brief prepared by PUI. T&R discussion items found no lack of knowledge. PUI questions displayed a genuine study of the material. Continue to study at this level.	See 2930 Comments. Overall good knowledge and execution of the LH-2 to a left sidestep. Continued improvement of glideslope and closure rate management. Scan more outside, your ability to play the video game in the HUD or on the glass is a crutch you can't use at the boat. It moves which makes all of that invalid. Look outside, consciously pick your hover cues and scan them continuously.	Above average with improvement throughout.
(b)(3), (b)(6), (b)(7)c	FCLP(2)-2942	Logged	No	Flight executed IVO MCAS New River at the LHD Deck. Weather was VFR with windy light and out of the North.	Solid plan to execute multiple FCLPs at the LHD Deck. PUI was well versed on all discuss items and had a solid working knowledge of all ANTP / Shipboard NATOPS / NATOPS procedures.	Overall solid execution. PUI was able to effectively navigate the flight down the blue line to the LHD Deck. Practice shipboard comms were demonstrated by the instructor. Your patterns today improved after each and every bounce. All control inputs were smooth with no unsafe tendencies noted. Remember, landing at the actual boat will be much more complicated, to include a pitching and rolling deck, multiple mixed T/M/S, challenging comms, and sometimes even bad weather. You have demonstrated a solid foundation today and you are ready for your first day at the boat. Remember to stay sharp and continue to hand fly your procedures and practice your shipboard comms. Remember, your scan is everything, coupled with smooth control inputs, and remaining flexible. Failure to do so can be unforgiving at the ship.	Continues in syllabus.
(b)(3), (b)(6), (b)(7)c	FCLP(2)-2942	Logged	No	Ferry flight from Harstad port to Bodo Air Base in Norway. PUI sat left seat.	PUI helped plan a 6-ship ferry in a foreign country to an unfamiliar airfield and uncertain weather. Brief was conducted by the flight lead.	Day VMC transit from a parking lot at the port and through the fjords of Norway while transiting numerous controlled airspace sectors with an uneventful recovery to home base of operations.	Typical weight/load planning and accountability considerations that go with the CAT mission were not required or performed on today's mission. Cargo being carried was pre-loaded into the aircraft and no pick-up/drop-offs were conducted.
	AE(3)-3140						
	TRAP(3)-3340						
	CAT(3)-3431						
	CAT(3)-3440						

(b)(3), (b)(6), (b)(7)c	CAT(3)-3441	Logged	No	General route of flight began at Bogue Airfield. Him and another student conducted 4 simulated drops of PARAOPS going through the full checklist. Both conducted 2 passes as the flying pilot and the non flying pilot. The drops consisted of static line and military free fall. Each student utilized their CARP diagram and received an updated release point from a simulated jump master and adjusted route of flight to accommodate for winds.	Students planned a CARP diagram and racetrack pattern for multiple executions of PARAOPS. The CARP diagram was built in accordance to the ANTTTP and Aerial Delivery handbook per UMPS. The racetrack pattern was lacking in executability. Waypoints were not named in a matter that created triggers for execution. This made executing the checklist difficult. Additionally, the pattern was built too small with sharp turns. Briefing items were covered in accordance with T&R and acceptable level of knowledge demonstrated.	The first attempted pass of PARAOPS was a no-drop due to racetrack pattern planning. However, update store waypoints and TPG calculations for slowdown parameters allowed the students to build a racetrack pattern and slowdown profile that accommodated execution. Students demonstrated the ability to fly the profile effectively within standards. Furthermore, both experienced the changes in flight characteristics for 40 flaps and high altitude/heavy aircraft.	Plan the event to be non-emotional and non-dynamic. Having a large racetrack pattern with standard rate turns will ensure that checkpoints and timings are met. Additionally, this will provide a stable platform for the jumpers in the back of the aircraft. Keep in mind that the procedures in the ANTTTP are designed for aerial delivery of cargo and minimize the aircrafts exposure to threat. However for PARAOPS and more specifically training, extending the look time out to 1 minute and 2 minutes will aid in having a stable profile for jumpers. Keep in mind that 1 minute and 2 minute calls are the points at which jumpers are allowed to leave the aircraft for static line and military free-fall.
	AD(4)-4041						
	AD(4)-4042						
	AD(4)-4070						
	AD(4)-4081						
	AD(4)-4083						
	AI(4)-4140						
	AI(4)-4141						
	AI(4)-4142						
	AI(4)-4143						
	MAT(4)-4180						
	MAT(4)-4181						
	DWS(4)-4242						
	DWS(4)-4245						
	DCM(4)-4330						
	DCM(4)-4340						
	CBRN(4)-4430						
	CBRN(4)-4431						
	CQ(4)-4470						
	CQ(4)-4480						
	CQ(4)-4481						
	CQ(4)-4482						
	CQ(4)-4483						
	HTT(4)-4490						
	SEA(4)-4540						
	RVE(4)-4580						
	ADGR(4)-4640						
	BI(4)-4740						
	AD(4)-4840						
	AC2(4)-4940						
	BIP(5)-5030						
	BIP(5)-5031						
	FRSK(5)-5130						
	FRSK(5)-5131						
	FRSK(5)-5132						
	FRSK(5)-5133						
	FRSK(5)-5134						
	FRSK(5)-5135						
	FRSK(5)-5136						
	FRSK(5)-5137						
	FRSK(5)-5138						
	FRSK(5)-5139						
	NSFK(5)-5150						
	NSFK(5)-5151						
	NSFK(5)-5152						
	FRSK(5)-5170						
	FRSK(5)-5171						
	AAR(5)-5330						
	AAR(5)-5340						
	LAT(5)-5630						
	LAT(5)-5631						
	LAT(5)-5632						
	RVLI(5)-5730						
	RVLI(5)-5731						
	RVLI(5)-5732						
	DCMK(5)-5830						
	DCMK(5)-5831						
	DCMK(5)-5832						
	NSK(5)-5930						
	NSK(5)-5931						
	NSK(5)-5932						
	NSK(5)-5933						
	NSK(5)-5934						
	NSK(5)-5935						
	NTPS(6)-6030						
	NTPS(6)-6031						
	NTPS(6)-6032						

Capt REYNOLDS, ROSS A - MV-22B Pilot
Crew Performance between 1/1/2015 - 3/18/2022
Generated on 03/24/2022 1043 UTC-04:00

Generated on 03/24/2022 1043 UTC-04:00

CPH 2000

~~UNCLASSIFIED//FOR OFFICIAL USE ONLY~~

Event Proficiency VMM-261 - MV-22B Pilot

Generated on 05/10/2022 1052 UTC-04:00

Days Until Expired as of 05/10/2022	>= 90 Days	60-89 Days	30-59 Days	< 30 Days	Expired
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"W" indicates Waived, "D" indicates Deferred

	Familiarization (FAM(2))							
	ACAD: MV-22 SINGARS	ACAD: MV-22 SATCOM	ACAD: MV-22 Tablet Fam	LAB: Radio Demo	LAB: Tablet Fam	SFAM: FAM	SFAM: INST	ACAD: CAL Procedures
	2010	2011	2012	2020	2021	2030	2031	2210
Permanent								
Capt REYNOLDS, ROSS A.	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly	03/10/2023	No Refly

Confined Area Landings (CAL(2))

Low #

SCAL: Single CAL	SCAL: Section CAL	CAL: Single CAL Visual	CAL: Single CAL Wypt	CAL: Section CAL	ACAD: LAT I	ACAD: LAT II	ACAD: LAT III	ACAD: Ps E/M	ACAD: Tactics in Night Env	LAB: LAT Walk Through
2230	2231	2240	2241	2242	2610	2611	2612	2613	2614	2620

No Refly	03/10/2023	No Refly	No Refly	03/10/2023	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly
----------	------------	----------	----------	------------	----------	----------	----------	----------	----------	----------

Altitude Tactics (LAT(2))

Mountain Area Training (MAT(2))

SLAT: LAT Maneuvers / Rte	SLAT: Section LAT	SNS LAT: NS Section LAT	LAT: LAT Maneuvers / Rte	LAT: Section LAT	NS LAT: HLL Section LAT	NS LAT: LLL Section LAT	ACAD: High Altitude Ops	ACAD: Advanced MV-22 Aero	SMAT: Day MAT Sim	SMAT: NS MAT Sim
2630	2631	2632	2640	2641	2642	2643	2710	2711	2730	2731

No Rally	02/01/2023	03/01/2023	No Rally	02/01/2023	09/29/2022	07/31/2022	No Rally	No Rally	02/07/2023	06/03/2022
----------	------------	------------	----------	------------	------------	------------	----------	----------	------------	------------

SMAT: High/Hot/Heavy SIM	Air Logistics Support (ALS(3))		Requirement, Qualification, Designation (RQD(6))				Emergency Procedures (EP(6))	Instrument (INST(6))		
	ACAD: ALSO Intro / Planning	ALS: ALS Msn	NATOPS Open Book	NATOPS Closed Book	NATOPS Oral Exam	NATOPS Eval	6033	IGS	Instrument Exam	Instrument Oral Exam
2732	3010	3040	6010	6011	6012	6030	6033	6040	6041	6042
04/21/2022	No Rely	03/09/2023	02/23/2023	03/23/2023	02/23/2023	02/23/2023	06/30/2022	01/31/2023	01/31/2023	01/31/2023

	Crew Resource Management (CRM(6))	
INST Eval	CRM Refresher	CRM Eval
6060	6070	6080

01/31/2023	01/31/2023	01/31/2023
------------	------------	------------

ENCLOSURE (9)



VMM-261 NATOPS AUDIT SHEET



NAME: MOORE, Jacob

DATE: 18 DEC 20

AUDITOR: (b)(3), (b)(6), (b)(7)c

SECTION I - GENERAL

PRIVACY ACT STATEMENT - SIGNED AND DATED / RECORD OF DISCLOSURE

PART A

- ▲ NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET REVIEW AND CERTIFICATION RECORD (3760/32A)
 - REVIEWED & CERTIFIED - REPORTING ANNUALLY CHANGE IN FLIGHT STATUS

PART B

- ▲ PILOTS - ONLY MOST CURRENT PCS (DIFOP) ORDERS
- ▲ ENLISTED AIRCREW - VOLUNTARY FLIGHT STATUS LETTERS
- ▲ LETTERS OF SUSPENSION / REVOCATION PERMANENTLY RETAINED

PART C

- ▲ MOST RECENT ANNUAL FLIGHT PHYSICAL CHIT (6410/2) (Only the most recent)
- ▲ ALL GROUNDING AND SUBSEQUENT UP CHITS SINCE ANNUAL
- ▲ WAIVER FORMS PERMANENTLY RETAINED

PART D

- ▲ FLIGHT EQUIPMENT RECORDS CS (DIFOP) ORDER (3760/32B) (NATOPS sign the bottom)

SECTION II - QUALIFICATIONS AND ACHIEVEMENTS

PART A

- ▲ PERMANENT RECORD OF ALL FUNCTIONAL DESIGNATIONS (3760/32C) (All previous letter from CO)
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL DESIGNATIONS (3760/32C)
(Ensure an ATF entered ion APR and logbook updated)

PART B

- ▲ PERMANENT RECORD OF ALL QUALIFICATIONS NOT INCLUDED IN PART A
- ▲ RETENTION OF DESIGNATION LETTERS FOR ALL QUALIFICATIONS (3760/32C)
(Ensure an ATF entered and logbook updated)

PART C

- ▲ PERMANENT RECORD OF CRM TRAINING AND FLIGHTS
(Matches NATOPS/Inst Check / retain annual class roster / CRMI/T logged)

SECTION III - TRAINING

PART A

- ▲ RECORD OF ALL SCHOOLS AND COURSES ATTENDED (3260/32E) (GWOEI-5 no longer req)
- ▲ COPY OF ALL TRAINING COMMAND / FRS SUMMARIES SINCE 01 JAN 88

PART B

- ▲ PERMANENT RECORD OF ALL SURVIVAL TRAINING (3760/32F)
- ▲ NITE LAB TRAINING DOCUMENTATION
- ▲ ANNUAL EGRESS TRAINING DOCUMENTATION (3760/32F)
(Check EMER EGRESS completed on NATOPS check)

PART C

- ▲ ALL EXAMS PERTINENT TO AVIATION QUALIFICATIONS
(Current IGS, OPEN/CLOSED book, update coverpage SEC III.C exams)

PART D

- ▲ ALL NATOPS EVALUATION RECORDS (3710/7) (Kneeboard card and report, numerical grade for open/closed book, ensure egress/CRM complete, update SEC II.C. Misc and SEC III.B. Egress, update logbook)

PART E

- ▲ ALL INSTRUMENT RATING REQUESTS (3710/2)
(Kneeboard card/application, applicant signed application, update CRM/Egress as req, update logbook)
- ▲ INSTRUMENT QUALIFICATION WAIVERS

SECTION IV - FLIGHT RECORDS

PART A

- ▲ (No longer req, MSHARP)

PART B

- ▲ PERMANENT RECORD OF ALL AIRCRAFT/MISHAPS FLIGHT VIOLATIONS INVOLVING AN AIRCREW CAUSAL FACTOR, AND FNAEB RESULTS. FNAEB ENTRY SHALL CONTAIN: ENTRIES AUTHORIZED BY PARAGRAPH 10.5.2.8, DATE OF THE FNAEB, AND CO COMMENTS. CO MAY NOT DELEGATE THIS RESPONSIBILITY. (3760/32H)

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IA - REVIEW AND CERTIFICATION RECORD

NAME (Last, First, Middle Initial)	DoD ID Number
MOORE, JACOB M	

1. This jacket shall be reviewed by the Commanding Officer or a designated representative as follows:
 - a. Upon reporting to a unit.
 - b. Annually, within 30 days of birthday.
 - c. Upon change in flying status.
2. This jacket shall be certified by the Commanding Officer or a designated representative upon detachment of the individual.

RECORDS OF REVIEW					
DATE	SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE
17 JUL 2019	(b)(3), (b)(6), (b)(7)c				
6 FEB 2020					
18 DEC 2020					
	✓				

DETACHMENT CERTIFICATION					
UNIT	DATE	SIGNATURE	UNIT	DATE	SIGNATURE
NASC	21-Mar-19	(b)(3), (b)(6), (b)(7)c			
VMMT 204	17 DEC 19				
		✓			



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
1326
S-3
28 Sep 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Designated Personnel

Subj: ASSIGNMENT OF TEMPORARY-INDEFINITE CREWMEMBER FLIGHT ORDERS

Ref: (a) MCO 1326.2H
(b) WgO 1326.5B
(c) SqdnO 1326.1G

Encl: (1) VMM-261 Crewmember Personnel Roster

1. Per the references, you are hereby ordered to duty in a flying status involving flights as a crewmember (MV-22B Crewchief). These orders are effective 1 October 2021 and will terminate on 30 September 2022.
2. If during this period you are discharged and reenlist at this station without a break in active service, this order will remain in effect for the period specified herein.
3. You are hereby notified that these flight orders and your flight status as per paragraph 1, above, will be terminated as of 30 September 2022 unless subsequently renewed.
4. These orders will be automatically revoked upon transfer from this unit.

(b)(3), (b)(6), (b)(7)c

VMM-261 CREWMEMBER PERSONNEL ROSTER

RANK	LAST NAME	FIRST NAME	MI	FDIPI
(b)(3), (b)(6), (b)(7)c				
LCPL	MOORE	JACOB	M	1548155734



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
1326
S-3
28 Sep 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Designated Personnel

Subj: ASSIGNMENT OF TEMPORARY-INDEFINITE CREWMEMBER FLIGHT ORDERS

Ref: (a) MCO 1326.2H
(b) WgO 1326.5B
(c) SqdnO 1326.1G

Encl: (1) Marine Medium Tiltrotor Squadron 261 Crewmember Personnel
Roster

1. Per the reference, you are hereby ordered to duty in a flying status involving flights as a crewmember (MV-22B CrewChief). These orders are effective from 1 October 2020 and will terminate 30 September 2021.
2. If during this period you are discharged and reenlist at this station without a break in active service, these orders will remain in effect for the period specified herein.
3. You are hereby notified that these flight orders and your flight status as per paragraph 1, above, will be terminated as of 30 September 21.
4. These orders will be automatically revoked upon transfer from this unit.

(b)(3), (b)(6), (b)(7)c

VMM 61 CREWMEMBER PERSONNEL ROSTER

RANK	LAST NAME	FIRST NAME	MI	EDID
(b)(3), (b)(6), (b)(7)c				
LCPL	MOORE	JACOB	M	1548155734
)c, (b)(3), (b)(6), (b)(7)c				



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

1326
S-3
10 Jan 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: ASSIGNMENT OF TEMPORARY-INDEFINITE CREWMEMBER FLIGHT ORDERS

Ref: (a) MCO 1326.2G
(b) WgO 1326.5B
(c) SqdnO 1326.1G

1. Per the references, you are hereby ordered to duty in a flying status involving flights as a crewmember (MV-22B Crewchief). These orders are effective from 0001, 10 January 2020 and will terminate on 30 September 2020.

2. If during this period you are discharged and reenlist at this station without a break in active service, this order will remain in effect for the period specified herein.

3. You are hereby notified that these flight orders and your flight status as per paragraph 1, above, will be terminated as of 30 September 2020 unless subsequently renewed.

4. These orders will be automatically revoked upon transfer from this unit.

(b)(3), (b)(6), (b)(7)c

ADMINISTRATIVE REMARKS
NAVPERS 1070/613 (REV. 10-81)
S/N 016-LF-010-6881

E-32

SHIP OR STATION:

NAVAL SCHOOLS COMMAND, PENSACOLA FL 32508-5221 UTC: 30500

28 JAN 19 I, MOORE, JACOB M VOLUNTEER FOR DUTY INVOLVING
(DATE) FLYING. I UNDERSTAND THAT I MUST MAINTAIN THOSE QUALIFICATIONS
SPECIFIED BY THE CHIEF OF NAVAL PERSONNEL DURING THE PERIOD I AM
ACTIVELY ASSIGNED TO SUCH DUTIES. THIS AGREEMENT SHALL REMAIN
VALID UNTIL SUCH A TIME AS IT IS RESCINDED BY ME OR THAT IT HAS BEEN
DETERMINED BY APPROPRIATE AUTHORITY THAT I AM NO LONGER QUALIFIED
FOR SUCH DUTIES.

Jacob Moore

(STUDENT SIGNATURE)

(b)(6), (b)(7)c

(WITNESS SIGNATURE)

(LAST, FIRST MI)

MOORE, JACOB M

SSN (LAST 4)

(b)(3), (b)(6), (b)(7)c

BRANCH

USMC

13

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY

(Read Privacy Act Statement and Instructions on back before completing form.)

1. TO: CO: VMM-261		2. FROM: FS: MCAS NEW RIVER		3. DATE (YYYYMMDD) 20220105	
4. MEMBER NAME (Last, First, Middle Initial) MOORE, JACOB		5. IDENTIFICATION NUMBER 1548155734		6. GRADE CPL	
7. DATE OF BIRTH (YYYYMMDD) 19971229		8. ORGANIZATION USMC		9. TYPE OF DUTY DIF AC	
10. FLIGHT PHYSICAL DATE (YYYYMMDD) (If applicable) 20220105					
11. UP: THE ABOVE INDIVIDUAL HAS BEEN FOUND QUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <input type="checkbox"/> CLEARED AFTER (X): <input type="checkbox"/> Temporary medical disqualification <input type="checkbox"/> Waiver recommended (Not USAF) <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Reporting to new duty station <input type="checkbox"/> Waiver granted <input type="checkbox"/> Other (See remarks) <input checked="" type="checkbox"/> CLEARED AFTER FLIGHT DUTY MEDICAL EXAMINATION					
b. EFFECTIVE DATE (YYYYMMDD) 20220105			c. EXPIRATION DATE (YYYYMMDD) 20221231		
12. DOWN: THE ABOVE INDIVIDUAL HAS BEEN FOUND DISQUALIFIED BY MEDICAL AUTHORITY.					
a. X one: <input type="checkbox"/> TEMPORARY DISQUALIFICATION DUE TO (X): <input type="checkbox"/> Illness or Injury <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Other (See remarks) MAY PARTICIPATE IN (X): <input type="checkbox"/> Simulator duties <input type="checkbox"/> Ground based flight line duties <input type="checkbox"/> Other (See remarks) <input type="checkbox"/> PERMANENT DISQUALIFICATION					
b. EFFECTIVE DATE (YYYYMMDD)			c. ESTIMATED DURATION OF GROUNDING		
13. REMARKS/LIMITATIONS <input type="checkbox"/> VISION CORRECTION DEVICES REQUIRED IN THE PERFORMANCE OF FLIGHT DUTIES. <input type="checkbox"/> MUST CARRY EXTRA SPECTACLES.					
14. (X one): <input checked="" type="checkbox"/> FLIGHT SURGEON <input type="checkbox"/> OTHER (Countersignature required for Air Force and Navy upslip)					
a. TYPED NAME (Last, First, Middle Initial) (b)(6), (b)(7)c		b. GRADE O4		c. PROVIDER SIGNATURE (b)(6), (b)(7)c	
d. DATE SIGNED (YYYYMMDD) 05 JAN 2022		e. TYPED NAME (Last, First, Middle Initial)		f. GRADE	
g. FLIGHT SURGEON COUNTERSIGNATURE		h. DATE SIGNED (YYYYMMDD)			
15. MEMBER CERTIFICATION					
a. I certify that I understand the above recommendations and that I: <input checked="" type="checkbox"/> MAY <input type="checkbox"/> MAY NOT perform flight duties.			b. AIRCREW MEMBER SIGNATURE <i>[Signature]</i>		c. DATE SIGNED (YYYYMMDD) 20220105
16. ACTION TAKEN BY COMMANDER (Not required for Air Force and Navy)			<input type="checkbox"/> APPROVE <input type="checkbox"/> DISAPPROVE		
a. TYPED NAME (Last, First, Middle Initial)		b. TITLE		c. SIGNATURE	
d. DATE SIGNED (YYYYMMDD)					

NAME (Last, First, Middle Initial)

DoD ID Number

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:

3710

DSSN

16 Sep 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: BICC DESIGNATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Basic Instructor Crew Chief.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook entry
M-SHARP



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR TRAINING SQUADRON 204
MARINE AIRCRAFT GROUP 26
2D MARINE AIRCRAFT WING
PSC BOX 21018
JACKSONVILLE, NC 28545-1018

IN REPLY REFER TO:
3710
DSSN
5 Dec 19

From: Commanding Officer, Marine Medium Tiltrotor Training Squadron 204
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: DESIGNATION

Ref: (a) CNAF M-3710.7
(b) NAVMC 3500.11E
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Crew Chief.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IIB - MISSION QUALIFICATION RECORD

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3710
DSSN
16 Jul 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: NIGHT SYSTEMS LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Altitude Tactics qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
DSSN



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3710
DSSN
24 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: NIGHT SYSTEMS QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
Logbook entry
NATOPS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
24 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: M240D QUALIFICATION

Ref: (a) MCO P3500.14
(b) NAVMC 3500.11

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby M240D qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
DSSN



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
24 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: NIGHT SYSTEMS TAIL GUN QUALIFICATION

Ref: (a) MCO P3500.14
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Tail Gun qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
DSSN



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
21 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: DAY TAIL GUN QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Tail Gun qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
2 Apr 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: NIGHT SYSTEMS HIGH LIGHT LEVEL QUALIFICATION

Ref: (a) CNAF-M 3710.7
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems High Light Level Qualified.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING
PSC BOX 21015
JACKSONVILLE, NC 28545-1015

IN REPLY REFER TO:
3710
DSSN
19 Feb 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Lance Corporal Jacob M. Moore 1548155734/6176 USMC

Subj: DAY LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) MCO P3500.14
(b) NAVMC 3500.11E

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
DSSN

CRM TRAINING & EVALUATION RECORD

CNAFINST 1542.7(Series)
2 MAY 2016

1. NAME (Last, first, middle initial):	2. RANK:	3. EDIPI NUMBER:
--	----------	------------------

Note: This form shall be permanently maintained in the NATOPS Flight Personnel Training/Qualification Jacket (Section II, Part C).

CRM IMM Instructor Course	4. Date: _____	5. Location: _____
---------------------------	----------------	--------------------

CRM FACILITATOR TRAINING

6. T/M AIRCRAFT	7. UNIT	8. DATE

GROUND TRAINING / FLIGHT EVALUATIONS

Note: Valid for 12 months from the last day of the month in which training/evaluation was completed.

Note: Renewal flight evaluations may be completed within 60 days preceding the expiration of the current qualification.

9. T/M AIRCRAFT	10. UNIT	11. GROUND / FLIGHT	12. INITIAL / RENEWAL	13. DATE COMPLETED	14. EXPIRATION DATE
MV22B	VMTT204	G	I	29 JUL 19	31 JUL 20
MV22	204	F	I	05 DEC 19	31 DEC 20
MV22B	261	G	R	24 JUL 20	31 JUL 21
MV-22B	261	G	R	4 JAN 21	31 JAN 22
MV-22B	261	F	R	5 JAN 21	31 JAN 22
MV-22B	261	G	R	4 JAN 22	31 JAN 23

EXTENSIONS

15. T/M AIRCRAFT	16. UNIT	17. GROUND / FLIGHT	18. AUTHORITY	19. EXPIRATION DATE

VMM-261 TRAINING ROSTER

Topic: CRM Awareness

Date: 1/11/22

Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2	LOMKIEWICZ M.J.	CAPT	[Signature]
3	(b)(3), (b)(6), (b)(7)c		
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17	REYNOLDS, ROSS A	CAPT	[Signature]
18	(b)(3), (b)(6), (b)(7)c		
19			
20			
21			
22			
23			
24			
25			
26			
27			
28	MOORE, J.M.	COL	[Signature]
29	(b)(3), (b)(6), (b)(7)c		
30			
31			
32			
33			
34	Spezdy, James W	CAPT	[Signature]
35	(b)(3), (b)(6), (b)(7)c		
36			
37			
38			

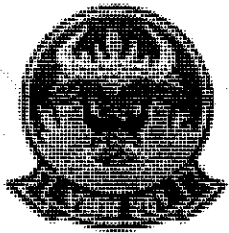
VMM-261 TRAINING ROSTER

Topic: CIRM Awareness

Date: 1/14/21

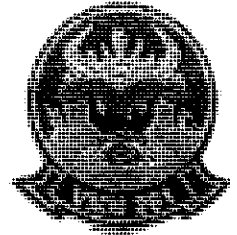
Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI, MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2	TOAKLEY, M.J.	CAPT	[Signature]
3	(b)(3), (b)(6), (b)(7)c		
4			
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12			
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15			
16			
17	KEYNOLDS, ROSS A	CAPT	[Signature]
18	(b)(3), (b)(6), (b)(7)c		
19			
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23			
24			
25			
26			
27			
28	MIRRE, T.W.	Capt	[Signature]
29	(b)(3), (b)(6), (b)(7)c		
30			
31			
32			
33			
34	Speedy, James W	Capt	[Signature]
35	(b)(3), (b)(6), (b)(7)c		
36			
37			
38			



VMM-261

2021 Back In The Saddle



Topic: CRM

Date: 04 JAN 2021

Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
36	(b)(3), (b)(6), (b)(7)c		
37			
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46			
47			
48			
49	MOORE, JAMES M	1 (a)	<i>[Signature]</i>
50	(b)(3), (b)(6), (b)(7)c		
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67			
68			
69			
70			

Instructor: (b)(3), (b)(6), (b)(7)c

[illegible]

CRM Initial/Refresher Course

Rank	Last Name	First Name	Middle Int.	Unit
(b)(3), (b)(6), (b)(7)c				VMMT-204
				VMMT-204
				VmmT-204
LCpl	Moore	Jacob	M	VMMT-204
(b)(3), (b)(6), (b)(7)c				VMMT-204
				VMMT-204
				VMMT-204
				VmmT-204
29 July				
		(b)(3), (b)(6), (b)(7)c		

CRM Training has been conducted IAW COMNAVAIRFOR Inst. 1542.7B

Date: 29 July 2019 Signature: (b)(3), (b)(6), (b)(7)c

CRM-I

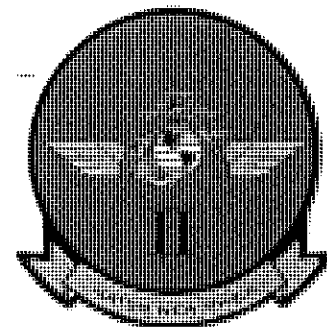
United States Marine Corps



*This is to certify that
LCpl Jacob Moore
has completed the*

Basic Instructor Training Course

*at Marine Aviation Training Systems Site
New River, NC on this 17th day of Aug, 2020*



(b)(6), (b)(7)c

(b)(6), (b)(7)c

(Ret.) BITC/CRMI

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET														
SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING														
NAME (Last, First, Middle Initial)									RANK/RATE		DoD ID Number			
MOORE, JACOB M									PFC		1548155734			
COURSE CATEGORY	TYPE OF TRAINING													
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE				
INTERMEDIATE WATER SURVIVAL TRAINING	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
LAND SURVIVAL TRAINING	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
Annual Aeromed Training	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
AAE (SEN/LAS/HYP/HF/INV) Radios Other:	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
MV-22 EMERGENCY EGRESS	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
NITE Lab Training 100919 INDOC/REF Other: ANUS-9 System:	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
MV-22 EMERGENCY EGRESS	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
Annual Aeromed Training	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
AAE (SEN/LAS/HYP/HF/INV) Radios Other:	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
2021 AEROMED	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT		
AEVET Emergency Egress	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE				
TRAINING ACTIVITIES														
1. Pensacola, FL			4. Lemoore, CA			7. Patuxent River, MD								
2. Miramar, CA			5. Jacksonville, FL			8. Whidbey Island, WA								
3. Norfolk, VA			6. Cherry Point, NC			9. Other (List)								
10. Other Information														

OPNAV 3760/32F (REV 02/2017)



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
340 HULSE ROAD
PENSACOLA FL 32508-1089

IN REPLY REFER TO
3760
9 Feb 2021

From: Officer in Charge, Naval Survival Training Institute

To: **LANCE CORPORAL JACOB MOORE**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **LANCE CORPORAL JACOB MOORE** has received **SURVIVAL SWIMMING** on **9 Feb 2021** at Aviation Survival Training Center **CHERRY POINT**.

2. **LANCE CORPORAL JACOB MOORE** received a grade of **Q**. All required modules were completed.

3. This qualification does not expire.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, H-72, H-92, OH-58C, TH-57, TH-73, UH-1, V-22

Aircrew Endurance Vest training consisted of an overview and in water familiarization of either the AE Vest or PRU-70 as applicable. In water familiarization included performing underwater problem solving, underwater egress, survival swimming, treading water, survival floating, life-preserver inflation, multi-place life raft boarding and helicopter rescue procedures. Subject named training specific to the AE Vest at Aviation Survival Training Center Cherry Point.

(b)(6), (b)(7)c

By direction

3710/5100

DSS

4 Jan 21

From: Aeromedical Safety Officer, Marine Aircraft Group 26
 To: VMM-261 Department of Safety and Standardization

Subj: AEROMEDICAL TRAINING

Ref: (a) CNAF M-3710.7
 (b) WgO 5100.29

1. The following personnel completed Annual Aeromedical training as required by reference (a) and (b). Topics include Sensory Problems / Situational Awareness, Aeromedical Aspects of Egress, LASER and LASER Eye Protection, Hypoxia, NVG Capabilities & Limitations, Human Factors & Stress in Aviation, and FAILSAFE Program.

	LAST	FULL FIRST	RANK	PLATFORM	SQUADRON
1	(b)(3), (b)(6), (b)(7)c			MV-22	Vmm-261
2				"	"
3					
4				"	"
5				"	"
6				V-22	261
7				V-22	261
8				MV-22	261
9				MV-22	261
10				"	"
11				"	"
12				MV-22	261
13				V-22	261
14				MV-22	VMM-261
15				MV-22	VMM-261
16				MV-22	VMM-261
17				MV-22	VMM-261
18				MV-22	VMM-261
19				MV-22	VMM-261
20				MV-22	VMM-261
21				MV-22	VMM-261
22				MV-22	VMM-261

/s/

(b)(3), (b)(6), (b)(7)c

Subj: AEROMEDICAL TRAINING (4 Jan 21)

	LAST	FULL FIRST	RANK	PLATFORM	SQUADRON
23	(b)(3), (b)(6), (b)(7)c			MV-22	VMM-261
24				MV-22	VMM-261
25				MV-22	VMM-261
26				MV-22	VMM-261
27				MV-22	VMM-261
28				MV-22	VMM-261
29				MV-22	VMM-261
30				MV-22	VMM-261
31				MV-22	VMM-261
32				MV-22	VMM-261
33				MV-22	VMM-261
34				MV-22	VMM-261
35				MV-22	VMM-261
36				MV-22	VMM-261
37				MV-22	VMM-261
38				MV-22	VMM-261
39				MV-22	VMM-261
40				MV-22	VMM-261
41				MV-22	VMM-261
42				MV-22	VMM-261
43				MV-22	VMM-261
44				MV-22	VMM-261
45				MV-22	VMM-261
46				MV-22	VMM-261
47				MV-22	VMM-261
48				MV-22	VMM-261
49				MV-22	VMM-261
50				MV-22	VMM-261
51				MV-22	VMM-261
52					
53					
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58					
59					
60					

/s/

(b)(3), (b)(6), (b)(7)c

Rank	Last Name	First Name	MI	EDIPI
(b)(3), (b)(6), (b)(7)c				
PFC	MOORE	JACOB	M	1548155734
(b)(3), (b)(6), (b)(7)c				

Egress

9/19/19

ENCLOSURE (10)

CENTER FOR SECURITY FORCES

Certificate of Completion

Survival, Evasion, Resistance, and Escape Course
A-2D-4635

Commanding Officer
Center for Security Forces

Takes pleasure in granting a certificate of completion to

PFC JACOB M MOORE

Given this 12th day of April 2019



(b)(6), (b)(7)c

(b)(6), (b)(7)c

USN

COMMANDING OFFICER
CENTER FOR SECURITY FORCES





DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
55 RADFORD BOULEVARD, SUITE 211
PENSACOLA FL 32508-1091

IN REPLY REFER TO
3760
19 Mar 2019

From: Officer in Charge, Naval Survival Training Institute

To: **PRIVATE FIRST CLASS JACOB MOORE**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **PRIVATE FIRST CLASS JACOB MOORE** has received **AC INDOC CLASS 3** on **18 Mar 2019** at Aviation Survival Training Center **PENSACOLA**.

2. **PRIVATE FIRST CLASS JACOB MOORE** received a grade of **Q**. All required modules were completed.

3. This qualification expires on **31 Mar 2023** unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, H-72, H-92, OH-58C, TH-57, UH-1, V-22

(b)(6), (b)(7)c

By direction **PR1**

(b)(6), (b)(7)c

NAME (Last, First, Middle Initial)

MOORE, JACOB M.

OPEN BOOK

CLOSED BOOK

INSTRUMENT EXAM



SINE PERSPIRO

VMM-261 CREW CHIEF OPEN BOOK EXAM

Revised 03 Sep 19

Issued by (b)(3), (b)(6), (b)(7)c

Name: MOORE, JACOB

Date: 22-01-31

Score: 3.9

Graded By: (b)(3), (b)(6), (b)(7)c

1. The MV-22 is a multi-mission aircraft within many applications. These applications include the following:

- a. medium lift assault support
- b. Tactical Recovery of Aircraft and Personnel
- c. Emergency Evacuation
- d. Fleet Logistics support
- e. Logistics support ashore
- f. Long Range logistics support
- g. medical evacuation

2. The aircraft is a twin engine, twin propotor, high wing, twin tail design with retractable landing gear.

3. The wing has a 3.5-degree dihedral and a 6-degree forward sweep.

4. The MV-22 is powered by two 6150 shaft-horse-power Rolls Royce Corporation AE1107C - Liberty turboshaft engines which are housed in the wing tip nacelles.

5. Interconnect shafting maintains propotor synchronization and provides single engine power to both rotors in the event of an engine failure.

6. The maximum VTOL gross weight of the V-22 is 52,600 pounds at sea level; maximum Short Takeoff (STO) gross weight is 57,000 pounds; and maximum self-deploy gross weight is 60,500 pounds.

7. The nose to tail length of the V-22 is 57 ft 4 in.

The overall rotor tip to rotor tip width of the V-22, airplane mode, is 83 ft 10 in.

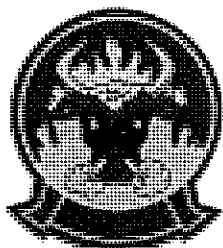
9. The Fuel Pump Metering Unit controls fuel flow and pressure in response to signals from the FADECs.

SINE PERSPIRO

VMM-261 CREW CHIEF CLOSED BOOK TEST

Rev 03 Sep 19

(b)(2)



SINE PERSPIRO VMM-261 CREW CHIEF OPEN BOOK EXAM

Revised 03 Sep 19

Issued by: (b)(3), (b)(6), (b)(7)c

Name: LCpl MOORE, JALOB

Date: 20/220

Score: 4.0

Graded By: (b)(3), (b)(6), (b)(7)c

Academic Integrity Statement

I will complete this examination with the aid of the NATOPS Flight Manual and associated checklists only and understand that failure to do so may result in disciplinary action under the UCMJ.

Signature

Current NATOPS Release Date: 1 AUGUST 2019

1. The MV-22 is a multi-mission aircraft within many applications. These applications include the following:

- a. Medium Lift Assault Support
- b. Tactical Recovery Of Aircraft and Personnel
- c. Emergency Evacuation
- d. Fleet Logistics support
- e. Logistics support ashore
- f. Long range logistics support
- g. Medical Evacuation

2. The aircraft is a twin engine, twin propeller, high wing, twin tail design with retractable landing gear.

The wing has a 3.5-degree dihedral and a 10-degree forward sweep.

SINE PERSPIRO

VMM-261 CREW CHIEF CLOSED BOOK TEST
Rev 03 Sep 19

(b)(2)

VMM-261 AIRCRAFT NATOPS EVALUATION FORM

Evaluatee CPL MOORE JACOB M
 Evaluatee SSN 154 8155734
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight 1 FEB 2022
 Total Hours 447.7
 Model Hours 447.7
 Flight Duration 3.3
 BuNo 168019
 Date of Last Evaluation 05 JAN 2021
 Expires 28 FEB 2023

Open Book Date and Grade 31 JAN 22: 3.9
 Closed Book Date and Grade 31 JAN 22: 4.0

Turn in completed ATF to 9-3 Pilot Training	<input checked="" type="checkbox"/>		
Correct TMR code entered into NALCOMIS	<input checked="" type="checkbox"/>		
Phase I Ground Evaluation	Q	CQ	U
Open/Closed Book	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oral Exam	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase II Flight Evaluation			
1. Preflight:			
* a. Records check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* b. Screen aircraft discrepancy book	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* c. Safety - aircraft pre-entry, covers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* d. Aircraft Servicing - Operational Requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* e. Demonstrate system knowledge, nomenclatures and theory of operations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* f. Aircraft Inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(1) IAW MRC's	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) IAW IETM's	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) APU start-up	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) Demonstrate CMS Knowledge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* g. Aircrew brief	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Passenger brief	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Aircraft Configuration			
a. Cabin gear security	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cabin equipment			
(1) Fast-rope frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) Winch / hoist operations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) External cargo hooks / pendants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) Medical evacuations/litter stanchions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(5) Life raft	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) Fire bottle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Start/engage/postengagement			
* a. Crew positions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* b. Panel security	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Aircraft Taxi:	Q	CQ	U
a. Hand and arm signals Day/Night	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Aircraft walk-around	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* 5. Flight Evaluation:			
a. ICS proper terminology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Crew integration and situational awareness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Lookout Doctrine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Personal flight equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* 6. Safety Regulations:			
a. Compliance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* 7. Emergency Procedures (critical area/sub area)			
a. Proficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Compliance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Flight Parameters			
a. Knowledge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Alertness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* 9. Voice Procedures			
a. Clear and Concise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Standard/Common Terminology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* 10. Pilot/Co-Pilot Crew Coordination			
a. Situational awareness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Aircrew Coordination Training	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Special/other (comment required)			

Narrative of Flight

Strengths SEE NATOPS EVAL

Weaknesses SEE NATOPS EVAL

Notes N/A

NATOPS EVALUATION REPORT

1. NAME (Last, first, middle initial)		2. RANK:	3. EDIPI NUMBER:	4. DATE OF LAST EVALUATION:
MOORE, JACOB, M		CPL	1548155734	05 JAN 2021
5. UNIT:	6. CREW POSITION & QUALIFICATIONS:		7. HOURS IN MODEL:	8. DATE OF CHECK FLIGHT:
VMM-261	CREW CHIEF		447.7	01 FEB 2022
9. TOTAL FLIGHT HOURS:	10. AIRCRAFT MODEL:	11. AIRCRAFT BUNO:	12. FLIGHT DURATION:	13. EXPIRATION DATE:
447.7	MV-22B	168019	3.3	28 FEB 2023

NATOPS EVALUATION

14a. REQUIREMENT	14b. DATE COMPLETED	14c. GRADE		
		Q	CQ	U
OPEN BOOK EXAMINATION	31 JAN 2022	3.9		
CLOSED BOOK EXAMINATION	31 JAN 2022	4.0		
ORAL EXAMINATION	31 JAN 2022	X		
EVALUATION FLIGHT	01 FEB 2022	X		

OVERALL FINAL GRADE: QUALIFIED

14d. REMARKS OF EVALUATOR:

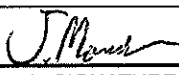
CPL MOORE flew his MV-22 NATOPS check ride IAW with CNAF 3710.7U, A1-V22AB-NFM-000, MCO P3500.34, and V-22 T&R. He was thoroughly prepared for the flight by ensuring that the aircraft was ready for the flight. CPL MOORE maintained high situational awareness throughout the flight, and used clear concise calls throughout. His above average crew coordination and CRM kept the pilots informed of the condition of the aircraft. SNM demonstrated adequate knowledge of the "Smoke and Fume Elimination" emergency procedure due to a simulated Smoke from Circuit Breaker Panel #1 in the cabin with no discrepancies noted. CPL MOORE is well qualified to be designated as a MV-22B crew chief.

Strengths: Crew coordination, CMS.

Weakness: None noted

Annual Egress was performed IAW CNAF M-3710.7 Series.

Annual CRM evaluation flight conducted IAW CNAFINST 1542.7C.

15a. PRINT NAME OF EVALUEE:	15b. RANK:	15c. DATE:	15d. SIGNATURE:
MOORE, JACOB M.	CPL	01 FEB 2022	
16a. PRINT NAME OF EVALUATOR:	16b. RANK:	16c. DATE:	16d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		01 FEB 2022	(b)(3), (b)(6), (b)(7)c

17. REMARKS OF UNIT COMMANDER:

18a. UNIT COMMANDER:	18b. RANK:	18c. DATE:	18d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		01 FEB 2022	(b)(3), (b)(6), (b)(7)c

AIRCREW EVALUATION FORM

Evaluatee LCPL JACOB MOORE
 Evaluatee DODID 1548155734
 Instructor (b)(3), (b)(6), (b)(7)c
 Date of Flight 05 JAN 21
 Total Hours 252.4
 Model Hours 252.4
 Flight Duration --- 3.5
 Buno 166484
 Date of Last Evaluation 05 DEC 2019
 Expires 05 JAN 2022

Open Book Date and Grade 20 DEC 20 / 4.0
 Closed Book Date and Grade 21 DEC 20 / 4.0

Turn in completed ATF to S-3 Pilot Training ☐
 Correct TMR code entered into NALCOMIS ☐

Phase I Ground Evaluation	Q	CQ	U
Open/Closed Book	[*]	[]	[]
Oral Exam	[*]	[]	[]

Phase II Flight Evaluation

1. Preflight:

* a. Records check	[*]	[]	[]
* b. Screen aircraft discrepancy book	[*]	[]	[]
* c. Safety - aircraft pre-entry, covers	[*]	[]	[]
* d. Aircraft Servicing - Operational Requirements	[*]	[]	[]
* e. Demonstrate system knowledge, nomenclatures and theory of operations	[*]	[]	[]
* f. Aircraft Inspection			
(1) IAW MRC's	[*]	[]	[]
(2) IAW IETM's	[*]	[]	[]
(3) APU start-up	[*]	[]	[]
(4) Demonstrate CMS Knowledge	[*]	[]	[]
* g. Aircrew brief	[*]	[]	[]
h. Passenger brief	[*]	[]	[]

2. Aircraft Configuration

* a. Cabin gear security	[*]	[]	[]
b. Cabin equipment			
(1) Fast-rope frame	[*]	[]	[]
(2) Winch / hoist operations	[*]	[]	[]
(3) External cargo hooks / pendants	[*]	[]	[]
(4) Medical evacuations/litter stanchions	[*]	[]	[]
(5) Life raft	[*]	[]	[]
(6) Fire bottle	[*]	[]	[]
* Start/engage/post engagement			
* a. Crew positions	[*]	[]	[]
* b. Panel security	[*]	[]	[]
c. Lost Comm hand signals	[*]	[]	[]

	Q	CQ	U
4. Aircraft Taxi:			
a. Hand and arm signals Day/Night	[*]	[]	[]
b. Aircraft walk-around	[*]	[]	[]
*5. Flight Evaluation:			
a. ICS proper terminology	[*]	[]	[]
b. Crew integration and situational awareness	[*]	[]	[]
c. Lookout Doctrine	[*]	[]	[]
d. Personal flight equipment	[*]	[]	[]
*6. Safety Regulations			
a. Compliance	[*]	[]	[]
*7. Emergency Procedures (critical area/sub area)			
a. Proficiency	[*]	[]	[]
b. Compliance	[*]	[]	[]
8. Flight Parameters			
a. Knowledge	[*]	[]	[]
b. Alertness	[*]	[]	[]
*9. Voice Procedures			
a. Clear and Concise			
b. Standard/Common Terminology	[*]	[]	[]
*10. Pilot/Co-Pilot Crew Coordination			
a. Situational Awareness	[*]	[]	[]
b. Aircrew Coordination Training	[*]	[]	[]
11. Special/other (comment required)	[*]	[]	[]

Narrative of Flight

Strengths See NATOPS write up.

Weaknesses See NATOPS write up.

Notes Refer to NATOPS evaluation report

ENCLOSURE

(10)

NATOPS EVALUATION REPORT

1. NAME (Last, first, middle initial)		2. RANK:	3. EDIPI NUMBER:	4. DATE OF LAST EVALUATION:
MOORE, JACOB, M		LCPL	1548155734	05 DEC 2019
5. UNIT:	6. CREW POSITION & QUALIFICATIONS:		7. HOURS IN MODEL:	8. DATE OF CHECK FLIGHT:
VMM-261	CREW CHIEF		252.4	05 JAN 2021
9. TOTAL FLIGHT HOURS:	10. AIRCRAFT MODEL:	11. AIRCRAFT BUNO:	12. FLIGHT DURATION:	13. EXPIRATION DATE:
252.4	MV-22B	166484	3.3	31 JAN 2022

NATOPS EVALUATION

14a. REQUIREMENT	14b. DATE COMPLETED	14c. GRADE		
		Q	CQ	U
OPEN BOOK EXAMINATION	20 DEC 20	4.0		
CLOSED BOOK EXAMINATION	21 DEC 20	4.0		
ORAL EXAMINATION	05 JAN 21	Q		
EVALUATION FLIGHT	05 JAN 21	Q		

OVERALL FINAL GRADE: **QUALIFIED**

14d. REMARKS OF EVALUATOR:

LCPL MOORE flew his MV-22 NATOPS check ride IAW with CNAF 3710.7U, A1-V22AB-NFM-000, MCO P3500.34, and V-22 T&R. He was thoroughly prepared for the flight by ensuring that the aircraft was ready for the flight. LCPL MOORE maintained high situational awareness throughout the flight, and used clear concise calls throughout. His above average crew coordination and CRM kept the pilots informed of the condition of the aircraft. SNM demonstrated adequate knowledge of the "Smoke and Fume Elimination" emergency procedure due to a simulated Smoke from Circuit Breaker Panel #1 in the cabin with no discrepancies noted. LCPL MOORE is well qualified to be designated as a MV-22B crew chief.

Strengths: Crew coordination, CMS.

Weakness: None noted

Annual Egress was performed IAW CNAF M-3710.7 Series.

Annual CRM evaluation flight conducted IAW CNAFINST 1542.7C.

15a. PRINT NAME OF EVALUEE:	15b. RANK:	15c. DATE:	15d. SIGNATURE:
MOORE, JACOB, M	LCPL	05 JAN 21	<i>Jacob Moore</i>
16a. PRINT NAME OF EVALUATOR:	16b. RANK:	16c. DATE:	16d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		05 JAN 21	(b)(3), (b)(6), (b)(7)c

17. REMARKS OF UNIT COMMANDER:

18a. UNIT COMMANDER:	18b. RANK:	18c. DATE:	18d. SIGNATURE:
(b)(3), (b)(6), (b)(7)c		05 JAN 21	(b)(3), (b)(6), (b)(7)c

ENCLOSURE (10)

NAME MOORE, JACOB

FILE OR SERIAL NO. 1548155734

DESIGNATION: NO. USMC

DATE OCTOBER 2019

LOG NO. 1 FROM 1 OCTOBER 2019

TO _____

IF FOUND, PLEASE RETURN TO

CHIEF OF NAVAL OPERATIONS
NAVY DEPARTMENT
WASHINGTON, D.C. 20350

OPNAV FORM 3760-31 REV. (4-65)

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

[illegible]

Make entries on lines, or in rubber stamp impressions anywhere on the page.

(To be signed by Commanding Officer or authorized deputy)

[illegible]

data entries on lines, or in rubber stamp impressions anywhere on the page.

ENCLOSURE

(To summarize flight data in this log and last months of previous log)

[illegible]

first year and item (e. g. model) on lines; transfer data from log)

[illegible]

ENCLOSURE

232

MONTH MARCH YEAR 90 24

DAY	AIRCRAFT		KIND OF FLIGHT CCODE	PILOT TIME			A/F COMME
	MODEL	SERIAL NUMBER		TOTAL PILOT TIME	FIRST PILOT	CO-PILOT	
1	MV22B	168305	1A1				
02	MV22B	166724	1A1 2M4				
5	MV22B	168305	1A1				
06	MV22B	166685	2M4				
7	MV22B	168330	1A1 2M4				
9	MV22B	168330	2M4				
10	MV22B	168305	1A1				
11	MV22B	168233	1A1				
16	MV22B	168305	2M4				
TOTAL THIS PAGE							
BROUGHT FORWARD				455.3			
TOTAL TO DATE							
*See page 2 for codes.				TOTAL ACCUM. PILOT TIME	TOTALS, THIS FISCAL YEAR		

AFH 4 - I.F. range T - TACAN
O - OMNI S - Simulated
R - Radar J - Jet

LANDINGS				CATAPULT	STD INST. APPR. COMPLETED			REMARKS
CARRIER	EC	SEA/LAND			NO.	TYPE	S	
								(3), (b)(6), (b)(7)
								2240
								(3), (b)(6), (b)(7)
								2240 2242
								1 SCOTT
								2784 2781
								(3), (b)(6), (b)(7)
								2240 2040
								(3), (b)(6), (b)(7)
								2040 2240
								(b)(6), (b)(7)
								2242 2040
								(3), (b)(6), (b)(7)
								2242 2782
								(3), (b)(6), (b)(7)
								2240 2282 2040
								(3), (b)(6), (b)(7)
								2040

CERTIFIED A CORRECT RECORD:

Pilot

Approved:

C.O. or authorized deputy

Pilot-time report submitted through last (or, this month; no

ENCLOSURE

Log Book for Cpl MOORE, JACOB 1/1/2019 - 3/31/2022

Generated on 04/28/2022 1018 UTC-04:00

Date Range Totals			Type	Hours					T&R						NAVFLIR
TMS	Device			TPT	SCT	NIGHT	HLL	LLL	T&R 1	T&R 2	T&R 3	T&R 4	T&R 5	T&R 6	
Totals					486.1	182.0	72.6	95.5							
10/1/2019	MV-22B	168649	Aircraft		3.5				1080						V6Z81QK
10/2/2019	MV-22B	166384	Aircraft		1.5				1081						ZGOAVI2
10/4/2019	MV-22B	169317	Aircraft		1.5				1082						C12ZR2C
10/8/2019	MV-22B	168644	Aircraft		1.5				1083						NVM8TYV
10/10/2019	MV-22B	168648	Aircraft		1.5				1084						SMVTJ03
10/11/2019	MV-22B	168648	Aircraft		1.5				1085						B4KCFW
10/16/2019	MV-22B	168684	Aircraft		2	1.7			1240						8K1TCW5
10/21/2019	MV-22B	168646	Aircraft		1.5				1086						SO02PF1
10/22/2019	MV-22B	168295	Aircraft		2				1340						R1SIDYN
10/26/2019	MV-22B	166384	Aircraft		3.4				1341						E81CG08
10/27/2019	MV-22B	168649	Aircraft		3.5				1341						KMUD65M
10/30/2019	MV-22B	168651	Aircraft		3.5				1440						GSEGY3X
11/3/2019	MV-22B	168648	Aircraft		3.5	3.5	3.5		1640	1641					CPV77NK
11/5/2019	MV-22B	168329	Aircraft		2	2	2		1642						JUOKQ9
11/12/2019	MV-22B	168684	Aircraft		2				1340	1540					HY4Z7VL
11/15/2019	MV-22B	168684	Aircraft		2.5				1830	1831					OZ43SXL
11/19/2019	MV-22B	168647	Aircraft		2	2			1240						M9XNPWY
11/20/2019	MV-22B	168295	Aircraft		2.3	2.3			1240						ORX96NC
11/20/2019	MV-22B	168683	Aircraft		1.8	1.8			1240						EBAIUDB
11/22/2019	MV-22B	168683	Aircraft		3.5	0.5			1084	1240					PIKRRMQ
12/3/2019	MV-22B	168645	Aircraft		3.5				1840						4ZGZPV9
12/5/2019	MV-22B	167921	Aircraft		3				1841	6030	6033	6080			9RWFUZO
12/6/2019	MV-22B	168676	Aircraft		3.5				1083						J3FH6D6
12/9/2019	MV-22B	168688	Aircraft		4	4	4		1642						XU91XTB
12/11/2019	MV-22B	168650	Aircraft		3				1840						RZAZT77
1/24/2020	MV-22B	168351	Aircraft		0.4				6033						21AEA0H
1/30/2020	MV-22B	168231	Aircraft		2.3				6033	2240					KVW3KKE
2/3/2020	MV-22B	168351	Aircraft		0.5										HSSOMNK
2/4/2020	MV-22B	166724	Aircraft		3.5				2240						YORX78E
2/11/2020	MV-22B	168622	Aircraft		2.5				2640	2240					AVI2VTZ
2/14/2020	MV-22B	168019	Aircraft		0.5										S6AP3ST
2/19/2020	MV-22B	165956	Aircraft		3.5				2242	2641	2140				K9UPN8A
2/24/2020	MV-22B	165956	Aircraft		0.3										BT1XYG
2/25/2020	MV-22B	165956	Aircraft		0.5										FN8FBVE
2/25/2020	MV-22B	166484	Aircraft		0.5										Q8DFJRK
2/26/2020	MV-22B	168019	Aircraft		3.3				2242						XTEGSQ4
3/2/2020	MV-22B	168231	Aircraft		3				2282	6900					AQ7XT5W
3/3/2020	MV-22B	168351	Aircraft		0.1										N333D1U
3/6/2020	MV-22B	166724	Aircraft		1.7				2240	6033					ZIB9UJN
3/6/2020	MV-22B	168622	Aircraft		7.8				6033						XGTYLFG
3/9/2020	MV-22B	168622	Aircraft		0.3				4180	6033					MA9GVNK
3/9/2020	MV-22B	168231	Aircraft		3.5	2.5	1.7		2282	2340	4180	4181	6900		CA5Q3DU
3/11/2020	MV-22B	168351	Aircraft		0.4										OKKJEW
3/12/2020	MV-22B	166484	Aircraft		4.5				2242	2282	2641	4180			2C12IQG
3/15/2020	MV-22B	168231	Aircraft		7				2240						B2SQQFS
3/18/2020	MV-22B	168226	Aircraft		0.5										AXLAWA9
3/24/2020	MV-22B	168351	Aircraft		3.3				2242	2282	6033				IAMFZ46
4/2/2020	MV-22B	168622	Aircraft		3.5	3.5	3.5		2282	2341					X0WVLJO
4/4/2020	MV-22B	168351	Aircraft		3.5	3.5	3.5		2341	2642					2F5FHEP
4/7/2020	MV-22B	168231	Aircraft		3.5	3.5	3.5		2341	2642					JQDS4X1
4/9/2020	MV-22B	168228	Aircraft		1				6033						LOVCXOZ
4/14/2020	MV-22B	166724	Aircraft		1				2240						Z13QLBG
4/16/2020	MV-22B	165956	Aircraft		3.5	3.5		3.5	2380	2381					3PW9Z38
4/21/2020	MV-22B	166724	Aircraft		1.5				2541	2540	6150	6033	2240		OWANSNU
4/23/2020	MV-22B	168607	Aircraft		3.5	3.5		3.5	2383	2282	2382				E3DXPO8
4/24/2020	MV-22B	166724	Aircraft		3.5	3.5		3.5	2382	2383	2542	2543	6151		HJKH5PN
5/13/2020	MV-22B	168231	Aircraft		0.5				6033						PE7GM7X

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5/14/2020	MV-22B	168622	Aircraft		0.5												4C1PRW7
5/15/2020	MV-22B	168228	Aircraft		3.5	3.5		3.5	2282	2381							HMOR4ZL
5/28/2020	MV-22B	168228	Aircraft		3.5				2780								6DKVKS9
6/1/2020	MV-22B	168622	Aircraft		0.5	0.5	0.5		2341								VV6C7EY
6/3/2020	MV-22B	168231	Aircraft		4				2242								25YCWH7
6/15/2020	MV-22B	168230	Aircraft		0.5												DO91FRK
6/18/2020	MV-22B	166484	Aircraft		2.3				2242	2640	2940						S8ISGRA
6/23/2020	MV-22B	168230	Aircraft		4				2240	3040							2LV5UKW
6/24/2020	MV-22B	168622	Aircraft		4.5				2240	6033							UUJT0N4
6/27/2020	MV-22B	168622	Aircraft		4				2240	3040							07GRRBF
6/29/2020	MV-22B	168673	Aircraft		1.3				2240								6YBFZ8S
7/1/2020	MV-22B	168673	Aircraft		3.5				4480								05GV5II
7/8/2020	MV-22B	168305	Aircraft		0.3												UEDD93Y
7/16/2020	MV-22B	168666	Aircraft		2.3	2.3		2.3	2383	2282	2643						7QA2KD5
7/21/2020	MV-22B	168230	Aircraft		0.5	0.5		0.5	6033								P8T4E2T
7/23/2020	MV-22B	168230	Aircraft		1				6033								K1MNO0D
7/29/2020	MV-22B	168622	Aircraft		0.7				6033								WQSDU4F
7/30/2020	MV-22B	166724	Aircraft		0.5												0DA7Z6C
8/5/2020	MV-22B	165956	Aircraft		3.5	3.5	2.5	1	2341								8W2WH35
8/11/2020	MV-22B	168673	Aircraft		3.3				2282	2641	2242						QWGANW7
8/13/2020	MV-22B	165956	Aircraft		2.5				2242	2840							N5FCIDE
8/14/2020	MV-22B	168228	Aircraft		0.5												H4AW5AK
9/1/2020	MV-22B	168305	Aircraft		3.5				2242	4041							8E1SRZP
9/9/2020	MV-22B	168231	Aircraft		0.5												XJA7JHN
9/14/2020	MV-22B	168231	Aircraft		10				2240								MH6KYKF
9/19/2020	MV-22B	168228	Aircraft		3.3	3.3		3.3	2380								KPNZ0M1
9/22/2020	MV-22B	168228	Aircraft		1.8				2240								GJ70SBD
9/24/2020	MV-22B	166687	Aircraft		1.1												GPUZZF9
9/29/2020	MV-22B	168228	Aircraft		0.6				2940	6033							74SBDQB
9/30/2020	MV-22B	166724	Aircraft		0.3	0.3	0.3										14M2GVS
11/7/2020	MV-22B	166484	Aircraft		0.5												ICGXWHL
11/8/2020	MV-22B	166484	Aircraft		3												MB97W1J
11/10/2020	MV-22B	165956	Aircraft		3.3	3.3	0.3	3	2381								3M0VNK6
11/20/2020	MV-22B	168231	Aircraft		17.1				2781	2784							UQOEL6C
11/23/2020	MV-22B	168305	Aircraft		0.4												PB2PS0X
11/24/2020	MV-22B	166484	Aircraft		0.3												K0BLMV4
12/7/2020	MV-22B	168231	Aircraft		2				2242	3040							3VHX27N
12/9/2020	MV-22B	168673	Aircraft		3	3		3	2282	2383	2643						92Z8S1Z
12/10/2020	MV-22B	166724	Aircraft		4	4		4	2784	3040	3140	3440	3441				Q87BS1M
12/14/2020	MV-22B	168230	Aircraft		3.6				2240	3040							PR0H297
12/15/2020	MV-22B	168228	Aircraft		3.5				2541	2781	6151						TJ4CULR
12/16/2020	MV-22B	168228	Aircraft		5	0.5	0.5		2242	3040							470NDSR
1/5/2021	MV-22B	166484	Aircraft		3.3	1			2282	2240	6030	6033	6080				0B39L39
1/12/2021	MV-22B	168019	Aircraft		3.2				2240								GVGFCMU
1/13/2021	MV-22B	167913	Aircraft		3.3	3.3		3.3	2380	2381	3441	3440					MYO30MP
1/22/2021	MV-22B	168228	Aircraft		0.4												G2RBITO
1/28/2021	MV-22B	168228	Aircraft		0.5												R4MQVDL
2/2/2021	MV-22B	166484	Aircraft		1.8	1.8	0.3	1.5	2382	2383	2643	2140	2642	2282			JHTH0DH
2/4/2021	MV-22B	166687	Aircraft		0.5												9HY6YAC
2/25/2021	MV-22B	168602	Aircraft		2				2781	3040							KCL617L
3/15/2021	MV-22B	168673	Aircraft		3				2242								3IDRC1W
3/18/2021	MV-22B	168630	Aircraft		4.5				2242	4480							DEBFQ93
3/23/2021	MV-22B	167913	Aircraft		3.3	3.3	3.3		2341								425D3WV
3/25/2021	MV-22B	168607	Aircraft		3				2780	2781	3441						7AYBLYF
3/27/2021	MV-22B	168602	Aircraft		0.3												SKT7XWW
3/30/2021	MV-22B	168228	Aircraft		3.3	3.3	2	1.3	2383								UXTB19H
4/5/2021	MV-22B	168622	Aircraft		3.3	3.3		3.3	2383	2543	6151						RUNB24Z
4/6/2021	MV-22B	168622	Aircraft		3.3	3.3		3.3	2383								5NQQZZ7
4/8/2021	MV-22B	168622	Aircraft		3.3	3.3		3.3	2383								YC1Z1TS
4/13/2021	MV-22B	168602	Aircraft		2				2242	6033							EMU3B6E
4/15/2021	MV-22B	168622	Aircraft		1.5	1.5		1.5	6033	2381							609WRT6
4/20/2021	MV-22B	168673	Aircraft		5				2242	3040	6033						9JF3WHU
4/22/2021	MV-22B	168602	Aircraft		1.5				2242	3040							JTCJXPH

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4/24/2021	MV-22B	168673	Aircraft		5				2242	3040					45YF7QK
5/6/2021	MV-22B	168673	Aircraft		3.5				2242	3040	2282				DRIV8QC
5/7/2021	MV-22B	166687	Aircraft		4	4		4	3140	2381					ANW9X88
5/10/2021	MV-22B	168673	Aircraft		3.3	3.3		3.3	2383						ZC27GUK
5/11/2021	MV-22B	168228	Aircraft		3.3	3.3		3.3	2380	6033	2282				H93CYNB
5/18/2021	MV-22B	166687	Aircraft		0.3	0.3	0.3		2341						QWV4R85
5/24/2021	MV-22B	166687	Aircraft		3	3	3		2340						VC8NXE5
5/27/2021	MV-22B	166687	Aircraft		3.5	3.5	3.5		2782	2942					HZP68WX
6/1/2021	MV-22B	168673	Aircraft		3.7				4480	2242					ZXBHW18
6/15/2021	MV-22B	168228	Aircraft		3.5	3.5		3.5	2381						SHIQUPT
6/17/2021	MV-22B	167913	Aircraft		3.3	3.3	3.3		2341						G76WJNA
7/5/2021	MV-22B	166687	Aircraft		3	3		3	2383	2282	6900	6033			C714HX3
7/7/2021	MV-22B	168602	Aircraft		4	2		2	2240	2380					BH5QPLC
7/10/2021	MV-22B	168228	Aircraft		3.3	2.8		2.8	2381						TN79S5E
7/15/2021	MV-22B	168228	Aircraft		3.3	3.3	3.3		2282	2340					33V4LV7
7/22/2021	MV-22B	167913	Aircraft		4	4	3.3		2340						09QJGN9
7/26/2021	MV-22B	167913	Aircraft		4	2.4		1.5	2380						IWUCONU
8/7/2021	MV-22B	168228	Aircraft		6.5				2781	3040	3140	3340	2282		QFHDO0B
8/11/2021	MV-22B	167913	Aircraft		1.7	1.7		1.7	2282	2381					0SQ6Y2X
8/12/2021	MV-22B	167913	Aircraft		3.5	3.2	0.4	2.8	2282	2383					P2J7M4R
8/23/2021	MV-22B	168228	Aircraft		3.6	2	2		2341						53KMX78
8/30/2021	MV-22B	168228	Aircraft		3.7				2242						3HQ7ZIB
8/31/2021	MV-22B	168622	Aircraft		3.7				6350	2541	2242				7SMCMQE
9/6/2021	MV-22B	168622	Aircraft		3.5	3		3	2382	2383					13JUS1B
9/7/2021	MV-22B	168673	Aircraft		3.2	3.2	0.2	3	2383						QYV7KW
9/9/2021	MV-22B	168673	Aircraft		3.8	3.8	1	2							XNM33BH
9/15/2021	MV-22B	168602	Aircraft		3.5	3.5	3.1		2780	2782					6U0QC6T
9/16/2021	MV-22B	168602	Aircraft		3				4041	5040	2242				NW17USH
9/17/2021	MV-22B	167913	Aircraft		3.5	3.5	3.1		2341						01A0W6C
9/20/2021	MV-22B	168673	Aircraft		3.6	3.6	3		2782						4PFX9QX
9/23/2021	MV-22B	168622	Aircraft		3.4	3.4	2.8	0.6	2341	2383	2282				VEET43A
9/24/2021	MV-22B	167913	Aircraft		3.5				2242	2282					6USKY1M
10/27/2021	MV-22B	168305	Aircraft		3	3		3	2383	2643					A05LODJ
10/29/2021	MV-22B	166724	Aircraft		4	3		3	2381	2643					QRQ8ZEA
11/9/2021	MV-22B	166724	Aircraft		3.3				2242	2641					PS2W7FP
11/16/2021	MV-22B	166724	Aircraft		3.5				2780	2781	2784				7IRO9A6
11/23/2021	MV-22B	166724	Aircraft		3				2242						JDX2BJC
11/23/2021	MV-22B	166724	Aircraft		3.5				2240	2640					YSBAFYL
11/30/2021	MV-22B	166724	Aircraft		3.3				2840	2242	2541	2282			UGBDGP2
12/7/2021	MV-22B	166724	Aircraft		3.3				2240	4081					ZX8028F
1/6/2022	MV-22B	168330	Aircraft		4.4	4.4		4.4	2383	2643	2942				ES5IJK7
2/1/2022	MV-22B	168019	Aircraft		3.3				2242	2641	6030	6080	6033		5FNFDC5
2/8/2022	MV-22B	168651	Aircraft		3.3	3.3	3.3		2341	2642					QON9BSJ
2/19/2022	MV-22B	168233	Aircraft		1				2240	3040					STA2L7Z
3/1/2022	MV-22B	168305	Aircraft		2.8				2240						VGN2HVX
3/2/2022	MV-22B	166724	Aircraft		3.3				2240	2282	3040				3PZ1W0V
3/5/2022	MV-22B	168305	Aircraft		3.3				2784	2781					BRVMLFA
3/6/2022	MV-22B	166685	Aircraft		3.1				2240	3040					386E6ED
3/7/2022	MV-22B	168330	Aircraft		3.3				3040	2240	2282				EJBUQS4
3/9/2022	MV-22B	168330	Aircraft		2.8				2242	3040					D9XUMR3
3/10/2022	MV-22B	168305	Aircraft		2.3	2.3	2.3		2282	2782					J87UC5X
3/11/2022	MV-22B	168233	Aircraft		3.3	3.3	3.3		2340	2282	3040				M7XIHQU
3/16/2022	MV-22B	168305	Aircraft		3.3				3040						NFS5PL2
3/17/2022	MV-22B	168330	Aircraft		3.3				2242	2282	2641				NHQ5ZXJ

Career Totals		Hours				
	TMS	TPT	SCT	NIGHT	HLL	LLL
Totals	All		486.1	182.0	72.6	95.5
	MV-22B		486.1	182.0	72.6	95.5

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Proficiency	Satisfactory	Unsatisfactory	Incomplete				
Instructor Name	Event	Method	Needs Additional Training	Overview	Plan/Brief	Execution	Instructor Comments
	FAM(1)-1032						
	FAM(1)-1033						
	FAM(1)-1080						
	FAM(1)-1081						
	FAM(1)-1082						
	FAM(1)-1083						
	FAM(1)-1084						
	FAM(1)-1085						
	FAM(1)-1086						
	INST(1)-1240						
	CAL(1)-1340						
	CAL(1)-1341						
	FORM(1)-1440						
	FCLP(1)-1540						
	NS(1)-1640						
	NS(1)-1641						
	NS(1)-1642						
	CARGO(1)-1730						
	REV(1)-1830						
	REV(1)-1831						
	REV(1)-1840						
	REV(1)-1841						
(b)(3), (b)(6), (b)(7)c	FCF A-card	Logged	No	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical descent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2 position until training complete.	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical descent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2 position until training complete.	Good SA of other plane and maneuvers	Be louder on ICS, and more assertive when calling out other planes location.
(b)(3), (b)(6), (b)(7)c	FCF A-card	Logged	No	FCF A-card on a/c 07 with multiple landings, all in unique ways.	Multiple landings to apex of Oak Grove, with extensive hover work at varying altitudes, modes, drifts, and even crew chief hover work. Approaches into Fayetteville and TACAN 23 to KNCA.	Excellent calls all day. Responsive to minor guidance. Strong SA with 53 traffic on Rwy 5 at Oak Grove and 22 at LZ Emu. Good clearance calls with trees and drift.	Well done. Stay in the books since flights will become more complicated and task management critical with additional CRM call requirements.
(b)(3), (b)(6), (b)(7)c	CAL(1)-1340	Logged	No	Departed KNCA to Oak Grove Complex. Completed 5 CALS at LZ BAT.	Departed KNCA to Oak Grove Complex. Completed 5 CALS at LZ BAT.	Student showed steady improvement through flight in distance estimation. Showed good situational awareness throughout.	Student needs improvement in standard terminology calls, and wind mitigation in mic while landing.
(b)(3), (b)(6), (b)(7)c	CAL(1)-1340	Logged	No	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical descent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2 position until training complete.	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical descent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2 position until training complete.	Good calls to deck	Work on wind noise mitigation, work on answering pilots quicker.
(b)(3), (b)(6), (b)(7)c	RVL(1)-1540	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	RVL(1)-1540	Logged	No	Flight Elvts 1-2 departed KNCA @ 1500 to conduct RVL training. Flight performed 10 RVL's and RTB KNCA for full stop.	SNM was prepared but could have used more studying. SNM was knowledgeable on RVL's but there is always room for improvement.	SNM was told to communicate more and clearly. SNM had minor moments of silence in the RVL environment.	SNM could use work but is ready for further RVL training.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	DEPARTED KABO AS A	N/A	N/A	N/A
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2383	Logged	No	DEPARTED KNCA AS A	N/A	N/A	N/A
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Flight departed as a single flying down the blue line to LZ Gulf where we conducted 6 CALS utilizing both	Flight flown as briefed, SNM was an active member of the brief and understood the plan.	Flight flown as briefed, SNM was an active member of the brief and understood the plan.	SNM had high SA and provided accurate distance estimation.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Flight departed as a single flying down the blue line to LZ Gulf where we conducted 6 CALS utilizing both	Flight flown as briefed, snm was an active member of the brief and understood the plan.	Flight flown as briefed, snm was an active member of the brief and understood the plan.	SNM had high SA, distance estimation was accurate all night.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Conducted Tail Gun training in the vicinity of BT-9	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Needs to work on making STAR calls.
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Needs to make better STAR calls while employing the M240
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Needs to work on STAR calls
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Needs to make better STAR calls
(b)(3), (b)(6), (b)(7)c	NSLL(2)-2382	Logged	No	Flight departed MCAS New River and conducted LAT on the VR-084 LAT route the went to LZ BAT to finish out the flight with CALS until RTB	SUI understood all terms and the plan of the flight	SUI was able to conduct all maneuvers with good SA throughout the flight. All training was conducted IAW MV-22B T&R manual	Keep in the pubs. work on wing mitigation

(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical decent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2	Departed KNCA at 1415L as a section towards the VR-84. Entered LAT route at point B via tactical decent, once in the LAT environment we conducted multiple SO/TO/RO and multiple tac form maneuvers, exited LAT route at point F via zoom climb, headed to LZ BAT and conducted multiple bounces as the lead and dash 2	Good calls	none
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Flight conducted as briefed.	Execution occurred as briefed.	Flight departed KNCA and flew directly to the 042 LAT route where we conducted APLN LAT and conversion LAT to include a SO/TO/ and RO. Flight continued LAT until landing at mountain empire where we conducted a pilot hotseat. Once hotseat complete, the flight departed mountain empire and re-entered the 042 and continued LAT until the end of the route. The flight conducted a zoom climb out of the route. The flight then flew directly to LZ Bat and performed a single CAL, then proceeded back to KNCA for a full stop.	SA was high throughout the flight. Good clearing calls. Areas for improvement include speaking up so you can be heard and more frequent updates on obstacles in the route.
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Flight departed as a section for the VR-084 IOT conduct LLL LAT. Afterwards, flight	N/A	SNM shows good understanding of Crew duties during LLL LAT.	N/A
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Flight departed as a division of 4 for the W-122 IOT conduct Tacform. Afterwards,	N/A	SNM showed good understanding of duties during DIV TacForm	N/A
(b)(6), (b)(7)c	Latent/RO	Logged	No	Flight departed as a division of 4 for the W-122 IOT conduct Tacform. Afterwards,	N/A	SNM Showed good understanding of duties during DIV CALs	N/A
(b)(6), (b)(7)c	Latent/RO	Logged	No	Flight departed KNCA and conducted initial division CALs for a full stop at YGR.	Crewchief was knowledgeable going over the T&R and was prepared ahead of time for the flight. Was visible the crewchief understood the requirements expected of him.	Crewchief was able to conduct 5 initial landings and safely get the aircraft on deck. SNM was able to conduct normal duties and be active in the CAL environment.	SNM needs to work on wind mitigation, at times it was difficult to understand what was being said.
(b)(6), (b)(7)c	Latent/RO	Logged	No	Flight took off from Moron Airbase and proceeded to NAS Rota to conduct night systems FCLPs and Division	SUI was able to understand briefed plan and ask appropriate questions concerning the flight.	SUI was able to maintain communication with all aircrew on the location of all aircraft in the flight.	N/A
(b)(3), (b)(6), (b)(7)c	Latent/RO	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Flight departed KNCA and conducted division LAT for a full stop at YGR.	Crewchief was knowledgeable during the T&R and was prepared for the flight.	Crewchief in the LAT environment was very aware and was able to perform all crew duties.	Crewchief is recommended to continue with training as is.
(b)(3), (b)(6), (b)(7)c	Latent/RO	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	Latent/RO	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Conducted GTR at the Navy DARE Range.	SNM understood the brief and plan. SNM did well in the walk through.	SNM understands the mechanics of GTR and is able to implement the techniques when presented with threats.	SNM will benefit from increased exposure to GTR. SNM should focus on the setup of ASE, nomenclature of the system, threat analysis, and theory of operation.
(b)(3), (b)(6), (b)(7)c	Latent/RO	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	Latent/RO	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Departed KNCA as a single and conducted 5 FCLP landings at the LHD deck. Departed The LHD deck and conducted LAT on the VR-084. Conducted L hour management into LZ Bat and conducted multiple CAL landings. Departed for RTB to	Departed KNCA as a single and conducted 5 FCLP landings at the LHD deck. Departed The LHD deck and conducted LAT on the VR-084. Conducted L hour management into LZ Bat and conducted multiple CAL landings. Departed for RTB to KNCA.	SNM showed continual progression throughout time of flight. Had clear concise calls. Made concise and timely corrective calls to the pilots.	SNM needs to work on being more confident in his abilities.
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Flight took off from Moron Airbase and proceeded to NAS Rota to conduct night systems FCLPs and Division	SUI was able to understand briefed plan and ask appropriate questions concerning the flight.	SUI was able to execute clear and concise calls to the deck IOT execute a safe landing	N/A
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	conducted IAW T&R	conducted IAW T&R	conducted IAW T&R	conducted IAW T&R
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	flight conducted a tactical scenario i/o moron air base	student postured well and took good notes as well as asked questions to help set himself up for the flight	student was able to back the pilots up well and take key information from the comms passed. student was also able to reconfigure the plane to take litter bound troops. student was able to demonstrate knowledge of the rmws and when to employ it and its ground capabilities	the tunnel is a hard spot to be when in a tactical scenario try to help the pilots. with plotting on maglabs of the cms as well as back them up with what has been passed over the comms for tasking
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R
(b)(3), (b)(6), (b)(7)c	Latent/RO	Logged	No	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R	Completed IAW MV-22B T&R

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Cpl MOORE, JACOB M - MV-22B Crew Chief
Crew Performance between 1/1/2015 - 3/18/2022
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(b)(3), (b)(6), (b)(7)c	AD(4)-4042	Logged	Yes	SNM needs to be more prepared for the mission plan. SNM was overall unorganized but still performed well. Could benefit by planning ahead and knowing what needs to get done prior to it happening.	SNM understood what was expected of him but did not seem confident with the overall situation.	SNM required more supervision from instructor and overall unorganized. SNM was good about keeping the pilots on their toes about surface winds and relaying information to jump master.	SNM would benefit from more exposure on ramp, but due to weather wasn't able to attain it. SNM needs to preop gear prior to going to the plane. Overall SNM needs to display more confidence and remember the basics.
(b)(3), (b)(6), (b)(7)c	AD(4)-4043						
(b)(3), (b)(6), (b)(7)c	AD(4)-4043	Logged	Yes	Departed KNCA as a single at 1840 to LZ Kite for external operations. Conducted 3 externals then departed LZ Kite for RTB KNCA in time for hotseat.	Departed KNCA as a single at 1840 to LZ Kite for external operations. Conducted 3 externals then departed LZ Kite for RTB KNCA in time for hotseat.	Student conducted 2 externals while giving calm, precise directional calls allowing for safe operations with the load. Student did however forget a couple calls during hooking and unhooking of the load.	Student needs to study voice signals for external operations before the next attempt of completing this code.
(b)(6), (b)(7)c	AD(4)-4043	Logged	No	Departed KNCA and proceeded down the blue line to LZ Albatross to conduct initial day single point externals. Conducted 1 demonstration pick and five picks per student. Upon completion of external operations, departed LZ Albatross and RTB to KNCA for hotseat.	Conducted preflight T&R brief and preflight of aircraft hook system and pendants.	CCUI was able to safely conduct external pickups with minimal input from instructor and was able to drop of load within 10 meters of desired drop off point. Student missed a few individual calls on a couple of passes but corrected each deficiency on the subsequent passes.	No Comment
(b)(3), (b)(6), (b)(7)c	AD(4)-4082						
(b)(3), (b)(6), (b)(7)c	AD(4)-4083	Logged	Yes	Cpl Moore attempted to complete his initial 4083X at LZ kite during a NSI check with Cpl Halovich.	Cpl Moore was well prepared for the T&R. SNM was able to be tested on his knowledge of the flights and knew what the performance standards were. During the brief SNM was attentive, knew the plan, and the SOM and had zero questions.	Due to the NSI check Cpl Moore did not get to inspect the load, or conduct 5 picks. SNM standard terminology was lacking during the word vomit of the EXT calls. SNM was getting better with every pick, but would leave out key calls to ensure the plots knew the hook was clear or hooked up.	Cpl Moore only conducted 3 picks. SNM will need to be shown the load to inspect it and ensure it is safe to pick up and will need to conduct a minimum of 2 more picks. I recommend SNM attempts this code again with no timeline so he can get as many picks as time allows.
	AD(4)-4084						
	AI(4)-4140						
	AI(4)-4141						
	AI(4)-4142						
	AI(4)-4143						
(b)(3), (b)(6), (b)(7)c	DEPARTED KABQ AS A	Logged	No	DEPARTED KABQ AS A	N/A	N/A	N/A
	DEPARTED KABQ AS A	Logged	No	DEPARTED KABQ AS A	N/A	N/A	N/A
	DWS(4)-4240						
	DWS(4)-4241						
	DWS(4)-4242						
	DWS(4)-4243						
	DWS(4)-4244						
	DWS(4)-4245						
	DCM(4)-4340						
	CBRN(4)-4430						
	CBRN(4)-4431						
(b)(6), (b)(7)c	CG(4)-4481	Logged	No	Flight departed KNCA and transited to the USS Wasp for 1 and a half hours of CQ landings. Flight then RTB to KNCA for full stop.	SNM was knowledgeable on carrier operations and had very good discussion topics prior to the flight.	SNM was able to conduct clear, precise and safe calls. Was capable of maintaining composure and was overall a good crew member.	Work on wind mitigation.
	CG(4)-4482						
	CG(4)-4483						
	SEA(4)-4540						
	RVE(4)-4580						
	ADGR(4)-4640						
	BI(4)-4740						
	BK(4)-4741						
	AD(4)-4840						
(b)(3), (b)(6), (b)(7)c	FRSCC(5)-5140	Logged	No	Departed LEMO as a section towards LERT. Once at LERT SNM took his student to conduct a face to face brief with jumpmaster prior to conducting para ops. SNM ensure jumpers were embarked and safely	SNM made sure to appropriately T&R his student before flight, explain expectations for flight, and ensure any questions the student had were answered prior to flight.	SNM taught student how to properly set up the cabin, making sure to stress the importance of pre-oping the anchor cable. Also making sure there would be a clear path for jumpers to exit the aircraft.	SNM is highly recommended for BICC and follow on instructor designations
	FRSCC(5)-5141						
	FRSCC(5)-5142						
	FRSCC(5)-5143						
	TG(5)-5430						
	TG(5)-5431						
	TG(5)-5432						
	TG(5)-5433						
	TG(5)-5434						
	TG(5)-5435						
	TG(5)-5436						
	DWS(5)-5530						
	DWS(5)-5531						
	DWS(5)-5533						
	LAT(5)-5630						
	LAT(5)-5631						
	NSF(5)-5731						
	NSF(5)-5732						
	DCM(5)-5831						

UNCLASSIFIED//~~FOR OFFICIAL USE ONLY~~
Cpl MOORE, JACOB M - MV-22B Crew Chief
Crew Performance between 1/1/2015 - 3/18/2022
 Generated on 03/24/2022 1046 UTC-04:00

	DCM(5)-5832						
	NS(5)-5931						
	NS(5)-5933						
	NS(5)-5934						
	NS(5)-5935						
	NTPS(6)-6030						
	NTPS(6)-6031						
	NTPS(6)-6032						
(b)(3), (b)(6), (b)(7)c	LEMO-0001	Logged	No	FCF A-card acceptance for a/c 07.	FCF A-card. Solid CRM review	Nr sensor mismatch, failed GPS, EAPS functional failure	Strong SA
(b)(3), (b)(6), (b)(7)c	LEMO-0002	Logged	No	Flight was completed in accordance with current T&R.	Student was instructed on the review of Emergency Procedures.	Student satisfactorily completed the Emergency Procedure Review in flight while retaining high S/A.	Student needs to review step 19 procedures for future flights to be comfortable in the cockpit on start up.
	CRM(6)-6080						
	CRM(6)-6091						
(b)(6), (b)(7)c	M240-0001	Logged	No	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Conducted single and section TG in the vicinity of BT-9 IAW T&R	Needs to work on making better STAR calls while employing the M240
	M240-0002	Logged	No	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Conducted night system single and section Tail Gun training in the vicinity of BT-9 IAW T&R	Needs to work on making better STAR calls
	GAU-16(6)-6250						
	GAU-16(6)-6251						
(b)(3), (b)(6), (b)(7)c	GAU-16(6)-6252	Logged	No	Departed LEMO as a section out over international waters to conduct 50 caliber tail gunnery.	SNM was able to talk through T&R intelligently.	SNM was able to effectively employ weapon system and lay down some freedom.	Recommend SNM continues with syllabus to learn the ways of the GAU.
	GAU-21(6)-6351						
	TRK(6)-6700						
(b)(3), (b)(6), (b)(7)c	RVL-100001	Logged	No	Departed KNCA@ 1500 for RVL training. Conducted 10 RVL landings then RTB	SNM was knowledgeable on RVL's.	SNM was told they could work on communication in RVL conditions.	Could use work on communication and mitigation.
(b)(3), (b)(6), (b)(7)c	RVL-100002	Logged	No	DEPARTED KABQ AS A	N/A	N/A	N/A

Event Proficiency VMM-261 - MV-22B Crew Chief

Generated on 05/10/2022 1101 UTC-04:00

Days Until Expired as of 05/10/2022

>= 90 Days

60-89 Days

30-59 Days

< 30 Days

Expired

"W" indicates Waived, "D" indicates Deferred

	Familiarization (FAM(2))				Confined Area Landings (CAL(2))			
	ACAD: Reference Publications	ACAD: Air to Air Refueling	LAB: Msn Aux Tank System	LAB: Cargo Loading	CAL: Single CAL	CAL: Section CAL	ACAD: LAT for EAC	ACAD: TAC Aircrew Considerations
	2012	2013	2020	2027	2240	2242	2610	2611
Permanent								
Cpl MOORE, JACOB M.	No Refly	No Refly	No Refly	No Refly	No Refly	03/17/2023	No Refly	No Refly

ENCLOSURE (12)

Low Altitude Tactics (LAT(2))					Air Logistics Support (ALS(3))		Requirement, Qualification, Designation (RQD(6))			
LAB: LAT Walk Through	LAT: LAT Maneuvers / Rte	LAT: Section LAT	NS LAT: HLL Section LAT	NS LAT: LLL Section LAT	ACAD: Six Functions	ALS: ALS Msn	NATOPS Open Book	NATOPS Closed Book	NATOPS Oral Exam	NATOPS Eval
2620	2640	2641	2642	2643	3011	3040	6010	6011	6012	6030
No Refly	No Refly	03/17/2023	10/06/2022	07/06/2022	No Refly	03/16/2023	01/31/2023	01/31/2023	01/31/2023	02/26/2023

Emergency Procedures (EP(6))	Crew Resource Management (CRM(6))	
6033	CRM Refresher	CRM Eval
6033	6070	6080

05/02/2022	07/31/2023	03/23/2023
------------	------------	------------



VMM-261 NATOPS AUDIT SHEET



NAME: SPEEDY

DATE: 6 JUN 21 AUDITOR:

(b)(3), (b)(6), (b)(7)c

SECTION I - GENERAL

PRIVACY ACT STATEMENT - SIGNED AND DATED - RECORD OF DISCLOSURE

✓

PART A

- △ NATOPS HIGH PERSONNEL TRAINING QUALIFICATION JACKET REVIEW AND CERTIFICATION RECORD (3760 32A)
- △ REVIEWED & CERTIFIED - REPORTING ANNUALLY CHANGE IN HIGH STATUS

✓

PART B

- △ PILOTS - ONLY MOST CURRENT PCS (DIFOP) ORDERS
- △ LISTED AIRCREW - VOLUNTARY FLIGHT STATUS LETTERS
- △ LETTERS OF SUSPENSION - REVOCATION PERMANENTLY RETAINED

NA

PART C

- △ MOST RECENT ANNUAL FLIGHT PHYSICAL CHIT (6110 2070)
- △ ALL GROUNDING AND SUBSEQUENT UP CHITS SINCE ANNUAL
- △ WAIVER FORMS PERMANENTLY RETAINED

✓

PART D

- △ FLIGHT EQUIPMENT RECORDS CS (DIFOP) ORDER (3760 32B)

✓

SECTION II - QUALIFICATIONS AND ACHIEVEMENTS

PART A

- △ PERMANENT RECORD OF ALL FUNCTIONAL DESIGNATIONS (3760 32C)
- △ RETENTION OF DESIGNATION LETTERS FOR ALL DESIGNATIONS (3760 32C)

✓

PART B

- △ PERMANENT RECORD OF ALL QUALIFICATIONS NOT INCLUDED IN PART A
- △ RETENTION OF DESIGNATION LETTERS FOR ALL QUALIFICATIONS (3760 32C)

PART C

- △ PERMANENT RECORD OF CRM TRAINING AND FLIGHTS

SECTION III - TRAINING

PART A

- △ RECORD OF ALL SCHOOLS AND COURSES ATTENDED (3260 32E)
- △ COPY OF ALL TRAINING COMMANDERS SUMMARIES SINCE 01 JAN 88

PART B

- △ PERMANENT RECORD OF ALL SURVIVAL TRAINING (3760 32F)
- △ NTH LAB TRAINING DOCUMENTATION
- △ ANNUAL GRESS TRAINING DOCUMENTATION (3760 32F)

PART C

- △ ALL EXAMS PERTINENT TO AVIATION QUALIFICATIONS

PART D

- △ ALL NATOPS EVALUATION RECORDS (3710 710)

PART E

- △ ALL INSTRUMENT TRAINING REQUESTS (3710 2)
- △ INSTRUMENT QUALIFICATION WAIVERS

SECTION IV - FLIGHT RECORDS

PART A

- △

PART B

- △ PERMANENT RECORD OF ALL AIRCRAFT MISLAPS FLIGHT VIOLATIONS INVOLVING AN AIRCREW CAUSAL FACTOR AND FINAL RESULTS. FNAFB ENTRY SHALL CONTAIN: ENTRIES AUTHORIZED BY PARAGRAPH 10.5.2.8, DATE OF THE FNAFB, AND CO COMMENTS. CO MAY NOT DELEGATE THIS RESPONSIBILITY (3760 321b)

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

SECTION IA - REVIEW AND CERTIFICATION RECORD

NAME (Last, first, middle initial)

SSN

1. This jacket shall be reviewed by the Commanding Officer or a designated representative as follows:
 - a. Upon reporting to a unit.
 - b. Annually, within 30 days of birthday.
 - c. Upon change in flying status.
2. This jacket shall be certified by the Commanding Officer or a designated representative upon detachment of the individual.

RECORDS OF REVIEW

DATE		DATE	SIGNATURE	DATE	SIGNATURE
6 JUN 21	(b)(3), (b)(6), (b)(7)c				

DETACHMENT CERTIFICATION

UNIT	DATE	SIGNATURE	UNIT	DATE	SIGNATURE

OPNAV 3760/32A (APR 1981)



UNITED STATES MARINE CORPS
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MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:

3710

DSSN

4 Nov 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: DAY LOW ALTITUDE TACTICS QUALIFICATION

Ref: (a) NAVMC 3500.11F
(b) NAVMC 3500.14E
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Low Altitude Tactics qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

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IN REPLY REFER TO:
3710
DSSN
24 Jun 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: M240D QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program
Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby M240D qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

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IN REPLY REFER TO:

3500

DSSN

06 Sep 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: NIGHT SYSTEMS LOW LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program
Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

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SECTION III

ATRIMS TRANSFER
DATA SUMMARY
ENCLOSURE ()



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IN REPLY REFER TO:
3500
DSSN
24 Jun 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: DAY TAIL GUNNERY QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program
Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Tail Gunnery qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

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IN REPLY REFER TO:
3500
DSSN
17 May 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: NIGHT SYSTEMS HIGH LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program
Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems High Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

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IN REPLY REFER TO:

1326

S-3

21 Sep 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Designated Personnel

Subj: ASSIGNMENT OF TEMPORARY-INDEFINITE NON-CREWMEMBER FLIGHT
ORDERS

Ref: (a) MCO 1326.2H
(b) WgO 1326.5B
(c) SqdnO 1326.1G

Encl: (1) VMM-261 Non-Crewmember Personnel Roster

1. Per the references, you are hereby ordered to duty in a flying status involving flights as a non-crewmember (MV-22B Aerial Observer). These orders are effective 1 October 2021 and will terminate on 30 September 2022.

2. If during this period you are discharged and reenlist at this station without a break in active service, this order will remain in effect for the period specified herein.

3. You are hereby notified that these flight orders and your flight status as per paragraph 1, above, will be terminated as of 30 September 2022 unless subsequently renewed.

4. These orders will be automatically revoked upon transfer from this unit.

(b)(3), (b)(6), (b)(7)c

VMM-201 NON-CREWMEMBER PERSONNEL ROSTER

RANK	LAST NAME	FIRST NAME	MI	EDIPI
(b)(3), (b)(6), (b)(7)c				
SSGT	SPEEDY	JAMES	W	1385011012
(b)(3), (b)(6), (b)(7)c				



UNITED STATES MARINE CORPS
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IN REPLY REFER TO:

1326

S-3

3 Dec 20

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Staff Sergeant James W. Speedy 1385011012/0111 USMC

Subj: ASSIGNMENT OF TEMPORARY-INDEFINITE NON-CREWMEMBER FLIGHT
ORDERS

Ref: (a) MCO 1326.2H
(b) WgO 1326.5B
(c) SqdnO 1326.1G

1. Per the references, you are hereby ordered to duty in a flying status involving flights as a non-crewmember (MV-22B Aerial Observer). These orders are effective beginning 3 December 2020 and will terminate on 30 September 2021.

2. If during this period you are discharged and reenlist at this station without a break in active service, this order will remain in effect for the period specified herein.

3. You are hereby notified that these flight orders and your flight status as per paragraph 1, above, will be terminated as of 30 September 2021 unless subsequently renewed.

4. These orders will be automatically revoked upon transfer from this unit.

(b)(3), (b)(6), (b)(7)c



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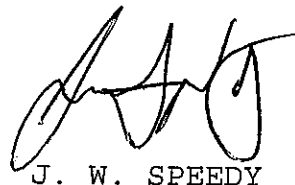
IN REPLY REFER TO:
1336
S-3
2 Dec 20

From: Staff Sergeant James W. Speedy 1385011012/0111 USMC
To: Commanding Officer, Marine Medium Tiltrotor Squadron 261

Subj: VOLUNTEER FOR DUTY INVOLVING FLYING

Ref: (a) MCO 1326.2H
(b) CNAF M-3710.7

1. I hereby volunteer and request orders for duty involving flying. I certify that this request is made of my own volition. This request is not based in any part on promises of special treatment or favors and is made free from duress of any kind. I understand that I must maintain those qualifications specified by the Chief of Naval Operations and the Commandant of the Marine Corps during the periods I am actively assigned to such duties. This agreement shall remain valid until such time as I rescind this agreement or that I am no longer qualified for such duties.



J. W. SPEEDY

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY

(Read Privacy Act Statement and Instructions on back before completing form.)

1. TO: Commanding Officer: VMM-261		2. FROM: Flight Surgeon: MCAS NEW RIVER		3. DATE (YYYYMMDD) 20220215	
4. MEMBER NAME (Last, First, Middle Initial) SPEEDY, JAMES W.		5. IDENTIFICATION NUMBER 1385011012		6. GRADE GYSGT/E-7	
7. DATE OF BIRTH (YYYYMMDD) 19910609		8. ORGANIZATION USMC		9. TYPE OF DUTY DIF AC/RW	
10. FLIGHT PHYSICAL DATE (YYYYMMDD) (If applicable) 20220215					
11. UP: THE ABOVE INDIVIDUAL HAS BEEN FOUND QUALIFIED BY MEDICAL AUTHORITY.					
a. X one:					
<input checked="" type="checkbox"/> CLEARED AFTER (X): <input type="checkbox"/> Temporary medical disqualification <input type="checkbox"/> Waiver recommended (Not USAF) <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Reporting to new duty station <input type="checkbox"/> Waiver granted <input type="checkbox"/> Other (See remarks)					
<input checked="" type="checkbox"/> CLEARED AFTER FLIGHT DUTY MEDICAL EXAMINATION:					
b. EFFECTIVE DATE (YYYYMMDD) 20220215			c. EXPIRATION DATE (YYYYMMDD) 20220630		
12. DOWN: THE ABOVE INDIVIDUAL HAS BEEN FOUND DISQUALIFIED BY MEDICAL AUTHORITY.					
a. X one:					
<input type="checkbox"/> TEMPORARY DISQUALIFICATION DUE TO (X): <input type="checkbox"/> Illness or Injury <input type="checkbox"/> Aircraft mishap <input type="checkbox"/> Other (See remarks)					
<input type="checkbox"/> MAY PARTICIPATE IN (X): <input type="checkbox"/> Simulator duties <input type="checkbox"/> Ground based flight line duties <input type="checkbox"/> Other (See remarks)					
<input type="checkbox"/> PERMANENT DISQUALIFICATION					
b. EFFECTIVE DATE (YYYYMMDD)			c. ESTIMATED DURATION OF GROUNDING		
13. REMARKS/LIMITATIONS					
<input checked="" type="checkbox"/> VISION CORRECTION DEVICES REQUIRED IN THE PERFORMANCE OF FLIGHT DUTIES.					
<input checked="" type="checkbox"/> MUST CARRY EXTRA SPECTACLES.					
14. (X one): <input checked="" type="checkbox"/> FLIGHT SURGEON <input type="checkbox"/> OTHER (Countersignature required for Air Force and Navy only)					
a. TYPED NAME (Last, First, Middle Initial)		b. GRADE		c. PROVIDER SIGNATURE	
(b)(3), (b)(6), (b)(7)c				(b)(3), (b)(6), (b)(7)c	
d. DATE SIGNED (YYYYMMDD) 20220215		e. TYPED NAME (Last, First, Middle Initial)		f. GRADE	
g. FLIGHT SURGEON COUNTERSIGNATURE		h. DATE SIGNED (YYYYMMDD)			
15. MEMBER CERTIFICATION					
a. I certify that I understand the above recommendations and that I:			b. AIRCREW MEMBER SIGNATURE		c. DATE SIGNED (YYYYMMDD)
<input checked="" type="checkbox"/> MAY <input type="checkbox"/> MAY NOT perform flight duties.					20220215
16. ACTION TAKEN BY COMMANDER (Not required for Air Force and Navy)					
<input type="checkbox"/> APPROVE <input type="checkbox"/> DISAPPROVE					
a. TYPED NAME (Last, First, Middle Initial)		b. TITLE		c. SIGNATURE	
d. DATE SIGNED (YYYYMMDD)					

DD FORM 2992, JAN 2015

REPLACES DA FORM 4186, AF FORM 1042, AND NAVMED FORMS 6410/1 AND 6410/2, WHICH ARE OBSOLETE.

Adobe Designer 9.0

ENCLOSURE (13)

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

NAME (Last, first, middle initial)

SSN

[illegible]

OPNAV 3760/32C (APR 1981)

SECTION IIB - MISSION QUALIFICATION RECORD

SSN

(b)(3), (b)(6), (b)(7)c



UNITED STATES MARINE CORPS
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MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:

3500

DSSN

06 Sep 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: NIGHT SYSTEMS LOW LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems Low Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook Entry
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ENCLOSURE (13)



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:
3500
DSSN
24 Jun 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: DAY TAIL GUNNERY QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Day Tail Gunnery qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook Entry
M-SHARP

ENCLOSURE (13)



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016

IN REPLY REFER TO:

3500

DSSN

17 May 21

From: Commanding Officer, Marine Medium Tiltrotor Squadron 261
To: Gunnery Sergeant James W. Speedy 1385011012/0111 USMC

Subj: NIGHT SYSTEMS HIGH LIGHT LEVEL QUALIFICATION

Ref: (a) NAVMC 3500.14 Aviation Training and Readiness Program Manual
(b) NAVMC 3500.11 MV-22B Training and Readiness Manual
(c) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby Night Systems High Light Level qualified.

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(3), (b)(6), (b)(7)c

Copy to:
Operations/APR
NATOPS
Logbook Entry
M-SHARP

ENCLOSURE (13)

CRM TRAINING & EVALUATION RECORD

1. NAME (Last, first, middle initial):	2. RANK:	3. EDIPI NUMBER:
--	----------	------------------

Note: This form shall be permanently maintained in the NATOPS Flight Personnel Training/Qualification Jacket (Section II, Part C).

CRM IMM Instructor Course 4. Date: _____ 5. Location: _____

CRM FACILITATOR TRAINING

[illegible]

GROUND TRAINING / FLIGHT EVALUATIONS

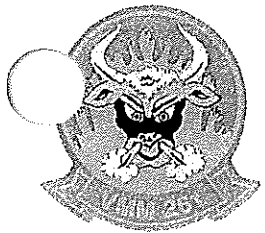
Note: Valid for 12 months from the last day of the month in which training/evaluation was completed.

Note: Renewal flight evaluations may be completed within 60 days preceding the expiration of the current qualification.

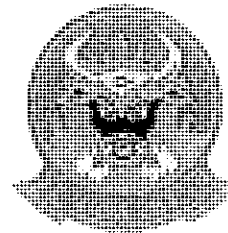
[illegible]

EXTENSIONS

15. T/M AIRCRAFT	16. UNIT	17. GROUND / FLIGHT	18. AUTHORITY	19. EXPIRATION DATE



VMM-261 TRAINING ROSTER

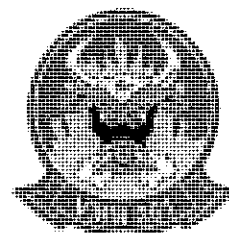
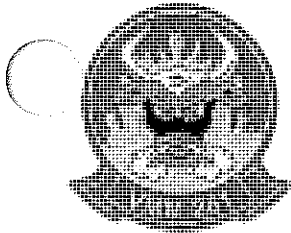


Topic: CIRM Awareness

Date: 1/11/22

Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(3), (b)(6), (b)(7)c		
2	TOMKIEWICZ, M.J.	CAPT	<i>Matt Tomkiewicz</i>
3	(b)(3), (b)(6), (b)(7)c		
4			
5			
6			
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12			
13			
14			
15			
16			
17	REYNOLDS, ROSS A	CAPT	<i>Ross Reynolds</i>
18	(b)(3), (b)(6), (b)(7)c		
19			
20			
21			
22			
23			
24			
25			
26			
27			
28	MARSH, J. M.	COL	<i>James Marsh</i>
29	(b)(3), (b)(6), (b)(7)c		
30			
31			
32			
33			
34	Speedy, James W	GSgt	<i>James Speedy</i>
35	(b)(3), (b)(6), (b)(7)c		
36			
37			
38			



VMM-261 CRM

Topic: Annual Crew Resource Management

Date: 31 August 2021

Instructor: (b)(3), (b)(6), (b)(7)c

	Last Name, FI. MI.	Rank	Signature
1	(b)(6), (b)(7)c		
2	Speedy, James W	Capt	[Signature]
3			
4			
5			
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10			
11			
12			
13			
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SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, first, middle initial)

SPEEDY

RANK/RATE

SSN

TYPE OF TRAINING

COURSE CATEGORY

AVIATION
PHYSIOLOGY

EMERGENCY
EGRESS

WATER
SURVIVAL

LAND SURVIVAL
DWEST,
SERE

NITE Lab Training
INDOR / REF
Other:
System: AN/AW-9

DATE 10220 GRADE Q UNIT 18

DATE GRADE UNIT

DATE 24NOV20 GRADE Q UNIT 20

DATE GRADE UNIT

SIGNATURE (b)(3), (b)(6), (b)(7)c

SIGNATURE

SIGNATURE (b)(2)Low, (b)(6), (b)(7)c

SIGNATURE

Annual Aeromed Training

DATE 021921 GRADE Q UNIT 18

DATE GRADE UNIT

DATE GRADE UNIT

DATE GRADE UNIT

SIGNATURE (b)(6), (b)(7)c, (b)(3), (b)(7)c

SIGNATURE

SIGNATURE

SIGNATURE

Annual Aeromed Training

DATE 11Feb22 GRADE Q UNIT 18

DATE GRADE UNIT

DATE GRADE UNIT

DATE GRADE UNIT

SIGNATURE (b)(3), (b)(6), (b)(7)c

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TRAINING ACTIVITIES

1. Pensacola, FL

8. Barbers Point, HI

15. Brunswick, ME

2. Miramar, CA

9. Cecil Field, FL

16. FASOTRAGRUPAC

3. Norfolk, VA

10. Cherry Point, NC

17. FASOTRAGRULANT

4. Corpus Christi, TX

11. Whidbey Island, WA

18. MCAS New River, NC

5. Lemoore, CA

12. Beaufort, SC

19. Okinawa

6. El Toro, CA

13. Point Mugu, CA

20. Other (List)

7. Jacksonville, FL

14. Patuxent River, MD

21.



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL SURVIVAL TRAINING INSTITUTE DETACHMENT
340 HULSE ROAD
PENSACOLA FL 32508-1089

IN REPLY REFER TO
3760
24 Nov 2020

From: Officer in Charge, Naval Survival Training Institute

To: **STAFF SERGEANT JAMES SPEEDY**

Subj: NASTP TRAINING QUALIFICATION LETTER

Ref: (a) CNAF M-3710.7

1. In accordance with reference (a), **STAFF SERGEANT JAMES SPEEDY** has received **AC INDOC CLASS 3** on **29 Oct 2020** at Aviation Survival Training Center **CHERRY POINT**.

2. **STAFF SERGEANT JAMES SPEEDY** received a grade of **Q**. All required modules were completed.

Dynamic training elements were conducted for the following modules:

• **HYPOXIA LABORATORY C6**

3. This qualification expires on **31 Oct 2024** unless additional conditions listed in reference (a) chapter 8, paragraph 8.4 apply.

4. This qualification applies to the following aircrafts only:

Class 3: AH-1, H-3, H-46, H-53, H-60, H-72, H-92, OH-58C, TH-57, UH-1, V-22

(b)(6), (b)(7)c

By direction

NAME Speedy, James W.

FILE OR SERIAL NO. 1385011012

DESIGNATION: NO. USMC

DATE FEB 2021

LOG NO. 1 FROM FEB 2021

TO _____

IF FOUND, PLEASE RETURN TO

CHIEF OF NAVAL OPERATIONS
NAVY DEPARTMENT
WASHINGTON, D.C. 20350

OPNAV FORM 3760-21 REV. (4-65)

1

ENCLOSURE (14)

(e. g. instrument card, patrol plane commander, aircraft type, CarQual, etc.)
(To be signed by Commanding Officer or authorized deputy)

[illegible]

Make entries on lines, or in rubber stamp impressions anywhere on the page.

Signature of Pilot in Command, patrol plane commander, aircraft type, CarQual, etc.
(to be signed by Commanding Officer or authorized deputy)

[illegible]

Do not write on lines, or in rubber stamp impressions anywhere on the page.

ENCLOSURE

[illegible]

Pilot-time report submitted through last (or, _____) day of this month; next ^{by} ~~ENCLOSURE~~ ENCLOSURE

Log Book for GySgt SPEEDY, JAMES 2/1/2015 - 2/28/2022

Generated on 03/24/2022 1033 UTC-04:00

Date Range Totals				Hours					T&R					NAVFLIR
	TMS	Device	Type	TPT	SCT	NIGHT	HLL	LLL	T&R 1	T&R 2	T&R 3	T&R 4	T&R 5	
Totals					78.4	21.7	11.8	9.3						
2/25/2021	MV-22B	166484	Aircraft		4				2040	2240				H4TQYNU
3/25/2021	MV-22B	168228	Aircraft		3.3				2240					UKBF5W1
3/30/2021	MV-22B	168228	Aircraft		4.3				2242					III7EK7
4/5/2021	MV-22B	166687	Aircraft		3.3				2242					JPHPOWG
4/13/2021	MV-22B	168622	Aircraft		2.3				2242					3FMBYQH
5/7/2021	MV-22B	167913	Aircraft		2.8				2242					V7L6R9E
5/11/2021	MV-22B	168673	Aircraft		3.3				2242					F1SAR59
5/17/2021	MV-22B	166687	Aircraft		2.6	2.6	2.6		2340	2341				ZIIMEIK
5/24/2021	MV-22B	166687	Aircraft		3	3	3		2340					VC8NXE5
5/27/2021	MV-22B	167913	Aircraft		4				2780	2781	3040	6033		U24UI20
6/2/2021	MV-22B	166687	Aircraft		4	0.1			2240					5QH8R7B
6/17/2021	MV-22B	166687	Aircraft		4				2242					QUQTF2A
6/24/2021	MV-22B	168673	Aircraft		4				2242	2540	2541	6150	2140	0D5B5O4
7/1/2021	MV-22B	168228	Aircraft		3.3	3.3		3.3	2380	2381				6ZZGD0W
7/5/2021	MV-22B	168673	Aircraft		3.8				2242	2282				1KOKQ3K
7/16/2021	MV-22B	168622	Aircraft		3.5	3.5	3.5		2340	6033				0K32SN0
8/16/2021	MV-22B	167913	Aircraft		3.5				2242	2282				SMQ8LOX
8/30/2021	MV-22B	167913	Aircraft		3.7				2242	6033				IWW83K5
9/6/2021	MV-22B	168622	Aircraft		3.5	3		3	2382	2383				13JUS1B
9/7/2021	MV-22B	168228	Aircraft		3.2	3.2	0.2	3	2383					1GZKMOI
9/15/2021	MV-22B	167913	Aircraft		2.7				2242					QRWYH39
9/20/2021	MV-22B	166687	Aircraft		3	3	2.5		2782	6033				EJHS8XL
11/4/2021	MV-22B	166724	Aircraft		3.3				2640	2242	2641			STYCDAS

Career Totals		Hours				
	TMS	TPT	SCT	NIGHT	HLL	LLL
Totals	All		78.4	21.7	11.8	9.3
	MV-22B		78.4	21.7	11.8	9.3

Proficiency	Complete	Needs Additional Training	Incomplete				
Instructor Name	Event	Method	Needs Additional Training	Overview	Plan/Brief	Execution	Instructor Comments
(b)(3), (b)(6), (b)(7)c	TA-001-001	Logged	No	Departed KNCA at 1230L as	Conducted IAW T&R	Conducted IAW T&R	Conducted IAW T&R
	TA-001-002	Logged	No	Conducted IAW T&R	Conducted IAW T&R	Conducted IAW T&R	Recommend continue with syllabus
	TA-001-003	Logged	No	Departed KNCA at 1230L as	Conducted IAW T&R	Conducted IAW T&R	Conducted IAW T&R
	TA-001-004	Logged	No	Flight departed LEMO to conduct section tanking off the southern coast of Spain. Following the successful join up and AR with the tanker we	CONDUCTED IAW T&R	CONDUCTED IAW T&R	SNM was attentive with tracking -2 and keeping the pilots informed on their position. SNM has improved in the course of a few flights to where he is comfortable and proficient at performing cal landings without strict supervision. SNM is still very new and should continue to fly to improve skill and proficiency in other areas.
(b)(3), (b)(6), (b)(7)c	TA-001-005	Waived	No				Event Waived
	TA-001-006	Logged	No	outlaw 1-1 flight departed moron afb at 1800L and performed section rfs iaw mv22 t&r.	Student was attentive during brief and posed good questions to set himself up for success in the zone.	Student performed calls to the deck in r/r conditions to a reasonable margin of error and required little input from the instructor to perform his duties. Student is fully capable of executing section rfs on his own with a proficient crew.	Instructed student how to keep ground reference in r/r conditions
(b)(3), (b)(6), (b)(7)c	TA-001-007	Logged	No	Conducted numerous single ship HLL CALs iwo Moron air base followed by numerous section CALs iwo Moron air base.	Conducted a thorough brief and discussion of T&R items followed by an NVG lab.	Conducted numerous single ship HLL CALs iwo Moron air base followed by numerous section CALs iwo Moron air base.	GySgt. Speedy required only few instructor inputs and was able to make corrections and adjustments to distance estimation and wind mitigation errors. Overall GySgt. Speedy had good situational awareness but required some help when it came to night systems operations and general crew duties. Continue with training.
(b)(3), (b)(6), (b)(7)c	TA-001-008	Logged	No	Conducted numerous single ship HLL CALs iwo Moron air base followed by numerous section CALs iwo Moron air base.	Conducted a thorough brief and discussion of T&R items followed by an NVG lab.	Conducted numerous single ship HLL CALs iwo Moron air base followed by numerous section CALs iwo Moron air base.	GySgt. Speedy required only few instructor inputs and was able to make corrections and adjustments to distance estimation and wind mitigation errors. Overall GySgt. Speedy had good situational awareness but required some help when it came to night systems operations and general crew duties. Continue with training.
(b)(3), (b)(6), (b)(7)c	TA-001-009	Logged	No	Departed LEMO as a section shortly after EENT, en route to NAS Rota. Once established at LZ Bull ring we	None.	SNM was able to provide accurate and timely calls, as well as clear the aircraft in LLL environment.	Continue working on scan and building confidence and experience on googles.
(b)(3), (b)(6), (b)(7)c	TA-001-010	Logged	No	Departed LEMO as a section shortly after EENT, en route to NAS Rota. Once established at LZ Bull ring we	None.	SNM was able to provide accurate and timely calls, as well as clear the aircraft in LLL environment.	Continue working on scan and building confidence and experience on googles.
(b)(3), (b)(7)a, (b)(7)c	TA-001-011	Logged	No	Outlaw 3-1 flight of two conducted brief, T&R brief, followed by a hotsat from Outlaws 1-1 and 2-1. Outlaw 3-1 flight departed directly into the GB-500, conducting 1.5 hours of IFR flight and multiple instrument approaches into NAS Rota. Once complete at NAS Rota, Outlaw flight proceeded directly back to point Whiskey off of Moron AB. Once at point Whiskey, Outlaw 3-1 flight conducted numerous tactical formation maneuvers between points Whiskey and Echo. Upon termination of tactical formation maneuvers, Outlaw 3-1 flight proceeded	Flight brief was conducted followed by a thorough T&R brief with GySgt. Speedy. SNM clearly understood all topics which were covered and his duties throughout the flight.	GySgt. Speedy demonstrated procedural knowledge of tactical formation maneuvering under low light level conditions, maintaining high situational awareness throughout the flight. GySgt. Speedy provided timely input to the pilots as to the position of the wingman at all times. SNM was instructed on techniques to aid in distance estimation in low light level condition. SNM was also instructed to open the crew door earlier prior to landing. SNM corrected deficiencies effectively.	GySgt. Speedy is capable of safe and effective crewing in the low light level environment, to include tactical formation maneuvering. GySgt. Speedy is always open to critiques and is constantly looking to improve, continue with training!
(b)(3), (b)(6), (b)(7)c	TA-001-012	Logged	No	Outlaw 3-1 flight of two conducted brief, T&R brief, followed by a hotsat from Outlaws 1-1 and 2-1. Outlaw 3-1 flight departed directly into the GB-500, conducting 1.5 hours of IFR flight and multiple instrument approaches into NAS Rota. Once complete at NAS Rota, Outlaw flight proceeded directly back to point Whiskey off of Moron AB. Once at point Whiskey, Outlaw 3-1 flight conducted numerous tactical formation maneuvers between points Whiskey and Echo. Upon termination of tactical formation maneuvers, Outlaw 3-1 flight proceeded	Flight brief was conducted followed by a thorough T&R brief with GySgt. Speedy. SNM clearly understood all topics which were covered and his duties throughout the flight.	GySgt. Speedy demonstrated procedural knowledge of Confined Area Landings under low light level conditions, maintaining high situational awareness throughout the flight. GySgt. Speedy provided timely input to the pilots as to the position of the wingman at all times. SNM was instructed on techniques to aid in distance estimation in low light level conditions. SNM was also instructed to open the crew door earlier prior to landing. SNM corrected deficiencies effectively.	GySgt. Speedy is an effective crewmember in the night environment, under all light level conditions. GySgt. Speedy is recommended for Night Systems Qualification. Continue with training.
(b)(3), (b)(6), (b)(7)c	TA-001-013	Logged	No	Departed LEMO at 1745L as a section reroute to go feet wet over Mediterranean Sea. Once established feet wet and in a clear area we	SNM was able to properly pre flight weapon, name major assemblies, cycle of operations. As well as explaining weapons emergencies, and limitations.	SNM was able to effectively and accurately employ weapon system, with minimal input from instructor.	Continue with syllabus.
(b)(3), (b)(6), (b)(7)c	TA-001-014	Logged	No	Departed LEMO at 1745L as a section reroute to go feet wet over Mediterranean Sea. Once established feet wet and in a clear area we	SNM was able to properly preflight weapon, name major assemblies, cycle of operations. As well as explaining weapons emergencies, and limitations.	SNM was able to effectively and accurately employ weapon system, with minimal input from instructor.	Continue with syllabus.
(b)(2)Low, (b)(6), (b)(7)c	TG(2)-2542						
	TG(2)-2543						
(b)(2)Low, (b)(6), (b)(7)c	TA-001-015	Logged	No	Departed KNCA as a section to the VR-084, then split up as singles to conduct single ship lat then joined back up as a section to do section lat. After completion of the VR-084 we met our L-Hour into LZ BAT to conduct section CALS and conducted several tactical and high speed straight-ins as	GySgt speedy was well prepared for brief and T/R brief	Conducted several vertical maneuvers and TAC-FORM maneuvers as a section as well as single ship SNM maintained good CRM throughout entire flight and gave pilots good calls on wingman's position and other aircraft in the working area.	none

GySgt SPEEDY, JAMES W - MV-22B Aerial Observer/Gunner
Crew Performance between 1/1/2015 - 3/18/2022

Generated on 03/24/2022 1045 UTC-04:00

(b)(2)Low, (b)(6), (b)(7)c	ATP(2)-2642	Logged	No	Departed KNGA as a section to the VR-084 then split up as singles to conduct single ship lat then joined back up as a section to do section lat. After completion of the VR-084 we met our L-Hour into LZ BAT to conduct section CALS and conducted several tactical and high speed straight-ins as	GySgt speedy was well prepared for brief and T/R brief	Conducted several vertical maneuvers and TAC-FORM maneuvers as a section as well as single ship SNM maintained good CRM throughout entire flight and gave pilots good calls on wingman's position and other aircraft in the working area.	none
	LAT(2)-2642						
	LAT(2)-2643						
(b)(3), (b)(6), (b)(7)c	ATP(2)-2643	Logged	No	Departed Moron Air Station and conducted Division TACFORM formation maneuvers in the vicinity central Spain. Then	SNM was knowledgeable and prepared for the T&R. We discussed the different maneuvers and there limitations.	Conducted Division TACFORM over central Spain. SNM made accurate calls on the location of dash at all times.	Made good calls, maintained situational awareness of Dash 2 and Dash at all times. Needs to make calls more often. Overall did a good job and I recommend that you proceed further in your syllabus.
(b)(3), (b)(6), (b)(7)c	ATP(2)-2643	Logged	No	Performed division low- and medium-altitude tactical approaches, landings, and departures at Moron air field.	Discussed division low- and medium-altitude tactical approaches, landings, and departures to a confined area. SNM was prepared for the T&R brief. SNM was knowledgeable and discussed accurately the limitations and procedures for each portion of the T&R.	Departed Moron air field and conducted division tactical approaches back to Moron air field. SNM maintained a high SA and displayed accurate calls of dash(s) position. The calls to the deck were good and made accurate drift corrections.	Made consistent calls to the deck and maintained SA. Continue to work on wind mitigation to keep your calls clear. Your distance estimation calls are improving; use the sounds of the rotors and your visual cues to help with your estimation call. Overall you did well and I recommend that you continue progressing in your syllabus.
(b)(3), (b)(6), (b)(7)c	ATP(2)-2643	Logged	No	Outlaw 1-1 flight of three departed from Moron AB, proceeding to conduct the GB 500 in a clockwise manner in IFR trail. Once reaching NAVSTA Rota, Outlaw 1-1	Flight brief was conducted following a thorough T&R brief. GySgt. Speedy clearly understood all concepts.	Execution of flight was in accordance with brief. Outlaw 1-1 was in the lead position for the entirety of the flight.	GySgt. Speedy maintained good situational awareness throughout the flight, and showed significant improvement on calling out wingman position during maneuvering. SNM was instructed on improving his wind mitigation, which he improved throughout the flight. SNM was instructed on opening the crew door earlier and improving his scan to include more reference points in order to improve distance estimation call accuracy. Continue with training.
	DIV(2)-2783						
	DIV(2)-2784						
(b)(3), (b)(6), (b)(7)c	ATP(2)-2840	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	GTR(2)-2840	Waived	No				Event Waived
	FCLP(2)-2940	Waived	No				Event Waived
	FCLP(2)-2942	Waived	No				Event Waived
(b)(3), (b)(6), (b)(7)c	ATP(2)-2942	Logged	No	Conducted air logistics support in a low-threat environment in the vicinity of Moron air field.	SNM was prepared for the T&R and demonstrated knowledge about general cargo handling and securing, cabin loading and unloading, and passenger handling.	Prior to flight SNM performed a simulated forklift loading operation. SNM demonstrated accurate hand and arm signals to the forklift operator and secured all cargo correctly. Departed Moron air field and conducted air logistics in the vicinity of central Spain	Continue to work on wind mitigation and I recommend that you continue your syllabus.
	AE(3)-3140						
	TRAP(3)-3340						
	CAT(3)-3440						
	CAT(3)-3441						
	AD(4)-4041						
	AD(4)-4042						
	AD(4)-4043						
	AD(4)-4081						
	AD(4)-4082						
	AD(4)-4083						
	AD(4)-4084						
	AIE(4)-4140						
	AIE(4)-4141						
	AIE(4)-4142						
	AIE(4)-4143						
	MAT(4)-4180						
	MAT(4)-4181						
	DWS(4)-4240						
	DWS(4)-4241						
	DWS(4)-4242						
	DWS(4)-4243						
	DWS(4)-4244						
	DWS(4)-4245						
	DCM(4)-4340						
	CBRN(4)-4430						
	CBRN(4)-4431						
	CQ(4)-4480						
	CQ(4)-4481						
	CQ(4)-4482						
	CQ(4)-4483						
	SEA(4)-4540						
	RVE(4)-4580						
	ADGR(4)-4640						
	BK(4)-4740						
	BK(4)-4741						
	AD(4)-4840						
	NTPS(6)-6030						
(b)(3), (b)(6), (b)(7)c	ATP(2)-6080	Logged	No	SNM complied with MV-22 NATOPS procedures and demonstrated knowledge about how to handle different situations that may occur	SNM was prepared for T&R and discussed emergency procedures accurately.	Departed Moron air field and conducted CALS at Moron air field. SNM maintained good SA through out the flight.	Continue to work on wind mitigation and I recommend you practice drills putting your mask on so that you can build muscle memory; you will be faster and more efficient.
	CRM(6)-6080						
(b)(3), (b)(6), (b)(7)c	ATP(2)-6151	Logged	No	Conducted day single ship and section TG.	Conducted IAW T&R.	SNM conducted single ship and section tail guns in day time, utilizing 1200 rounds.	Recommend continuation with TQ syllabus.
	M240D(6)-6151						
	GAU-16(6)-6250						

UNCLASSIFIED//~~FOR OFFICIAL USE ONLY~~
GySgt SPEEDY, JAMES W - MV-22B Aerial Observer/Gunner
Crew Performance between 1/1/2015 - 3/18/2022
Generated on 03/24/2022 1045 UTC-04:00

	GAU-16(6)-4251						
	GAU-21(6)-6350						
	GAU-21(6)-6351						
	TRK(6)-8700						
	RVL(6)-6900						

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Event Proficiency VMM-261 - MV-22B Aerial Observer/Gunner

Generated on 05/10/2022 1111 UTC-04:00

Days Until Expired as of 05/10/2022

>= 90 Days

60-89 Days

30-59 Days

< 30 Days

Expired

"W" indicates Waived, "D" indicates Deferred

	Familiarization (FAM(2))							
	ACAD: CRM	ACAD: NITE LAB	ACAD: Reference Publications	ACAD: Air to Air Refueling	LAB: Msn Aux Tank System	LAB: Flight Line Fire Ext	LAB: Ingress/Egress	LAB: Start Up / Shutdown/ Taxi
	2010	2011	2012	2013	2020	2021	2022	2023
Permanent								
GySgt SPEEDY, JAMES W.	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly	No Refly

					Confined Area Landings (CAL(2))		Low Altitude Training (L			
Lab: Mooring Lab	LAB: ALSS Equipment	ACAD: Eps	LAB: Cargo Loading	FAM: Fam Flight	CAL: Single CAL	CAL: Section CAL	ACAD: LAT for EAC	ACAD: TAC Aircrew Considerations	LAB: LAT Walk Through	LAT: LAT Maneuvers / Rte
2024	2025	2026	2027	2040	2240	2242	2610	2611	2620	2640
No Refly	No Refly	No Refly	No Refly	No Refly	06/02/2022	11/04/2022	No Refly	No Refly	No Refly	No Refly

AT(2))			Air Logistics Support (ALS(3))		NATOPS(NTPS(6))				Emergency Procedures (EP(6))	Crew Resource (CRM)
LAT: Section LAT	NS LAT: HLL Section LAT	NS LAT: LLL Section LAT	ACAD: Six Functions	ALS: ALS Msn	NATOPS Open Book	NATOPS Closed Book	NATOPS Oral Exam	NATOPS Eval	6033	CRM Refresher
2641	2642	2643	3011	3040	6010	6011	6012	6030	6033	6070
11/05/2022			No Risky	05/27/2022					12/19/2021	01/31/2023

Management
1(6))

CRM Eval

6080

ENCLOSURE (15)

First Interview: 30 March 2022

Name/ Rank: (b)(3), (b)(6), (b)(7)c

Operational Background:

Commanding Officer of VMM-261. In Oct 2020 I took command of VMM-261, was previously at VMM-365 where I did time as the maintenance officer, deployed on the MEU, and participated in TRIDENT JUNCTURE in Trondheim, Norway in 2018.

My qualifications include WTI/AMC, I spent time at Pax River as an MV-22 test pilot. I was originally a CH-46 transition, V22 since 2009, about 2500 total hours and 1800 hours in the Osprey.

What kind of higher level guidance was given for preparing for COLD RESPONSE in terms of training and education?

Guidance from Wing- to make sure pilots flew an adequate number of hours prior coming out to CR. We had been going through a dry spell with flight time and the general wanted to make sure that we had adequate flight time and proper warm ups prior to operations in Norway.

Guidance from MAG was to fly, to operate, and find a way to contribute to the mission and scenario.

What was your operational approach to preparing the squadron, academics, SOPs, crawl/walk/run, equipment, etc?

Preparation started in earnest back in MCAS New River in January 2022, our Standardization Board talked about weather minimums, IMC procedures with terrain. We went through several iterations of procedure for dealing with terrain and weather, we then demoed it in simulator. All pilots went through at least one sim where we went through what to do in IMC out in Norway. We also went through several icing protection system classes, discussed limits and knowledge. We also went through grooming of aircraft for operations in icing conditions as much as we could. The goal I set for the squadron was to have aircraft capable of operating in temperatures down to -20°F penetration capability. Which in Chapter 4 of NATOPS has very specific components needed for that.

Did you write any separate and distinct standard operating procedures for COLD RESPONSE?

No

Read and Initials? Yes. The one you've probably heard about is the Bodo Reversal, which was how to turn around in a fjord if weather is encountered and at what point to turn around. We practiced and published via Read and Initials. We also had a summary of weather minimums in the training, including 3710 (NATOPS), General Planning, and other documents as a one-stop-shop.

What was your guidance on weather minimums for your aircrew:

The standard weather minimum for Airplane mode was 1000' / 3 mi visibility. If it dropped below that, conversion mode is how we'd proceed to no less than 500' / 1 mi visibility, and below that would be "No-Go" unless we were Instrument meteorological condition capable. Our instrument minimums were based on lowest available approaches at whichever airfield we were operating at.

Can you expound on the Bodo Reversal?

Organized way to turn flight around in small area. Once weather began to degrade, aircraft would organize into a trail formation. If an aircraft lost sight of the aircraft in front of them, or lost sight of 3 ground references... we would conduct a simultaneous reversal for flight, swapping the tactical lead of the flight from the original front to the original last aircraft, and expedite on the escape heading. Single

Enclosure (16)

would be same idea, reverse course and exit the valley the way it was entered. We practiced in the simulator, conducted verbal briefs, and published via Read and Initial.

We you properly manned per the Training and Readiness manual to execute a detachment (reduced)?

Yes, we were properly manned to operate as a det and had sufficient legal crews to operate. I did not sign any deferrals or waivers to enable us to meet our manning requirements.

Were there any additional SOPS published from the MAG to execute COLD RESPONSE?

No, Not from MAG.

Was there any conflict between preparing for COLD RESPONSE and the MAG-26 Campaign Plan regarding meeting flight hour goals? Were they adequately separated to allow aircrew to be empowered to cancel due to weather.

No- no conflict between the two, they were adequately separated.

Were there any directives/orders by MEF or Wing given to fly when below planned mins?

No

Were there ever any immediate tasking orders (ASRs/JTARS) to fill that were inside plan/brief cycles?

Yes.

How did you mitigate those risks?

The cutoff for immediate tasking was whether crews were already scheduled to conduct unit level training. If tasking came up late the night prior or morning of, we would reassign a crew from a ULT flight to fulfill the movement of passengers. The movement of these passengers was from normally runway to runway, across standard routing, or from a familiar LZ that did not require detailed and deliberate planning in advance. Usually around 12 hours prior to event.

Did you talk about the crew of GT31 during your Human Factors Councils?

Yes, we discussed everyone during HFC, nothing stands out from the GT31 crew.

Did you certify the A/B/C routes in your mind, were they LAT routes?

"We treated the certification as a LAT route. And so before we flew it for a unit level training flight, our WTI and our ASO... actually (b)(3), (b)(6), (b)(7)c . they went out and they flew these routes day-VMC ahead of time to look for obstacles that may not be on the map. And that was our way of vetting the route."

How did you do the administrative portion of the route certification?

We did the certification flight, above an altitude that wasn't LAT. And then we used that route to send up through the NAOC I believe, because when we do low altitude training here we have to send a very specific route through the Norwegian system for them to approve it.

Which aircraft did you bring over?

Six aircraft, 1 x C MCOI, rest were Block B. AC14- that would have been a Bravo. All of the aircraft were icing capable to some degree.

Did you receive any guidance on flight hours for your pilots to achieve prior to executing COLD RESPOSNE? What about from MAG or MAW?

Enclosure (16)

The guidance that got to my team came through me was a specific number of flight hours augmented with simulator hours.

If we compare your table of organization to the Training and Readiness detachment model, are you missing any qualifications or personnel?

I think we are in alignment with the T&R

Do you have a standard policy for empowering aircraft commanders to cancel flights, once the aircraft is theirs, what is your policy of canceling flights for whatever reason?

My policy is to set weather minimums before launch, and then stick with those minimums to take emotion out of decision.

Same with maintenance? Regarding MESMS, etc? .

Maintenance is quality over quantity.

Did you have any specific guidance for round robins or stopping at other airports for crews to take fuel or get weather updates?

No

What is your PED policy in the aircraft?

To fly with those devices that are approved. MAGTABS.

What is your crew rest policy?

In accordance with CNAF 3710.

What were your sources of weather for flight crews to utilize?

ODO still pulls weather from standard sources that we used back in CONUS, the METARS websites. That has been augmented with regional sources for prognosis charts and local area weather forecast sources.

To the best of your knowledge are there any ways to update weather in flight?

No

Concerning the MAGTABS, did you update the publications for Norway?

We did update them for Norway, updated since arriving.

For weight and power, did you use the MAGTAB tool?

Weight and power- used standard tool in JMPS. Our pilots were encouraged to check on glass before takeoff. Standard was to print, sign, and leave copy with the ODO.

What ORM worksheet did you use?

Ford the ODO briefs we used the MAG-26 template RAW.

To the best of your knowledge, did you waive any events for the crew of GT31?

Correct, I waived no events for mishap crew.

Why did you deploy with Block B's vs Block C's?

We deployed with the aircraft that we could, with the aircraft we had on hand.

Was it common to fly with NVG's on all flights?

Enclosure (16)

No

Were dry suits mandated for every flight?

Dry suits are required every flight, no exception when critical phases of flight over water such as shipboard or tanking over water. Mandated wear for the first two weeks.

After flying over the A/B/C route, was there any traffic sent to Wing or MEF to request use of the routes for LAT?

I will have to check with my operations folks.

Second Interview of (b)(3), (b)(6), (b)(7)c Commanding Officer VMM-261

-Conducted solely by (b)(3), (b)(6), (b)(7)c Investigating Officer

1. Would you please re-state your squadron's policy for the use of personal electronic devices (PED) while operating USMC aircraft? Are you aware of the CNAF policy on PED useage, 2d MAW PED policy?
 - a. PED operation is allowed while on deck to check weather and communicate with squadron operations to maintain situational awareness of the flight schedule. I am not aware of the CNAF policy, but our squadron policy mirrors 2d MAW.
2. Have you flown with any aircrew while the Commanding Officer when they have used PEDs during the flight?
 - a. No.
3. What is your reaction to hearing there was a GoPro found in the wreckage of GH31?
 - a. I am disappointed and surprised.
4. Talk me through your understanding of the Training and Readiness Manual Volume One's definition of the Low Altitude Tactics flight regime? 167367
 - a. Less than 500', significant terrain. (b)(3), (b)(6), (b)(7)c talked through considerations and had solid understanding of V22 LAT requirements and restrictions from both T&R and 2d MAW SOP.)
5. What is your approach to mitigating risks associated with LAT training?
 - a. Proper route scheduling, legal crew scheduling, adhering to currency requirements.
6. Are you aware of the 2d MAW Ops SOP requiring route and altitude minimums to be published on squadron schedules authorizing LAT regime flights?
 - a. No
7. What was your understanding of how the Norwegian MTRs (e.g., A, B, and C routes) were designated and/or certified?
 - a. That they were used by the host nation for the training of military aircrew and that the Norwegians mandated a "no lower than 500' AGL" along the routes.
 - b. They were chummed and ready for our digital maps.

Enclosure (16)

8. Did you sign schedules with LAT codes with the intent to fly LAT?
 - a. Yes, though the original schedule we did not fly was to give an opportunity to my LAT/WTIs to recon the route to certify.
9. How did you certify the LAT training areas you eventually used?
 - a. We did not properly certify them IAW with T&R and 2d MAW Ops SOP.
10. How did you mitigate the risk of conducting LAT in uncertified LAT training areas?
 - a. I mandated no lower than 500' AGL along the routes and LAT wx mins of 3000/5.
11. Did you have any risk mitigation criteria for junior aircrews (non-BIP TACs and below) operating in Norway?
 - a. Stay within local area defined by bag of gas (distance?) and day VMC.

Enclosure (16)

First Interview 30 March 2022

Name/Rank/Billet: (b)(3), (b)(6), (b)(7)c

Qualifications and Experience: NSI/Div Lead/NI, AARI, LATI, - 2100 hours, CH-46 transition around 2013 3 MEUs, (2xFrog, 1xV22), SPMAGTF Spain with VMM-264, MRF-D with VMM-268 Okinawa 2 squadrons, VMM-264 East coast, VMM-268 Hawaii, back on East Coast, 5th squadron now with VMM-261

What guidance did you give the Maintenance Department for prepping to support COLD RESPONSE?
The big-ticket item, we used the VMM-365 TRIDENT JUNCTURE after-action. We ensured Marines were taken care of for cold weather gear, both aircrew and maintainers. We purchased 8 containers of survival gear, if aircraft land in the field we have tents, all the things to survive overnight.

Did the CO or you, or the OPSO give guidance for aircrew to land if they encountered unmitigable icing conditions...i.e. if weather becomes insurmountable were crews authorized to land and utilize that survival equipment?

Yes, and we got the same information from the Norwegians. It's normal practice for poor weather for aircraft to land. No real SOP, but developed robust training plan to prep for COLD RESPONSE. We did Sims- cold weather type sims to simulate what Norway would look like. We practiced a reversal procedure that we developed which works well with canalizing terrain. All of the pilots went through the verbology and mechanics to see it before having to do it for real.

Did you sign any deviations for operating in cold weather?

No CNAF deviations. We did do more pre-heater quals. Plenty of those available. We did more training focused on cold weather options, pre-start checklist items, shop level discussions, etc.

Were any waivers or deferrals that you know of issued to get qualified crews to support COLD RESPONSE?

As far as the Ops side of things I wasn't tracking any of that.

From Training and Readiness perspective, how does your maintenance team match against manning requirements?

We are good, we brought our A-team (b)(3), (b)(6), (b)(7)c maintenance control was hand picked, our best controller. Our QA chief is out here as well. All of the quality personnel out here at the sacrifice of RBE.

What MAW or MAG directives were guiding in what you did preparing for COLD RESPONSE?

30% goal for FMC is the WING CG goal. My goal was to get as close to that as possible. However, we transferred six of our best aircraft to VMM-365 to support their NARF deployment. Then we accepted 5 aircraft from Nov-Dec 2021 from around the MAG. Our focus was on making those aircraft mission capable vice reaching FMC.

Did that goal of 30% FMC take away your desire or efforts to make safe, mission capable aircraft?
No, mission capable aircraft came first.

Did you sit on Human Factors Councils? Were any of the crew discussed?

Yes, we talked about each aircrew personnel. Nothing of note.

Did you ever fly the A/B/C?

Enclosure (17)

I flew that specific route the day prior. The route I flew the day prior was VMC, 9000' ceilings, perfect weather, as a NAV route. It's not New River, it's not flat. It's what we consider mountainous terrain.

Any obstacles on route that would cause deviation from OPNAV or NATOPS rules?

No

Have you ever given guidance to deviate from MESM?

No

If it's not withing MESM, then you won't release the aircraft correct?

Right, and my controllers wouldn't safe the aircraft.

Has the icing capability been an impact to flight ops? Lack of minimum equipment?

No, been able to mitigate equipment degradation with flight planning or profile management.

Are you aware of any mandated flight hour minimums prior to arriving to COLD RESPONSE

There is a number, I don't remember what it was. Believe it came from the MAG CO. As we got closer to execution the MAG CO asked other squadrons to help out to make sure we were at the flight hours we needed. DOn't remember what the number is off the top of my head.

Any specific COLD RESPONSE SOPS from VMM-261 or MAG-26?

No, but did publish the Bodo Reversal, I might call that an SOP.

What is you understanding of your weather minimums?

Depended on mission, for a local NAV route the consensus was 1000'/3mi (VMC). Pretty much what we went with every day.

Have you experienced guidance or direction from higher to launch if weather was not within minimums?

Weather is very volatile, can launch with great weather and then 30 min weather changes... you can hit fiords and changes... if it's not your minimum then you turn around. Nothing forcing us though.

Have you ever been questioned or pressured from higher for cancelling flights due to weather?

There have been flights that have cancelled for weather below IFR minimums. No question from higher.

What was you understanding of the PED policy?

Nothing personal... no photographs, videos, etc. Primarily used MAGTABs. No usage of personal devices in flight.

How did you address crew rest and acclimatization to Norwegian timezone?

Did it by nature... by the time aircraft arrived we were already acclimatized. One flight with the aircraft coming off of the boat. After that we went into cold weather training.

What was NVG policy? Take on every flight?

Few of later flights, brought with us just in case. As a practice day for VFR flights crews were not checking out goggles.

When did planning start for COLD RESPONSE? RFI- lead time to groom aircraft?

Enclosure (17)

VMM-266 was teed up for this mission and then the TEEP changed. Around October timeframe, we got tasked. Around November 2021 was when we started deliberate planning regarding what aircraft we were accepting and how to get in position to support. Bulk of squadron deployed in mid-February. Flash to bang came off deployment in October, got nod in November, deployed in February, roughly 105 days. Aircraft had to be ready earlier due to onload, black-bottom, timeline happening early January.

What was goal for the aircraft regarding icing capability?

-20°F was goal... IPS condition tracked daily, where aircraft stand, and the way forward. Took a lot of deliberate effort from Avionics.

Do you remember anything specific about Aircraft 14?

No

Did you ever have to pull or suspend any qualifications?

No suspense or pulling of quals.

Capt Tomkiewics had maintenance and weather issues during TAC syllabus, of which you instructed one of the events, can you elaborate on it?

There were a lot of maintenance delays that night... we like to give on call ASRs or a tactical scenario. With the time left available, there wasn't sufficient time to give him a fair evaluation and go through all of the learning objectives.

Enclosure (17)

First Interview 11 April 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c VMM-261 OPSO

Qualifications and Experience: Came in as the OPSO mid-November 2021. Was at VMM-261 for 5 years, then at VMMT-204 as an instructor for two year, then back to VMM-261. I'm an NSI and was NATOPS program manager at VMMT-204.

What role did you have in the syllabus for prepping the squadron for COLD RESPONSE?

I worked with my PTO to help develop the plan knowing what was going to be coming up. Our initial plan included a detachment to West Virginia that ended up being cancelled for some pretty bad weather up there. So what we came up with was our syllabus, with the key training goals to help expose the pilots to things they would expect there. It's a methodical syllabus on what we can duplicate here in the simulators. That was our primary way to prepare the squadron, given by senior instructors.

To your knowledge, everyone who deployed to COLD RESPONSE completed the syllabus?

Yes

Were you tracking any deficiencies with any of the aircrew of GT31?

I didn't get to fly much because of having to get refreshed coming off of the MEU. The experience I did have with them there was no concerns with their performance. Capt Tomkiewicz was progressing well, got him through his syllabus as planned. Nothing was rushed, he was prepped, and while it seems like it took a while because of the weather, it was not due to flight performance.

How would you describe Tomkiewicz's in his ready room demeanor and flight preparation?

He liked to joke around but when it came to flying he took it seriously. Shouldn't confuse his demeanor with how he took his flight planning or prep for flights.

Any issues with Capt Reynolds or Cpl Moore?

Capt Reynolds was solid, solid copilot. Very smart and helped out with mission planning stuff. Good head on his shoulders, had no issues. Was fairly young but progressing normally.

Did you ever review either pilot's NATOPS or APR, audit them yourself?

No

Did you ever discuss Energy Maneuverability diagrams when discussing the Bodo Reversal?

I did not participate much with that because I still had to go through my refresh at the time.

The month of January was solely focused on prepping the aircrew for COLD RESPONSE, took most of the flight time and sim time to get them ready with what we had.

What you had, what were you missing?

Up aircraft, because we had to black bottom 6 of our aircraft early January. Then try to fly the 6 planes we had left. We had a lot of issues, I think about 5 gearboxes and lots of heavy maintenance impacting flight hours. We also reached out to other squadrons to help meet our requirements of 10 flight hours and 5 sim hours prior to deploying.

Who established that metric?

Myself and the Ops shop. Felt that was the most achievable metric

Enclosure (17)

What science delineated that number?

Numerous sources, Commandant's planning guidance, MAG-26 campaign plan, etc.

Was Capt Tomkiewicz next in the shoot for section lead?

No, there was a couple ahead of him.

Enclosure (۱۶)

First Interview 31 March 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c MMCO, VMM-261

Qualifications and Experience: 6092, Intermediate level Airframes, CDI, taught at the schoolhouse, A-school instructor, production control at MALS-26, 4-5 years MV-22 time. Selected in 2020, TBS 2020. 6077 AAMO WTI

When was the last squadron maintenance inspection?

Last year prior to NARF, Wing inspection- passed.

Do you remember anything specific about the mishap aircraft?

Aircraft 168330- received November 2021 from PMI, during PMI got painted/weighed, and phased. Flew for a week, then went into Modifications. One anomaly coming from PMI- CVG binding on one engine. Went through conditional, lubed, no issues since then. No serialization issues, changed a bunch of parts but MX admin said was good during acceptance.

Went into depot level modifications: AC-bus tie mod, an Irridium antenna mod, rudder mount modification, and engine thermocouple upgrade.

Was the aircraft a Block B or Block C?

Block C, already had weather radar.

What did you do to get aircraft back ready to fly out of modification?

Out of mod... C-card for rudder actuators being removed and replaced. ALL TDs was incorporated. Sent on 30 day no fly. No issues with flight. We did fly a little post modification.

When you offloaded the black bottom transport, what was your biggest challenges?

No significant challenges, ones of the planes had an issue coming off the boat. The issue was on A/C 14. Was a unstowing issue. Not long to incorporate into daily schedule.

Did you see any weather impacts to maintenance operations in Norway? Aircraft or personnel?

Plenty of time to acclimatize, no significant stand out leaks. Researched weather impacts to maintenance. We experienced average MAF/WO generation.

Personnel had obvious issues with dexterity. Maintainers were briefed to come inside, or we put pre-heaters in the area. Cpl Wallace signed the A-sheet, Cpl Moze did the daily and turn around. No memory of issue with them.

Any issues with unscheduled maintenance?

No, aircraft have been pretty good here. Aircraft 16 has only flown one flight, due to a pitch change bearing.

Anything that keeps you up at night?

No, we have a pretty solid group with us

Are you still conducting tech training?

Yes, more so hands-on tech training, we take time to do it.

Enclosure (17)

Any pressure for aircraft generation?

Out here? No, the aircraft have behaved pretty well. Aircraft availability hasn't been an issue.

What's your work day?

Maintenance generally works around 0900-1900, 10 hour days. We flex with the schedule but maintain 10 hour days.

Any ongoing documentation issues?

No, no real long term issues with maintenance documentation.

First Interview 1 April 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c MV-22 FLSE Program Coordinator

Qualifications and Experience: Nearly 8 years fleet flying, 2 squadrons, 2 MEUs, DISCA deployment, 1500 flight hours, Hold every flight leadership designation and instructor designation with the exception of DCMI. No longer ANI, doesn't fit in my role, don't have NI.

Describe your role with VMM-261.

Augmenting VMM-261. PCA'd from VMM-261 August 21 to MATTS NR. At time of PCA- I participated in Cold Response PDSS. CO personally requested I augment the squadron in an attempt to manage deployment to dwell time. I didn't not go to Spain deployment, myself and (b)(3), (b)(6), (b)(7)c did not deploy. I'm currently TAD in excess to 261.

Are you familiar with general proficiency of pilots in VMM-261?

Yes, VMM-261 is amalgamation of VMM-261/264 proper. Very top heavy instructorship layout. Lots of NSIs. All of GT31 is from VMM-261 proper. Few mid level quals and a large amount of copilots. At one point over 21 copilots, vice normal batch of 8-13.

The squadron had not done a lot of challenging flying- repeat deployments to NARF. Deployment model is based in Spain, does not allow VFR flying- majority of flying IFR at altitude. That has been the deployment model for the past 6 years for VMM-261. Relatively safe to say that this is the first time most of aircrew have seen challenging weather and actual significant terrain.

Was there a predeployment training plan to augment that?

YES, a Training and academic plan was developed by then (b)(6), (b)(7)c Training plan developed to handle academic (icing, nav) and simulator package to mitigate shortfalls. Out of that came TTPs like the Bodo Reversal, and all was required for participating aircrew prior to execution. I participated in some of this training.

Is it verified that the aircrew understood the Bodo Reversal due to the Read and Initial?

That is my understanding, but I have not checked the signatures.

Were enlisted aircrew involved in the academics and the training?

I don't know. Enlisted aircrew do not normally go into the sim. The MCAT at NR is not operational, was not available or funded for this training.

You are augmenting in an Ops capacity to the squadron, correct?

Yes, that's my background, I was originally left as AOPS, and was OPSO for RBE (b)(3), (b)(6), (b)(7)c is replacement. I was coming to lend extra qualification and maturity to the ready room, which is young. My understanding was the CO was concerned that the exercise impacts of constantly needing a WTI to answer staff questions, there was a need for another WTI to fill the gap in the ready room (b)(3), (b)(6), (b)(7)c worked out MV-22 exercise integration into COLD RESPONSE. Turned into very large number of VIP/DV movements, almost all of which met 2star or larger equivalent for support. I moved into take roll addressing those to allow (b)(6), (b)(7)c to focus on scenario and training of squadron.

Before departing for COLD RESPONSE, we discussed at MAG the concept of LAT training with embarked troops? Why?

Enclosure (17)

LAT is defined as flight where terrain avoidance is a significant factor and intended flight below 500' AGL. I wanted to potentially discuss a waiver for troops is because of the extreme rugged nature of Norwegian terrain and the climatology. Norway is lots of fjords, with severe weather, and we worked through the routing for that waiver. We ended up not doing it, because the flying typically was between 1000' MSL-3000' MSL, which corresponded to AGL often over the water in the fjords. While there were mountains on both sides, generally had a mile on either wing, and we did not feel that the profile met the same intent as the LAT we did at home. Otherwise, if you expansively interpreted the definition then every flight would have been LAT. We were not flying at extreme low altitude or down near the dirt to avoid threats in a way that we thought would happen prior to arrival.

The scenario has a number of RF threats, but the execution of the scenario means the MV-22 has no interaction with those threats. No tactical reason to fly at that low level. Didn't continue to press the waiver, got through G-3 at 2d MAW CONUS, but was recommended to continue in Norway. Determined that we did not need it based on profiles that were being flown.

Weather minimums that were understood were 1000' / 3mi because the routes that were being flown were not considered LAT.

Correct, the flight was not intended to typically use LAT.

Have you ever seen LAT on the schedule?

I'm not sure, I can go look.

To address the weather minimum thing. The rules of conduct for LAT have you fly at 3000' / 5mi when flying LAT, when you are not flying LAT you can fly down to VFR mins of 1000' / 3mi. However, you can take that down to 501' AGL in theory, that's not the intent, but you can find that in the black and white of how you want to interpret that. There is a prudence in sort of, pay attention to what you are doing.

The definition is relative short for LAT, the squadron is based in a flat open coastal area of the US and their deployment experience was in flat open areas around the Mediterranean.

Based on your experiences as a WTI and your knowledge of required briefing items from publications, do you feel that the products met the intent for execution/mission accomplishment? For the profiles being flown?

Yes, I think it was. I wasn't there for the flight briefs so I can't speak to that. But historically, the level of detail put into just flying NAV or an ASR or just CALS is higher than it is CONUS for the specific reason of needing to mitigate terrain in the area. Almost all of the briefs incorporated DTED breakout to illustrate terrain and it was discussed.

How were line of sight comms and familiarity with other airfields?

Aircrew were very familiar with other fields in the area and line of sight communications have been surprisingly good. Generally radar contact in many areas that you may not expect, and have communication with ATC.

How would you describe the weather in Norway?

Rapidly changing and unpredictable. We pull METARS and TAFS and you will typically see multi-layer cloud decks, intermixed with showers and snow or rain, and it is very spotty. It's possible to see three distinct meteorological patterns within one half of the sky.

Have you encountered that weather in flight?

Enclosure (17)

Absolutely, was flying in good weather to another site out here, and when I turned around to come back the weather was untenable from the surface to 9000' MSL. That's just how it is here.

Have the developed procedures worked?

Yes, I've actually used it before. I was lucky that I was able to see that we weren't going to make it through and called it early. Often dealing with 3-5mi visibility, and hard to pick out the weather gradient. Very similar color shading to everything, terrain, aircraft, water, etc.

Do any external agencies give you weather updates?

You can ask, but generally only have access to weather within their control zone.

Any pilot to metro type services?

No, and PIREP usage is low.

The squadron did not deploy with any radios to deploy with an ANW2 network correct?

Correct, we did not deploy with them.

In your opinion are MAGTABS the only devices used in the cockpit?

No, generally on the deck you can sometimes get cell service to get METARS, generally best way to get weather for next leg of flight.

Has weather radar on aircraft been helpful?

No, because we are surrounded by high terrain and the way the radar interacts with the terrain generates lots of returns and has trouble discerning between the two. I have tried to use it and it is not useful in this terrain.

Any issues maintaining currency with cancelations?

No, spread load of flight hours is good and readiness has been pretty good as well. Total number of hours and experience is still relatively low. Recency can be high compared to stateside crews, but total maturity can be lower. Personnel are qualified and legal to fly. For example, the mishap crew was totally qualified to fly, but were young.

To your knowledge, the use of simulator time to augment flight time in order to meet 450 flight hours and 50 simulator hours is common and authorized per the Training and Readiness manual?

It is accepted, and much more palatable now than 5 years ago. Result of low cumulative flight hour production. Other flight leadership billets have hours requirement and are not waivable.

To your knowledge, was there a plan to progress Capt Tomkiewicz to section lead?

Yes

Enclosure (17)

First Interview 1 April 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c WTI, EATM,

Qualifications and Experience: With VMM-261 for 4 years. SPMGAFTF, Spain and West Africa WTI; NI: CDI/PC 310

Can you tell me about your daily duties?

I primarily work scheduling, managing crew chief prerequisites, crew chief and AO training plan,

How do you do your training plan?

Bi-weekly, I figure out what events will work on the next couple of flights and try to work them in.

Were the mishap crew members part of that plan?

Not particularly. Another crew chief was the EATM before coming out to Norway. I didn't really have a training plan prior to coming out to Norway- primarily worked in flightline. (b)(3), (b)(6), (b)(7)c EATM with training plan].

Is it safe to say that you weren't involved in the training plan for either the mishap Crew Chief or AO?

No, because once we came out here my goal was to get him up as far as I could to his LATI syllabus.

To the best of your knowledge, were both crewmembers proficient to be operating in the flight the day of the mishap?

Yes

Anything that gave you or any other instructors professional pause about the mishap crew chief or AO?

No, no abnormalities or significant deficiencies.

How are you integrated with Flight O/ PTO in integrating aircrew onto schedule?

I normally talked to AOPS/OpsO... more than helpful with aircrew training. They bring up a point to get training done, and are very helpful in getting it done. They think about crew chief training.

How do you transfer names onto the flight schedule?

MX quals can be a point, if we are going on a det. But not particularly needed for Norway. We do look at experience to determine crews, experienced crew to fly by themselves, etc. . Not just having pre-requisites for the day. MARLOG, not many prerequisites needed. As far as I know the aircrew had all of the prerequisites.

Do you recall the flight hours for the mishap aircrew?

Moore had about ~400 hrs... estimated.

Did you sit in on Human Factors Council for the crew chief portion? Any issues?

No factors for Gunny Speedy, excited to fly again. Nothing in particular for Cpl Moore. All he did was talk to (b)(6), (b)(7)c attitudes never seemed different.

Can you tell me about your understanding of Crew chief PED policy use?

Don't have PEDs... (PEMAs) don't really take on flights unless going for dets. Used to bring PEMA on aircraft for inflight troubleshooting. We sometimes do it on dets.

Enclosure (17)

What about personal cell phones?

For communication we do take cell phones with us. Nothing in SOP about not taking cell phones. Some don't take them at all?

Is PED use briefed in flights?

Depends on mission set, briefed not to have cell phones on us in flight for sigint reasons. Up to crewchief on whether to "take" phones into aircraft.

Any issues with the mishap aircraft?

Flew on AC 14 day prior. Nothing of specific note. I reviewed the aircraft's book, nothing significant. Just some icing issues, spinner dome, etc. "average MV-22 ADB".

Is it SOP for the survival kits to be on aircraft? Tracking?

Yes, installed by Flight Equipment and MAF'd.

What's the policy on taking NVGs on flights?

Normally take if landing within an hour of sunset. Prebriefed by TAC. Up to TAC if just flying daytime, take back up at night.

Did you see on any previous flight any systems for pilots to obtain in flight weather?

Some of the pilots have used some systems, possibly. They would call back home, radio back for weather updates, but don't always have that ability. For the most part, pilots use MAGTABS or cellphones to get updated weather.

Can you describe weather pattern on day you flew?

Weather will be clear... almost always moving south. It changes rapidly. The day I flew we attempted to fly south, but weather wasn't agreeable, so we stayed at a local LZ.

Were CC's getting enough hours?

Getting more than enough to remain proficient.

What was pre-deployment guidance for crew chiefs.

Mainly who was core skill complete? Moore was considered one of the more "senior" crewchiefs, already core skill complete. No particular sim training before coming, just normal night and LAT flights. We did cold weather training once we were out here.

Are you aware of any crew rest issues for the mishap crew chief or AO?

(b)(3), (b)(6), (b)(7)c Anytime I came back from night flight he was asleep. I believe he had enough sleep based on personal experience. (b)(3), (b)(6), (b)(7)c Flt E would have awareness on Gunny Speedy.

Were pilots trying to gather weather in flight? Or on deck via cell phone?

Most of the time I've seen they've gathered weather on the deck via cellphone... I can maybe name a few instances on a NAV route or flying IFR where it occurred. Just a quick weather update with solid crew coordination to ensure look out doctrine is followed.

Any inflight discipline issues with crewchiefs?

Enclosure (17)

Most of my crewchiefs, especially out here, have not had issue with complacency.

Do you feel like your crewchiefs are being listened to or can speak up to pilots on concerns?

Some of my younger crewchiefs feel like they are overspoken by some of the pilots. Pilots are wanting to push and say "we're wanting to make it". There can be disagreements and sometimes they feel overspoken.

Any addressing with PTO or OPSO?

No, usually ends with crewchief point being made, but just takes longer for crew chief account to be taken in and listened too.

The CRM environment is conducive to training?

Yes

How would you characterize Capt Tomkiewicz's ability to listen to crew input?

He was one of better pilots for CRM inclusion..

How would generally describe in decision making, new MV-22 TACs?

They're normally afraid of dropping a flight or dropping training. Some of the decision making is lacking, but that means they use the crew more for input.

Would you say their attitude is more conservative or cavalier?

More conservative?

Which would describe Capt Tomkiewicz?

He'd fit the more conservative mold.

When you fly LAT? Do fly down to 500' AGL or more around 1000'?

When we are inside the terrain its normally 1000' in airplane mode, when we don't have 1000' / 3mi, we will slow down and convert.

With the terrain of Norway, where you can be at 1000' AGL and still have terrain high around you, was the application of the LAT weather minimums of 3000' / 5mi ever discussed?

I believe it was discussed at some point, it's been brought up. But not sure if it's been a discussion for the whole unit or not.

Enclosure (17)

First Interview 6 April 2022

Name / Ranke / Billet: (b)(3), (b)(6), (b)(7)c VMM-261 XO

Qualifications and Experience: VMM-261 in Summer of 2020 from being a MAWTS-1 IP. Most of time on west coast and Okinawa. MEUs until Spain deployment in 2021. Been XO since November 2021. 1700 total hours, 1300 Osprey. I also did resident PME EWS and MAWTS only gets about 150 a year.

Are you a member of the Human Factors Board (Council)? Were the mishap crew ever singled out during them?

Yes. The mishap crews were not singled out for specific issues. Copilot was recently (b)(6), (b)(7)c TAC had been (b)(6), (b)(7)c Neither singled out to be a significant human factor. Nothing specific about enlisted aircrew.

Can you talk about preparation for Cold Response? Aircraft, aircrew?

(b)(3), (b)(6), (b)(7)c put together a small T&R to develop a sequential model to focus on preparation to get the most training in the available time. Very deliberate on aircrew going to COLD RESPONSE and backup personnel. Very direct on specific things from CO direction. Reviewed icing classes, NATOPS and INST checks focused on icing. Focused on mountain area terrain type stuff, not just landing. We created Bodo Reversal. Developed based on IMC reversal, and some feedback on Trident Juncture VMM-365 after action- and CO experience. We used collective experience to verify with senior instructors. Made tweaks. Implemented in sim events, MAT events, with icing, degrading visibility, and set it up under duress to test it. We used the -200 NATOPS performance supplement for turn radius information. Performed and demonstrated in different modes, evaluated in different speeds/modes, climbs/decents, etc. Used trend dots a big focus. Flying in conversion mode allows us to shrink our turn radius. The R&I graphic is the result of what we came up with and what stemmed from our development.

Can you speak about how the syllabus was developed?

It was designed like T&R using codes that already exist for MAT and LAT training. The third code was high/hot/heavy- designed as progression. Daytime high altitude, night time, worked through Bodo Reversal. The codes mirrored T&R current codes, but went through specific COLD RESPONSE deliberate discussion items. Integrated degraded engine due to engine anti ice, NATOPS, performance, etc. Layed existing T&R framework over expecting operating conditions. The discuss items were the bigger meat of the training.

When you fly through mountain ranges do you consider that LAT training?

Yes, terrain is a significant factor.

So does that mean that any time you flew in Norway you were conducting LAT?

That's what we talked about, but to be honest I didn't look at the schedule every day to see how they were logging it. There were certain ASR runs to like Bardufoss that were probably at altitude. They were also trying to get a LAT route certified. Not sure if that route included consisted with a part of the route flown by GT31. I know they were attempting to certify the route.

How can we confirm that the route was certified?

(b)(3), (b)(6), (b)(7)c was attempting to get it certified before they left because there was input from other units out there.

If you go below the mountain line, would that be LAT?

Enclosure (17)

So, below 500' AGL, and then caveat with significant terrain. All of that stuff exists like MSA and ESAs.

For a skid guy, what's the line of embarkation between LAT and NAV?

Terrain avoidance. Specifically, if you are doing LAT training for the code, purposely trying to increase crew comfort by putting yourself in that environment. When I think of the code for LAT we are specifically doing the training for the T&R. When I think of mission, LAT is a means to an end, not the mission if we are doing a mission.

I've had multiple conversations in the MAWTS-1 building regarding this definition and how we utilize and delineate LAT from other profiles.

Without contingency or combat operations, you need 3000' / 5mi to conduct LAT correct?

If you are training for LAT, yes for fixed wing airplane mode LAT. In conversion we have lower minimums.

Can you talk to the crew's performance in the squadron?

Capt Tomkiewicz was an even keeled guy in Ready Room. If given a task- he got it done, was light hearted, smart, direct. If he was nervous, you wouldn't know it. If things were down- he'd lift people up. If given a task he'd get it done. Mostly in maintenance when he was in Spain then worked in Ops. He was average, but had a noteworthy program on the SACO CGI. He wasn't one to cut corners. Capt Reynolds checked in when we got out the door, S5 and then to Ops. Given a task and he got it done. He was hardworking, motivated. Organized and deliberate- became NAVO/MAGTAB SME. He was a young guy who got along with the ready room.

Cpl Moore- quiet, always a hardworker. He was working on instructor quals. Part of a peer group of 4-5 as achievers, ear marked to move through instructor quals.

Gunny Speedy, knew his role, was a "gunny" in the squadron, not just admin chief.

Can you talk me through your interpretation of the PED policies you know of?

PED policy- my understanding is they are not supposed to be used by aircrew. COMSTRAT and others have their own rules. MAGTABS can be used in cockpit- cell phones can be in bags with the understanding is not coming out and taking pictures.

Do you think there is a holistic problem in Naval Aviation with PED usage?

Yes, because you see it all the time on social media. And it's tough coming from MAWTS because we had different rules with COMSTRAT and maybe people see that as "well if MAWTS is doing it...". But here locally and aviation wide it's probably a problem.

We rebuilt Gunny Speedy's APR jacket over the last couple of days, generically. The quals and designations letters were made, but unsigned. We think he took his original out there with him and it's with his personal gear.

Capt Tomkiewicz had three night reviews prior to his TAC check, weather and maintenance impacts causing incompletes. Can you confirm the decision to execute the review in the sim was in the spirit of keeping him moving in syllabus?

Yes, we incompleted him multiple times due to weather and maintenance and our flight hour generation capability was not doing him any favors. We decided to challenge him in the sim at night and worked through a scenario and felt comfortable that once demonstrated all of the required metrics and met the CO's guidance that he was complete. We did not want him to stall out due to lack of aircraft.

Enclosure (17)

Have you seen anyone at VMM-261 fail any review flights? Process after?

Yes, I have failed one and (b)(6), (b)(7)(C) has failed one. We hosted a Human Factors Board after for my individual. We debriefed, I gave the shortfalls and wrote the ATFS. I then went to the PTO and said to develop a training plan. What we came up with was essentially to fly 50 more hours, and then they would restart the syllabus. It worked out because they were at 450 hours, and then we came back here. They would then get a day and night warm up, and put them in the sim for the day review to do all the emergency procedures. We didn't get to the night review. We did a Human Factors Board when we got back because the instructors and Safety felt that there was some lingering anxieties outside of performance issues. They never made it to a TAC check. The squadron is not afraid to identify sub-par performance and seeks to resource aviators with assistance.

Another thing we started looking at after identifying some issues due to lack of flight time was deliberate simulator utilization and mentorship/instruction prior to syllabus checks. Part of the instructor standardization meetings is we would write ATFs on people even if it wasn't a coded event. If a copilot on an instrument check shoots a bad approach, we would write an ATF on that pilot to document for future tracking. Wasn't all bad, we also wrote on noteworthy events. We started doing this after looking back at this one individual and seeing issues in flight school and VMMT-204 flights.

Enclosure (17)

First interview 30 March 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c SFF/MC Controller

Qualifications / Experience: Maintenance Control for 2 years, SFF for 1.5 year- 19 months. Never revoked. V-22MX for 5.5 years at VMM-261, one deployment and COLD RESPONSE 22

What procedures do you follow when you safe a book?

We utilize a locally generated SFF checklist, same one used for each aircraft, derived from min requirements for SFF from Ch5 of the CNAF 4790. All paperwork is printed if we can and placed in a contingency binder like the one seized by another controller. I did not touch any records after knowledge of the mishap. Normally print everything we have, but limited here. S6 hasn't provided everything, so we print bare essentials. Printed in case we have to go to a contingency mode.

What kind of maintenance guidance did you receive to prep aircraft for COLD RESPONSE?

We just transferred large number of planes out, plus received a number of aircraft from PMI. BUNO 168330 was a relative new plane to the squadron, where we received it either in December or January straight from PMI at Cherry Point where they did PMI and a phase inspection. We did not have that plane in hand very long before shipping over to COLD RESPONSE. PMI conducted post PMI FCF, we groomed the aircraft to best of our abilities. Multi shop effort to receive it. MX admin, control, QA received aircraft, can't recall if there were any discrepancies.

Was there any guidance to look real hard at MESM? What is the guidance?

Guidance was to provide most mission capable aircraft as possible. FMC is not very common. Hard line between PMC and NMC, do not flirt with that line.

What shop did you work in before control?

Flight equipment by trade.

Aware of any additional MX SOP to support COLD RESPONSE?

Not that I'm aware of.

Aware of any orders to violate the 4790 to get aircraft flying?

No

Any aircrew using phones or PEDs on the way to the aircraft.

No

Are Aircrew very well versed in writing up MAFs?

Yes, they are good at it. Occasionally have late MAFS, but that is dealt with quickly by maintenance leadership, MMCO/AMO.

If a plane captain says "the bird is down" do you listen?

Yes, we ask questions to gain more SA, but we listen and ensure the appropriate shop is notified about the issue. We then take the aircraft off the flight schedule.

Anything unusual about leading up to the launch of the mishap aircraft?

Enclosure (17)

No, it was a normal day, and normal flight. It took off, I watched when they came back and fueled. I heard them on the line, poked my head outside, asked if anything was wrong. The ODO said they were just fueling and going back out.

What's your work day look like?

MX works 10 hours.

ODO's ever call down asking for things to be done outside of 4790?

No, the ODOs are in receive mode...

Any quals suspended or revoked?

no plane captains suspended quals.

How are discrepancies that are found outside of schedule inspections treated?

If the plane is down the plane is down. Our team is very good at writing up things that are wrong, regardless of if they are outside of their interval or not. There's no stigma attached to that?

Did the mishap aircraft have the most recent software load?

No, we had a deviation for the JASS load to be corrected within 90 days of returning to CONUS. All of the COLD RESPONSE aircraft have the deviation due to the timing of the software drop.

Enclosure (17)

Name / Rank / Billet:

(b)(3), (b)(6), (b)(7)c

Flight Line Division Chief

Qualifications and Experience: Former F/A-18 Airframes, IA machine gunner. LAT moved here to MV-22. 2 x Iraq, 1 x Afghanistan, SPMAGTF SPAIN, MEU.

How quickly did the Marines adapt to maintenance in Norway?

They adapted very quickly... mainly about ice. I can't speak about flying. But maintenance wise the first time personnel slip they learn to wear PPE.

Have you had to discipline for any malpractice maintenance wise?

No... the only difference out here is mainly the cold weather stuff. Mostly morale issues trying to keep Marine's heads up, keep them engaged.

You were roommates with Gunny Speedy? Any human factors issues?

Yes, and no issues that I'm aware of.

In your opinion, did Gunny Speedy adhere to crew rest regulations?

I am familiar with those requirements and to my knowledge he did.

Enclosure (17)

First Interview 31 March 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c ODO day of 18 Mar,

Qualifications and Experience: Single deployment NARF 2021, MV-22 copilot, NSQ, LATQ, AAR, core skill complete

Can you tell me about the date of the mishap?

On the Morning of 18 March I took over as ODO, arrived at the squadronsquadron 0730. The flight brief was at 0900, ODOs normally arrive 30 min prior. I arrived earlier due to some new procedures in place for operations during COLD RESPONSE. Exercise was just kicking off and new procedures in place from NAOC for ACMs, hot air spaces, mission secret, Norwegian NOTAM system. Got early to access and be able to brief to crews.

I entered the ready room and pulled up my laptop, opened the ODO template. Prepared ODO brief, checked the flight schedule, added a snap shot of schedule, brief roll call, added temps/max/da/pa, utilized the Air Force weather website (Airforce weatherweb.mil), and used the IPPC.no website which we've found have the most accurate weather radar pictures of country/regional/local. The picture was similar to 70% of days, scattered precipitation, scattered cells moving throughout the area. Rapidly changing weather patterns. METARS/TAF (aviationweather.gov, backed up on af site). NOTAMS for Bodo, Bardufoss, Evenes, Trondheim. For the airspace portion- that's mission secret- pulled the ACMs. Briefed very similar to 31 Mar brief. Signed RAW that I had. (Initialed RAW on the computer, not certificate). Not that I recall any mx issues.

I generally knew the mishap route of flight. I flew with Capt Tomkiewicz the day prior. On the 17th, Iwe anticipated flying the route but received last minute tasking about 30 min prior to takeoff, that tasking fell through before launch. We planned and brief to fly the route, did local CALS instead, and entered a portion of the route at an alternate checkpoint. Entered just north of Rosval and flew south to north. I believe we overflew the site of the mishap.

Which route were you on?

It was the Bravo route that we received from the NAOC as a verified route that we were allowed to fly. They didn't name the checkpoints, so we named them according to the ASTACSOP.

Are those checkpoints what you reported on Helo Common?

We reported that we were entering the Bravo route north of Moyrana and Rosvall over Helo Common and Rosval radio.

Did you have line of site comms with anyone?

No, made calls in the blind over Rosvel that we were not entering their zone, but were trasiting in the area. Did not recevie anything back.

Can you describe terrain, how you flew the route?

Weather was at 7000' overcast, so we were flying over the terrain. I don't remember the MSL altitude, it was my first time flying to route.

Did you brief weather mins?

Yes, briefed 5000' / 5mi because of the terrain in that area.

Enclosure (17)

Anything unusual with the brief?

No, sounded extremely similar to other briefs.

Did crew turn in RAW/ and load comp?

Yes, I received both.

Did you listen to flight brief?

I was within earshot, but not attentively listening.

Any issues with aircraft?

No

What aircraft?

Aircraft 14

Is Aircraft 14 Block B or C?

Believe it is a Block C

What does Block C mean to you?

"Stick aircraft" ... has modifications.

Any procedures for using onboard weather radar?

Yes sir, we use it.

Have aircraft commanders ever forgotten to sign the RAW with it being on the computer?

Not to my knowledge, very well adhered to.

During your flight on the 17th, did you experience any of the changing weather?

No, there were high ceilings, none of the normal cells in the area.

Do you remember if the Bodo reversal was briefed? Any other weather issues on the 17th?

Not briefed every flight due to extensive predeployment training.

Do you remember the last communications you had with GT31 on 18 March 2022?

They came back for hot fuel at half-way point, I actually walked outside to watch them taxi and takeoff.

Did the crew ask for any weather updates?

I walked outside and told them that the weather updated was still scattered in the area. They had been flying for 3 hours before fuel.

What was their route of flight?

First half was going north up the coast, don't remember exactly where. I was submitting 1801s filed through the HN website. The second half was meant to be south along bravo route.

What kind of communications do you have with the aircraft?

Just the PRC-152. Crews will often brief cell phones as a tertiary means of communication on deck. No SATCOM was available.

Enclosure (17)

Is the lack of printing products a resource issue?

Yes, we are still creating all of the products, but have to use MAGTABs to take pictures to bring the products with us. We had printers but they have failed. Primarily use pictures vice .pdfs on the MAGTABs.

Any ability to upload electronically vice taking pictures?

I don't know. I don't believe we had that capability.

Do feel comfortable enough in the current system to fly with?

I don't feel any less comfortable walking to the aircraft with the products as we have them.

Any formal or informal SOP on battery life for MAGTAB?

TACs will generally check battery life.. Informal rule that 80% should last day or two. Plenty of opportunity to charge.

Any issues keeping AERO APP updated?

No

Mission change on day of GT31 event?

No sir, no need for mission change.

To your knowledge, does anyone keep their own device on hand in case the MAGTAB fails? IPAD with Foreflight?

I believe some pilots may use foreflight... I don't use anything besides MAGTAB.

Did Captain Tomkiewicz every use an IPAD on the preivious flight with him?

No, not that I remember.

Any issues with aircraft regarding no having DTED?

No, generally briefed as mission essential equipment

Pretty standard for aircrew to use Height Above Terrain in flight?

Yes

Enclosure (17)

First Interview 31 March 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c QA Chief

Qualifications and Experience: Plane Captain, QAR 310 (Flightline), V22 since 2009, 5 deployments, 261-2009, CNATT, VMM-262 2012, NARF/AFG, MEU, 31st MEUs

Were you aware of any perceived pressure to prepare the aircraft for COLD RESPONSE beyond normal cycle of preparation, to cause shortcuts?

No

Were there any deviances or anything you perceived going on in the maintenance department that required you to take administrative or punitive action?

No, not with Aircraft 14 or for COLD RESPONSE. We did have to pull (b)(3), (b)(6), (b)(7)c CDQ qualification prior to deploying. He had to work through the syllabus again and be signed off by specified personnel in flightline. Qual was actually suspended and not pulled... required additional training through a syllabus.

Do you recall the plane captain the day of the mishap on AC 14?

No, I was in Narvik on a site survey. (b)(3), (b)(6), (b)(7)c was running the QA shop.

Once I returned from Narvik I received a text message about Aircraft 14 not having returned yet. So I went back to the squadron, and when I arrived that's when things started unraveling. Shortly after the CO broke the news.

When was your last major maintenance inspection?

Last year we had a MALS and a Wing inspection come in. Results weren't bad.

Do you remember anything specific about Aircraft 14?

Workin with icing on it a lot... it was a player to be as close to FMC as possible.

Enclosure (17)

From: (b)(3), (b)(6), (b)(7)c
To:
Cc:
Subject: RE: JAGMAN Information
Date: Tuesday, April 19, 2022 1:48:41 PM

Sorry for the delay sir, I was flying last night. I'll answer as best I can.

1. Yes he was my roommate.
2. I know that he was sick on and off throughout the time we were there with a head cold. I believe I remember him being congested the night prior. I flew the night prior and then slept in so he and I were off cycle so I couldn't tell you his status the morning he woke up. Other than that, I know that he had just settled on a house and had received the keys so that was an exciting time but not anything I would say affected his ability to fly/focus.
3. Per my above comments, he was fighting some congestion but was managing just fine. I think I likely woke him up when I came back from my night flight. I landed at 2300 and probably got back to the room around 0030 - 0100. His brief time the following day was at 0900. Breakfast ran from 0530-0800. Not exactly sure when he woke up but it was likely in time to get breakfast and then prep the last minute items before the brief.

I have cc'd the ASO and senior member of the AMB just cause I know that my role in answer questions for the JAGMAN and participating in the AMB is a bit touchy. The guidance I have received is that I am allowed to disclose factual information and then stuff that I was personally responsible for and aware of prior to my role as an AMB member. I hope this helps but please let me know if you need anything else.

Very Respectfully,

(b)(3), (b)(6), (b)(7)c

-----Original Message-----

From: (b)(3), (b)(6), (b)(7)c
Sent: Monday, April 18, 2022 8:53 AM
To: (b)(3), (b)(6), (b)(7)c
Subject: JAGMAN Information

(b)(3), (b)(6), (b)(7)c

Good morning, I am assisting the JAGMAN IO in regards to GT31 and hoped you could answer a few questions for us regarding your Norway roommate, Capt

Enclosure (17)

Reynolds.

Before I begin, we do not suspect anyone at this time of any wrongdoing and are therefore not offering 31B rights. These questions are in regard to the JAGMAN investigation and therefore do not fall subject to any privileged information considerations.

1. Can you confirm that your roommate was Captain Ross Reynolds?
2. To your knowledge, were there any human factors associated with Captain Reynolds that may have been affecting him prior to 18 Mar 22?
3. To your knowledge, did Capt Reynolds have any issues regarding achieving the required crew rest the night before 18 Mar 22? Or crew day?

Thank you for your assistance.

V/R,

(b)(3), (b)(6), (b)(7)c

Enclosure (17)

From: (b)(3), (b)(6), (b)(7)c
To:
Subject: RE: JAGMAN Information
Date: Friday, April 22, 2022 2:45:21 PM

Good Afternoon Sir,

My apologies for the delay in response, but I have no problem in answering your questions below.

1. My roommate was indeed Capt Tomkiewicz.
2. To my knowledge, I wasn't aware of any personal/human factors associated with Matt during the exercise in Norway or during the time leading up to the squadron leaving.
3. As far as I know, Matt didn't have any issues with achieving crew rest from the scheduled events the day prior. Additionally, I did not note any issues with his crew day on 18 Mar 2022 as well.

If you'd like me to expand on anything further, feel free to reach out to me on my cell at (b)(6), (b)(7)c and I'd be happy to clarify anything if need be.

V/R,

(b)(3), (b)(6), (b)(7)c

-----Original Message-----

From: (b)(3), (b)(6), (b)(7)c
Sent: Monday, April 18, 2022 8:57 AM
To: (b)(3), (b)(6), (b)(7)c
Subject: JAGMAN Information

(b)(3), (b)(6), (b)(7)c

Good morning, I am assisting the JAGMAN IO in regards to GT31 and hoped you could answer a few questions for us regarding your Norway roommate, Capt Tomkiewicz.

Before I begin, we do not suspect anyone at this time of any wrongdoing and are therefore not offering 31B rights. These questions are in regard to the JAGMAN investigation and therefore do not fall subject to any privileged information considerations.

1. Can you confirm that your roommate was Captain Matthew Tomkiewicz?
2. To your knowledge, were there any human factors associated with Captain

Enclosure (17)

Tomkiewicz that may have been affecting him prior to 18 Mar 22?

3. To your knowledge, did Capt Tomkiewicz have any issues regarding achieving the required crew rest the night before 18 Mar 22? Or crew day?

Thank you for your assistance.

V/R,

(b)(3), (b)(6), (b)(7)c

Enclosure (17)

First Interview 1 April 2022

Name / Rank / Billet: (b)(3), (b)(6), (b)(7)c VMM-261 (b)(3), (b)(6), (b)(7)c

To the best of your knowledge, was any of the mishap aircrew on any prescribed any medication?

None of the aircrew were on any standing medications for any chronic medical conditions.

Were you aware of any outstanding human factors that may have affected decision making processes of the aircrew?

Not that I'm aware of.

Did you do the flight physicals of the aircrew?

I did not do Gunnery Sergeant Speedy's, I don't recall if I did any of the other crew's.

As a medical professional, did you see any differences in the way aircrew were reacting in the cold weather?

Everyone was adapting very well, the dry suits took some getting used to, but by the time of the mishap flight most people have become accustomed to it.

Enclosure (17)

First Interview 6 April 2022

Name / Rank / Billet: (b)(6), (b)(7)c VMM-261 DSS

Qualifications and Experience: Deployed to Kuwait, VMM-268 SPMAGTF 2016, two MRF-Ds 2017/2018, DFT to Korea/Philippines 2019

I went to Resident EWS, and just got back from NARF April-Jul 2021

I attended WTI in the fall of 2021. Flt lead, AMC, 1450 total hours

What billet do you hold in the squadron?

I'm the Director of Safety and Standardization, but am not an ASO.

DO you participate in Human Factors Councils? Did you discuss any of the mishap crew in detail?

None of the crew members were discussed as having issues during last 3 months of councils.

Have you seen any trends in the squadron as the DSS? Running beyond the capabilities?

Common topic discussed during councils was on working towards aircraft grooming and flight hour management in preparation to deploy. And then a lack of distribution of flight hours due to that focus on readiness.

What steps were taken on the maintenance side to ensure you had mission capable aircraft to take to COLD RESPONSE?

I can't speak to specifics of the maintenance department. I wasn't aware of anything like shortcuts or any other specific issues in getting the aircraft ready.

Can you speak on some of the mitigating steps taken to make sure that pilots got hours, academics, training coming back from the NARF and into preparation for hazardous mountainous terrain?

The first focus was getting people back into the aircraft consistently during Oct-Dec 2021. From late December to January there was the PTO developed training syllabus that was sim driven due to inability to replicate locally. Syllabus consisted of 3 sim events on LAT in MAT, one to discuss icing system, one to expose crews to "white outs". A crawl-walk-run method. Academics- built like a T&R event. It included discussion items, required readings. Pulled out required reading and publications to resource instructors. NSIs and above were the instructors, leveraged experienced aviators.

Do you have a record of the training?

Owned by (b)(3), (b)(6), (b)(7)c

Were Crew Chiefs required to participate in the training?

CCs were encouraged but not required.

Was the Ready Room receptive to the additional training in preparing for COLD RESPONSE?

Ready Room was receptive to training. Required reading pulled out of NATOPS, ANTP, pulled out limitations and icing concerns.

Was any of the syllabus focused on Energy Maneuverability diagrams and maneuvering inside of terrain?

Yes, more directed to the Bodo reversal numbers. Part of heavy detailed planning.

Who reviewed the Bodo reversal Read and Initial?

Enclosure (17)

Reversal maneuver was approved and integrated by Stan Board. Members were myself, (b)(3), (b)(6), (b)(7)c
(b)(3), (b)(6), (b)(7)c as the EATM.

Can you talk about how the Bodo Reversal was introduced to the squadron?

Worked into syllabus that was discussed, part of the sim training plan.

Where were the simulator events conducted?

We went to Bridgeport was for one of the sims in order to simulate terrain. Did not use Norway because it was not modeled very well.

What is the squadron PED policy and your understanding on it?

We don't have a squadron policy, we fall in on the MAG policy. The policy dictates the use of PEDs for the purposes of mission planning and to aid in enroute structure navigation/procedures with an official PED. As far as a personal PED, I'd have to get as far as discretion of where the personal PED falls under. Driven off of understanding that PEDs should not be distraction or hinderance with flight operations.

What do you know or understand to be an accepted practice by crew chiefs on the PED policy?

Don't think I can speak well on CC following policy.

As a culture, does the command work hard to control the utilization of unauthorized PEDs in flight?

Not sure I can expound anything beyond our current policy.

In your own flights, do you brief the usage of PEDS or how to employ them?

Not specifically part of my NATOPS brief before every flight. During execution I heavily emphasize use of the MAGTAB and if we are going to use it make sure we have a way to secure it. Anytime someone is heads down, we vocalize to ensure that the crew is aware and that someone can pick up the scan outside.

Can you describe Capt Tomkiewicz's discipline with planning, briefing, execution?

Capt Tomkiewicz was a great person to have in ready room, average performing pilot. Based on flying with him and being around the ready room and understanding who puts in lots of time planning vs who is looking to stray away. He was in the middle.

Did you ever fly with Capt Tomkiewicz as an instructor? How did he deal with events when things changed?

For mission skill events and for one or two night system events. The majority of events I flew with him were PTT type events, not much for me to judge decision making, etc.

Capt Tomkiewicz had three attempts at his night review syllabus; for various external reasons. Does VMM-261 ever fail a person on a review flight? And if so, what happens next?

Yes, the squadron has failed personnel on review flights. If it's a single event that's failed it requires a detailed ATF, to draw out weaknesses. Instructor makes coordination with Operations and Safety to discuss remediating a specific skill before being evaluated again. Ops and Safety take the recommendations and if necessary conduct additional events to address weaknesses.

Is it common to see MV-22s squadron have pilots utilize the 50 simulator hours to fulfill 10% of the required 500 flight hours to make TAC?

Enclosure (17)

Yes, common in VMM-261 and in other squadrons on the east coast. Less common in Hawaii and on the West Coast.

Enclosure (17)

Interview of (b)(3), (b)(6), (b)(7)c SFF/ Maintenance Controller.

Interviewed by (b)(3), (b)(6), (b)(7)c on April 20th 2022.

When were you signed SFF? Has been SFF since December 2021.

Any Maintenance Guidance for CR? "Nothing out of the normal."

Procedure to safe an aircraft for flight? Followed the same procedures as we did at home. Biggest issue was computer and printer assets. We only had 3 maintenance computers and one printer.

Is a checklist used? "We used a local generated safe for flight checklist".

What is the usual fuel load amount required for flight? "Around 11K."

Hot pit on the way out? "Yes, hot pits were available if needed on the way out. "

Any pressure to get aircraft turned back around for the flight schedule? "No abnormal pressure to get the birds out".

Anyone taking short cuts to meet the flight schedule? "Not that I am aware".

How was the icing systems as a whole in CR? "We did what we could to fix the icing gripes on the aircraft when they were not on the flight schedule."

How were the working conditions on the aircraft? "Was cold, but maintenance personal had covered area on the flight line to get out of the elements when needed. "

Are you a 200 CDI or 200 work center supervisor? No.

MCN: 28T088A. Did you sign the CDI block of the Worker hours, initials AMV? Yes. "Avi shop said they were ATAFed and were walking out the door. I signed the CDI block so the MAF would be M3".

Did you ATAF the tool box? "I did not inventory the tool box prior to signing the CDI block on the MAF".

Enclosure (17)

-Ended Interview-

Enclosure (17)

VMM 261 Aircrew Interviews conducted 25 April 2022 in VMM 261 Conference Room

VMM 261 interview (b)(3), (b)(6), (b)(7)(C) Crew Chief, 2 Mar 2022 flight with MAC

(b)(5), (b)(6), (b)(7)c

(b)(5), (b)(6), (b)(7)c

1. CC, PC, BIC, NARF, CR.
2. Do you know the policy for the use of PED in Marine Aviation?
 - a. Don't take them. (not accurate understanding of PED policy)
3. Were you familiar with authorized LAT training areas or MTRs in Norway used for CR?
 - a. I can't recall.
4. Do you remember flying with MAC on 2 Mar 2022?
 - a. Yes, but nothing stands out.
5. Do you remember any parts of the flight brief that was given significant attention?
 - a. I can't remember.
6. What about minimum altitudes or weather?
 - a. I can't remember.
7. What about MAC's attitude prepping for and during flight execution?
 - a. MAC enjoyed teaching, had good CRM, never felt unsafe.
8. How often on other flights not with the MAC in Norway did you operate below 500' AGL and what, if anything drove you low?
 - a. I can't recall for sure.
9. Did you ever operate in the LAT regime?
 - a. Yes, but stayed above 500' AGL.
10. If you were above 500' AGL, why do you say you were in LAT?
 - a. WX, terrain.
11. Was there a general minimum altitude you operated at?
 - a. 1000' AGL.
12. Did you ever witness anyone using PED on one of your flight?
 - a. Yes, (b)(3), (b)(6), (b)(7)(C) took pictures with a camera.

VMM 261 interview (b)(3), (b)(6), (b)(7)(C) Crew Chief, 2 Mar 2022 flight with MAC

(b)(5), (b)(6), (b)(7)c

(b)(5), (b)(6), (b)(7)c

1. CC, PC, BIC, CDI, NARF, CR.
2. What type of demeanor did the MAC have when prepping for a flight or during execution?
 - a. Down to business, I don't remember specifics of the flight brief or flight.
3. Do you recall the profiles you flew over water or feet dry?
 - a. I don't recall exactly, I can't remember, it was almost two months ago.
4. Do you recall how LAT training areas/routes were certified in Norway?
 - a. I can't remember.
5. Do you recall if minimum altitudes were ever briefed to the aircrew of 261?
 - a. Ya, but I can't recall.

Enclosure (17)

VMM 261 interview (b)(3), (b)(6), (b)(7)c **Co-Pilot, 2Mar2022 flight with MAC**

(b)(5), (b)(6), (b)(7)c

(b)(5), (b)(6), (b)(7)c

1. CP, NARF, CR
2. Did you ever fly in the LAT regime in Norway?
 - a. No, I never did LAT.
3. What about your flight with MAC?
 - a. We conducted an area fam within 25NM of Bodo, sight-seeing, doing CALS, never left Bodo airspace.
4. What were your profiles for this flight?
 - a. We generally were at 1500' AGL with exception of CALS or conversion mode 120kts/200'
5. Were you aware of any routes certified for LAT training?
 - a. I am not sure about being certified but we used the "Hoth" route to the south.
6. Was the "Hoth" route the same as the "B" route?
 - a. I think so, not sure.
7. How was MAC to fly with?
 - a. He was fun to fly with, not on the controls much.
8. When you flew with him did he brief any key risk mitigations?
 - a. Yes, we planned to stay close to Bodo and avoid weather.
9. When you mission plan, do you do map studies of your routes?
 - a. No, I don't do intermediate check points.
10. How would you describe the culture of the 261 ready room?
 - a. Great place to be, I enjoy being here.
11. Did you have a go/nogo for weather in Norway?
 - a. Yes, 1000' cloud deck.
12. So, was the 1000' cloud deck a CO imposed restriction?
 - a. No, it was generally up to AC.

VMM 261 interview (b)(3), (b)(6), (b)(7)c **works in Ops, Co-Pilot, 5Mar2022 flight brief with** (b)(3), (b)(6), (b)(7)c
Division lead (b)(3), (b)(6), (b)(7)c **DLUI, LAT scheduled** (b)(5), (b)(6), (b)(7)c

(b)(5), (b)(6), (b)(7)c

1. CP, NSQ, NARF, CR
2. Were there certified LAT areas in Norway?
 - a. Yes, the A, B, and C routes.
2. How were the LAT areas certified?
 - a. We built them in JMPs, looked at MSA, built a brief to push to higher (b)(3), (b)(6), (b)(7)c took care of pushing up.
3. Since the NAOC pushed you the A, B, and C routes did the NAOC certify them? Can the Norwegian military certify a LAT area for USMC?
 - a. Yes, the NAOC routes were certified (b)(5), (b)(6), (b)(7)c
4. Did you fly with MAC on 17Mar22?
 - a. Yes.
5. What did you do?

Enclosure (17)

- a. Last minute tasking changed our plan.
- 6. How?
 - a. Instead of doing an ASR we flew to the south?
- 7. What did you do?
 - a. We flew the B route.
- 8. Did you ever fly below 500' AGL on the B route?
 - a. Maybe, not sure.
- 9. How did you plan the route, did you conduct a detailed route study for significant terrain?
 - a. Followed ANTP guidelines, with checkpoints 30-60 KM apart.
- 10. Any more stringent added to cockpit brief (looking for discussion of terrain, winds, ect..)?
 - a. Nothing outside the usual weather concerns.
- 11. Were any altitude restrictions briefed during mission brief?
 - a. I don't remember (LAT ROC not briefed?).
- 12. How would you describe MAC's approach to planning and briefing?
 - a. Funny and go lucky up until it is time to work.
- 13. How would you describe the MCP?
 - a. Hard worker.
- 14. Is PED use authorized in USMC aircraft?
 - a. Yes, but I don't recall the exact policy.
- 15. **At end of interview** (b)(3), (b)(6), (b)(7)c **stated that he probably flew below 500' AGL but couldn't state how often or why.**

VMM 261 interview (b)(3), (b)(6), (b)(7)c **FOPSO, DLUI, 5Mar2022 flight brief with** (b)(3), (b)(6), (b)(7)c **Division lead, LAT scheduled** (b)(5), (b)(6), (b)(7)c

- 1. Sec Ld, NARF, CR.
- 2. You were scheduled for LAT on 5Mar22, but didn't execute the flight. Did you specifically brief the LAT portion and the ROC? Were there certified LAT areas in Norway?
 - a. I didn't brief LAT ROC or anything specific to LAT. I was completely focused on the DLUT portion of the mission.
- 3. What were the certified LAT training areas in Norway?
 - a. I am not sure.
- 4. What flight profile did you generally fly in Norway?
 - a. 1000-2000' AGL, VMC. I never descended into the LAT regime.
- 5. For your DLUT, did MAC help you prepare?
 - a. Yes, he was a solid member of the ready room.
- 6. Did you ever fly with MAC?
 - a. Yes, I flew several hours with MAC, good aviator, no issues, plenty of experience.. he made good decisions.
- 7. So, you never operated in LAT regimes while in Norway?
 - a. No.
- 8. How many times did you fly in Norway?
 - a. 8-10 times.
- 9. Did you ever fly with MCP?

Enclosure (11)

- a. No.
- 10. Do you know the squadron's PED policy?
 - a. Yes, MAGTABs are authorized. Not sure about others.
- 11. Did you ever fly below 500' AGL for any reason?
 - a. I can't remember.
- 12. Did you ever hear about pilots using GoPros?
 - a. No, I have not.

VMM 261 interview, (b)(3), (b)(6), (b)(7) AMO, Acting XO in Norway, 17Mar2022 flight brief with MAC in dash two , mission section CALS/LAT (senior pilot, leadership (6)(5), (b)(6), (b)(7)c

- 1. Squadron AMO, second interview.
- 2. Were you aware that there were no certified LAT areas in Norway?
 - a. No, I assumed if they were on the schedule they were vetted through operations.
- 3. Did you operate in LAT regimes while flying on 17Mar22?
 - a. Yes. 500' AGL, 200kts. We did a handful of times. No intent to fly below 200' AGL. We were really aiming for LL 500-1000 feet AGL.
- 4. Had anyone flown the route (B) before you flew it?
 - a. I am not entirely sure.
- 5. Did you ever fly in the LAT environment outside of 17Mar22?
 - a. No.
- 6. Were you aware of any briefed altitude restrictions for Norway?
 - a. No.
- 7. Are you aware of the PED policy for the squadron?
 - a. Yes, MAGTABs, other devices powered off and stowed.
- 8. Did you brief LAT ROC for your 17 Mar22 flight?
 - a. No, I did not. LAT scheduling was used to help mitigate risk.

VMM 261 interview, (b)(3), (b)(6), (b)(7)c interview 26 Apr (interviewed to ask about GoPro)

- 1. Do you know the PED policy for 261.
 - a. Yes, MAGTABs are authorized.
- 2. Have you heard of conversations where 261 aircrew talked about the use of recording devices?
 - a. Yes, I am also aware that MCP had a GoPro.

Enclosure (17)



COLD RESPONSE 22

SIMULATOR EVENTS + STUDY GUIDE

Please return this binder to the PTO desk when complete with your event.

Goal: Introduce student to icing system, standard operation, limitations, and failure modes.

Requirements: Conduct day IFR operations in an icing environment to encompass normal operations, emergency procedures, and inadvertent IMC procedures.

Discuss

Icing System Components (NFM-000 2.16)

IPS Modes and Menus (NFM-000 2.16.2)

Icing System Failures/Degraded Modes (NFM-000 Figure 2-134)

Icing System Limitations (NFM-000 Figure 4-17)

Built-In-Test System (BITs) (NFM-000 2.25.1)

IIMC Procedures & CRM [NATOPS+ASTACSOP] (MDG Table C-11)

IIMC Procedures (Bodo Breakup)

Introduce

Bodo Breakup

Review

NATOPS and ASTACSOP IIMC Fan Break

Emergency Procedures, including but not limited to IPS EPs

Performance Standards

Execute EPs in accordance with NATOPS

Test and operate IPS system in an icing environment

Pilots should perform all three IIMC procedures and associated CRM drills, but SHALL perform NATOPS and Bodo Breakup procedures

Instructor: NI/ANI/WTI/NSI

Pre-requisites: None

Simulator Setup and Supporting Files

Narrative: First 1 hour of simulator can be accomplished as a single by conducting startup in cold environment, followed by operation of icing systems, planned IMC penetration, and review of EPs and icing faults. Second hour of sim is dedicated to conducting IIMC procedures as a section. If unable to network sims, use of a moving model is adequate provided instructor conduct CRM calls as wingman.

Applicable T&R Codes: 2031, 2130, 2730, 6033

Position Set: Bridgeport (7CL4) (West Coast Database)

JMPS Files: None

Goal: Review conduct of CALs and LAT (conversion and airplane) in a mountainous environment.

Requirements. Conduct performance calculations for operations at high DA landing environment. Landings conducted where mountainous terrain is a significant factor including pinnacles, bowls, valleys, and canyons. Conduct LAT (conversion and airplane) with consideration given to mountainous area effects.

Discuss

- LAT/MAT hidden hazards (NTTP 3-22.3 4.3.4.5)
- Orographic turbulence (NTTP 3-22.3 4.2.1.5)
- Consideration for LZ selection and evaluation (NTTP 3-22.3 3.2)
- High/low reconnaissance pass checklists (NTTP 3-22.3 Table 3-1)
- Go/no go point (NTTP 3-22.3 3.1.3.4)
- IIMC Procedures (Bodo Breakup)
- Energy Management (NTRP 3-22.4 Chapter 6) **no reference material included*
- Contour versus low level flight (NTTP 3-22.3 4.3.7)
- Low power margin waveoff considerations (NATOPS 11.3.8.2)
- Mountain area departures (NTTP 3-22.3 3.5.5)

Practice

- Bodo Breakup
- CALs in a MAT environment, including pinnacles, slopes, bowls, valleys, and crosswind landings

Review

- NATOPS and ASTACSOP IIMC Fan Break
- Emergency Procedures in the LAT environment
- Section LAT Maneuvers
- Conversion mode maneuvering

Performance Standards

- Execute EPs in accordance with NATOPS
- Test and operate IPS system in an icing environment
- Pilots should perform all three IIMC procedures and associated CRM drills, but SHALL perform NATOPS and Bodo Breakup procedures

Instructor: NI/ANI/LATI

Pre-requisites: Icing/EP Sim

Simulator Setup and Supporting Files

Narrative: Utilize JMPS computer to brief LAT route execution. Section event beginning and ending at Bridgeport. Network sims, depart to conduct VIRGINIA ROUTE to hit L-Hr in to LZ SWALLOW. Utilize remaining sim time to conduct MAT CALs, EPs, and practice Bodo Breakup. Navigation after LAT route at discretion of IP (zones of opportunity).

Applicable T&R Codes: 2630, 2730, 6033

Position Set: Bridgeport (7CL4) (West Coast Database)

Environment: Winds 010/10, Ceilings 13,000 (this should result in a IIMC/ Breakup situation during route); if no IIMC required, CAVU. RVL settings at discretion of IP.

JMPS Files: CR22 PTP Files including VIRIGNIA ROUTE overlays.

Goal: Review RVL procedures in a mountainous area, white-out environment.

Requirements. Conduct performance calculations for operations at high DA landing environment. Landings conducted where mountainous terrain is a significant factor including pinnacles, bowls, valleys, and canyons. Conduct all approach types that utilize coupled automation. Land within NTTP standards for RVL conditions.

Discuss

NATOPS RVL limitations (NFM-000 4.14.6)
Vertical (RADALT/VS) and horizontal (POSN/GNDSPD) submodes of automation (NTRP Ch 13)
Consideration for LZ selection and evaluation (NTTP 3-22.3 3.2) **See MAT/LAT sim section for reference discussion material*
Wave-off criteria for RVLs (MDG 5.5.6.1)
RVL CRM cadence (MDG Table C-24 and C-25)
Go/no go point (NTTP 3-22.3 3.1.3.4) **See MAT/LAT sim section for reference discussion material*
Go Around Function (NTRP pg. 13-118)

Practice

Takeoffs and departures with various levels of obscuration
CALs in a MAT environment, including pinnacles, slopes, bowls, valleys, and crosswind landings

Review

Emergency Procedures during RVLs
RVL procedures with and without the use of automation
RVL Departures and waveoffs

Performance Standards

Conduct MAT RVLs within standards per T&R manual Ch. 2.

Instructor: NI/ANI/RVLI

Pre-requisites: MAT/LAT Sim

Simulator Setup and Supporting Files

Narrative: Single or section event utilizing zones from MAT sim. Set device to override, 200% whiteout (snow). Conduct day RVLs for 1 hour or until comfortable and reset environmental to night.

Applicable T&R Codes: 2270, 2271, 2730, 2731, 6033

Position Set: Bridgeport (7CL4) (West Coast Database)

JMPS Files: CR22 PTP Files



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26 2D MARINE AIRCRAFT WING FMF
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ON REPLY REFER TO
3710
DSSN
25 Jan 22

From: Standardization Officer, Marine Medium Tiltrotor Squadron 261
To: Commanding Officer, Marine Medium Tiltrotor Squadron 261
Subj: STANDARDIZATION BOARD MINUTES FOR JANUARY 2022
Ref: (a) CNAF M-3710.7
(b) MCO 5100.29C
(c) VMM-261 Safety Management System
(d) VMM-261 Flight Operations SOP
(e) ASO 3710.7Y

Encl: (1) Qualification and Designation Matrix
(2) Bodo Reversal

1. The Marine Medium Tiltrotor Squadron 261 (VMM-261) Standardization Board convened on 25 January 2022 in accordance with the references.

2. The following members were present:

(b)(3), (b)(6), (b)(7)c	Aviation Maintenance Officer
	Operations Officer
	Executive Officer
	Director of Safety and Standardization
	Aviation Safety Officer
	Assistant Operations Officer
	Pilot Training Officer
	Enlisted Aircrew Training Manager

3. Old Business.

a. Bodo Reversal Corrections

(1) After rehearsals and thorough review, the Bodo Reversal has been finalized. All aircrew participating in Cold Response 22 shall be familiar with this procedure, incorporate it into flight briefs, and practice it in CR22 PTP sims.

4. New Business

Enclosure (19)

Subj: STANDARDIZATION BOARD MINUTES FOR DECEMBER 2021

a. Icing Procedures in Norway.

(1) Start plane with IPS selected OFF. Manually turn on what is required in accordance with your flight profile. If icing penetration is expected, IPS PFBIT shall be run prior to departure.

CO's Comments:

CIRCUIT BREAKER DISCIPLINE is key here. Pilots need to review the ADB for proper IPS configuration and ensure the aircraft matches. Initiate and update MAFs as required so subsequent crews have the most accurate information.

5. Instrument Flight Board. None.

6. Aviation Safety Counsel. None.

7. Proposals

- a. [REDACTED] Reduced Visibility Landing Instructor
- b. (b)(3), (b)(6), (b)(7)c - Functional Check Pilot
- c. [REDACTED] - Flight Lead, Air Mission Commander, Weapons Tactics Instructor
- d. [REDACTED] - Section Lead
- e. (b)(2)Low, (b)(6), (b)(7)c Low Altitude Tactics Instructor (LATI)
- f. [REDACTED] Assistant NATOPS Instructor (ANI), Crew Resource Manager Facilitator (CRMF)
- g. (b)(3), (b)(6), (b)(7)c ANI, CRMF
- h. [REDACTED] LATI

CO's Comments:

Approved

(b)(3), (b)(6), (b)(7)c

(b)(3), (b)(6), (b)(7)c

VMM-261 MV-22B AIRCREW DESIGNATION AND QUALIFICATION MATRIX

DESIGNATIONS																									QUALIFICATIONS											
CC	BKCC	LATI	NSI	TGI 240	TGI GAU-21	WFI	NI	ANI	CRM1	CRM2	QASO	PC	CDI	CDQ	QAR	DAY LAT	NS LAT	HLL	ILL	CQ	DAY TG	NS TG	TGQ 240	TGQ -21												
(b)(3), (b)(6), (b)(7)c	X	X	P/1									X				X	X	X	X		X	X	Z													
	X																																			
	X	X	X	P/7		P/10			P/1		P/1	X	X			X	X	X	X	X	X	X	X	X												
	X																Z																			
	X	X	X									X	X			X	X	X	X		X	X	X	X												
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	X	X	X	X	X	X	X	P/7	Z	P/7	Z	X	X			X	X	X	X		X	X	X	X												
	X																Z		Z			AWP														
	X	P/9											X				Z		X	X		X	X	X												
	X	P/9	P/1										X				X	Z	X	X		X	X	X												
	X	X	X	X	X	X			X		X	X	X	X	X		X	X	X	X	X	X	X	X	X											
	X												X	X			X	X	X	X	X	X	X	X												
	X	P/9											X				X	Z	X	X		X	X	X												
	R	R	R	R									X	X			X	X	X	X		X	X	?												
	X	P/9											X				X		X	X		X	X	X												
	X	X	X	P/7		P/10							X	X			X	X	X	X	X	X	X	X	X											
	X	X	X	X	X	X	X		X		X		X	X	X		X	X	X	X	X	X	X	X	X											
	MOORE	CPL											X				X	X	X	X		X	X	X												
(b)(3), (b)(6), (b)(7)c	X	X	X									X				X	X	X	X	X	X	X	X													
	X																																			
	X																																			
	X																X	Z	Z	Z		AWP														
	X	X	X	P/12		P/12			P/1		P/1	X				X	X	X	X	X	X	X	X	X												
X																X		Z																		
CMMR		20	8	6	6	4	4	2	1	4	1	5																								
ON HAND												17	9	3	0	18	13	17	17	8	17	17	15	8												
Proposed			4	3	2	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
(b)(3), (b)(6), (b)(7)c	AO											PC	CDI	CDQ	QAR	LAT	NS LAT	HLL	ILL	CQ	DAY TG	NS TG	TGQ 240	TGQ -21												
	P/8															X		X	X		X	X	X													
	P/9															Z		X	X		X															
	X															X	X	X	X		X	X	X													
	X															X	X	X	X		X	X	X													
(b)(3), (b)(6), (b)(7)c	X															X	X	X	X	X	X	X	X													
	12															12	12	12	12		12	12	12													
ON HAND		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	5	5	1	5	4	4	0												
Proposed		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												

LEGEND	
X	= QUALIFIED / DESIGNATED
P/XX	= PROPOSED/MONTH
P/XX*	= PROPOSED/MONTH - YEAR OLD
R	= REFRESHER
AWP	= AWAITING PAPERWORK
Z	= ROUTING

JANUARY

Enclosure (19)

Enclosure (19)

327

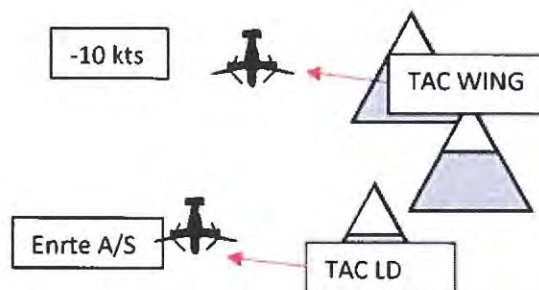
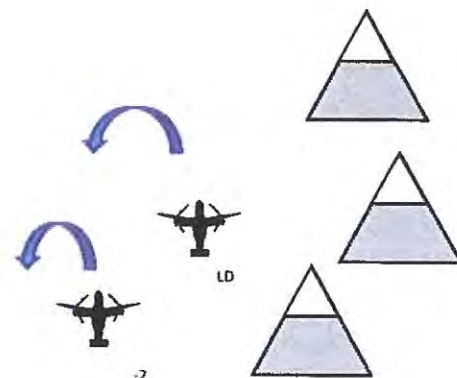
BODO REVERSAL

This is a VISUAL FLIGHT RULES maneuver that is intended to be executed PRIOR to going in to IMC conditions. However, it can be executed utilizing instruments if an aircraft goes IIMC. DTED is required to execute this maneuver while IMC.

-If terrain is especially canalizing, consider use of trail formation.

-During low altitude flight, each aircraft spins heading bug to the "escape heading" based on terrain and DIGMAP study. This "escape heading" is updated throughout every route turn and verbalized to the crew.

1. Lead flies closest to the he fjord, following "rules of the road". This puts lead closest to the ground visual reference of the ridgeline wall and remaining aircraft fly echelon left
2. "Elvis Flight, execute Bodo Reversal" is called when either aircraft is able to fly VFR but experiences one or more of the following:
 - a. Has less than 3 visual references contrasting the winter landscape, OR
 - b. Subsequent aircraft anticipates losing their visual interval, OR
 - c. Aircrew scanning the 6 o'clock begin to lose terrain references first (to ensure an unobstructed reversal).
3. "Elvis 11 POPEYE, execute Bodo Reversal" is called when any aircraft goes IIMC and determines the best way to regain VMC is by reversing course. There is no difference in procedures when executed VMC or IMC.
4. At the command of execution, -2 executes a left turn utilizing **30 degrees AOB** and announces "in the turn" once 30° AOB is established.
 - a. "In the turn" is the command for LD aircraft to initiate their 30° AOB turn.
 - b. -2 assumes the TAC LEAD on the reversal, doubtless of which aircraft commands the maneuver. As TAC LEAD, they are responsible for transmitting the escape heading on intraflight by verbalizing "Out ____" (Ex.: "out 180").
 - c. Altitude changes are not prescribed but shall be verbalized to wingman on intraflight.



NOTES

- TAC lead change is implicit once maneuver is called.
- >30° AOB may be used if required by terrain; exceptions to 30° AOB shall be communicated to wingman.
- Altitude changes are at discretion of PIC and based on altitude, terrain, and anticipated icing conditions. Communicate altitude deviations to wingman.
- Expect heavy reliance on DIGMAP, DTED, and trend dots if executed in IMC conditions.

5. Rolling out, TAC LEAD retains enroute airspeed. TAC WING aircraft reduces speed by 10 knots until desired A/A TACAN separation is achieved.

Enclosure (19)



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261
MARINE AIRCRAFT GROUP 26 2D MARINE AIRCRAFT WING, PMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE NC 28545 1016

IN REPLY REFER TO
3710
DSSN
27 Feb 22

From: Standardization Officer, Marine Medium Tiltrotor Squadron 261

To: Commanding Officer, Marine Medium Tiltrotor Squadron 261

Subj: STANDARDIZATION BOARD MINUTES FOR FEBRUARY 2022

Ref: (a) CNAF M-3710.7
(b) MCO 5100.29C
(c) VMM-261 Safety Management System
(d) VMM-261 Flight Operations SOP
(e) ASO 3710.7Y

Encl: (1) Qualification and Designation Matrix

1. The Marine Medium Tiltrotor Squadron 261 (VMM-261) Standardization Board convened on 25 and 27 February 2022 in accordance with the references.

2. The following members were present:

(b)(3), (b)(6), (b)(7)c	Aviation Maintenance Officer
	Operations Officer
	Executive Officer
	Director of Safety and Standardization
	Aviation Safety Officer
	Assistant Operations Officer
	Pilot Training Officer
	NATOPS Officer
	Enlisted Aircrew Training Manager

3. Old Business.

a. Icing Procedures in Norway.

(1) Start plane with IPS selected OFF. Manually turn on what is required in accordance with your flight profile. Pilots need to review the ADB for proper IPS configuration, and ensure the aircraft capabilities match the mission requirements. Initiate and update MAFs as required so subsequent crews have the most accurate information.

Enclosure (19)

Subj: STANDARDIZATION BOARD MINUTES FOR FEBRUARY 2022

4. New Business.

a. RVLS Training Plan

- (1) With the RVLS software installation in progress in RBE, we have come up with a basic training plan that essentially echoes HX-21's recommendations: All pilots will receive an RVLS brief from an RVLI, and should have an RVLS fam sim completed before flying an RVLS aircraft. All pilots SHALL have an RVLS fam sim completed before executing RVLs in an RVLS aircraft. Operations will be responsible for tracking this training.

CO's Comments:

Concur.

b. Cold Response Specific

- (1) A digital Read and Initial Binder with SOPs for Norway specific procedures has been created and shall be reviewed by all Cold Response aircrew. It is located on the share drive at Z:\(14) E-Pubs\10. Cold Response 2022 Read and Initial.

(2) Nacelle modulation is mandatory at ENBO if loitering at the hold short or on the runway due to runway epoxy coating heat considerations.

(3) Aircraft returning to be hangared in Hangars 504 and 505 shall be shut down in front of Hangar 503, stowed, and then towed into their respective hangars. Aircraft departing from Hangars 504 and 505 will be towed in front of Hangar 503, then unstowed and unfolded prior to man time.

CO's Comments:

Concur.

5. Instrument Flight Board.

a. Unpredictable Norwegian Weather

- (1) All pilots shall become familiar with the different instrument approaches at nearby airfields due to the complexity as well as the different layout that these approaches contain.

Subj: STANDARDIZATION BOARD MINUTES FOR FEBRUARY 2022

6. Aviation Safety Council. None.

7. Proposals.

- a. (b)(3), (b)(6), (b)(7)c - Tiltrotor Aircraft Commander (TAC)
- b. (b)(3), (b)(6), (b)(7)c TAC
- c. (b)(3), (b)(6), (b)(7)c - TAC
- d. (b)(3), (b)(6), (b)(7)c - Functional Check Pilot (FCP), Basic Instructor Pilot (BIP)
- e. Capt Tomkiewicz - BIP
- f. (b)(3), (b)(6), (b)(7)c Defensive Combat Maneuver Instructor (DCMI)
- g. (b)(3), (b)(6), (b)(7)c Low Altitude Tactics Instructor (LATI)
- h. (b)(3), (b)(6), (b)(7)c LATI
- i. (b)(3), (b)(6), (b)(7)c Basic Instructor Crew Chief (BICC)
- j. (b)(3), (b)(6), (b)(7)c BICC

CO's Comments:

Approved.

(b)(3), (b)(6), (b)(7)c

(b)(3), (b)(6), (b)(7)c

Enclosure (19)

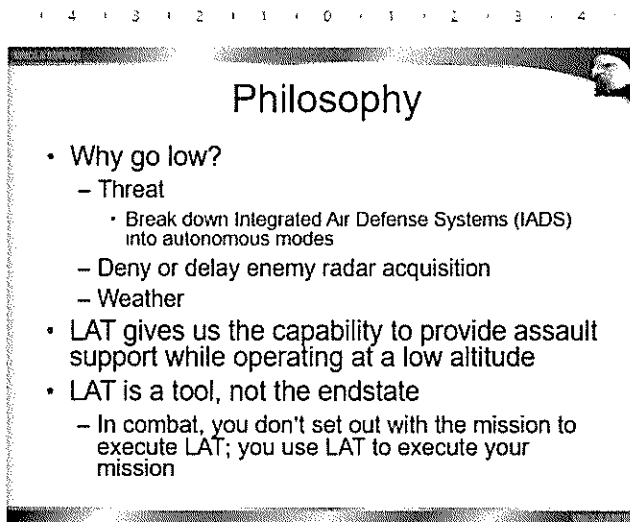
VMM-261 MV-22B AIRCREW DESIGNATION AND QUALIFICATION MATRIX

DESIGNATIONS													QUALIFICATIONS												
CC	BICC	LAT1	NS1	TG1 240	TG1 GAU-21	WT1	NI	AM1	CRM1	CRM2	QASO	PC	CD1	CD2	QAR	DAY LAT	NS LAT	HLL	LLL	CC	DAY TG	NS TG	TGQ 240	TGQ -21	
(b)(3), (b)(6), (b)(7)c																									
MOORE	CPL	X	X	P/10								X				X	X	X	X		X	X	X		
(b)(3), (b)(6), (b)(7)c																									
CMMR		20	8	6	6	4	4	2	1	4	1	5													
ON HAND													17	9	3	0	18	13	17	17	8	17	17	15	8
Proposed			2	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		AO												PC	CD1	CD2	QAR	LAT	NS LAT	HLL	LLL	CC	DAY TG	NS TG	TGQ 240
(b)(3), (b)(6), (b)(7)c																									
SPEEDY	GYSGT	P/9														Z		X	X		X				
(b)(3), (b)(6), (b)(7)c																									
REQ		12															12	12	12	12		12	12	12	
ON HAND		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	5	5	1	5	4	4	0
Proposed		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LEGEND

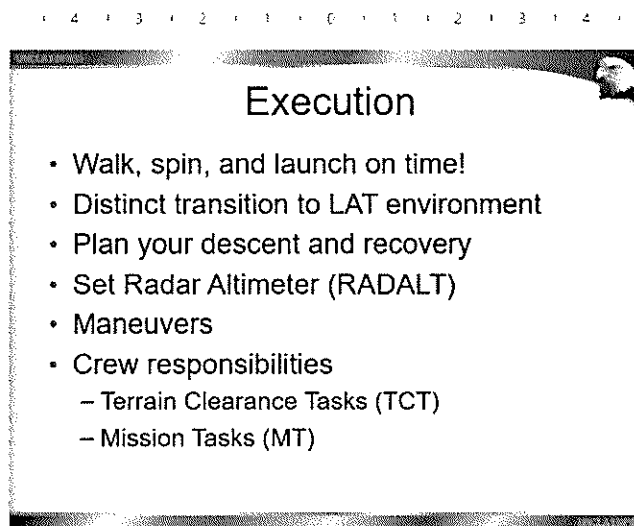
X = QUALIFIED / DESIGNATED
 P/XX = PROPOSED/MONTH
 P/XX* = PROPOSED/MONTH - YEAR OLD
 R = REFRESHER
 AWP = AWAITING PAPERWORK
 Z = ROUTING

FEBRUARY

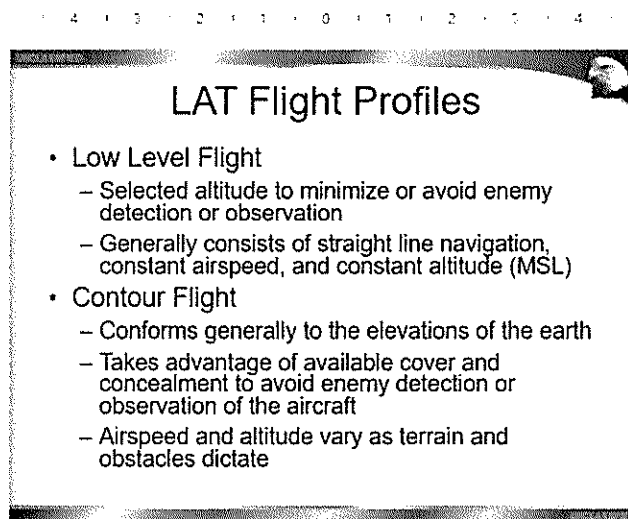


So, if we have three choices of altitudes, why would we choose to go low? Obviously the threat can drive us low. By flying low we may be able to force his Integrated Air Defense Systems (IADS) into autonomous modes. Additionally, we may attempt to gain the element of surprise as a result of flying low in order to deny or delay radar acquisition. This can also be done through direct or indirect terrain masking. Something we don't often consider, however is that we may be driven low by the weather. If you have spent the last year or so in a desert environment, you could be in for a rude waking should your squadron deploy to Europe or Korea.

The goal of the LAT program is to provide us with the capability to conduct our mission successfully at low altitude. However, LAT should not be looked at as the endstate of training. Instead, it should be looked at as a stepping stone to learning Ground Threat Reaction (GTR) and later Defensive Combat Maneuvering (DCM). Safe, repeatable control of the aircraft in vertical maneuvers and the LAT environment will enable you to react to threats and reach the objective area to complete your mission in a combat environment.



- Make your transition to LAT distinct. Announce it to the crew, ensure your FENCE checks are complete (including resetting your RADALT to 10% below your minimum altitude), and then commence your descent. A lazy, unplanned descent may introduce hazards that the crew is not prepared for. Plan your descent and make sure that it is briefed to the flight. Also, brief the planned recovery. If the conditions are not met to use the dive recovery rules then have a plan to recover e.g. tactical descent until 2000' AGL, break descent to 2000 FPM until 1000' AGL, break descent and use the small descent rule to your briefed altitude.
- Remember LAT is not just low level navigation, it includes the basic and advanced maneuvers. Ensure everyone in your aircraft and flight know when you are going to commence those maneuvers so they are prepared. Also, ensure that you don't "beat up" your aircrew with too many maneuvers. If their stomachs aren't up to the task they are going to call a KIO anyways. So, do some maneuvers, fly some straight and level, and then do some more maneuvers.
- Remember to focus on the correct tasks during LAT. The PF should be doing almost solely TCT while the rest of the crew is doing MT.



For MV-22s there are two flight profiles that can be flown during LAT. The first is low level flight which consists of generally straight line navigation at a constant altitude and constant airspeed. The second is contour flight which generally conforms to the elevations of the earth with varying airspeed and altitude as obstacles and terrain dictate. Low level flight might be used for times when avoiding the weather is the reason for flying low, whereas contour flight might be used to prevent enemy acquisition through the use of terrain masking.

**M-SHARP Schedule Validation Report for
3/18/2022 - VMM-261
Validated: 03/17/2022 : 1434 (W. Europe Standard Time)**

30-1 MV-22B TBD - TBD

(b)(3), (b)(6), (b)(7)c MV-22B Crew Chief

- Not proficient in the following NATOPS qualifications:
 - NATOPS AUDIT
 - APR AUDIT

31-1 MV-22B 1230 - 1800

Moore, Jacob Michael Cpl - MV-22B Crew Chief

- Not proficient in the following NATOPS qualifications:
 - NATOPS AUDIT
 - APR AUDIT

Speedy, James William GySgt - MV-22B Aerial Observer/Gunner

- Not proficient in the following NATOPS qualifications: (He has not had a NATOPS check yet due to his location in the syllabus. KAH)
 - NATOPS, MV-22B (E
 - NATOPS Closed, MV-22B
 - NATOPS Open, MV-22B
 - CRM Flight
 - Emergency Egress
 - Aeromedical Brief (Completed 11FEB22 and now logged in MSHARP. KAH.)
 - NATOPS AUDIT
 - APR AUDIT

Tomkiewicz, Matthew James Capt - MV-22B Pilot

- Not proficient in the following NATOPS qualifications:
 - APR AUDIT

MAG-26 Risk Assessment Worksheet EXECUTION



Aircraft					
	TOMKIEWICZ	REYNOLDS	MOORE	SPEEDY	
Operations Data					
Days Since Last Flight	6	7	1	134	
Last 30 (Day / Night)	15.3/0	6.3/2.3	28.5/5.6	0/0	
Mission Specific:					
Mission Specific:					
Aircraft Self-Assessment					
Any congestion or illness? If so, any medication (AFRIN, aspirin, etc.)	N	N	N	N	
Personal / Work concerns that may affect your ability to focus or accomplish mission?	N	N	N	N	
Are you free from the effects of alcohol?	Y	Y	Y	Y	
Have you had sufficient crew rest with quality sleep?	Y	Y	Y	Y	
Are you flying through chow? Have you had sufficient food to get you through the flight?	Y/Y	Y/Y	Y/Y	Y/Y	
1. FLIGHT SCHEDULING					
	YES	NO	UNK	APPROVED	
Schedule change	New RAW	L			
Aircraft Change	New RAW	L			
Mission change	New RAW	L			
Airfield Status interferes with mission	RAC	L			
R&I Current	L	NO-GO			
Monthly EP Test / Sim Complete	L	NO-GO			
2. WEATHER/ENVIRONMENTAL FACTORS					
ROUTINE OPERATING AREAS					
	> 1000/3	500/1 - 1000/3	< 500/1		
Day VFR	L	L	NO-GO		
IFR		L	L		
Unaided	L				
NVG VFR	L	M	NO-GO		
NON-STANDARD OPERATING AREAS					
	Over Water	Desert	Mountain	Snow	
NVG HLL	L	L	L	L	
NVG LLL	M	M	M	M	
Unaided	M	M	M	M	
Day	L	L	L	L	
3. AIRCRAFT STATUS					
	YES	NO			
Aircraft PMC & affects mission	M	L			
Load Comp checked and sufficient for current mission	L	M			
ECS INOP with OAT > 27 C	M	L			
(b)(3), (b)(6), (b)(7)c					
ODO Signature					

OVERALL PLANNING RAC: L M H

DATE: 18 March 2022	EVENT: 3-1		
TAC: TOMKIEWICZ	COPLOT: REYNOLDS		
AIRCREW: MOORE	AO SPEEDY		
4. BASH			
LOW	MOD	SEVERE	APPROVAL
Airfield	L	L	NO-GO
LAT	L	M*	NO-GO
MITIGATION FOR NON-XR CODED TRAINING EVENTS IAW WGO 5100.29C. XR CODED MITIGATION AT DISCRETION OF 50DN CO			

5. FLIGHT BRIEF (Aircraft Commander)	
To your knowledge, has this mission been assigned and resourced IAW standard risk controls? Is everything within CNAF 3710, NATOPS, T&R, and SOPs?	
YES	
Have you identified any hazards that require additional risk controls? If yes, what are they? What controls will you implement to lower the risk?	
NO	
Will the plan require anyone to operate near a crew performance, aircraft or environmental limit?	
NO	
Are you clear on the plan and mission objectives, does it correlate well with what you think the CO intended when signing the flight schedule?	
YES	
What is the riskiest thing you will do on this mission and how will you mitigate that risk?	
FLIGHT IN MOUNTAINOUS TERRAIN IN POOR WX. WX TRIGGERS TO NOT CONDUCT THAT FLIGHT PROFILE.	
6. FLIGHT BRIEF OVERALL RISK (Aircraft Commander)	
L M H	
TOMKIEWICZ, MATTHEW /S/	
Flight Brief - TAC Signature	
Flight Brief - CO Signature (AS REQ'D)	
Flight Brief - MAG/MEU CO Signature (High)	

Version 2 (rev. 20210623)

ENCLOSURE (22)



MAG-26 Risk Assessment Worksheet

PLANNING

MISSION PLANNING	YES	NO
Mission Precedence > Routine	M	L
All Aircrew Current with NATOPS requirements	L	NO-GO
Aircrew / Instructor Qualified	L	NO-GO
NS TAC >15 days	GO	NO-GO
Check / Certification Event	M	L

AIRCREW FATIGUE / ENVIRONMENTAL	YES	NO
Planned Flight Duration >6 hrs (Non-CCX)	M	L
Planned Flight Duration > 10 hrs (CCX)	M	L
Crew Rest < 10 hrs	NO-GO	L
Exposure Suit Required (See CNAF 3710)	M	L
Over Water Ops/No suitable divert	H	L
Crewmember >15 hours in past 5 days	M	L
Crew show >3 hours prior to normal show time	M	L
Scheduled land time > 3 hours past normal end of workday	M	L

FORMATION	YES	NO
Dissimilar / Joint / Combined A/C	M	L
Different Unit / Mixed Unit Crew	M*	L
*Low if flight brief conducted with all aircrew		

CAL	YES	NO
CAL site DOD	L	M*
CAL site in populated area	M	L
*L if site survey conducted by squadron WTUASO prior to conducting training		

Reduced Visibility Landing (RVL)	YES	
RVL6900 within 30 days	M*	
RVL6900 > 30 days, but < 90 days	M	
RVL6900> 90 days	H**	
*L if TAC has flown RVL6900 to planned zone within 7 days		
**M if Training Flight and TAC has flown RVL (2282) within 30 days		

TACTICS	YES	NO
Dissimilar / Joint / Combined A/C	M	L
AMC/EFL/AFL briefs conducted	L	NO-GO

LAT	YES	NO
LAT scheduled within 1 hour of sunrise/sunset	M	L
Event to Certify Route	M	L

AAR	YES	NO
Multiple Tankers in AOR / Track	M	L
Multiple receivers (Dissimilar A/C)	M	L
Tanker NVG compatible	L	M
AAR required for RTB without suitable divert (Must Plug)	EH	L

Ordnance / IG	YES	NO
Range regulations established/received	L	NO-GO
Laser use employment and restriction established/received	L	NO-GO
U.S. Range Control	L	M
Established Hung Ordnance Procedures	L	M
Deconfliction of fires/airspace established	L	NO-GO
Friendly pos/GCE scheme of maneuver known	L	NO-GO

AIE	YES	NO
Is DZ a Bldg/Structure	M	L
SPIE	M	L
Day	L	M

GTR/DCM	YES	NO
Day	L	M
# Friendly aircraft - more than a section	M	L
Adversary brief conducted in person	L	M*
U.S. Range Control	L	M
*NO-GO if adversary brief not conducted		

EXTERNALS	YES	NO
Load crosses populated area	M	L

SHIPBOARD CQ/CLP	YES	NO
More than 2 a/c in an uncontrolled pattern	M	L
LHD/LHA	L	M
Unaided Night	M	L

MAI	YES	NO
DTED available and loaded (RMU/PEBBLE)	L	M

VIP SUPPORT	YES	NO
Is VIP at controls*	M	L
In-flight mission change possible	M	L
*If non-NATOPS qualified VIP, TAC shall be NI or ANI		

CBRN	YES	
CBRN in Aircraft	H	

Most Dangerous Hazards / RAC	RAC Level	Control Measure(s) / Mitigation	New RAC Level
	L M H		L M H
	L M H		L M H
	L M H		L M H
	L M H		L M H
	L M H		L M H
	L M H		L M H
	L M H		L M H

DIRECTIONS FOR USE

1. ONE RAW PER AIRCRAFT
2. CIRCLE OR HIGHLIGHT THE APPLICABLE RISK LEVEL IN EACH SECTION THAT APPLIES
3. OVERALL RISK IS THE HIGHEST RISK FACTOR IN EACH SUBMATRIX
4. ADDRESS MITIGATIONS FOR M, H, EH. IDENTIFY AT LEAST (1) RISK/HAZARD AND ITS CONTROL MEASURE
5. CARRY THE FINAL OVERALL RISK LEVEL ONTO THE FLIP SIDE FOR ODO AND CREWS TO FILL OUT.

CURRENCY REQUIREMENTS:
NIGHT CURRENCY FOR PAX: 1.0 NVG, (2 BOAT LANDINGS), 30 DAYS
NIGHT TAC SIGN: FLOWN MV-22B IN LAST 15 DAYS
CREW DAY: 12 HRS OR IAW LAND TIME
CREW REST: 10 HOURS OR IAW LAND TIME

RISK ASSESSMENT

Operations Mitigation Comments:

DSSN Mitigation Comments:

CO Mitigation Comments:

RISK ASSESSMENT CODE (RAC) MATRIX

SEVERITY	PROBABILITY				
	LIKELY	PROBABLY	MAY	UNLIKELY	
	CRITICAL	EH	EH	H	M
	SERIOUS	EH	H	M	L
	MEDIUM	H	M	L	
	LOW	M	L		
WGO 3500 23 FURTHER DEFINE SEVERITY / PROBABILITY CATEGORIES					
EH - EXTREMELY HIGH - MAW CG APPROVAL					
H - HIGH - MAG/MEU/SPMAGTF CO APPROVAL					
M - MEDIUM - *SQUADRON CO APPROVAL					
L - LOW - NO ELEVATED APPROVAL REQUIRED					
APPROPRIATE APPROVAL REQUIRED IF <u>FINAL RISK ASSESSMENT</u> FALLS UNDER THESE CATEGORIES					
* OR BYDIR					

Signature: /s/

24 HOUR RISK - OPS

Signature: /s/

24 HOUR RISK - Safety

Signature: /s/

24 HOUR RISK - CO

Signature:

24 HR - MAG/MEU CO/MAW CG Signature (High/Extremely High)

Version 2 (rev. 20210623)



VMM-261 ODO BRIEF



(b)(3), (b)(6), (b)(7)c

18 Mar 2022
0900



FLIGHT SCHEDULE



B/U: ODO DATE: 18 Mar 2022 TEMP PA DA FREEZING LEVEL
(b)(3), (b)(6), (b)(7)(C) 0900-LPOD Day: +5 -160 -1416 +XK

ENBO	FIELD HOURS: 24 HRS QUIET HOURS: NONE		BMNT / SR: 0412 / 0611		SS / EENT: 1812 / 2013		MR / MS: 1815 / 0703		ILLUM: 100%		LLL: NONE HLL: 2013-0407*	
EVENT	TMR	BRF	ETD	ETR	HRS	AIRCREW	TRAINING CODES			MISSION	NOTES	CONF
GHOST 3-0 MV-22B	2K2	0900	TBD	TBD	TBD	(b)(3), (b)(6), (b)(7)c				FCF		
GHOST 3-1 MV-22B	1A1	0900	1100	1800	6.6	CAPT TOMKIEWICZ, M. CAPT REYNOLDS, R. CPL MOORE, J. GYSGT SPEEDY, J.	2240, 3040 2240, 3040 2240, 3040 2240P, 3040P			ALS / MARLOG	1	

@ AIR MISSION COMMANDER / # FLIGHT LEAD / ** DIVISION LEAD / * SECTION LEAD / X ATF REQUIRED / R NOT PROFICIENT / P PROFICIENCY EXPIRES W/I 90 DAYS

** UNLESS OTHERWISE INDICATED, ALL FLIGHTS WILL ORIGINATE AND TERMINATE AT BODØ AIR BASE (ENBO) **

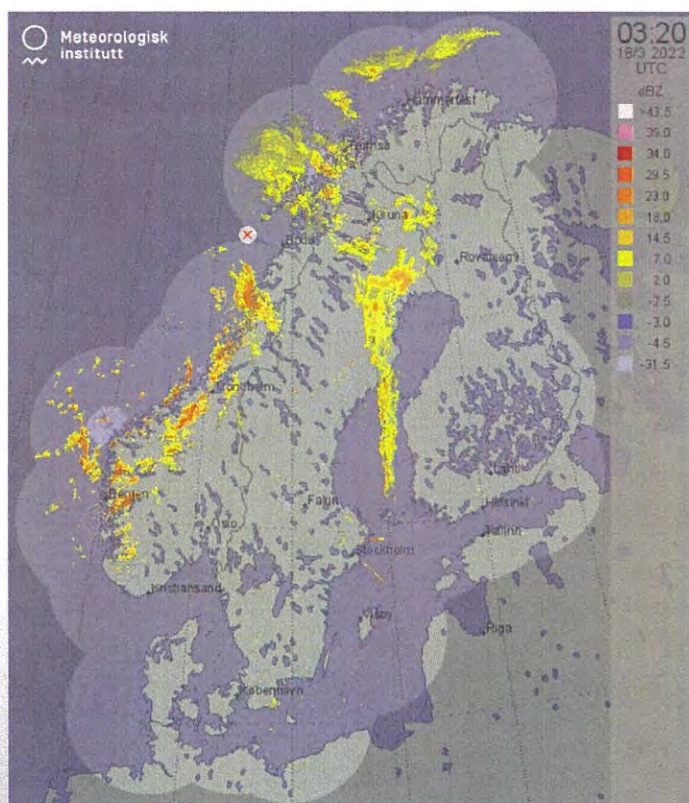
FLIGHT NOTES:

1. TBD: CREW TO MARLOG AT ENKJ.

FCF: E CARD A/C 16
GT A/C 13

ENCLOSURE (23)

RADAR





SIGMETs/AIRMETs





METARs / TAFs



Data at: 0735 UTC 18 Mar 2022

ENBO 180720Z 23025KT 9999 SCT025TCU 06/01 Q1017

TAF ENBO 1806/1906 20012KT 9999 BKN040
TEMPO 1806/1808 RA BKN014
TEMPO 1806/1824 23025G35KT 4000 SHRAGS BKN012CB
PROB30
TEMPO 1812/1818 TS
TEMPO 1900/1906 4000 RA BKN008

ENDU 180720Z VRB02KT 9999 FEW030 BKN040 05/M01 Q1011 BECMG 23012KT RMK WIND 1100FT 19013KT WIND 2200FT 21029KT

TAF ENDU 1806/1906 VRB03KT 9999 -SHRA FEW030 BKN040
BECMG 1808/1810 23012KT
TEMPO 1808/1824 24015G25KT 4000 SHRASN SCT020CB
BECMG 1900/1902 RA
TEMPO 1903/1906 24018G30KT

ENTC 180720Z 19016KT 9999 BKN040 05/M01 Q1010 NOSIG RMK WIND 2600FT 18028KT

TAF ENTC 1806/1906 18015KT 9999 FEW025 BKN040
TEMPO 1806/1812 RA
TEMPO 1812/1824 22022G32KT 4000 SHRASNGS BKN014CB
PROB30
TEMPO 1818/1821 TS
TEMPO 1900/1906 4000 RA BKN008

ENHF 180720Z 21009KT 9999 FEW038 BKN120 03/M02 Q1008 RMK WIND 1254FT 22015KT

TAF ENHF 180500Z 1806/1815 24009KT 9999 FEW040 BKN070
TEMPO 1806/1812 17015G25KT
BECMG 1811/1813 24025KT
TEMPO 1812/1815 25025G35KT

ENCLOSURE
(23)



METARs / TAFs



Data at: 0736 UTC 18 Mar 2022

ENST 180720Z 25023G37KT 9999 SHRASNGS SCT012CB BKN020 03/01 Q1022 RMK WIND 300FT 27027G44KT
No TAF found for ENST

ENBN 180720Z 24016KT 220V280 9999 VCSH FEW015CB SCT030 BKN040 05/01 Q1024

TAF ENBN 180500Z 1806/1815 22015KT 9999 -SHRA FEW006 BKN020
TEMPO 1806/1815 23020G30KT 4000 SHRAGS BKN012CB
PROB30
TEMPO 1812/1815 TS

ENMS 180720Z 23010KT 170V270 9999 VCSH FEW020 SCT035 05/M01 Q1022 RMK WIND 412FT 20014G251KT
No TAF found for ENMS

ENRA 180720Z VRB02KT 9999 VCSH FEW012 FEW025TCU SCT035 04/01 Q1020

TAF ENRA 180500Z 1806/1815 20007KT 9999 -SHRA FEW040 BKN080
TEMPO 1806/1815 SHRA SCT015CB

ENCLOSURE

(23)



WEATHER OUTLOOK



Model-Based outlook for BODO using the GALWEM for the period: 18/00Z - 20/00Z ¹

Time	18/00Z	18/03Z	18/06Z	18/09Z	18/12Z	18/15Z	18/18Z	18/21Z	19/00Z	19/03Z	19/06Z	19/09Z	19/12Z	19/15Z	19/18Z	19/21Z	20/00Z
Clouds	OVC019	OVC012	BKN027	OVC014	BKN029	SCT030	BKN016 BKN050	OVC009	OVC004	OVC003	OVC002	OVC003	OVC004	OVC005	OVC005	BKN017 BKN060	OVC006
Vis (sm)	16	15	15	16	17	16	15	15	13	14	13	12	11	12	11	12	13
Wx			TSTMS	TSTMS			TSTMS VCNTY	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
Wind Dir	130	200	220	250	250	220	230	230	220	220	220	240	230	230	230	230	230
Wind Spd(kt)	8	12	26	23	19	20	23	23	24	31	33	31	29	29	28	27	24
Gusts(kt)		18	43	39	31	33	38	38	39	53	57	52	49	49	46	45	40
Temp(C)	5	5	5	4	5	5	5	5	5	5	6	7	7	7	7	6	6
RH(%)	66	72	76	66	51	60	75	75	87	83	85	90	91	91	91	90	86
PA(ft)	50	68	1	-160	-259	-294	-298	-308	-231	-136	-73	-143	-250	-327	-401	-475	-503
DA(ft)	-1086	-1058	-1081	-1416	-1487	-1511	-1522	-1502	-1377	-1232	-1015	-1023	-1168	-1271	-1392	-1513	-1555
ALSTG	29.90	29.88	29.96	30.13	30.23	30.27	30.28	30.29	30.21	30.10	30.04	30.11	30.23	30.31	30.39	30.47	30.50

ENCLOSURE
(23)



BASH



LIGHT

MODERATE

SEVERE

Transport Aircraft
(Prop & Jet) &
Tiltrotor
(as appropriate)

At the MAG CO's discretion,
the following sorties are
authorized to be flown in LAT;
a T&R sortie where one of the
flight members is flying the
event for an initial X, or for
a refresh (R coded) event.
Sorties that do not meet these
criteria will maintain a min
altitude of 1,000 feet AGL.

Not authorized

Helicopter & Tiltrotor
(as appropriate)

The lookout aircraft or "high
bird" will advise the TERF
aircraft of bird activity.
Adjust route accordingly.

All aircraft will adjust
flight path, altitude, and
airspeed to avoid bird
concentrations.



NOTAMS



Data Current as of: Fri 10 Mar 2022 06:56:00 GMT

ENDO BODO

☐ Check All ENDO ☐ UnCheck All ENDO

- ☐ A1451/22 - GP 07 PERIODICALLY OUT OF SERVICE. GP AVBL ON REQUEST WHEN NEEDED DUE TO WEATHER. 10 MAR 07:05 2022 UNTIL 04 APR 10:00 2022. CREATED: 10 MAR 07:05 2022
- ☐ A1275/22 - PAR EQUIPMENT ESTABLISHED CLOSE TO MANOEUVRING AREA. POSITION 105 M SOUTH OF RWY, 290 M EAST OF TWY H, 35 M NORTH OF TWY Y. HEIGHT 5.5 M, WIDTH 2.5 M MARKED WITH RED OBSTACLE LIGHT. 02 MAR 13:05 2022 UNTIL 06 APR 13:00 2022 ESTIMATED. CREATED: 02 MAR 13:05 2022
- ☐ A0806/22 - MOBILE CRANE ERECTED 1430 METER NORTHWEST OF THRESHOLD RWY 25, 204FT AMSL. 14 FEB 07:00 2022 UNTIL 15 MAY 23:00 2022 ESTIMATED. CREATED: 10 FEB 09:36 2022

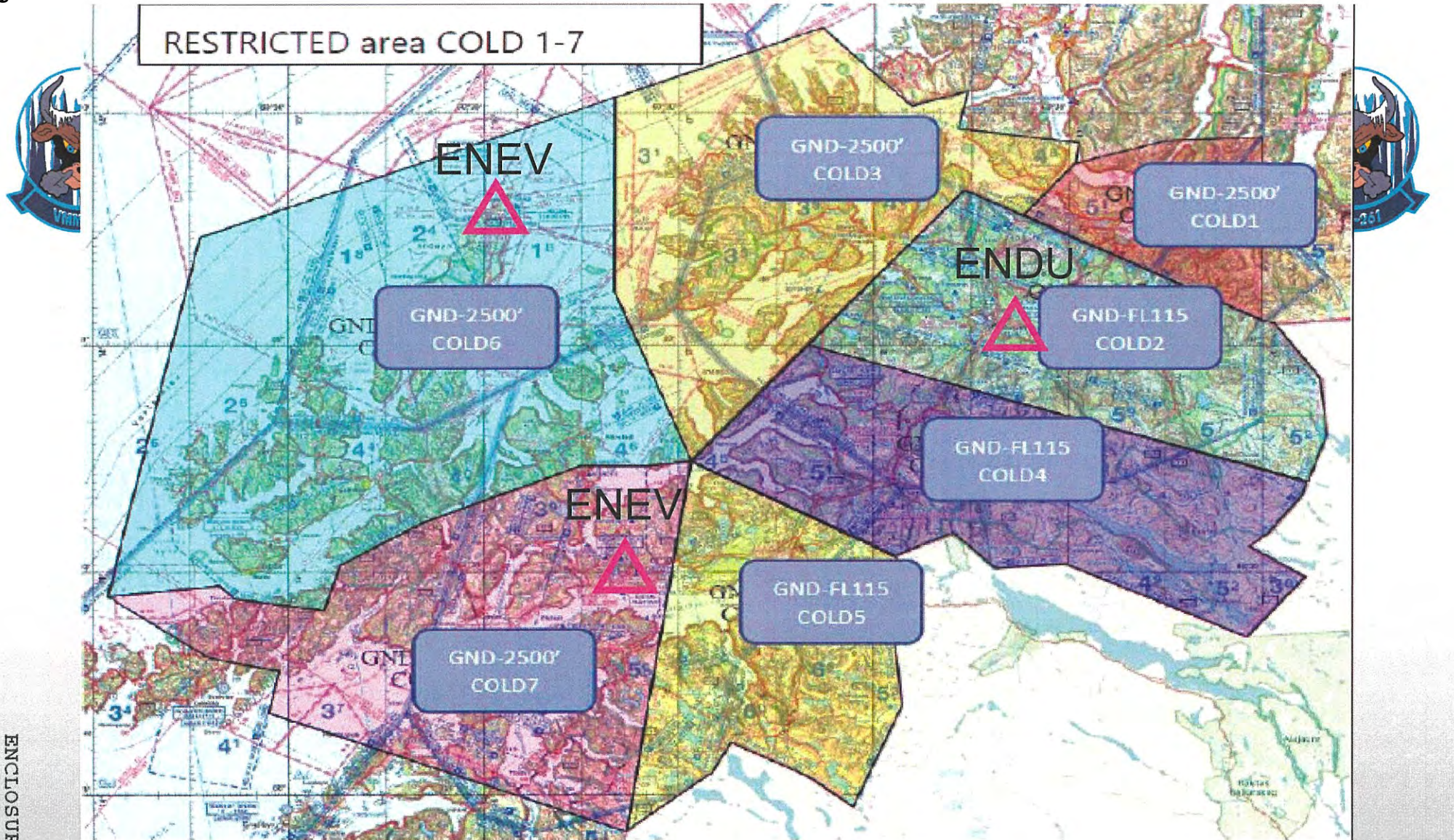
ENDU BARDUFOSS

☐ Check All ENDU ☐ UnCheck All ENDU

- ☐ A1721/22 - OBST LGT AT POWERSPAN SULHEIM OVERHEAD BARDU RIVER OUT OF SERVICE. 17 MAR 15:07 2022 UNTIL 30 MAR 15:00 2022. CREATED: 17 MAR 15:07 2022
- ☐ A1561/22 - IN SUPPORT OF EXERCISE COLD RESPONSE U.S MILITARY PROVIDING PRECISION APPROACH RADAR SERVICES TO RWY 28 VIA GROUND CONTROLLED APPROACH. 12 MAR 14:20 2022 UNTIL 31 MAR 22:00 2022 ESTIMATED. CREATED: 12 MAR 14:20 2022
- ☐ A1560/22 - IN SUPPORT OF EXERCISE COLD RESPONSE U.S MILITARY UTILIZING ENDU TACAN CH R1X. 12 MAR 14:12 2022 UNTIL 31 MAR 22:00 2022 ESTIMATED. CREATED: 12 MAR 14:12 2022
- ☐ A1481/22 - TRIGGER NOTAM AIP AIRAC AMDT 04/22 WEF 21 APR 2022. AD 2.8 STAND 1-4, 10-25, P3 AND P4 ADDED, STAND P2 WD. AD 2.12 RWY AND STRIP DMN CHANGED, RWY CENTRELINE POINTS RE-SURVEYED. AD 2.13 DECLARED DISTANCES CHANGED AND ADDED. AD 2.14 EDGE LGT RWY 10 CHANGED. AD 2.15 ANEMOMETER CHANGED. AD 2.19 DME BDF RE-SURVEYED. ADC NEW CHART LAYOUT. ADC-A MAG VAR. 21 APR 00:00 2022 UNTIL 04 MAY 23:59 2022. CREATED: 10 MAR 13:18 2022
- ☐ A1366/22 - TACAN BAR CH81X UNAVAILABLE. 07 MAR 08:30 2022 UNTIL 05 APR 23:59 2022 ESTIMATED. CREATED: 07 MAR 08:20 2022
- ☐ A1361/22 - TWR HR OF SER 14 0530-2359 15-30 0000-2359 31 0000-2200. 14 MAR 05:30 2022 UNTIL 31 MAR 22:00 2022 ESTIMATED. CREATED: 07 MAR 07:35 2022
- ☐ A1300/22 - LITTED OPERATIONAL EQUIPMENT(GCA) POSITIONED MID FIELD, 110 M SOUTH OF CENTERLINE RWY 10/23, HEIGHT 5.5 METRES. 03 MAR 17:22 2022 UNTIL 03 APR 23:59 2022. CREATED: 03 MAR 17:23 2022
- ☐ A1210/22 - LIT CRANE ERECTED AT ANDSLINGEN (LIANS CARAVAN), APPROX 4.5 NM NORTH OF AD HGT 150FT. 28 FEB 05:25 2022 UNTIL 31 MAR 23:59 2022. CREATED: 28 FEB 05:26 2022
- ☐ A0018/22 - AERODROME OBSTACLE CHARTS - ICAO TYPE A RWY 10/28 EFF 07 MAR 2013 SUSPENDED DUE OUTDATED DATA, REF AIP NORWAY AD 2 ENDU. 03 JAN 07:54 2022 UNTIL 31 DEC 12:00 2022. CREATED: 03 JAN 07:54 2022
- ☐ A4506/21 - AD HR OF SER: MON-FRI 0530-2200, SAT 0530-1440, SUN 0850-2230. 04 NOV 09:05 2021 UNTIL 27 MAR 01:00 2022. CREATED: 04 NOV 09:05 2021

ENCLOSURE

(23)





ASAP Rules of the Road



- One submission **required per flight element** (Not each individual aircraft i.e MC, FL, DL, SL, TAC responsibility) If flight breaks up during event, each TAC submits report.

<https://asap-usmc.com/usmc/>

- User Name: VMM261 Password: Marines
- Reports can be used to address any problem. For example, if you are tired of working in a building that has a leaking roof, you can ASAP that. Alternatively, if you don't have the proper equipment to do your job you can ASAP that as well. If you almost have a mid-air collision during a flight, you can ASAP that.
- One submission per day of cross country flights. (Minimum)
- **Any aircrew or maintainer may submit a report** at any time if hazards are identified.
- ALL SUBMISSIONS ARE ANONYMOUS. Cannot be traced to individuals.
- Please contact (b)(3), (b)(6), (b)(7)c (VMM-261 ASO) with any questions



5G Tower Interference



- If you notice RAD ALT interferences:
 - Create wypt
 - Notify nearest airfield tower (ATC agency)
- Please contact (b)(3), (b)(6), (b)(7)c (VMM-261 ASO) with any questions



REMEMBER:



- AIRCREW WILL MAKE SURE ALL R&I'S ARE GREEN BEFORE WALKING TO AIRCRAFT
- TURN IN YOUR LOAD COMPS AND RAWS BEFORE WALKING TO THE AIRCRAFT.
- CALL THE ODO OUTBOUND AND EACH PASS THROUGH THE PITS, REPORT OPS NORMAL AND FUEL STATE EVERY 30 MINUTES WHEN ABLE.
- THERE IS NO MISSION IN TRAINING WORTH COMPROMISING THE SAFETY OF OUR MARINES.



REMEMBER:



- Call "Lion Ops" on 138.95 before Takeoff and after Landing.
- Contact Tower to go into and out of the Hot Pits. Monitor Tower while in the fuel pit.
- Submit a Norwegian Safety Report if anything unsafe occurs on your flight (near mid air, BASH, etc.). Its non-punitive, they just want to know.
- CSAR/SPINS...

QUESTIONS?



VMM-261
Operations Duty Officer Log
FOR OFFICIAL USE ONLY
18 March 2022

COMMANDING OFFICER
OPERATIONS OFFICER
OPERATIONS DUTY OFFICER

(b)(3), (b)(6), (b)(7)c

0900	I, (b)(3), (b)(6), (b)(7)c HAVE ASSUMED THE DUTIES AND RESPONSIBILITIES OF VMM-261 ODO. I HAVE IN MY POSSESSION (5) BRICKS AND (1) STICKS.	MLM
1015	GT 30 OUTBOUND FOR E CARD.	MLM
1045	GT 30 SOD ENBO.	MLM
1100	GT 31 OB NORTHERN ROUTE.	MLM
1410	GT 31 SOD ENBO.	MLM
1430	GT 31 OB.	MLM

(b)(3), (b)(6), (b)(7)c



OPERATION KILLING TIME / CALs

GHOST 3-1 Flight

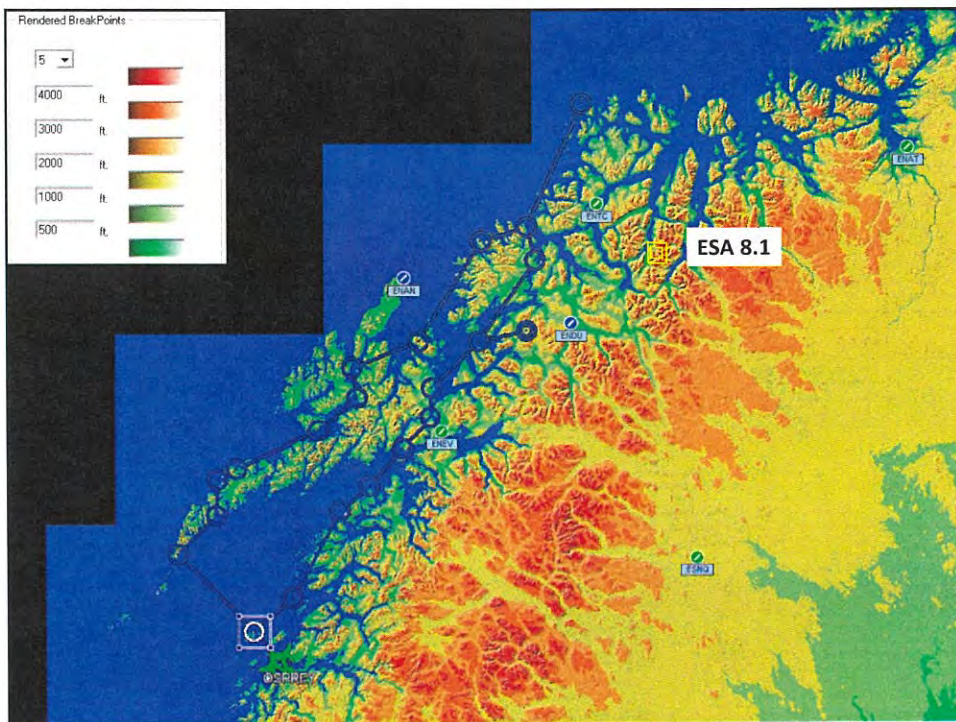
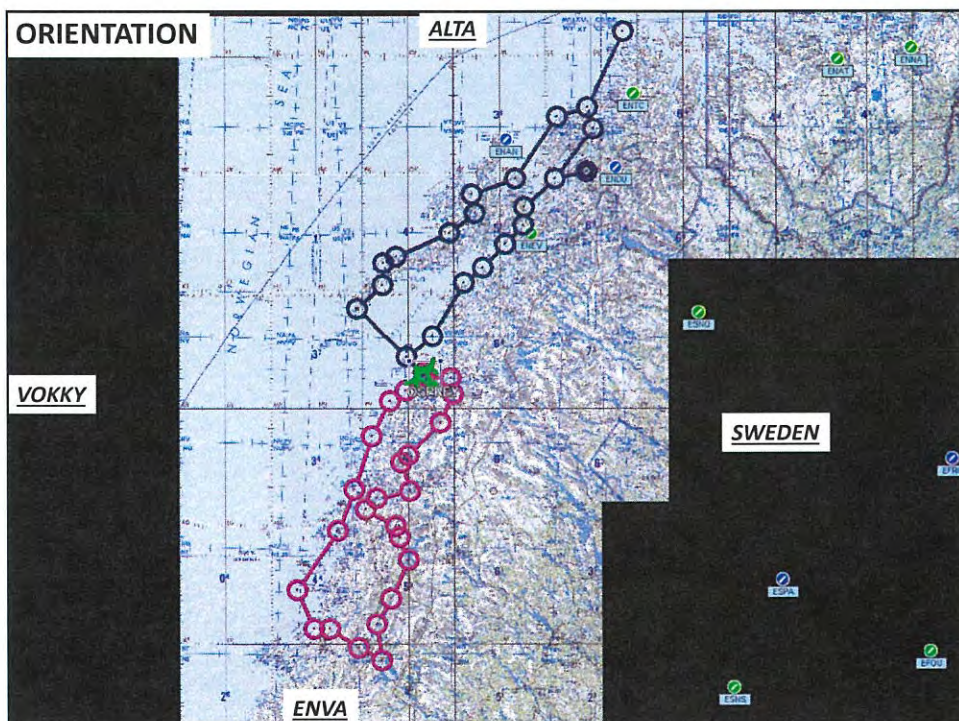
CAPT "PYRO" TOMKIEWICZ

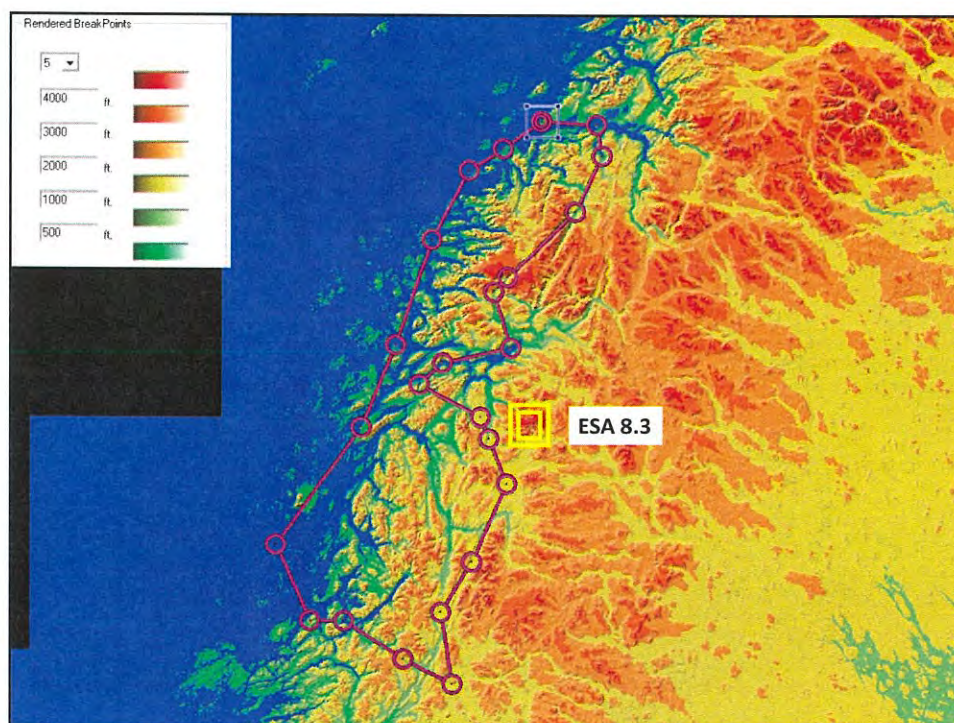
18 March 2022



ORIENTATION

- TIME HACK
- ROLL CALL
- SMARTPACK INVENTORY / PEN CHANGES
- MAPS/CHARTS/PUBLICATIONS
- BRICKLOAD (2xROUTE, LOCAL COMM PLAN, WAYPOINTS, OVERLAY)





SITUATION



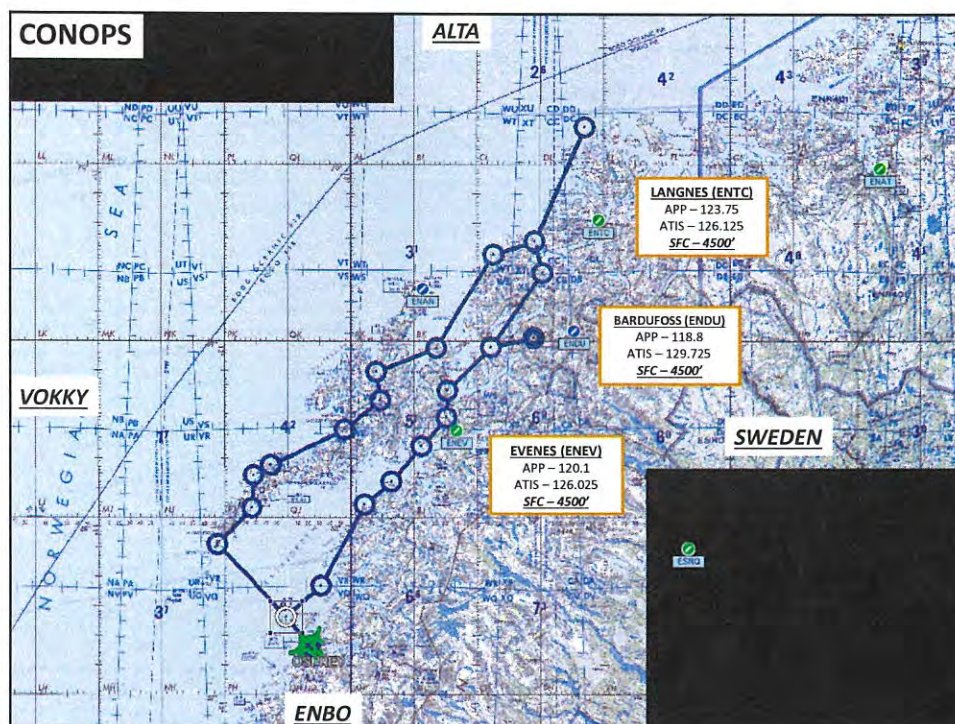
- Enemy: None
- Friendly
 - Higher: II MEF / 2d MAW
 - Adjacent: MAG 26/29, CR22 Allied Aircraft
 - Supported: II MEF, 2d MAW
 - Mission assets:
 - 1 x MV-22 “Ghost 3-1 flight”

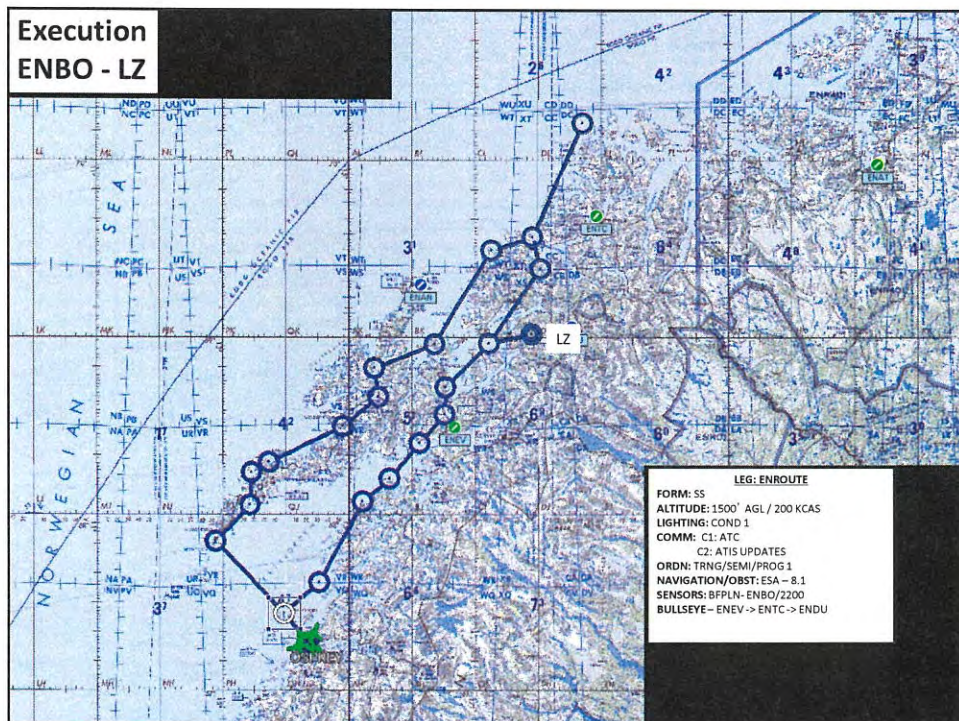
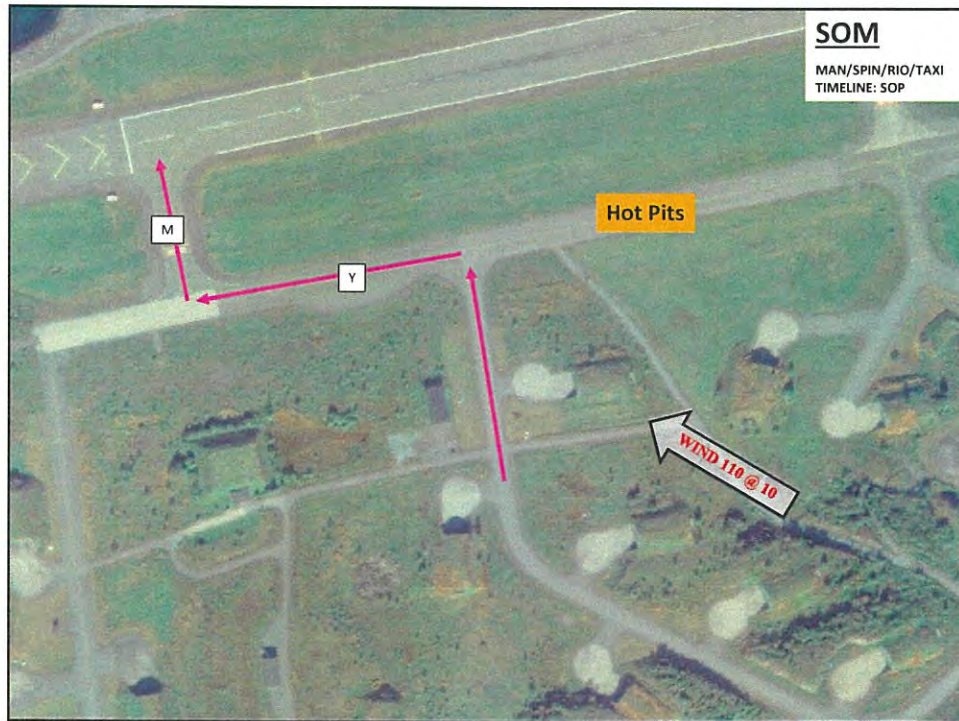


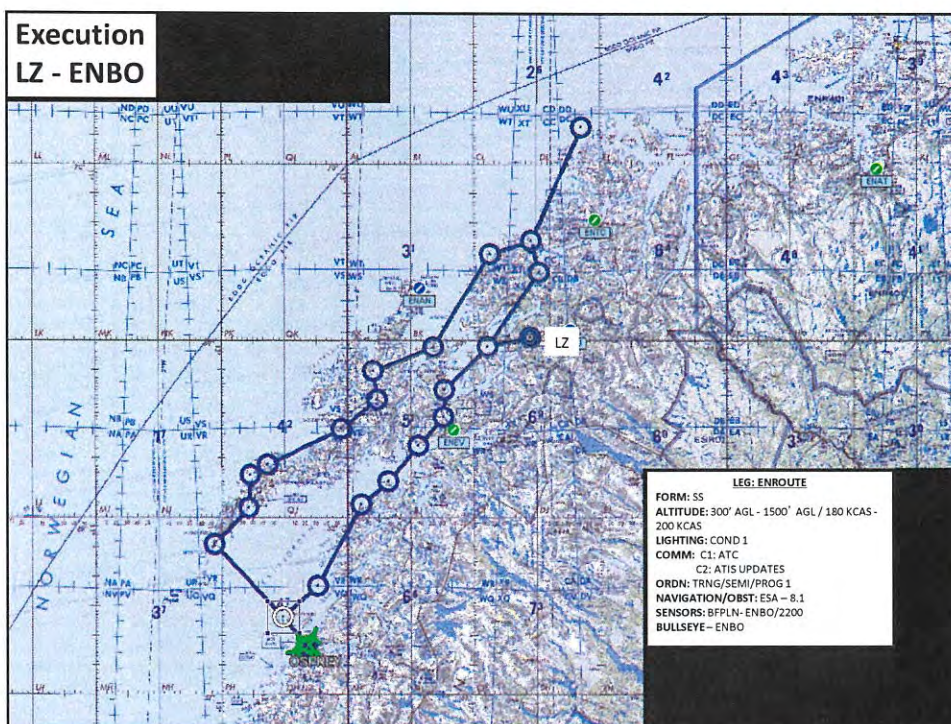
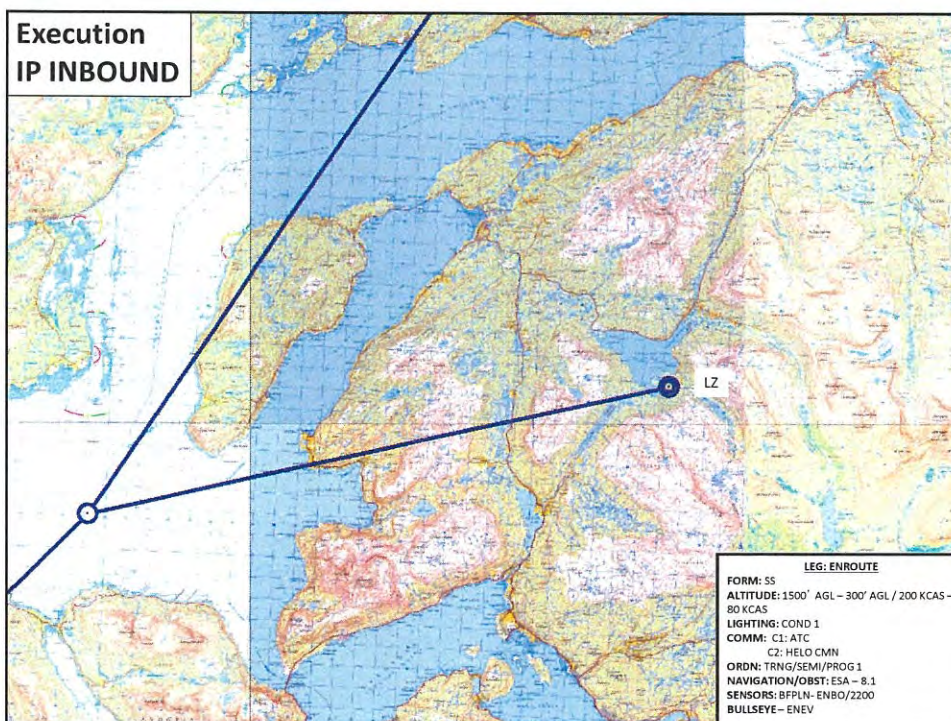
MISSION

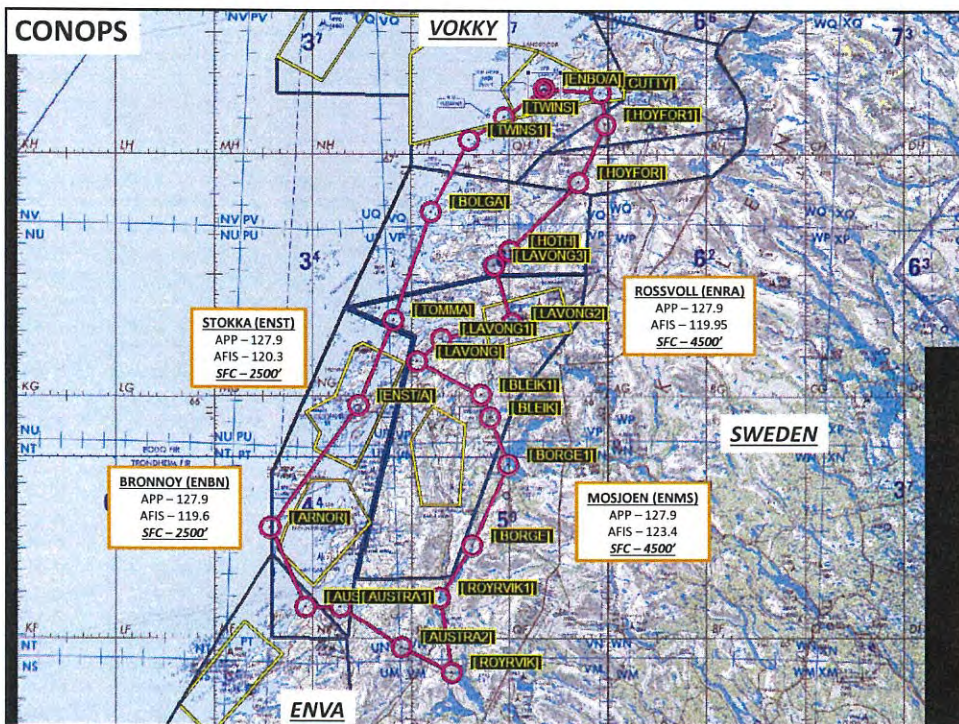


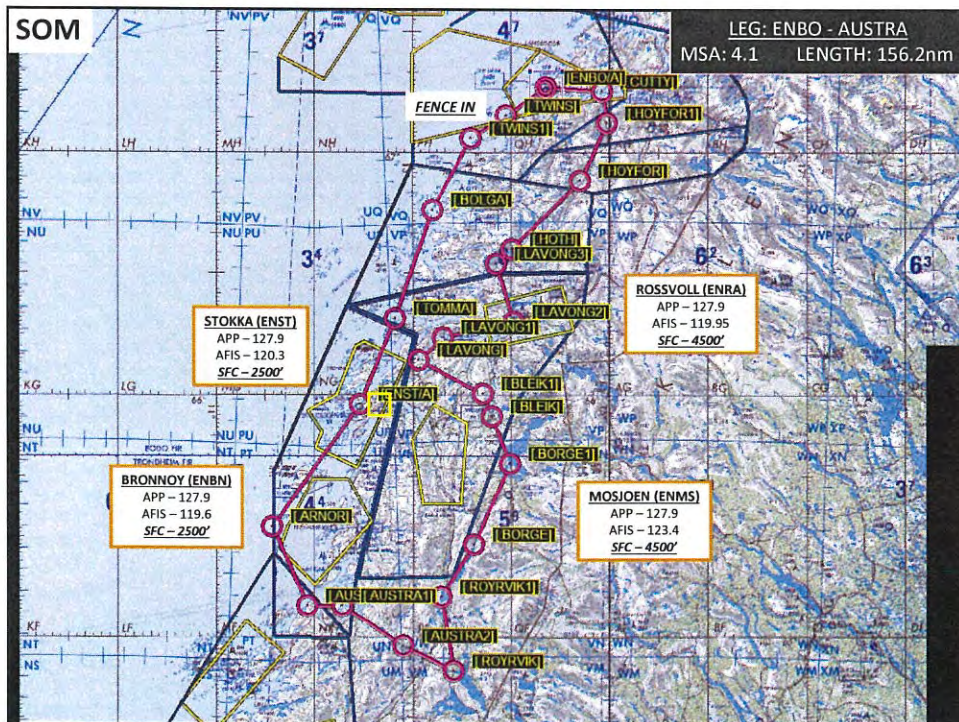
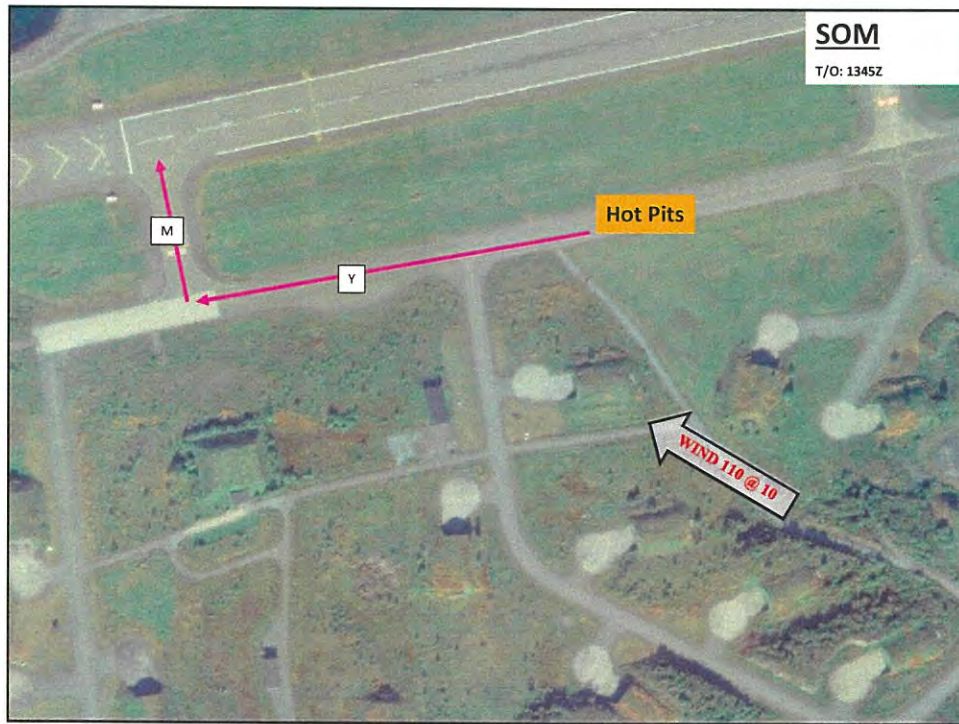
- Mission Statement: At 1000Z GHOST 3-1 displaces from ENBO to conduct CALs in order to increase squadron proficiency.
 - Mission Precedence: Routine
 - Specified Tasks: CALs
 - Implied Task: None
- Commander's Intent
 - Purpose: Increase squadron proficiency
 - Endstate: Ghost 31 SOD at ENBO

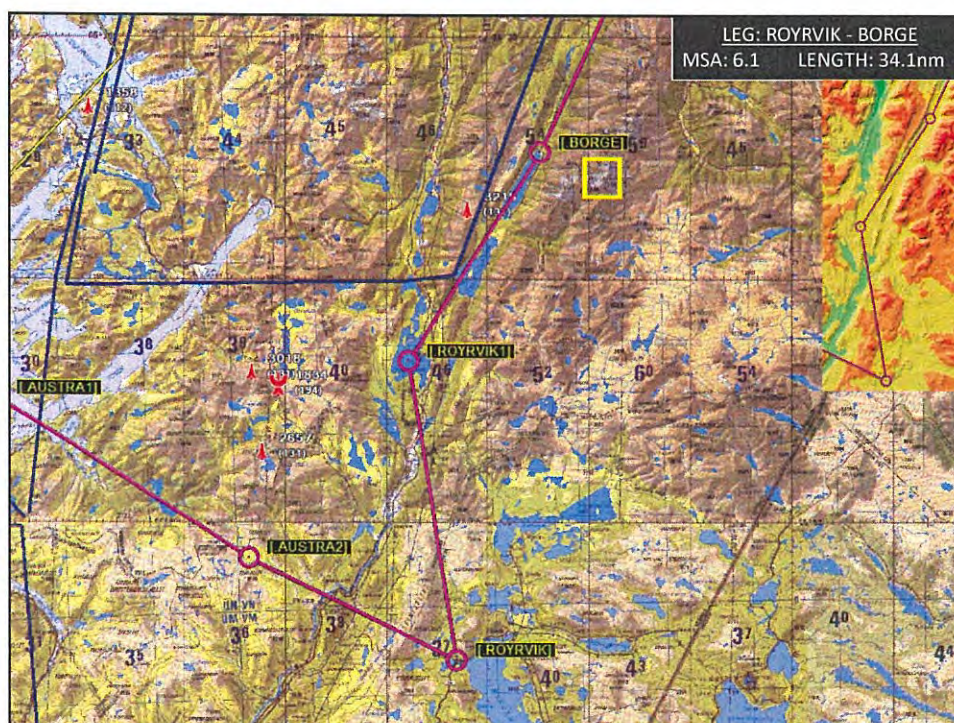


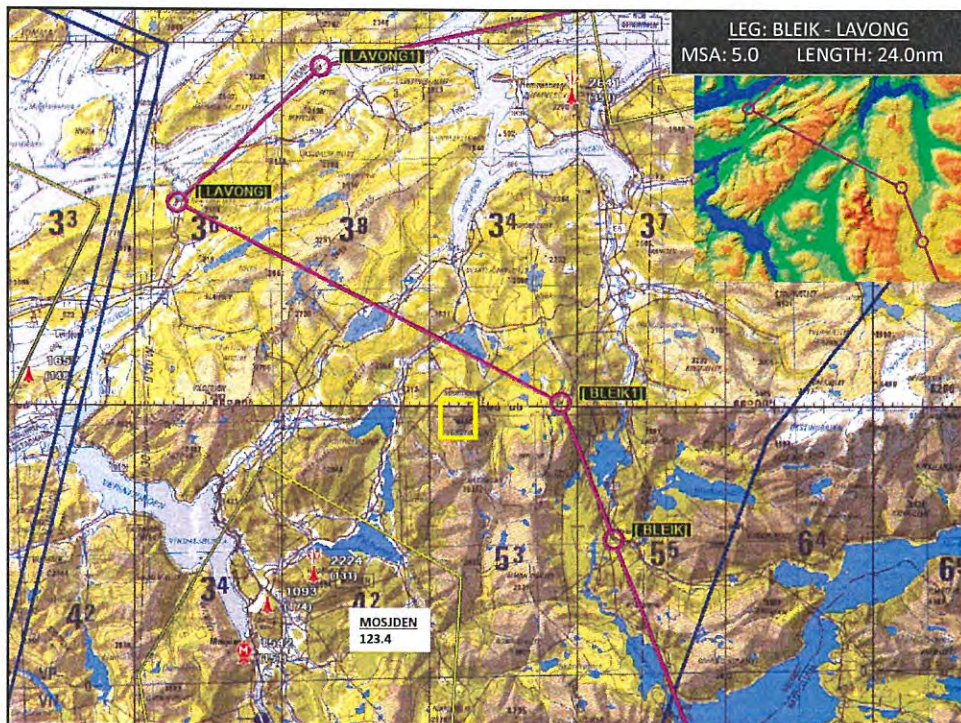
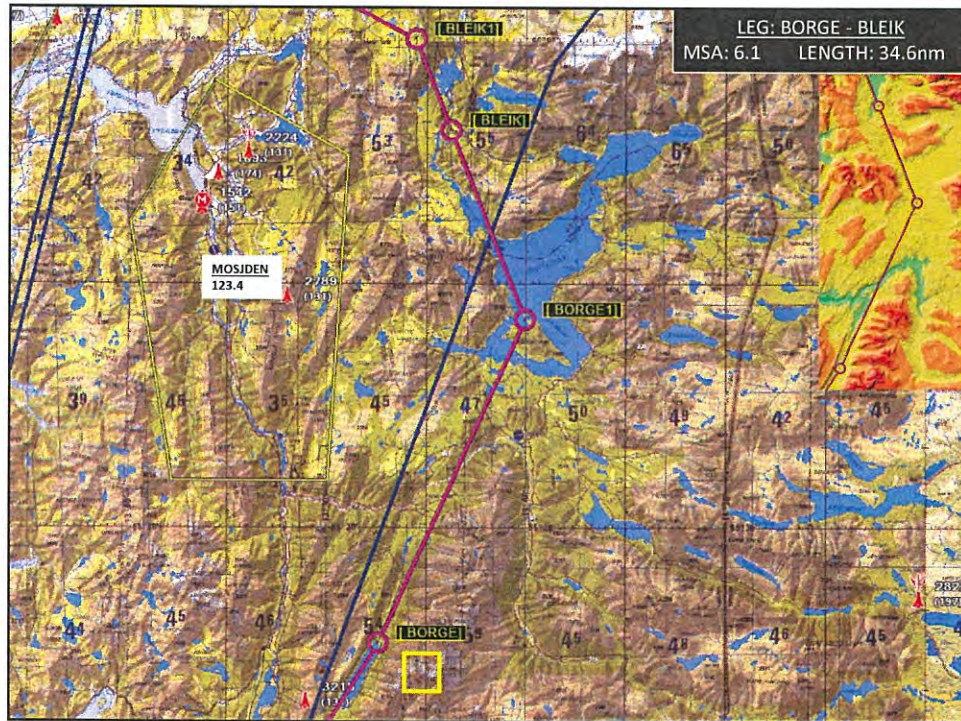


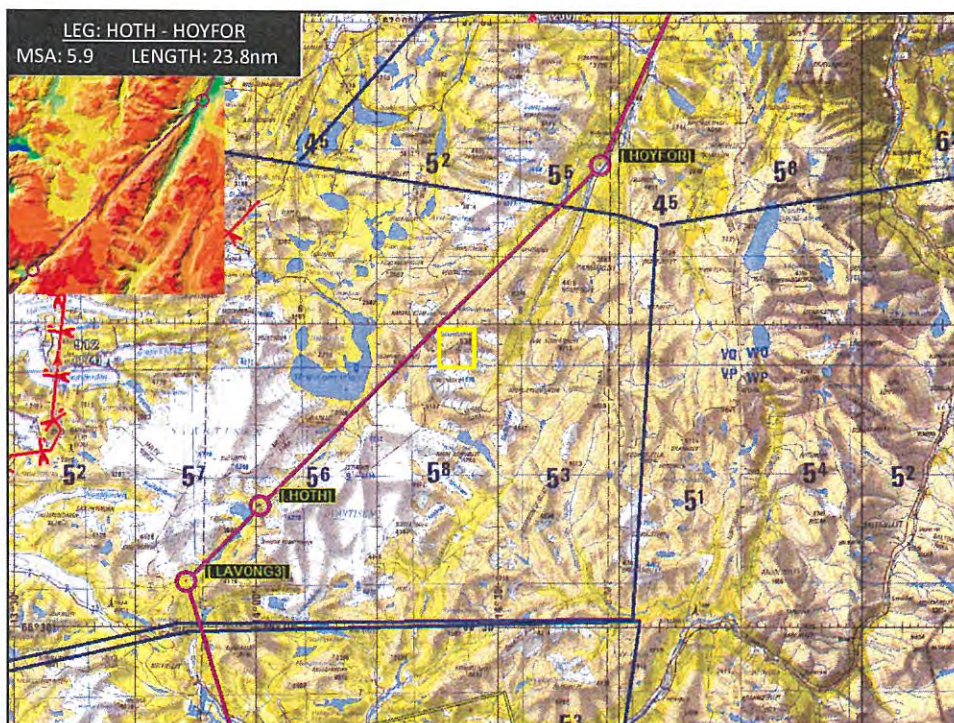
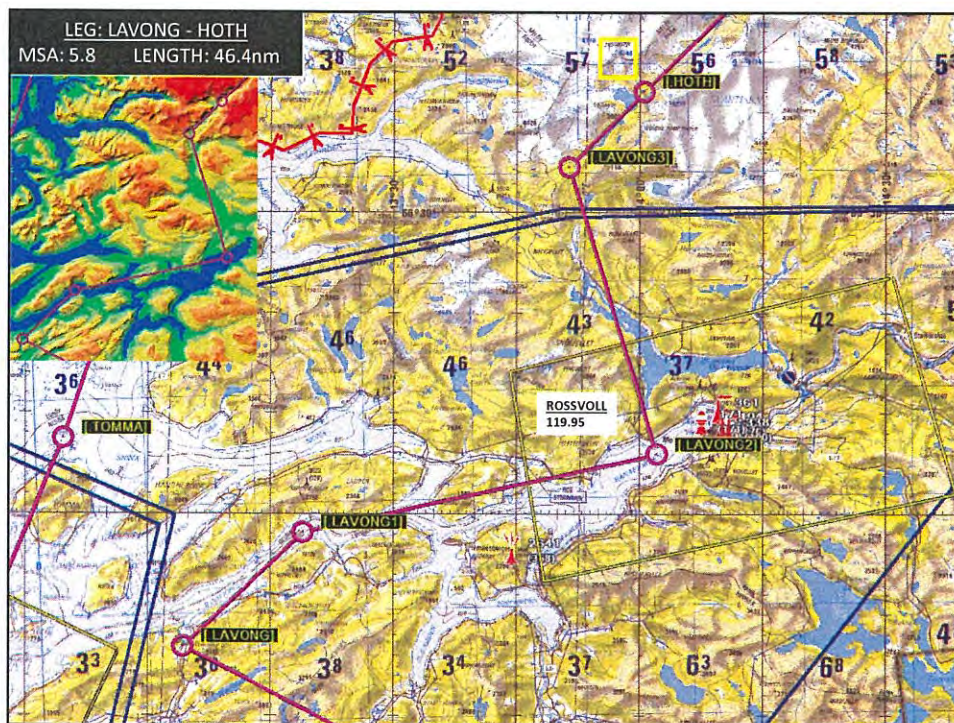


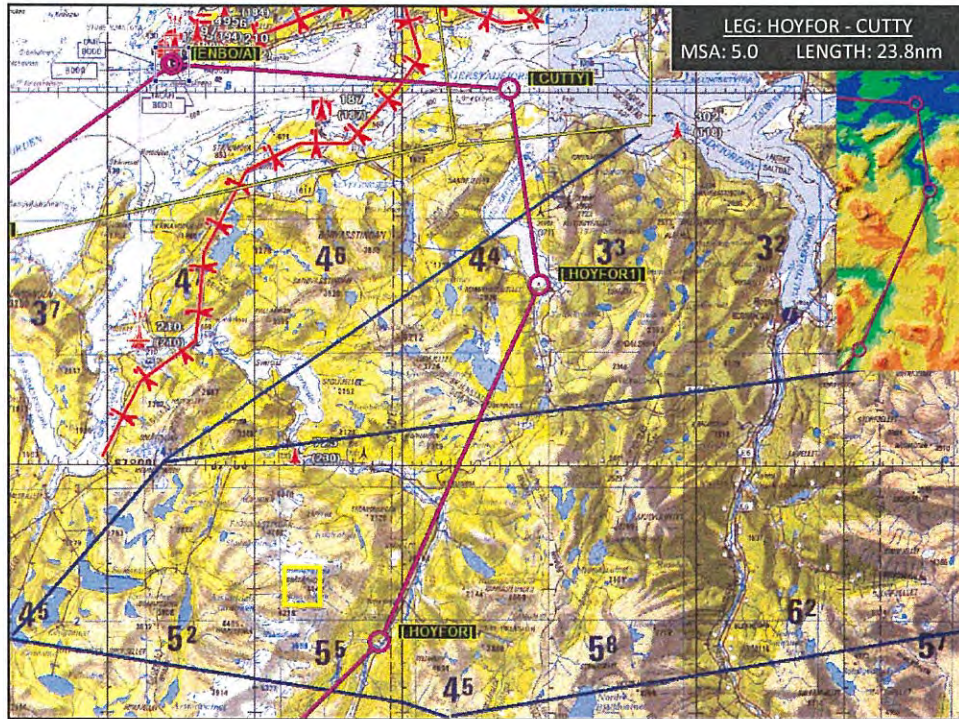














EXECUTION Coordinating Instructions



- Mission-Essential Equipment
 - Aircraft: DTED / EAPS
 - Personal: Food/Water for 6.6 hrs of flight
- GO
 - 1 x MV-22
- No-Go
 - 500/1
- Aborts/Waveoffs - SOP



EXECUTION Coordinating Instructions



- Emergency/System Failures
- IIMC - Reversal
- Terminate / Knock-it-off
- Downed AC



ADMIN AND LOGISTICS



- Delay/Straggle Plan/Drop Dead
 - Delay: 6 hours
 - Drop Dead
 - 1600z for 1+00 of flight time



ADMIN AND LOGISTICS



- Fuel Plan / Fuel required
 - T/O: 10.5
 - Mission: 21.0
 - Joker: 4.2 / 4.5
 - Bingo: 3.4 / 3.7 (LZ – ENBO) / (Royrvik - ENBO)
 - Available: ENBO/ENDU/ENVA
 - BINGO NO FLPN: ENBO/2200#/4500'/200KTS
- LOS/Bullseye: ENBO/ENEV/ENST/ENDU reverse on the way back
- Ordnance: TNG/SEMI/PROG-1
- Debrief Location/Time



COMMAND AND SIGNAL



- Chain of Responsibility
 - Authority to change route, LZs – TAC
 - Extension/Schedule change: SOP
- Frequencies
 - Assigned calls:
 - ATC, WX, BASE, AIRSPACE COORD
- Lost Comm / Single Radio Plan
- Chattermark = 21S – 20 – 1
- IFF Procedures/Codes



RM



- Risk to Forces
 - Blue: Poor weather calls with confining terrain and icing.
 - WX < 5000'/5sm at coastal airports = No Inland LAT
 - WX < 1000'/3sm = Conversion Mode
 - WX < 500' / 1sm = No Go
 - Red: Terrain / Icing / Turbulence
- Risk to Mission
 - Blue: Getting behind fuel ladder due to CONV mode Ops.
 - Red: WX



CLEAN UP

QUESTIONS?



UNITED STATES MARINE CORPS
 MARINE MEDIUM TILTROTOR SQUADRON 261 (-) REINFORCED, COLD RESPONSE DETACHMENT
 MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
 POSTAL SERVICE CENTER BOX 21016
 JACKSONVILLE, NC 28545-1016



MISSION: SUPPORT THE MAGTF COMMANDER BY PROVIDING ASSAULT SUPPORT TRANSPORT OF COMBAT TROOPS, SUPPLIES AND EQUIPMENT, DAY OR NIGHT, UNDER ALL WEATHER CONDITIONS DURING EXPEDITIONARY, JOINT, OR COMBINED OPERATIONS.

FLIGHT SCHEDULE TUESDAY, 01 MARCH 2022 (2060)

ODO: (b)(3), (b)(6), (b)(7)c
 ODO: (b)(3), (b)(6), (b)(7)c
 DNCO (OPS 5): (b)(3), (b)(6), (b)(7)c
 ADNCO (OPS 5): (b)(3), (b)(6), (b)(7)c
 SCHEUDLE 24: (b)(3), (b)(6), (b)(7)c
 SCHEDULE 48: CAPT REYNOLDS, R.

0630-1245
 1245-LPOD

SCHEDULED HOURS
 13.2

MAR (GOAL/SCHEDULED/EXECUTED)
 240.0 / 0.0 / 0.0
 QTR
 600.3 / 274.5 / 215.8
 FY
 2426.0 / 581.0 / 510.8

ENBO	FIELD HOURS: 24 HRS QUIET HOURS: NONE	BMNT / SR: 0523 / 0720	SS / EENT: 1711 / 1909	MR / MS: 0852 / 1400	ILLUM: 4%	LLL: 1938-0451* HLL: 0455-0523, 1909-1938
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EVENT	TMR	BRF	ETD	ETR	HRS	AIRCREW	TRAINING CODES	MISSION	NOTES	CONFIG
GHOST 3-1 MV-22B	1A1	0700	0900	1215	3.3	(b)(3), (b)(6), (b)(7)c	2031, 2242, 2280, 2281, 2282, 2641, 6240, 6900R 2031, 2242, 2280, 2281P, 2282, 2641, 6900R 2242, 2282, 2641, 6900R 2242, 2270X, 2282X, 2641, 6900X	AREA FAM / LAT CERT / SEC CALS	1, 2	
GHOST 3-2 MV-22B	1A1	0700	0900	1215	3.3	CAPT TOMKIEWICZ, M. (b)(3), (b)(6), (b)(7)c	2031, 2242, 2280, 2281, 2282, 2641, 6900R 2031, 2242, 2280, 2281P, 2282, 2641, 6900R 2242, 2282, 2641, 6900R 2242, 2270X, 2282X, 2641, 6900X	AREA FAM / LAT CERT / SEC CALS	1	
GHOST 3-3 MV-22B	1A1	1015	1315	1630	3.3	(b)(3), (b)(6), (b)(7)c	2031, 2242, 2280, 2281, 2282, 2641, 6240, 6900R 2031, 2242, 2280P, 2281P, 2282R, 2641, 6900X 2242, 2282, 2641, 6900X 2242, 2282, 2641, 6900X	AREA FAM / LAT CERT / SEC CALS	1, 2	
GHOST 3-4 MV-22B	1A1	1015	1315	1630	3.3	(b)(3), (b)(6), (b)(7)c CPL MOORE, J.	2031, 2242, 2280, 2281, 2282, 2641, 6900R 2031, 2242, 2280, 2281, 2282, 2641, 6900R 2242, 2282, 2641, 6900R 2242, 2282, 2641, 6900R	AREA FAM / LAT CERT / SEC CALS	1	

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** UNLESS OTHERWISE INDICATED, ALL FLIGHTS WILL ORIGINATE AND TERMINATE AT BODØ AIR BASE (ENBO) **

FLIGHT NOTES:

1. HOUND DOG ROUTE 0910-0955 AND 1325-1410 AND BODO AREA LZ CERTIFICATIONS
2. CREW AUTHORIZED TO FCF AS REQUIRED.

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
0730	0800	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	(b)(3), (b)(6), (b)(7)c
NLT	0800	INDIVIDUAL SPACES	ATO INPUTS FOR NEXT DAY DUE TO MAW	S-3T TO INPUT	
NLT	0800	OPS 5	MIDRATS FOR AIRCREW	S-4 COORDINATE 8 LUNCH MIDRATS FOR MARCH 2 CREW	
NLT	1500	INDIVIDUAL SPACES	SITREP INPUTS DUE TO S-3	ALL SHOPS TO SUBMIT	
NLT	1600	OPS 5	SITREP DUE TO MAW G3	S-3 TO SUBMIT	
1700	1730	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	
1900	2000	BARRACKS G	KEY LEADERS SYNC	(b)(3), (b)(6), (b)(7)c ATTEND	
ALL	DAY	BARDUFOSS	FORCE ON FORCE FTX PLANNING	(b)(6), (b)(7)c TO ATTEND	

OPS: /S/
 DSSN: /S/
 MAINT: /S/

(b)(3), (b)(6), (b)(7)c

COMMANDING OFFICER



UNITED STATES MARINE CORPS
 MARINE MEDIUM TILTROTOR SQUADRON 261 (-) REINFORCED, COLD RESPONSE DETACHMENT
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FLIGHT SCHEDULE SATURDAY, 05 MARCH 2022 (2064)

ODO: (b)(3), (b)(6), (b)(7)c 0600-1200
 ODO: CAPT REYNOLDS, R. 1200-LPOD
 DNCO (OPS 5):
 ADNCO (OPS 5): (b)(3), (b)(6), (b)(7)c

SCHEDULED HOURS
 19.8

MAR (GOAL/SCHEDULED/EXECUTED)
 200.1 / 24.8 / 20.0
 QTR
 600.3 / 335.2 / 261.2
 FY
 2426.0 / 641.7 / 556.2

ENBO	FIELD HOURS: 24 HRS QUIET HOURS: NONE	BMNT / SR: 0507/0704	SS / EENT: 1726/1923	MR / MS: 0743/2147	ILLUM: 7%	LLL: 1955-0435* HLL: 0439-0507, 1923-1955
------	--	----------------------	----------------------	--------------------	-----------	--

EVENT	TMR	BRF	ETD	ETR	HRS	AIRCREW	TRAINING CODES	MISSION	NOTES	CONFIG
GHOST 3-1 MV-22B	2K2	0830	TBD	TBD	TBD	(b)(3), (b)(6), (b)(7)c		FCF		
GHOST 3-2 MV-22B	2M4 1A1	0630	0915	1615	6.6		2280, 2281, 2282, 2440P, 2781, 2784R, 3040, 3440, 3441, 6330X 2280, 2281, 2282, 2440P, 2781, 2784, 3040P, 3440X, 3441 2282, 2781, 2784, 3040, 3440, 3441 2282, 2780X, 2784X, 3040X	CAT/DIV LAT / DIV CALS	1, 2, 3, 5	
GHOST 3-3 MV-22B	2M4 1A1	0630	0915	1615	6.6		2280P, 2281P, 2282, 2440P, 2781, 2784, 3040, 3440R, 3441, 6240 2280P, 2281P, 2282, 2440, 2781, 2784R, 3040, 3440R, 3441R 2440R 2282, 2781, 2784, 3040, 3440, 3441 2282, 2781, 2784, 3040, 3440X, 3441X	CAT/DIV LAT / DIV CALS	1, 2, 3, 4	
GHOST 3-4 MV-22B	2M4 1A1	0630	0915	1615	6.6		2280, 2281, 2282, 2440, 2781, 2784R, 3040, 3440, 3441, 6340 2280P, 2281, 2282, 2440P, 2781, 2784R, 3040R, 3440X, 3441P 2440R 2282P, 2781, 2784P, 3040, 3440P, 3441X 2282, 2781, 2784, 3040, 3440P, 3441P	CAT/DIV LAT / DIV CALS	1, 2, 3, 4	
						CAPT TOMKIEWICZ, M. (b)(3), (b)(6), (b)(7)c CPL MOORE, J.				

@ AIR MISSION COMMANDER / # FLIGHT LEAD / ** DIVISION LEAD / * SECTION LEAD / X ATF REQUIRED / R NOT PROFICIENT / P PROFICIENCY EXPIRES W/ 90 DAYS

** UNLESS OTHERWISE INDICATED, ALL FLIGHTS WILL ORIGINATE AND TERMINATE AT BODØ AIR BASE (ENBO) **

FLIGHT NOTES:

1. BARDUFOSS FUEL COORDINATED AT 1300L. ODO TO CONTACT HMH/HMLA ODO: SIPR 302-750-3983 PRIOR TO DEPARTURE. POC (b)(3), (b)(6), (b)(7)c
2. PAX AUTHORIZED. COMMSTRAT PAX TO MANIFEST WITH ODO. POC (b)(3), (b)(6), (b)(7)c
3. AERIAL REFUELING WITH VMGR 252. POC (b)(3), (b)(6), (b)(7)c
4. IN AIR HOTSEAT AUTHORIZED.
5. (b)(3), (b)(6), (b)(7)c OG 3011X FOR (b)(3), (b)(6), (b)(7)c AND (b)(3), (b)(6), (b)(7)c PRIOR TO FLIGHT.

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
0730	0800	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	(b)(3), (b)(7)c
NLT	0800	INDIVIDUAL SPACES	ATO INPUTS FOR NEXT DAY DUE TO MAW	S-3T TO INPUT	
NLT	1300	OPS 5	MIDRATS FOR AIRCREW	S-4 COORDINATE 15 LUNCH MIDRATS FOR MARCH 5 CREW	
NLT	1500	INDIVIDUAL SPACES	SITREP INPUTS DUE TO S-3	ALL SHOPS TO SUBMIT	
NLT	1600	OPS 5	SITREP DUE TO MAW G3	S-3 TO SUBMIT	
1700	1730	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 261 (-) REINFORCED, COLD RESPONSE DETACHMENT
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016



MISSION: SUPPORT THE MAGTF COMMANDER BY PROVIDING ASSAULT SUPPORT TRANSPORT OF COMBAT TROOPS, SUPPLIES AND EQUIPMENT, DAY OR NIGHT, UNDER ALL WEATHER CONDITIONS DURING EXPEDITIONARY, JOINT, OR COMBINED OPERATIONS.

FLIGHT SCHEDULE THURSDAY, 17 MARCH 2022 (2076)

ODO: (b)(3), (b)(6), (b)(7)c 0900-1630
DO (OPS 5): (b)(3), (b)(6), (b)(7)c 1615-LPOD
AD (OPS 5): (b)(3), (b)(6), (b)(7)c
SCHEDULE (24): (b)(3), (b)(6), (b)(7)c FRI - SAT

SCHEDULED HOURS
15.2

MAR (GOAL/SCHEDULED/EXECUTED)
210.1 / 114.0 / 89.9
QTR
600.3 / 467.2 / 348.7
FY
2426.0 / 773.7 / 643.7

ENBO	FIELD HOURS: 24 HRS QUIET HOURS: NONE	BMNT / SR: 0416 / 0615	SS / EENT: 1808 / 2008	MR / MS: 1624 / 0718	ILLUM: 98%	LLL: NONE HLL: 2008-0412*
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EVENT	TMR	BRF	ETD	ETR	HRS	AIRCREW	TRAINING CODES	MISSION	NOTES	CONFIG
GHOST 3-0 MV-22B	2K2	0930	TBD	TBD	TBD	(b)(3), (b)(6), (b)(7)c		FCF		
GHOST 3-1 MV-22B	1A1	1200	1500	1815	3.3	CPL MOORE, J. (b)(3), (b)(6), (b)(7)c	2242, 2280, 2281, 2282, 2641, 6240 2242, 2280P, 2281P, 2282R, 2641 2242, 2282, 2641 2242, 2282, 2641	SEC LAT / CALC	1	
GHOST 3-2 MV-22B	1A1	1200	1500	1815	3.3	CAPT TOMKIEWICZ, M. (b)(3), (b)(6), (b)(7)c	2242, 2280, 2281, 2282, 2641 2242, 2280, 2281, 2282, 2641 2242, 2282, 2641 2242, 2282X, 2641	SEC LAT / CALC	1	
GHOST 3-3 MV-22B	2L5 1A9	1645	1945	0000	4.3	(b)(3), (b)(6), (b)(7)c	2280, 2281, 2282, 2341, 2441, 3340, 6240 2280, 2281, 2282, 2341, 2441R, 3340R, 5340X 2282, 2341, 3340P 2282, 2341, 3340X	NS TAAR / TRAP	2	
MV-22B	1A9	1645	1945	0000	4.3	(b)(3), (b)(6), (b)(7)c	2280, 2281, 2282, 2341, 2441P, 3340 2280, 2281, 2282, 2341, 2441X, 3340 2282, 2341, 3340R 2282, 2341, 3340P	NS TAAR / TRAP	2	

@ AIR MISSION COMMANDER / # FLIGHT LEAD / ** DIVISION LEAD / * SECTION LEAD / X ATF REQUIRED / R NOT PROFICIENT / P PROFICIENCY EXPIRES W/I 90 DAYS
** UNLESS OTHERWISE INDICATED, ALL FLIGHTS WILL ORIGINATE AND TERMINATE AT BODØ AIR BASE (ENBO) **

FLIGHT NOTES:

1. TO FLY LAT ROUTE A AND B.
2. D522 RESERVED FOR NS TAAR WITH VMGR-252.



ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
0630	TBD	CHOW HALL	NARVIK PORT PDSS	(b)(3), (b)(6), (b)(7)c AND (b)(3), (b)(6), (b)(7)c	(b)(3), (b)(6), (b)(7)c
0900	0930	OPS 5	MAINTENANCE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	
1000	1030	CAVES	INTEL BRIEF	S-2 PERSONNEL TO ATTEND	
1100	1200	CAVES	RETROGRADE MEETING	ALL DESIGNATED PERSONNEL TO ATTEND	
1330	1400	MS TEAMS	APB	ASRs FOR FOLLOWING DAYS VERIFICATION	
1500	1600	OPS NORTH	SAFETY MEETING	(b)(3), (b)(6), (b)(7)c AND (b)(3), (b)(6), (b)(7)c	
NLT	1500	INDIVIDUAL SPACES	SITREP INPUTS DUE TO S-3	ALL SHOPS TO SUBMIT	
NLT	1600	OPS 5	SITREP DUE TO MAW G-3	S-3 TO SUBMIT	
NLT	1600	OPS 5	ATO INPUTS DUE TO MAW G-3	OPS CLERKS TO SEND TO (b)(3), (b)(6), (b)(7)c	
1900	1930	OPS 5	MAINTENANCE MEETING	(b)(3), (b)(6), (b)(7)c	
				ALL DESIGNATED PERSONNEL TO ATTEND	

OPS: /S/
DSSN: /S/
MAINT: /S/

(b)(3), (b)(6), (b)(7)c

COMMANDING OFFICER

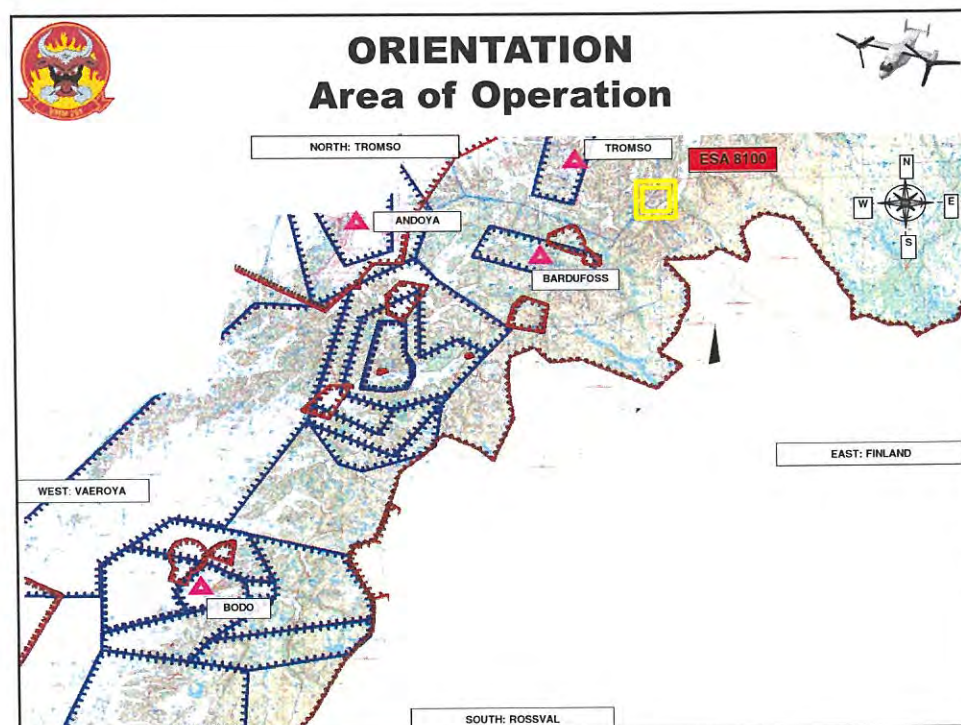



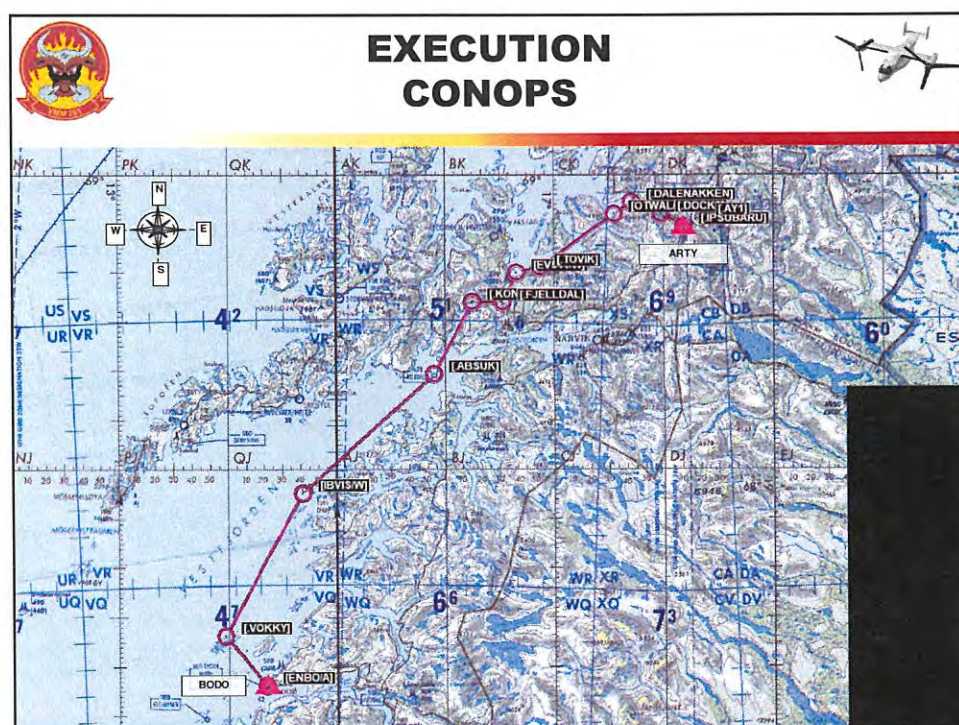
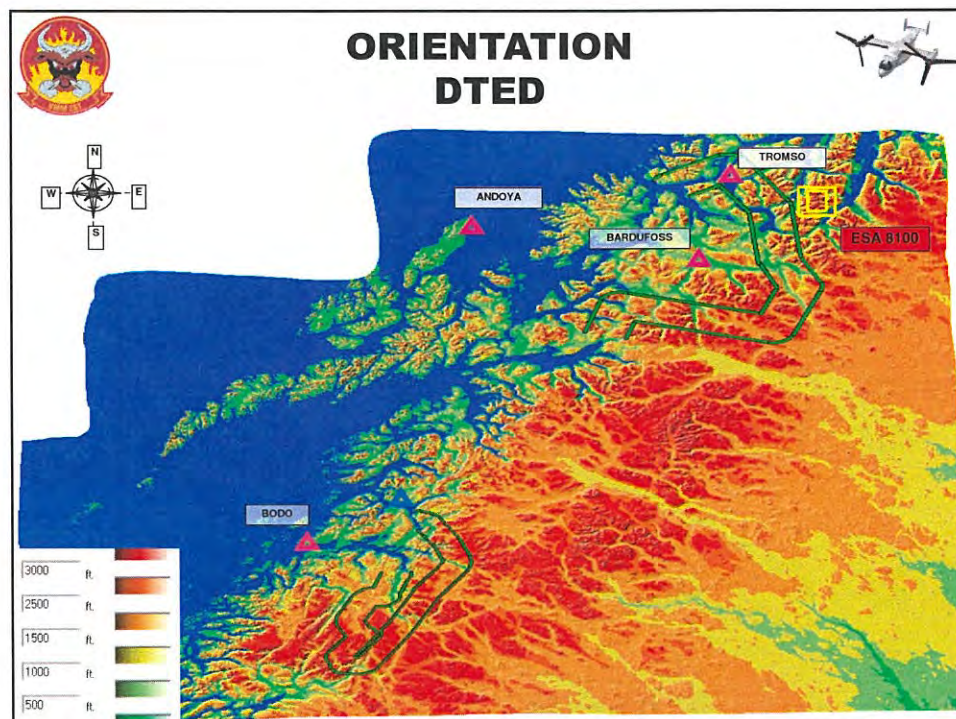
ALS / SEC LAT / CAL

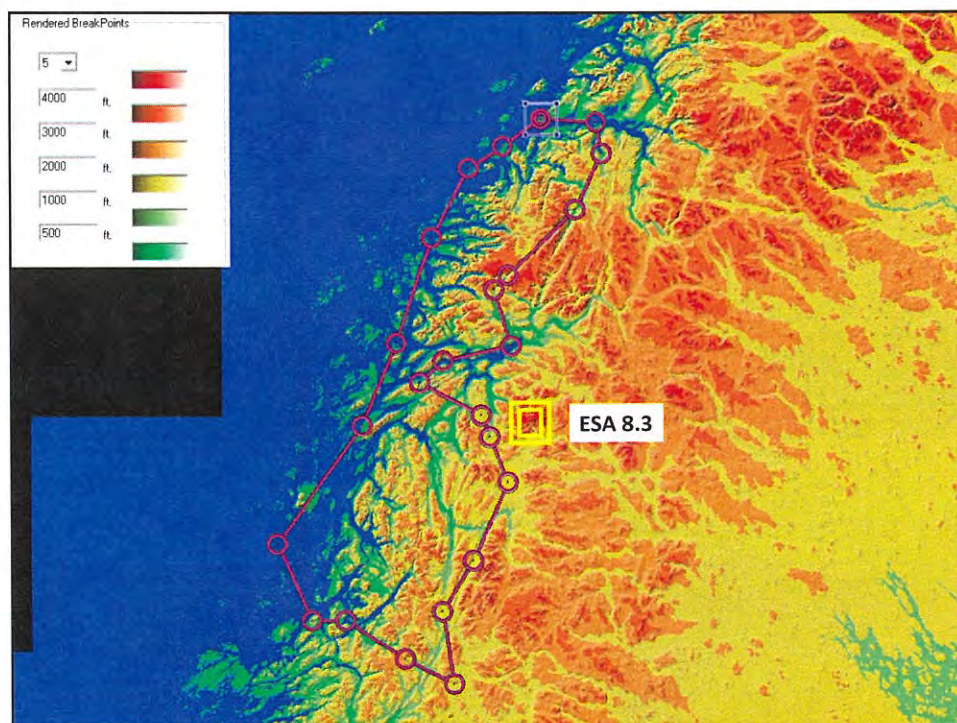
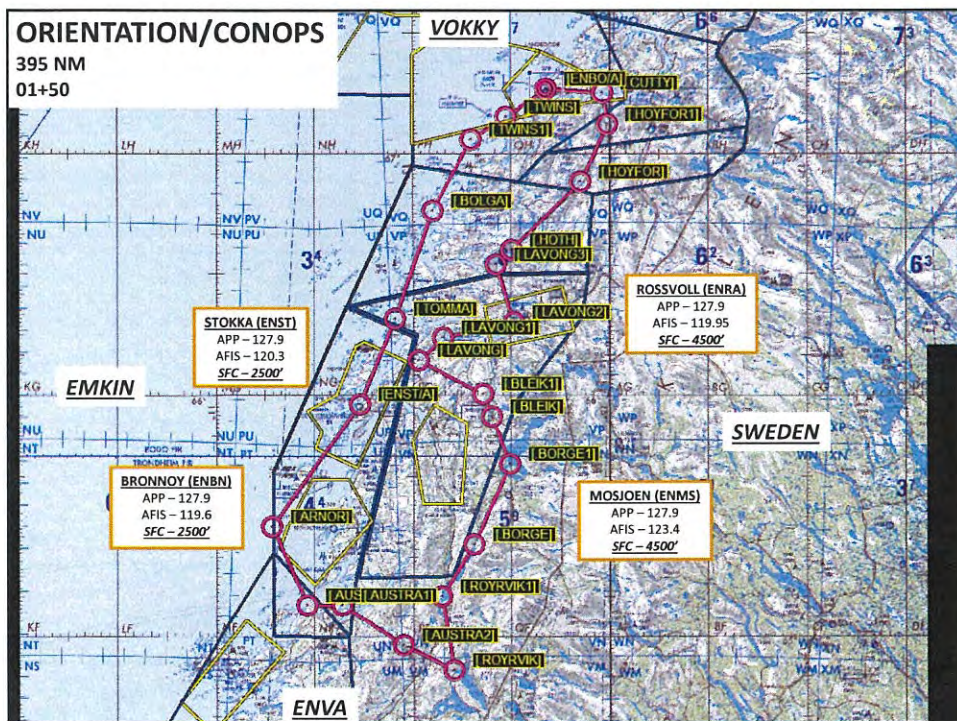
GHOST 3-1 Flight

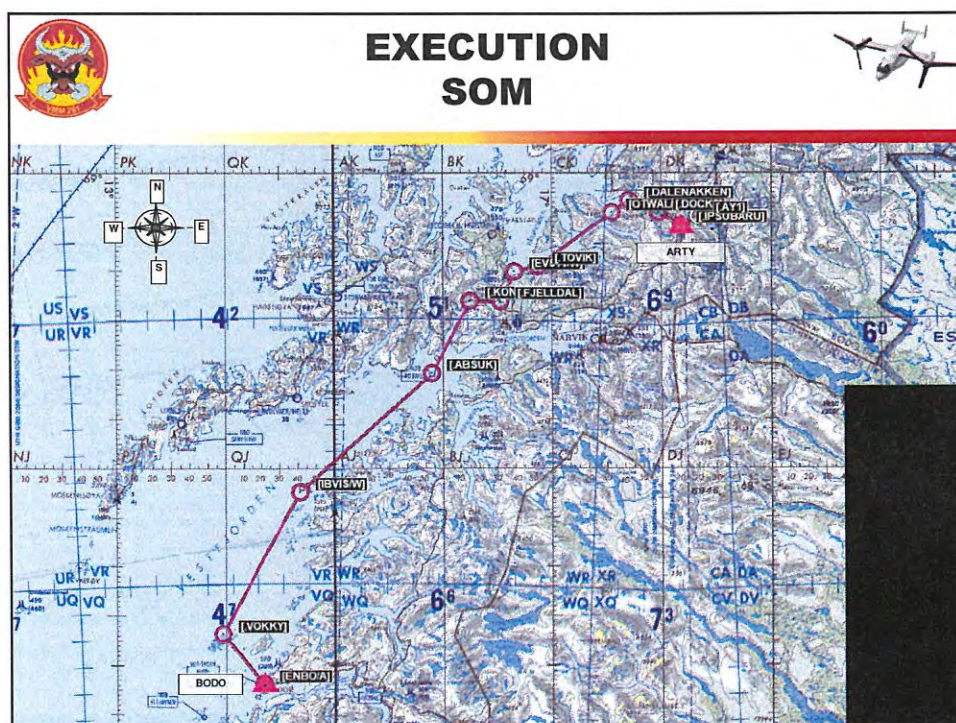
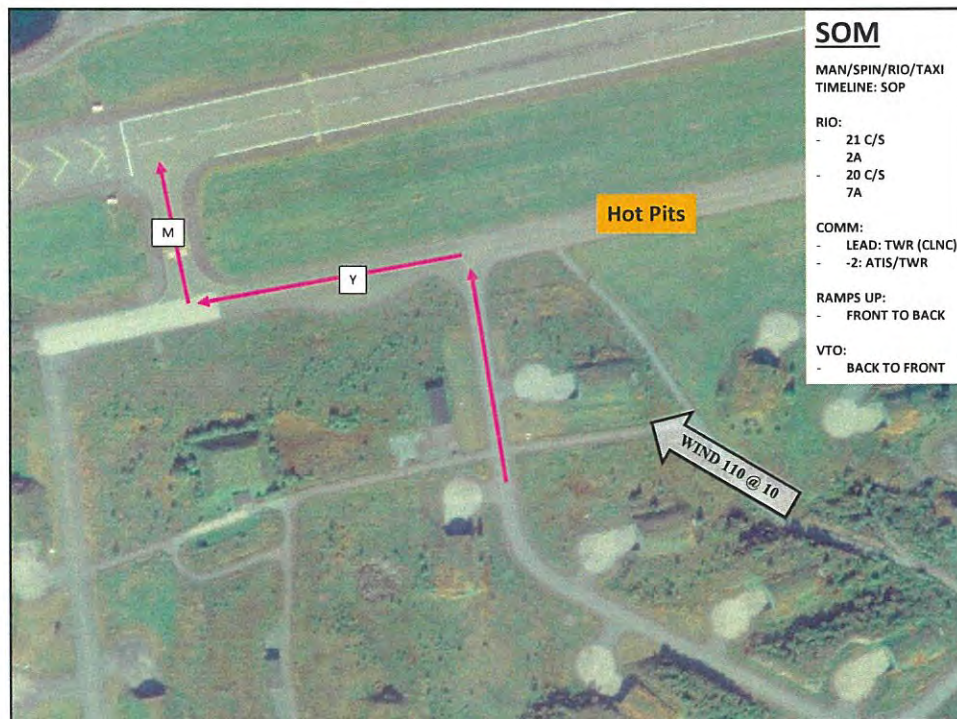
31Y/94Y

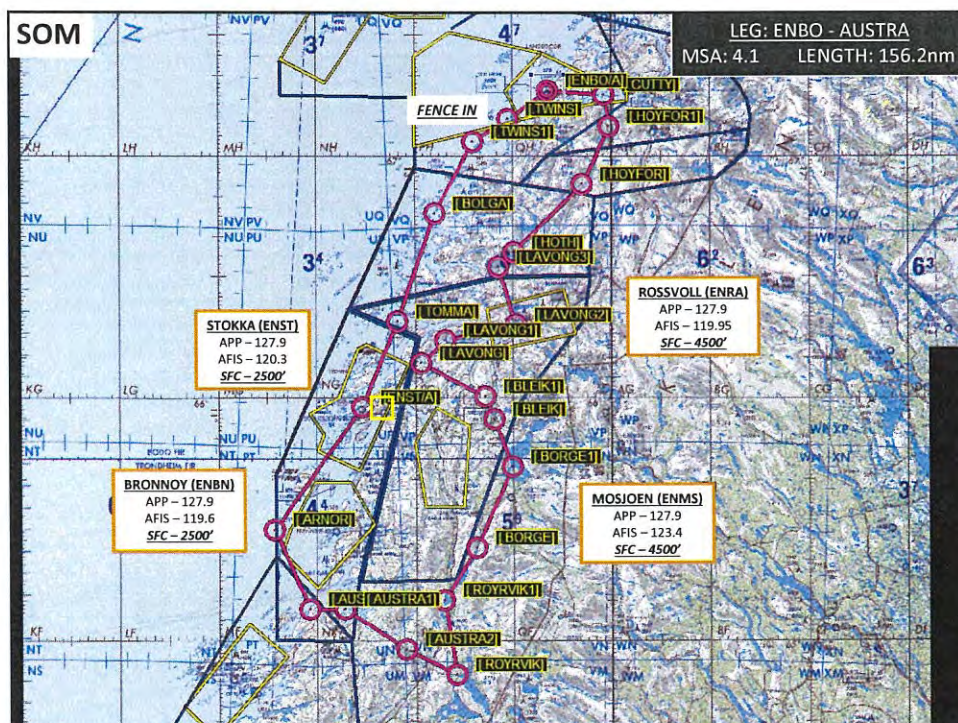
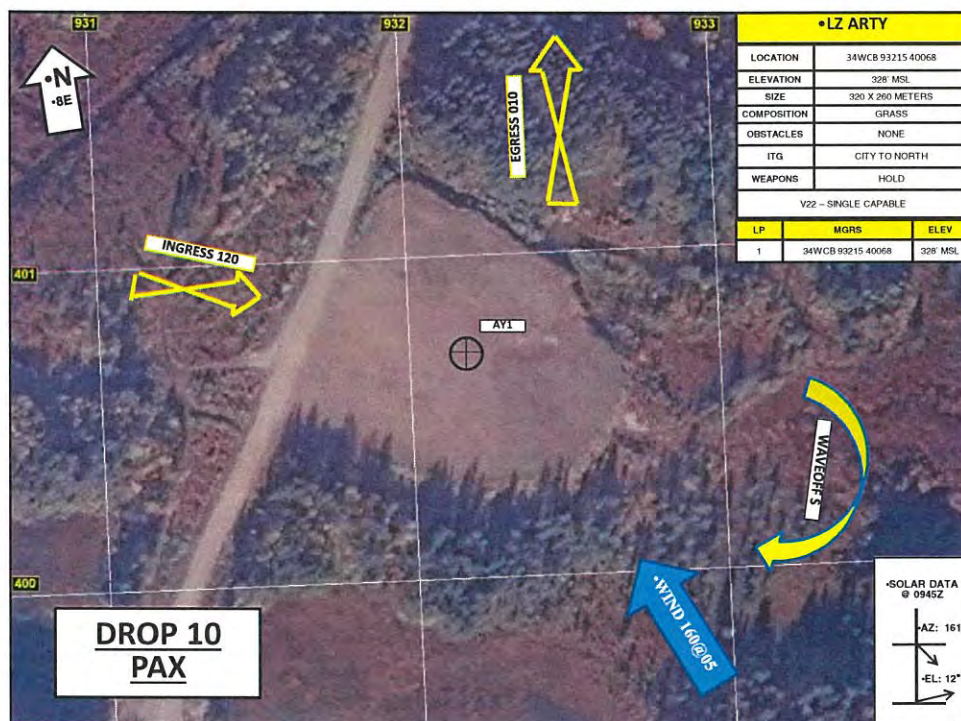
TAC 1(Btn 21S): 280.275
17 March 2022

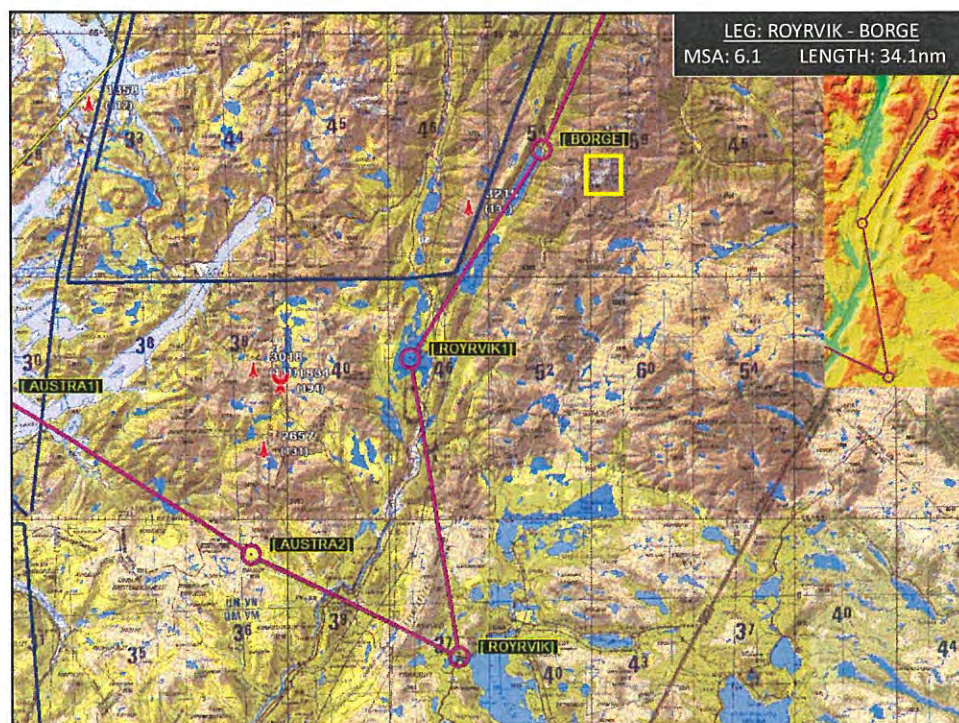


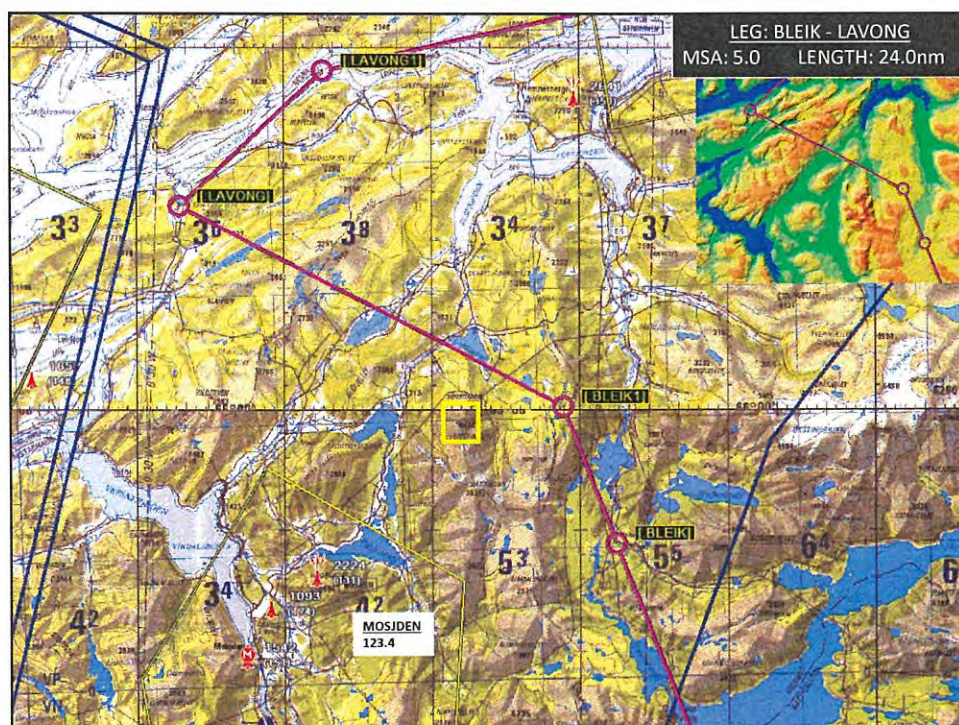
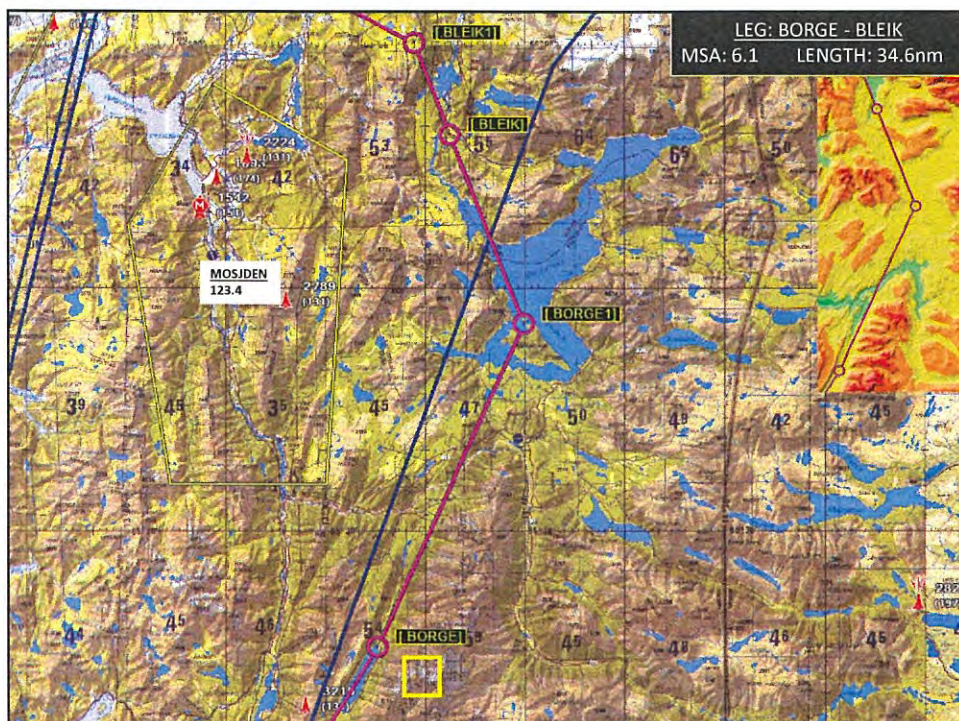


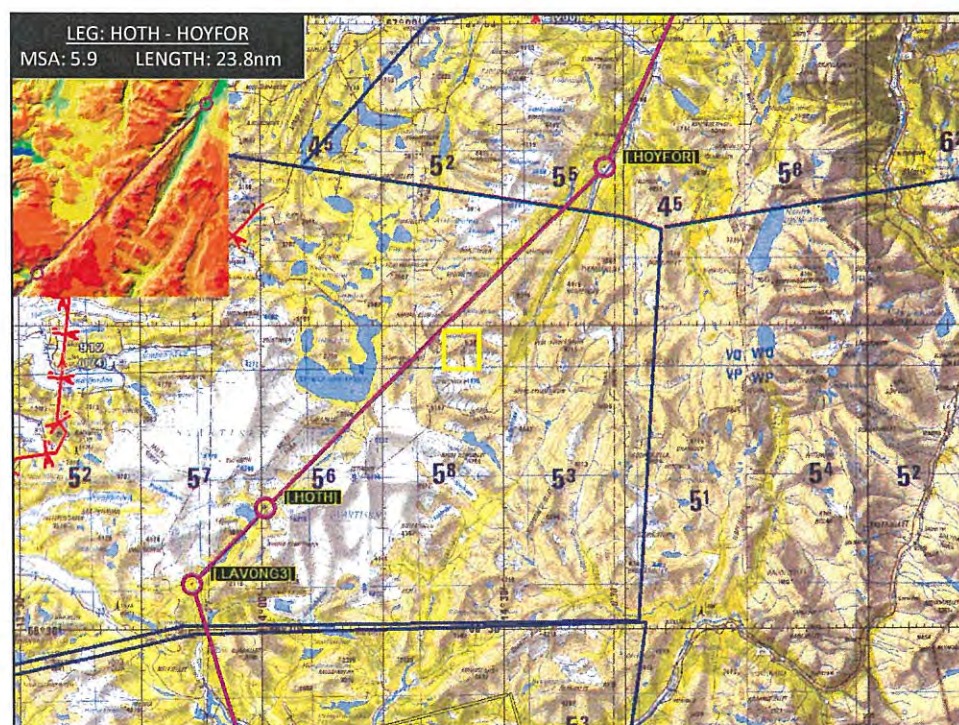
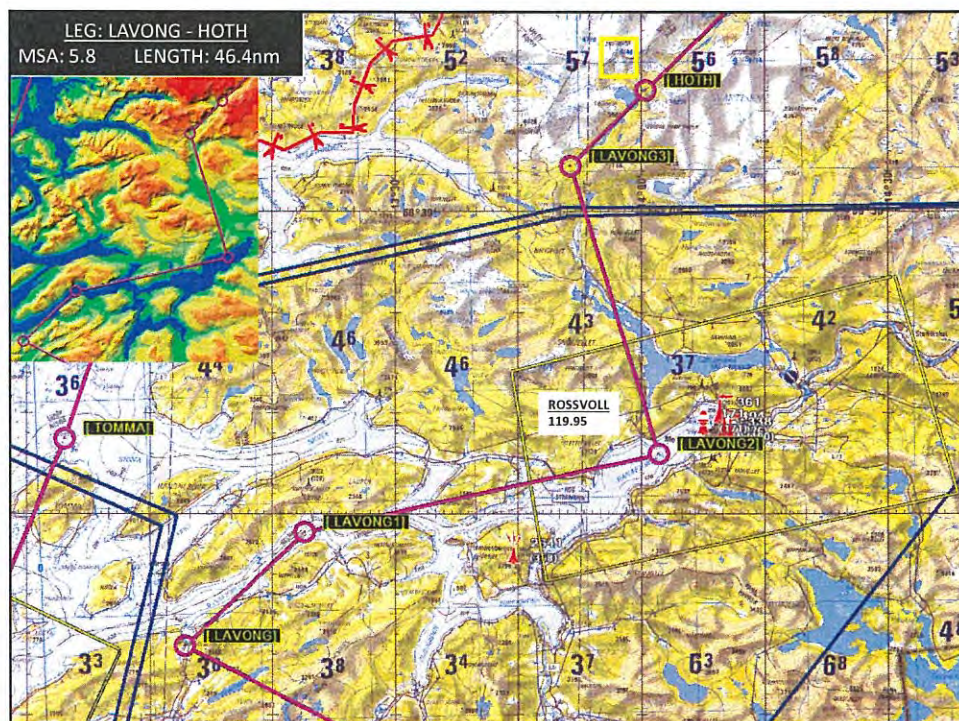


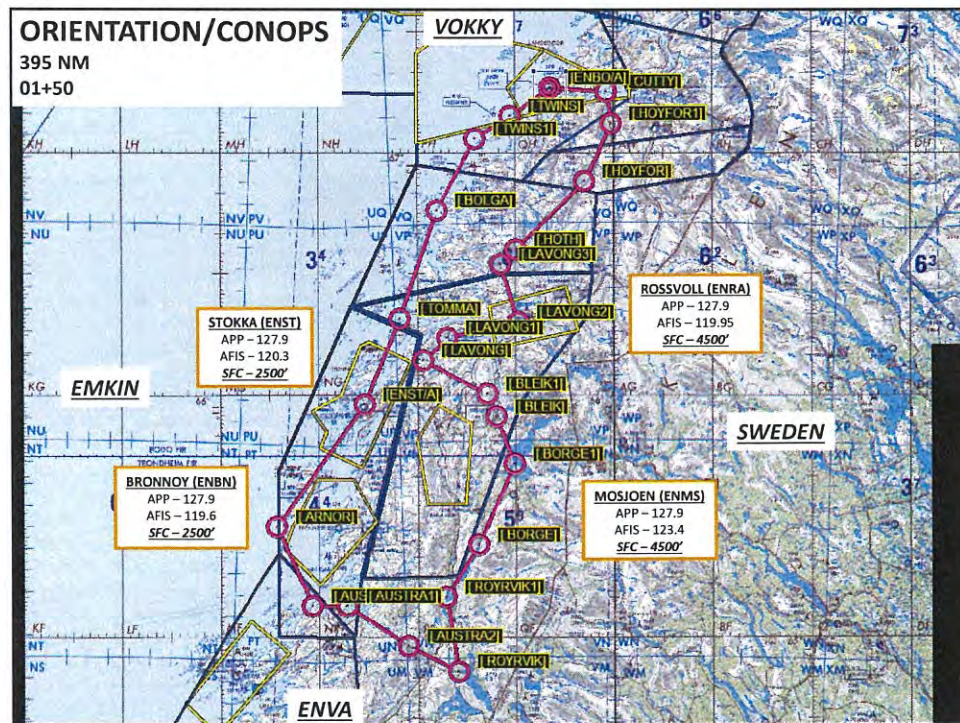
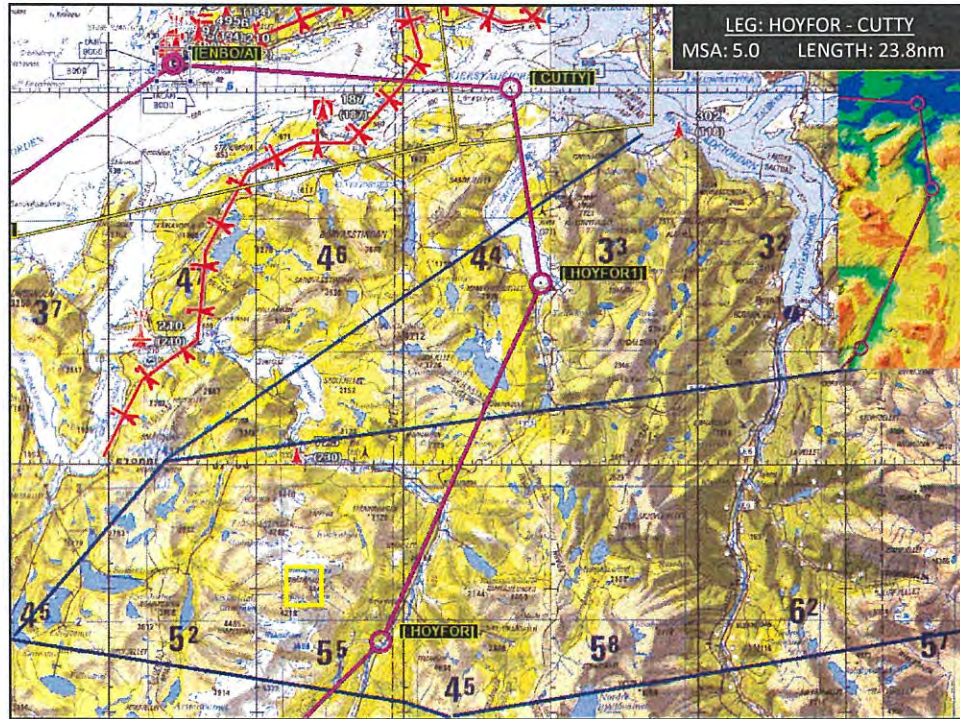


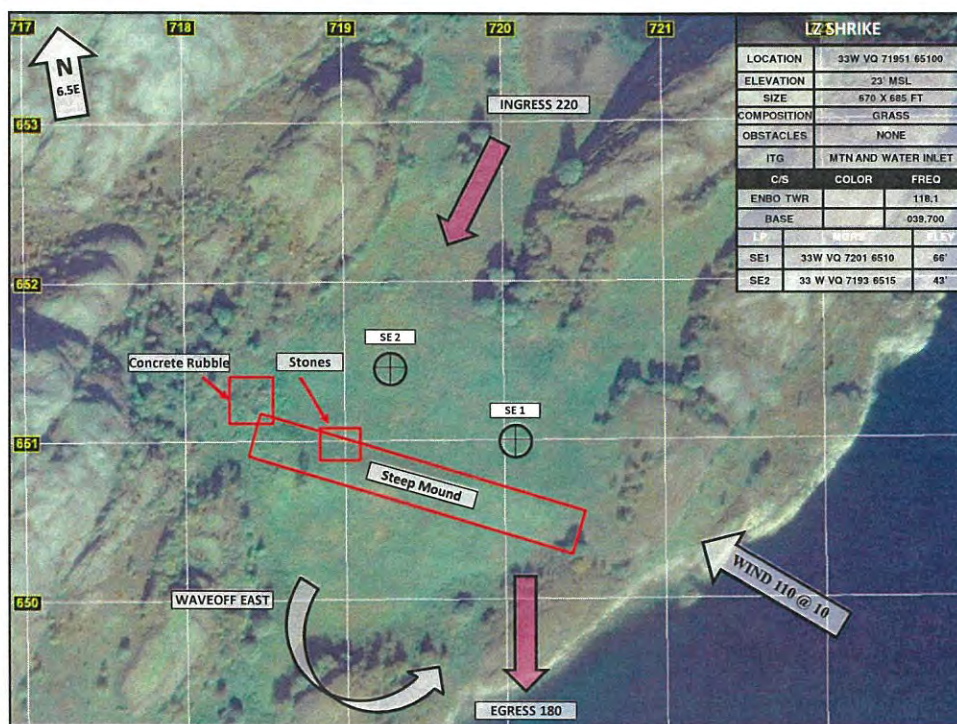












EXECUTION

Coordinating Instructions



- Mission-Essential Equipment
 - Aircraft: DTED
 - Personal: Food/Water for 3.3 hrs of flight
- GO
 - 1 x MV-22
- No-Go
 - 500/1
- Aborts - SOP
- Wave Offs (C1)
 - Single – Use C/S, maint lane, turn DW land w/ visual
 - Flight – Use flight C/S, maint lane, A/C furthest upwind priority to turn, land w/ visual



EXECUTION Coordinating Instructions



- Emergency/System Failures
- IIMC
 - Bodo Reversal
 - Wx < 1000' AGL / degraded visibility below terrain = CONV mode
 - Loss of 3 ground references = "Knock it off"
- Loss of Visual Contact
 - Over water: ASTACSOP
 - In Terrain: talk-on → Bodo reversal
- Terminate / Knock-it-off
- Downed AC
 - Internal / External



ADMIN AND LOGISTICS



- Bump Plan:
 - 3-2 takes good A/C with Capt Brao
- Delay/Straggle Plan/Drop Dead
 - Delay: 15 mins for section; Good A/C takes Ghost 3-1 call sign and pax
 - Straggle:
 - Straggle A/C Stay local for CALs
 - Stay up TAC-1
 - Rejoin on deck in Shrike
 - Drop Dead
 - 1645L: PAX movement
 - 1715L (training)



ADMIN AND LOGISTICS



- Fuel Plan / Fuel required
 - T/O: 10.5
 - Mission: 10.5
 - Joker: 4.5
 - Bingo: 3.7 (Arty - ENBO)
 - Available: ENBO/ENDU
 - BINGO NO FLPN: ENBO/2200#/4500'/200KTS
- LOS/Bullseye: ENBO/ENEV/ENDU
- Ordnance: TNG/SEMI/PROG-1
- Debrief Location/Time



COMMAND AND SIGNAL



- Chain of Responsibility
 - Authority to change route, LZs – SL
 - Extension/Schedule change: SOP
- Frequencies
 - Assigned calls:
 - LD = ATC, COMM3
 - -2 = WX, BASE, AIRSPACE COORD
- Lost Comm / Single Radio Plan
 - ASTACSOP Day Method 2
 - Maintain Ch2, Good Comm A/C assume Ch1 calls
- Chattermark = 21S – 20 – 1
- Golden = 1
- IFF Procedures/Codes
 - 3-1 carries squawk



RM



- Risk to Forces
 - Blue: Poor weather calls with confining terrain and icing.
 - WX < 5000'/5sm at coastal airports = No Inland LAT
 - WX < 1000'/3sm = Conversion Mode
 - WX < 500' / 1sm = No Go
 - Red: Terrain / Icing / Turbulence
- Risk to Mission
 - Blue: Getting behind fuel ladder due to CONV mode Ops.
 - Red: WX



CLEAN UP

QUESTIONS?

From:
To:

(b)(3), (b)(6), (b)(7)c

Subject: [Non-DoD Source] Monday information - Please read
Date: Monday, March 14, 2022 4:14:50 PM
Attachments: [LL Routes NEW - Part 1 of 2.pdf](#)
[LL Routes NEW - Part 2 of 2.pdf](#)

Hey, all!

Some information, please read all and distribute to all pilots!

We realize at Lion Ops that certain things that have been briefed and informed via e-mails and Signal messages haven't come across to everyone. Please make sure your squadron has a way of letting ALL pilots in on the info routed from us to you.

- Low Level

- o We have finally gotten a standing approval for TWO low level routes down to an altitude of 500'.
- o They are attached and are NOT the same ones you received earlier. Please shred the previous route and plan for this one any time you want to go flying lower than 1000'.
- o For ATO requests, requesting "Low level route Alpha" should be sufficient for NAOC to know. Any time you go off this route, please climb back to 1000'.
- o AGAIN: You still have to plan these routes properly with regards to towers, power lines, etc. They are not recently chummed.

- IFG

- o You have all received this. The presets on the front page are possible (and encouraged) to use by tower here in Bodø. They prefer UHF frequencies for ground, tower, departure/approach and arrival. VHF only for Polaris (Preset 8 and 9.)
- o "Lion 69, push Departure channel 6." Etc.
- o This is just a recommendation, ATC is aware that this might not be the standard for you all.

- FARP

- o You HAVE to contact tower to operate on Yankee.
- o Today there was an incident (again) where Tower suddenly realized that FARPing(?) was going on, but the pilots had not informed Tower that this would take place.

- Flight Plans

- o Bodø TWR now wants you to ALWAYS file a VFR flight plan, this is due to some sort of system limitations.
- o Apparently it is 6-9 times easier for them to accommodate you when the FPL has "VFR" in it compared to when it says "IFR."
- o When you contact tower, this is where you state your actual request. ("Vokky VFR 1000" or "XXXX IFR departure.")
- o In the remarks/free text of your FPL, this is where you will put WHERE you're going, or what area, and also the remark "CR22".

Thanks guys.

ARC

(b)(3), (b)(6), (b)(7)c

Royal Norwegian Air Force

(b)(3), (b)(6), (b)(7)c





Flightplan Id's 458995 - 0 -	x Aircraft Id GHOST31	x Flight Rules V: VFR	x Type of Flight M: Military
Number of Aircraft(s) 1	x Type of Aircraft V22	x Wake Turbulence Category M: Medium	
x Equipment (NAV/COM) SDITUY		(SSR/ADS) CS	

x Date of Flight (yyymmdd) 220318	x EOBT (UTC-time) 1000	x Cruising Speed N 0200	x Cruising Level A 015
x ADEP ENBO	x Total EET (HHMM) 0315	1. Altn. Aerodrome	2. Altn. Aerodrome
x ADES ENBO			

x Route. Visualize Route: Convert Route Coordinates:

DCT VOKKY DCT TUVLA DCT GIRUX DCT UNSOR DCT EVANI DCT KEGAX DCT DITEB DCT MOVAB DCT DITEB DCT GIBMO DCT ELDUR DCT UBABA
DCT ARDUX DCT VOKKY

Other Information

RMK/SSR A1631 OAT IN CR22 AREA

Supplementary Information

x Endurance(HHMM) 0330	x Persons on board 4	Emergency Radio			
		<input checked="" type="checkbox"/> UHF	<input checked="" type="checkbox"/> VHF	<input type="checkbox"/> ELT	<input type="checkbox"/> PLB
Information on Survival Equipment					
<input checked="" type="checkbox"/> Survival	<input checked="" type="checkbox"/> Polar	<input type="checkbox"/> Desert	<input checked="" type="checkbox"/> Maritime	<input type="checkbox"/> Jungle	
Information on Jackets					
<input checked="" type="checkbox"/> Jackets	<input type="checkbox"/> Light	<input type="checkbox"/> Fluores	<input checked="" type="checkbox"/> UHF	<input checked="" type="checkbox"/> VHF	
Information on Dinghies					
Number of Dinghies	Capacity	Cover	Colour		
1	28	<input type="checkbox"/>	YELLOW		
x Aircraft Colour and Markings					
GREY					

Flightplan Id's

458994 - 0 -

Number of Aircraft(s)

1

✖ Equipment (NAV/COM)

SDITUY

✖ Aircraft Id

GHOST31

✖ Type of Aircraft

V22

✖ Flight Rules

V: VFR

✖ Wake Turbulence Category

M: Medium

(SSR/ADS)

CS

✖ Type of Flight

M: Military

✖ Date of Flight (yymmdd)

220318

✖ ADEP

ENBO

✖ ADES

ENBO

✖ EOBT (UTC-time)

1345

✖ Total EET (HHMM)

0315

✖ Cruising Speed

N 0200

1. Altn. Aerodrome

✖ Cruising Level

A 015

2. Altn. Aerodrome

✖ Route. Visualize Route: Convert Route Coordinates:

DCT TWINS DCT STO DCT ARNOR DCT RORIK DCT DETMU DCT GUBAV DCT LORDO DCT RA501 DCT DISMU DCT CUTTY DCT

Other Information

RMK/OAT IN CR22 AREA SSR 1631

Supplementary Information

✖ Endurance(HHMM)

0330

✖ Persons on board

4

Emergency Radio

☒ UHF

☒ VHF

☐ ELT

☐ PLB

Information on Survival Equipment

☒ Survival

☒ Polar

☐ Desert

☒ Maritime

☐ Jungle

Information on Jackets

☒ Jackets

☐ Light

☐ Fluores

☒ UHF

☒ VHF

Information on Dinghies

Number of Dinghies

1

Capacity

28

Cover

☐

Colour

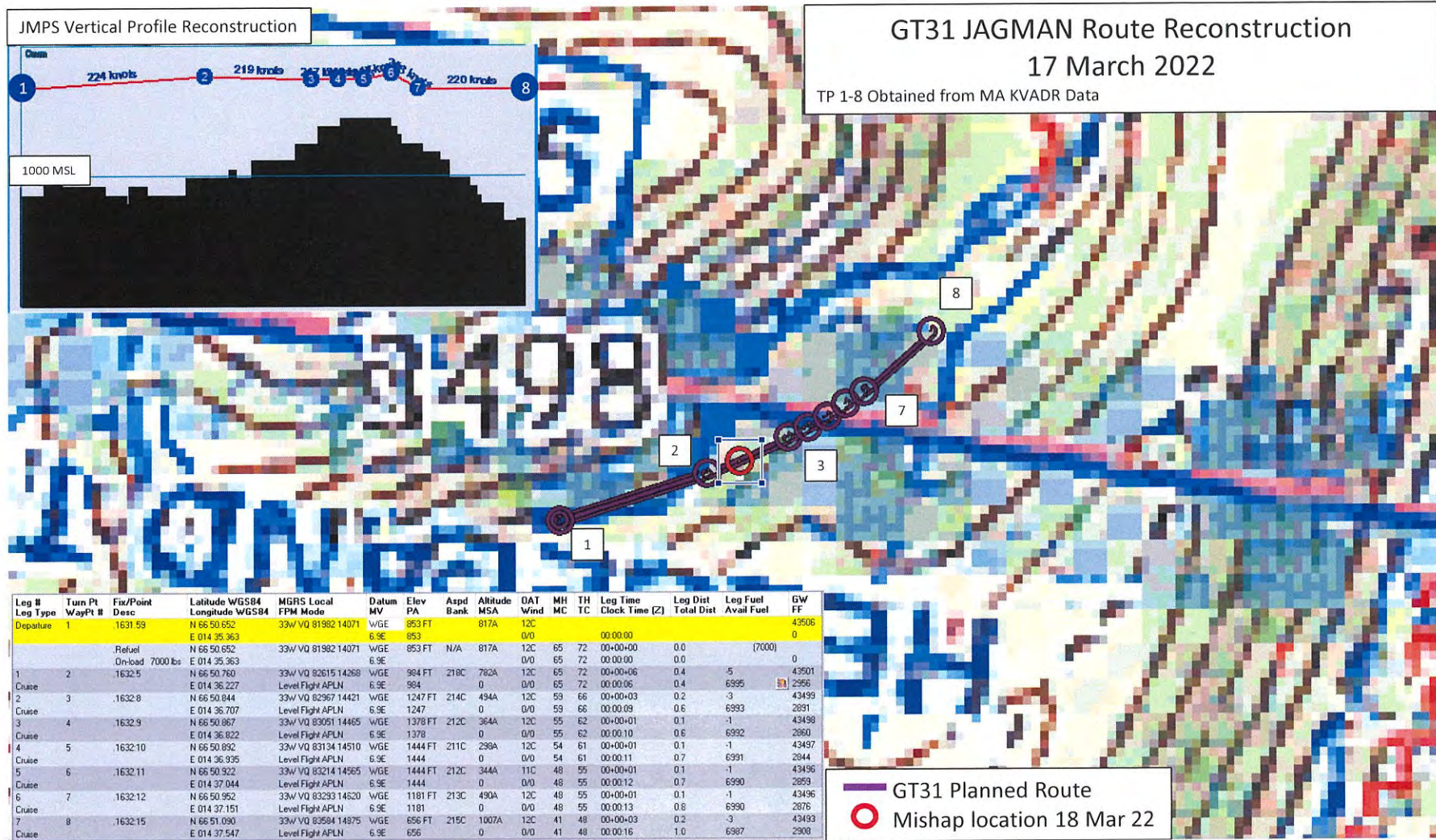
YELLOW

✖ Aircraft Colour and Markings

GREY

JAGMAN LAT Flight Reconstruction 17 March 22

- Depiction created from MA recovered KVADR data for flight that occurred day prior to mishap
- Created by JAGMAN team to validate squadron flying tendencies through terrain IVO mishap location
- Low-level profile flown IAW TTPs and commensurate with terrain

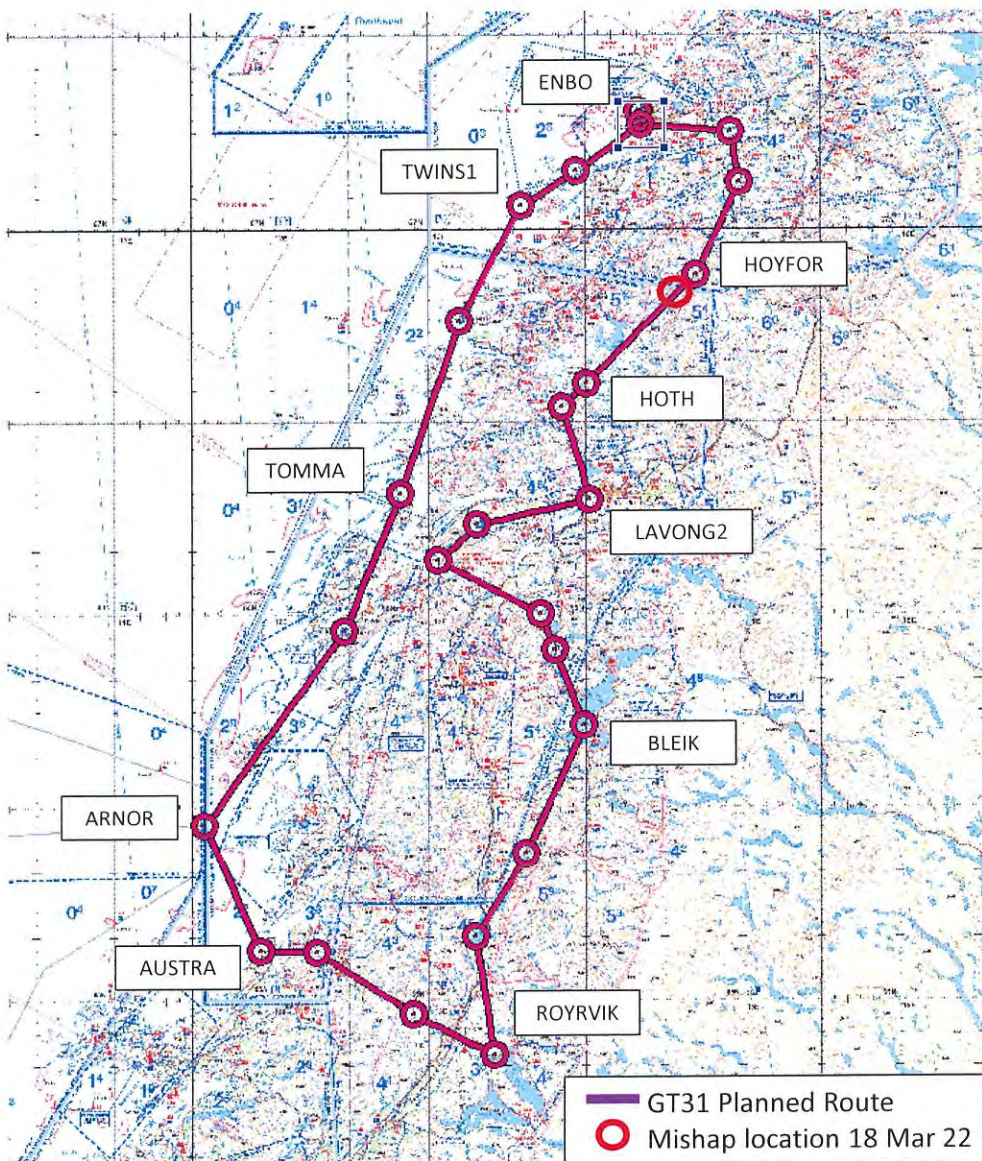


JAGMAN Mishap Flight Reconstruction 18 March 22

- Depiction created from MC Mission Binder in VMM-261 JMPS Server
 - Original planned mission route was updated with mishap location during squadron post-mishap actions, this checkpoint has been removed.
- Checkpoints along reconstruction route were obtained from Norwegian ATC track and MA KVADR Data
- Low-level profile flown IAW TTPs and commensurate with terrain

GT 31 PLANNED MISSION ROUTE

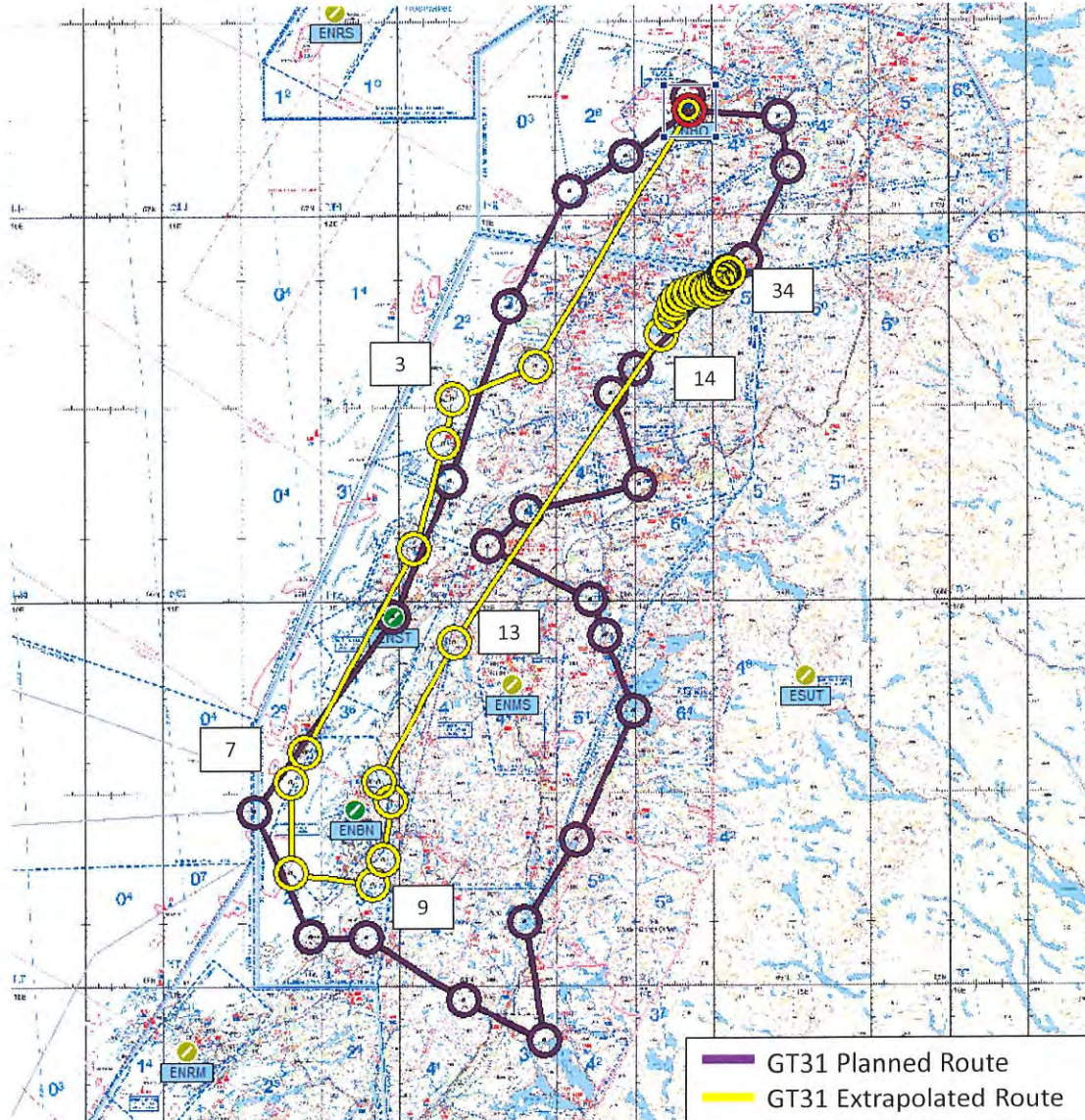
18 March 2022



Leg #	Turn Pt	Fix/Point	Latitude WGS84	Longitude WGS84	MGRS Local	Datum	Elev	Aspd	Altitude	OAT	MH	TH	Leg Time	Leg Dist	Leg Fuel	GW
Leg Type	WayPt #	Desc			FPM Mode	MV	PA	Bank	MSA	Wind	MC	TC	Clock Time [Z]	Total Dist	Avail Fuel	FF
Departure	1	ENBO/A BODO	N 67 16.120 E 014 21.529	33W VQ 72351 61473	WGE	43 FT	43	N/A	0A	7C	110/10		00:00:00	0.0	(10500)	46812 0
		Reluel	N 67 16.120 E 014 21.529	33W VQ 72351 61473	WGE	43 FT				7C	224	231	00:00:00	0.0		0
		Onload 10500 lbs	N 67 08.979 E 013 57.202	33W VQ 54646 48444	WGE	0 FT	220C		1500A	4C	224	231	00:03:08	11.9	-157	46655
1	2	TWINS	N 67 03.478 E 013 35.603	33W VQ 39963 38531	WGE	0 FT	220C		3800	110/10	226	233	00:03:08	11.9	10343	3005
Cruise			N 66 45.636 E 013 12.373	33W VQ 21027 05828	WGE	0 FT	220C		1500A	4C	198	205	00:05:26	20.1	-366	45522
2	3	TWINS1	N 66 18.692 E 012 49.598	33W VP 02578 56327	WGE	10 FT	220C		3500	110/10	193	199	00:18:57	70.6	9553	3002
Cruise			N 65 57.489 E 012 28.227	33W VP 05029 17564	WGE	57 FT	220C		1500A	4C	194	200	00:04:13	23.0	-309	45956
3	4	BOLGA	N 65 27.245 E 011 34.924	32W PT 19664 61516	WGE	0 FT	220C		1500A	4C	208	214	00:10:02	37.5	-498	45058
Cruise			N 65 07.663 E 011 56.153	32W PT 37746 25980	WGE	1903 FT	220C		1500A	0C	149	154	00:05:52	21.6	-288	44769
4	5	TOMMA	N 65 07.603 E 012 17.534	33W UN 72946 25300	WGE	0 FT	220C		1000A	5C	86	91	00:02:34	9.0	-128	44642
Cruise			N 64 51.901 E 013 25.360	33W VN 01362 06000	WGE	1772 FT	220C		1000A	2C	116	121	00:05:09	18.6	-254	44388
5	6	ENST/A STOKKA	N 64 51.901 E 013 25.360	33W VM 25230 93593	WGE	1444 FT	220C		1000A	2C	110	115	00:04:04	14.5	-200	44189
Cruise			N 65 09.883 E 013 18.257	33W VN 20535 27879	WGE	1017 FT	220C		1000A	3C	347	353	00:04:55	18.7	-242	43947
6	7	ARNOR	N 65 22.825 E 013 37.777	33W VN 36302 51544	WGE	1194 FT	220C		1000A	3C	29	35	00:04:10	15.4	-204	43742
Cruise			N 65 42.747 E 013 59.849	33W VN 83988 88227	WGE	1260 FT	220C		1000A	3C	21	27	00:05:55	22.0	-290	43452
7	8	AUSTR	N 65 54.449 E 013 48.667	33W VP 45848 10110	WGE	1050 FT	220C		1000A	3C	334	341	00:03:18	12.6	-161	43291
Cruise			N 66 00.110 E 013 43.295	33W VP 41984 20705	WGE	1870 FT	220C		1000A	1C	334	341	00:01:34	6.1	-77	43214
8	9	AUSTR1	N 66 08.391 E 013 04.272	33W VP 12949 36838	WGE	66 FT	220C		5000	110/10	333	339	01:12:44	269.5	6902	2928
Cruise			N 66 14.032 E 013 18.900	33W VP 24232 46996	WGE	0 FT	220C		1000A	5C	43	49	00:02:17	8.2	-112	42872
9	10	AUSTR2	N 66 17.912 E 014 02.090	33W VP 56709 53520	WGE	0 FT	220C		5800	110/10	40	46	01:15:41	295.6	6560	2945
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42624
10	11	ROYRVIK	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42432
11	12	ROYRVIK1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42362
12	13	BORGE	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42292
13	14	BORGE1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42222
14	15	BLEIK	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42152
15	16	BLEIK1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42082
16	17	LAVONG	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	42012
17	18	LAVONG1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41942
18	19	LAVONG2	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41872
19	20	LAVONG3	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41802
20	21	HOTH	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41732
21	22	HOYFOR	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41662
22	23	HOYFOR1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41592
23	24	CUTTY	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41522
24	25	ENBO/A BODO	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41452
25	26	SE1	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41382
26	27	SE2	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41312
27	28	ENBO/A BODO	N 66 32.214 E 013 51.315	33W VP 56709 53520	WGE	6.5E	0		5800	110/10	71	77	01:24:46	313.5	6312	2942
Cruise			N 66 32.214 E 013 51.315	33W VP 49140 80222	WGE	984 FT	220C		1000A	3C	339	345	00:03:56	15.0	-192	41242

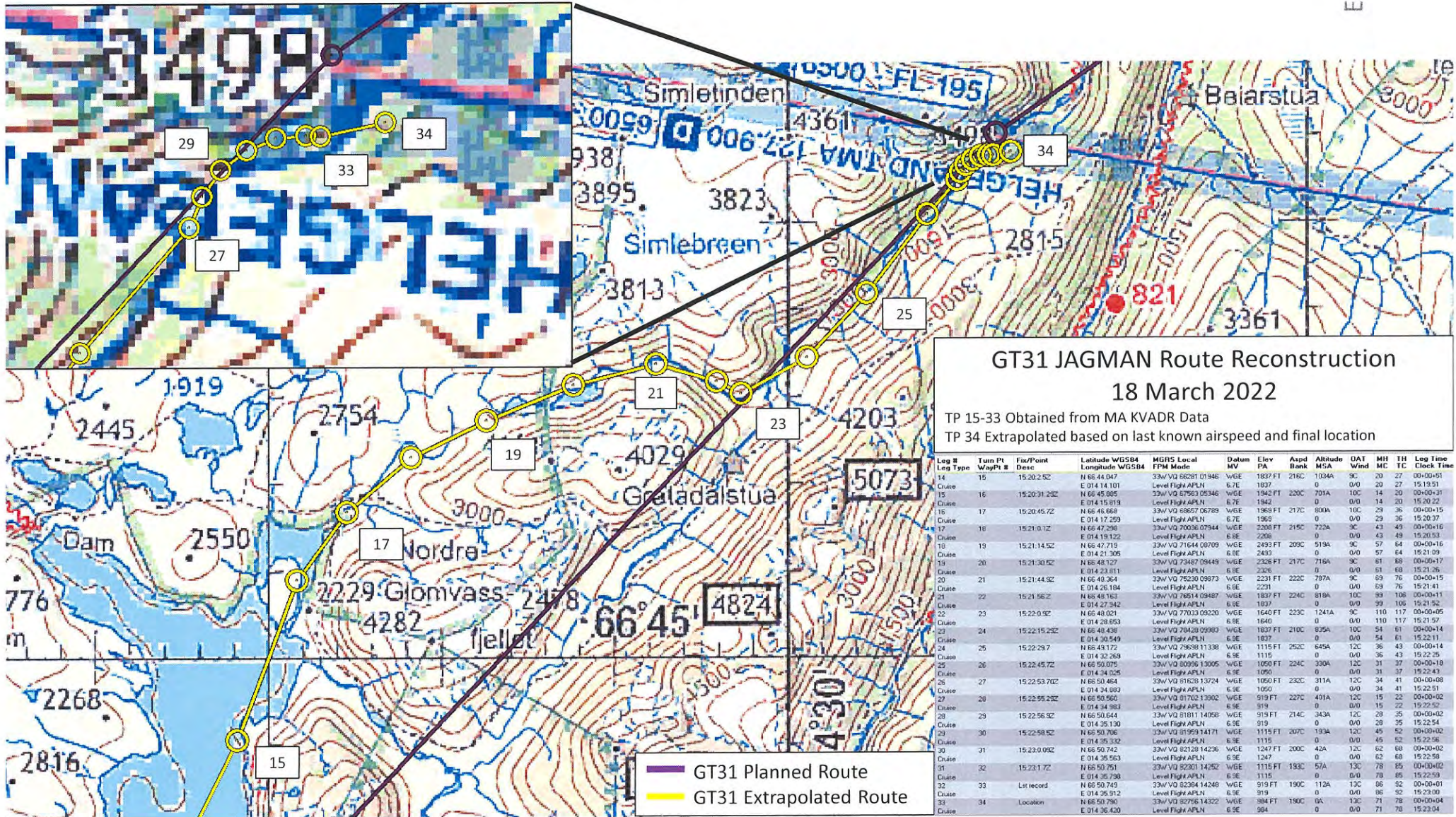
GT31 JAGMAN Route Reconstruction 18 March 2022

TP 2-14 Obtained from Norwegian ATC tracking
TP 15-33 Obtained from MA KVADR Data
TP 34 Extrapolated based on last known airspeed and impact location



GT31 Planned Route
GT31 Extrapolated Route

Leg #	Turn Pt	WayPt #	Fix/Point	Latitude	Longitude	MGRS	Local	Datum	Elev	Aspd	Altitude	OAT	MC	TH	TC	Leg Time	Leg Dist	Leg Fuel	SW
Leg Type	Turn	WayPt	Desc	WGS84	WGS84	Zone	Mode	Mode	PA	Bank	MSA	MC	MC	MC	MC	Clock Time [Z]	Total Dist	Aval Fuel	FF
Departure	1		ENRDA 8000	N 67 16.120 E 014 21.529		33W	VG 72351 61473	WGE	43 FT	N/A	500A	14C	204	211	13:22:00	0.0	0.0	4768	0
			Enclad 11142 lbs			33W	VG 72351 61473	WGE	43 FT	N/A	500A	14C	204	211	00:00:00	0.0	0.0	[11142]	0
Cruise			800/1211046	N 68 36.488 E 013 22.306		33W	VP 27870 88698	WGE	919 FT	101C	1000M	5C	204	211	00:27:26	46.1	1345	48303	1
2	3		STO/E015035	N 66 31.287 E 012 50.759		33W	VP 04381 78694	WGE	10 FT	177C	1000M	13C	242	249	00:04:34	13.6	180	48112	2
Cruise			STOKSA			33W	VP 01285 67036	WGE	10 FT	139C	500A	14C	195	191	00:03:00	7.0	113	48998	3
3	4		STO/E016028	N 66 24.427 E 012 47.361		33W	VP 01285 67036	WGE	10 FT	139C	500A	14C	195	191	14:07:00	66.7	9493	2256	4
Cruise			STOKSA			33W	VP 01285 67036	WGE	10 FT	139C	500A	14C	195	191	14:07:00	66.7	9493	2256	5
4	5		STO/E017011	N 68 08.105 E 012 36.079		33W	VP 01285 67036	WGE	10 FT	253C	500A	14C	180	196	00:04:00	17.0	248	4557	6
Cruise			STOKSA			33W	VP 01285 67036	WGE	10 FT	253C	500A	14C	180	196	14:11:00	141.0	837	9245	7
5	6		BNN/E320012	N 65 36.585 E 011 54.267		33W	PT 33798 79465	WGE	86 FT	153C	500A	14C	203	209	00:14:00	36.0	539	48212	8
Cruise			BRONNOY			33W	PT 33798 79465	WGE	86 FT	153C	500A	14C	203	209	14:25:00	119.8	8706	2210	9
6	7		BNN/E294011	N 65 31.950 E 011 48.710		33W	PT 29625 70519	WGE	0 FT	181C	500A	14C	201	206	00:01:44	5.3	73	48139	10
Cruise			BRONNOY			33W	PT 29625 70519	WGE	0 FT	181C	500A	14C	201	206	14:26:44	125.0	6633	2255	11
7	8		BNN/E226014	N 65 17.699 E 011 48.074		33W	PT 31226 44259	WGE	0 FT	116C	500A	14C	174	180	00:07:16	14.2	390	44749	12
Cruise			BRONNOY			33W	PT 31226 44259	WGE	0 FT	116C	500A	14C	174	180	14:34:00	129.2	8243	2210	13
8	9		BNN/E165012	N 65 15.869 E 012 20.249		33W	UN 75716 40553	WGE	294 FT	105C	500A	13C	92	96	00:04:16	13.3	191	44568	14
Cruise			BRONNOY			33W	UN 75716 40553	WGE	294 FT	105C	500A	13C	92	96	14:36:16	152.5	8062	2549	15
9	10		BNN/E149009	N 65 13.728 E 012 22.915		33W	UN 70862 47599	WGE	0 FT	143C	500A	14C	16	22	00:01:44	4.2	65	44503	16
Cruise			BRONNOY			33W	UN 70862 47599	WGE	0 FT	143C	500A	14C	16	22	14:40:00	156.7	7997	2226	17
10	11		BNN/E077006	N 65 20.757 E 012 26.893		33W	UN 81644 64266	WGE	66 FT	109C	500A	14C	2	8	00:00:00	0.0	253	44250	18
Cruise			BRONNOY			33W	UN 81644 64266	WGE	66 FT	109C	500A	14C	2	8	14:45:00	165.8	7744	3040	19
11	12		BNN/E040006	N 65 31.862 E 012 22.509		33W	UN 70711 70168	WGE	0 FT	107C	500A	14C	324	330	00:02:00	3.6	100	44190	20
Cruise			BRONNOY			33W	UN 70711 70168	WGE	0 FT	107C	500A	14C	324	330	14:47:00	169.4	7644	3038	21
12	13		Lat Radar	N 65 22.509 E 012 22.509		33W	VP 02148 09694	WGE	1444 FT	100C	900A	10C	324	330	00:02:00	3.6	100	44190	22
Cruise			Lat Radar			33W	VP 02148 09694	WGE	1444 FT	100C	900A	10C	324	330	14:55:00	169.4	7644	3038	23
13	14		JFF Reklam	N 66 41.230 E 014 10.530		33W	VP 63509 96747	WGE	1709 FT	139C	900A	10C	27	33	00:04:00	57.6	857	42965	24
Cruise			JFF Reklam			33W	VP 63509 96747	WGE	1709 FT	139C	900A	10C	27	33	15:15:00	251.8	6459	2141	25
14	15		15:20.2.52	N 66 44.047 E 014 14.101		33W	VP 66201 01946	WGE	1037 FT	216C	1034A	9C	20	27	00:00:51	3.2	41	42325	26
Cruise			15:20.2.52			33W	VP 66201 01946	WGE	1037 FT	216C	1034A	9C	20	27	15:19:51	255.0	6419	2900	27
15	16		15:20.31.29Z	N 66 45.885 E 014 15.819		33W	VG 67593 05346	WGE	1942 FT	220C	701A	10C	14	20	00:00:31	2.0	26	42699	28
Cruise			15:20.31.29Z			33W	VG 67593 05346	WGE	1942 FT	220C	701A	10C	14	20	15:20:22	256.9	6393	2963	29
16	17		15:20.45.72	N 66 46.668 E 014 17.259		33W	VG 68557 06709	WGE	1969 FT	217C	600A	10C	23	36	00:00:15	1.0	13	42686	30
Cruise			15:20.45.72			33W	VG 68557 06709	WGE	1969 FT	217C	600A	10C	23	36	15:20:37	257.9	6380	2917	31
17	18		15:21.0.12	N 66 47.298 E 014 19.122		33W	VG 70036 07944	WGE	2208 FT	215C	723A	9C	43	49	00:00:16	1.0	12	42674	32
Cruise			15:21.0.12			33W	VG 70036 07944	WGE	2208 FT	215C	723A	9C	43	49	15:20:53	258.9	6388	2881	33
18	19		15:21.14.52	N 66 47.718 E 014 21.305		33W	VG 71644 08709	WGE	2493 FT	209C	519A	9C	57	64	00:00:16	1.0	12	42682	34
Cruise			15:21.14.52			33W	VG 71644 08709	WGE	2493 FT	209C	519A	9C	57	64	15:21:09	258.8	6386	2795	35
19	20		15:21.30.52	N 66 48.127 E 014 23.811		33W	VG 73487 04449	WGE	2326 FT	217C	716A	9C	61	68	00:00:17	1.1	14	42340	36
Cruise			15:21.30.52			33W	VG 73487 04449	WGE	2326 FT	217C	716A	9C	61	68	15:21:26	260.9	6342	2913	37
20	21		15:21.44.32	N 66 48.364 E 014 26.184		33W	VG 75230 03873	WGE	2231 FT	222C	787A	9C	63	76	00:00:15	1.0	13	42325	38
Cruise			15:21.44.32			33W	VG 75230 03873	WGE	2231 FT	222C	787A	9C	63	76	15:21:41	261.9	6329	2989	39
21	22		15:21.56.2	N 66 48.163 E 014 27.842		33W	VG 76514 05487	WGE	1837 FT	224C	818A	10C	99	106	00:00:11	0.7	9	42626	40
Cruise			15:21.56.2			33W	VG 76514 05487	WGE	1837 FT	224C	818A	10C	99	106	15:21:52	262.6	6330	3038	41
22	23		15:22.0.92	N 66 48.021 E 014 28.853		33W	VG 77033 09220	WGE	1640 FT	223C	1241A	9C	110	117	00:00:05	0.3	4	42322	42
Cruise			15:22.0.92			33W	VG 77033 09220	WGE	1640 FT	223C	1241A	9C	110	117	15:21:57	262.4	6316	3018	43
23	24		15:22.15.29Z	N 66 48.438 E 014 30.549		33W	VG 78428 09983	WGE	1837 FT	210C	825A	10C	54	61	00:00:14	0.9	11	42811	44
Cruise			15:22.15.29Z			33W	VG 78428 09983	WGE	1837 FT	210C	825A	10C	54	61	15:22:11	263.8	6395	2804	45
24	25		15:22.28.7	N 66 50.775 E 014 34.025		33W	VG 79638 11338	WGE	1115 FT	252C	645A	12C	36	43	00:00:14	1.0	14	42797	46
Cruise			15:22.28.7			33W	VG 79638 11338	WGE	1115 FT	252C	645A	12C	36	43	15:22:25	264.8	6291	3653	47
25	26		15:22.45.72	N 66 50.706 E 014 34.963		33W	VG 80996 13005	WGE	1090 FT	224C	330A	12C	31	37	00:00:18	1.1	15	42781	48
Cruise			15:22.45.72			33W	VG 80996 13005	WGE	1090 FT	224C	330A	12C	31	37	15:22:43	265.3	6275	3550	49
26	27		15:22.55.70Z	N 66 50.464 E 014 36.790		33W	VG 81628 13724	WGE	1090 FT	223C	311A	12C	34	41	00:00:09	0.5	7	42774	50
Cruise			15:22.55.70Z			33W	VG 81628 13724	WGE	1090 FT	223C	311A	12C	34	41	15:22:51	265.5	6268	3193	51
27	28		15:22.55.29Z	N 66 50.563 E 014 36.963		33W	VG 81702 13902	WGE	819 FT	227C	401A	12C	45	52	00:00:02	0.1	1	42773	52
Cruise			15:22.55.29Z			33W	VG 81702 13902	WGE	819 FT	227C	401A	12C	45	52	15:22:52	266.6	6267	3104	53
28	29		15:22.56.32	N 66 50.644 E 014 36.790		33W	VG 81811 14058	WGE	919 FT	214C	343A	12C	28	35	00:00:02	0.1	1	42772	54
Cruise			15:22.56.32			33W	VG 81811 14058	WGE	919 FT	214C	343A	12C	28	35	15:22:54	267.7	6266	2895	55
29	30		15:22.50.52	N 66 50.742 E 014 35.963		33W	VG 81858 14171	WGE	1115 FT	207C	153A	12C	45	52	00:00:02	0.1	1	42770	56
Cruise			15:22.50.52			33W	VG 81858 14171	WGE	1115 FT	207C	153A	12C	45	52	15:22:56	268.6	6254	2780	57
30	31		15:23.0.03Z	N 66 50.742 E 014 35.963		33W	VG 82126 14236	WGE	1247 FT	200C	42A	12C	62	68	00:00:02	0.1	1	42768	58
Cruise			15:23.0.03Z			33W	VG 82126 14236	WGE	1247 FT	200C	42A	12C	62	68	15:22:58	269.3	6263	2587	59
31	32		15:23.1.7Z	N 66 50.751 E 014 35.790		33W	VG 82301 14252	WGE	1115 FT	193C	57A	13C	78	85	00:00:02	0.1	1	42766	60
Cruise																			





COM NAOC Safety Brief

Flying in Norway

Current as of 01 June 2021

ROYAL NORWEGIAN AIR FORCE



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

References

- | | |
|--|--|
| ▪ Military Air Regulations | 12 May 2017 |
| ▪ Air Operational Procedures (AOP): | 09 Jun 2017 |
| ▪ Aeronautical Information Publication (AIP) | www.ippc.no |
| ▪ Agreement on Use of AMC Manageable Areas: | 28 Jan 2021 |

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Scope

- Flightplans / NOTAM / Met
- Civilian regulations / Air space
- Military Regulations / FUA
- Low Level flying in general
- Aircraft specific operations
 - Fighter aircraft
 - Fixed wing/transport
 - Maritime aircraft / MPA
 - Helicopters
 - Maritime helicopters
- Maps
- Phone numbers
- Main takeaways



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Flightplans/NOTAM/MET

- Flightplans
 - File 1 hr prior to T/O
 - Call Norway AIS briefing office
 - +47 6481 9000/+47 6481 9015 or ippc.no
- ATO Feeder/airpace request to NAOC
 - NLT 0900L the day prior (on Friday if flying Monday)
- NOTAM
 - ippc.no
- MET
 - ippc.no (METAR/TAF)
 - MWO: Oslo 22963000, Bergen 55236650, Tromsø 77621300



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General Information

- AIP: www.ippc.no (AIS publications)
- PPR
 - Check AIP for requirements
- Opening hours
 - Refer to AIP Norway and NOTAM
- Fuel
 - Normally available inside opening hours (some AFIS fiels do not have fuel)



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Civilian regulations

- Civilian airspace regulations are in accordance with SERA (Standardized European Rules of the Air), and additions depicted in BSL-F
 - www.caa.no
- Aeronautical Information Package Norway (AIP Norway)
 - www.ippc.no

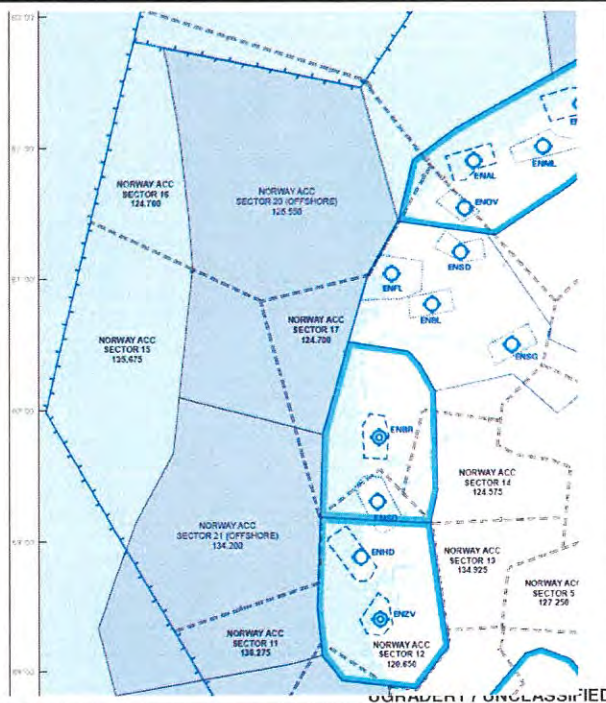


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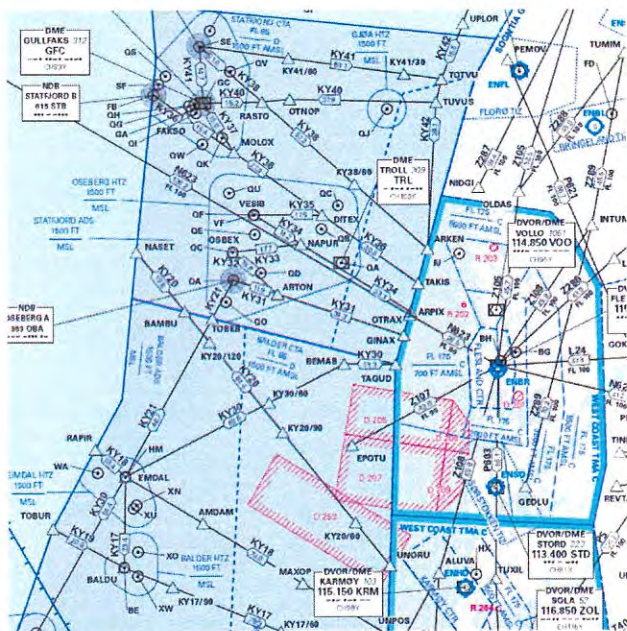
Offshore CTAs and ADSs

- CTA
 - Class D Airspace
 - 1500` AMSL – FL085
- ADS
 - Class G Airspace
 - GND – 1500` AMSL
- Contact Norway ACC «Polaris Control» for traffic information or clearance
- AIP ENR 2.1 + 2.2

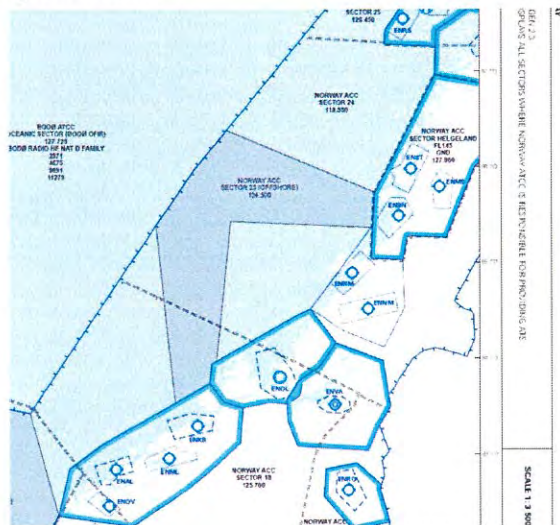
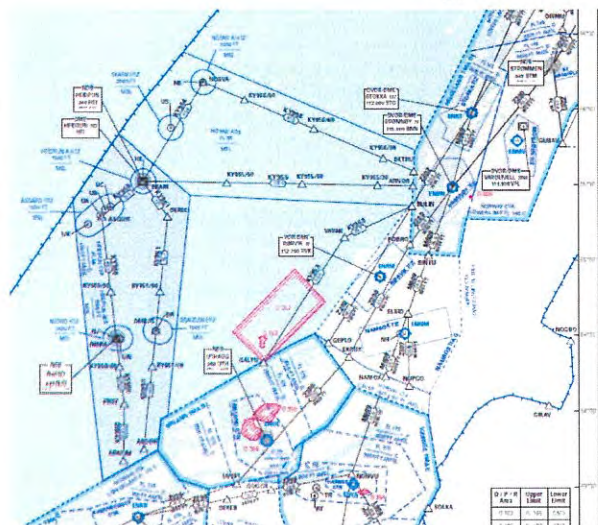


Offshore Helicopter routes

- **Normally:**
 - Remain within 4 NM of route
 - 2000` out
 - 3000` in
 - May be lower in case of icing.
- Remain in contact with «Polaris Control»
- AIP ENR 2.2



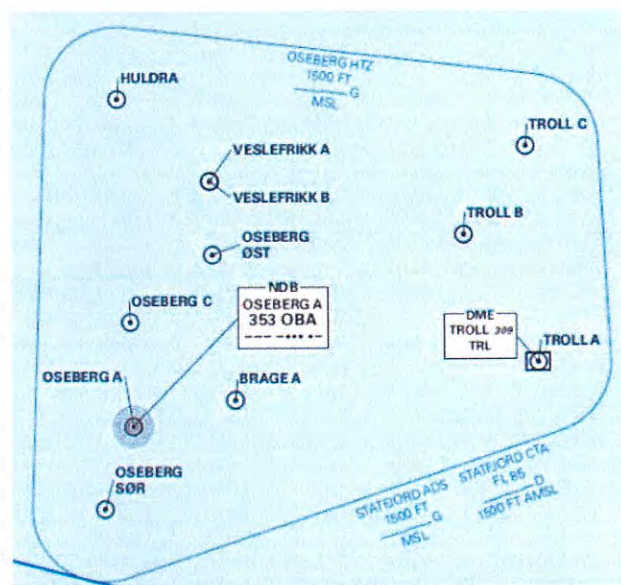
Offshore Helicopter routes



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Helicopter Traffic Zone (HTZ)

- Established at all permanent offshore installations with a landing pad.
- 5NM radius
- 2000' AMSL
- RMZ
- Usually «Polaris Control»
- Positions and frequencies: AIP ENR 2.2



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Safety Zones

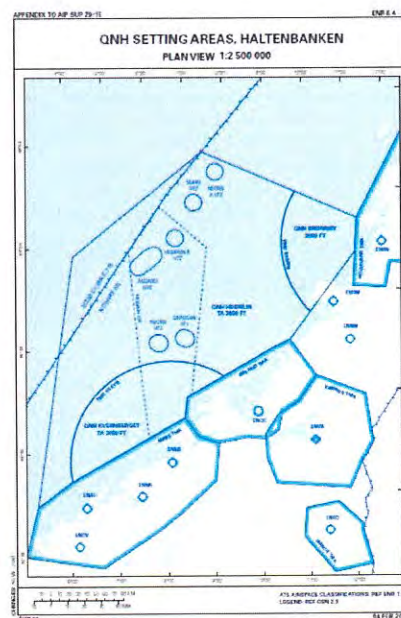
- Offshore facilities have a 500 meter safety zone above and around.
- Unauthorized activities within the zone is forbidden.
- Refer to AIP ENR 2.2



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QNH SETTING AREAS

- QNH Settings and regions:
 - For air traffic operating on the Norwegian continental shelf, QNH setting areas are established. When flying in these areas altimeter setting is based on observed local QNH from a METAR station area.
 - ATS will state the QHH for the areas via R/T. When crossing a border between QNH areas, the altimeter setting shall be changed when informed by ATS

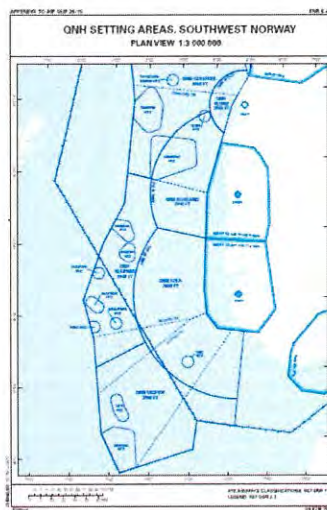


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QNH SETTING AREAS *cont'd*



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Airspace Structure

- There is no military control outside Military Training Areas / Flexible Use of Airspace (FUA) like in other parts of Europe. We do not have military close control.
- Flying VFR, you will vertically and laterally pass numerous different zones, areas and classes of airspace.
- Clearance is mandatory if you intend to enter controlled airspace.
- **Aircraft will avoid flying into uncontrolled TIZ/TIA space. Two way prior comms is mandatory if you have to enter.**
- It is the pilot's responsibility to adhere to the airspace structure!
- We've had numerous near misses and airspace violations involving foreign aircraft the last years, and that is as always not acceptable!
- **VFR flight gives you a lot of freedom, but also a lot of responsibility!**

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Norwegian Air Operations Centre

Military regulations

- BML
 - Regulations for military aircraft
 - No english version



Bestemmelser for Militær Luftfart

Bestemmelser for Militær Luftfart

Revisjon 12 januar 2017

Forord
Første utgave
Kontrollert
Sjef Luftforsvar

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FUA AIRAC JAN21

Flexible use of airspace (FUA)

- Agreement effective as of 12. November 2015
 - Separates Mil/civ traffic
 - Typical: FL 660
Unspecified
- Lower limit typically corresponds to lower limit of controlled airspace
- When G airspace below, expect to be cleared area from Ground and up to requested altitude
- Area entry:
 - Prior to entering FUA airspace, contact TAC C2 (usually ATC hands you over)
- Area exit:
 - Advise TAC C2 about 5-10 min before leaving FUA airspace with intentions for RTB (IFR or VFR, and altitude)
- **Do NOT leave FUA airspace without a clearance from TAC C2**
- CRC is always available on NATO COMMON



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Geographic restrictions

- **Flying EAST of 24 Degrees:**
 - Approval COM NAOC
 - Requests, routes, timings
 - Nav-log post flight
 - Flight-following mandatory (fighter A/C)
- **Flying EAST of 28 Degrees East:**
 - Not authorized for Fighter a/c
- **Border distance SWE / FIN / RUS:**
 - 10 NM (5 NM along approved low level routes/ Training ranges / Departure-Approach)



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Temperature correction

- MSAA corrections to low temp's (ICAO doc 8168):

Table III-1-4-1 b). Values to be added by the pilot to minimum promulgated heights/altitudes (ft)

Aerodrome temperature (°C)	Height above the elevation of the altimeter setting source (feet)													
	200	300	400	500	600	700	800	900	1 000	1 500	2 000	3 000	4 000	5 000
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1 210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1 190	1 500

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Wind correction

- MSAA corrections to strong winds:
 - Guideline tool from ICAO doc 8168:
 - «It is up to the pilot-in command to evaluate whether the combination of terrain, wind strength and direction are such as to make a correction for wind necessary.»

Table III-1-4-5. Altimeter error due to wind speed (non-SI units)

<i>Wind speed (kt)</i>	<i>Altimeter error (ft)</i>
20	53
40	201
60	455
80	812

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Low Level Flying (<1000ft AGL)

- NAOC is the approval authority for all low level flying to ensure deconfliction from other military and known civilian traffic, noise-sensitive areas, furfarms, powerlines etc.
 - Normally, such approval will only be given when aircrew are departing from a Norwegian airfield or airbase.
- In certain conditions (e.g. during exercises), NAOC may approve low level flying in Norway for aircrew departing from abroad.
- Can be delegated to an experienced RNORAF pilot during exercises or other activities.
- Mandatory face to face or VTC brief required (telephone conference can be used if no other option available. Needs to be approved by NAOC)



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Aborted low level flying

- If you have to abort low level flying, and this results in flying into IMC without prior coordination with ATC, the following applies when inside controlled airspace:
 - Climb above minimum safe altitude and level off at the lowest flight level that ends with 5 (FL35, FL45, FL55 etc.) or a higher altitude with 5 if a emergency situation so requires.
 - Inform appropriate controlling agency (ATC/CRC (Fighter Controller)) ASAP. Obtain an IFR clearance as soon as practical.
 - If unable to contact controlling agency (ATC/CRC), Squawk mode 3, code 7600 or 7700 if a emergency situation exists.
- If an emergency situation exists, regardless of position:
 - Climb to a safe altitude.
 - Squawk IFF Mode 3, code 7700.
 - Broadcast MAYDAY message on VHF or UHF Guard frequency.



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Deviating from Preplanned Low-Level Track

- When forced to deviate from the pre-planned track due to poor weather conditions or other reasons, low-level flying will be discontinued.
- Low-level flying may be continued if and when the aircraft or formation is able to get back on the planned track.

Minimum safe altitude

- When planning the low level route:
 - A minimum safe abort altitude (MSAA) shall be determined and clearly depicted on the map for each leg or section of the route.
 - The MSAA is calculated based on the highest obstacle within 5NM on either side of planned track.
 - MSAA shall ensure 2000' terrain separation if the highest obstacle is above 6000' MSL, otherwise 1000' terrain separation.
 - These MSAA's shall be corrected for low temperature conditions and strong winds.



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Violations of low level flying regulations

- All violations of regulations regarding minimum altitudes are to be reported to Host Unit (HU) Air Wing Commander and COM NAOC as soon as possible.
- HU Air Wing Commanders are given disciplinary authority on behalf of COM NAOC.



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Norwegian Air Operations Centre

Airspace for low level flying

- Norway has no dedicated low level airspace or corridors.
- The whole country and open waters is available for low level as long as minimum heights above the following areas are adhered to:
 - Cities, and smaller, densely populated areas
 - National parks
 - Fox/mink farms
 - Protected areas
 - *Low flying over "open waters" means flying outside the Norwegian coast line, and more than 1 NM from islands and peninsulas.*



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FIXED WING SECTION

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Minimum altitudes – Foreign mil A/C

- As a general rule, aircraft will not fly lower than 1000' AGL, except during take-off and landing.
- The minimum altitude over cities and villages for Fighter a/c is 3000' AGL.
- Low flying (below 1000') requires NAOC approval.
- 500' AGL min ALT may be approved as a general minimum altitude for an *approved low level route, inside a defined exercise area or inside a gunnery range.*
 - Such approval may be granted on a mission to mission basis, or for a specific range of missions.
- 300' AGL min ALT may be approved inside a **defined exercise area** when participating in a planned exercise or other activity approved by COM NAOC. *If a defined exercise area is not specified, or parts of the flight will occur outside the specified exercise area, 300' min ALT may still be approved inside a further specified area.*
 - Such approval may be granted on a mission to mission basis, or for a specific range of missions.

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Minimum altitudes – Fighter A/C

- For Fighter A/C, 200' AGL min ALT may be approved provided the mission is conducted as a formation flight led by a Norwegian pilot.
- Prerequisites for flying 200' AGL in Norway is that the low level route has been flown and recognized at 300'-500' AGL within the last 12 months.
 - Reason: Towers and power lines are often erected without being reported to appropriate authorities, and without corresponding map updates.



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Minimum altitudes MPA & Transport A/C

- Foreign MPA and Transport A/C flying in IMC may fly down to 200ft AGL min ALT over the water provided the A/C is equipped with radar altimeter, operational navigation equipment, the mission requires it and the A/C is 5NM or more from shore over open water



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Fur animal vulnerability seasons – Fighter A/C

- Red : 15 March – 25 June
- Yellow : 1 March – 14 March & 26 June – 10 July
- Green : 11 July – 28 (29) February

Overall fur animal season is 1 March – 10 July

Red: Low level training with fighter aircraft is to be avoided.

Fighters are to stay 3000'AGL / 3.0nm away from known fur farms.

A/G exercises with continuous noise is not allowed below 8000'AGL within 10nm of known fur farms.

Yellow: Fighters are to stay 3000'AGL / 0.5nm away from known fur farms.

Green: No restrictions.

SAR & medevac missions are exempt when needed.



1/1	–	28/2	1/3 – 14/3	15/3	–	5/6	26/6 – 10/7	1/1	–	31/12
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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Fur animal vulnerability seasons – Multi Engine & Small A/C

- Red : 15 March – 25 June
- Yellow : 1 March – 14 March & 26 June – 10 July
- Green : 11 July – 28 (29) February

Overall fur animal season is 1 March – 10 July

General: Exercise caution using high engine power when close to fur farms.

Red: Low level training with multi engine and small size A/C is to be avoided.

Multi Engine and smaller size a/c are to stay 2000'AGL / 2.0nm away from known fur farms.

Yellow: Multi Engine and smaller size A/C are to stay 2000'AGL / 0.5nm away from known fur farms.

Green: No restrictions

SAR & medevac missions are exempt when needed.



1/1	–	28/2	1/3 – 14/3	15/3	–	5/6	26/6 – 10/7	1/1	–	31/12
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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Reindeer

- Reindeer may be sensitive to noise from aircraft. Great caution is required to avoid overflying herds of reindeer at low altitudes. If possible, stay clear of reindeer-flocks when flying low level.
- The following periods require increased attention to avoid areas with reindeer:

15. April – 15. June and
25. August – 31. October



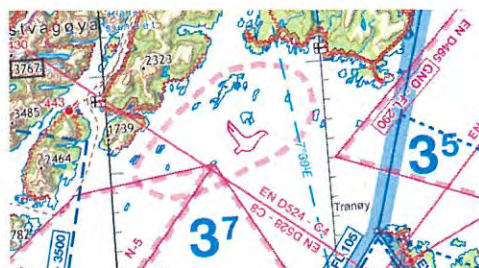
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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Bird congested areas

- AIP-Norway ENR 5.6 describes the most important bird congested areas, and the most common migration routes during spring and autumn.
- Consult AIP Norge ENR 5.6 for recommended minimum altitudes for flying over bird congested areas and migration routes.
- Associated maps are no longer found in AIP-Norway. Bird congested areas are however marked on LFC Norway 1:500000 charts.



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Norwegian national holidays

- Low flying is not permitted on the following national holy days:
 - 1. January,
 - Maundy Thursday,
 - Good Friday,
 - Easter Eve,
 - Easter Sunday and Easter Monday,
 - 1. May, 17. May,
 - Ascension Day,
 - Whit Sunday and Whit Monday
 - 25. and 26. December.
- The same restriction applies after 13:00 local time on 24. and 31. December, and Pentecost Eve.



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Flying at Supersonic speed

- Over land:
 - Above FL300 only
- Over open Water:
 - Minimum FL150 provided:
 - A/C is more than 10NM from land, pointing away from coastline.
 - A/C is more than 30NM from land.
 - If above conditions cannot be satisfied, use minimum altitude FL300.



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Norwegian Air Operations Centre

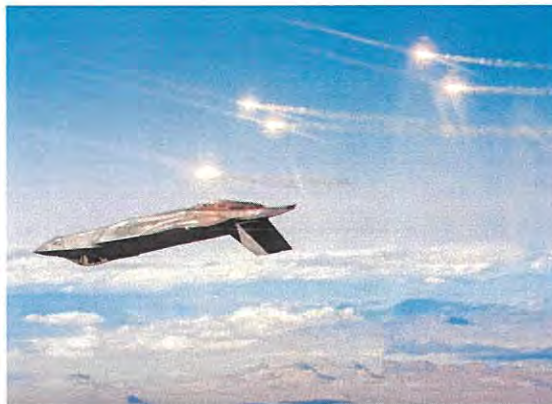
Chaff & Flares

Release of Chaff:

- Use of "Bulk Chaff" is to be coordinated with COM NAOC.
 - Take upper winds into consideration.
- Use of "Self Protection Chaff" within Air Traffic Control Zone and TMA is to be coordinated with ATC.
 - No restrictions inside Military Training Areas (TSA / FUA).

Release of Flares:

- No use of flares below 3000 feet AGL over land.
- Over open water; no altitude limit, but stay clear of vessels.
- No use of flares above populated areas.
- No use of flares at night unless approved by COM NAOC.
- When releasing flares make sure that adversary is:
 - Above or at same altitude
 - On lead pursuit curve, or
 - On pure pursuit curve



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Norwegian Air Operations Centre

ROTARY WING SECTION

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Helicopter specifics – Low Level Flying

- Minimum altitude for foreign crews is 1000' AGL. (Lower altitudes must be approved by COM NAOC and require a face to face VFR briefing).
- **Low level flying is defined below 500' AGL.**
- **Tactical flying** below 200' AGL only in areas well known to the crew. Mission will be briefed with special attention to power lines and other low level hazards.
- For **tactical** terrain following flying, minimum altitude is 50' AGL.
- Minimum altitude in populated areas (cities) is 1000' AGL.
- Minimum altitude over protected areas is 1000' AGL.

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Minimum altitudes maritime helicopter

- Foreign maritime helicopters flying in IMC may fly down to 200' AGL min ALT over the water provided the a/c is equipped with radar altimeter, operational navigation equipment, the mission requires it and the helicopter is over open water 800 meters (2400') or more from shore/installations.



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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Fur animal vulnerability seasons – helicopters

- Red: 15 March – 25 June
- Yellow: 1 March – 14 March & 26 June – 10 July
- Green: 11 July – 28 (29) February

Overall fur animal season is 1 March – 10 July

Red & Yellow: Helicopters are to stay
1000' AGL / 0.5nm away from
known fur farms.

Green: No restrictions

SAR & medevac missions are exempt when needed.



1/1	–	28/2	1/3 – 14/3	15/3	–	5/6	26/6 – 10/7	1/1	–	31/12
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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

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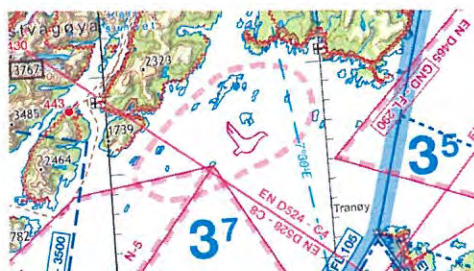
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ROYAL NORWEGIAN AIR FORCE
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ROYAL NORWEGIAN AIR FORCE
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Helicopter specifics – Landing outside airfield

- Landing on cultivated areas (Farmland) requires permission from the owner.
- Landing within military establishment without permanent landing area is subject to permission from the commander of the establishment.
- Landing inside densely populated area is subject to permission by the local police and by the owner or user of the area.

	Cultivated Ground	Uncultivated Ground	National Park etc
SAR/Police/etc	YES	YES	YES
Mil ops	NO (Owner)	YES	NO
Exercise	YES (Owner)	YES	NO



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Norwegian Air Operations Centre

Helicopter specifics – VFR operations

- Flying under bridges, power lines or any other installation is prohibited.
- VFR Flight visibility below 1000' AGL
 - Day:
 - min 0,8 km (civilian rules)
 - Night:
 - min 5 km visibility with distinctive terrain contours (military rules)
 - Night with NVG:
 - min 3 km visibility with distinctive terrain contours. Cloud base min 300'AGL (military rules)
- Special VFR (inside a control zone)
 - Min 800 m visibility
 - Clear of cloud and surface in sight

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Norwegian Air Operations Centre

Helicopter specifics – NVG operations

- If you are
 - outside controlled airspace and
 - below 500ft AGL and
 - NVG ops are reported on flightplan

Then conventional exterior lights
may be switched off
(IR lights should be on)

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[END OF ROTARY WING SECTION]

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MAPS



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Map requirements/availability

- The Norwegian mil GEOMETOC services have several types of maps available:
 - *M517-AIR (1:250K)
 - *LFC (1:500K) →
 - FLMA (1:1M)
 - N100-AIR (1:100K)
 - N50-AIR (1:50K)
- All maps are available in the following formats:
 - POD (Print-On-Demand) (M517, LFC, FLMA only)
 - GeoTIFF 169dpi
 - GeoTIFF 400dpi
 - Geopackage
 - MbTiles (For use in desktop app MapTiler and iOS app Foreflight)

** Maps to be used as reference to protected areas and areas prohibited for low flying.*



Map requirements/availability cont'd

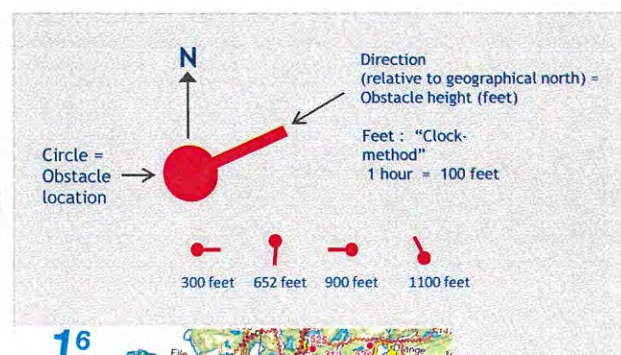
- Updates to the maps are issued according to AIRAC releases by Avinor (NOR CAA), approximately once a month.
 - This will enable aircrew to identify areas where low flying is prohibited.
- Your host base will be responsible for printing updated maps.
 - Downloads will be made available on request, but aware of file size in relation to your available bandwidth.
- If possible, obtain current maps through your own GEOMETOC organization



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Map legend – vertical obstacle depiction

- Single < 100 feet
- Single < 100 feet – lit
- ▲ Multiple < 100 feet
- △ Multiple < 100 feet – lit
- ↓ Single 100 feet or higher
- ◌ Single 100 feet or higher – lit
- ⬇ Multiple 100 feet or higher
- ⬇ Multiple 100 feet or higher – lit



Map legend – Powerlines/spans





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Map legend – Danger- and restricted areas

- Permanent Danger areas
 - Activity dangerous for aircraft may take place. Recommend to coordinate activity with NAOCC before entry.
- Temporary Danger areas
 - Activity dangerous for aircraft may take place. NOTAM activated.
- NOR NAVY firing area (SDP103(G))
 - Same marking as temporary danger areas. Identification will correspond with region. E.g. Eastern parts of Norway Ø10, Ø11, etc.
- Restricted areas
 - Same marking as Danger areas. Identification «EN Rxxx» in stead of «EN Dxxx». To be avoided unless authorized by approval authority.



Permanent Danger area



Temporary Danger area

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Map legend – protected areas

- **Protected area – restriction 1000 feet**
 - Protected area 1.MAY-31.jul
 - NOR A/C allowed below 1000ft outside these dates
 - Foreign A/C: 1000ft restriction all year
- **Protected area – restriction NO LDG**
 - Protected area NO LDG →
 - Applies all year unless otherwise depicted



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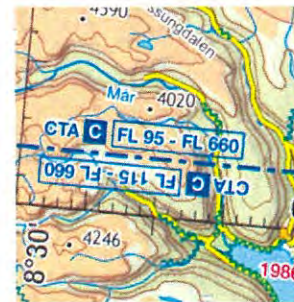
Map legend – airspace



TMA



TIA



CTA






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Map legend –

- | | |
|-------|-----------------------------|
| BA.01 | Terrain 0 - 1500 ft |
| BA.02 | Terrain 1500 - 3000 ft |
| BA.03 | Terrain 3000 - 4500 ft |
| BA.04 | Terrain 4500 - 6000 ft |
| BA.05 | Terrain 6000 ft and higher |
| BA.06 | Forest 0 - 1000 ft |
| BA.07 | Forest 1000 - 3000 ft |
| BA.08 | Forest 3000 ft and higher |
| BA.09 | Wetlands |
| BA.10 | Glaciers |
| BA.11 | Moraine |
| BA.12 | Holoplain |
| BA.13 | Built-up area |
| BA.14 | Industrial area (Buildings) |
| BA.15 | Scrubby ground |
| BA.16 | Major building |
| BA.17 | Cemetery |
| BA.18 | Hydrography (Inlets, lakes) |
| BA.19 | Sea |
| BA.20 | Hillshade |
| BA.21 | Hillshade (false) |
| RI.01 | Motorway |
| RI.02 | Motorway (tunnel) |
| RI.03 | Primary Road |
| RI.04 | Primary Road tunnel |
| RI.05 | Secondary Road |
| RI.06 | Secondary Road Tunnel |
| RI.07 | Unimproved Road |
| RI.08 | Pathway |

- | | |
|-------|--|
| RL 00 | Roadway tunnel |
| RL 11 | Ferry line |
| RL 12 | Dam |
| RL 13 | River |
| RL 14 | River large |
| RL 15 | River and lake shoreline |
| RL 16 | Contour line index |
| RL 17 | Contour line |
| RL 18 | Contour line index (Hydro elevation) |
| RL 19 | Contour line (Hydro elevation) |
| RP 01 | Spot elevation |
| RP 02 | Hospital |
| RP 03 | Health institution |
| RP 04 | Church |
| RP 05 | Tourist cabin |
| RP 06 | Buildings large |
| RP 07 | Buildings medium |
| RP 08 | Buildings small |
| RP 09 | Lighthouse |
| RP 10 | Mine |
| RT 01 | Road shield green |
| RT 02 | Road shield white |
| RT 03 | Spot elevation |
| RT 04 | Hydrographic surface elevation |
| RT 05 | Contour line index |
| AL 01 | CTR |
| AL 02 | TLZ |
| AL 03 | IIA boundary |
| AL 04 | TIA sectorisation |
| AL 05 | TMA boundary |
| AL 06 | TMA sectorisation |
| AL 07 | FIR |
| AL 09 | ADS |
| AL 10 | Permanent danger, restricted, prohibited areas |
| AL 11 | Activated danger, restricted, prohibited areas |

- | | |
|--|--|
| | AL12 Protected area, restriction 1000 ft |
| | AL13 Protected area, restriction no landing |
| | AL14 Aerial sporting activities |
| | AL15 Forewarn farm |
| | AL16 Information boxes, activated danger, restricted, prohibited areas |
| | AL17 Information boxes |
| | AL18 Airport |
| | AP01 Aerodrome short runway |
| | AP02 Aerodrome medium runway |
| | AP03 Aerodrome long runway |
| | AP04 Helicopter site |
| | AP05 VFR reporting site compulsory |
| | AP06 VFR reporting site on request |
| | AP09 TACAN (IHF navigation system) |
| | AP10 RACON |
| | AP11 NDB/MA/R |
| | AP12 DME radio navigation aid |
| | AP13 VOR |
| | AP14 VOR/DME |
| | AP16 Aerial sporting activity - Paragliding |
| | AP17 Aerial sporting activity - Microlight |
| | AP18 Aerial sporting activity - Parachuting |
| | AP19 Aerial sporting activity - Skydiving |
| | VL01 Powerline/slide |
| | VL02 Powerline |

- | | |
|---|---|
|  | VP.01 Single obstacle, unit, AGL >100FT |
|  | VP.02 Single obstacle, lit, AGL >100FT |
|  | VP.03 Multiple obstacles, unlit, AGL >100FT |
|  | VP.04 Multiple obstacles, lit, AGL >100FT |
|  | VP.05 Single obstacle, unit, AGL >100FT |
|  | VP.06 Single obstacle, lit, AGL >100FT |
|  | VP.07 Multiple obstacles, unlit, AGL >100FT |
|  | VP.08 Multiple obstacles, lit, AGL >100FT |
|  | VP.09 Single Windmill, unit, AGL >100FT |
|  | VP.10 Single Windmill, lit, AGL >100FT |
|  | VP.11 Multiple windmills, unit, AGL >100FT |
|  | VP.12 Multiple windmills, lit, AGL >100FT |
|  | VT.01 Vertical obstacle (AMS) |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |

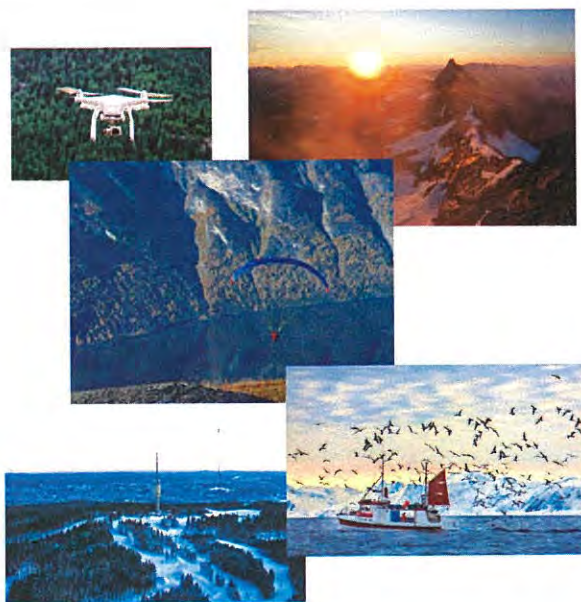
1234

UGRADERT / UNCLASSIFIED



HAZARDS

- The Ground
- Wires and towers
- Aircraft and helicopters
- Gliders and paragliders
- Unmanned Vehicles (UAV's)
- Birds
- Low sun
- White out (featureless terrain)
- Wind



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Norwegian Air Operations Centre

The Ground

- Keep your priorities straight regarding your maneuvers and flight versus the proximity to the ground and the terrain surrounding you.
- If you have to look away, ensure deconfliction with ground for the duration. Quick cross-checks are paramount.
- GCAS systems may save you, but you have to act quickly.
- IF YOU ARE NOT 100% SURE YOU ARE IN THE RIGHT FJORD OR VALLEY
- - CLIMB OR TURN AROUND!

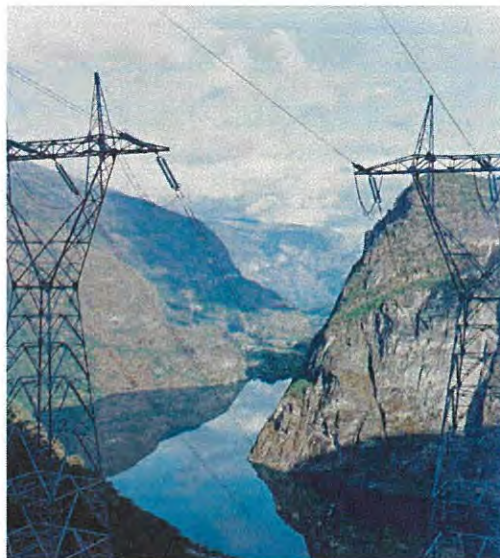
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Norwegian Air Operations Centre

Wires and Towers

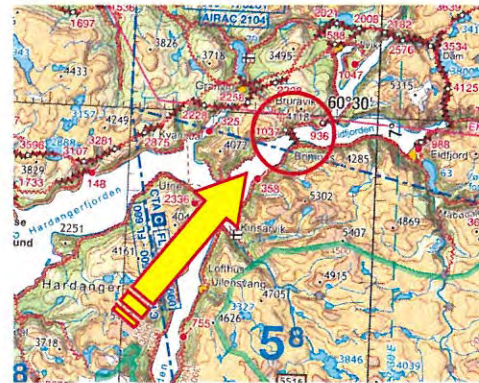
- Most towers are under 200 feet AGL. (mobile phone towers).
- Short wire spans are as deadly as long spans.



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Power lines

- How easy is it to see wires if you don't know where they are.....?



LFC 1:500K

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Power lines

- This is what you see...



- But this is what you get...



UGRADERT / UNCLASSIFIED

Power lines

- How about this one?

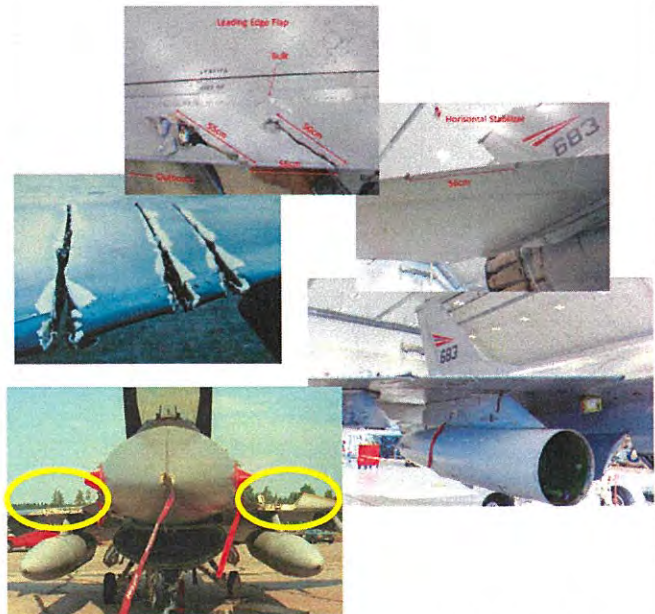
- NOVIK, 20 NM south of Bodø



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Power lines

- Be aware of this variant!



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Wires

- Techniques on avoiding wires.
- Techniques on finding wires.



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Aircraft and Helicopters

- Where?
- How to reduce risk?
- TCAS



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Flying Hazards; Other Aircraft

- On-shore Civ VFR may fly without flightplan and talk to Nobody.
 - Refer to IPPC/briefing/Statnett for info about Powerline building operations (Typical 500 AGL slingload).
- Fly on the right side in the walleys to prevent head-on collisions with Other VFR traffic.
- Offshore helicopter traffic in/over the exercise area.
 - In ADS (G airspace).
 - Requested to communicate position & intentions with ATC.
 - In D or C airspace:
 - Always obtain ATC clearance first.



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Dense civil helicopter operations

- Typical
 - GND – 500ft AGL
 - Slingload
 - No flightplan
 - No comms with ATC in G airspace



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Areal sporting activity

- Where?
- How to avoid?



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UAVs

- Where?
- How to avoid?



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Birds

- Birds are normally not a big problem during winter
- Eagles and falcons in mountains
- Largest concentration of birds along the coast.
 - Avoid overflying small islands and fishing boats



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Bird

- Where?
- How to avoid?



Bird concentration areas



All year



April to August



September to March

Flying below 1500 feet above the surface may involve a risk

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Low sun

- Planning consid's.
 - If avoidable: Don't plan low level flying «into» a low sun.
- Techniques.
 - Flight path deconfliction.



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Winter

- Low sun - white snow-cover
- Expect winter conditions, even in summer...



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Winter

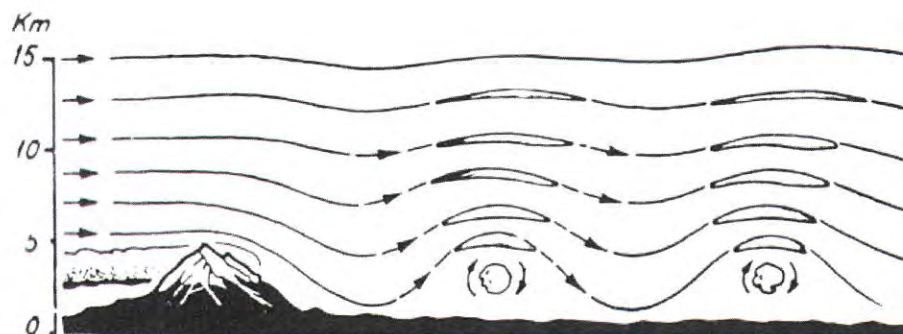
- Visual height references:
 - No trees / small trees
 - Rocks – size
- Depth perception in dim light conditions:
- NVG flight in snow conditions
- Wx may change rapidly - CHECK LATEST
- METAR's – keep updated. Plan for bad weather



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Wind

- Severe turbulence - heavy downdrafts



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- Snow/desert: Can be hard to judge altitude. The rock you assume to be 5 meters in diameter is only 1 meter, leading to a misperception of altitude.
- PGCAS can save you, but best to recognize hazard and avoid putting flight path marker into terrain.
- Water: «Glassy» water makes it hard to judge altitude. Use RALT to ease the a/c down.



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The following subjects are Norwegian recommended emphasis items for low level authorization:

- Choice of routing, terrain, known hazards/obstacles (wires, towers), and fur farms.
- Danger areas and other airspace restrictions
- Weather and light conditions.
- Airspace structure and communication with ATC.
- Other air traffic below 3000 feet AGL.
- Weather aborts and minimum safe altitudes. Your position in relation to surrounding terrain and min safe altitude.
- Contingencies (uncertain about position, wingman blind etc.)
- Guidance and restrictions for (parts of) the planned route.
- Flight lead and flight members' experience and low level currency.

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Norwegian Air Operations Centre

Please....

Do not expect to be approved for low level unless it's a part of your squadrons mission sets!

There are few restrictions and regulations for Low Level flying in Norway.

Please acknowledge- & adhere to the ones we have, then hopefully, we can keep things the way they are!

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Norwegian Air Operations Centre

MAIN TAKEAWAYS

- **AIRSPACE**
 - Radio procedures
- **Low Level restrictions**
 - Mink Farms
 - Reindeer
 - Protected areas
 - 1000ft AGL
 - NO LAND/NO HOVER
- **Weather/season**
 - Fuel consids/alternates
- **NAOC ATO**
 - Inputs needed 0900L the day prior
 - Maps: forward to *naoc@mil.no*
 - *DOTAHs: call A3-5 if not able*

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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

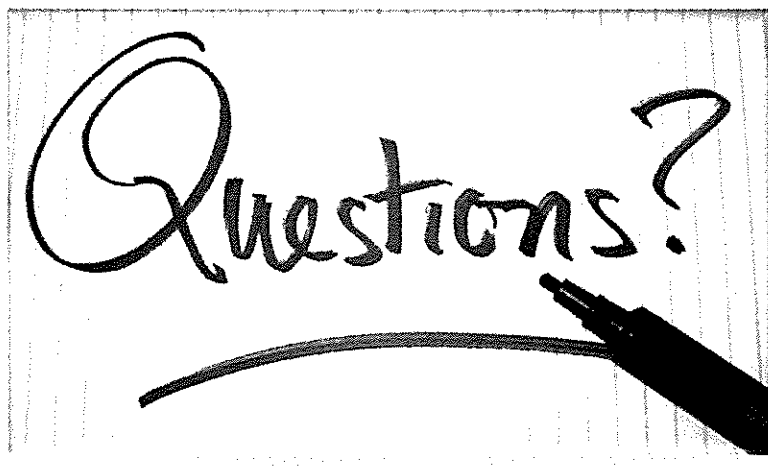
Reporting of safety related incidents

- All safety related incidents and occurrences shall be reported to the local Wing Safety Officer (WFSO) or directly to the Inspectorate of Flight Safety.
- In some cases incidents shall also be reported anonymously to the Norwegian Civil Aviation Authority (CAA) in accordance with EU Reg 376/2014 and 2015/1018 Annex I.
- The form NF-2007 shall be utilized for all incident reporting involving ATC and/or civil aircraft.
- Examples:
 - Runway incursions
 - Bird strikes
 - Anytime «mayday» is declared
 - ATC clearance violations
 - Training Area violations
 - Near miss
 - Illuminated by laser

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ROYAL NORWEGIAN AIR FORCE
Norwegian Air Operations Centre

Useful phone numbers (civ/mil)

- NAOC
 - NDO: +47 7553 6900 / 0565-6900
 - A3-3 FICO: +47 7553 6931 / 0565-6931
 - A3-5 (ATO): +47 7553 xxxx / 0565-xxxx
- Wing ops:
 - ENBO
 - ENOL
 - ENDU
 - ENAN
 - ENGM
 - ENRY

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UNITED STATES MARINE CORPS

MARINE MEDIUM TILTROTOR SQUADRON 261 (-) REINFORCED, COLD RESPONSE DETACHMENT
MARINE AIRCRAFT GROUP 26, 2D MARINE AIRCRAFT WING, FMF
POSTAL SERVICE CENTER BOX 21016
JACKSONVILLE, NC 28545-1016



MISSION: SUPPORT THE MAGTF COMMANDER BY PROVIDING ASSAULT SUPPORT TRANSPORT OF COMBAT TROOPS, SUPPLIES AND EQUIPMENT, DAY OR NIGHT, UNDER ALL WEATHER CONDITIONS DURING EXPEDITIONARY, JOINT, OR COMBINED OPERATIONS.

FLIGHT SCHEDULE MONDAY, 21 FEBRUARY 2022 (2052)

NO FLIGHTS SCHEDULED

SCHEDULED HOURS
0.0

FEB(GOAL/SCHEDULED/EXECUTED)
26.2 / 6.0 / 6.0
QTR
600.3 / 237 / 195.2
FY
2426.0 / 543.5 / 490.2

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
0800	0830	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	(b)(3), (b)(6), (b)(7)c
NLT	0800	BARRACKS I	WEAPONS TURN IN	ALL MAINBODY PERSONNEL	
0900	1000	OPS NORTH	NORWAY COURSE RULES	ALL PILOTS TO ATTEND	
1100	1130	OPS 5	STAFF SYNC / WEEKLY SYNC	ALL SHOPS TO SEND A REPRESENTATIVE	
1130	1200	OPS 5	OPS SYNC	OPS PERSONNEL TO ATTEND	
1500	1600	OPS NORTH	2D MAW OPS SYNC	(b)(3), (b)(6), (b)(7)c TO ATTEND	
1700	1730	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	

FLIGHT SCHEDULE TUESDAY, 22 FEBRUARY 2022 (2053)

NO FLIGHTS SCHEDULED

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
NLT	COB	INDIVIDUAL SHOPS	COLD WEATHER TRAINING VIDEOS	SHOP LEADERS TO FACILITATE	(b)(3), (b)(6), (b)(7)c
0800	0830	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	
0900	1000	OPS 5	INTRO TO WINTER SERVICE TRAINING	ALL AIRCREW TO ATTEND	
	1100	OPS 5	COLD WEATHER INJURIES	ALL AIRCREW TO ATTEND	
	1130	OPS 5	COLD WEATHER NUTRITION	ALL AIRCREW TO ATTEND	
	1400	OPS 5	COLD WEATHER CLOTHING DEMO	ALL AIRCREW TO ATTEND	
1400	1500	OPS 5	COLD WEATHER LEADERSHIP	ALL AIRCREW TO ATTEND	
1500	1600	OPS NORTH	2D MAW OPS SYNC	(b)(3), (b)(6), (b)(7)c TO ATTEND	
1500	1600	OPS 5	SIBERIA TRAINING	ALL AIRCREW TO ATTEND	
1700	1730	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	

FLIGHT SCHEDULE WEDNESDAY, 23 FEBRUARY 2022 (2054)

NO FLIGHTS SCHEDULED

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
NLT	COB	INDIVIDUAL SHOPS	COLD WEATHER TRAINING VIDEOS	SHOP LEADERS TO FACILITATE	(b)(3), (b)(6), (b)(7)c
0800	0830	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	
0900	1000	OPS 5	INTRO TO BIVOUAC	ALL AIRCREW TO ATTEND	
1000	1100	OPS 5	AVALANCHE / SAFE ROUTING	ALL AIRCREW TO ATTEND	
1100	1200	OPS 5	COLD WEATHER WEAPONS EFFECTS	ALL AIRCREW TO ATTEND	
1330	1430	OPS 5	SURVIVAL GEAR PRAC APP	ALL AIRCREW TO ATTEND	
1500	1600	OPS NORTH	2D MAW OPS SYNC	(b)(3), (b)(6), (b)(7)c TO ATTEND	
1700	1730	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	
1900	0600	FIELD	OVERNIGHT SURVIVAL GEAR PRAC APP	ALL AIRCREW TO ATTEND	

FLIGHT SCHEDULE THURSDAY, 24 FEBRUARY 2022 (2055)

NO FLIGHTS SCHEDULED

SCHEDULE 24: CAPT REYNOLDS, R.
SCHEDULE 48: CAPT TOMKIEWICZ, M.

ADMIN NOTES:

START	END	LOCATION	REMARKS	NOTES	POC
NLT	COB	INDIVIDUAL SHOPS	COLD WEATHER TRAINING VIDEOS	SHOP LEADERS TO FACILITATE	(b)(3), (b)(6), (b)(7)c
0600	0700	FIELD	PRAC APP PACKUP AND DEBRIEF	ALL AIRCREW TO ATTEND	
0800	0830	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	
1400	1430	OPS 5	WEEKLY SYNC	ALL SHOPS TO SEND A REPRESENTATIVE	
1500	1600	OPS NORTH	2D MAW OPS SYNC	(b)(3), (b)(6), (b)(7)c TO ATTEND	
1700	1730	OPS 5	MAINTENANCE MEETING	DESIGNATED PERSONNEL	

IN: /S/
MAINT: /S/

/S/

(b)(3), (b)(6), (b)(7)c
COMMANDING OFFICER

Enclosure (32)

From: (b)(3), (b)(6), (b)(7)c
To:
Cc:
Subject: RE: Data Request
Date: Wednesday, May 25, 2022 1:31:28 PM
Attachments: [\(CUI\) CR22 VMM-261 FLIGHT SCHEDULE 21-24 FEB 22.pdf](#)
[Low Level Brief - Part 1 - Rules Regulations \(ARC WIP\).pptx](#)
[Low Level Brief - Part 2 - Recommended Procedures in Norway \(ARC WIP\).pptx](#)
[2022-02-21 \(U\) Gen Local Area Brief SOF \(ARC\).pptx](#)

Sir,

Sorry for the delayed response. I took a bit of leave and am getting caught up.

There was no roster for that training. See attached schedule for the brief occurring on the 21st. All pilots attended that were present to include the mishap crew members. Also, I've attached the briefs we received. Let me know if you have any questions.

Very Respectfully,

(b)(3), (b)(6), (b)(7)c

-----Original Message-----

From: (b)(3), (b)(6), (b)(7)c
Sent: Tuesday, May 24, 2022 11:51 AM
To:
Cc: (b)(3), (b)(6), (b)(7)c
(b)(3), (b)(6), (b)(7)c
Subject: RE: Data Request

(b)(3), (b)(6), (b)(7)c

Thanks for following up on this. I don't think there was ever a definitive answer via email regarding the NAOC training.

If the answer is that there is not a physical record of all of the personnel from VMM-261 in Norway receiving the brief that is ok.

However, if the understanding is that all of the pilots, and specifically that any of the crew of GT31 did receive that brief, it would be helpful to have an email from you and each of the personnel in the CC line stating that and ideally when/where. A flight schedule with the brief as a ground event would be bonus material in that regard if you have it.

(b)(3), (b)(6), (b)(7)c

-----Original Message-----

Enclosure (32)

From: (b)(3), (b)(6), (b)(7)c
Sent: Wednesday, May 18, 2022 7:11 AM
To: (b)(3), (b)(6), (b)(7)c
Subject: RE: Data Request

Sir,

I'll look to see if there was a roster if that is what you're referring to.
I'll see what my team can figure out for you.

I'm not sure a document exists on who reached the site when, but I know my team did not reach the site until 24 March. A spec ops team which included Counter Intel, Navy Seals, and a PJ were on scene either that night or next day.

(b)(3), (b)(6), (b)(7)c

See if there is any document pertaining to the NAOC safety brief. If we don't have it, maybe ARC can help locate it.

Very Respectfully,

(b)(3), (b)(6), (b)(7)c

-----Original Message-----

From: (b)(3), (b)(6), (b)(7)c
Sent: Friday, May 13, 2022 11:21 AM
To: (b)(3), (b)(6), (b)(7)c
Subject: Data Request

(b)(3), (b)(6), (b)(7)c

Is it possible to obtain a couple of products from your team if you have it?

Copy of NAOC Safety Brief Attendance for mishap crew members

Reference document of when and who first reached the mishap site

Thank you,

V/R,

(b)(3), (b)(6), (b)(7)c

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To: [REDACTED] (b)(3), (b)(6), (b)(7)c
Cc:
Subject: RE: Data Request
Date: Wednesday, May 25, 2022 1:31:28 PM
Attachments: [\(CUI\) CR22 VMM-261 FLIGHT SCHEDULE 21-24 FEB 22.pdf](#)
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[REDACTED]
(b)(3), (b)(6), (b)(7)c

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Sent: Tuesday, May 24, 2022 11:51 AM
To: [REDACTED] (b)(3), (b)(6), (b)(7)c
Cc: [REDACTED] (b)(3), (b)(6), (b)(7)c
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Reference document of when and who first reached the mishap site

Thank you,

V/R,

(b)(3), (b)(6), (b)(7)c

Enclosure (32)

Flights Cancelled due to Weather*, **														
	2-Mar	7-Mar	8-Mar	10-Mar	12-Mar	13-Mar	18-Mar	21-Mar	23-Mar	25-Mar	27-Mar	28-Mar	29-Mar	Totals
AV-8B			4				8	6	8	2	6	2	6	42
CH-53E	1									1				2
MV-22B		1						1			1			3
UH-1Y	4													4
AH-1Z														0
KC-130J							1			1				2
F/A-18		4	4	4	2	4	10	6	10			2	10	56
TOTALS	5	5	8	4	2	4	19	13	18	4	7	4	16	109

* DATES NOT DEPICTED - NO WEATHER CANCELLATIONS

** INCLUDES FCF LINES CANX DUE TO WEATHER

BUNO 168330 KVADR Data

18 March 2022

1521:53Z - 1523:03Z

Page 1

TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	WIND_SP EED	WIND_ DIRECTION	BARO_ALTI TUDE(FEET)	PRESSURE _ALTITUDE	RADAR_ ALTITUDE _DATA(F	CALIBRATE D_AIRSP EEE	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_ VER TICAL_SYSTEM RATION(FEET/SEC	NORMAL_ACCE LOND/SECOND	G Load	LONGITUDINAL_STICK_ POSITION(INCHES)	LATERAL_STICK_ POSITION(INCHES)	THROTTLE_ POSITION(INCHES)	DIRECTIONAL_ PEDAL_POSITI ON(INCHES)
22718.6	14199															33.34375	1.0	0.81738072	-0.48730344	2.44677108	0.0119148
22718.8	14199											222		1	-1	-31.5625	-1.0	-0.78027144	-0.43652232	2.46972024	-0.0158864
22719	14199															-35.78125	-1.1	-0.80468544	-0.38378808	2.45800152	0.015858
22719.2	14199				66.80406734	14.46002592					903	0.692382813	221.875	2	1	-37.6875	-1.2	-0.66210768	-0.26171808	2.45800152	0.0235296
22719.4	14199															-42.34375	-1.3	-0.61230312	-0.14257776	2.44091172	0.0238296
22719.6	14199											220.25		4	3	-38.5	-1.2	-0.53906112	-0.439452	2.47899756	0.0158864
22719.8	14199															-39.09375	-1.2	-0.48242064	-0.58495944	2.46386088	0.0119148
22720	14200	15	21	54.5	66.80363584	14.4619453	25	244	3022	2544	845	0.701660156	219.75	3	3	-40.21875	-1.3	-0.44726448	-0.61132656	2.44286484	0
22720.2	14200															-39.25	-1.2	-0.4345692	-0.62792808	2.43700548	-0.0119148
22720.4	14200											220.5625		4	3	-40.9375	-1.3	-0.40917864	-0.63574056	2.43700548	-0.0238296
22720.6	14200															-38.8125	-1.2	-0.44726448	-0.7226544	2.44677108	-0.0317728
22720.8	14200				66.80318339	14.46383491					829	0.703125	219.9375	3	3	-39.8125	-1.2	-0.44042856	-0.79980264	2.4487242	-0.019658
22721	14200															-37.625	-1.2	-0.3808584	-0.86034936	2.46386088	-0.019858
22721.2	14200											222.375		2	1	-34.4375	-1.1	-0.36816312	-0.8740212	2.46386088	-0.0317728
22721.4	14200															31.34375	-1.0	-0.40624896	-0.878904	2.45403528	-0.0635456
22721.6	14201	15	21	56.09375	66.80271953	14.46570793	25	245	3006	2528	818	0.697265625	224.875	1	0	-37	-1.2	0.39648336	-0.86327904	2.4487242	-0.0556024
22721.8	14201															34.65625	-1.1	-0.37792872	-0.92675544	2.45067732	-0.079432
22722	14201											226.0625		1	-1	-33.03125	-1.0	-0.33964288	-0.95898192	2.45263044	-0.0873752
22722.2	14201															-36.78125	-1.1	0.38671776	-0.98534904	2.4389586	-0.0873752
22722.4	14201				66.80225476	14.46758363					832	0.691894531	227.5	2	0	-34.21875	-1.1	-0.42187392	-0.98730216	2.44481796	-0.0834036
22722.6	14201															-34.09375	-1.1	-0.38964744	-1.01659896	2.45263044	-0.0834036
22722.8	14201											227.375		1	0	-33.375	-1.0	-0.49511592	-1.02734112	2.45895464	-0.1032616
22723	14201															-33.46875	-1.0	-0.6689436	-0.95312256	2.45995464	-0.1270912
22723.2	14202	15	21	57.703125	66.80179937	14.46947786	24	245	2987	2509	888	0.681152344	227.4375	1	-1	33.125	-1.0	-0.69062272	-0.91894296	2.45409528	-0.1429576
22723.4	14202															-35.0625	-1.1	-1.0644504	-0.76757616	2.45800152	-0.1626356
22723.6	14202											226		1	0	-37.3125	-1.2	-1.2744108	-0.73925592	2.45800152	-0.1668072
22723.8	14202															-40.21875	-1.3	-1.41308232	-0.51074088	2.44286484	-0.1628156
22724	14202				66.80136569	14.47141048					1061	0.659691406	225.8125	3	2	-45.125	-1.4	-1.48632432	-0.48730344	2.43700548	-0.1747504
22724.2	14202															48.09375	-1.5	1.34667624	0.6249984	2.42968128	-0.1906368
22724.4	14202											226.625		5	4	50.25	-1.6	1.245114	-0.76757616	2.43358752	-0.2065232
22724.6	14202															-51.875	-1.6	-1.1914032	-0.86620872	2.43358752	-0.218438
22724.8	14203	15	21	59.296875	66.80097166	14.47339782	24	245	2934	2456	1219	0.635253906	225.9375	6	6	-51.6875	-1.6	-1.16991688	-0.83105256	2.43700548	-0.2422676
22725	14203															-51.75	-1.6	-1.25780928	-0.75781056	2.43505236	-0.2452392
22725.2	14203											224.75		6	6	52.09375	-1.6	-1.29296544	-0.63769368	2.4389586	-0.2462352
22725.4	14203															-52.8125	-1.7	-1.55566068	-0.29882736	2.43358752	-0.2541824
22725.6	14203				66.80062842	14.47544343					1262	0.60546875	225.25	6	6	-53.1875	-1.7	-1.82519064	-0.26464776	2.4389586	-0.258154
22725.8	14203															-56.4375	-1.8	-1.92675288	-0.37890528	2.42772816	-0.2621256
22726	14203											224.1875		8	7	-60	-1.9	1.78417512	-0.34374912	2.42577504	-0.2660972
22726.2	14203															-59.5625	-1.9	1.69237648	-0.4687488	2.41991568	-0.2706888
22726.4	14204	15	22	0.90625	66.80035366	14.47755106	24	245	2926	2448	1241	0.573242188	229.8125	10	8	59.21875	-1.9	1.6894488	-0.50585808	2.42577504	-0.2660972
22726.6	14204															-58.96875	-1.8	-1.82519064	-0.4380456	2.43358752	-0.2621256
22726.8	14204											222.75		9	8	-57.84375	-1.8	1.95507312	-0.439452	2.43505236	-0.2541824
22727	14204															55.65625	-1.7	2.24315832	-0.26757744	2.43358752	-0.2422676
22727.2	14204				66.80015408	14.47970873					1224	0.544433594	222.0625	8	8	56.34375	-1.8	2.44921248	-0.11232784	2.4316344	-0.2462392

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TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	WIND_SPEED	WIND_DIRECTION	BARO_ALTITUDE(Feet)	PRESSURE_ALTITUDE(ft)	RADAR_ALTITUDE(ft)	TRUE_HEADING	CALIBRATE_D_AIRSPEED(KNOTS)	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_VERTICAL_SYSTEM(FEET/SEC)	NORMAL_ACCELERATION(FEET/SEC^2)	G Load	LONGITUDINAL_STICK_POSITION(INCHES)	LATERAL_STICK_POSITION(INCHES)	THROTTLE_POSITION(INCHES)	DIRECTIONAL_PEDAL_POSITION(INCHES)
22727.4	14204												220.1875		8	9	-56.59375	-1.8	-2.50682952	-0.16894488	2.42577504	-0.2422676
22727.6	14204																-58	-1.8	-2.56347	-0.1611324	2.4218688	-0.2422676
22727.8	14204																-60.96875	-1.9	-2.5886056	-0.2539056	2.41649772	-0.2462392
22728	14205	15	22	2.5	66.80003397	14.48189833	24	245	2952	2474	1209	0.5078125	219.125	10	10	16.65625	-61.09375	-1.9	-2.68358688	-0.3710928	2.41649772	-0.2660972
22728.2	14205																-61.40625	-1.9	-2.7978444	-0.38378808	2.4218688	-0.2819836
22728.4	14205																-62.375	-1.9	-2.69335248	-0.46093632	2.42772816	-0.2859552
22728.6	14205																-62.125	-1.9	-2.45897608	-0.66992016	2.42772816	-0.3058132
22728.8	14205				66.79999961	14.48409733					1177	0.47265625	216.625	11	12	20.875	-60.65625	-1.9	-2.38573608	-0.537108	2.42577504	-0.3097848
22729	14205																-58.675	-1.8	-2.28417384	-0.5029284	2.4316344	-0.3058132
22729.2	14205																58.09375	-1.8	2.30663472	-0.42870984	2.4316344	-0.3137564
22729.4	14205																-57.5	-1.8	-2.3280956	-0.439452	2.42772816	-0.3336144
22729.6	14206	15	22	4.109375	66.8000499	14.48628374	24	245	2989	2511	1147	0.438476563	214.5	10	10	21.21875	-57	-1.8	-2.65233696	-0.28027272	2.42382192	-0.3336144
22729.8	14206																-57.96875	-1.8	-2.70604776	-0.20898384	2.41796256	-0.3296428
22730	14206																-57.53125	-1.8	-2.70604776	-0.17773392	2.41649772	-0.3296428
22730.2	14206																57.78125	-1.8	-2.6708916	-0.11514032	2.42577504	-0.3256712
22730.4	14206				66.8001861	14.48843739					1196	0.397460938	212.1875	11	11	19.125	-58.6875	-1.8	-2.59179024	-0.12988248	2.42772816	-0.317728
22730.6	14206																-58.375	-1.8	-2.56054032	-0.13476528	2.42382192	-0.3097848
22730.8	14206																-58.375	-1.8	-2.45413424	-0.15039024	2.42577504	-0.29787
22731	14206																-58.5625	-1.8	2.43358752	-0.16406208	2.42382192	-0.2899268
22731.2	14207	15	22	5.703125	66.80040889	14.49053446	24	245	3021	2543	1226	0.36328125	209.25	12	11	16.3125	58.15625	-1.8	-2.46874368	-0.20410104	2.4218688	-0.2859552
22731.4	14207																56.125	-1.8	-2.4462823	-0.49999872	2.4316344	-0.2819836
22731.6	14207																207.875	-1.8	-2.43065784	-0.45507696	2.41991568	-0.278012
22731.8	14207																-55.65625	-1.7	-2.56932936	-0.097656	2.41649772	-0.2740404
22732	14207				66.80071358	14.49255532					1160	0.328613281	207.75	9	10	11.75	54.09375	-1.7	2.52031384	-0.09472632	2.4218688	-0.2740404
22732.2	14207																53.78125	-1.7	2.30370504	-0.21191352	2.42772816	-0.2740404
22732.4	14207																55.5	-1.7	-2.12597112	-0.2783196	2.42382192	-0.2740404
22732.6	14207																-54.78125	-1.7	-2.13280704	-0.12402312	2.4218688	-0.2740404
22732.8	14208	15	22	7.296875	66.80109495	14.49448259	24	245	3045	2567	1145	0.296386719	206	10	11	6.21875	-54.15625	-1.7	-2.27831448	-0.05691384	2.42382192	-0.2740404
22733	14208																-55.0625	-1.7	2.27245512	-0.02343744	2.41649772	-0.278012
22733.2	14208																205.1875	-1.7	2.23046304	-0.01269528	2.4145446	-0.2819836
22733.4	14208																-55.25	-1.7	-2.14550232	-0.00781248	2.4145446	-0.2819836
22733.6	14208				66.80154984	14.49629651					1109	0.263183594	205.9375	10	10	0.6875	54.21875	-1.7	-2.08788528	0.06445296	2.41259148	-0.2819836
22733.8	14208																-54.125	-1.7	-2.08788528	0.24706968	2.41063936	-0.278012
22734	14208																54.09375	-1.7	1.82812032	0.47949096	2.4145446	-0.2700688
22734.2	14208																-51.6675	-1.6	1.50487896	0.57519384	2.41991568	-0.2621256
22734.4	14209	15	22	8.90625	66.80207044	14.49798664	24	245	3053	2575	1065	0.240234375	206	8	9	-5.5	-50.8125	-1.6	-1.18261416	0.60449064	2.41991568	-0.2541624
22734.6	14209																-45.625	-1.4	-1.41991824	0.44531136	2.42382192	-0.2502108
22734.8	14209																-44.6575	-1.4	1.23632496	0.44531136	2.42577504	-0.235296
22735	14209																43.56875	-1.4	1.66152072	0.58886568	2.42577504	-0.2303528
22735.2	14209				66.80264351	14.49956378					1013	0.221679688	206	6	6	11.34375	-43.3125	-1.4	-0.99163824	0.68945126	2.41991568	-0.2144664
22735.4	14209																-42.625	-1.3	-0.81738072	0.84277128	2.41991568	-0.2065232
22735.6	14209																-41.5	-1.3	-0.59960784	0.91113048	2.41991568	-0.1546084
22735.8	14209																39.0625	-1.2	-0.49511592	0.8984352	2.42577504	-0.1906168
22736	14210	15	22	10.5	66.8032579	14.50104134	24	245	3050	2572	960	0.212890625	204.4375	3	4	16.09375	36.4375	-1.1	-0.47265504	0.8384352	2.42577504	-0.1866652

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22736.2	14210																36.5625	-1.1	-0.4785144	0.88281624	2.42772816	-0.1826936
22736.4	14210												205	2	4		-35.625	-1.1	-0.35546784	0.94335696	2.4316344	-0.1866652
22736.6	14210																-35.125	-1.1	-0.18456984	0.98827872	2.4316344	-0.19858
22736.8	14210				66.60390155	14.50244615					915	0.207519531	205.5625	2	4	-19.0625	-33.6875	-1.1	-0.17773392	0.9912084	2.42772816	-0.2144664
22737	14210																33	-1.0	-0.20312448	1.00195056	2.42772816	0.2224096
22737.2	14210												205.75	1	3		-31.84375	-1.0	-0.16749952	0.99316152	2.4316344	-0.218438
22737.4	14210																-31.21875	-1.0	-0.1806636	0.9912084	2.42577504	-0.2144664
22737.6	14211	15	22	12.109375	66.60456422	14.50380393	24	245	3034	2556	803	0.20703125	206	0	1	-21.90625	-29.875	-0.9	-0.24121032	0.80659168	2.43358752	-0.2065232
22737.8	14211																-29.09375	-0.9	-0.19726512	0.60937344	2.43700548	-0.1946084
22738	14211												206.875	0	1		-26.78125	-0.8	-0.18456984	0.73144344	2.43505236	-0.1826936
22738.2	14211																-25.625	-0.8	-0.16796832	0.63574056	2.4389586	-0.1668072
22738.4	14211				66.6052338	14.50514101					885	0.207519531	207.25	-1	0	-26.875	-26.25	-0.8	-0.13964808	0.48730344	2.44286484	-0.159208
22738.6	14211																-25.0625	-0.8	-0.20605416	0.6503736	2.4389586	-0.1469492
22738.8	14211												207.1875	-2	0		-26.71875	-0.8	-0.44042856	0.41601456	2.44286484	-0.158864
22739	14211																-27.8125	-0.9	-0.5419908	0.13574184	2.4389586	-0.1469492
22739.2	14212	15	22	13.703125	66.60592134	14.506476	24	241	2996	2518	874	0.206542969	208.25	1	0	-31	-28.375	-0.9	-0.40234272	0.48730344	2.4389586	-0.1270912
22739.4	14212																-29.28125	-0.9	-0.30468672	0.46093632	2.44286484	-0.1231196
22739.6	14212												209.5	-1	1		-29.9375	-0.9	0.01855464	0.708006	2.4316344	-0.0553184
22739.8	14212																-30.75	-1.0	-0.15527304	0.48730344	2.44091172	-0.09929
22740	14212				66.60660974	14.50781032					858	0.205566406	209.5	1	1	-32.28125	-31.59375	-1.0	0.25097592	0.22851504	2.4389586	-0.0873752
22740.2	14212																-32.46875	-1.0	0.65722488	2.41649772		-0.0675172
22740.4	14212												209.75	0	2		-31.5	-1.0	0.31640544	0.5517564	2.40282588	-0.0516308
22740.6	14212																-30.59375	-1.0	0.5224596	0.44047656	2.38182584	-0.0238296
22740.8	14213	15	22	15.296875	66.60730309	14.509151	24	235	2942	2464	835	0.205078125	210.75	-1	1	-33.625	-28.21875	-0.9	0.5761704	0.47945096	2.380365	-0.0158864
22741	14213																30.625	-1.0	0.64257648	0.41406144	2.41259148	-0.0158864
22741.2	14213												210.3125	1	1		-28.0625	-0.9	0.5957016	0.31835856	2.4218688	-0.0119148
22741.4	14213																-29.3125	-0.9	0.30371016	0.07421856	2.42382192	0
22741.6	14213				66.60799938	14.51049962					798	0.206542969	212.5	-2	1	-37.53125	-24.34375	-0.8	0.24999936	0.03515616	2.4560484	-0.0039716
22741.8	14213																23.125	-0.7	0.0341796	0	2.44481796	0.0119148
22742	14213												215.625	3	2		24.4375	-0.8	0.19335888	0.04589832	2.43700548	0
22742.2	14213																-27.875	-0.9	0.3320304	0.31542888	2.41991568	0.0278012
22742.4	14214	15	22	16.90625	66.60869843	14.51186992	25	230	2889	2410	762	0.206542969	215.75	-2	-1	-42.25	-28.6875	-0.9	0.6396468	0.47753784	2.38182984	0.0317728
22742.6	14214																28.75	-0.9	0.83886504	0.53027208	2.35936896	0.0317728
22742.8	14214												213.1875	1	1		27.6875	0.9	0.67695088	0.46679568	2.34960336	0.0317728
22743	14214																-27.6875	0.9	0.91854296	0.39257712	2.31085268	0.0317728
22743.2	14214				66.60939781	14.51325679					744	0.208907813	211.5	-2	0	-45.78125	-28.375	-0.9	0.99804432	0.48535032	2.19774828	0.0317728
22743.4	14214																-26.84375	-0.8	1.15331736	0.50378776	2.19774828	0.0317728
22743.6	14214												213.4375	-2	1		-24.5	-0.8	1.1181612	0.32617104	2.13671328	0.0238296
22743.8	14214																-23.4375	0.7	1.1621064	0.32910072	1.60448808	0.0238296
22744	14215	15	22	18.5	66.61009728	14.51466654	26	230	2823	2344	710	0.208007813	216.625	3	-3	52.4375	-23.21875	-0.7	1.2353484	0.50097528	1.62545412	0.0278012
22744.2	14215																24.3125	0.8	1.4794884	0.7470684	1.6406208	0.035716
22744.4	14215												217.875	-2	2		-22.6125	-0.7	1.58105664	0.68652168	1.69774956	0.0556024
22744.6	14215																-22.03125	-0.7	1.44726192	0.49023312	1.68793396	0.0834036
22744.8	14215				66.61079491	14.51609449					697	0.211914063	218.8125	2	3	60.71875	20.59375	0.6	1.43847288	0.24414	1.684566	0.1112048

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		HOURS	MINUTES	SECONDS	EEES	LATITUDE(DEGR	LONGITUDE(WIND_SP	WIND_	BARO_ALT	PRESSURE	ALTITUDE	D_AIRSP	L_AOA(R_AOA(TICAL_SYSTEM	RATION(FEET/SEC	LONGITUDINAL_STICK_	POSITION(INCHE	POSITION(I	PEDAL_POSIT	
						DEGREES)	DEGREES)	EED	DIRECTION	TUDE(FEET)	_ALTITUDE	_DATA(I	TRUE_HEADING	D(KNOTS)))	(FEET/SEC)	OND/SECOND)	G Load	POSITION(INCHES)	POSITION(INCHES)	POSITION(INCHES)	
22745	14215																19.9375	-0.6		1.66594104	0.10937472	1.71483936	0.119148
22745.2	14215													218.5	-3	-3	-19.75	-0.6		1.91991696	0.10937472	1.73192916	0.09929
22745.4	14215																-19.5	-0.6		1.85937024	0.14062464	1.72069872	0.0913468
22745.6	14216	15	22	20.09375	66.8114896	14.51754523	26	230	2737	2258	725	0.218261719	221.5	-4	-3	-71.875	-17.21875	-0.5	1.70702688	0.21777288	1.72265184	0.0553184	
22745.8	14216																19.03125	-0.6		1.33007472	0.33105384	1.7187456	0.1632616
22746	14216												221.3125	-4	-3		-20.125	-0.6		1.24218432	0.35253816	1.7187456	0.09929
22746.2	14216																-21.6875	-0.7		1.14648144	0.41894424	1.71288624	0.0913468
22746.4	14216				66.81217994	14.51902614					772	0.219726563	223.625	-3	-3	-81.21875	-24.25	-0.8	1.245114	0.62792808	1.69774956	0.0834036	
22746.6	14216																-26.09375	-0.8		1.21972344	0.5273424	1.71483936	0.0834036
22746.8	14216																25.25	-0.9		1.30175448	0.33398352	1.68993768	0.0873752
22747	14216																-27.71875	-0.9		1.22948904	0.22851504	1.70360892	0.0913468
22747.2	14217	15	22	21.703125	66.81286465	14.52054184	26	230	2596	2116	809	0.2265625	227.25	-1	-2	-86.5625	-26.46875	-0.8	1.05175512	0.14355432	1.72411668	0.0913468	
22747.4	14217																-27.09375	-0.8		0.85839624	0.024414	1.72802292	0.0953184
22747.6	14217													229.125	-1	-2	-29.46875	-0.9		0.87109152	-0.08203104	1.73368228	0.0834036
22747.8	14217																31.125	-1.0		0.76366992	0.20410104	1.73388228	0.0873752
22748	14217				66.81354552	14.52210112					845	0.237792969	230.1875	0	-1	-89.0625	-32.59375	-1.0	1.01366928	0.20117136	1.71679248	0.1672332	
22748.2	14217																-34.40625	-1.1		1.14062208	0.341796	1.68261288	0.1231196
22748.4	14217																-33.46875	-1.0		1.36816056	0.56445168	1.67675352	0.1270912
22748.6	14217																-32.5	-1.0		1.4794884	0.48730344	1.67870664	0.1310628
22748.8	14218	15	22	23.296875	66.81421833	14.52370467	26	230	2437	1957	853	0.247558594	231.4375	0	0	-90.0625	-31.53125	-1.0	1.21679376	0.1855464	1.7602494	0.119148	
22749	14218																-32.90625	-1.0		1.10546592	0.04589632	1.66864756	0.0913468
22749.2	14218													232.625	-1	0	-32.40625	-1.0		1.05175512	-0.03124992	2.47704444	0.0635456
22749.4	14218																-33.8125	-1.1		0.84570096	-0.24609312	2.3974548	0.0436876
22749.6	14218				66.8148826	14.52536001					949	0.255371094	233	0	0	-90.71875	-35.15625	-1.1	0.95019288	-0.14550744	2.34765024	0.0476592	
22749.8	14218																-36.3125	-1.1		0.93456792	-0.20117136	2.34765024	0.0436876
22750	14218													234.125	1	1	-37.40625	-1.2		0.96288816	-0.2490228	2.33446668	0.0436876
22750.2	14218																37.125	-1.2		0.97265376	-0.26757744	2.32860732	0.0436876
22750.4	14219	15	22	24.90625	66.81554024	14.5270695	26	230	2284	1803	990	0.259277344	235.1875	1	0	-88.46875	-36.6875	-1.1	0.89941176	-0.2783196	2.2924746	0.0476592	
22750.6	14219																-39.0625	-1.2		0.8935524	-0.09472632	2.28124416	0.0635456
22750.8	14219													236.5625	2	1	39.375	-1.2		0.36425688	-0.439452	2.3022402	0.0675172
22751	14219																-40.40625	-1.3		0.27246024	-0.74413872	2.3022402	0.0675172
22751.2	14219				66.81619302	14.52852769					915	0.265625	238.1875	2	1	-82.5625	-43	-1.3	0.51952992	0.79980264	2.30614644	0.059574	
22751.4	14219																-45.34375	-1.4		0.74413872	-0.60644376	2.29833396	0.0635456
22751.6	14219													239.5	3	3	-45.5625	-1.4		0.87695088	-0.42578016	2.29638034	0.0675172
22751.8	14219																44.9375	-1.4		0.8749212	-0.33593664	2.29533396	0.0754604
22752	14220	15	22	26.5	66.81684497	14.53062225	26	229	2139	1658	796	0.264648438	240.6875	3	2	-73.375	-42.03125	-1.3	0.80468544	-0.30556952	2.29638034	0.079432	
22752.2	14220																-40.75	-1.3		0.78906048	-0.08496072	2.30419332	0.0913468
22752.4	14220													241.875	1	1	39.34375	-1.2		0.78906048	-0.12402312	2.31151752	0.0873752
22752.6	14220																-37.40625	-1.2		0.7763652	-0.12988248	2.32128312	0.0675172
22752.8	14220				66.81750135	14.53243576					720	0.265136719	243.0625	0	0	69.03125	35.5625	-1.1	0.80468544	-0.61425624	2.32714248	0.0236296	
22753	14220																-34.25	-1.1		0.74120904	-0.72851376	2.32714248	-0.0079432
22753.2	14220													245	1	0	-36.03125	-1.1		0.94042728	-0.79384328	2.30809956	-0.0317728
22753.4	14220																32.78125	-1.0		1.03613016	-0.57714696	2.30809956	-0.0236296
22753.6	14221	15	22	28.09375	66.81816495	14.53425195	26	228	2041	1560	687	0.259765625	245.6875	1	1	67.125	36	1.1	0.8837868	0.5957016	2.33056044	-0.0158864	

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Sequence Number						LATITUDE(DEGREES)	LONGITUDE(DEGREES)	WIND_SPEED	WIND_DIRECTION	BARO_ALTITUDE(Feet)	PRESSURE_ALTITUDE(ft)	RADAR_ALTITUDE(ft)	TRUE_HEADING(Degrees)	CALIBRATE_AIRSPEED(KNOTS)	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_VERTICAL_SYSTEM(FEET/SEC)	NORMAL_ACCELERATION(FEET/SEC^2)	G Load	LONGITUDINAL_STICK_POSITION(INCHES)	LATERAL_STICK_POSITION(INCHES)	THROTTLE_POSITION(INCHES)	DIRECTIONAL_PEDAL_POSITION(INCHES)
TIME	Seq_e_Numb er	HOURS	MINUTES	SECONDS	EES)	DEGREES)	EED										(FEET/SEC)	OND/SECOND)					
22753.8	14221																-38.6875	1.2		0.44828792	-0.81835728	2.34227916	-0.0119148
22754	14221													249	0	-1	-38.09375	-1.2		-0.21874944	-0.70214664	2.33251356	-0.0357444
22754.2	14221																-41.71875	-1.3		-0.57714696	-0.6005644	2.31737688	-0.0317728
22754.4	14221				66.81884271	14.53606026					669	0.247558594	252.875	0	0	-61.375	-43.5	-1.4	-0.36523344	-0.77538664	2.32518936	-0.0079432	
22754.6	14221																-46.6875	-1.5		0.24023376	-0.9423804	2.32323624	0.0079432
22754.8	14221												253.625	1	2		-46	-1.4	0.45605352	-0.82616976	2.33056044	0.0119148	
22755	14221																-42.1875	-1.3		0.15820272	-0.73925592	2.27991996	0.0039716
22755.2	14222	15	22	29.703125	66.81954193	14.53782985	26	228	1930	1448	635	0.232910156	252.6875	0	1	-54.75	-41.5625	-1.3	-0.57714696	-0.2490228	2.18602956	0	
22755.4	14222																-44.4375	-1.4		-0.78320112	-0.09472632	2.17870536	-0.0119148
22755.6	14222												251.25	1	0		-50.9375	-1.6		-0.56738136	-0.26757744	2.11229928	-0.0317728
22755.8	14222																-50.625	-1.6		-0.28222564	-0.26953056	2.12352972	-0.0317728
22756	14222				66.8202725	14.53953247					601	0.212890625	252.6875	4	3	-47.71875	-51.28125	-1.6	-0.22285568	-0.35742096	2.15380308	-0.0317728	
22756.2	14222																-45	-1.4		-0.09863256	-0.59277192	2.13280704	-0.019858
22756.4	14222												255.1875	2	0		-43.64375	-1.4		0.79199016	-0.12988248	2.14452576	-0.0079432
22756.6	14222																-49.125	-1.5		0.72558408	-0.28027272	2.14257264	-0.0039716
22756.8	14223	15	22	31.296875	66.82103424	14.54114255	26	228	1837	1355	600	0.198730469	255.875	2	1	-42.8125	-47.4375	-1.5	-0.2978508	-0.49995872	2.18281116	-0.0039716	
22757	14223																-53.1875	-1.7		-0.04199208	-0.30663984	2.15184996	-0.0079432
22757.2	14223												253.375	3	3		-55.65625	-1.7		0.24706968	-0.34960848	2.16893976	-0.0238296
22757.4	14223																-60.5	-1.9		-0.04785144	-0.01269528	2.0703072	-0.0436876
22757.6	14223				66.82183002	14.54264809					593	0.185546875	258.75	3	6	33.125	-52.90625	-1.7	0.22558536	1.57616784	-0.0675172	-0.0675172	
22757.8	14223																-42.34375	-1.3		-0.48528	0.38671776	1.60058184	-0.0635456
22758	14223												259.75	-1	-2		-34.71875	-1.1		-0.46581912	0.47460816	1.65575748	-0.0516308
22758.2	14223																-35.625	-1.1		-0.4345692	0.41894424	1.68798396	-0.039716
22758.4	14224	15	22	32.90625	66.82265078	14.54405299	26	228	1798	1316	586	0.171875	259.0625	-2	1	-35.1875	-36.59375	-1.1	-0.24706968	0.31054608	1.66552308	-0.039716	
22758.6	14224																-37.6875	-1.2		-0.08007792	0.37695216	1.66942932	-0.0276012
22758.8	14224												258.5625	-2	1		-40.78125	-1.3		-0.26660088	0.64159992	1.62743724	-0.0317728
22759	14224																-37.59375	-1.2		-0.2539056	0.42187392	1.66942932	-0.0476592
22759.2	14224				66.82348511	14.54538521					558	0.163085938	257.125	-2	0	-34.03125	-36.625	-1.1	-0.2636712	0.14062464	1.69774956	-0.0476592	
22759.4	14224																-35.78125	-1.1		-0.28222564	-0.04492176	1.6916902	-0.0516308
22759.6	14224												259	-1	1		-35.25	-1.1		-0.28515552	0.07226544	1.72997604	-0.0675172
22759.8	14224																-37.28125	-1.2		-0.30468672	0.12499968	1.71288624	-0.0754604
22760	14225	15	22	34.5	66.82432992	14.54665767	26	228	1729	1247	521	0.153320313	256.6875	0	1	-31.90625	-38.46875	-1.2	-0.25683528	0.17285112	1.72802292	-0.0714888	
22760.2	14225																-41.28125	-1.3		-0.14941368	0.63378744	1.71679248	-0.0556024
22760.4	14225												257.25	1	1		-41.0625	-1.3		0.08886696	0.78710736	1.68798396	-0.0436876
22760.6	14225																-37.15625	-1.2		0.02832024	0.73144344	1.71483936	-0.0436876
22760.8	14225				66.8251837	14.54787347					495	0.154785156	255.8125	-1	-1	-29.71875	-31.75	-1.0	0.0097656	0.69433416	1.72069872	-0.0317728	
22761	14225																-30.3125	-0.9		-0.14257776	0.57812352	1.69579644	-0.0278012
22761.2	14225												254.8125	-3	2		-30.9175	-1.0		-0.23144472	0.46679568	1.684566	0.0317728
22761.4	14225																-31.96875	-1.0		-0.415038	0.62011556	1.6577106	0.039716
22761.6	14226	15	22	36.09375	66.82603992	14.54906185	25	228	1695	1212	465	0.155761719	255.125	-3	0	-30.375	-30.625	-1.0	-0.62792808	0.57226416	1.6745004	-0.0595274	
22761.8	14226																-35.53125	-1.1		-0.64062336	0.28906176	1.67675352	-0.079432
22762	14226												252.3125	-2	1		-33.09375	-1.0		-0.56738136	0.13769496	1.71483936	-0.053154
22762.2	14226																-31.96875	-1.0		-0.49120968	0.31542888	1.69970268	-0.1151764
22762.4	14226				66.82669462	14.55024303					454	0.151367188	249.9375	2	1	29.65625	-30.8125	-1.0	-0.96972408	0.70507632	1.7187456	0.1270912	

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TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGR EES)	LONGITUDE(DEGREES)	WIND_SP EED	WIND_ DIRECTION	BARO_ALTI TUDE(FEET)	PRESSURE _ALTITUDE _DATA(F	RADAR_ ALTITUDE TRUE_HEADING (D) (KNOTS)	CALIBRATE D_AIRSP E E	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_ VER TICAL_ SYSTEM (FEET/ SEC)	NORMAL_ ACCELE RATION(FEET/ SEC	ON(SECOND)	G Load	LONGITUDINAL_ STICK POSITION(INCHES)	LATERAL_ STICK POSITION(INCHES)	THROTTLE_ POSITION(INCHES)	DIRECTIONAL_ PEDAL_ POSIT ION(INCHES)
22762.6	14226											250.875	-1	-1	-34.71875	-1.1			1.02343488	0.87988056	1.68795396	-0.1231296
22762.8	14226														-39.1875	-1.2			0.25468216	1.68795396		-0.1032616
22763	14226														-42.8125	-1.3			-1.11523152	0.0878904	1.6748004	-0.0754604
22763.2	14227	15	22	37.703125	66.62774563	14.55142463	22	228	1611	1128	478	0.154296875	251.5	1	2	-22.5625	-1.4		-0.88769304	0.07421856	1.63478144	-0.0635456
22763.4	14227														-41.8125	-1.3			-0.92870856	0.57031104	1.64848016	-0.0675172
22763.6	14227											249.6125	1	1	-45.78125	-1.4			-0.88085712	1.025368	1.6332966	-0.059574
22763.8	14227														-43.71875	-1.4			-0.97948968	0.97460658	1.63134348	-0.0635456
22764	14227				66.82859036	14.55267131					469	0.160644531	245	1	2	-13.78125	-1.4		-1.06152072	1.08105192	1.62543412	-0.0556024
22764.2	14227														-42.65625	-1.3			-1.14452832	0.91113048	1.623531	-0.0675172
22764.4	14227											245.125	1	2	-43.71875	-1.4			-1.36913712	0.94335696	1.61230056	-0.0913468
22764.6	14227														-47.09375	-1.5			-1.4257776	1.20019224	1.59325764	-0.112048
22764.8	14228	15	22	39.296875	66.82942126	14.55385169	22	228	1567	1084	470	0.174804688	242.5	2	3	-3.75	-1.6		-1.44237912	1.3037076	1.59862372	-0.1231196
22765	14228														-50.1875	-1.6			-1.53710544	0.9570288	1.62157768	-0.1310628
22765.2	14228											240.4375	2	2	-45.5	-1.4			-1.61327712	1.17382512	1.60253496	-0.13906
22765.4	14228														-48.26125	-1.5			-1.4257776	1.50194928	1.623531	-0.1509208
22765.6	14228				66.83022676	14.55515969					481	0.193359375	240.9375	4	3	5.0625	-1.7		-1.3023012	1.4013636	1.6162068	-0.139006
22765.8	14228														-48.25	-1.5			-1.26757488	1.14341112	1.63478144	-0.1112048
22766	14228											238.6875	5	3	-49.34375	-1.5			-1.19726256	1.63671456		-0.0913468
22766.2	14228														-47.8125	-1.5			-2.19628344	-0.05273424	1.64257392	-0.0834036
22766.4	14229	15	22	40.90625	66.83099999	14.55655485	22	228	1568	1085	532	0.226074219	237.5	3	3	8.40625	-1.6		-2.49413424	-0.2490228	1.62157788	-0.079432
22766.6	14229														-53.71875	-1.7			-2.46483744	-0.2490228	1.61425368	-0.079432
22766.8	14229											236.375	6	7	-58.96875	-1.8			-2.27245512	0.38476464	1.58739828	-0.0635456
22767	14229														-58.5	-1.8			-1.89159672	1.18945008	1.58739828	-0.0079432
22767.2	14229				66.83172243	14.5580734					493	0.25390625	233.75	7	6	12.96875	-1.7		-1.58105064	1.42773672	1.59862372	0
22767.4	14229														-54.0625	-1.7			-1.35351216	1.01757552	1.58862872	0
22767.6	14229											232.5	6	6	-50.03125	-1.6			-1.58105064	0.6249984	1.60253496	-0.0039716
22767.8	14229														-42.26125	-1.3			-2.01854952	-0.2880852	1.63478144	-0.0278012
22768	14230	15	22	42.5	66.83239357	14.55970838	22	228	1600	1117	449	0.275390625	230.375	3	3	8.0625	-1.3		-2.2119084	-0.2539056	1.66356996	-0.0317728
22768.2	14230														-44.15625	-1.4			-2.56932936	-0.41601456	1.61962476	-0.0436876
22768.4	14230											229.6875	3	3	-43.5625	-1.4			-2.43358752	-0.31542888	1.61962476	-0.039716
22768.6	14230														-49.90625	-1.6			-2.36034552	-0.21191352	1.60839432	-0.0278012
22768.8	14230				66.83301182	14.56144737					393	0.30859375	227.5	6	5	3.21875	-1.6		-2.03417448	-0.59277192	1.60839432	-0.0238296
22769	14230														-53.5	-1.7			-1.71483936	-0.8496672	1.5893514	-0.0039716
22769.2	14230											227.125	8	7	-47.625	-1.5			-1.56542568	-0.7861308	1.60448808	0.0158864
22769.4	14230														-45.15625	-1.4			-1.34081688	-1.03008328	1.6162068	0.0119148
22769.6	14231	15	22	44.109375	66.83357365	14.56328209	22	228	1607	1124	346	0.322753966	222.375	4	3	0.65625	-1.3		-1.20409848	-1.28222328	1.64643328	0
22769.8	14231														-35.46875	-1.1			-1.26757488	-0.86327904	1.66356996	0.0317728
22770	14231											223.6875	2	1	-34.65625	-1.1			-1.22655936	1.0937472	1.63134348	0.0278012
22770.2	14231														-32.25	-1.0			-1.23241872	1.14159864	1.6503864	0.0079432
22770.4	14231				66.83409618	14.5651712					324	0.333496094	223.375	0	1	-4.15625	-1.1		-1.18847352	1.33691064	1.64257392	-0.0039716
22770.6	14231														-37.5	-1.2			-1.12206744	-1.16796576	1.70702688	-0.0079432
22770.8	14231											224.625	2	3	-38.1875	-1.2			-1.30077792	1.79101104		-0.0119148
22771	14231														-36.21875	-1.1			-0.9472632	-1.78808136	2.26220124	-0.1350344
22771.2	14232	15	22	45.703125	66.83458912	14.56709753	22	228	1596	1113	330	0.33203125	224.1875	3	3	2.09375	-1.3		-0.96364472	2.15038512	2.31005268	-0.2065232

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Sequence Number		TIME				LATITUDE(DEGR EES)	LONGITUDE(DEGREES)	WIND_SPEED	WIND_DIRECTION	BARO_ALT(FEET)	PRESSURE _ALTITUDE _DATA(F	RADAR_ ALTITUDE _DATA(F	TRUE_HEADING	CALIBRATE D_AIRSP EED(KNOTS)	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_ VER TICAL_ SYSTEM (FEET/ SEC)	NORMAL_ ACCE LERATION(FEET/ SEC	G Load	LONGITUDINAL_ STICK_ POSITION(INCHES)	LATERAL_ STICK_ POSITION(INCHES)	THROTTLE_ POSITION(INCHES)	DIRECTIONAL_ PEDAL_ POSITI ON(INCHES)	
22771.4	14232																	-37.34375	-1.2		-0.82128696	2.4951108	2.30419332	-0.337586
22771.6	14232													222.75		3	3	-40.09375	-1.3		-0.76360992	-2.41796256	2.24315832	-0.377302
22771.8	14232																	-37.78125	-1.2		-0.78320112	-2.1240016	2.24511144	-0.3693588
22772.2	14232				66.83506848	14.5690335					372	0.307617188	222.25		2	1	2.34375	-39.34375	-1.2	-0.78320112	-2.12108832	2.23778724	-0.39716	
22772.4	14232													225		3	0	-38.96875	-1.2		-0.8496072	-1.55175384	2.20897072	-0.3216996
22772.6	14232																	-36.5625	-1.1		0.91601328	-0.4345692	2.23583412	-0.2303528
22772.8	14233	15	22	47.296875	66.83556218	14.57093677	22	229	1612	1129	444	0.284667969	223.375		3	0	3.09375	-36.375	-1.1	-0.8398416	-1.0302708	2.23925208	-0.2621256	
22773.2	14233																	-36.5	-1.1		-0.98241936	-1.41405888	2.21288496	-0.3653872
22773.4	14233													222.5		2	0	-38.96625	-1.2		-0.95409912	-1.41991824	2.22069744	-0.3852452
22773.6	14233																	-37.625	-1.2		0.65624832	-1.7138628	2.22997476	-0.4885068
22773.8	14233				66.83608747	14.57277258						470	0.2578125	225.375		2	0	-39.75	-1.2		-0.80859168	-1.32714504	2.22606852	-0.4726204
22774.2	14233													227.5		3	0	-39	-1.2		-0.49511592	-1.4111292	2.22216228	-0.45664
22774.4	14233																	-40.625	-1.3		-0.70702944	-0.9960912	2.22411554	-0.4726204
22774.6	14234	15	22	48.90625	66.83665845	14.5745052	22	229	1607	1124	557	0.225097656	227.3125		6	3	9.28125	-41.8125	-1.3	-1.05273168	-0.86620872	2.23192788	-0.4487908	
22774.8	14234																	-43.125	-1.5		1.50154928	-0.0048828	2.1997014	-0.3812736
22775.2	14234																	-43.71875	-1.4		-1.89843264	-0.37890528	2.1997014	-0.4130464
22775.4	14234																	-47	-1.5		-2.07519	-0.77050584	2.20507248	-0.4686483
22775.6	14234																	-48.65625	-1.5		-2.03710416	-0.5957016	2.20702556	-0.4445192
22775.8	14234																	-55	-1.7		2.01561984	-0.61132656	2.20507248	-0.4487908
22776.2	14234				66.83728374	14.57609517					446	0.180175781	226		8	7	-16.71875	-63.0625	-2.0	1.88573736	-0.77343552	2.20507248	-0.4487908	
22776.4	14234																	-64.4375	-2.0		1.64745672	-0.77831832	2.21288496	-0.4527624
22776.6	14234																	-66.3125	-1.9		-1.76464392	-0.49999872	2.1997014	-0.4527624
22776.8	14234																	-58.25	-1.8		-1.94530752	-0.17480424	2.17675224	-0.436876
22777.2	14235	15	22	50.5	66.83796845	14.57748924	22	229	1556	1073	403	0.146484375	226.875		9	7	25.625	-56.34375	-1.6	1.88183112	0.08007792	2.18456472	-0.3931884	
22777.4	14235																	-53.78125	-1.7		1.58495688	0.5886568	2.18602956	-0.3455292
22777.6	14235																	-56.3125	-1.8		-1.3720668	0.31835856	2.19774828	-0.3415576
22777.8	14235																	-51.3125	-1.6		-1.49608992	0.19140576	2.1997014	-0.3455292
22778.2	14235				66.83670095	14.57869029					416	0.122070313	224.75		7	5	-36	-50.375	-1.6	-1.66405824	0.03710928	2.20702556	-0.3495008	
22778.4	14235																	-49.59375	-1.5		-1.51757424	0.05078112	2.23583412	-0.3256712
22778.6	14235																	-54.875	-1.7		1.0839916	1.20507504	2.1386664	-0.258154
22778.8	14235																	-48.15625	-1.5		-0.96972408	1.928706	2.10253368	-0.2541824
22779.2	14236	15	22	52.109375	66.83947091	14.57970634	22	229	1512	1029	428	0.102050781	228.375		5	4	-44.0625	-49.4375	-1.5	1.15038768	2.10643992	1.89159672	-0.2427624	
22779.4	14236																	-43.625	-1.4		-1.05273168	2.12694768	1.53222264	-0.2303528
22779.6	14236																	-38.1875	-1.2		1.19433288	1.71679248	1.53026952	-0.2421676
22779.8	14236																	-38.0625	-1.2		-1.14452832	1.53612888	1.56444912	-0.2660972
22780.2	14236				66.84026434	14.58058753					385	0.100097656	228.9375		1	2	-46.9375	-39.6875	-1.2	1.32226224	1.623531	-0.3097848		
22780.4	14236																	-41.5	-1.3		-1.13476272	1.04882544	1.623531	-0.3653872
22780.6	14236																	-47.59375	-1.5		-1.20702816	1.1132784	1.5551718	-0.377302
22780.8	14236																	-49.34375	-1.5		-0.98925528	2.16991632	1.50927348	-0.3653872
22781.2	14237	15	22	53.703125	66.84107009	14.5813875	22	229	1430	947	311	0.099121094	232.75		5	6	-37.375	50.59375	-1.6	-0.82128596	2.81053968	1.50927348	-0.2899268	
22781.4	14237																	-49.46875	-1.5		-0.88085712	3.32128056	1.51317972	-0.2819836
22781.6	14237																	-42.34375	-1.3		-0.9570288	3.25780416	1.51705596	-0.2859552
22781.8	14237																	-42	-1.3		1.20409648	2.49315768	1.5209922	-0.2899268
22782.2	14237				66.84187937	14.5821676					391	0.128417969	229		1	2	29.09375	41.59375	-1.3	1.40722228	2.3974548	1.52294532	-0.2819836	

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TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	WIND_SPEED	WIND_DIRECTION	BARO_ALT(Feet)	PRESSURE	RADAR_ALTITUDE	TRUE_HEADING	CALIBRATE_D_AIRSP E E	L_AOA(DEGREES)	R_AOA(DEGREES)	VELOCITY_VERTICAL_SYSTEM (Feet/Sec)	NORMAL_ACCELERATION(Feet/Sec)	VELOCITY_VERTICAL_SYSTEM (Feet/Sec)		LONGITUDINAL_STICK_POSITION(INCHES)	LATERAL_STICK_POSITION(INCHES)	THROTTLE_POSITION(INCHES)	DIRECTIONAL_PEDAL_POSITION(INCHES)
																		VELOCITY_VERTICAL_SYSTEM (Feet/Sec)	NORMAL_ACCELERATION(Feet/Sec)				
22780.2	14237												226.875	4	7		-49.3125	1.5	-2.06249472	1.31444976	1.54394136	-0.3097848	
22780.4	14237																-55.3125	-1.7	-2.60155584	1.4355432	1.54003512	-0.2899268	
22780.6	14237																-60.125	-1.9	-3.12694512	1.18945008	1.53222264	-0.3058132	
22780.8	14238	15	22	55.296875	66.84267037	14.58305768	22	229	1360	876	401	0.1796875	227.125	7	9	-19.5	-64.90625	-2.0	-3.51366288	0.64648272	1.53417576	-0.317728	
22781.0	14238																-72.09375	-2.3	-3.83983392	0.52441272	1.51708596	-0.3137564	
22781.2	14238												226.75	12	13		-76.71875	-2.4	-3.8726604	0.55956888	1.5112266	-0.317728	
22781.4	14238																-76.28125	-2.4	-3.90331032	0.84765408	1.4868126	-0.3216996	
22781.6	14238				66.84341133	14.584163					426	0.241210938	222.875	14	16	-10.78125	-77.625	-2.4	-3.92870088	1.39843392	1.47362904	-0.337586	
22781.8	14238																-82.09375	-2.6	-3.92284152	1.05956676	1.69970268	-0.337586	
22782.0	14238												217.75	16	17		-78.6875	-2.5	-3.91893528	0.89550552	2.36669316	-0.3415576	
22782.2	14238																-80.0625	-2.5	-3.91893528	0.92480232	2.74511016	-0.3415576	
22782.4	14239	15	22	56.90625	66.84407467	14.58551047	22	229	1333	849	343	0.299804688	214.625	19	18	-8.25	-80.6875	-2.5	-3.91893528	0.95888192	2.55516924	-0.3455292	
22782.6	14239																-85.28125	-2.7	-3.9257712	1.23241872	2.57030592	-0.3296428	
22782.8	14239												212.3125	21	20		-85.59375	-2.7	-3.92870088	1.0808644	2.52831384	-0.3216996	
22783.0	14239																-84.15625	-2.6	-3.92870088	1.19237976	2.49413424	-0.3216996	
22783.2	14239				66.84463877	14.58709574					254	0.354492188	212.5	21	19	-10.96875	-80.25	-2.5	-3.92870088	1.16601264	2.3964198	-0.3415576	
22783.4	14239																-76.3125	-2.4	-3.9257712	0.99902088	0	-0.3693588	
22783.6	14239												210.4375	19	17		-70.90625	-2.2	-3.92284152	0.9960912	0	-0.4329044	
22783.8	14239																-70.5625	-2.2	-3.92284152	0.91698984	0	-0.4329044	
22784.0	14240	15	22	58.5	66.84509684	14.58886592	22	229	1319	835	193	0.400878906	207.625	18	16	-25.40625	-67.375	-2.1	-3.93846648	1.09960656	0	-0.4726204	
22784.2	14240																-65.625	-2.1	-3.93846648	0.26757744	0	-0.7387176	
22784.4	14240												204.625	16	15		-64.875	-2.0	-3.9697164	1.02245832	0	-0.913468	
22784.6	14240																-62.5625	-2.0	-3.99510696	0.69776184	0	-0.9214112	
22784.8	14240				66.84545031	14.59075654					123	0.446777344	202.8125	16	13	-46.15625	-63.1875	-2.0	-3.99989876	-0.39941304	0	-0.9055248	
22785.0	14240																-61.875	-1.9	-3.99989876	-0.51855336	0	-0.9611272	
22785.2	14240												202.125	17	13		-65.25	-2.0	-3.99989876	-0.9960912	0	-1.0088432	
22785.4	14240																-65.28125	-2.0	-3.99989876	-1.17089544	0	-1.0207012	
22785.6	14241	15	23	0.09375	66.84569489	14.59271422	22	229	1241	757	42	0.502441406	200.5	18	14	-64.125	-64.96875	-2.0	-3.99989876	-1.25292648	0	-1.0286444	
22785.8	14241																-68.15625	-2.1	-3.99989876	-1.20214536	0	-1.0405592	
22786.0	14241												198.5025	19	16		-75.1875	-2.3	-3.99989876	-1.2792936	0	-1.012758	
22786.2	14241																-70.28125	-2.2	-3.95409144	-3.8671776	0.13720668	-1.0961616	
22786.4	14241				66.84582096	14.59469327					27	0.551269531	198.4375	22	20	-68.90625	-74.46875	-2.3	-2.5439338	0.58007664	2.61376284	-0.8499224	
22786.6	14241																-75.90625	-2.4	-2.19628344	-1.70500344	0.81200964	-1.0882184	
22786.8	14241												196.3125	22	22		-77.25	-2.4	-3.99989876	-1.20898128	0	-0.5250524	
22787.0	14241																-72.53125	-2.3	-1.95214344	-3.99989876	2.11571724	-0.8102064	
22787.2	14242	15	23	1.703125	66.84584208	14.59663904	22	229	1113	629	57	0.579589844	193.6875	20	21	-57.09375	-66.34375	-2.1	-2.24994424	-3.99989876	3.16698408	-0.7506324	
22787.4	14242																-67.21875	-2.1	-3.3837804	-3.7499904	2.72606724	-0.5937116	
22787.6	14242												193.625	13	17		-62.40625	-2.0	-3.43163184	-3.99989876	3.38182728	-0.6196996	
22787.8	14242																-55.875	-1.7	-3.91405248	-3.25051892	0	-0.6235412	
22788.0	14242				66.84580771	14.59854442					112	0.589355469	190.5625	8	16	-39.84375	-55.125	-1.7	-3.11424884	-3.60741264	4.00975536	-0.5679388	
22788.2	14242																-51.46875	-1.6	-2.8613208	-3.29491344	3.60252984	-0.7387176	
22788.4	14242												188.8125	2	14		-46.03125	-1.4	-2.89745352	-3.10641736	0	-0.662572	
22788.6	14242																-46.40625	-1.5	-2.35448616	-3.01171104	2.91063708	0.754604	

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11198	6998						204.125	
11198.2	6998							
11198.4	6999	16	31	32.296875	66.82049361	14.54078858	207.375	1354
11198.6	6999							
11198.8	6999						208.0625	
11199	6999							
11199.2	6999				66.82118	14.54231878	208.5	1327
11199.4	6999							
11199.6	6999						208.1875	
11199.8	6999							
11200	7000	16	31	33.90625	66.8218809	14.5438121	207.3125	1288
11200.2	7000							
11200.4	7000						210.375	
11200.6	7000							
11200.8	7000				66.82258833	14.54527432	212.8125	1233
11201	7000							
11201.2	7000						222.0625	
11201.4	7000							
11201.6	7001	16	31	35.5	66.82330314	14.54670243	225.875	1178
11201.8	7001							
11202	7001						224	
11202.2	7001							
11202.4	7001				66.82402642	14.54809936	223.4375	1097
11202.6	7001							
11202.8	7001						226.75	
11203	7001							
11203.2	7002	16	31	37.109375	66.82475388	14.54947298	229.8125	1003
11203.4	7002							
11203.6	7002						229.3125	
11203.8	7002							
11204	7002				66.82548378	14.55082817	229	927
11204.2	7002							
11204.4	7002						230.125	
11204.6	7002							
11204.8	7003	16	31	38.703125	66.8262156	14.55217187	226.9375	773
11205	7003							
11205.2	7003						222.625	
11205.4	7003							
11205.6	7003				66.8269481	14.55350686	218.1875	751
11205.8	7003							
11206	7003						216.875	
11206.2	7003							

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TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	CALIBRATED_AIRSPPEED(KNOTS)	RADAR_ALTITUDE_DATA(FEET)
11206.4	7004	16	31	40.296875	66.82767875	14.55484939	216.6875	691
11206.6	7004							
11206.8	7004						216.875	
11207	7004							
11207.2	7004				66.82840546	14.55621287	215.875	649
11207.4	7004							
11207.6	7004						214.75	
11207.8	7004							
11208	7005	16	31	41.90625	66.82912789	14.55759664	214.9375	698
11208.2	7005							
11208.4	7005						214.75	
11208.6	7005							
11208.8	7005				66.82984773	14.55899122	213.5625	706
11209	7005							
11209.2	7005						212.9375	
11209.4	7005							
11209.6	7006	16	31	43.5	66.8305674	14.56038807	212.5	714
11209.8	7006							
11210	7006						213.1875	
11210.2	7006							
11210.4	7006				66.83128757	14.56178399	212.125	682
11210.6	7006							
11210.8	7006						211.8125	
11211	7006							
11211.2	7007	16	31	45.09375	66.83200993	14.56317119	214.3125	725
11211.4	7007							
11211.6	7007						212.625	
11211.8	7007							
11212	7007				66.83273572	14.56454138	215	868
11212.2	7007							
11212.4	7007						215.1875	
11212.6	7007							
11212.8	7008	16	31	46.703125	66.83346695	14.56589841	216.1875	926
11213	7008							
11213.2	7008						213.9375	
11213.4	7008							
11213.6	7008				66.83420347	14.56723734	213.8125	850
11213.8	7008							
11214	7008						216	
11214.2	7008							
11214.4	7009	16	31	48.296875	66.83494586	14.56855916	214	804
11214.6	7009							

TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	CALIBRATED_AIRSPEED(KNOTS)	RADAR_ALTITUDE_DATA(FEET)
11214.8	7009						215.125	
11215	7009							
11215.2	7009				66.83569377	14.56986741	216.8125	774
11215.4	7009							
11215.6	7009						223.25	
11215.8	7009							
11216	7010	16	31	49.90625	66.83644957	14.57115412	220.5625	738
11216.2	7010							
11216.4	7010						219	
11216.6	7010							
11216.8	7010				66.8372083	14.57243211	219.3125	667
11217	7010							
11217.2	7010						219.8125	
11217.4	7010							
11217.6	7011	16	31	51.5	66.83796837	14.57370557	219.5	613
11217.8	7011							
11218	7011						219	
11218.2	7011							
11218.4	7011				66.83872668	14.57498616	217.25	575
11218.6	7011							
11218.8	7011						216.75	
11219	7011							
11219.2	7012	16	31	53.09375	66.83947946	14.57628384	217.375	602
11219.4	7012							
11219.6	7012						216.5	
11219.8	7012							
11220	7012				66.84021774	14.57762394	216.1875	701
11220.2	7012							
11220.4	7012						215.0625	
11220.6	7012							
11220.8	7013	16	31	54.703125	66.84093481	14.57902933	214.375	839
11221	7013							
11221.2	7013						216	
11221.4	7013							
11221.6	7013				66.84161467	14.58052416	217.75	923
11221.8	7013							
11222	7013						219	
11222.2	7013							
11222.4	7014	16	31	56.296875	66.842248	14.58211941	217.9375	1023
11222.6	7014							
11222.8	7014						217.5	
11223	7014							

BUNO 168330 KVADR Data
17 March 2022
1631:32Z – 1632:21Z

TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	CALIBRATED_AIRSPEED(KNOTS)	RADAR_ALTITUDE_DATA(FEET)
11223.2	7014				66.8428282	14.58381071	218.375	995
11223.4	7014							
11223.6	7014						218.5	
11223.8	7014							
11224	7015	16	31	57.90625	66.8433519	14.58558801	221.125	948
11224.2	7015							
11224.4	7015						229	
11224.6	7015							
11224.8	7015				66.84380771	14.587457	223.875	887
11225	7015							
11225.2	7015						226.5	
11225.4	7015							
11225.6	7016	16	31	59.5	66.84420358	14.58940395	221.875	817
11225.8	7016							
11226	7016						223.875	
11226.2	7016							
11226.4	7016				66.84456099	14.59139398	232	768
11226.6	7016							
11226.8	7016						229.9375	
11227	7016							
11227.2	7017	16	32	1.09375	66.84487103	14.59343246	224.875	727
11227.4	7017							
11227.6	7017						220.875	
11227.8	7017							
11228	7017				66.84514839	14.59550438	217.75	693
11228.2	7017							
11228.4	7017						216.875	
11228.6	7017							
11228.8	7018	16	32	2.6875	66.845397	14.59759525	217.875	696
11229	7018				IVO Last Recorded Location on Mishap Day			
11229.2	7018						217.75	
11229.4	7018							
11229.6	7018				66.84562172	14.59969659	218.75	798
11229.8	7018							
11230	7018						219	
11230.2	7018							
11230.4	7019	16	32	4.296875	66.84584644	14.60179199	219.875	842
11230.6	7019							
11230.8	7019						219.3125	
11231	7019							
11231.2	7019				66.84609219	14.60387003	218.875	782
11231.4	7019							

BUNO 168330 KVADR Data
17 March 2022
1631:32Z – 1632:21Z

TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	CALIBRATED_AIRSPEED(KNOTS)	RADAR_ALTITUDE_DATA(FEET)
11231.6	7019						218.5	
11231.8	7019							
11232	7020	16	32	5.90625	66.84636871	14.60592544	218.3125	732
11232.2	7020							
11232.4	7020						217.875	
11232.6	7020							
11232.8	7020				66.84668052	14.60794858	217	674
11233	7020							
11233.2	7020						215.5625	
11233.4	7020							
11233.6	7021	16	32	7.5	66.8470308	14.60993106	214.75	609
11233.8	7021							
11234	7021						214.25	
11234.2	7021							
11234.4	7021				66.84741796	14.61187055	214.5	434
11234.6	7021							
11234.8	7021						213.5625	
11235	7021							
11235.2	7022	16	32	9.09375	66.84784032	14.61376294	212.4375	364
11235.4	7022							
11235.6	7022						211.625	
11235.8	7022							
11236	7022				66.84829152	14.61561249	211.8125	324
11236.2	7022							
11236.4	7022						212.25	
11236.6	7022							
11236.8	7023	16	32	10.703125	66.84876753	14.6174275	212.375	344
11237	7023							
11237.2	7023						212.6875	
11237.4	7023							
11237.6	7023				66.84926977	14.61920287	213.0625	490
11237.8	7023							
11238	7023						212.8125	
11238.2	7023							
11238.4	7024	16	32	12.296875	66.84979968	14.62093449	212.125	635
11238.6	7024							
11238.8	7024						212.4375	
11239	7024							
11239.2	7024				66.85035733	14.62261934	213.125	743
11239.4	7024							
11239.6	7024						214	
11239.8	7024							

BUNO 168330 KVADR Data

17 March 2022

1631:32Z – 1632:21Z

Profile indicative of short
duration terrain crossing at exit
point of valley

TIME	Sequence Number	HOURS	MINUTES	SECONDS	LATITUDE(DEGREES)	LONGITUDE(DEGREES)	CALIBRATED_AIRSPPEED(KNOTS)	RADAR_ALTITUDE_DATA(FEET)
11240	7025	16	32	13.90625	66.85094607	14.62424903	214.6875	868
11240.2	7025							
11240.4	7025						213.75	
11240.6	7025							
11240.8	7025				66.85156591	14.62581687	215.625	1007
11241	7025							
11241.2	7025						215.875	
11241.4	7025							
11241.6	7026	16	32	15.5	66.85221593	14.627321	216.5625	995
11241.8	7026							
11242	7026						216.75	
11242.2	7026							
11242.4	7026				66.85290249	14.62873695	217.125	963
11242.6	7026							
11242.8	7026						216.875	
11243	7026							
11243.2	7027	16	32	17.09375	66.85362493	14.6300535	216.0625	926
11243.4	7027							
11243.6	7027						216.6875	
11243.8	7027							
11244	7027				66.8543772	14.63127567	216.75	906
11244.2	7027							
11244.4	7027						217.1875	
11244.6	7027							
11244.8	7028	16	32	18.703125	66.85515253	14.63242072	218.375	869
11245	7028							
11245.2	7028						218.3125	
11245.4	7028							
11245.6	7028				66.85594286	14.6335076	218.9375	843
11245.8	7028							
11246	7028						219.75	
11246.2	7028							
11246.4	7029	16	32	20.296875	66.85674735	14.63453748	219.5	802
11246.6	7029							
11246.8	7029						219.3125	
11247	7029							
11247.2	7029				66.85756836	14.63549847	219	777
11247.4	7029							
11247.6	7029						219.0625	
11247.8	7029							
11248	7030	16	32	21.90625	66.85840311	14.63638787	218.375	738
11248.2	7030							
11248.4	7030						218.375	

BUNO 168330 KVADR Data

17 March 2022

1631:32Z – 1632:21Z

Polaris ACC Bodø - RADAR and radio communication summary regarding GHOST31 flight March 18 2022.

All times UTC.

Freq 118,55Mhz (Polaris ACC): (GHOST 31 departed ENBO 13:33)

13:42:42 GHOST31 checks in on 118,55MHz "Southbound"

14:09:20-14:11:12 "Unreadable" from ATC "contact Stokka freq 120,4Mhz"

There are no transmissions from GHOST31 on 118.55 MHz between 14:11:12 to 15:30:00.

MSSR radar Polaris ACC:

Radar contact between 13:32:44 (departure) until time 13:59:26 (BOO VOR R-211 46Nm)

altitude 1000-1100 ft.

Radar contact between 14:01:50 (STO VOR R-015 35Nm) until time 14:05:25 (STO VOR R-016 28Nm)

altitude 1000-1200 ft.

Radar contact between 14:11:15 (STO VOR R-017 11Nm) until time 14:24:45 (BNN VOR R-320 12Nm)

altitude 800-1100 ft.

Radar contact between 14:26:15 (BNN VOR R-294 11Nm) until time 14:26:44

altitude 900 ft.

Radar contact between 14:32:05 (BNN VOR R-226 14Nm) until time 14:36:47

altitude 300-900 ft.

Radar contact between 14:38:16(BNN VOR R-165 12Nm) until time 14:39:45(BNN VOR R-149 9 Nm)

altitude 600 ft.

Radar contact between 14:44:25(BNN VOR R-077 6 Nm) until time 14:45:30

altitude 900 ft.

Radar contact between 14:46:30 (BNN VOR R-042 6 Nm) until time 14:55:00

altitude 900 ft.

Last shown on MSSR radar at position 65536N0125116E time 14:55, 900 feet, turning southeast.

ENST (Stokka AFIS) last contact with GHOST31 time 1455.

ENMS (Mosjoen AFIS) in contact with GHOST31 time 1458-1501

ENRA (Rana AFIS) in contact between 1504-1510. GHOST31 informed ENRA (Rana AFIS) "Entering your zone in the west to leave to the north" No further contact after that.

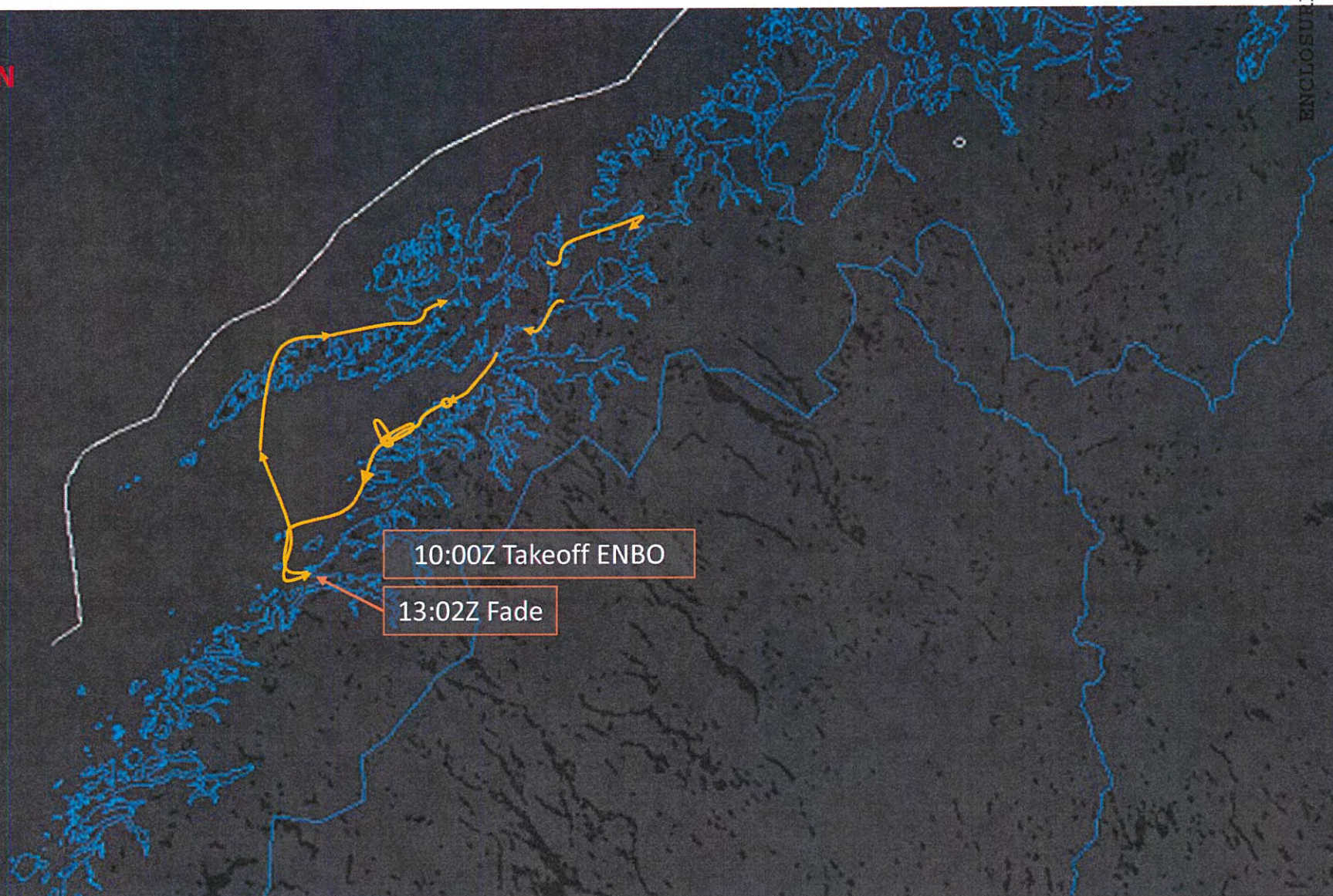
Info

- Gul linje viser der vi har hatt radarkontakt med GT31.
- CRC har ikke på noe tidspunkt hatt radiokontakt med GT31 .
- På siste posisjon ble GT31 sett med to IFF plott med 12 sekunders mellomrom. Høyde på plott 1 var 2800fot, høyde på plott 2 var 2900fot. På bakgrunn av kun to plott kan vi ikke med sikkerhet si noe om hvilken HDG GT31 hadde.

Info

- Yellow line shows where we have had radar contact with GT31.
- CRC has at no time had radio contact with GT31.
- In the last position, the GT31 was seen with two IFF plots at 12 second intervals. Height of plot 1 was 2800 feet, height of plot 2 was 2900 feet. Based on only two plots, we can not say with certainty which HDG GT31 had.

UNTATT
OFFENTLIGHETEN



ENCLOSURE (36)

UNTATT
OFFENTLIGHETEN

13:33Z Takeoff ENBO

15:19Z Plots,
66.41'23N-014.10'53E
2900fot (M3-høyde)
Sett av RH VVØ IFF,
søkeradar var NONOP

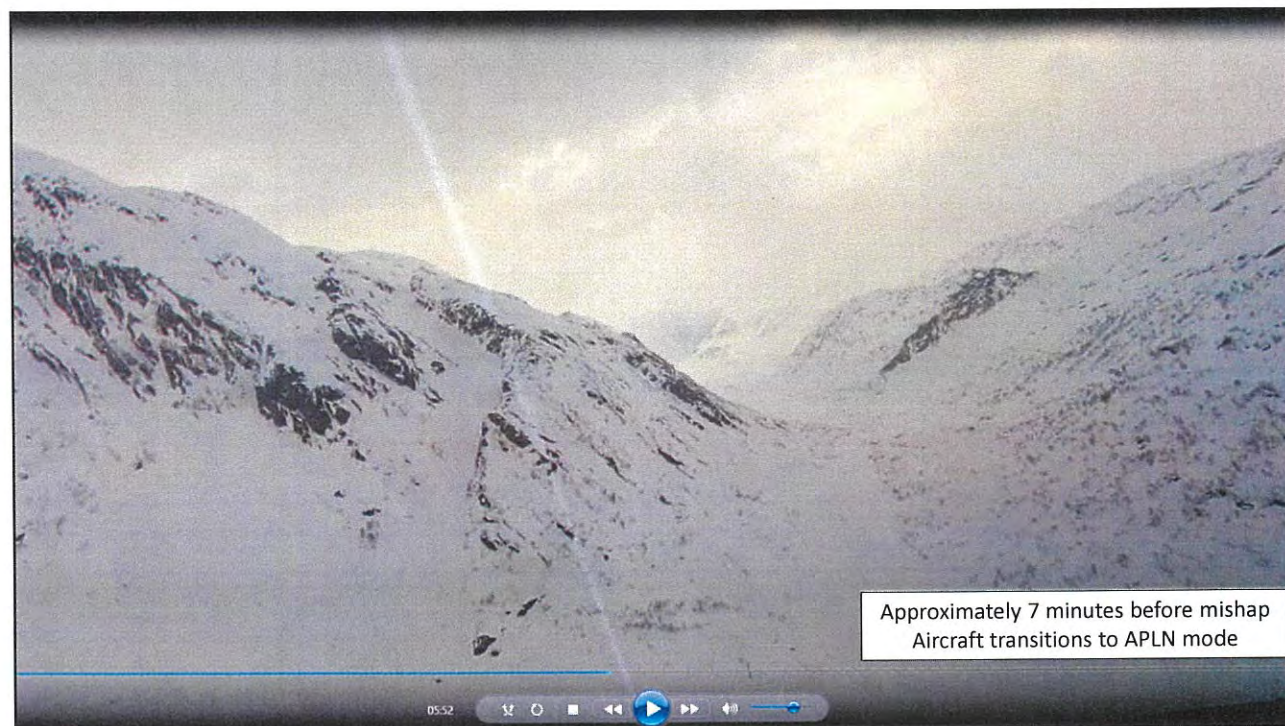
14:55Z Fade

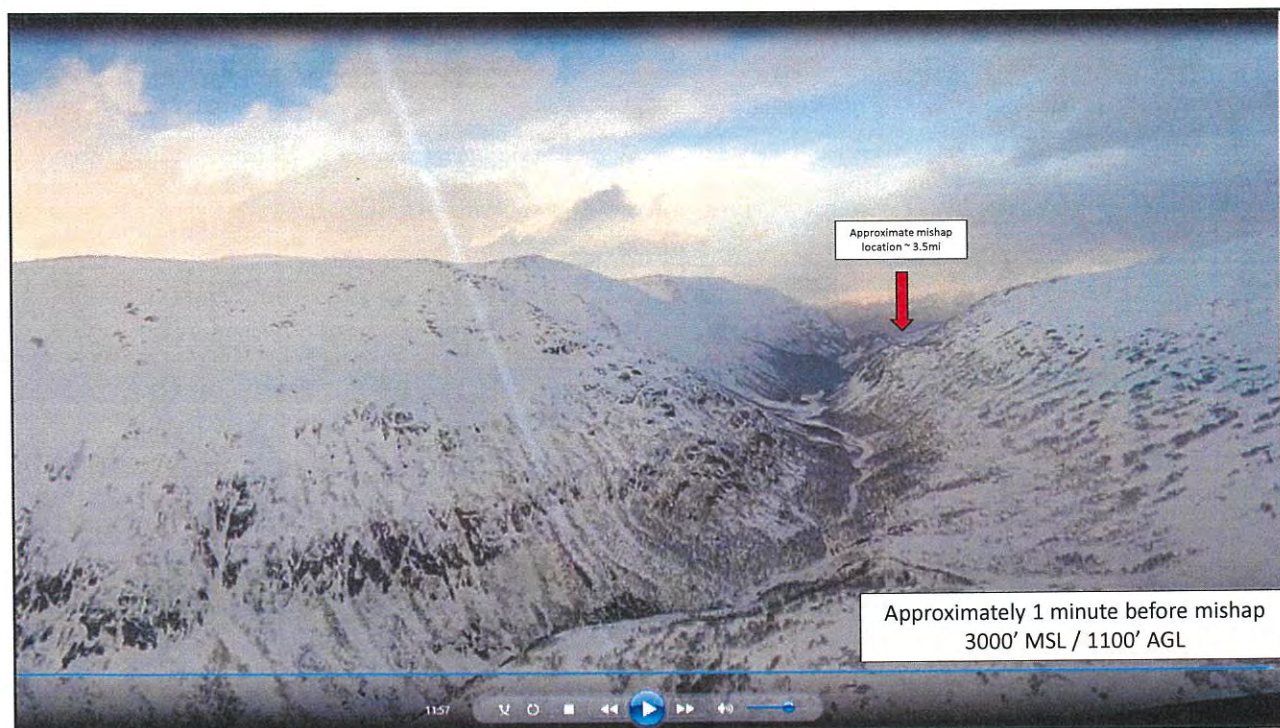
GHOST 3-1 Recovered GoPro Video Footage 18 March 22

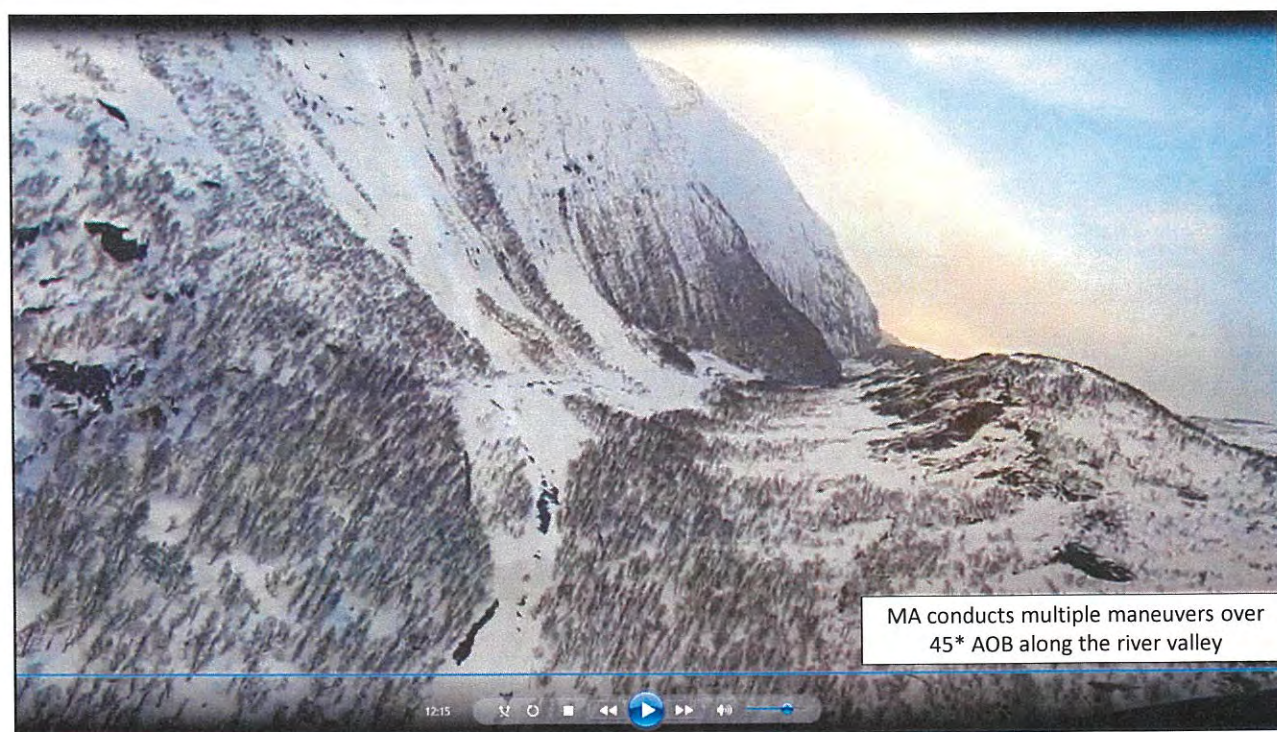
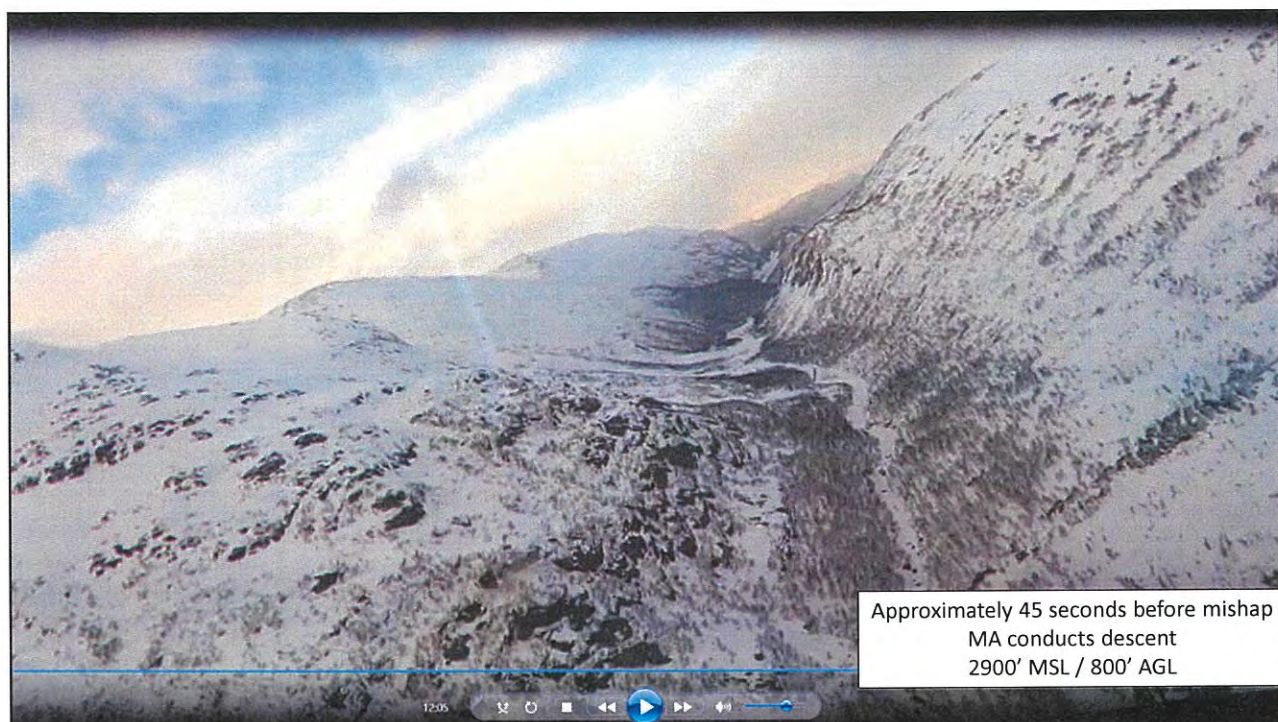
- Altitudes and Airspeeds were correlated from KVADR data
 - Estimated accuracy within 15 sec
- Profiles listed are approximate based upon:
 - Aircraft performance characteristics
 - Configuration
 - Auditory and visual information from the video recording

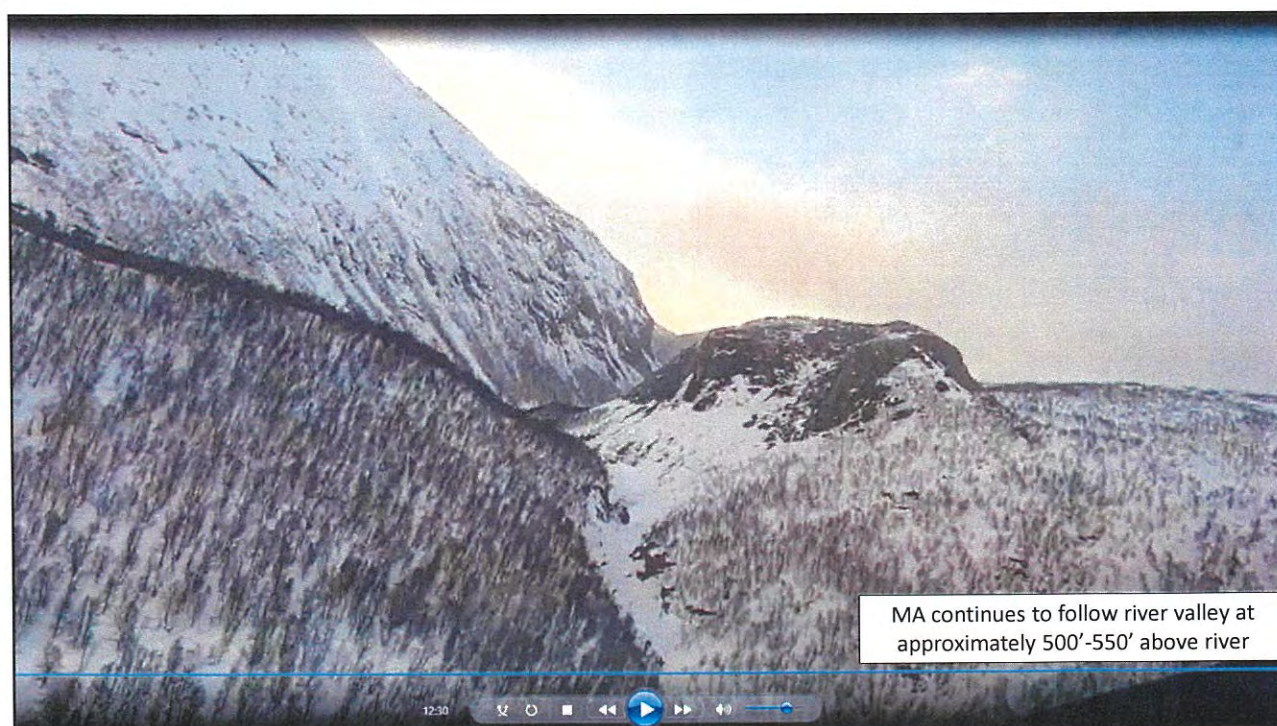
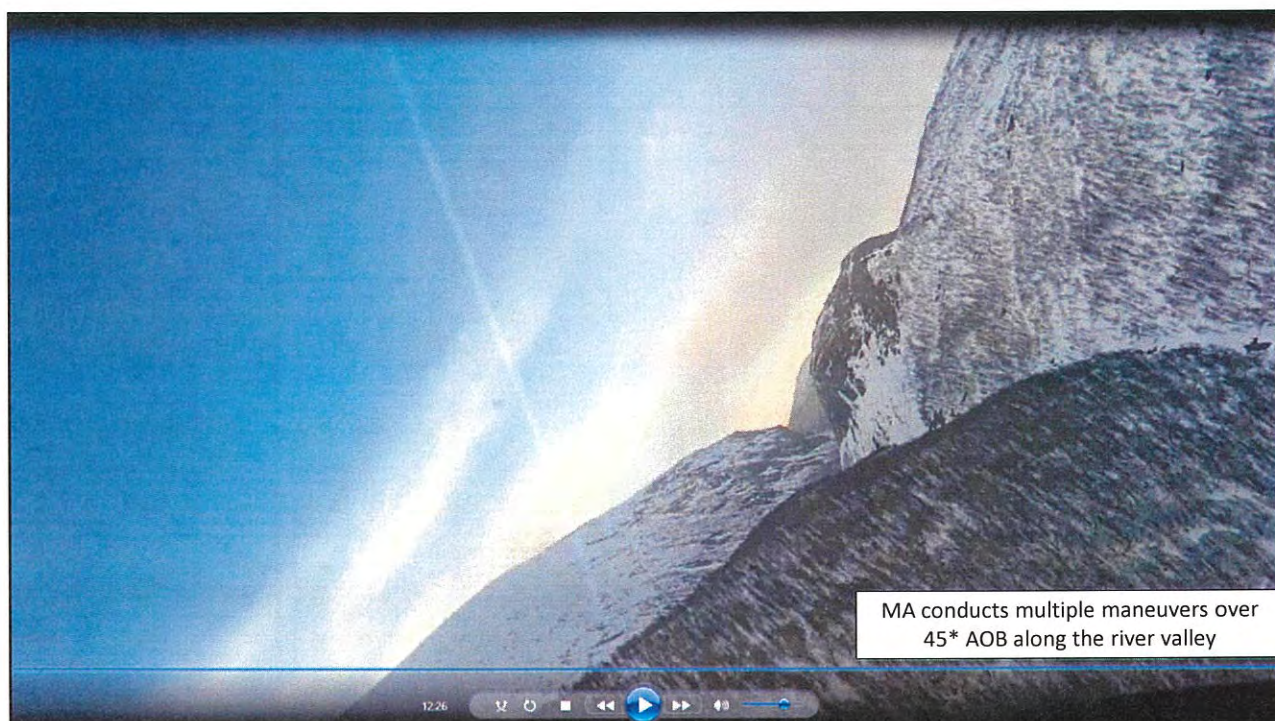


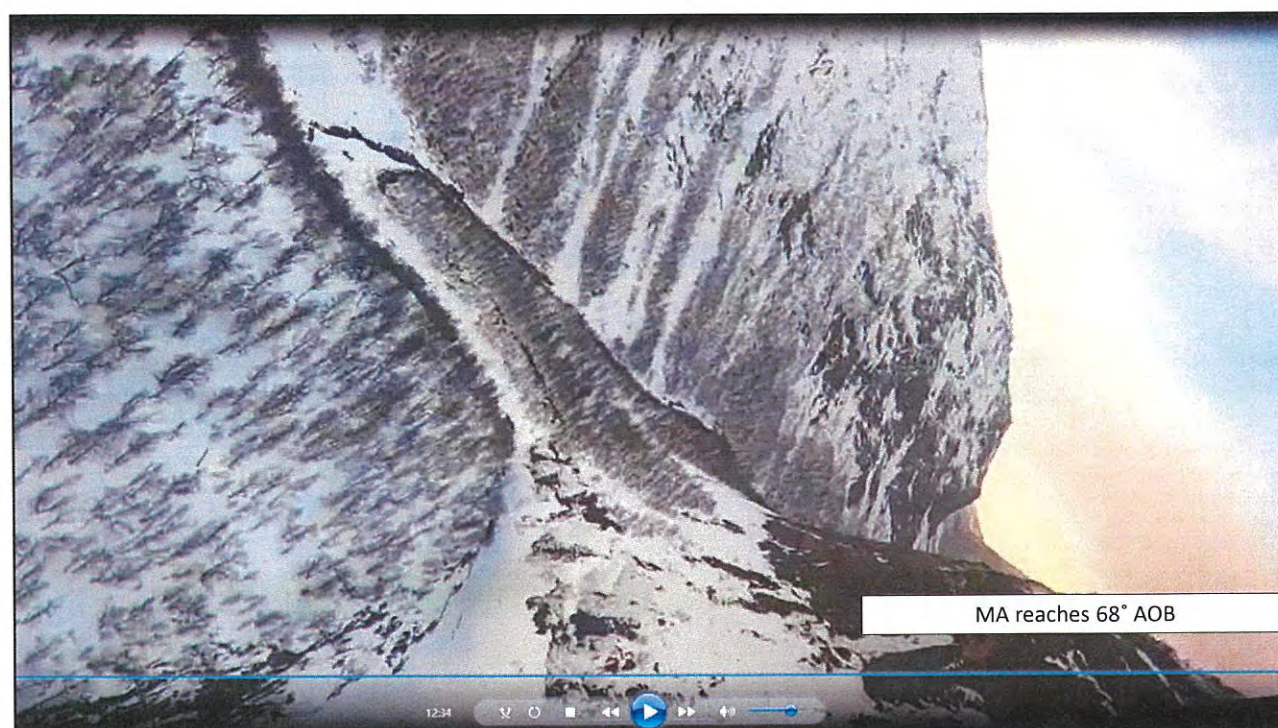








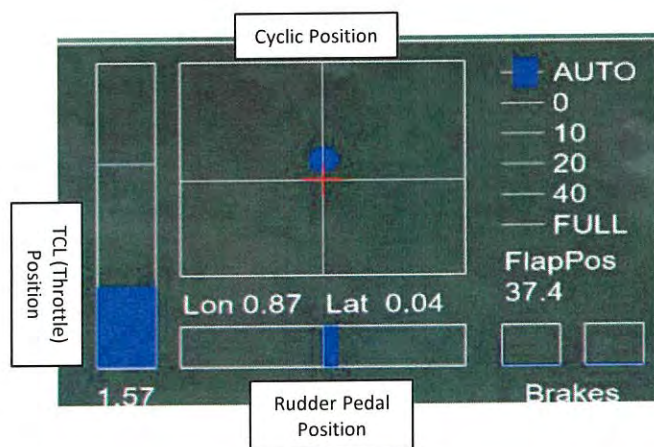






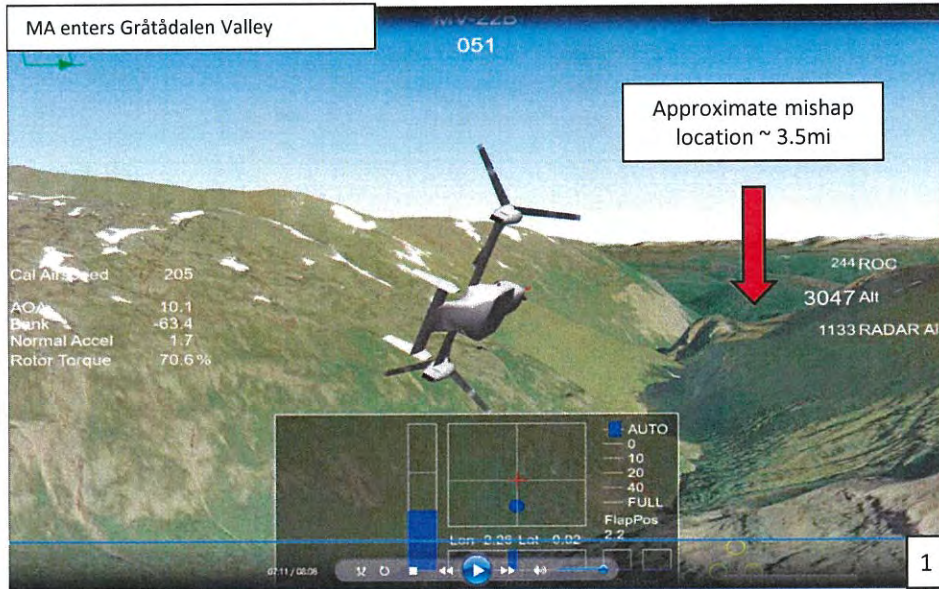
GHOST 3-1 FST Mishap Flight Recreation 18 March 22

- Depiction created from MA recovered KVADR data



GT31 18 March 2022 FST Recreation

Images depict flight profile of BUNO 168330 as flown during 18 Mar 22 mishap. Created using recovered KVADR data.



GT31 18 March 2022 FST Recreation

Images depict flight profile of BUNO 168330 as flown during 18 Mar 22 mishap.



GT31 18 March 2022 FST Recreation

Images depict flight profile of BUNO 168330 as flown during 18 Mar 22 mishap.

MA stabilizes momentarily
Approximate last frame of GoPro footage



MA conducts right hand turn to follow river bed and avoid terrain
Full aft stick applied



MA continues right hand turn, passes 73° AOB

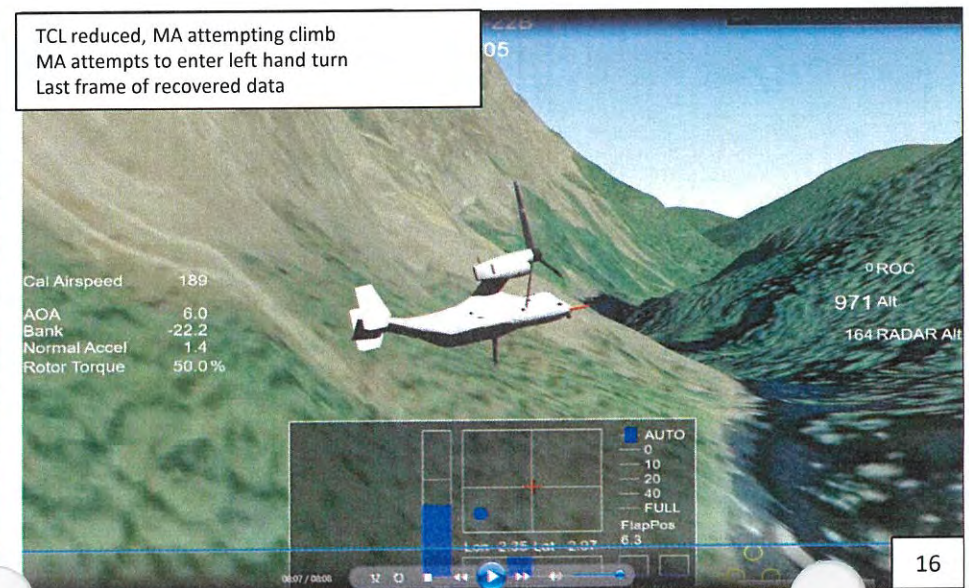
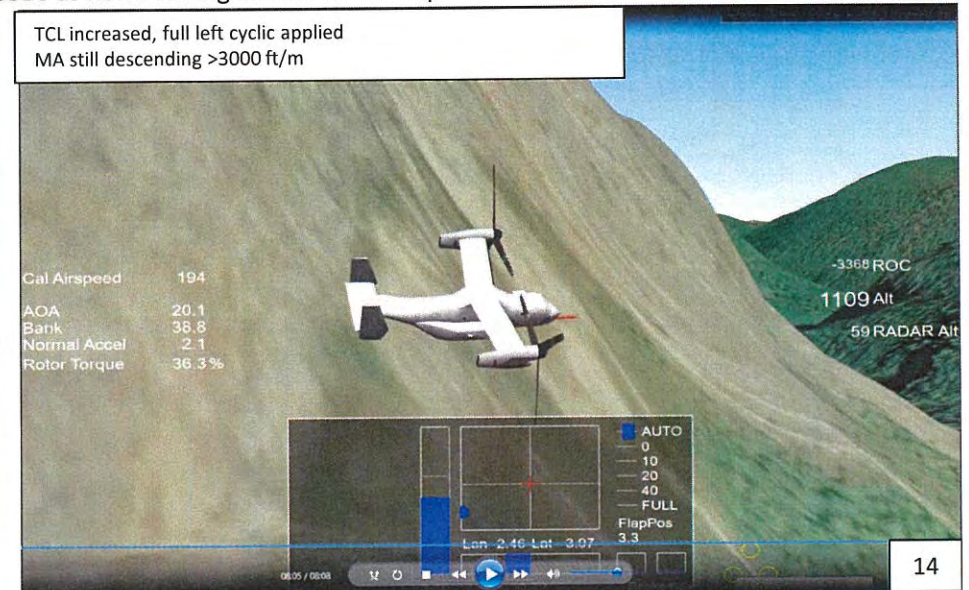


Max AOB reached of 88.5°
Full aft cyclic applied, TCL reduced to idle



GT31 18 March 2022 FST Recreation

Images depict flight profile of BUNO 168330 as flown during 18 Mar 22 mishap.



First Interview 1 April 2022

Name / Rank / Billet: (b)(6), (b)(7)c Bodø, Norway

Can you describe your role in the search and rescue efforts of GT31?

I was the sensor operator and navigator on the helicopter. (b)(3), (b)(6), (b)(7)c was in charge of the aircraft.

Can you describe how you were notified of the mishap and tasked?

We were on our standard alert when we received notice of the possible missing Osprey. We were notified at 1900 (1800Z) by our dispatch desk.

When did you launch?

We launched at 1935. Our standard scramble time is 15 minutes, but due to the mountains and the weather, we had to take extra time to plan for that.

Can you describe the weather that caused your delay?

The weather was very bad, and it had deteriorated in the mountains. We tried three times to get into the valley of the Osprey from the south before having to go all the way around to the north. The weather was very bad. Showers and snow showers. Visibility was very bad. The clouds were around 2000', and we had to be very careful entering the valley. Inside the valley, the winds were strong, coming from the south down the valley.

Can you describe how you located the aircraft?

We originally were asked to proceed to the last radar contact location. On the way, we were told that the aircraft may have gone through the Gråttådal valley and so we turned in that direction. There was a P-3 in the area that had not picked up any signals. Once we got to the area we began searching. On our second pass, we picked up the emergency locator beacon. Once we got into the area, we were able to see signs of the aircraft in the terrain, through the trees.

Can you describe what you saw at the crash site?

It was not good. There were not many large pieces of the aircraft that we could see. There was a hole in the trees, maybe 50m x 100m, where you can see the aircraft went through. There was maybe, one large piece of the aircraft, a couple of meters long.

Can you describe the site itself, it's orientation in the valley?

The aircraft appeared to be going up the hill, it was spread out going up the hill, not in one area. From southwest to northeast.

Can you describe your attempts to rescue the crew?

We attempted to lower a doctor and rescuer. But the winds were too high and the weather started to come down. We did not want to become trapped in the valley.

Based on your experience, do you believe any of the crew may have survived the mishap?

No, I don't believe so. There was not much of the aircraft left.

Enclosure (39)

01.04.2022, 15:42

TouchTime

330 skv Bodø

330 SAR AMB-rapport

Helikoptertype: Sea King

SAR/AMB: SAR

SAR/AMB Nr: 020

Evt B-rapport etc:

AMIS-nr:

Løpenummer: 128

Oppdrag kort fortalt: Savnet Opsprey V-22

Scrambletidspunkt: 2022-03-18 19:00

Take off tid: 2022-03-18 19:35

Reaksjonstid i minutter: 35

Beredskapsstatus ved scramble: 15 min

Situasjon ved scramble: Normal standby

☒ Var det avvik på reaksjonstid?

☒ Planlegging

☒ Vær

☒ Andre forsinkende faktorer

Spesifiser andre forsinkende faktorer om nødvendig: Behov for mer informasjon før avgang

Besetning

Base: Bodø

Fartøysjef: (b)(6), (b)(7)c

2. flyger: (b)(6), (b)(7)c

Sys.op./ Nav: (b)(6), (b)(7)c

Maskinist: (b)(6), (b)(7)c

<https://sc.hovedredningssentralen.no/#/checklistdata/153921>

1/5

01.04.2022, 15:42

TouchTime

Redningsmann: (b)(6), (b)(7)c

Lege: (b)(6), (b)(7)c

Flightlogg:

1935-2155 ENBO-ENBO

Total flytid: 2.3

Derav IMC: 0.0

Derav Natt: 2.3

Derav NVG: 2.2

SAR Oppdrag

Om oppdraget

Type oppdrag: Luft

Stand til kystlinje:

område / sted: Helgeland- Bodø

Datum/posisjon:: N 6650.84 E 01436.37

Datum/posisjon pålitelighet: Usikker

☒ Ble det gjennomført SØK?

Siste sikre posisjon: N 6650.84 E 01436.37

Start søk: 2022-03-18 19:55

Slutt søk: 2022-03-18 21:05

Søksobjekter

☒ Luftfartøy

☒ Nødpeilesender

Type søk

<https://sr.hovedredningssentralen.no/#/checklistdata/153921>

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01.04.2022, 15:42

TouchTime

- ☒ Visuelt søk
 - ☒ Elektronisk søk
 - ☒ Contour
- Gjennomsnittlig høyde: 500
Track-spacing:

Resultat SØK

- ☒ Ble det gjort funn?
- Funnsted: N6659,79 E01436,42
- ☒ Luftfartøy
 - ☒ Nødpeilesender

Funn metode

- ☒ Funnet med NVG
 - ☒ Funnet med annet
- Spesifiser funnet med annet: ELT

Utfyllende redningsdetaljer

- ☒ Utfyllende redningsdetaljer

Ressurser ved redningsoppdrag

Utstyr benyttet

- ☒ Benyttet radar
- ☒ Benyttet varmesøkende kamera
- ☒ Benyttet NVG
- ☒ Benyttet peiler

<https://sr.hovedredningssentralen.no/#/checklistdata/153921>

3/5

01.04.2022, 15:42

TouchTime

Generell status pasient / reddede

Vær som påvirket oppdraget

☒ Var det vær som påvirket oppdraget?

☒ Snø

☒ Skydekke

Skydekke i antall fot: 0-2000

☒ Vind

Vindretning/styrke: 15-45

☒ Mørke

☒ Sikt

Sikt i meter: 5-10+

☒ Turbulens

Effekten av sensorer

Effekten av varmesøkende kamera: Noe

Effekten av NVG: Avgjørende

Effekten av RADAR: Noe

Oppfølging

Oppsummering av oppdraget

Oppdraget ble: Fullført

Utfyllende kommentar:

Oppdraget var søk etter savnet Osprey V-22 i området mellom Svartisen og Bodø. Vi brukte litt tid før avgang på å samle mest mulig informasjon for å prøve å starte et søk på rett sted, samt få et bilde av hva vi lette etter. Vi ble bedt, av HRS, om å dra til Storglomvatnet for å starte søk da det var siste bekreftede radar observasjon. Noen snøbyger skapte noen utfordringer på veien inn, men etter hvert kom vi oss til området og fikk søkt dette området

<https://sr.hovedredningssentralen.no/#/checklistdata/153921>

4/5

01.04.2022, 15:42

TouchTime

ganske godt. Odin-50, Norsk P3-C Orion, lå over oss og søkte etter signaler samt videreformidlet beskjeder fra oss når vi var utenfor radiodekning. Etter hvert fikk vi beskjed om at det savnede flyet mest sannsynlig hadde fløyet ned Gråttådalen. Vi satte dermed kursen dit samtidig som vi også satte opp for elektronisk søk på VHF og UHF guard. Kun kort tid etter at vi startet søk i Gråttådalen plukket vi opp ELT signaler på VHF-guard. På andre passering observerte vi IR-strobe og så tydelige merker i terrenget etter et havari, dette var 2105L. Ny passering bekreftet havaristed. Vi rapporterte funn 2117L. Deretter gikk vi inn en gang til for å forsøke å heise ned Redningsmann og Lege. Dette måtte avbrytes på grunn av at været forverret seg ganske raskt og vi ønsket ikke å bli værfast inne i Gråttådalen. Vi var sikre på at ingen kunne ha overlevd basert på hva vi så på havaristedet. Returnerte deretter Bodø. Støttet HRS og Sjef Luft med nødvendig briefinger etter landing.

Rapporten ble godkjent og signert 2022-03-19 13:18 av (b)(6), (b)(7)c Versjon:1

Rapporten er - Unntatt offentlighet - iht. Offentleglov §13, 1.ledd, jfr. Forvaltningslov §13, 1. ledd, nr. 1 og 2

330 according to Bodø

330 SAR AMB Report

Helicopter type: Sea King

SAR / AMB: SAR SAR /

AMB No: 020 Possible B-

report etc: AMIS no:

Serial number: 128

Assignments in brief:

Missed Opsprey V-22 Scramble time:

2022-03-18 19:00 Take off time : 2022-03-18

19:35 Reaction time in minutes: 35

Emergency status in case of scramble: 15

min Situation in case of scramble: Normal

standby Were there deviations in reaction

☒ time?

☒ Planning

☒ Weather

☒ Other delaying factors

Specify other delaying factors if necessary: Need more information before departure

Crew

Base: Bodø

Commander: (b)(6), (b)(7)c

Tore 2nd pilot: (b)(6), (b)(7)c

Sys.op./ Nav: (b)(6), (b)(7)c

Engineer: (b)(6), (b)(7)c

Rescuer: (b)(6), (b)(7)c Doctor:
(b)(6), (b)(7)c Flight log: 1935-2155
ENBO-ENBO Total flight time: 2.3 Of
which IMC: 0.0 Of which Night: 2.3 Of
which NVG: 2.2

SAR Mission

About the assignment

Type of assignment:

Distance to

Baseline: Area / location:

Helgeland- Bodø Date / position :: N

6650.84 E 01436.37 Date / position

☒ reliability: Uncertain Was the SEARCH carried out?

Last safe position: N 6650.84 E 01436.37

Start search: 2022-03-18 19:55 End search:

2022-03-18 21:05

Search objects

☒ Aircraft

☒ Emergency beacon transmitter

Type of search

- ☒ Visual search
- ☒ Electronic search
- ☒ Contour
- Average height: 500
- Track spacing:

Result SEARCH

- ☒ Were any discoveries made?
- Site : N6659.79 E01436.42 Aircraft
- ☒ Emergency beacon transmitter
- ☒

Find method

- Found with NVG
- Found with other
- Specify found with other: ELT

Supplementary rescue details

- ☒ Supplementary rescue details

Resources for rescue missions

Equipment used

- ☒ Used radar
- ☒ Used heat-seeking camera
- ☒ Used NVG
- ☒ Used bearings

General status patient / rescued

Weather that affected the mission Was it weather

☒ that affected the mission?



☒ Snow Cloud

cover Cloud cover in number of

☒ feet: 0-2000 Wind Wind direction /

strength: 15-45 Dark Visibility

☒ Visibility in meters: 5-10 +

☒ Turbulence



he effect of sensors

The effect of heat-seeking camera: Something

The effect of NVG: Decisive

The effect of RADAR: Something

Follow-up

Summary of the assignment The assignment was:

Completed **Additional comment:** The assignment was

a search for the missing Osprey V-22 in the area

between Svartisen and Bodø. We spent some time before departure to gather as much information as possible to try to start a search in the right place, as well as get a picture of what we were looking for. We were asked, by HRS, to go to Storglomvatnet to start a search when it was the last confirmed radar observation. Some snow showers created some challenges on the way in, but eventually we got to the area and searched this area

pretty good. Odin-50, Norwegian P3-C Orion, lay over us and searched for signals as well as relayed messages from us when we were out of radio coverage. Eventually we were told that the missing plane had most likely flown down Gråttådalén. We thus set the course there at the same time as we also set up for electronic search on VHF and UHF guard.

Only a short time after we started searching in Gråttådalén, we picked up ELT signals on VHF-guard. On the second pass we observed IR strobe and saw clear marks in the terrain after an accident, this was 2105L. New passage confirmed crash site. We reported findings 2117L. Then we went in again to try to hoist down Rescuer and Doctor. This had to be canceled due to the weather deteriorating quite quickly and we did not want to become weatherproof inside Gråttådalén. We were sure that no one could have survived based on what we saw at the crash site. Then returned to Bodø. Supported HRS and Sjef Luft with necessary briefings after landing.

The report was approved and signed 2022-03-19 13:18 by (b)(6), (b)(7)c Version: 1 The report is - Excluding the public - according to Public Law §13, 1st paragraph, cf. Public Administration Act §13, 1st paragraph, no. 1 and 2

SAR/AMB rapport for 330 skv avd Bodø, oppbevares 12 mnd på opsen.

TID	LOGG	
—	FUNN/NØDP-SØNDØR GRATADØB	
	6650.79N	
	01436,42E → 01436,37	
—	PLANLEGGING VAR NØDVENDIG PÅ VÆR	
	FØR T/O	
Oppdragsdetaljer : (Sykdom, Skade, LRS, TLFnr, Comm, mm)		
SAVNET OSPRØY SYD AV BODØ		
Gen Status Pas (0-7)/reddede	AMIS:Nr	HRS: Nr

SAR/AMB rapport for 330 skv avd Bodø, oppbevares i 12 mnd på opsen.



Dato: 18/3-22	Crew: PET/AND/PAU/BER/GUL/STE	
Utkalt: 1900	Pos 6650,79 N 01436,42 E	
SAR/AMB	Ank: —	Avg: —

ENCLOSURE (40)

Registrerte landinger:

LANDING	STED/POSISJON	AVGANG
	BODØ	1935
2155	BODØ	

Fuel:

Tid					
Fwd					
Aft					

ORG 3
ORG Name MM261
Aircraft Data: MODEX

NALCOM MA
SCHEDULED INSPECTIONS REPORT
11 MAR 2022 - 07 APR 2025

DATE: 07 APR 2022
TIME: 1347
REQ BY: (b)(3), (b)(6), (b)(7)c
PAGE: 1 of 2

MODEX	BUNO/Serno	Assy	Position Code	Task Name	Location	Interval	When Due		Current	Remaining
		Cd					Date	Units		
14	000117164	AYNE		560 HR INSPECTION	MISHAP	560 Hour		1237.700	1055.000	182.700
	168330	AYNE		56 DAY INSPECTION	MISHAP	56 Day	19 APR 2022			12
		AYNE		70 FLIGHT HOUR INSPECTION	MISHAP	70 Hour		1697.700	1685.700	12.000
		AYNE		420 FLIGHT HOUR INSPECTION	MISHAP	420 Hour		1825.800	1685.700	140.100
		AYNE		210 FLIGHT HOUR INSPECTION	MISHAP	210 Hour		1837.700	1685.700	152.000
		AYNE		PLANNED MAINTENANCE INTERVAL IN:	MISHAP	1680 Hour		3307.700	1685.700	1622.000
		AYNE		7 DAY INSPECTION	MISHAP	7 Day	21 MAR 2022			-17
		AYNE		364 DAY INSPECTION	MISHAP	364 Day	01 NOV 2022			208
		AYNE		PHASE D INSPECTION	MISHAP	280 Hour		1907.700	1685.700	222.000
		AYNE		91 DAY INSPECTION	MISHAP	91 Day	03 MAY 2022			28
		AYNE		182 DAY INSPECTION	MISHAP	182 Day	03 MAY 2022			28
		AYNE		4315 FLIGHT HOUR INSPECTION	MISHAP	4315 Hour		4315.000	1685.700	2629.300
		AYNE		1000 LANDING INSPECTION	MISHAP	1000 Lndg		4000.000	3492.000	508.000
		AYNE		900 DAY INSPECTION	MISHAP	900 Day	20 APR 2024			744
		AYNE		5 YEAR INSPECTION	MISHAP	5 Year	23 APR 2024			747
		AYNE		140 FLIGHT HOUR INSPECTION	MISHAP	140 Hour		1767.700	1685.700	82.000
	168330-5	AYNE		CRASH POSITION INDICATOR TEST (A)	MISHAP	364 Day	01 NOV 2022			208
	A-1696	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		1511.000	1499.000	12.000
	A-1877	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		1150.000	1138.000	12.000
	A-1900	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		956.000	944.000	12.000
	A-1939	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		1652.000	1640.000	12.000
	A-253	AYNE		35 HOUR NEWLY INSTALLED SWASHPL	MISHAP	35 Hour		1202.100	1190.100	12.000
	BEC-0097	AYNE		4480 HR EDDY CURRENT INSP	MISHAP	4480 Hour		4480.000	185.000	4295.000
	BH218389	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		1287.000	1275.000	12.000
	BH418334	AYNE		35 HOUR INSPECTION.	MISHAP	35 Hour		887.000	875.000	12.000
	BH505505	AYNE		35 HR NEWLY INSTALLED SWASHPLAT	MISHAP	35 Hour		1304.800	1292.800	12.000
	EN0025497	AYNE		CABIN EMERGENCY EQUIPMENT INSP	MISHAP	182 Day	03 AUG 2022			118
	EN0033768	AYNE		CABIN EMERGENCY EQUIPMENT INSP	MISHAP	182 Day	03 AUG 2022			118

ENCLOSURE (413)

ORG C3
ORG Name JMM261
Aircraft Data: MODEX

NALCOM MA
SCHEDULED INSPECTIONS REPORT
11 MAR 2022 - 07 APR 2025

DATE: 07 APR 2022
TIME: 1347
REQ BY: (b)(3), (b)(6), (b)(7)c
PAGE: 2 of 2

MODEX	BUNO/Serno	Assy		Task Name	Location	Interval	When Due			
		Cd	Position Code				Date	Units	Current	Remaining
14	NP52446	AYNE		UNDERWATER ACOUSTIC BEACON TEST	MISHAP	364 Day	01 NOV 2022			20
	A-1486	CV2L		364 DAY PROPROTOR HUB CORROSION	MISHAP	364 Day	01 NOV 2022			20
		CV2L		PHASE A INSPECTION	MISHAP	280 Hour		2032.300	1810.300	222.00
	BH307881	CV2R		364 DAY PROPROTOR HUB CORROSION	MISHAP	364 Day	01 NOV 2022			20
		CV2R		PHASE C INSPECTION	MISHAP	280 Hour		1684.300	1462.300	222.00
	CAE130478	T1B	RH	70 HOUR ENGINE INSPECTION	MISHAP	70 Hour		1751.000	1739.000	12.00
		T1B	RH	70 HOUR POWER ASSURANCE	MISHAP	70 Hour		1751.000	1739.000	12.00
		T1B	RH	1680 HR ENGINE INSPECTION - 053A05	MISHAP	1680 Hour		3011.000	1739.000	1272.00
		T1B	RH	2520 HOUR ENGINE INSPECTION - UNS	MISHAP	2520 Hour		3851.000	1739.000	2112.00
		T1B	RH	PHASE B ENGINE INSPECTION	MISHAP	280 Hour		1961.000	1739.000	222.00
		T1B	RH	4200 HR ENGINE INSPECTION - UNS 05	MISHAP	4200 Hour		5531.000	1739.000	3792.00
		T1B	RH	140 FLIGHT HOUR INSPECTION	MISHAP	140 Hour		2331.000	1739.000	592.00
		T1B	RH	6720 HR ENGINE INSPECTION - UNS 05	MISHAP	6720 Hour		8051.000	1739.000	6312.00
	CAE130508	T1B	LH	70 HOUR ENGINE INSPECTION	MISHAP	70 Hour		1549.900	1537.900	12.00
		T1B	LH	70 HOUR POWER ASSURANCE	MISHAP	70 Hour		1549.900	1537.900	12.00
		T1B	LH	1680 HR ENGINE INSPECTION - 053A05	MISHAP	1680 Hour		2938.000	1537.900	1400.10
		T1B	LH	PHASE D ENGINE INSPECTION	MISHAP	280 Hour		1759.900	1537.900	222.00
		T1B	LH	2520 HOUR ENGINE INSPECTION - UNS	MISHAP	2520 Hour		3778.000	1537.900	2240.10
		T1B	LH	4200 HR ENGINE INSPECTION - UNS 05	MISHAP	4200 Hour		5458.000	1537.900	3920.10
		T1B	LH	6720 HR ENGINE INSPECTION - UNS 05	MISHAP	6720 Hour		7978.000	1537.900	6440.10
		T1B	LH	140 FLIGHT HOUR INSPECTION	MISHAP	140 Hour		2258.000	1537.900	720.10
	30005855	YPEE		180 DAY INSPECTION AN/PRC-149 RAD	MISHAP	180 Day	23 FEB 2023			32
		YPEE		448 DAY INSPECTION AN/PRC-149 RAD	MISHAP	448 Day	23 FEB 2023			32
		YPEE		90 DAY INSPECTION AN/PRC-149 RADIC	MISHAP	90 Day	23 FEB 2023			32
	20L5297	YPRH		AIMD) 448 DAY INSPECTION LRU-34/A	MISHAP	448 Day	23 FEB 2023			32

ENCLOSURE (41)

Part No: MV-22B

Nomen: MV-22B AIRCRAFT

Next Highest Inventory Serno: 168330

Next Highest Inventory Nomen: MV-22B AIRCRAFT

Date	Description	Activity	Enter																								
13 MAR 2022	EFFECTIVE THIS DATE PERFORMED ONE TIME MISSING FASTENER REPORT FOR 6LO3 LOWER FORWARD FITTING ASSY. FOUND PIN BROKEN ON DAILY INSPECTION. PERFORMED INVESTIGATION FOR 6LO3 LOWER COMPRESSION LATCH, BROKEN PIECE COULD NOT BE LOCATED.RECOMMEND RELEASE FROM INVESTIGATION. AIRCRAFT RELEASED DSAFE FOR FLIGHT BY AMO. REFER TO MFR: 22011.	VMM261DET1	SGT																								
25 FEB 2022	EFFECTIVE THIS DATE, ACFT BUNO 168330 PREFORMED 91 DAY INSPECTION IAW A1-V22AB-MRC-000. BASE REMAINS 211102 WITH THE NEXT 91 DAY INSPECTION DUE ON 220503.	VMM261DET1	SGT																								
22 FEB 2022	EFFECTIVE THIS DATE, 7 DAY INSPECTION WAS RESCHEDULED FROM 220130 TO 220221 IAW COMNAVIAIRFORINST 4790.2D. NEXT 7 DAY INSPECTION IS DUE AT 220228.	VMM261DET1	LCPI																								
31 JAN 2022	EFFECTIVE THIS DATE, TECHNICAL DIRECTIVE DEFFERAL FOR ASC-123, INSTALLATION OF TACTICAL SYSTEM SOFTWARE ON ACFT BUNO 168330, GRANTED NLT 60 DAYS AFTER RETURN FROM CR22 IAW CNAF MSG DTG 310416Z JAN 22.	VMM261	LCPI																								
07 JAN 2022	EFFECTIVE THIS DATE PERFORMED ONE TIME MISSING FASTENER REPORT FOR RH IB MFD OFF/DAY/NIGHT KNOB.FOUND MISSING DURING POST FLIGHT WALK AROUND RH INBD MFD OFF/DAY/NIGHT KNOB. CONDUCTED A SEARCH OF THE IMMEDIATE AREA AND AROUND THE COCKPIT, COULD NOT LOCATE THE MFD KNOB. CONDUCTED A SEARCH OF THE COCKPIT. RH IB MFD KNOB COULD NOT BE LOCATED. MFD KNOB DOES NOT POSE A THREAT TO AIR WORTHNESS. RECOMMEND RELEASE A/C FROM INVESTIGATION. AMO CONCURS, RELEASE AIRCRAFT, SAFE FOR FLIGHT. REFER TO MCN:28QT9YU MFR#:27004.	VMM261	CPL																								
18 NOV 2021	EFFECTIVE THIS DATE, PERFORMED ONE TIME MISSING FASTNER REPORT ON AIRCRAFT 168330 FOR A RH INBOARD CLAMSHELL STRUT HARDWARE. DURING PEST FLIGHT INSPECTION HARDWARE FOR RH INBOARD CLAMSHELL STRUT WAS MISSING. THE LOWER INTAKE WAS REMOVED TO LOCATE CLAMSHELL STRUT HW LWR. HW WAS NOT FOUND. THE INSTAKE CENTER BODY WAS REMOVED AND BOLT WITH WASHER AND SPACE WAS LOCATED. ONE SPACER STILL UNACCOUNTED FOR. SEARCHED THOROUGHLY IN THE FIREWALL AREAS AND SPACER WAS STILL NOT LOCATED. PERFORMED INVESTIGATION FOR MISSING SPACER COUND NOT LOCATED. RECOMMEND RELEASE OF AIRCRAFT FROM INVESTIGATION. AIRCRAFT RELEASED SFF BY AAMO. REFER TO MFR:21076 AND MCN:28QT7JV.	VMM261	LCPI																								
17 NOV 2021	EFFECTIVE THIS DATE RECEIVED ACFT BUNO 168330 FROM PMI IAW CNAF ATO H510-21 MSG DTG 090517Z NOV 21. HYDRAULIC SAMPLES ARE AS FOLLOWS:TOOK SAMPLE VIA PODS METHOD IAW NAVAIR 01-1A-17 SYS 1 RAN NAVY CLASS 0 SYS 2 RAN NAVY CLASS 0 SYS 3 RAN NAVY CLASS 1. THIS DATE, THE MONTHLY FLIGHT SUMMARY HOURS SINCE NEW WERE VERIFIED TO BE CORRECT. PHASE BASE IS 1627.7 ATSN WITH THE NEXT PHASE 'D' DUE AT 1907.7 ATSN. ACFT CURRENTLY HAS 0 APU STARTS AND 0 BFWS. THE FOLLOWING INSPECTIONS HAVE BEEN VERIFIED TO MATCH AIRCRAFT LOGBOOK AND OOMA CM ALS.	VMM261	CPL																								
17 NOV 2021	<table><tr><td>INSPECTION</td><td>BASE</td><td>DUE</td><td>INSPECTION</td><td>BASE</td><td>DUE</td></tr><tr><td>56 DAY</td><td>211102</td><td>211228</td><td>91 DAY</td><td>211102</td><td>220201</td></tr><tr><td>70 HR</td><td>1627.7</td><td>1697.7</td><td>140 HR</td><td>1627.7</td><td>1767.7</td></tr><tr><td>4315 HR</td><td>0.0</td><td>0.0</td><td></td><td></td><td></td></tr></table>	INSPECTION	BASE	DUE	INSPECTION	BASE	DUE	56 DAY	211102	211228	91 DAY	211102	220201	70 HR	1627.7	1697.7	140 HR	1627.7	1767.7	4315 HR	0.0	0.0				VMM261	LCPI
INSPECTION	BASE	DUE	INSPECTION	BASE	DUE																						
56 DAY	211102	211228	91 DAY	211102	220201																						
70 HR	1627.7	1697.7	140 HR	1627.7	1767.7																						
4315 HR	0.0	0.0																									
17 NOV 2021	EFFECTIVE THIS DATE, ACFT BUNO 168330 TRANSFERRED TO VMM-261 UPON COMPLETION OF PMI-2. THIS DATE, THE MONTHLY FLIGHT SUMMARY FLIGHT HOURS IN PERIOD AND SINCE NEW WERE VERIFIED TO BE CORRECT. AUTOMATED LOGSET VERIFIED TO BE ON CD-RW AND ENCLOSED IN MANILLA ENVELOPE IN THE BACK OF THE LOGBOOK.	FRC EAST NADEP CP	CIV																								
15 NOV 2021	EFFECTIVE THIS DATE, PMI-2 COMPLETED WITH 1631.2 FLIGHT HOURS IAW MV22B-PMI SPEC. NBNC (NOTED BUT NOT CORRECTED) DISCREPANCIES ARE FORWARDED FOR CUSTODIAN ACTION. HYDRAULIC CONTAMINATION RESULTS UPON COMPLETION OF PMI-2 ARE AS FOLLOWS: SYSTEM I CLASS #0; SYSTEM II CLASS #0; AND SYSTEM III CLASS #1. NEXT, PMI EVENT IS PMI-2 DUE ON 03/27.	FRC EAST NADEP CP	CIV																								
15 NOV 2021	THE FOLLOWING SPECIAL INSP'S ARE COMPLIED WITH AND BASE DATE ESTABLISHED TO BE 211102 AT ACFT HOURS: 1627.7: 70 HR, 140 HR, 210 HR, 280 HR PHASE C INSP, 56 DAY, 91 DAY, 182 DAY, 364 DAY, AND 900 DAY. AIRCRAFT PAINTED MARINE TACTICAL GRAY. THE FOLLOWING TECHNICAL DIRECTIVES WERE INCORPORATED: AFB-0182, ASC-0095, ASC-0114, ASC-0117, AND ASC-0118. THE FOLLOWING TORQUE CHECKS WERE PERFORMED: L/H TAG BOX RETORQUE AFTER 9-18 FLIGHT HOURS IAW SSS 0550. L/H SWASHPLATE RETORQUE AFTER 35 FLIGHT HOURS IAW SSS 0550. R/H SWASHPLATE RETORQUE AFTER 35 FLIGHT HOURS IAW SSS 0550. R/H MAST NUT BOLTS RETORQUE AFTER 35 FLIGHT HOURS IAW SSS 0550.	FRC EAST NADEP CP	CIV																								
19 SEP 2021	EFFECTIVE THIS DATE, FLAP RIG PIN IS SUSPECTED OF BEING LOST IN SUBJECT AIRCRAFT. A THOROUGH INVESTIGATION WAS CONDUCTED WITH NEGATIVE RESULTS. TCN: SF1535. REFERENCE MTR: 21000219.	FRC EAST NADEP CP	CIV																								
04 AUG 2021	EFFECTIVE THIS DATE, FLAP RIG PIN (PN: 901-232-020-101) IS SUSPECTED OF BEING LOST IN SUBJECT AIRCRAFT. A THOROUGH INVESTIGATION WAS CONDUCTED WITH NEGATIVE RESULTS. TCN: PA3SF4206. REFERENCE MTR: 21000195	FRC EAST NADEP CP	CIV																								
07 APR 2021	EFFECTIVE THIS DATE, A 5/32 ALLEN WRENCH WITH S/N 21000137 FROM TOOL KIT # SM-B-278 IS SUSPECTED OF BEING LOST IN SUBJECT AIRCRAFT. A THOROUGH INVESTIGATION WAS CONDUCTED WITH NEGATIVE RESULTS.	FRC EAST NADEP CP	CIV																								
2021	EFFECTIVE THIS DATE, A 7/32 DRILL BIT WITH S/N 21000101 IS SUSPECTED OF BEING LOST IN SUBJECT AIRCRAFT. A THOROUGH INVESTIGATION WAS CONDUCTED WITH NEGATIVE RESULTS.	FRC EAST NADEP CP	CIV																								

Part No: MV-22B

Nomen: MV-22B AIRCRAFT

Next Highest Inventory Serno: 168330

Next Highest Inventory Nomen: MV-22B AIRCRAFT

Date	Description	Activity	Enter
17 DEC 2020	EFFECTIVE THIS DATE, ACFT BUNO 168330 RECEIVED FROM VMM-365 FOR PMI-2. THIS DATE, THE MONTHLY FLIGHT SUMMARY FLIGHT HOURS IN PERIOD AND SINCE NEW WERE VERIFIED TO BE CORRECT.	FRC EAST NADEP CP	CIV.
17 DEC 2020	EFFECTIVE THIS DATE, TRANSFERRED ACFT BUNO 168330 TO PMI CHERRYPOINT IAW ATO H166-21 MSG DTG 171716Z DEC 20. PHASE BASE ESTABLISHED AT 1405.8 ATSN WITH NEXT PHASE 'C' DUE AT 1685.8 ATSN. THIS DATE THE MONTHLY FLIGHT SUMMARY OPERING HOURS AND HOURS IN LIFE HAVE BEEN VERIFIED TO BE CORRECT. TSN AT TIME OF TRANSFER IS 1626.9 ATSN, 3330 LANDINGS. THE FOLLOWING INSPECTIONS HAVE BEEN VERIFIED TO MATCH AIRCRAFT LOGBOOK AND OOMA CM ALS:	VMM365	CPL
17 DEC 2020	INSPECTION BASE WHEN DUE INSPECTION BASE WHEN DUE 56 DAY 201119 210114 91 DAY 170503 210127 70 HR 1569 1639 140 HR 1405.8 1685.8 210HR 1405.8 11825.8 420 HR 1405.8 1825.8 1680 PMI HR 0000.0 1680.0 4315 HR 0000.0 4315.0 1000 LANDING 0 40000 900 DAY 200930 230319	VMM365	CPL
19 NOV 2020	EFFECTIVE THIS DATE 19 NOV 2020 COCKPIT STANDBY COMPASS CALIBRATION WAS PERFORMED BY (b)(6), (b)(7)c VERIFIED BY (b)(3), (b)(6), (b)(7)c UTILIZING THE GROUND SWING METHOD AT MCAS NEW RIVER, ALL READINGS ARE WITHIN THE LIMITS SPECIFIED BY MV22 IETMS S/S/S 3110. (CONTINUED COCKPIT COMPASS ROSE)	VMM365	CPL
19 NOV 2020	EFFECTIVE THIS DATE 19 NOV 2020 CABIN STANDBY COMPASS CALIBRATION WAS PERFORMED BY (b)(3), (b)(6), (b)(7)c VERIFIED BY (b)(3), (b)(6), (b)(7)c UTILIZING THE GROUND SWING METHOD AT MCAS NEW RIVER, ALL READINGS ARE WITHIN THE LIMITS SPECIFIED BY MV22 IETMS S/S/S 3110. (CONTINUED CABIN COMPASS ROSE)	VMM365	CPL
19 NOV 2020	HD=00, RD=00, RE=00 HD=180, RD=180, RE=00 HD=90, RD=90, RE=00 HD=270, RD=270, RE=00 RE=00 HD=15, RD=15, RE=00 HD=195, RD=195, RE=00 HD=105, RD=105, RE=00 HD=285, RD=285, RE=00 HD=30, RD=30, RE=00 HD=210, RD=210, RE=00 HD=120, RD=120, RE=00 HD=300, RD=300, RE=00 RE=00 HD=45, RD=45, RE=00 HD=225, RD=225, RE=00 HD=135, RD=135, RE=00 HD=315, RD=315, RE=00 HD=60, RD=60, RE=00 HD=240, RD=240, RE=00 HD=150, RD=150, RE=00 HD=330, RD=330, RE=00 RE=00 HD=75, RD=75, RE=00 HD=255, RD=255, RE=00 HD=165, RD=165, RE=00 HD=345, RD=345, RE=00	VMM365	CPL
19 NOV 2020	HD=00, RD=00, RE=00 HD=180, RD=180, RE=00 HD=90, RD=90, RE=00 HD=270, RD=270, RE=00 RE=00 HD=15, RD=15, RE=00 HD=195, RD=195, RE=00 HD=105, RD=105, RE=00 HD=285, RD=285, RE=00 HD=30, RD=30, RE=00 HD=210, RD=210, RE=00 HD=120, RD=120, RE=00 HD=300, RD=300, RE=00 RE=00 HD=45, RD=45, RE=00 HD=225, RD=225, RE=00 HD=135, RD=135, RE=00 HD=315, RD=315, RE=00 HD=60, RD=60, RE=00 HD=240, RD=240, RE=00 HD=150, RD=150, RE=00 HD=330, RD=330, RE=00 RE=00 HD=75, RD=75, RE=00 HD=255, RD=255, RE=00 HD=165, RD=165, RE=00 HD=345, RD=345, RE=00	VMM365	CPL
13 NOV 2020	ON THIS DATE THE AMO HAS DETERMINED TO NOT PLACE AIRCRAFT INTO LEVEL 1 PRESERVATION. AC IS ACTIVELY BEING REPAIRED AND IS EXPECTED TO FLY BEFORE IT REACHES 45 DAYS.	VMM365	CWC
26 AUG 2020	EFFECTIVE THIS DATE, UPON SCREENING OF AIRCRAFT FLIGHT SUMMARY PAGE, IT WAS DISCOVERED THAT THERE WERE 13 ACCUMILITIVE ARREST LANDINGS ERONIOUSLY DOCUMENTED. ARREST LANDINGS DO NOT APPLY TO TYPE MODEL SERIES, NO OTHER DISCREPANCIES NOTED.	VMM365	CPL
13 AUG 2020	EFFECTIVE THIS DATE, 70 FLIHT HOUR INSPECTION WAS RESCHEDULED FROM 1606 ATSN TO 1569 ATSN IAW 4790.2C. NEXT 70 FLIGHT HOUR INSPECTION DUE AT 1639 ATSN.	VMM365	CPL
23 JUL 2020	EFFECTIVE THIS DATE, SUSPENDED 7 DAY AFLOAT INSPECTION DUE TO RETURN FROM DEPLOYMENT ABOARD THE USS BATAAN.	VMM365	CPL
23 JUL 2020	EFFECTIVE THIS DATE, SUSPENDED 35 HOUR AFLOAT INSPECTION DUE TO RETURN FROM DEPLOYMENT ABOARD THE USS BATAAN.	VMM365	CPL
08 JUN 2020	EFFECTIVE THIS DATE, 35 HR INSP WAS RESCHEDULED FROM 1545.8 TO 1536.0. NEXT 35 HR INSP IS DUE AT 1571.0.	VMM365	GYS
08 JUN 2020	EFFECTIVE THIS DATE, 70 HR INSP WAS RESCHEDULED FROM 1545.8 TO 1536.0. NEXT 70 HR INSP IS DUE AT 1606.0.	VMM365	GYS
18 MAY 2020	EFFECTIVE THIS DATE, 35 HR INSP WAS RESCHEDULE FROM 1510.8 TO 1507.4. NEXT 35 HR INSP IS DUE AT 1542.4.	VMM365	GYS
16 APR 2020	EFFECTIVE THIS DATE, PERFORMED ONE-TIME INSPECTION FOR MISSING TOOL. MTR: 20M094 APPLIES. COULD NOT LOCATE MISSING TOOL. REFER TO MCN: 2MF1ILK	VMM365	SGT
02 APR 2020	EFFECTIVE THIS DATE, TSN FOR ACCUMULATED SPHERICAL BEARINGS, THE (4) BEARINGS WERE INSTALLED DURING ACFT PRODUCTION, CURRENT BFWS CTSN: 331	VMM365	CPL
24.MAR 2020	EFFECTIVE THIS DATE, PERFORMED ONE-TIME INSPECTION FOR RH TCL SEARCH LIGHT BUTTON. MFR: 2020-11 APPLIES. COULD NOT LOCATE RH TCL SEARCH LIGHT BUTTON. AIRCRAFT RELEASED FOR FLIGHT BY MMCO. REFER TO MCN: 2MF1GUB	VMM365	SGT
2020	EFFECTIVE THIS DATE, PERFORMED ONE TIME INSPECTION OF RH ENGINE TO VERIFY NO LEAKAGE VISABLE. NO LEAKAGE VISIBLE. ATAF. APAF. AFF. REFER TO MCN: 2MF1CKO.	VMM365	SGT

BUNO	TMS	Transferred In	Transferred Out
168330	MV-22B	11/07/2021 1459	Currently Assigned

LAUNCH	TIME	TFT	SRT	SBTP	TRNG	SUPT	OPER	CONT	TMR/HRS	TMR/HRS	CREW	ICAO	LNC
		30.3	15	30.3	24.2	6.1	0.0	0.0					
01/06/22	20:12 - 01:00	4.4	2	4.4	4.4	0.0	0.0	0.0	1B9 4.4			KNCA	
01/17/22	09:00 - 10:00	1.0	1	1.0	0.0	1.0	0.0	0.0	2J2 1.0		(b)(3), (b)(6), (b)(7)c	KNCA	
02/20/22	13:30 - 14:30	1.0	1	1.0	0.0	1.0	0.0	0.0	2J2 1.0			ZZZZ	
03/01/22	09:15 - 12:00	2.8	1	2.8	2.8	0.0	0.0	0.0	1A1 2.8		TOMKIEWICZ	ENBO	
03/07/22	14:15 - 17:30	3.3	2	3.3	2.0	1.3	0.0	0.0	1A1 2.0	2M4 1.3	TOMKIEWICZ	ENBO	
03/07/22	19:30 - 22:45	3.3	1	3.3	3.3	0.0	0.0	0.0	1A9 3.3			ENBO	
03/09/22	15:00 - 17:50	2.8	2	2.8	0.0	2.8	0.0	0.0	2M4 2.8			ENBO	
03/09/22	20:00 - 22:45	2.8	1	2.8	2.8	0.0	0.0	0.0	1A9 2.8			ENBO	
03/10/22	19:45 - 22:00	2.3	1	2.3	2.3	0.0	0.0	0.0	1A9 2.3		(b)(3), (b)(6), (b)(7)c	ENBO	
03/17/22	15:00 - 18:15	3.3	1	3.3	3.3	0.0	0.0	0.0	1A1 3.3			ENBO	
03/17/22	19:45 - 23:05	3.3	2	3.3	3.3	0.0	0.0	0.0	1A9 3.3			ENBO	

Automated Aircraft Discrepancy Book

ORG: FC3 BUNO: 168330 TMS: MV-22B Next Phase: 222,000 Hours Up/Down/Partial: P Cancel
 MODEX: 14 Assy Cd: AYNE Basic Wgt: 34761 Acft Hours: 1,685.700 Last Flown: 17 MAR 2022 1945

Inspections Near Due Removals Near Due Summary
 Engine/APU/Prop Data Open Work Orders Awaiting Maintenance Control Approval Closed Work Orders Last 10 Flights Acceptance For Flight Consumption



Oxy Qty: 1,800.00 Fuel Grade: JP8 Oil Grade Oz. Of Oil Added Multiplier Description
 Fuel Qty: 1,800.00
 Hot Seat Ind: NO

Ordnance: NO ORDNANCE OR AAS INSTALLED

Special: NONE
 Equipment: ENG 1 NSR, ENG 2 360Z
 MIL-PRF-23699

Limitations: *** DO NOT TEST ICING *** LH ENG COMPR SENSOR TREND DATA FOR 1X MORE FLIGHTS

Pilot Signature Date
 18 MAR 2022 0959

I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on a work order.

Certification of safe for flight condition by MMCO, MO or MCO. If authorized, other persons may sign.

I've reviewed discrepancy reports of 10 previous flights, insured wgt. and balance data filed and accept this aircraft for flight.

Signatures: Plane Captain: (b)(3), (b)(6), (b)(7)c Safe for Flight: (b)(3), (b)(6), (b)(7)c Pilot: CAPT M TOMKIEWICZ

FOR OFFICIAL USE ONLY

A-Sheet Daily Maint. Record Turnaround Maint. Record Aircraft Limitations Daily/Turnaround - Local Card Reference Last 10 A-Sheets

SFF SCREENING CHECKLIST

MODEX: 14

BUNO: 168330

- ☒ Print A/C Equipment / Workload Report
 - ☒ Print A/C Scheduled Inspection Report (Start date 1 year behind, end date 1 year ahead)
Sort: INTERVAL TYPE, INTERVAL, ASSY CODE, POSITION CODE
 - ☒ Screen Scheduled Inspection Report. Verify against time sheet and status board
***AIRFRAME TIME, (6) 35HR, (11) 70HR, (1) 140HR, (1) 210HR, (5) PHASE INSP, 500/1000 LNDGS
 - ☒ Screen Component Removals - 25% / 7 days
 - ☒ Screen ALSS Inspection Report for Personal Equipment - Verify off of flight schedule and DTR reports
 - ☒ Screen Technical Directives Outstanding Report in Configuration Management
 - ☒ Screen Installed Explosives Report in Configuration Management
 - ☒ Verify Compass Cal Initial compass was done
 - ☒ Verify date and time on D&T are enough to cover flight - Print D/T paperwork for Binder.
 - ☒ Verify APU Starts/Hours, and BFWS
 - ☒ Check Oil Consumption: (✓) APU, (✓) #1 ENG, (✓) #2 ENG - QA needs to sign their block weekly
 - ☒ Verify Fuel Samples - Valid for 24 HRS
 - ☒ Screen Open Discrepancies/Verify In Processes in AADB Open Discrepancies tab
 - ☒ Screen Closed Discrepancies in OOMA to include Hourly, Calendar, Landing, Phase, Xfer/Accep insp
 - ☒ Verify 10 previous flights NAVFLIR's with Last 10 A-Sheets tab in AADB. Print Last 10 A-Sheets for ADB. (Refer to Aircraft Flight Report)
 - ☒ Run Ad Hoc ensuring no open tools on A/C
 - ☒ Change M3's to M7
 - ☒ Verify Weight & Balance Form F does not exceed 57,000 lbs in block 16 and is within 180 day expiration timeline
 - ☒ Screen FCF/GT Matrix for anything that might need to be signed off before the flight
 - ☒ Ensure Oil servicing is annotated in the Special Equipment block on A-Sheet of AADB
 - ☒ Annotate If Ord/Special equipment is installed (if applicable) on Part A - If none, annotate "NO ORDNANCE OR AAS INSTALLED"
 - ☒ Update aircraft limitations
 - ☒ Update AC Remarks in OOMA to reflect Safe For Flight
 - ☒ Sign SFF block on A-Sheet in the AADB
- Sign/Date/Time: (b)(3), (b)(6), (b)(7)c 20220318 @ 0943
- ☐ Print Part A once pilot signs for A/C and save summary back up.

Sign/Date/Time: _____

CLOSEOUT CHECKLIST

- ☐ Debrief Pilots to find out if any maintenance/fuel type/significant events have occurred
- ☐ Ensure Pilots/CDI/CDQAR's sign FCF/GT Matrix if anything applied
- ☐ Download screened by QA
- ☐ Ensure NAVFLIR's are downloaded from MSHARP to OOMA by M/A
- ☐ Closeout A/C hours from NAVFLIR on time sheet
- ☐ Closeout Oil Consumption
- ☐ Change all M7's to M3
- ☐ Update hours on board after verifying there is no conflicting data
- ☐ Update Remarks in OOMA to reflect DE ARMED

Qual/Cert/License/Medicals Cross-Tab Report (Condensed)

UIC: <ALL>

Organization Structure: MARINE AVIATION - TECOM - COMMARFORCOM - 2ND MAW - MAG-26 - VMM-261

ENCLOSURE (46)

[illegible]

COMPLETE WORK ORDER FORM

N 7KX	JCN FC3322059	Type WO DF	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 120	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr	Amend		Part		Kit No			
Turn-In Doc	WUC/UNS 57			Trans 11	M/L 1	Item Process 1	Action Taken B	Mal Code	Disc Code J	Type Maint D	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage		Serial Number			Cage		Serial Number				
Part Number		Date Removed 00 0000 0000			Part Number		Date Installed 00 0000 0000				
Man Hrs 0.1	Elapsed Hrs 0.1	Received 18 NOV 2021 1209		EOC	In Work 09 DEC 2021 1505		EOC	Completed 00 0000 0000		WO Status Cd U	
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason RH OB VORTEX GEN REMOVED					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
			97499	901-032-346-115	1	AK1	06	09 DEC 2021 1530	13434068	09 DEC 2021 1904	S/F/1 57/205/1 VC
DISCREPANCY							INITIATOR (b)(3), (b)(6), (b)(7)c				
RH OUTBORN VORTEX GENERATOR REMOVED AND DISCARDED IN FL											
CORRECTIVE ACTION											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			

MCN :28
JCN :FC 59
MODEX :14

NALCOMIS
REQUIRED MATERIAL

Date : 28 APR 2021
Time : 0823
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Sys Reason : RH OB VORTEX GEN REMOVED

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
NO	97499	901-032-346-115	1	AK1	06	09 DEC 2021 1530	13434068	S/F/I 57/205/1 VORTEX GENERATOR PAOZZ KP	09 DEC 2021 1904	343COMPL	01-647-1127

ENCLOSURE (47)

mon : 2001/1/1
JCN : FC3322059
MODEX : 14
Sys Reason : RH OB VORTEX GEN REMOVED

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0823
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 5

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	18 NOV 2021 1209		(b)(3), (b)(6), (b)(7)c	CDISUP	09 DEC 2021 1505	09 DEC 2021 1510	
M4	18 NOV 2021 2045						
M3	19 NOV 2021 1025						
M4	22 NOV 2021 2340						
M3	23 NOV 2021 0557						
M7	23 NOV 2021 0836						
M3	24 NOV 2021 0630						
M4	24 NOV 2021 1202						
M3	29 NOV 2021 0600						
M7	29 NOV 2021 1957						
M3	01 DEC 2021 1633						
M4	03 DEC 2021 1814						
M3	05 DEC 2021 1511						
M4	06 DEC 2021 0007						
M3	06 DEC 2021 0614						
M3	06 DEC 2021 0615						
IW	09 DEC 2021 1505						
M3	09 DEC 2021 1511						
WP	09 DEC 2021 1530						
M3	09 DEC 2021 1851						
M4	10 DEC 2021 0230						
M3	10 DEC 2021 0653						
M7	11 DEC 2021 0204						
M3	11 DEC 2021 0607						
M4	11 DEC 2021 1632						
M3	12 DEC 2021 1521						
M4	13 DEC 2021 0424						
M3	13 DEC 2021 0602						
M4	14 DEC 2021 0155						
M3	14 DEC 2021 0612						
M4	15 DEC 2021 0256						
M3	15 DEC 2021 0604						
M4	15 DEC 2021 1423						
M3	15 DEC 2021 1737						
M3	16 DEC 2021 0136						
M3	16 DEC 2021 0610						
M4	17 DEC 2021 0145						

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ENCLOSURE (47)

MON : 2021/12/27
JCN : FC3322059
MODEX : 14
Sys Reason : RH OB VORTEX GEN REMOVED

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0823
Req By : (b)(3), (b)(6), (b)(7)c
Page : 2 of 5

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	17 DEC 2021 0604						
M4	18 DEC 2021 0138						
M3	18 DEC 2021 0739						
M4	18 DEC 2021 1758						
M3	20 DEC 2021 0621						
M4	23 DEC 2021 1729						
M5	28 DEC 2021 0720						
M3	28 DEC 2021 0814						
M4	28 DEC 2021 1807						
M3	29 DEC 2021 0739						
M7	29 DEC 2021 1653						
M4	29 DEC 2021 1805						
M3	30 DEC 2021 0705						
M7	30 DEC 2021 1317						
M4	30 DEC 2021 1618						
	05 JAN 2022 0605						
	06 JAN 2022 1316						
M4	07 JAN 2022 0221						
M3	07 JAN 2022 0627						
M5	10 JAN 2022 0009						
M4	10 JAN 2022 0150						
M3	10 JAN 2022 0625						
M4	11 JAN 2022 0221						
M3	11 JAN 2022 0607						
M4	12 JAN 2022 0154						
M3	12 JAN 2022 0629						
M7	13 JAN 2022 0251						
M3	13 JAN 2022 0252						
M4	13 JAN 2022 0253						
M3	13 JAN 2022 0620						
M4	14 JAN 2022 1817						
M3	16 JAN 2022 1522						
M7	16 JAN 2022 2044						
M3	20 JAN 2022 1458						
M4	20 JAN 2022 1554						
	24 JAN 2022 0824						
M4	24 JAN 2022 1825						
M3	25 JAN 2022 0613						

WORK : 2021/1/1
JCN : FC3322059
MODEX : 14
Sys Reason : RH OB VORTEX GEN REMOVED

NALCOMIS OMA
Job Status / Worker Hours

Date : 20 APR 2022
Time : 0823
Req By (b)(3), (b)(6), (b)(7)c
Page : 3 of 5

Job Status

Worker Hours

<u>Job</u> <u>Status</u>	<u>Date</u> <u>Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>CDI</u>
M4	27 JAN 2022 1640						
M3	28 JAN 2022 0616						
M4	28 JAN 2022 1625						
M3	31 JAN 2022 0609						
M4	31 JAN 2022 1613						
M3	01 FEB 2022 0637						
M4	03 FEB 2022 1709						
M3	06 FEB 2022 1658						
M4	07 FEB 2022 0054						
M3	07 FEB 2022 0623						
M4	08 FEB 2022 0016						
M3	08 FEB 2022 0622						
M4	10 FEB 2022 0244						
M3	10 FEB 2022 0629						
M4	11 FEB 2022 1203						
M4	14 FEB 2022 0914						
M4	17 FEB 2022 1618						
M2	22 FEB 2022 1442						
M3	23 FEB 2022 0734						
M2	23 FEB 2022 0735						
M3	24 FEB 2022 0911						
M4	28 FEB 2022 1550						
M7	28 FEB 2022 1609						
M3	01 MAR 2022 0620						
M3	01 MAR 2022 1439						
M4	01 MAR 2022 1602						
M4	01 MAR 2022 1914						
M3	02 MAR 2022 0728						
M4	02 MAR 2022 1837						
M3	03 MAR 2022 0715						
M4	03 MAR 2022 1643						
M3	04 MAR 2022 1035						
M4	04 MAR 2022 1620						
M3	05 MAR 2022 0713						
M7	07 MAR 2022 0830						
M4	07 MAR 2022 2326						
M4	08 MAR 2022 0141						
M3	08 MAR 2022 0557						

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ENCLOSURE (47)

MON : 2001/1/1
JCN : FC3322059
MODEX : 14
Sys Reason : RH OB VORTEX GEN REMOVED

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0823
Req By (3), (b)(6), (b)(7)c
Page : 4 of 5

Job Status

Worker Hours

<u>Job</u> <u>Status</u>	<u>Date</u> <u>Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>CDI</u>
M7	08 MAR 2022 2203						
M3	09 MAR 2022 2318						
M4	10 MAR 2022 0212						
M3	10 MAR 2022 1141						
M7	10 MAR 2022 1359						
M3	10 MAR 2022 2259						
M4	11 MAR 2022 2354						
M3	13 MAR 2022 0804						
M7	13 MAR 2022 2048						
M3	13 MAR 2022 2348						
M4	14 MAR 2022 0155						
M3	14 MAR 2022 1432						
M4	15 MAR 2022 0240						
M3	15 MAR 2022 0807						
M7	15 MAR 2022 0853						
M7	16 MAR 2022 0236						
M7	16 MAR 2022 0237						
M3	16 MAR 2022 0913						
M7	16 MAR 2022 1006						
M3	16 MAR 2022 1009						
M4	17 MAR 2022 0435						
M3	17 MAR 2022 1137						
M7	17 MAR 2022 1138						
M3	17 MAR 2022 2335						
M4	18 MAR 2022 0141						
M3	18 MAR 2022 0919						
M7	18 MAR 2022 0920						
M3	23 MAR 2022 1259						
M4	23 MAR 2022 2200						
M3	25 MAR 2022 1457						
M4	25 MAR 2022 1759						
M3	26 MAR 2022 0852						
M4	27 MAR 2022 1905						
M3	28 MAR 2022 0858						
M4	28 MAR 2022 1855						
M4	29 MAR 2022 1124						
M4	29 MAR 2022 1907						
M3	30 MAR 2022 0948						

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ENCLOSURE (4/7)

MCN : 28QT7KX
JCN : FC3322059
MODEX : 14
Syn Reason : RH OB VORTEX GEN REMOVED

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0823
Req By (b)(3), (b)(6), (b)(7)c
Page : 5 of 5

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M4	30 MAR 2022 1634						
M3	31 MAR 2022 0829						
M7	09 APR 2022 0851						
M3	18 APR 2022 0651						
M4	21 APR 2022 1602						
M3	22 APR 2022 0618						
M4	25 APR 2022 0104						
M3	25 APR 2022 0606						
M4	25 APR 2022 2359						
M3	26 APR 2022 0610						
M4	27 APR 2022 0115						
M3	27 APR 2022 0600						
M4	28 APR 2022 0104						
M3	28 APR 2022 0557						

COMPLETE WORK ORDER FORM

N J88A	JCN FC3067680	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr	Amend	Part	Kit No					
Turn-In Doc	WUC/UNS 621204			Trans 11	M/L 1	Item Process 1	Action Taken	Mal Code	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage		Serial Number			Cage		Serial Number				
Part Number		Date Removed 00 0000 0000			Part Number		Date Installed 00 0000 0000				
Man Hrs 18.6	Elapsed Hrs 9.3	Received 08 MAR 2022 0107		EOC I	In Work 13 MAR 2022 0800		EOC I	Completed 00 0000 0000		WO Status Cd P	
Meter	In Process Insp N	Safety EI	Posit RGRN	Fid	Tech	System Reason R GRN BLD TEMP SNSR					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
DISCREPANCY								INITIATOR			
R GRN BLD TEMP SNSR F(P)								(b)(3), (b)(6), (b)(7)c			
CORRECTIVE ACTION											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			

JCN : FC3067680
MODEX : 14
Sys Reason : R GRN BLD TEMP SNSR

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	08 MAR 2022 0107	I	(b)(3), (b)(6), (b)(7)c	200-3-4	13 MAR 2022 0800	13 MAR 2022 1715	AMV
M4	08 MAR 2022 0141	I		NTR	13 MAR 2022 0800	13 MAR 2022 1715	AMV
M3	08 MAR 2022 0557	I					
M7	08 MAR 2022 2203	I					
M3	09 MAR 2022 2318	I					
M4	10 MAR 2022 0212	I					
M3	10 MAR 2022 1141	I					
M7	10 MAR 2022 1359	I					
M3	10 MAR 2022 2259	I					
M4	11 MAR 2022 2354	I					
IW	13 MAR 2022 0800	I					
M3	13 MAR 2022 1716	I					
M7	13 MAR 2022 2048	I					
M3	13 MAR 2022 2348	I					
M4	14 MAR 2022 0155	I					
M4	14 MAR 2022 1432	I					
M4	15 MAR 2022 0240	I					
M3	15 MAR 2022 0807	I					
M7	15 MAR 2022 0853	I					
M3	16 MAR 2022 0236	I					
M4	16 MAR 2022 0237	I					
M3	16 MAR 2022 0913	I					
M7	16 MAR 2022 1006	I					
M3	16 MAR 2022 1009	I					
M4	17 MAR 2022 0435	I					
M3	17 MAR 2022 1137	I					
M7	17 MAR 2022 1138	I					
M3	17 MAR 2022 2335	I					
M4	18 MAR 2022 0141	I					
M3	18 MAR 2022 0919	I					
M7	18 MAR 2022 0920	I					
M3	23 MAR 2022 1259	I					
M4	23 MAR 2022 2200	I					
M3	25 MAR 2022 1457	I					
M4	25 MAR 2022 1759	I					
M4	26 MAR 2022 0852	I					
M4	27 MAR 2022 1905	I					

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ENCLOSURE (77)

MON : 201000A
JCN : FC3067680
MODEX : 14
Sys Reason : R GRN BLD TEMP SNSR

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 2 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	28 MAR 2022 0858	I					
M4	28 MAR 2022 1855	I					
M3	29 MAR 2022 1124	I					
M4	29 MAR 2022 1907	I					
M3	30 MAR 2022 0948	I					
M4	30 MAR 2022 1634	I					
M3	31 MAR 2022 0829	I					
M7	09 APR 2022 0851	I					
M3	18 APR 2022 0651	I					
M4	21 APR 2022 1602	I					
M3	22 APR 2022 0618	I					
M4	25 APR 2022 0104	I					
M3	25 APR 2022 0606	I					
M4	25 APR 2022 2359	I					
M3	26 APR 2022 0610	I					
	27 APR 2022 0115	I					
	27 APR 2022 0600	I					
M4	28 APR 2022 0104	I					
M3	28 APR 2022 0557	I					

FOR OFFICIAL USE ONLY

ENCLOSURE (47)

COMPLETE WORK ORDER FORM

N 883	JCN FC3067674	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N			
Intrm Cd	Code	Basic No	Rev Ltr	Amend	Part	Kit No						
Turn-In Doc	WUC/UNS 62210713			Trans 11	M/L 1	Item Process 1	Action Taken B	Mal Code	Disc Code H	Type Maint B		
REMOVED/OLD ITEM					INSTALLED/NEW ITEM							
Cage		Serial Number			Cage		Serial Number					
Part Number		Date Removed 00 0000 0000			Part Number		Date Installed 00 0000 0000					
Man Hrs 14.8	Elapsed Hrs 7.7	Received 08 MAR 2022 0047		EOC I	In Work 08 MAR 2022 1600		EOC I	Completed 00 0000 0000		WO Status Cd P		
Meter	In Process Insp Y	Safety EI	Posit	Fid	Tech	System Reason L PEN DAMP HEATERS						
(H-Z) Failed/Required Material												
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date	ORD	DDSN	Date RCVD	NOMEN
			97499	901-311-205-107	3	AK7	02	13 MAR 2022	1729	2072GC20	13 MAR 2022	1948 SLIP RING PENC
DISCREPANCY							INITIATOR (b)(3), (b)(6), (b)(7)c					
L PEN DAMP HEATERS F(P)												
CORRECTIVE ACTION												
CORRECTED BY				INSPECTED BY				MAINT CONTROL				

MCN : 28T0883
JCN : FC3067674
MODEX : 14
Sub Reason : L PEN DAMP HEATERS

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0822
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND CLOSED LEFT HAND SPINNER DOME. WIT'D
TQ OF 80 IN-LBS ON SPINNER DOME SCREWS.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

08 MAR 2022 1645

MCN :287
JCN :FC 4
MODEX :14
Sys Reason :L PEN DAMP HEATERS

NALCOMIS
REQUIRED MATERIAL

Date :28 APR 2
Time :0822
Req By (b)(3), (b)(6), (b)(7)c
Page :1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
NO	97499	901-311-205-107	3	AK7	02	13 MAR 2022 1729	2072GC20	SLIP RING PENDULUM SFI: 62, 209, 11 PAOZZ	13 MAR 2022 1948	073COMPL	

ENCLOSURE (47)

MCN : 28T0883
JCN : FC3067674
MODEX : 14
Sys Reason : L PEN DAMP HEATERS

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 2

Job Status

Job Status	Date Time	EOC
M3	08 MAR 2022 0047	I
M4	08 MAR 2022 0141	I
M3	08 MAR 2022 0557	I
IW	08 MAR 2022 1600	I
M3	08 MAR 2022 1645	I
M7	08 MAR 2022 2203	I
M3	09 MAR 2022 2318	I
M4	10 MAR 2022 0212	I
M3	10 MAR 2022 1141	I
M7	10 MAR 2022 1359	I
M3	10 MAR 2022 2259	I
M4	11 MAR 2022 2354	I
M3	13 MAR 2022 0804	I
WP	13 MAR 2022 1729	I
M	13 MAR 2022 1949	I
	14 MAR 2022 0700	I
M3	14 MAR 2022 1401	I
M4	15 MAR 2022 0240	I
M3	15 MAR 2022 0807	I
M7	15 MAR 2022 0853	I
M3	16 MAR 2022 0236	I
M4	16 MAR 2022 0237	I
M3	16 MAR 2022 0913	I
M7	16 MAR 2022 1006	I
M3	16 MAR 2022 1009	I
M4	17 MAR 2022 0435	I
M3	17 MAR 2022 1137	I
M7	17 MAR 2022 1138	I
M3	17 MAR 2022 2335	I
M4	18 MAR 2022 0141	I
M3	18 MAR 2022 0919	I
M7	18 MAR 2022 0920	I
M3	23 MAR 2022 1259	I
M4	23 MAR 2022 2200	I
	25 MAR 2022 1457	I
	25 MAR 2022 1759	I
M3	26 MAR 2022 0852	I

Worker Hours

Name	Toolbox	Start Date	End Date	CDI
(b)(6), (b)(7)c	CDISUP	08 MAR 2022 1600	08 MAR 2022 1644	(b)(3), (b)(6), (b)(7)c
	200-4-1	08 MAR 2022 1640	08 MAR 2022 1644	
	CR-15	14 MAR 2022 0700	14 MAR 2022 1400	
	200-3-1	14 MAR 2022 0700	14 MAR 2022 1400	

MCN : 2810883
JCN : FC3067674
MODEX : 14
Sys Reason : L PEN DAMP HEATERS

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 2 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M4	27 MAR 2022 1905	I					
M3	28 MAR 2022 0858	I					
M4	28 MAR 2022 1855	I					
M3	29 MAR 2022 1124	I					
M4	29 MAR 2022 1907	I					
M3	30 MAR 2022 0948	I					
M4	30 MAR 2022 1634	I					
M3	31 MAR 2022 0829	I					
M7	09 APR 2022 0851	I					
M3	18 APR 2022 0651	I					
M4	21 APR 2022 1602	I					
M3	22 APR 2022 0618	I					
M4	25 APR 2022 0104	I					
M3	25 APR 2022 0606	I					
M4	25 APR 2022 2359	I					
M4	26 APR 2022 0610	I					
M4	27 APR 2022 0115	I					
M3	27 APR 2022 0600	I					
M4	28 APR 2022 0104	I					
M3	28 APR 2022 0557	I					

MCN : 28T0883
JCN : FC3067674
MODEX : 14
Syn Reason : L PEN DAMP HEATERS

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0822
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND CLOSED LEFT HAND SPINNER DOME. WIT'D
TQ OF 80 IN-LBS ON SPINNER DOME SCREWS.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

08 MAR 2022 1645

COMPLETE WORK ORDER FORM

N J88B	JCN FC3067681	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N	
Intrm Cd	Code	Basic No	Rev Ltr		Amend		Part		Kit No	
Turn-In Doc	WUC/UNS 6221130333			Trans 11	M/L 1	Item Process 1	Action Taken	Mal Code	Disc Code H	Type Maint B
REMOVED/OLD ITEM					INSTALLED/NEW ITEM					
Cage		Serial Number			Cage			Serial Number		
Part Number		Date Removed 00 0000 0000			Part Number			Date Installed 00 0000 0000		
Man Hrs 0	Elapsed Hrs 0	Received 08 MAR 2022 0110		EOC I	In Work 13 MAR 2022 1823		EOC I	Completed 00 0000 0000	WO Status Cd P	
Meter	In Process Insp Y	Safety EI	Posit LTEG	Fid	Tech	System Reason L SPINNER TEMP SNSR				

(H-Z) Failed/Required Material

Index F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
---------------	-----	------	-------------	-----	------	-----	----------	------	-----------	-------

DISCREPANCY

INITIATOR

(b)(3), (b)(6), (b)(7)c

L SPINNER TEMP SNSR ZONE 10

CORRECTIVE ACTION

CORRECTED BY

INSPECTED BY

MAINT CONTROL

MCN : 28T088B
JCN : FC3067681
MODEX : 14
Spn Reason : L SPINNER TEMP SNSR

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND WIT INSTALL OF LH SPINNER DOME. SCREWS
TQ TO 80IN/LBS.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

13 MAR 2022 1826

MCM : 2810885
JCN : FC3067681
MODEX : 14
Sys Reason : L SPINNER TEMP SNSR

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	08 MAR 2022 0110	I	(b)(3), (b)(6), (b)(7)c	CDISUP	13 MAR 2022 1823	13 MAR 2022 1825	
M4	08 MAR 2022 0141	I					
M3	08 MAR 2022 0557	I					
M7	08 MAR 2022 2203	I					
M3	09 MAR 2022 2318	I					
M4	10 MAR 2022 0212	I					
M3	10 MAR 2022 1141	I					
M7	10 MAR 2022 1359	I					
M3	10 MAR 2022 2259	I					
M4	11 MAR 2022 2354	I					
M3	13 MAR 2022 0804	I					
IW	13 MAR 2022 1823	I					
M3	13 MAR 2022 1826	I					
M7	13 MAR 2022 2048	I					
M2	13 MAR 2022 2348	I					
	14 MAR 2022 0155	I					
M3	14 MAR 2022 1432	I					
M4	15 MAR 2022 0240	I					
M3	15 MAR 2022 0807	I					
M7	15 MAR 2022 0853	I					
M3	16 MAR 2022 0236	I					
M4	16 MAR 2022 0237	I					
M3	16 MAR 2022 0913	I					
M7	16 MAR 2022 1006	I					
M3	16 MAR 2022 1009	I					
M4	17 MAR 2022 0435	I					
M3	17 MAR 2022 1137	I					
M7	17 MAR 2022 1138	I					
M3	17 MAR 2022 2335	I					
M4	18 MAR 2022 0141	I					
M3	18 MAR 2022 0919	I					
M7	18 MAR 2022 0920	I					
M3	23 MAR 2022 1259	I					
M4	23 MAR 2022 2200	I					
	25 MAR 2022 1457	I					
	25 MAR 2022 1759	I					
M3	26 MAR 2022 0852	I					

~~- FOR OFFICIAL USE ONLY~~

ENCLOSURE (47)

MCN : 281088B
JCN : FC3067681
MODEX : 14
Sys Reason : L SPINNER TEMP SNSR

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0822
Req By: Low, (b)(6), (b)(7)c
Page : 2 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M4	27 MAR 2022 1905	I					
M3	28 MAR 2022 0858	I					
M4	28 MAR 2022 1855	I					
M3	29 MAR 2022 1124	I					
M4	29 MAR 2022 1907	I					
M3	30 MAR 2022 0948	I					
M4	30 MAR 2022 1634	I					
M3	31 MAR 2022 0829	I					
M7	09 APR 2022 0851	I					
M3	18 APR 2022 0651	I					
M4	21 APR 2022 1602	I					
M3	22 APR 2022 0618	I					
M4	25 APR 2022 0104	I					
M3	25 APR 2022 0606	I					
M4	25 APR 2022 2359	I					
M4	26 APR 2022 0610	I					
M4	27 APR 2022 0115	I					
M3	27 APR 2022 0600	I					
M4	28 APR 2022 0104	I					
M3	28 APR 2022 0557	I					

MCN : 28T088B
JCN : FC3067681
MODEX : 14
Reason : L SPINNER TEMP SNSR

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0822
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND WIT INSTALL OF LH SPINNER DOME. SCREWS
TQ TO 80IN/LBS.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

13 MAR 2022 1826

COMPLETE WORK ORDER FORM

N J888	JCN FC3067679	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr	Amend	Part	Kit No					
Turn-In Doc	WUC/UNS 6222140434			Trans 11	M/L 1	Item Process 1	Action Taken	Mal Code	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage			Serial Number		Cage			Serial Number			
Part Number			Date Removed 00 0000 0000		Part Number			Date Installed 00 0000 0000			
Man Hrs 0	Elapsed Hrs 0	Received 08 MAR 2022 0104		EOC I	In Work 13 MAR 2022 1800		EOC I	Completed 00 0000 0000	WO Status Cd P		
Meter	In Process Insp Y	Safety EI	Posit RTEG	Fid	Tech	System Reason R SPINNER TEMP SNSR 2					
(H-Z) Failed/Required Material											
Index	F/P A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
DISCREPANCY								INITIATOR			
R SPINNER TEMP SNSR 2 F(P)								(b)(3), (b)(6), (b)(7)c			
CORRECTIVE ACTION											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			

MCN : 28T0888
JCN : FC3067679
MODEX : 14
S son : R SPINNER TEMP SNSR 2

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0821
Req By: (b)(3), (b)(6), (b)(7)c
Page : 1 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	08 MAR 2022 0104	I	(b)(3), (b)(6), (b)(7)c	CDISUP	13 MAR 2022 1800	13 MAR 2022 1801	
M4	08 MAR 2022 0141	I					
M3	08 MAR 2022 0557	I					
M7	08 MAR 2022 2203	I					
M3	09 MAR 2022 2318	I					
M4	10 MAR 2022 0212	I					
M3	10 MAR 2022 1141	I					
M7	10 MAR 2022 1359	I					
M3	10 MAR 2022 2259	I					
M4	11 MAR 2022 2354	I					
M3	13 MAR 2022 0804	I					
IW	13 MAR 2022 1800	I					
M3	13 MAR 2022 1802	I					
	13 MAR 2022 2048	I					
	13 MAR 2022 2348	I					
M4	14 MAR 2022 0155	I					
M3	14 MAR 2022 1432	I					
M4	15 MAR 2022 0240	I					
M3	15 MAR 2022 0807	I					
M7	15 MAR 2022 0853	I					
M3	16 MAR 2022 0236	I					
M4	16 MAR 2022 0237	I					
M3	16 MAR 2022 0913	I					
M7	16 MAR 2022 1006	I					
M3	16 MAR 2022 1009	I					
M4	17 MAR 2022 0435	I					
M3	17 MAR 2022 1137	I					
M7	17 MAR 2022 1138	I					
M3	17 MAR 2022 2335	I					
M4	18 MAR 2022 0141	I					
M3	18 MAR 2022 0919	I					
M7	18 MAR 2022 0920	I					
M3	23 MAR 2022 1259	I					
	23 MAR 2022 2200	I					
	25 MAR 2022 1457	I					
M4	25 MAR 2022 1759	I					
M3	26 MAR 2022 0852	I					

MCN : 2810888
JCN : FC3067679
MODEX : 14
Sys Reason : R SPINNER TEMP SNSR 2

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0821
Req By (b)(3), (b)(6), (b)(7)c
Page : 2 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M4	27 MAR 2022 1905	I					
M3	28 MAR 2022 0858	I					
M4	28 MAR 2022 1855	I					
M3	29 MAR 2022 1124	I					
M4	29 MAR 2022 1907	I					
M3	30 MAR 2022 0948	I					
M4	30 MAR 2022 1634	I					
M3	31 MAR 2022 0829	I					
M7	09 APR 2022 0851	I					
M3	18 APR 2022 0651	I					
M4	21 APR 2022 1602	I					
M3	22 APR 2022 0618	I					
M4	25 APR 2022 0104	I					
M3	25 APR 2022 0606	I					
M4	25 APR 2022 2359	I					
M4	26 APR 2022 0610	I					
M4	27 APR 2022 0115	I					
M3	27 APR 2022 0600	I					
M4	28 APR 2022 0104	I					
M3	28 APR 2022 0557	I					

MCN : 28T0888
JCN : FC3067679
MODEX : 14
Reason : R SPINNER TEMP SNSR 2

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0821
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND WIT INSTALL OF RH SPINNER DOME. PANEL
SCREWS TQ TO 80IN/LBS.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

13 MAR 2022 1827

Turnaround Maint. Records for MODEX 14 /BUNO 168330

Page 1 of 1

Received Date: 18 MAR 2022 0044

Completion Date: 18 MAR 2022 0925

Maint Cntl Sig: (b)(3), (b)(6), (b)(7)c

(b)(3), (b)(6), (b)(7)c

Card No	Wc Cd	Tool Box #	Discrepancy	Corrected	Signature
11	310	6-9	NONE ON 20220318 @ 0042 PEMA 92007	<input type="checkbox"/>	
12	310	6-9	FUEL SAMPLES TAKEN FROM PORTS 1,2,3,4,5,6 ALL PASSED. NONE ON 20220318 @ 0042 PEMA 92007	<input type="checkbox"/>	
13	310	6-9	NONE ON 20220318 @ 0042 PEMA 92007	<input type="checkbox"/>	
14	310	6-9		<input type="checkbox"/>	
15	310	6-9		<input type="checkbox"/>	
16	310	6-9		<input type="checkbox"/>	
17	310	6-9		<input type="checkbox"/>	
18	310	6-9		<input type="checkbox"/>	
19	310	6-9		<input type="checkbox"/>	
20	310	6-9		<input type="checkbox"/>	
21	310	6-9		<input type="checkbox"/>	
22	310	6-9		<input type="checkbox"/>	
23	310	6-9		<input type="checkbox"/>	
24	310	6-9		<input type="checkbox"/>	
25	310	6-9		<input type="checkbox"/>	
ATAF	310	6-9	NONE ON 20220318 @ 0042 PEMA 92007	<input type="checkbox"/>	

(b)(3), (b)(6), (b)(7)c

Received Date: 18 MAR 2022 0042

Completion Date: 18 MAR 2022 0925

Maint Cntrl Sig: (b)(3), (b)(6), (b)(7)c

Card No	We Cd	Tool Box #	Discrepancy	Corrected	Worker Signature
09.1	310	6-9			(b)(3), (b)(6), (b)(7)c
09.2	310	6-9			
10	310	6-9			
11	310	6-9			
12	310	6-9			
12.1	310	6-9			
12.2	310	6-9			
12.3	310	6-9			
12.4	310	6-9			
12.5	310	6-9			
12.6	310	6-9			
12.7	310	6-9			
13	310	6-9			
13.1	310	6-9			
13.2	310	6-9			
13.3	310	6-9			
	310	6-9			



Snapshot: 18-Apr-22 5:15

ENCLOSURE (7/9)

QCL By Person (Accreditations/Duties/Billets)

Date Printed: 22-Apr-22
Report generated by: (b)(3), (b)(6), (b)(7)c
UIC: <ALL>
Program: <ALL>
Show Tests: No

This Report is based on a database Snapshot. Data in this report will be delayed. Please see snapshot date.

Controlled by: NUWC Keyport
Controlled by: NUWC Keyport C414
CUI Category: PRVCY
Distribution Statement: D
POC: ASM Helpdesk 360-315-7450



Snapshot: 18-Apr-22 5:15

QCL By Person (Accreditations/Duties/Billets)

Organization Structure: MARINE AVIATION - TECOM - COMMARFORCOM - 2ND MAW - MAG-26 - VMM-261

Title	Effective Date	QCL/Med Date	Image Exists	Granted Manually	Expired Expiring	Days To Expiration	In Progress
MARINE AVIATION - TECOM - COMMARFORCOM - 2ND MAW - MAG-26 - VMM-261 - MAINT DEPT - FLIGHT LINE C							
WALLACE, SPENCER L CPL (OH 09Sep24)							
CERTIFICATION							
AIRCRAFT CONFINED SPACE PROGRAM (ACSP) AUTHORIZED ENTRANT (USMC)	01-Feb-21	01-Feb-21(G)					
AIRCRAFT CONFINED SPACE PROGRAM (ACSP) ENTRY SUPERVISOR (USMC)	13-Dec-21	13-Dec-21(G)					
AIRCRAFT CONFINED SPACE PROGRAM (ACSP) SAFETY OBSERVER (USMC)	13-Dec-21	13-Dec-21(G)					
MHE: CATEGORY 3 CRANE (NON-CAB OPERATED) (USMC)	03-Mar-22	03-Mar-25(E)	X			1051	
LICENSE							
A/M24M-6 TRAILER MOUNTED ELECTRIC POWER PLANT (MV-22) (USMC)		IN PROGRESS					07-Dec-21 3.8%
A/M32A-108, SHORE MOBILE ELECTRIC POWER PLANT (MV-22)	18-Aug-20	18-Aug-25(E)				1219	
A/M32M-40 SMALL CORROSION CONTROL CART (MV-22)	16-Jun-20	16-Jun-25(E)				1156	
A/M42M-2/2A PORTABLE FLOODLIGHT SET (MV-22)		IN PROGRESS					17-Aug-20 98.1%
A/S32A-45 MID-RANGE TOW TRACTOR (MV-22)	16-Jun-20	09-Sep-24(E)				876	
ACU-24/M PORTABLE AIR COMPRESSOR (MV-22)	13-Jul-20	13-Jul-25(E)				1183	
GHO-EAPS-1 (EAPS) WASH SYSTEM (V-22) (MC)	18-Aug-20	18-Aug-25(E)				1219	
HDU-43 PRE HEATER (V-22) (MC)		IN PROGRESS					17-Aug-20 98.1%
NC-10A/B/C MOBILE ELECTRIC POWER PLANT (MV-22)	13-Jul-20	13-Jul-25(E)				1183	
MEDICALS							
PERIODIC HEALTH ASSESSMENT (PHA)	14-Aug-20	19-Dec-20(E)	X		EXPIRED	-485	
QUALIFICATION							
AIRCRAFT ENGINE/APU TURN-UP LICENSE (4790/192)(APU)(V-22)	14-Jun-21	14-Jun-22(E)			EXPIRING	58	
AIRCRAFT TOW DIRECTOR QUALIFICATION/CERTIFICATION (V-22) (MC)	21-Dec-20	21-Dec-20(G)					
AIRCRAFT TOW DRIVER QUALIFICATION/CERTIFICATION (V-22) (MC)	16-Sep-20	16-Sep-20(G)					
BLADE FOLD WING STOW QUAL (V-22) (MC)	17-Jul-20	17-Jul-20(G)					
BRAKE RIDER QUAL (V-22) (MC)	04-Jun-20	04-Jun-20(G)					

ENCLOSURE (4/9)



QCL By Person (Accreditations/Duties/Billets)

Organization Structure: MARINE AVIATION - TECOM - COMMARFORCOM - 2ND MAW - MAG-26 - VMM-261

Snapshot: 18-Apr-22 5:15

Title	Effective Date	QCL/Med Date	Image Exists	Granted Manually	Expired Expiring	Days To Expiration	In Progress
MARINE AVIATION - TECOM - COMMARFORCOM - 2ND MAW - MAG-26 - VMM-261 - MAINT DEPT - FLIGHT LINE I							
WALLACE, SPENCER L CPL (OH 09Sep24) (Cont.)							
QUALIFICATION (Cont.)							
CPR/AED QUALIFIED (USMC)	17-Mar-21	02-Feb-23(E)	X			291	
EGRESS/EXPLOSIVES SYSTEMS CHECKOUT QUALIFICATION (MV-22)	30-Mar-22	30-Sep-22(E)				166	
EWIS NON-AVIONICS (TECOM) (MC)	26-Oct-21	26-Oct-22(E)	X			192	
FUEL SURVEILLANCE PROGRAM QUAL (V-22) (MC)	11-Jun-20	11-Jun-20(G)					
PLANE CAPTAIN DESIGNATION (4790/158) (V-22) (USMC)	22-Mar-22	30-Sep-22(E)	X			166	
QUALITY ASSURANCE INSPECTOR DESIGNATION (4790/12)(CDI)(310)(V-22) (USMC)	10-Dec-21	10-Dec-21(G)	X				
THINGS FALLING OFF AIRCRAFT (TFOA) INDOCTRINATION	27-May-20	27-May-20(G)					
TRAINING: HAZCOM NON-SUPERVISOR (USMC)	13-Mar-22	13-Mar-23(E)				330	
TRAINING: NAMP INDOCTRINATION (USMC)	30-Jul-21	30-Jul-21(G)					
TRAINING: NAVOSH INITIAL (USMC)	11-Nov-21	11-Nov-21(G)					
Duty/Billet							
SUPERVISOR (MC)							

COMPLETE WORK ORDER FORM

JCN 887	JCN FC3067678	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr			Amend	Part		Kit No		
Turn-In Doc	WUC/UNS 62220806			Trans 11	M/L 1	Item Process 1	Action Taken	Mal Code	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage			Serial Number			Cage			Serial Number		
Part Number			Date Removed 00 0000 0000			Part Number			Date Installed 00 0000 0000		
Man Hrs 2.0	Elapsed Hrs 1.0	Received 08 MAR 2022 0101		EOC I	In Work 14 MAR 2022 1901		EOC I	Completed 00 0000 0000	WO Status Cd P		
Meter	In Process Insp Y	Safety EI	Posit RRED	Fid	Tech	System Reason R PEN DAMP HEATERS					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
DISCREPANCY								INITIATOR			
R PEN DAMP HEATERS F(P)								(b)(3), (b)(6), (b)(7)c			
CORRECTIVE ACTION											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			

MCN : 28T0887
JCN : FC3067678
MODEX : 14
Syn Reason : R PEN DAMP HEATERS

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0821
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND CLOSED RH SPINNER DOME. WIT'D TQ OF 80
IN-LBS ON SPINNER DOME SCREWS. AFF

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

14 MAR 2022 2154

MCN : 2810887
JCN : FC3067678
MODEX : 14
Sys Reason : R PEN DAMP HEATERS

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0821
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	08 MAR 2022 0101	I	(b)(3), (b)(6), (b)(7)c	CDISUP	14 MAR 2022 1901	14 MAR 2022 2000	
M4	08 MAR 2022 0141	I		200-3-4	14 MAR 2022 1901	14 MAR 2022 2000	(b)(3), (b)(6), (b)(7)c
M3	08 MAR 2022 0557	I					
M7	08 MAR 2022 2203	I					
M3	09 MAR 2022 2318	I					
M4	10 MAR 2022 0212	I					
M3	10 MAR 2022 1141	I					
M7	10 MAR 2022 1359	I					
M3	10 MAR 2022 2259	I					
M4	11 MAR 2022 2354	I					
M3	13 MAR 2022 0804	I					
M7	13 MAR 2022 2048	I					
M3	13 MAR 2022 2348	I					
M4	14 MAR 2022 0155	I					
M3	14 MAR 2022 1432	I					
M3	14 MAR 2022 1901	I					
M3	14 MAR 2022 2001	I					
M4	15 MAR 2022 0240	I					
M3	15 MAR 2022 0807	I					
M7	15 MAR 2022 0853	I					
M3	16 MAR 2022 0236	I					
M4	16 MAR 2022 0237	I					
M3	16 MAR 2022 0913	I					
M7	16 MAR 2022 1006	I					
M3	16 MAR 2022 1009	I					
M4	17 MAR 2022 0435	I					
M3	17 MAR 2022 1137	I					
M7	17 MAR 2022 1138	I					
M3	17 MAR 2022 2335	I					
M4	18 MAR 2022 0141	I					
M3	18 MAR 2022 0919	I					
M7	18 MAR 2022 0920	I					
M3	23 MAR 2022 1259	I					
M4	23 MAR 2022 2200	I					
M3	25 MAR 2022 1457	I					
M3	25 MAR 2022 1759	I					
M3	26 MAR 2022 0852	I					

FOR OFFICIAL USE ONLY

ENCLOSURE (50)

MCN : 2810887
JCN : FC3067678
MODEX : 14
Sys Reason : R PEN DAMP HEATERS

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0821
Req By (b)(3), (b)(6), (b)(7)c
Page : 2 of 2

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M4	27 MAR 2022 1905	I					
M3	28 MAR 2022 0858	I					
M4	28 MAR 2022 1855	I					
M3	29 MAR 2022 1124	I					
M4	29 MAR 2022 1907	I					
M3	30 MAR 2022 0948	I					
M4	30 MAR 2022 1634	I					
M3	31 MAR 2022 0829	I					
M7	09 APR 2022 0851	I					
M3	18 APR 2022 0651	I					
M4	21 APR 2022 1602	I					
M3	22 APR 2022 0618	I					
M4	25 APR 2022 0104	I					
M3	25 APR 2022 0606	I					
M4	25 APR 2022 2359	I					
M4	26 APR 2022 0610	I					
M4	27 APR 2022 0115	I					
M3	27 APR 2022 0600	I					
M4	28 APR 2022 0104	I					
M3	28 APR 2022 0557	I					

MCN : 28T0887
JCN : FC3067678
MODEX : 14
Syn Reason : R PEN DAMP HEATERS

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0821
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

FOD FREED AND CLOSED RH SPINNER DOME. WIT'D TQ OF 80
IN-LBS ON SPINNER DOME SCREWS. AFF

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

14 MAR 2022 2154

28 APR 2022
ORG Name: VMM261

NALCOM JMA
AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 28 APR 2022

TIME : 0812

REQ BY: (b)(3), (b)(6), (b)(7)c

PAGE : 1 of 4

Work Center	Assy Cd	MODEX	BUNO/ Serno	Maint Level	MCN	JCN	Acft/ Equip Stat	Job Stat	EOC	WUC/UNS	System Reason	DDSN	Proj Code	Supply Status	Received Date
021	AYNE	14	168330	1	28QTABN	FC3011098	U	M3		1000000	AFC-0289/DNLT/PHSD/190;				
					28QT7J8	FC3321011	U	M3		1000000	AFC-239/NLT 30JUN24				
					28QT7LU	FC3323085	U	M3		1000000	AFC-0272 DNLT 31 MAY 20:	13234030	AK1	323COMPL	19 NOV 202
							U	M3		1000000	AFC-0272 DNLT 31 MAY 20:	13234029	AK1	323COMPL	19 NOV 202
					28QT8X2	FC3344302	U	M3		1000000	AFB-0195 DNLT AF 1767.7				
					28QT9DB	FC3354175	U	M3		252005	ACC-0771 RE IN ABEYANC				
					28QT9DC	FC3354176	U	M3		252007	ACC-0771 RE IN ABEYANC				
					28QT9DD	FC3354177	U	M3		252009	ACC-0771 RE IN ABEYANC				
					28QT9DE	FC3354178	U	M3		252011	ACC-0771 RE IN ABEYANC				
					28QT9DF	FC3354179	U	M3		252013	ACC-0771 RE IN ABEYANC				
					28QT9DG	FC3354180	U	M3		252015	ACC-0771 RE IN ABEYANC				
					28QT9DH	FC3354181	U	M3		252017	ACC-0771 RE IN ABEYANC				
					28QT9DI	FC3354182	U	M3		252019	ACC-0771 RE IN ABEYANC				
					28QT9DJ	FC3354183	U	M3		252021	ACC-0771 RE IN ABEYANC				
					28QT9DK	FC3354184	U	M3		252023	ACC-0771 RE IN ABEYANC				
					28QT9DL	FC3354185	U	M3		252025	ACC-0771 RE IN ABEYANC				
					28QT9DM	FC3354186	U	M3		252002	ACC-0771 RE IN ABEYANC				
					28QT9DN	FC3354187	U	M3		252004	ACC-0771 RE IN ABEYANC				
					28QT9DO	FC3354188	U	M3		252006	ACC-0771 RE IN ABEYANC				
					28QT9DP	FC3354189	U	M3		252008	ACC-0771 RE IN ABEYANC				
					28QT9DQ	FC3354190	U	M3		252010	ACC-0771 RE IN ABEYANC				
					28QT9DR	FC3354191	U	M3		252012	ACC-0771 RE IN ABEYANC				
					28QT9DS	FC3354192	U	M3		252014	ACC-0771 RE IN ABEYANC				

ENCLOSURE (50)

28 APR 2022
ORG Name: VMM261

NALCOM JMA
AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 28 APR 2022
TIME : 0812
REQ BY: (b)(3), (b)(6), (b)(7)c
PAGE : 2 of 4

Work Center	Assy Cd	MODEX	BUNO/ Serno	Maint Level	MCN	JCN	Acft/ Equip Stat	Job Stat	EOC	WUC/UNS	System Reason	DDSN	Proj Code	Supply Status	Received Date
021	AYNE	14	168330	1	28QT9DT	FC3354193	U	M3		252016	ACC-0771 RE IN ABEYANC				
					28QT9DU	FC3354194	U	M3		252020	ACC-0771 RE IN ABEYANC				
					28QT9DV	FC3354195	U	M3		252022	ACC-0771 RE IN ABEYANC				
					28QT9DW	FC3354196	U	M3		252024	ACC-0771 RE IN ABEYANC				
					28QT9DX	FC3354197	U	M3		252001	ACC-0771 RE IN ABEYANC				
					28QT9DY	FC3354198	U	M3		252003	ACC-0771 RE IN ABEYANC				
					28QT9I3	FC3356328	U	M3		1000000	AFC-0256RE/SCHD/31MAY				
120	AYNE	14	168330	1	28QTAC9	FC3012114	P	M3	F	259102	AFT CARGO SCREW HANL				
					28QT7KX	FC3322059	U	M3		57	RH OB VORTEX GEN REM	13434068	AK1	343COMPL	09 DEC 202
					28QT7L9	FC3323067	U	M3		255080	CARGO ROLLER RAILS				
					28QT7LV	FC3323086	U	M3		1000000	AFC-0287 DNLT PHS 1907	13234031	AK1	335COMPL	01 DEC 202
					28QT7Q7	FC3326231	U	M3		542115	WORN RIVETS				
12C	AYNE	14	168330	1	28QT7LQ	FC3323084	U	M3		1000000	MODEX AIRCRAFT				
200	AYNE	14	168330	1	28QT9Q6	FC3004582	P	M3	I	621105	LEFT WHITE BLD TEMP SM				
					28QT9Q8	FC3004595	U	M3		219001	ECS PROP VLV F(T)				
					28QTB1D	FC3026285	U	M3		461102	ASC-0123/DNLT/60AFTERC				
					28QTB1E	FC3026286	U	M3		462101	ASC-0123/DNLT/60AFTERC				
					28QTB1F	FC3026287	U	M3		463006	ASC-0123/DNLT/60AFTERC				
					28QTB1G	FC3026288	U	M3		463007	ASC-0123/DNLT/60AFTERC				
					28QTB1H	FC3026289	U	M3		463010	ASC-0123/DNLT/60AFTERC				
					28QTB1I	FC3026290	U	M3		463011	ASC-0123/DNLT/60AFTERC				
					28QTB1J	FC3026291	U	M3		463101	ASC-0123/DNLT/60AFTERC				
					28QTB1K	FC3026292	U	M3		463008	ASC-0123/DNLT/60AFTERC				

ENCLOSURE (50)

28 APR 2022

ORG Name: VMM261

NALCOM MA

AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 28 APR 2022

TIME : 0812

REQ BY: (b)(3), (b)(6), (b)(7)c

PAGE : 3 of 4

Work Center	Assy Cd	MODEX	BUNO/ Serno	Maint Level	MCN	JCN	Acft/ Equip Stat	Job Stat	EOC	WUC/UNS	System Reason	DDSN	Proj Code	Supply Status	Received Date
200	AYNE	14	168330	1	28QTB1L	FC3026293	U	M3		461101	ASC-0123/DNLT/60AFTERC				
					28T080Y	FC3060637	P	M3	J	193005	AVSS				
					28T0810	FC3060638	P	M3	H	785206	R COANDA BLEED VALVE				
					28T0880	FC3067671	P	M3	I	621103	L GRN BLD DEICE ZONE 3				
					28T0881	FC3067672	P	M3	I	621103	L GRN BLD FAIRING				
					28T0882	FC3067673	P	M3	I	621105	L WHT BLD ZONE 1-8 F(P)	2072GC19	AK7	080COMPL	21 MAR 202
					28T0883	FC3067674	P	M3	I	62210713	L PEN DAMP HEATERS	2072GC20	AK7	073COMPL	13 MAR 202
					28T0884	FC3067675	P	M3	I	621105	L WHT BLD PARTING STRI				
					28T0885	FC3067676	P	M3	I	621101	L RED BLD TEMP SNSR				
					28T0886	FC3067677	P	M3	I	621103	L GRN BLD TEMP SNSR				
					28T0887	FC3067678	P	M3	I	62220806	R PEN DAMP HEATERS				
					28T0888	FC3067679	P	M3	I	6222140434	R SPINNER TEMP SNSR 2				
					28T088A	FC3067680	P	M3	I	621204	R GRN BLD TEMP SNSR				
					28T088B	FC3067681	P	M3	I	6221130333	L SPINNER TEMP SNSR				
					28T08AJ	FC3069743	U	M3		435106	AFT CABIN STATION ICS				
					28QTC PG	FC3081330	U	M3		1000000	AFC-0256/DNLT/MAR/31/20				
					28QT7L1	FC3322063	U	WP		1000000	AFC-0236 DNLT 31DEC202	13224014	ZO9	349BBNRP	
							U	WP		1000000	AFC-0236 DNLT 31DEC202	13224013	AK1	020COMPL	20 JAN 202
					28QT7TQ	FC3328345	P	M3	J	344401	WX RADAR INOP				

ENCLOSURE (50)

28 APR 2022
ORG Name: VMM261

NALCOM JMA
AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 28 APR 2022
TIME : 0812
REQ BY: (b)(3), (b)(6), (b)(7)c
PAGE : 4 of 4

Work Center	Assy Cd	MODEX	BUNO/ Serno	Maint Level	MCN	JCN	Acft/ Equip Stat	Job Stat	EOC	WUC/UNS	System Reason	DDSN	Proj Code	Supply Status	Received Date
310	AYNE	14	168330	1	28QTAC6	FC3012113	U	M3		2190AH33	BYPASS INDICATOR RUBE				
FOR MODEX: 14		**	Work Orders: 64		AWP: 1		AWM: 63		IW: 0		RQN's: 8		**		
***		TOTAL Work Orders: 64		TOTAL AWP: 1		TOTAL AWM: 63		TOTAL IW: 0		TOTAL RQN'S: 8		**			

ENCLOSURE (50)

COMPLETE WORK ORDER FORM

N J8E9	JCN FC3076656	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 130	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr			Amend	Part		Kit No		
Turn-In Doc	WUC/UNS 262002			Trans 23	M/L 1	Item Process 1	Action Taken R	Mal Code 295	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage 06535			Serial Number EN0034713			Cage 06535			Serial Number EN0025497		
Part Number 132-008			Date Removed 17 MAR 2022 2358			Part Number 132-008			Date Installed 18 MAR 2022 0051		
Man Hrs 0.2	Elapsed Hrs 0.2	Received 17 MAR 2022 2333		EOC Z	In Work 17 MAR 2022 2337		EOC Z	Completed 18 MAR 2022 0057	WO Status Cd D		
Meter	In Process Insp N	Safety EI	Posit AF	Fid	Tech	System Reason R/R FIRE EXTINGUISHER					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
			06535	132-008	1	AK0	02	17 MAR 2022 2348	2076GC63	18 MAR 2022 0001	EXTINGUISHER,
DISCREPANCY								INITIATOR (b)(3), (b)(6), (b)(7)c			
FIRE EXTINGUISHER WAS USED TO PUT OUT GRASS FIRE											
CORRECTIVE ACTION CANNIBALIZED (BUNO: 166724 MCN: 28T08EC) IAW IETMS SSS: 2620 USING PEMA 92186 ATAF APAF AFF ACF											
CORRECTED BY (b)(3), (b)(6), (b)(7)c				INSPECTED BY (b)(3), (b)(6), (b)(7)c				MAINT CONTROL (b)(3), (b)(6), (b)(7)c			

MCN :28
JCN :FC 36
MODEX :14
Sys Reason : R/R FIRE EXTINGUISHER

NALCOMIS
REQUIRED MATERIAL

Date : 28 APR
Time : 0817
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
NO	06535	132-008	1	AKC	02	17 MAR 2022 2348	2076GC63	EXTINGUISHER, ASSY FIRE, IETMS SSS 26 FIGURE 205	18 MAR 2022 0001	077CANNB	

ENCLOSURE (51)

MCN : 28T08E9
JCN : FC3076656
MODEX : 14
Sym Reason : R/R FIRE EXTINGUISHER

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0817
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>
M3	17 MAR 2022 2333	Z
IW	17 MAR 2022 2337	Z
WP	17 MAR 2022 2348	Z
M3	17 MAR 2022 2348	Z
JC	18 MAR 2022 0057	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	92186	17 MAR 2022 2337	17 MAR 2022 2348	(b)(3), (b)(6), (b)(7)c

COMPLETE WORK ORDER FORM

N J8E8	JCN FC3076655	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 130	CF Req N	QA Req N	
Intrm Cd	Code	Basic No	Rev Ltr			Amend	Part		Kit No	
Turn-In Doc	WUC/UNS 262001			Trans 23	M/L 1	Item Process 1	Action Taken R	Mal Code > 295	Disc Code H	Type Maint B
REMOVED/OLD ITEM					INSTALLED/NEW ITEM					
Cage 06535			Serial Number EN0034428			Cage 06535			Serial Number EN0033768	
Part Number 132-008			Date Removed 17 MAR 2022 2357			Part Number 132-008			Date Installed 18 MAR 2022 0050	
Man Hrs 0.1	Elapsed Hrs 0.1	Received 17 MAR 2022 2332		EOC Z	In Work 17 MAR 2022 2333		EOC Z	Completed 18 MAR 2022 0056	WO Status Cd D	
Meter	In Process Insp N	Safety EI	Posit FW	Fid	Tech	System Reason R/R FIRE EXTINGUISHER				

(H-Z) Failed/Required Material

Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
			06535	132-008	1	AK0	02	17 MAR 2022 2346	2076GC62	18 MAR 2022 0000	EXTINGUISHER,

DISCREPANCY

INITIATOR

(b)(3), (b)(6), (b)(7)c

FIRE EXTINGUISHER WAS USED TO PUT OUT GRASS FIRE

CORRECTIVE ACTION

CANNIBALIZED (BUNO: 166724 MCN: 28T08EB) IAW IETMS SSS: 2620 USING PEMA 92186 ATAF APAF AFF ACF

CORRECTED BY

(b)(3), (b)(6), (b)(7)c

INSPECTED BY

(b)(3), (b)(6), (b)(7)c

MAINT CONTROL

(b)(3), (b)(6), (b)(7)c

MCN :287
JCN :F 35
MODEX :14
Sys Reason : R/R FIRE EXTINGUISHER

NALCOMIS
REQUIRED MATERIAL

Date : 28 APR
Time : 0818
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
NO	06535	132-008	1	AKC	02	17 MAR 2022	2346 2076GC62	EXTINGUISHER, ASSY FIRE, IETMS SSS 26 FIGURE 205	18 MAR 2022	0000	077CANNB

ENCLOSURE (51)

MCN : 28T08E8
JCN : FC3076655
MODEX : 14
Reason : R/R FIRE EXTINGUISHER

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0818
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job</u> <u>Status</u>	<u>Date</u> <u>Time</u>	<u>EOC</u>
M3	17 MAR 2022 2332	Z
IW	17 MAR 2022 2333	Z
M3	17 MAR 2022 2337	Z
WP	17 MAR 2022 2346	Z
JC	18 MAR 2022 0056	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	92186	17 MAR 2022 2333	17 MAR 2022 2346	(b)(3), (b)(6), (b)(7)c

COMPLETE WORK ORDER FORM

N J8EH	JCN FC3077661	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 310	CF Req N	QA Req N	
Intrm Cd	Code	Basic No	Rev Ltr			Amend	Part		Kit No	
Turn-In Doc	WUC/UNS 7102			Trans 11	M/L 1	Item Process 1	Action Taken B	Mal Code 696	Disc Code H	Type Maint B
REMOVED/OLD ITEM					INSTALLED/NEW ITEM					
Cage		Serial Number			Cage		Serial Number			
Part Number		Date Removed 00 0000 0000			Part Number		Date Installed 00 0000 0000			
Man Hrs 0.6	Elapsed Hrs 0.3	Received 18 MAR 2022 0008		EOC Z	In Work 18 MAR 2022 0030		EOC Z	Completed 18 MAR 2022 0048		WO Status Cd D
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason R/H ENG OIL SERV 36 OZ				

(H-Z) Failed/Required Material

Index	F/P A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
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DISCREPANCY

INITIATOR

(b)(3), (b)(6), (b)(7)c

R/H ENG OIL SERV 36 OZ

CORRECTIVE ACTION

SERVICED RH ENGINE WITH 36OZ OF MIL-PRF-23699 IAW SSS 1210, USING PEMA 92007. ATAF, APAF, AFF, ACF.

CORRECTED BY

(b)(3), (b)(6), (b)(7)c

INSPECTED BY

(b)(3), (b)(6), (b)(7)c

MAINT CONTROL

(b)(3), (b)(6), (b)(7)c

MCN : 28T08EH
JCN : FC3077661
MODEX : 14
Sync Reason : R/H ENG OIL SERV 36 OZ

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0816
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>
M3	18 MAR 2022 0008	Z
IW	18 MAR 2022 0030	Z
M3	18 MAR 2022 0046	Z
JC	18 MAR 2022 0048	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	CDISUP	18 MAR 2022 0030	18 MAR 2022 0045	
	6-5	18 MAR 2022 0030	18 MAR 2022 0045	(b)(3), (b)(6), (b)(7)c

COMPLETE WORK ORDER FORM

N .8CM	JCN FC3073603	Type WO CM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 120	CF Req N	QA Req N			
Intrm Cd	Code	Basic No	Rev Ltr	Amend		Part		Kit No				
Turn-In Doc	WUC/UNS 291212			Trans 18	M/L 1	Item Process 1	Action Taken T	Mal Code 815	Disc Code O	Type Maint B		
REMOVED/OLD ITEM					INSTALLED/NEW ITEM							
Cage 77272		Serial Number 168330-1			Cage 77272		Serial Number 0379					
Part Number 901-380-036-107		Date Removed 16 MAR 2022 1009			Part Number 901-380-036-107		Date Installed 16 MAR 2022 1235					
Man Hrs 8.3	Elapsed Hrs 3.9	Received 15 MAR 2022 1608		EOC Z	In Work 15 MAR 2022 1645		EOC Z	Completed 16 MAR 2022 2208		WO Status Cd D		
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason Cannib TRML CNTR VALVE						
(H-Z) Failed/Required Material												
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date	ORD	DDSN	Date RCVD	NOMEN
			77272	901-380-036-107	1	AK0	02	14 MAR 2022	2009	2073GC28	16 MAR 2022 1235	SSS 27 FIG 533 I
DISCREPANCY								INITIATOR (b)(3), (b)(6), (b)(7)c				
Cannibalized item: 901-380-036-107 THERMAL CONTROL VALVE MODULE (DDSN: 2073GC28) for Modex 03 Original MCN: 28T08BZ												
CORRECTIVE ACTION CANNIBALIZED (BUNO: 166724 MCN: 28T08D5) REPLACED RH SYS 3 THERMAL CONTROL VALVE IAW SSS 2912 UTILIZING PEMA 92116. HYDRAULIC SYSTEM 3 RAN A NAVY CLASS 0 UTILIZING THE PODS METHOD. ATAF APAF AFF ACF.												
CORRECTED BY (b)(3), (b)(6), (b)(7)c				INSPECTED BY (b)(3), (b)(6), (b)(7)c				MAINT CONTROL (b)(3), (b)(6), (b)(7)c				

MCN :28
JCN :FC 03
MODEX :14
Sys Reason :Cannib TRML CNTR VALVE

NALCOMIS
REQUIRED MATERIAL

Date : 28 APR
Time : 0818
Req (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
YES	77272	901-380-036-107	1	AKC	02	14 MAR 2022 2009	2073GC28	SSS 27 FIG 533 IND 67 MODULE ASSY PAODD JCS.	16 MAR 2022 1235	075CANNB	

ENCLOSURE (51)

MCN : 28T08CM
JCN : FC3073603
MODEX : 14
Sym Reason : Cannib TRML CNTR VALVE

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0818
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>
M3	15 MAR 2022 1608	Z
WP	15 MAR 2022 1609	Z
IW	15 MAR 2022 1645	Z
WP	15 MAR 2022 1831	Z
M3	16 MAR 2022 1236	Z
IW	16 MAR 2022 1400	Z
M3	16 MAR 2022 1546	Z
M8	16 MAR 2022 1547	Z
IW	16 MAR 2022 2020	Z
M3	16 MAR 2022 2041	Z
JC	16 MAR 2022 2208	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	120-2-3	15 MAR 2022 1645	15 MAR 2022 1830	JCS
	CDISUP	15 MAR 2022 1645	15 MAR 2022 1830	
	CDISUP	16 MAR 2022 1400	16 MAR 2022 1545	
	120-2-5	16 MAR 2022 1400	16 MAR 2022 1545	NQC
	HAZ	16 MAR 2022 1500	16 MAR 2022 1545	NQC
	120-2-5	16 MAR 2022 2020	16 MAR 2022 2040	JCS

MCN : 28T08CM
JCN : FC3073603
MODEX : 14
Syn Reason : Cannib TRML CNTR VALVE

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0818
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

Rank

Name

DateTime

WTD TQ OF (3) FITTINGS TO 40 FT LBS. WTD TQ OF (1) FITTING TO 70 FT LBS. WTD INSTALL OF (3) MOUNT SCREWS TO TIGHT. ATAF APAF AFF ACF.

PERFORMED BLOC . ALL CHECKS GOOD.

PERFORMED FOD FREE OF PANEL 6RI3 AND WTD INSTALL OF PANEL ALL ATTACHING HW TQD TO 40 IN LBS. ATAF APAF AFF ACF.

PERFORMED FOD FREE OF PANEL 6RB4 AND WTD INSTALL OF PANEL AND ALL ATTACHING HW TQD TO 40 IN LBS. ATAF APAF AFF ACF.

(b)(3), (b)(6), (b)(7)c

16 MAR 2022 1507

16 MAR 2022 1854

16 MAR 2022 1858

16 MAR 2022 2201

COMPLETE WORK ORDER FORM

N 8C1	JCN FC3074604	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 200	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr			Amend	Part		Kit No		
Turn-In Doc	WUC/UNS 3X6101			Trans 23	M/L 1	Item Process 1	Action Taken R	Mal Code 615	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage 97499			Serial Number LH000415			Cage 97499			Serial Number LH000577		
Part Number 901-005-662-101			Date Removed 16 MAR 2022 1923			Part Number 901-005-662-101			Date Installed 16 MAR 2022 1939		
Man Hrs 45.8	Elapsed Hrs 16.7	Received 15 MAR 2022 1031		EOC Z	In Work 15 MAR 2022 1738		EOC Z	Completed 17 MAR 2022 0948	WO Status Cd D		
Meter	In Process Insp N	Safety EI	Posit LH	Fid	Tech	System Reason LH WHT LWR LATCH SENSOR					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
			97499	901-005-662-101	1	AK0	02	15 MAR 2022 1818	2074GC44	16 MAR 2022 1939	SFI42,66E,16 DIS
DISCREPANCY								INITIATOR			
LH WHITE BLADE LOWER LATCH SENSOR F(P)								(b)(3), (b)(6), (b)(7)c			
CORRECTIVE ACTION											
REMOVED AND REPLACED LH CDD IAW SSS:3061. SYSTEM OP-CHECK GOOD. USED PEMA 93002. ATAF. APAF. AFF. ACF.											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			
(b)(3), (b)(6), (b)(7)c				(b)(3), (b)(6), (b)(7)c				(b)(3), (b)(6), (b)(7)c			

MCN :28
JCN :FC 04
MODEX :14
Sys Reason :LH WHT LWR LATCH SENSOR

NALCOMIS
REQUIRED MATERIAL

Date :28 APR
Time :0819
Req By (3), (b)(6), (b)(7)c
Page :1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
YES	97499	901-005-662-101	1	AKC	02	15 MAR 2022 1818	2074GC44	SFI42,66E,16 DISTRIBUTOR ASSY,CENTRAL DEICE PAOOI	16 MAR 2022 1939	075CANNB	

ENCLOSURE (51)

MCN : 28T08C1
JCN : FC3074604
MODEX : 14
Sys Reason : LH WHT LWR LATCH SENSOR

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0819
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

Worker Hours

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>	<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
M3	15 MAR 2022 1031	Z	(b)(3), (b)(6), (b)(7)c	TB3-4	15 MAR 2022 1738	15 MAR 2022 1800	(b)(3), (b)(6), (b)(7)c
IW	15 MAR 2022 1738	Z		200-3-1	16 MAR 2022 0900	16 MAR 2022 1800	
M3	15 MAR 2022 1801	Z		200-CR25	16 MAR 2022 0900	16 MAR 2022 1800	
WP	15 MAR 2022 1818	Z		CDISUP	16 MAR 2022 0900	16 MAR 2022 1800	
IW	16 MAR 2022 0900	Z		CDISUP	16 MAR 2022 1900	17 MAR 2022 0200	
WP	16 MAR 2022 1801	Z		200-3-4	16 MAR 2022 1900	17 MAR 2022 0200	
IW	16 MAR 2022 1900	Z		CDISUP	16 MAR 2022 2210	17 MAR 2022 0200	
M3	17 MAR 2022 0201	Z		200-3-1	17 MAR 2022 0900	17 MAR 2022 0920	
CT	17 MAR 2022 0240	Z		CDISUP	17 MAR 2022 0900	17 MAR 2022 0920	
IW	17 MAR 2022 0900	Z					
M3	17 MAR 2022 0921	Z					
JC	17 MAR 2022 0948	Z					

MCN : 28T08C1
JCN : FC3074604
MODEX : 14
Syn Reason : LH WHT LWR LATCH SENSOR

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0819
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

Rank

Name

DateTime

WIT TQ OF LH CDD MOUNTING BOLTS TO 85IN/LBS. BOLTS
SAFETY WIRED. NEEDS SEALANT. SYSTEM OP-CHECK GOOD.

(b)(3), (b)(6), (b)(7)c

16 MAR 2022 1940

FOD FREED L/H WHITE TRAILING EDGE FAIRING, GOOD TO BE
INSTALLED.

(b)(3), (b)(6), (b)(7)c

16 MAR 2022 2236

FOD FREED AND CLOSED LH WHITE LEADING AND SPINNER
DOME. CLOSED LH WHITE TRAILING EDGE. WIT'D TQ OF 80
IN-LBS ON ALL PANEL SCREWS. BLADE FOLD OP CHECKS
GOOD. AFF

(b)(2)Low, (b)(6), (b)(7)c

17 MAR 2022 0244

COMPLETE WORK ORDER FORM

JCN 8D3	JCN FC3075637	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 120	CF Req N	QA Req N		
Intrm Cd	Code	Basic No	Rev Ltr	Amend		Part		Kit No			
Turn-In Doc	WUC/UNS 521001			Trans 11	M/L 1	Item Process 1	Action Taken C	Mal Code 190	Disc Code H	Type Maint B	
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage		Serial Number			Cage		Serial Number				
Part Number		Date Removed 00 0000 0000			Part Number		Date Installed 00 0000 0000				
Man Hrs 4.4	Elapsed Hrs 2.2	Received 16 MAR 2022 1032		EOC Z	In Work 16 MAR 2022 1546		EOC Z	Completed 16 MAR 2022 1850		WO Status Cd D	
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason UPPER CREW DOOR WINDOW					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
DISCREPANCY								INITIATOR			
UPPER CREW DOOR WINDOW CRAZED AND CANNOT BE SEEN OUT OF.								(b)(3), (b)(6), (b)(7)c			
CORRECTIVE ACTION											
REPLACED UPPER CREW DOOR WINDOW IAW SSS 5210 UTILIZING PEMA 92116. ATAF APAF AFF ACF.											
CORRECTED BY				INSPECTED BY				MAINT CONTROL			
(b)(3), (b)(6), (b)(7)c				(b)(3), (b)(6), (b)(7)c				(b)(3), (b)(6), (b)(7)c			

MCN : 28T08D3
JCN : FC3075637
MODEX : 14
Sync Reason : UPPER CREW DOOR WINDOW

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0818
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>
M3	16 MAR 2022 1032	Z
IW	16 MAR 2022 1546	Z
M3	16 MAR 2022 1801	Z
JC	16 MAR 2022 1850	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	120-2-5	16 MAR 2022 1546	16 MAR 2022 1800	NQC
	CDISUP	16 MAR 2022 1546	16 MAR 2022 1800	

MCN : 28T08D3
JCN : FC3075637
MODEX : 14
Syn Reason : UPPER CREW DOOR WINDOW

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0818
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

WTD INSTALL AND TQ OF ALL ATTACHING HW TO 25 IN LBS.
ATAF APAF AFF ACF.

Rank

Name

(b)(3), (b)(6), (b)(7)c

DateTime

16 MAR 2022 1849

COMPLETE WORK ORDER FORM

MCN 38C	JCN FC3067682	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 310	CF Req N	QA Req N		
Assy Cd	Code	Basic No	Rev Ltr	Amend	Part	Kit No					
Turn-In Doc 28T088J	WUC/UNS 211001	Trans 23	M/L 1	Item Process 1	Action Taken R	Mal Code 585	Disc Code H	Type Maint B			
REMOVED/OLD ITEM					INSTALLED/NEW ITEM						
Cage 97499	Serial Number 2210180-440		Cage 97499	Serial Number 2210180-892							
Part Number 901-364-002-109	Date Removed 08 MAR 2022 1317		Part Number 901-364-002-109	Date Installed 08 MAR 2022 2116							
Man Hrs 11.4	Elapsed Hrs 6.2	Received 08 MAR 2022 0114	EOC Z	In Work 08 MAR 2022 0800	EOC Z	Completed 08 MAR 2022 2117	WO Status Cd D				
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason SDC FAIL/INOP					
(H-Z) Failed/Required Material											
Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date ORD	DDSN	Date RCVD	NOMEN
			77272	901-364-002-109	1	AK0	02	08 MAR 2022 0950	2067GC74	08 MAR 2022 1530	SFI 21,100,12 CC
			77272	901-366-582-791	2	AK0	02	08 MAR 2022 1520	2067GC80	08 MAR 2022 1530	SFI 21,100,20 SE
			97499	901-046-615-101	1	AK0	02	08 MAR 2022 1524	2067GC81	08 MAR 2022 1630	SFI 21,100,14 AC
			77272	901-366-582-764	2	AK0	02	08 MAR 2022 1617	2067GC82	08 MAR 2022 1830	S/F/I 21,202A,11
DISCREPANCY										INITIATOR (b)(3), (b)(6), (b)(7)c	
SDC FAIL/INOP											
CORRECTIVE ACTION REPLACED SHAFT DRIVEN COMPRESSOR IAW SSS 2110 USING PEMA 92084. ATAF, APAF, AFF, ACF.											
DIRECTED BY (b)(3), (b)(6), (b)(7)c				INSPECTED BY (b)(3), (b)(6), (b)(7)c				MAINT CONTROL (b)(3), (b)(6), (b)(7)c			

COMPLETE WORK ORDER FORM

MCN 88C	JCN FC3067682	Type WO DM	Org Code FC3	Modex 14	Buno/Serno 168330	Assy Cd AYNE	Work Center 310	CF Req N	QA Req N	
Ln Cd	Code	Basic No	Rev Ltr	Amend		Part		Kit No		
Turn-In Doc	WUC/UNS 211001			Trans 23	M/L 1	Item Process 1	Action Taken R	Mal Code 585	Disc Code H	Type Maint B
REMOVED/OLD ITEM					INSTALLED/NEW ITEM					
Cage 97499			Serial Number 2210180-440			Cage 97499			Serial Number 2210180-892	
Part Number 901-364-002-109			Date Removed 08 MAR 2022 1317			Part Number 901-364-002-109			Date Installed 08 MAR 2022 2116	
Man Hrs 11.4	Elapsed Hrs 6.2	Received 08 MAR 2022 0114	EOC Z	In Work 08 MAR 2022 0800			EOC Z	Completed 08 MAR 2022 2117	WO Status Cd D	
Meter	In Process Insp N	Safety EI	Posit	Fid	Tech	System Reason SDC FAIL/INOP				

(H-Z) Failed/Required Material

Index	F/P/A/T	MAL	Cage	Part Number	QTY	PROJ	PRI	Date	ORD	DDSN	Date RCVD	NOMEN
77272			901-364-002-109		1	AK0	02	08 MAR 2022	0950	2067GC74	08 MAR 2022 1530	SFI 21,100,12 CC
77272			901-366-582-791		2	AK0	02	08 MAR 2022	1520	2067GC80	08 MAR 2022 1530	SFI 21,100,20 SE
97499			901-046-615-101		1	AK0	02	08 MAR 2022	1524	2067GC81	08 MAR 2022 1630	SFI 21,100,14 AC
77272			901-366-582-764		2	AK0	02	08 MAR 2022	1617	2067GC82	08 MAR 2022 1830	S/F/I 21,202A,11

DISCREPANCY

INITIATOR

(b)(3), (b)(6), (b)(7)c

SDC FAIL/INOP

CORRECTIVE ACTION

REPLACED SHAFT DRIVEN COMPRESSOR IAW SSS 2110 USING PEMA 92084. ATAF, APAF, AFF, ACF.

CORRECTED BY

(b)(3), (b)(6), (b)(7)c

INSPECTED BY

(b)(3), (b)(6), (b)(7)c

MAINT CONTROL

(b)(3), (b)(6), (b)(7)c

MCN :287
JCN :F 32
MODEX :14
Sys Reason :SDC FAIL/INOP

NALCOMIS
REQUIRED MATERIAL

Date :28 APR
Time :0820
Req By (b)(3), (b)(6), (b)(7)c
Page :1 of 1

<u>RPBL</u>	<u>Cage</u>	<u>Part Number</u>	<u>QTY</u>	<u>Proj</u>	<u>PRI</u>	<u>Ordered</u>	<u>DDSN</u>	<u>Reference</u>	<u>Date</u>	<u>Status</u>	<u>NIIN</u>
YES	77272	901-364-002-109	1	AKC	02	08 MAR 2022 0950	2067GC74	SFI 21,100,12 COMPRESSOR ASSY SHAFT DRIVEN PAOOI	08 MAR 2022 1530	067COMPL	
NO	77272	901-366-582-791	2	AKC	02	08 MAR 2022 1520	2067GC80	SFI 21,100,20 SEAL ECS PAOZZ NB	08 MAR 2022 1530	065COMPL	
NO	97499	901-046-615-101	1	AKC	02	08 MAR 2022 1524	2067GC81	SFI 21,100,14 ADAPTER SPLINED PAOZZ NB	08 MAR 2022 1630	067COMPL	
NO	77272	901-366-582-764	2	AKC	02	08 MAR 2022 1617	2067GC82	S/F/I 21,202A,11 SEAL, ECS COUPLING PAOZZ	08 MAR 2022 1830	067COMPL	

ENCLOSURE (51)

MCN : 28T088C
JCN : FC3067682
MODEX : 14
Svc Reason : SDC FAIL/INOP

NALCOMIS OMA
Job Status / Worker Hours

Date : 28 APR 2022
Time : 0820
Req By (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Job Status

<u>Job Status</u>	<u>Date Time</u>	<u>EOC</u>
M3	08 MAR 2022 0114	Z
M4	08 MAR 2022 0141	Z
M3	08 MAR 2022 0557	Z
IW	08 MAR 2022 0800	Z
M3	08 MAR 2022 0901	Z
IW	08 MAR 2022 0945	Z
M3	08 MAR 2022 0948	Z
WP	08 MAR 2022 0950	Z
IW	08 MAR 2022 1600	Z
M3	08 MAR 2022 2111	Z
JC	08 MAR 2022 2117	Z

Worker Hours

<u>Name</u>	<u>Toolbox</u>	<u>Start Date</u>	<u>End Date</u>	<u>CDI</u>
(b)(3), (b)(6), (b)(7)c	CDISUP	08 MAR 2022 0800	08 MAR 2022 0900	
	NTR	08 MAR 2022 0945	08 MAR 2022 0947	
	1-6	08 MAR 2022 1600	08 MAR 2022 2110	
	CDISUP	08 MAR 2022 1600	08 MAR 2022 2110	

MCN : 28T088C
JCN : FC3067682
MODEX : 14
Svc Reason : SDC FAIL/INOP

NALCOMIS OMA
QAR/CDI In Process Inspection

Date : 28 APR 2022
Time : 0820
Req By : (b)(3), (b)(6), (b)(7)c
Page : 1 of 1

Description

Rank

Name

DateTime

WIT TQ OF SDC TO MWGB VBAND CLAMP TO 125INLBS, BEAT TO SEAT
WIT TQ OF SDC BARRIER FILTER HOUSING TO SDC VBAND CLAMP TO 25INLBS, BEAT TO SEAT
WIT TQ OF SDC GROUNDING STRAP HW TO 50INLBS.

(b)(3), (b)(6), (b)(7)c

08 MAR 2022 2123

ALL CANNON PLUGS FULLY SEATED
SDC PROPERLY SERVICED WITH MIL-PRF-23699, LEAK CHECK AND OP CHECK GTG.

(b)(3), (b)(6), (b)(7)c

08 MAR 2022 2125

Historical Work Order Query

ORG: FC3 WC: MODEX: 14 Assy Cd: Type WO:
 BUNO/Serno: 168330 Maint Level: EOC Code: U/D/P: ☐ Up ☐ Down ☐ Partial ☒ All
 Trans Code: Act Tkn Cd: When Disc Cd: Mal Cd:
 WUC/UNS:
 Nomen:
 MCN: JCN:

Start Date: 18 NOV 2021 0000
 End Date: 19 MAR 2022 0000

Retrieve

Clear

Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS TWO	WUC/UNS
FC3	28QT7J9	FC3321012	14	168330	P	130	LIFERAFT NOT INST	C	17	DM 256010
FC3	28QT7JG	FC3321014	14	168330	P	310	LH COANDA F(P)	H	23	DM 785105
FC3	28QT7JI	FC3321015	14	168330	P	200	RH EXDEF CB	H	11	DM 7852
FC3	28QT7JJ	FC3321016	14	168330	U	12C	FLIR PAINT CDD15DEC21		11	DM 935102
FC3	28QT7JK	FC3321018	14	168330	U	120	6RB2 DAMAGE		11	DM 5422
FC3	28QT7JL	FC3321019	14	168330	U	120	6RI1B DAMAGE		11	DM 5422
FC3	28QT7JM	FC3321020	14	168330	U	120	6RO1B DAMAGE		11	DM 5422
FC3	28QT7JN	FC3321021	14	168330	U	120	COPILOT MIRROR		12	DM 251045
FC3	28QT7JO	FC3321022	14	168330	U	200	RH GLARESHIELD		12	DM 25102402
FC3	28QT7JQ	FC3321023	14	168330	U	120	WORN BEARINGS		11	DM 324006
FC3	28QT7JR	FC3321024	14	168330	U	120	WORN BEARINGS		11	DM 324007
FC3	28QT7JS	FC3321025	14	168330	U	120	WORN BEARINGS		11	DM 324009
FC3	28QT7JU	FC3321026	14	168330	U	12C	APUFUELMANICDD: 20211:		11	CT 493015
FC3	28QT7JV	FC3321027	14	168330	D	040	MFR# 21076	Z	11	CX 0550
FC3	28QT7JW	FC3321028	14	168330	U	120	RH INBD CLAMSHELL STRU		12	DM 54227603
FC3	28QT7JX	FC3321029	14	168330	U	310	ECU DIFF PRESS INDICATOR		11	DF 215002
FC3	28QT7K1	FC3321038	14	168330	D	310	RH INLET DRAIN STRUT	Z	11	DM 7162
FC3	28QT7K2	FC3321033	14	168330	U	020	AIRCRAFT ACCEPTANCE INS		11	AL 0561
FC3	28QT7K3	FC3321033	14	168330	U	040	AIRCRAFT ACCEPTANCE INS		11	AL 0561
FC3	28QT7K4	FC3321033	14	168330	U	120	AIRCRAFT ACCEPTANCE INS		11	AL 0561
FC3	28QT7K5	FC3321033	14	168330	U	130	AIRCRAFT ACCEPTANCE INS		11	AL 0561
FC3	28QT7K6	FC3321033	14	168330	U	200	AIRCRAFT ACCEPTANCE INS		11	AL 0561

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Sort By

Historical Work Order Query

ORG: WC: MODEX: Assy Cd: Type WO:
 BUNO/Serno: Maint Level: EOC Code: U/D/P:
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Retrieve

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANSTWO	WUC/UNS
FC3	28QT7K7	FC3321033	14	168330	U	230	AIRCRAFT ACCEPTANCE INS	11	AL	0561
FC3	28QT7K8	FC3321033	14	168330	U	310	AIRCRAFT ACCEPTANCE INS	11	AL	0561
FC3	28QT7K9	FC3321034	14	168330	U	310	ENGINE ACCEPTANCE INSPE	12	AX	0561
FC3	28QT7KA	FC3321035	14	168330	U	310	ENGINE ACCEPTANCE INSPE	11	AX	0561
FC3	28QT7KB	FC3321036	14	168330	U	310	LEFT HUB ASSEMBLY ACCE	11	AX	0561
FC3	28QT7KC	FC3321037	14	168330	U	310	RIGHT HUB ASSEMBLY ACC	11	AX	0561
FC3	28QT7KD	FC3322039	14	168330	U	310	APU COVER WORN	12	DM	1000000
FC3	28QT7KE	FC3322040	14	168330	D	120	6RIIB AFT POP LATCH	Z	11	DM 5422760105
FC3	28QT7LI	FC3323074	14	168330	D	310	RH CVG BINDING	Z	11	DM 7104
FC3	28QT7LR	FC3323082	14	168330	D	200	ASC-0122 DNLT 3 NOV 202	Z	47	TD 313201
FC3	28QT7LT	FC3323074	14	168330	U	200	FOM RH FADEC B	11	FO	732504
FC3	28QT7LX	FC3323088	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623111
FC3	28QT7LY	FC3323089	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623119
FC3	28QT7LZ	FC3323090	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623117
FC3	28QT7M0	FC3323091	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623212
FC3	28QT7M1	FC3323092	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623220
FC3	28QT7M2	FC3323093	14	168330	U	310	DCB-0057 DNLT 1697.7 HRS	47	TD	623218
FC3	28QT7M3	FC3323094	14	168330	U	310	DCB-0056 DNLT 1697.7 HRS	47	TD	62311301
FC3	28QT7M5	FC3323095	14	168330	U	120	AYB-1716 NLT 1767.7	47	TD	275017
FC3	28QT7M6	FC3323096	14	168330	U	120	AYB-1716 DNLT 1767.7	47	TD	275015
FC3	28QT7MS	FC3326114	14	168330	U	120	AFB-0188 HELD IN ABEYAN	41	TD	1000000
FC3	28QT7QL	FC3326240	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252003

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Historical Work Order Query

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Retrieve

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS TWO	WUC/UNS
FC3	28QT7QM	FC3326241	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252004
FC3	28QT7QN	FC3326242	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252005
FC3	28QT7QO	FC3326243	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252006
FC3	28QT7QP	FC3326244	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252007
FC3	28QT7QQ	FC3326245	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252008
FC3	28QT7QR	FC3326246	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252009
FC3	28QT7QS	FC3326247	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252010
FC3	28QT7QT	FC3326248	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252011
FC3	28QT7QU	FC3326249	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252012
FC3	28QT7QV	FC3326250	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252013
FC3	28QT7QW	FC3326251	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252014
FC3	28QT7QX	FC3326252	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252015
FC3	28QT7QY	FC3326253	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252016
FC3	28QT7QZ	FC3326254	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252017
FC3	28QT7R0	FC3326255	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252018
FC3	28QT7R1	FC3326256	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252019
FC3	28QT7R2	FC3326257	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252020
FC3	28QT7R3	FC3326258	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252021
FC3	28QT7R4	FC3326259	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252022
FC3	28QT7R5	FC3326260	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252023
FC3	28QT7R6	FC3326261	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252024
FC3	28QT7R7	FC3326262	14	168330	U	130	INSTALL TROOP SEAT	17	DM	252025

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANSTWO	WUC/UNS
FC3	28QT7R8	FC3326263	14	168330	U	130	INSTALL TROOP SEAT		17 DM	252026
FC3	28QT7RA	FC3327265	14	168330	D	200	HI-TIME: 1704923	Z	23 DM	34550101
FC3	28QT7RB	FC3327266	14	168330	D	130	INSTALL JUMP SEAT	Z	17 DM	252002
FC3	28QT7RI	FC3327272	14	168330	U	120	AYB-1716 DNLT 1767.7		47 TD	275016
FC3	28QT7RJ	FC3327273	14	168330	U	120	AYB-1716 DNLT 1767.7		47 TD	275018
FC3	28QT7RK	FC3327274	14	168330	U	120	AYB-1716 DNLT 1767.7		47 TD	275013
FC3	28QT7RL	FC3327275	14	168330	U	120	AYB-1716 DNLT 1767.7		47 TD	275018
FC3	28QT7TR	FC3328346	14	168330	U	200	GPS DAY KEY INOP		11 DM	345201
FC3	28QT7TV	FC3328343	14	168330	D	310	LEFT NEW TAGB-TO-SPINDL	Z	11 CX	0550
FC3	28QT7WE	FC3328436	14	168330	U	200	R&R WIA 57		11 DM	427062
FC3	28QT7XZ	FC3328478	14	168330	P	200	LH RED BLADE TEMP SENS	I	11 DM	621101
FC3	28QT7Y0	FC3328479	14	168330	P	200	LH GREEN BLADE TEMP F(P	I	11 DM	621103
FC3	28QT832	FC3333077	14	168330	P	200	LH COANDA F(P)	H	12 DM	4220VN
FC3	28QT84G	FC3334117	14	168330	U	230	INSTALL M240		17 DM	9420
FC3	28QT84H	FC3334118	14	168330	U	230	REMOVE M240		16 DM	9420
FC3	28QT84I	FC3334119	14	168330	U	230	REMOVE PINTLE		16 DM	751D0
FC3	28QT84J	FC3334120	14	168330	U	230	REMOVE M 240D RAMP MOI		16 DM	751F0
FC3	28QT84K	FC3334121	14	168330	U	130	INSTALL FWD EXTERNAL H		17 DM	259505
FC3	28QT84L	FC3334122	14	168330	U	130	REMOVE FWD EXTERNAL H		21 DM	259505
FC3	28QT84R	FC3334128	14	168330	U	230	OP CHECK ALE-47		11 DM	9931
FC3	28QT865	FC3335167	14	168330	D	310	RH ANTI ICE VALVE	Z	25 DM	751101
FC3	28QT866	FC3335169	14	168330	P	200	RH PENDAMP HEAT FAIL	I	11 DM	62220814

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS TWO	WUC/UNS
FC3	28QT867	FC3335170	14	168330	P	200	LH INLET CTR BDY TEMP SE	I	11	DM 716105
FC3	28QT87G	FC3335212	14	168330	P	200	ALE 47 FAIL	C	23	DM 993102
FC3	28QT88C	FC3335230	14	168330	D	200	RH NACELLE BLOWER F(P)	Z	12	DM 4220HE
FC3	28QT88N	FC3335238	14	168330	D	021	AFC-0188 IN ABYNC	Z	41	TD 1000000
FC3	28QT8A1	FC3336279	14	168330	D	021	AFC-0190 DNLTL 31OCT23	Z	41	TD 1000000
FC3	28QT8A2	FC3336280	14	168330	D	021	AFC-0217 31JUL24	A	41	TD 1000000
FC3	28QT8A3	FC3336281	14	168330	D	021	AFC-0226 AS PER TYCOM	Z	41	TD 1000000
FC3	28QT8A6	FC3336287	14	168330	U	130	HI-TIME: 20C0564		23	DM 256010
FC3	28QT8AX	FC3336305	14	168330	U	020	BRICK ERROR		12	DM 461203
FC3	28QT8AY	FC3336306	14	168330	U	020	BRICK ERROR		12	DM 461203
FC3	28QT8EV	FC3321022	14	168330	U	200	FOM WIRING		11	FO 25102402
FC3	28QT8GE	FC3340456	14	168330	U	120	1RS7 DELAMINATION		11	DM 531172
FC3	28QT8GZ	FC3340455	14	168330	U	310	DCB-0056 DNLTL 1697.7 HR		47	TD 62321402
FC3	28QT8IG	FC3340487	14	168330	U	120	7 DAY TIRE INSPECTION (NC		11	CX 0550
FC3	28QT8K8	FC3341543	14	168330	U	020	BRICK CARDS		12	DM 461203
FC3	28QT90B	FC3346401	14	168330	U	120	DD: 12/15/2021 7 DAY INS		11	SX 052A02
FC3	28QT91N	FC3347442	14	168330	D	021	ASC-0096 DNLTL NXT 70 HR	Z	47	TD 435101
FC3	28QT91S	FC3347445	14	168330	D	021	ASC-0114 RE NLT 13FEB20	Z	47	TD 345201
FC3	28QT98A	FC3351024	14	168330	U	040	AYC-1507 AS PER TYCOM		47	TD 5313HV
FC3	28QT9AN	FC3352090	14	168330	P	200	ALE-47 FAIL	C	23	DM 993102
FC3	28QT9B6	FC3352101	14	168330	D	200	LH FIRE WIRE #2	Z	11	DM 261109
FC3	28QT9BX	FC3354133	14	168330	U	120	DD: 12/22/2021 7 DAY INS		11	SX 052A02

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS	TWO	WUC/UNS
FC3	28QT9D3	FC3354167	14	168330	U	310	FUEL OP CHECK		11	DM	282739
FC3	28QT9D4	FC3354168	14	168330	U	200	AC POWER OP CHECK	A	11	DM	242003
FC3	28QT9D5	FC3354169	14	168330	U	310	RH ENG ANTI-ICE OP CHECK		11	DM	751201
FC3	28QT9D6	FC3354170	14	168330	U	310	LH ENG ANTI-ICE OP CHECK		12	DM	751201
FC3	28QT9D7	FC3354171	14	168330	U	200	FADEC A FUNCTION CHECK	A	11	DM	732501
FC3	28QT9D8	FC3354172	14	168330	U	200	FADEC B FUNCTION CHECK	A	11	DM	732504
FC3	28QT9D9	FC3354173	14	168330	U	310	DRIVE SHAFT OP CHECK		11	DM	631101
FC3	28QT9DA	FC3354174	14	168330	U	310	LH ENG OP CHECK		11	DM	751201
FC3	28QT9FX	FC3336289	14	168330	U	120	FOM LH RUDDER		11	FO	5541
FC3	28QT9FY	FC3336290	14	168330	U	120	FOM RH RUDDER		11	FO	5542
FC3	28QT9GA	FC3355277	14	168330	D	200	LH EAPS F(P)	Z	11	TS	718102
FC3	28QT9H	FC3355277	14	168330	D	120	LH EAPS F(P)	Z	12	DM	71810349
FC3	28QT9J1	FC3321015	14	168330	D	200	RH EXDEF CB	Z	12	DM	427061
FC3	28QT9J3	FC3357354	14	168330	D	200	ADU 1 F(P)	Z	12	DM	272402
FC3	28QT9K2	FC3362382	14	168330	U	310	RH ENGINE OP CHECK		12	DM	77210510
FC3	28QT9K5	FC3362385	14	168330	D	120	6RO3 UPPER PIN LATCH HOI	Z	11	DM	542112
FC3	28QT9KG	FC3362397	14	168330	U	120	DD: 12/29/2021 7 DAY INS		11	SX	052A02
FC3	28QT9LB	FC3363422	14	168330	D	200	CO PILOTS OVER TRV	Z	12	DM	4220DX
FC3	28QT9LX	FC3363440	14	168330	D	200	RH NAC BLWR F(P)	Z	23	DM	4220HE
FC3	28QT9M2	FC3363445	14	168330	D	200	RH FADEC A FAULT	Z	12	DM	425115
FC3	28QT9M3	FC3363446	14	168330	D	120	INSTALL UPPER CREW DOO	Z	11	DM	525030
FC3	28QT9PU	FC3004581	14	168330	U	200	RH NAC BLWR		11	DM	549205

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANSTWO	WUC/UNS
FC3	28QT9PZ	FC3364579	14	168330	D	020	DD: 12/31/2021 56 DAY IN	Y	11	SC 052A09
FC3	28QT9Q0	FC3364579	14	168330	D	120	DD: 12/31/2021 56 DAY IN		11	SL 052A09
FC3	28QT9Q1	FC3364579	14	168330	D	130	DD: 12/31/2021 56 DAY IN	Z	11	SL 052A09
FC3	28QT9Q2	FC3364579	14	168330	D	310	DD: 12/31/2021 56 DAY IN		11	SL 052A09
FC3	28QT9Q7	FC3004583	14	168330	P	200	LEFT INLET CTRBODY TEMP	I	11	DM 308503
FC3	28QT9TY	FC3005153	14	168330	D	120	PANEL 6LO3 FWD HINGE PIN	Z	12	DF 542112
FC3	28QT9TZ	FC3005154	14	168330	U	310	ECU DIFF PRESS INDICATOR		11	DF 2190BS
FC3	28QT9U0	FC3005155	14	168330	U	310	ENGINE INTAKE COVER		11	DF 251020
FC3	28QT9Y6	FC3007259	14	168330	D	310	LH ENG SERV	Z	12	DM 791101
FC3	28QT9Y7	FC3007260	14	168330	D	310	RH ENG SERV	Z	12	DM 791101
FC3	28QT9Y8	FC3007261	14	168330	D	200	MWGB OIL OVERTEMP SW	Z	12	DM 4220GS
FC3	28QT9YB	FC3007263	14	168330	U	310	35 HOUR MAST NUT BOLT T		11	SX 053D0A
FC3	28QT9YC	FC3007264	14	168330	U	310	35 HOUR MAST NUT BOLT T		11	SX 053D0A
FC3	28QT9YD	FC3007265	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YE	FC3007266	14	168330	U	310	35 HOUR NEWLY INSTALLEI		11	SX 053D0A
FC3	28QT9YF	FC3007267	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YG	FC3007268	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YH	FC3007269	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YI	FC3007270	14	168330	U	310	35 HR NEWLY INSTALLED S		11	SX 053D0H
FC3	28QT9YJ	FC3007271	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YK	FC3007272	14	168330	U	120	35 HOUR INSPECTION.		11	SX 053D0A
FC3	28QT9YT	FC3007280	14	168330	U	200	RH IB MFD KNOB		12	DM 463002

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Retrieve

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Detail

- ☐ Up
☐ Down
☐ Partial
☒ All

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS TWO	WUC/UNS
FC3	28QT9YU	FC3007279	14	168330	D	040	MFR 27004	Z	11	CX 0550
FC3	28QT9ZQ	FC3007315	14	168330	U	12C	CCDD04FEB22 RH RED		11	SF 621202
FC3	28QT9ZT	FC3007318	14	168330	U	12C	CCDD04FEB22 RWHT PAINT		11	SF 621206
FC3	28QTA10	FC3009364	14	168330	U	120	DD: 1/12/2022 7 DAY INSP		11	SX 052A02
FC3	28QTA32	FC3010401	14	168330	U	200	HITIMEWC23301 NLT01FEB2		23	DM 34520101
FC3	28QTA33	FC3010402	14	168330	U	200	HITIMEWC23302 NLT01FEB2		23	DM 34520101
FC3	28QTA34	FC3010403	14	168330	U	200	HITIMEWC23303 NLT01FEB2		23	DM 34520101
FC3	28QTA8S	FC3010594	14	168330	P	200	LH NIPCU	C	11	DM 308503
FC3	28QTAIO	FC3014328	14	168330	U	310	LC FAILS TO TRANSMIT		11	DM 4220FQ
FC3	28QTAJ4	FC3016344	14	168330	U	120	DD: 1/19/2022 7 DAY INSP		11	SX 052A02
FC3	28QTB6B	FC3027458	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6C	FC3027459	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6D	FC3027460	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6E	FC3027461	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6F	FC3027462	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6G	FC3027463	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6H	FC3027464	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6I	FC3027465	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6J	FC3027466	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28QTB6K	FC3027467	14	168330	U	130	ACB 1339/DNLT/23FEB2023		47	TD 91B84
FC3	28T07UK	FC3052617	14	168330	D	020	DD: 2/25/2022 56 DAY INS	Y	11	SC 052A09
FC3	28T07UL	FC3052617	14	168330	D	120	DD: 2/25/2022 56 DAY INS	Z	11	SL 052A09

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Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS TWO	WUC/UNS
FC3	28T07UM	FC3052617	14	168330	D	130	DD: 2/25/2022 56 DAY INS	Z	11	SL 052A09
FC3	28T07UN	FC3052617	14	168330	D	310	DD: 2/25/2022 56 DAY INS	Z	11	SL 052A09
FC3	28T07UO	FC3052618	14	168330	D	120	DD: 1/26/2022 7 DAY INSP	Z	11	SX 052A02
FC3	28T07UP	FC3052619	14	168330	D	020	DD: 2/4/2022 91 DAY INSP	Y	11	SC 052A0R
FC3	28T07UQ	FC3052619	14	168330	D	12C	DD: 2/4/2022 91 DAY INSP	Z	11	SL 052A0R
FC3	28T07UR	FC3052619	14	168330	D	130	DD: 2/4/2022 91 DAY INSP	Z	11	SL 052A0R
FC3	28T07US	FC3052619	14	168330	D	200	DD: 2/4/2022 91 DAY INSP	Z	11	SL 052A0R
FC3	28T07UT	FC3052619	14	168330	D	310	DD: 2/4/2022 91 DAY INSP	Z	11	SL 052A0R
FC3	28T07UY	FC3052624	14	168330	D	120	HYD 2 LOW	Z	11	DM 2912
FC3	28T07V3	FC3053738	14	168330	U	120	6LB4 H/W		12	SF 57330901
FC3	28T07V4	FC3053739	14	168330	U	200	HPDU HARNESS		11	SF 2911
FC3	28T07Y5	FC3053740	14	168330	U	12C	CCDD:22MAR2022 NLG JAC		11	SF 322001
FC3	28T07Y6	FC3053741	14	168330	U	12C	CCDD:22MAR2022 LH MLG		11	SF 321001
FC3	28T07Y7	FC3053742	14	168330	U	12C	CCDD:22MAR2022 RH MLG		11	SF 321002
FC3	28T07YP	FC3055749	14	168330	U	310	INSTALL STANCHION		11	DM 256002
FC3	28T07YQ	FC3055750	14	168330	U	310	REMOVE STANCHIONS		11	DM 256002
FC3	28T07ZQ	FC3058780	14	168330	U	130	INSTALL COLD WEATH KITS		11	DM 2560
FC3	28T07ZU	FC3058603	14	168330	U	120	DD: 3/3/2022 7 DAY INSPE		11	SX 052A02
FC3	28T080X	FC3060636	14	168330	D	120	RH MLG SHOCK LOW PRES:	Z	12	DM 321002
FC3	28T0811	FC3060639	14	168330	D	200	L ENG COMPR DISCHARGE	Z	12	TS 72390101
FC3	28T0812	FC3060640	14	168330	D	120	PANEL 7RB4 CRACKED	Z	12	DM 534804
FC3	28T0817	FC3060642	14	168330	U	200	RH FLOOD LIGHT DOME LEM		12	DM 334009

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Sort By

Historical Work Order Query

ORG: FC3 WC: MODEX: 14 Assy Cd: Type WO:
 BUNO/Serno: 168330 Maint Level: EOC Code: U/D/P:
 Trans Code: Act Tkn Cd: When Disc Cd: Mal Cd:
 WUC/UNS:
 Nomen:
 MCN: JCN:
 Start Date: 18 NOV 2021 0000
 End Date: 19 MAR 2022 0000

Retrieve

Clear

Detail

ORG	MCN	JCN	MODEX	BUNO/ Serno	U/D/P	WC	SYSTEM/REASON	EOC	TRANS	TWO	WUC/UNS
FC3	28T07YQ	FC3055750	14	168330	U	310	REMOVE STANCHIONS		11	DM	256002
FC3	28T07ZQ	FC3058780	14	168330	U	130	INSTALL COLD WEATH KITS		11	DM	2560
FC3	28T07ZU	FC3058603	14	168330	U	120	DD: 3/3/2022 7 DAY INSPE		11	SX	052A02
FC3	28T080X	FC3060636	14	168330	D	120	RH MLG SHOCK LOW PRES!	Z	12	DM	321002
FC3	28T0811	FC3060639	14	168330	D	200	L ENG COMPR DISCHARGE	Z	12	TS	72390101
FC3	28T0812	FC3060640	14	168330	D	120	PANEL 7RB4 CRACKED	Z	12	DM	534804
FC3	28T0817	FC3060642	14	168330	U	200	RH FLOOD LIGHT DOME LEN		12	DM	334009
FC3	28T082U	FC3060639	14	168330	D	310	L ENG COMPR DISCHARGE	Z	12	DM	72390101
FC3	28T0860	FC3065604	14	168330	U	120	DD: 3/10/2022 7 DAY INSP		11	SX	052A02
FC3	28T086Y	FC3065640	14	168330	D	120	PNEUMATIC RESERVOIR	Z	11	DF	323101
FC3	28T088C	FC3067682	14	168330	D	310	SDC FAIL/INOP	Z	23	DM	211001
FC3	28T0895	FC3068702	14	168330	D	120	LWR COMP LATCH 6LO3	Z	12	DF	542112
FC3	28T08BB	FC3072765	14	168330	U	120	DD: 3/17/2022 7 DAY INSP		11	SX	052A02
FC3	28T08BM	FC3073772	14	168330	D	120	BROKEN CLICKSTUD	Z	11	DF	622119
FC3	28T08C1	FC3074604	14	168330	D	200	LH WHT LWR LATCH SENS	Z	23	DM	3X6101
FC3	28T08CM	FC3073603	14	168330	D	120	Cannib TRML CNTR VALVE	Z	18	CM	291212
FC3	28T08D3	FC3075637	14	168330	D	120	UPPER CREW DOOR WINDO	Z	11	DM	521001
FC3	28T08DM	FC3076646	14	168330	D	040	MFR # 22011	Z	11	CX	0550
FC3	28T08DN	FC3076647	14	168330	D	120	6LO3 LWR FWD PIN LATCH	Z	12	DF	542114
FC3	28T08E8	FC3076655	14	168330	D	130	R/R FIRE EXTINGUISHER	Z	23	DM	262001
FC3	28T08E9	FC3076656	14	168330	D	130	R/R FIRE EXTINGUISHER	Z	23	DM	262002
FC3	28T08EH	FC3077661	14	168330	D	310	R/H ENG OIL SERV 36 OZ	Z	11	DM	7102

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Sort By

(b)(6), (b)(7)c

Subject: Replacement Cost of V22

From: (b)(6), (b)(7)c

(b)(6), (b)(7)c, (b)(7)b

Date: Monday, May 09, 2022, 3:21 PM

To: (b)(6), (b)(7)c

(b)(6), (b)(7)c >

Cc: (b)(3), (b)(6), (b)(7)c

Subject: RE: Replacement Cost of V22

(b)(3), (b)(6), (b)(7)c

See below for the EA of the raw data.

Review of KVADR data shows the following:

At time 22786.6 RH Rotor Torque sees a spike 75776 Foot-Pounds while LH Rotor Torque -2440 Foot-Pounds after throttle position is moved away from zero inches (full aft). Data does not indicate any component failed resulting in the corresponding torque spike.

Potential Causes for this type of asymmetric rotor torque spike:

- Sudden change in blade pitch on the effected rotor (not seen in this case)
- Blade(s) strike (data cannot determine this conclusively)
- One Engine Inoperative (no signs of degraded engine performance)
- Ingestion of FOD into rotor (data cannot determine this conclusively)

Outside of the above time stamp review of KVADR reveals no other anomalies of aircraft systems or components.

Thanks,

(b)(6), (b)(7)c

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A-10

Figure A-9. Daily Aircraft Fuel/Defuel Log

ENCLOSURE (54)

PRODUCT CODE Code de Produit JP8		VEHICLE NO. Numero du Vehicule 043	UNIT ID or UIN Identification M00372	SELLER USE CODE: V SIG: A FUND: BH DODAAC: M20361 BOS: USMC		BUYER USE CODE: W SIG: A FUND: 7B DODAAC: V09441 BOS: USN TAIL#: 168330		DOCUMENT CONTROL SER. NO. G198665	
QUANTITY Quantite 1392		MEASURE UNIT Unite de Mesure GAL	UNIT PRICE Prix Unitaire 3.08						
SERVICE LOCATION and NATION Lieu de l'Operation et Pays BoDO				TOTAL PRICE Prix Totale					
SALE <input checked="" type="checkbox"/> Vente RETURN <input type="checkbox"/> Reprise		METHOD OF PAYMENT/Mode de Compensation CASH/Argent <input type="checkbox"/> REIMBURSEMENT <input type="checkbox"/> Reimboursement		REPLACEMENT IN KIND <input type="checkbox"/> Remplacement Equivalent		BILLING ADDRESS AND AIRCRAFT INFORMATION Adresse de Facturation: Modele et No. d'Immatriculation de l'Avion UNIT: VMN-261			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5#: 140083				DIR OF LOG Directeur de Logistique ACCOUNTANT Comptable 22077		ISSUED BY (SIGNATURE)/Service Fournisseur (b)(3), (b)(6), (b)(7)c RECEIVED BY (SIGNATURE)/Service Acheteur (b)(3), (b)(6), (b)(7)c PRINT NAME and RANK/Nom et Grade (en lettres d'imprimerie) Cpl MOORE			

DD FORM 1898, ENERGY SALES SLIP, JUL 2008

PREVIOUS EDITION MAY BE USED UNTIL SUPPLY IS EXHAUSTED

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USS: 632745

DAILY AIRCRAFT FUEL/DEFUEL LOG

Control Talker: _____ Flight Deck LCPO: _____ Fuels Maintenance Officer: _____

PAGE__OF__

FIGURE A-9
NAVAIR 00-805-109

PRODUCT CODE Code de Produit JP-8	VEHICLE NO. Numero du Vehicule 632745	UNIT ID or UIN Identification M00272	SELLER: USE CODE: V SIG: A FUND: BH DODAAC: M20361 BOS: USMC		BUYER: USE CODE: W SIG: A FUND: 7L DODAAC: U09131 BOS: USN TAIL: 164653 UNIT: VMFA-312		DOCUMENT CONTROL 1	SER. NO. G198623
QUANTITY Quantite 1673	MEASURE UNIT Unite de Mesure GAL	UNIT PRICE Prix Unitaire 3.08	SERVICE LOCATION and NATION Lieu de l'Operation et Pays BODO		TOTAL PRICE Prix Totale			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			DIR OF LOG Directeur de Logistique 22077		ISSUED BY (SIGNATURE)/Service Fournisseur (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G198623
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ACCOUNTANT Comptable 22077		RECEIVED BY (SIGNATURE)/Service Acheteur (b)(3), (b)(6), (b)(7)c			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ISSUE DATE/Date de Distribution 22077		PRINT NAME and RANK (Nom et Grade en lettres d'imprimerie) (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G198623
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			BILLING ADDRESS AND AIRCRAFT INFORMATION Adresse de Facturation, Modele et No. d'Immatriculation de l'Avion		UNIT: VMFA-312			

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PRODUCT CODE Code de Produit JP-8	VEHICLE NO. Numero du Vehicule 632745	UNIT ID or UIN Identification M00272	SELLER: USE CODE: V SIG: A FUND: BH DODAAC: M20361 BOS: USMC		BUYER: USE CODE: W SIG: A FUND: 7B DODAAC: U09441 BOS: USN TAIL#: 168330 UNIT: VMFA-261		DOCUMENT CONTROL 1	SER. NO. G198668
QUANTITY Quantite 1448	MEASURE UNIT Unite de Mesure GAL	UNIT PRICE Prix Unitaire 3.08	SERVICE LOCATION and NATION Lieu de l'Operation et Pays BODO		TOTAL PRICE Prix Totale			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			DIR OF LOG Directeur de Logistique 22077		ISSUED BY (SIGNATURE)/Service Fournisseur (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G198668
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ACCOUNTANT Comptable 22077		RECEIVED BY (SIGNATURE)/Service Acheteur (b)(3), (b)(6), (b)(7)c			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ISSUE DATE/Date de Distribution 22077		PRINT NAME and RANK (Nom et Grade en lettres d'imprimerie) (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G198668
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			BILLING ADDRESS AND AIRCRAFT INFORMATION Adresse de Facturation, Modele et No. d'Immatriculation de l'Avion		UNIT: VMFA-261			

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PRODUCT CODE Code de Produit JP-8	VEHICLE NO. Numero du Vehicule 632745	UNIT ID or UIN Identification M00272	SELLER: USE CODE: V SIG: A FUND: BH DODAAC: M20361 BOS: USMC		BUYER: USE CODE: W SIG: A FUND: 7L DODAAC: U09131 BOS: USN TAIL#: 166235 UNIT: VMFA-312		DOCUMENT CONTROL 1	SER. NO. G200866
QUANTITY Quantite 1448	MEASURE UNIT Unite de Mesure GAL	UNIT PRICE Prix Unitaire 3.08	SERVICE LOCATION and NATION Lieu de l'Operation et Pays BODO		TOTAL PRICE Prix Totale			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			DIR OF LOG Directeur de Logistique 22077		ISSUED BY (SIGNATURE)/Service Fournisseur (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G200866
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ACCOUNTANT Comptable 22077		RECEIVED BY (SIGNATURE)/Service Acheteur (b)(3), (b)(6), (b)(7)c			
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			ISSUE DATE/Date de Distribution 22077		PRINT NAME and RANK (Nom et Grade en lettres d'imprimerie) (b)(3), (b)(6), (b)(7)c		DOCUMENT CONTROL 1	SER. NO. G200866
REMARKS and/or VOUCHER NUMBER Remarques et/ou Piece Justificative GROUND REISSUE HOB5# 140083			BILLING ADDRESS AND AIRCRAFT INFORMATION Adresse de Facturation, Modele et No. d'Immatriculation de l'Avion		UNIT: VMFA-312			

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ENCLOSURE

ENCLOSURE (54)

BODD FUEL FARM CR22
MARCH 18 2022

FARP COMMANDER

FARP SMCOTC

FARP NCOTC

(b)(3), (b)(6), (b)(7)c

TIME EVENT

2200 I (b)(3), (b)(6), (b)(7)c HAVE ASSUMED ALL DUTIES AND RESPONSIBILITIES AS FUEL FARM NCOTC

(b)(3), (b)(6), (b)(7)c

OPENING INVENTORY

BAG 010: 0 GALS

BAG 043: 14193 GALS

TRUCK 632745: 2800

TRUCK 632740: 4800

TRUCK 632733: 4785

TRUCK 618482: 173

0157 TRUCK 632745 STARTS RECEIVING

0205 TRUCK 632745 RECEIVING ENDS (1990 GALS)

0345 BAG 043 BEGINS RECEIVING FROM TRUCK 632733

0405 BAG 043 RECEIVING END 3001 GALLONS

0409 TRUCK 632733 STARTS RECEIVING

(b)(3), (b)(6), (b)(7)c

0416 TRUCK 632733 RECEIVING ENDS 2929 GALLONS

0431 BAG 043 BEGINS RECIRCULING

0459 BAG 043 FINISHES RECIRCULING SAMPLES WERE

PULLED FROM POINTS 1, 2, AND 3 TEST RESULTS BELOW

PT1: SED (A0) WATER (0.2) API (46) TEMP (47) FSII (0.13)

PT2: SED (A0) WATER (0.0) API (46) TEMP (45) FSII (0.13)

PT3: SED (A0) WATER (0.0) API (45) TEMP (44) FSII (0.13)

0635 TRUCK 632745 LEAVES TO FUEL VMFA-312

(b)(3), (b)(6), (b)(7)c

0710 TRUCK 632745 FUELED AC: F/A-18, N# 25, T# 164653

1673 GALS, (b)(3), (b)(6), (b)(7)c

0733 TRUCK 632745 RECEIVED FUEL 1046 GAL (STOP 0737)

0915 TRUCK 632745 LEAVES TO FUEL VMFA-312 and VMFA-312

0930 TRUCK 632745 LEAVES TO FUEL TRUCK AND FUEL VMFA-312

1009 TRUCK 632745 FUELED AC: 22, N# 14, T# 168330

1448 GALS, (b)(3), (b)(6), (b)(7)c

(b)(3), (b)(6), (b)(7)c

1040 TRUCK 632745 RECEIVED FUEL 1343 GALS (STOP 1047)

1405 AC: MV-22, N# 14, B# 168330, BAG 043, T-1405-1405

1392 GALS, (b)(3), (b)(6), (b)(7)c

(b)(6), (b)(7)c

1709 DEFUEL SAMPLE TEST RESULTS 039 KC-130 (b)(3), (b)(6), (b)(7)c

ECON: 190 API: 46 TEMP: 56°F FSII: 0.13 C+W, W+W

2042 AC: F/A-18C, N# 14, B# 168330, TRUCK 632745, T-2042-2057

1673 GALS, (b)(3), (b)(6), (b)(7)c

(b)(6), (b)(7)c

ENCLOSURE (54)

**MIL-STD-3004-1A
APPENDIX F**

PETROLEUM SAMPLE CHAIN OF CUSTODY DOCUMENT			COC DOCUMENT NUMBER	
RECEIVING ACTIVITY MWS-272, Alpha Company		LOCATION Bodo, Norway		
NAME, GRADE AND TITLE OF PERSON FROM WHOM RECEIVED OWNER (b)(3), (b)(6), (b)(7)c OTHER		ADDRESS (Include Zip Code) MWS-272, Alpha Company Cold Response 22 Bodo, Norway		
LOCATION FROM WHERE OBTAINED MWS-272, Alpha Company, Tactical Fuel Farm, Bodo, Norway		REASON OBTAINED Investigation for MV21 Incident	TIME/DATE OBTAINED 20 March 2022 1130 Local	
ITEM NO.	QUANTITY	DESCRIPTION OF ARTICLES (Include product, unit numbers, final destination, condition and unusual marks or scratches)		
1	1	Origin Activity: MWS-272, Alpha Company, Bodo, Norway Fuel Type: JP8, F-34 Date Sample Taken: 18 March 2022 Source of Sample: MWS-272-043 Type of container: Glass bottle Condition: Good, not tampered, No seal on bottle. Final Destination: Frank Robinson, Bodo Fuel Director, Bodo Fuel Lab		
CHAIN OF CUSTODY				
ITEM NO.	DATE	RELEASED BY SIGNATURE NAME, GRADE OR TITLE	RECEIVED BY SIGNATURE NAME, GRADE OR TITLE	PURPOSE OF CHANGE OF CUSTODY
1	20 MARCH 2022	(b)(3), (b)(6), (b)(7)c	(b)(3), (b)(6), (b)(7)c	Sample requested by Norwegian Commission for investigation.
		(b)(3), (b)(6), (b)(7)c	(b)(3), (b)(6), (b)(7)c 21/3-22	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	(b)(3), (b)(6), (b)(7)c	
		NAME, GRADE OR TITLE	20220321	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	

FIGURE F-1. Chain of Custody Document, page 1



Enclosure (55)





Glossary of Acronyms and Terms

AGL	Above Ground Level
AIRMET	Airman Meteorological Information
AIO	Assistant Investigating Officer
ALS	Air Logistics Support
AMB	Aircraft Mishap Board
AOB	Angle of Bank
APR	Aircrew Performance Record
ASM	Advanced Skills Management
BuNo	Bureau Number
CALs	Confined Area Landings
CDD	Central Deice Distributer
CDI	Collateral Duty Inspector
CDQAR	Collateral Duty Quality Assurance Representative
CRM	Crew Resource Management
ENBO	Bodo Airport
EOC	Equipment Operational Capability
GoPro	A portable digital media camera
IMC	Instrument Meteorological Conditions
IO	Investigating Officer
JAGMAN	Judge Advocate General Manual
JMPS	Joint Mission Planning System
KVADR	K-series Voice Data Recorder
LAT	Low Altitude Tactics
MA	Mishap Aircraft
MAC	Mishap Tiltrotor Aircraft Commander
MAG	Marine Aircraft Group
MAGTAB	Marine Air Ground Tablet
MAO	Mishap Aerial Observer / Gunner
MAT	Mountain Area Training
MAW	Marine Aircraft Wing
MAWTS	Marine Aviation Weapons and Tactics Squadron
MC	Mishap Crew
MCC	Mishap Crew Chief
MCN	Master Control Number
MCP	Mishap Tiltrotor Second Pilot (copilot)
mi	Statute Mile
MS	Mishap Squadron
MSHARP	Marine Sierra-Hotel Aviation Reporting Program
MSL	Mean Sea Level
NALCOMIS System	Naval Aviation Logistics Command Management Information System
NAOC	Norwegian Air Operations Center
NATOPS	Naval Aviation Training and Operating Procedures
No Go	Briefed condition that would prevent launch of aircraft
ODO	Operations Duty Officer
OOMA	Optimized Organizational Maintenance Activity
PED	Portable Electronic Device
PMC	Partial Mission Capable
PMI	Planned Maintenance Interval
PPED	Personally Owned Portable Electronic Device

Enclosure (56)

QAR	Quality Assurance Representative
QCL	Qualifications / Certifications / Licenses
QPT	Qualified Proficient Technician
RAW	Risk Assessment Worksheet
RVL	Reduced Visibility Landings
SAR	Search and Rescue
SFF	Safe for Flight
SIGMET	Significant Meteorological Information
SMQ	Special Maintenance Qualification
SOP	Standard Operating Procedure
T2P	Tiltrotor Second Pilot (copilot)
TAC	Tiltrotor Aircraft Commander
TCL	Thrust Control Lever (throttle)
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
VMM	Marine Medium Tiltrotor Squadron
WO	Work Order
WX	Weather

Enclosure (56)