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RECONNAISSANCE WING**

**DEPARTMENT OF THE AIR FORCE 21-101
319TH RECONNAISSANCE WING SUPPLEMENT**

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Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE
MANAGEMENT



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DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 8 November 2022 and AFI 21-101, *Aircraft and Equipment Maintenance Management, Air Combat Command Supplement*, 22 April 2021 are supplemented as follows. This supplement applies to all 319th Reconnaissance Wing personnel who perform aircraft or equipment maintenance, and personnel who work in the flight line area or respond to aircraft incidents, including all subordinate forward operating locations. This supplement provides guidance and procedures for maintenance, documentation, and support of RQ-4 aircraft and RD-2 ground segments. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. The reporting requirements in this publication (unless otherwise specified) are exempt from licensing In Accordance With (IAW) AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*. The authorities to waive wing/unit level requirements in this publication are identified with a tier (“T-0, T-1, T-2, and T-3”) number following the compliance statement. See DAFI90-160, *Publication and Forms Management*, Table 1.1 for a description of the authorities associated with the tier numbers. Submit requests for waivers through the chain of command to the appropriate tier waiver approval authority IAW AFI 33-360. Send comments and suggested changes on AF Form 847, *Recommendation for Change of Publication*, to 319 OG/QA, 701 Eielson St. Suite 418, Grand Forks AFB ND 58205. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual AFI33-322, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>.

SUMMARY OF CHANGES

This publication is substantially revised and must be completely reviewed in its entirety.

This supplement provides policy and additional guidance.

Table of Contents

| | |
|---|-----------|
| Chapter 1—MANAGEMENT OVERVIEW, SUPPORTING CONCEPTS AND REQUIREMENTS | 6 |
| 1.13. General Safety Guidance | 6 |
| 1.15. Communications | 6 |
| 1.20. Incident Reporting Procedures | 6 |
| Chapter 2—ROLES AND RESPONSIBILITIES | 8 |
| 2.2. Wing Commander (WG/CC) Responsibilities | 8 |
| 2.4. Maintenance Group Commander (MXG/CC) Responsibilities | 8 |
| 2.5. Deputy Maintenance Ground Commander (MXG/CD) | 8 |
| 2.12. Section NCOIC/Chief | 9 |
| Chapter 3—AIRCRAFT MAINTENANCE SQUADRON (AMXS) | 10 |
| 3.6. Flight line Expediter | 10 |
| 3.7. Aircrew and Maintenance Debrief Section | 10 |
| 3.11. Support Section | 10 |
| Chapter 4—MAINTENANCE SQUADRON (MXS) | 11 |
| 4.4. Accessories Flight | 11 |
| 4.5. Aerospace Ground Equipment (AGE) flight | 11 |
| Chapter 5—MAINTENANCE OPERATIONS (MXO) | 12 |
| 5.2. Maintenance Operations | 12 |
| Chapter 6—QUALITY ASSURANCE (QA) | 13 |
| 6.4. Chief Inspector Responsibilities | 13 |
| 6.10. Technical Order Distribution Office (TODO) | 13 |
| 6.12. Functional Check Flights (FCFs) to include Operational Check Flights (OCFs) | 13 |
| Table 6.1. OCF/FCF Determination | 14 |
| 6.14. High Speed Taxi Checks | 15 |
| 6.15. Weight and Balance (W&B) Program | 15 |
| Chapter 8—TOOL AND EQUIPMENT MANAGEMENT | 16 |
| 8.2. Guidelines for Program Management | 16 |

| | |
|---|-----------|
| 8.3. General Program Guidelines | 19 |
| 8.5. Tool Accountability..... | 19 |
| 8.6. Tool and Equipment Marking and Identification..... | 20 |
| 8.7. Locally Manufactured, Developed, or Modified Tools and Equipment | 20 |
| 8.8. Tool Room Operations and Security | 20 |
| 8.9. Lost Item/Tool Procedures | 21 |
| Chapter 11—ADDITIONAL MAINTENANCE REQUIRMENTS AND PROGRAMS | 22 |
| 11.1. Facility Housekeeping and Contamination Control..... | 22 |
| 11.6. Red Ball Maintenance | 22 |
| 11.8. Foreign Object Damage (FOD) Prevention Program | 22 |
| 11.9. Dropped Object Prevention (DOP) Program..... | 25 |
| 11.13. Cannibalization Program..... | 25 |
| 11.14. Hangar Queen Aircraft | 26 |
| 11.16. Aircraft Inlet/Intake/Exhaust Certification | 26 |
| 11.18. Engine Blade Blending Training and Certification Program..... | 26 |
| 11.19. Engine Flexible Borescope Inspection Training and Certification Program | 26 |
| 11.28. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program | 26 |
| 11.34. Wing Avionics Manager (WAM)..... | 27 |
| 11.43. Cold Weather Hangar Door..... | 27 |
| 11.45. Corrosion Program | 27 |
| Chapter 14—MAINTENANCE PLANS, SCHEDULING AND DOCUMENTATION (PS&D) | 29 |
| 14.1. Responsibilities..... | 29 |
| 14.2. Data Documentation..... | 29 |
| 14.3. Configuration, TCTO, SI and TCI Management | 29 |
| 14.5. Maintenance and FHP Planning Cycle | 30 |
| 14.6. Contingency and Expeditionary Responsibilities | 31 |
| Chapter 16—AEROSPACE VEHICLE COATING AND MARKING REQUIREMENTS.... | 32 |
| 16.2. Coating System Scoring and Maintenance..... | 32 |
| Chapter 17—319 RW STATIC DISPLAY AIRCRAFT REQUEST REQUIREMENTS..... | 33 |
| Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION..... | 34 |
| References | 34 |
| Prescribed Forms..... | 34 |
| Adopted Forms..... | 34 |
| Abbreviations and Acronyms | 34 |

| | |
|---|----|
| Attachment 2— FLYING SCHEDULING EFFECTIVENESS | 36 |
| Figure A2.1.1. Purpose..... | 36 |
| Attachment 3— MAINTENANCE SCHEDULING EFFECTIVENESS | 38 |
| Figure A3.2.2. Maintenance Scheduling Effectiveness | 38 |
| Attachment 4— FLYING SCHEDULING REPORTING PROCEDURES | 39 |
| Figure A4.2.3.2. Sortie Sequence Numbers | 39 |
| Attachment 5— DEPLOYED OPERATIONS AND OFF-STATION SORTIES | 41 |
| Figure A5.3.1. Deployed RQ-4/RD-2 Sortie Sequence Numbers | 41 |
| Attachment 6— RQ-4A/B AIRCRAFT “RED X” CRITERIA LISTING | 42 |
| Table A6.1. RQ-4A/B Aircraft Red X Criteria Listing | 42 |
| Attachment 7— RD-2A MISSION CONTROL ELEMENT “RED X” CRITERIA LISTING | 44 |
| Table A7.1. RD-2A Mission Control Element Red X Criteria Listing | 44 |
| Attachment 8— RD-2B LAUNCH AND RECOVERY ELEMENT “RED X” CRITERIA LISTING | 45 |
| Table A18.1. RD-2B Launch and Recovery Red X Criteria Listing | 45 |
| Attachment 9— 319 RW MAINTENANCE LMR CALL SIGNS | 46 |
| Table A9.1. 319 RW Maintenance LMR Call Signs..... | 46 |
| 319 AMXS / COMMUNICATIONS MAINTENANCE UNIT..... | 46 |
| 319TH OPERATIONS GROUP | 46 |
| 319 AIRCRAFT MAINTENANCE SQUADRON..... | 46 |
| 319 AMXS / AIRCRAFT MAINTENANCE UNIT | 46 |
| 319 AMXS / EQUIPMENT MAINTENANCE UNIT | 47 |
| 4 RS (Andersen)..... | 47 |
| 4 RS (Yokota)..... | 47 |
| 348TH RECONNAISSANCE SQUADRON..... | 48 |
| 7TH Reconnaissance Squadron..... | 48 |
| Attachment 10— MANUAL JOB CONTROL NUMBERS | 49 |
| Figure A10.1. 319 AMXS..... | 49 |
| Figure A10.3. 4 RS..... | 49 |
| Figure A10.4. 7 RS..... | 49 |
| Attachment 11— WWID LIST | 50 |
| Figure A11.1. WWID List..... | 50 |
| 319 AMXS | 50 |
| 319 AGE..... | 50 |

| | |
|---|-----------|
| AFI21-101_319RWSUPP 25 SEPTEMBER 2023 | 5 |
| 319 OG..... | 50 |
| Crash | 50 |
| 319 OG/QA | 50 |
| 4 RS..... | 50 |
| 4 RS..... | 50 |
| 18 ACCS | 50 |
| 7 RS..... | 50 |
| Attachment 12—LOST TOOL/OBJECT FLOW CHART..... | 51 |
| Figure A12.1. Lost Tool/Object Flow Chart..... | 51 |
| Attachment 13—INTAKE MAINTENANCE AND RIVET REPLACEMENT CHECKLIST | 52 |
| | |
| Figure A13.1. Intake Maintenance and Rivet Replacement Checklist | 52 |
| Attachment 14—319TH OPERATIONS GROUP STATIC DISPLAY & BRIEFING | |
| COORDINATION FORM | 53 |
| Figure A14.1. 319 th Operations Group Static Display & Briefing Coordination Form..... | 53 |
| Attachment 15—RQ-4 AIRCRAFT INITIAL ACCEPTANCE INSPECTION CHECKLIST | 54 |
| | |
| Figure A15.1. RQ-4 Aircraft Initial Acceptance Inspection Checklist..... | 54 |
| Attachment 16—RD2-A MCE ACCEPTANCE INSPECTION CHECKLIST | 56 |
| Figure A16.1. RD2-A MCE Acceptance Inspection Checklist | 56 |
| Attachment 17—RD2-B LRE ACCEPTANCE INSPECTION CHECKLIST | 57 |
| Figure A17.1. RD2-B LRE Acceptance Inspection Checklist..... | 57 |
| Attachment 18— CDDAR PROGRAM | 58 |
| Figure A18.1. CDDAR Program..... | 58 |
| 1. GENERAL | 58 |
| 2. SPECIFIC RESPONSIBILITIES | 59 |
| 3. CDDAR PROCESS..... | 63 |
| 4. SUPPORT FOR CDDAR COREHOURS/AFTERHOURS | 65 |
| Attachment 19—VEHICLE REQUIREMENTS | 67 |
| Figure A19.1. Vehicle Requirements | 67 |
| Attachment 20—CDDAR CHECKLIST | 68 |
| Figure A20.1. CDDAR Checklist..... | 68 |

Chapter 1

MANAGEMENT OVERVIEW, SUPPORTING CONCEPTS AND REQUIREMENTS

1.13. General Safety Guidance.

1.13.3. **(Added)** When vehicles are parked within 5 feet of the aircraft for operational purposes, (e.g. launches, operational checks, etc.), a spotter will be utilized and wheel chocks will be placed to the aft of a rear axle wheel.

1.13.4. Spotters will be used during any vehicle backing operations on the flightline, when available. If no spotters are available, the driver will perform a 360-degree vehicle walk-around to check for obstructions prior to backing up. Drivers in both scenarios will sound the vehicle horn prior to backing vehicle.

1.13.5. Servicing gauge serial numbers (e.g. tire servicing kits, Ku nitrogen servicing kits) will be entered in the 781A corrective action block when servicing actions, to include servicing checks, are performed.

1.13.6. Annotate the servicing cart number (e.g. OC01) in the 781A Corrective Action Block.

1.15. Communications.

1.15.1.1. The use of personal electronic or communication devices (e.g., cell phones, portable music/video players, electronic games) is prohibited on the flightline, hangars, and/or other industrial work areas to include the LRE/MCE.

1.15.1.1.1. Personal electronic devices are authorized for use in designated hangar office/break areas.

1.15.1.2. Group, Squadron, Flight, and AMU Supervision, to include Production Superintendent and Flightline Expeditors, may possess/utilize approved electronic or communication devices on the flightline in support of mission requirements. Mobile devices of any type cannot be used within any secure room or area with or without the presence of classified products or information.

1.20. Incident Reporting Procedures.

1.20.1. An incident is defined as "...aircraft/equipment damage or potential damage induced by maintenance actions." May also include any personnel injury incurred during maintenance actions.

1.20.2. Units/Flight will report all incidents to QA and the MOC immediately.

1.20.3. QA will:

1.20.3.1. Create an initial incident report, take pictures (when applicable), and assist in the incident investigation. The initial report will be sent out within 24 hours to the unit for investigation and documentation. A copy will be sent to 319 OG/CC, OG/CD and OG/CEM.

1.20.3.2. Review all reports for trends and possible changes to technical data. A final report will be uploaded to the QA SharePoint site after QA receives the OG/MXG cross tell from the unit.

1.20.4. The Unit/Flight where incident occurred will:

1.20.4.1. Investigate the incident. The investigation will include OG/MXG cross tell, including the following information: root cause, hazard, or deficiency, contributing factors, mishap cost, corrective actions implemented, recommendations/conclusions, and command actions.

1.20.4.2. Send completed report back to local QA section within 7 calendar days of notification.

Chapter 2

ROLES AND RESPONSIBILITIES

2.2. Wing Commander (WG/CC) Responsibilities. The WG/CC allocates resources to meet all mission requirements.

2.2.2.2. 319 RW “Wing Standup” meeting will occur in person at least once monthly. Weekly standup when not in person will be communicated via electronic means.

2.4. Maintenance Group Commander (MXG/CC) Responsibilities. Senior group-level responsibility for all maintenance activities (e.g. scheduling (TDI), SCR, Impoundments, MSEP, etc.). The 319th Operations Group Commander will assume all MXG/CC responsibilities but will delegate to Operations Group Maintenance Deputy where appropriate to ensure compliance with the maintenance requirements and programs in Chapter 11 of AFI 21-101 ACC Sup.

2.4.44.1. Repeat/Recur Discrepancy Responsibilities and Procedures.

2.4.44.1.1. Access IMDS screen 174, Sortie Recap Inquiry, (or compatible automated system), for the last 30 days or ten sorties when an aircraft lands with a PRD and determine if the discrepancy is a repeat/recur. In the event IMDS is down, debrief will review the locally developed manual debriefing forms for the same period. Enter repeat/recur in red in the discrepancy block, followed by the discrepancy. Unit’s OIC or Superintendent will review all repeat/recur discrepancies.

2.4.44.1.2. **(Added)** Impoundment Authorities should consider if impoundment is warranted on fourth occurrence of a repeat or recur.

2.4.44.2. CND Responsibilities and Procedures.

2.4.44.2.1. For work centers performing on-equipment maintenance.

2.4.44.2.1.1. **(Added)** When a discrepancy cannot be duplicated, to clear the discrepancy, the technician will document Cannot Duplicate Malfunction, description of actions performed, applicable T.O. in corrective action block, and clear the symbol IAW T.O. 00-20-1

2.4.53.4.1. **(Added)** Production Superintendents will validate aircraft/equipment status with the MOC a minimum of once per shift.

2.4.55.1. The Wing Avionics Manager (WAM) is the primary responder for maintenance cybersecurity incident reporting.

2.5. Deputy Maintenance Ground Commander (MXG/CD).

2.5.4.1. FOLs/GSUs will develop or use local wing emergency action/functional checklist.

2.12. Section NCOIC/Chief.

2.12.27.8. RQ-4/RD-2 weapon systems will use a -05 TO system for scheduled maintenance.

Chapter 3

AIRCRAFT MAINTENANCE SQUADRON (AMXS).

3.6. Flight line Expediter.

3.6.9.1. Ensure users annotate all discovered discrepancies on the AFTO Form 244 attached to the unit, verbally communicate problems with equipment to an AGE driver or the AGE dispatch function and report to AGE flight dispatch function if the AFTO Form 244 is full or damaged beyond use. GSUs/FOLs will follow local guidance.

3.6.9.2. **(Added)** Users will perform operator's inspection prior to use of all Aerospace Ground Equipment and document the AFTO Form 244, Block II. GSUs/FOLs operation on non-ACC installations will follow local guidance.

3.7. Aircrew and Maintenance Debrief Section. Debrief section will ensure AFI 21-101, ACCSUP, Addendum C, Aircraft and Equipment Maintenance Management (Remotely Piloted Aircraft) debrief requirements are met.

3.7.4.4. Debrief will retain and track all aircraft fuel servicing receipts and submit to the local Resource Advisor on a quarterly basis by the 5th of the month; Jan, Apr, July, Oct.

3.7.13. RPS RSO debrief will:

3.7.13.1. Maintain detailed debriefing procedures in continuity books in the debrief sections (or equivalent), to include standardized communication procedures at all deployed/forward operating locations (e.g. debrief checklist).

3.11. Support Section.

3.11.8. Support Section Chief (or equivalent) will appoint -21, (Type I) equipment custodians (primary and alternate) in writing, and maintain program IAW DAFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*.

3.11.8.1. **(Added)** Ensure -21 equipment and storage bag (in use) is marked with aircraft tail number or composite tool kits (CTK) EID number. Affix red "REMOVE BEFORE FLIGHT" streamers to covers and pins. Ensure all equipment identified as -21 is marked legibly with aircraft tail number or CTK EID number to which they belong. If bags are used for smaller items, mark them in the same manner. These streamers will be no shorter than 4" long. If -21 equipment is transferred from one aircraft to another aircraft, previous markings will be completely removed and new markings added immediately. -21 equipment "in use" will be inspected for serviceability, inventoried in conjunction with document review and the inspection documented in the aircraft AFTO 781 forms. Use AF Forms 2691 and 2692 to account and inventory all - 21 Type I.

3.11.8.2. Tow Supervisors are responsible for control of -21 equipment when aircraft locations change.

Chapter 4

MAINTENANCE SQUADRON (MXS)

4.4. Accessories Flight.

4.4.4.2.4.1. Primary and secondary open fuel tank locations will be determined by the fuel systems Entry Authority and posted in the Master Entry Plan (MEP).

4.4.4.2.4.1.1. The RW GSUs and FOLs will establish primary and alternate open fuel tank maintenance facilities.

4.5. Aerospace Ground Equipment (AGE) flight.

4.5.1.7.1. Using organizations are responsible for equipment not cited on authorized allowance standards. Users are also required to inspect/service oil and hydraulic servicing carts prior to use, monitor nitrogen cart contents (quantity/pressure levels).

4.5.1.8. Oil carts, H70 Nitrogen cart, and hydraulic carts will be documented on the cart servicing logs and must be kept with the equipment. Units will notify local AGE of full or damaged logs. AGE will maintain the most recent oil and hydraulic cart logs for 12 months. GSUs/FOLs operating on non-ACC installations will follow local guidance.

Chapter 5 MAINTENANCE OPERATIONS (MXO)

5.2. Maintenance Operations.

5.2.1.1.1. 319 OG PS&D will receive schedules from 4RS and 7RS to develop and publish a combined group operations/maintenance schedule with OG/CC approval. 319 OG PS&D will then submit the combined schedule to 319 RW for 319 RW/CC approval.

5.2.1.12.1. For 319 RW LMR call signs see **Attachment 9**.

5.2.5.3.4.4.2. The 319 OG/Analysis section is the Host DBM for ELC 5329 Units A (Grand Forks AFB, Comm-Electronics), Unit B (260th Air Traffic Control Squadron, Pease ANGB,NH), Unit C (260th Air Traffic Control Squadron, Pease ANGB,NH), Unit D (148th Fighter Wing, Duluth ANGB, MN), Unit E (119th Fighter Wing, Fargo ANGB, ND, Comm - Electronics), Unit F (148th Fighter Wing, Duluth ANGB, MN), Unit G (119th Fighter Wing, Fargo ANGB, ND), Unit H (Grand Forks AFB), and Unit M (128th Air Refueling Wing, General Mitchell ANGB, WI). Discrepancies residing in these units must go through the 319 OG/Analysis section.

5.2.5.3.4.4.3. **(Added)** The 9 LSS/Analysis section is the Host DBM for ELC 5362; this includes Unit J (4 RS), and Unit S (4 RS). All issues and discrepancies must go through the 9 LSS/Analysis section.

5.2.5.3.3.6.1. See **Attachment 10** for manual Job Control Numbers (JCN) block assignment. These JCNs are established only for manual input of JCNs during IMDS outages and deployment processing.

Chapter 6 QUALITY ASSURANCE (QA)

6.4. Chief Inspector Responsibilities.

6.4.15. Chief Inspector publishes QA Flashes as 319 OG directives providing local guidance on issues affecting the maintenance community, until that guidance is incorporated into an instruction, technical order, other directive, or is deemed no longer required. The rescinding authority for all QA Flashes is the 319 OG/CC or CD.

6.4.16. **(Added)** Chief Inspector publishes QA Grams providing additional information or clarification on issues affecting the maintenance community. When created, they will be sent out via the base email system and to applicable work centers.

6.10. Technical Order Distribution Office (TODO).

6.10.1.1.1. TODOs will download applicable TCTOs off the Enhanced Technical Information Management System (ETIMS).

6.10.7.3. All FOLs will have an annual TO inspection accomplished by local organization TODO, or if one is not assigned, by the 319 OG TODO.

6.10.8.1.1. The lead 319 OG TODO/e-Tool Manager will ensure all FOLs and GSUs are included in the e-Tools annual refresh.

6.10.10. Site Specific TODA will:

6.10.10.1. Manage locally prepared publications according to AFI 21-101 and TO 00- 5-1 to include the MAJCOM and base supplements.

6.10.10.2. Assign an identification number to LWC, LCL, LJG and LPSs (ex. LCL- 319OG-XXX) and conduct format review.

6.10.10.3. Keep the original copy on file (no date stamp) and give a date stamped copy to the applicable work centers.

6.12. Functional Check Flights (FCFs) to include Operational Check Flights (OCFs).

6.12.1.1.1. OCFs will follow the same documentation, tracking, and procedural criteria as FCFs.

6.12.1.2. All FCF/OCF missions must have prior approval by the 319 OG/CC or CD. Table 6.1 provides more information on when an OCF/FCF may be required.

Table 6.1. OCF/FCF Determination.

| AFI Mandated OCF | AFI Commander's Discretion OCF/FCFs |
|---|---|
| Hangar Queen Category 3 Release (AFI 21-101 ACC Supp para. 11.14.5.3.1) | Flights scheduled as OCF/FCF must follow documentation procedures |
| | Uncommanded flight control movement (AFI 21-101 ACC Supp para. 7.5.4) |
| | Malfunctions leading to impounds in which the root cause cannot be determined (AFI 21-101 ACC Supp para. 7.6.9) Sensor Confidence Flights |
| | After major fixed flight surfaces have been replaced or have undergone major structural repairs After adjustment, replacement, or removal and reinstallation of multiple major components of the flight control system on the same flight surface. After aircraft removed from extended storage. (90+ days) Aircraft Acceptance (from depot) |

6.12.1.3. QA FCF program manager will maintain a copy of the FCF certification letter signed by the 319 OG/CC.

6.12.1.4. All FCFs must be flown by a current and qualified FCF aircrew. OCFs will only be flown by experienced aircrew, as determined by Ops.

6.12.2.2.1. Ensure aircrews are properly Trained/Certified and briefed on specific FCF/OCF requirements, procedures, and hazards.

6.12.3.6. The FCF qualified QA inspector will follow the procedures outlined in approved local FCF or OCF checklist.

6.12.4.4. Aircraft maintenance will:

6.12.4.4.1. **(Added)** Aircraft maintenance will notify/coordinate all FCF/OCF with the QA FCF Manager within four duty days to allow for sufficient time to accomplish FCF/OCF checklist requirements and to preclude any last-minute delays. All maintenance actions and documentation will be completed before the QA FCF Manager requests authorization.

6.12.4.4.2. Ensure the active and pulled AFTO Form 781-series forms, copy of current IMDS 380 screen, and maintenance history report for the aircraft and engine are reviewed by the FCF qualified QA inspector.

6.12.6.1. Off-station aircraft FCF requirements.

6.12.6.1.1. At GSUs and FOLs, the commander and operations officers are the primary FCF pilots and will be qualified and certified.

6.12.6.1.2. The GSU/FOL commander serves as the OG/CC representative, ensuring TDY FCF pilots are briefed on these procedures prior to flying an FCF. GSU and FOL CCs will be the OG/CC representative for off station FCF related decisions, and FCF related waiver authority when authorized.

6.14. High Speed Taxi Checks.

6.14.1.2.1. The FCF qualified QA inspector will follow the procedures outlined in approved local HST checklist.

6.14.1.2.2. The FCF qualified QA inspector will follow the same FCF/OCF documentation procedures for HST aircraft IAW **Chapter 6.12** of this publication.

6.14.4. Aircraft maintenance will:

6.14.4.1. Process forms through the FCF qualified QA inspector using FCF procedures. Provide the FCF qualified QA inspector with a complete history of issue leading up to HST, to include the aircraft configuration, fuel on board, and speed at which the problem occurred.

6.14.4.2. Coordinate all HST checks through the MOC. Prior to the taxi operation, the MOC will pass tail number, parking spot, time of taxi, and route to tower. The tower will not authorize HST checks without prior coordination with the MOC.

6.14.4.2. Follow procedures outlined in approved local HST checklist.

6.15. Weight and Balance (W&B) Program.

6.15.3.3.1. For TCTOs affecting W&B (equipment changes, modifications, repairs, etc.) enter a Red X discrepancy statement "W&B verification due" in AFTO Forms 781A.

6.15.3.4.1. When a configuration change has been accomplished affecting W&B (not included in aircraft Basic Weight) the technician will annotate the equipment removed/added on an appropriate symbol in AFTO Form 781A, Maintenance Discrepancy and Work Document and 781C, Avionics Configuration and Load Status Document. Enter a Red X discrepancy statement "W&B configuration verification due" in the AFTO Form 781A for a W&B certified Quality Assurance Inspector to verify.

Chapter 8

TOOL AND EQUIPMENT MANAGEMENT

8.2. Guidelines for Program Management.

8.2.1.2. All OG and FOL Work Centers will:

8.2.1.2.1. Maintain a master CTK continuity book with the following information:

8.2.1.2.1.1. Appointment letters for all CTK custodians and alternates.

8.2.1.2.1.2. Change of custodian inventory letter.

8.2.1.2.1.3. Documentation of annual tool, CTK, non-CA/CRL equipment inventory will be documented in the TC-MAX (or equivalent).

8.2.1.2.1.4. Tool room access letter.

8.2.1.2.1.5. Spare tool access letter (limited to shift supervisor or equivalent, and CTK custodian).

8.2.1.2.1.6. List of references including locations.

8.2.1.2.1.7. Restricted item listings with approved individuals for specific items (May be broken down by items that are restricted with multiple authorizations from different AFSCs filed for same item.)

8.2.1.3. All CTKs and support equipment must remain free of foreign objects and common bench stock items such as nuts, bolts, washers, and screws. Empty toolbox FOD bags/containers at the end of each shift.

8.2.1.4. Lead seals removed from the work center will be packaged in a plastic bag or equivalent and marked with quantity. All unused and removed seals (pieces) will be accounted for prior to leaving the job site and returned/disposed of accordingly.

8.2.1.5. Long-term sign out of CTKs will not be used strictly for sake of convenience; i.e., launch kits will not be signed out for the flying week. Long-term sign out of CTKs must be approved by the unit Production Superintendent.

8.2.1.5.1. Support will use TC-MAX to sign out CTKs/equipment long-term. Support will include an ACC Form 140, *CTK Inventory and Control Log* with the issue for manual inventory. The MXG/CC or designated representative may waive use of TC-MAX during contingencies or exercises.

8.2.1.5.3. If the outgoing individual is removed by exercise input, the ranking member at the job site will ensure positive accountability of all items issued to the removed individual. After accountability is accomplished, the items will be turned in or transferred to personnel still at the site.

- 8.2.1.5.4. CTKs or equipment items signed out long-term (if on-station) must be physically verified as complete by a member of the owning support section or shop a minimum of every 7 calendar days. Visual inspections on items issued on a long-term basis will be tracked in TC Max or other verifiable tracking products.
- 8.2.1.6. Units/personnel not assigned to the OG dispatched to work on the flight line/airfield or in maintenance facilities supporting aircraft operations will:
- 8.2.1.6.1. Ensure all tools transported in the areas designated above are contained in a toolbox or kit. Such boxes/kits are generically referred to as CTKs. Vehicle toolboxes are sufficient for this purpose.
- 8.2.1.6.2. Mark tools, at a minimum, with the owning organization, office symbol and phone number. This marking can be engraved or in ink with a permanent marker.
- 8.2.1.6.3. Maintain an inventory of all tools transported on the flight line or in a maintenance facility supporting aircraft operations. The inventory will be kept with the toolkit at all times.
- 8.2.1.6.4. Inventory all tools and equipment used on the flight line or aircraft maintenance facilities prior to entry to and exit from a work site.
- 8.2.1.6.5. Keep all tool kits free of FO and hardware such as nuts, bolts, washers, screws etc. A FOD receptacle will be placed and accounted for in the toolkit or vehicle used to transport the tool kit. The receptacle must completely secure the FO to prevent debris from falling out unnoticed. Empty all debris from receptacle when full or at the end of each shift.
- 8.2.2.1. The annual inventory will include all assigned CTKs, tools, and non-CA/CRL equipment. It will not include spare tools. During this inventory all tools will be inspected for care and safety in accordance with DAFMAN 91-203 and TO 32-1-101.
- 8.2.3.2. CTK custodians or their appointed alternates will coordinate with the appropriate vendors and unit IMPAC holders for procurement of warranty/non-warranty tools and equipment.
- 8.2.3.3. Broken warranty tools will be stored separately from broken non-warranty tools.
- 8.2.3.4. Unserviceable tools that cannot be immediately replaced with a warranty tool may be temporarily replaced with a non-warranty tool. Requirements for marking tools must still be met.
- 8.2.4.1.1. Spare warranty tools will be stored separately from non-warranty tools. Tools removed from a CTK for placement into a spare tool bin will be de-etched and annotated in the spare tool control log by bin #, nomenclature, and quantity.
- 8.2.4.2.1. Unserviceable tools will be replaced on a one-for-one basis by a CTK custodian.
- 8.2.4.2.2. A log will be kept of broken tools stating CTK #, item description, date removed, removed by employee number, and warranty status (Y or N).
- 8.2.4.2.3. Broken tools must be documented on the CTK MIL, TC-MAX, and the Broken Tool Log.
- 8.2.4.3. Sections requiring the placement of HAZMAT in a CTK (i.e.: grease, oil, paste, adhesives, etc.) will ensure AF Form 3952 and appropriate MSDS is on file. CTK custodians will control and manage shelf-life items IAW AFI 23-101.

8.2.5. CTKs and/or all associated equipment will be transferred at the job site only for contingencies, exercises, or during heavy maintenance. The Production Superintendent is the lowest level of authority to approve CTK turnover on the flight line. All tools/equipment approved for on-site turnover must be returned to the owning support section every 24 hours for inventory unless signed out on a long-term basis.

8.2.6. Immediately contact the MOC and base operations if a tool, object, or piece of equipment is lost on the flight line or any aircraft maintenance facility.

8.2.6.1. Reference to lost or missing tool procedures (Attachment 12). GSUs will follow local guidance concerning lost or missing tool procedures.

8.2.7. Refer to Unit WWID List (**Attachment 11**).

8.2.8.1. Personally procured protective equipment is limited to gloves and ear protection only. Gloves must be marked with owner's first initial, last name and employee number (i.e. J. Doe, 01234). Gloves/EPs will not be left unattended on the flightline and if lost will be treated as a lost tool. Bluetooth EPs are not authorized. Battery powered EPs shall not be used in fuel servicing zones.

8.2.8.2. If a member identifies that a personally procured protective equipment item is missing, they are to notify their Production section. The Production section will then initiate lost tool procedures IAW paragraph 8.9. of DAFI 21-101.

8.2.9. Rags will be signed out as a prepackaged kit with a designated amount of rags annotated on the kit. Rags will be considered a tool and reported as a lost tool when unaccounted for. Complete accountability of rags will be accomplished by support personnel at the beginning and end of each shift.

8.2.10. Appointed CTK custodians and alternates submit tool purchase requests. The purchase will be executed through the units GPC holder or RA as applicable.

8.2.11. Requestors initiate OG Form 3, or equivalent, requesting authorization to locally manufacture and use a particular tool or piece of equipment.

8.2.11.1. The form must include full justification for the tool and a description of the use for each item. It must also list all applicable diagrams, T.O. references and include pictures or drawings or any other supporting information as attachments.

8.2.11.2. 319 OG/CC is approving authority for all locally manufactured tools for each location.

8.2.11.3. The QA local manufacture program monitor copies and files all documents associated with the request and forwards all original documents to the initiator. QA and the owning work center will maintain records of all approved locally designed tools and equipment.

8.2.12. Establish a separate support section in the functional area for the duration of the field activity or incorporate with the host unit's support section.

8.2.12.2. If a separate CTK custodian is not assigned, the senior person will assure CTK custodian responsibilities are met. The custodian will be briefed on local CTK/lost tool procedures by the host AMU or AMXS support section chief.

8.2.14.1. Crash recovery equipment in Emergency Response Vehicles (ERV), trailers, and mobility kits will be considered a CTK. They will have a nine-digit EID number assigned and follow dispatchable CTK guidance in this instruction.

8.2.14.1.1. Equipment contained in trailers, mobility kits, and ERV will not be used for routine aircraft maintenance. Positive control of equipment will be maintained through the MIL and TC-MAX.

8.2.14.1.2. Keys for trailers and kits will be secured in the work center when not in use, and controlled using TC-MAX.

8.2.14.1.3. Equipment keys will remain with ERV keys during the duty day, then secured in the work center (R&R) when not in use.

8.2.14.1.4. ACC Form 140 and MIL will be maintained in the work center to document use of equipment, inventories, and inspections when TC-MAX is not available.

8.2.15. The Production Superintendent or weekend supervisor will perform an inventory of the CTK/equipment upon turn-in when a secondary party is not otherwise available.

8.2.16. Access will be limited to personnel on the applicable access letter. The tool room will be secured when unattended.

8.2.17. Individuals who discover damage to an item that does not render that item unserviceable will be legibly annotate in ink on the MIL immediately to the right of the item nomenclature and annotate the damage in TC-Max, or equivalent, as soon as feasible.

8.3. General Program Guidelines.

8.3.6.8.1. The individual will enter their last name and the date the damage was discovered.

8.3.6.8.2. If a legible entry cannot be made in the available space, an updated MIL will be printed.

8.5. Tool Accountability.

8.5.1.2.1.2. Physical HAZMAT inventory will match TC-MAX by TC-MAX ID(s). Once the product has been used or is deemed unserviceable, the item will be consumed in TC-MAX to show accurate inventory. Before disposal of item, the TC-MAX ID marking on item will be removed.

8.5.3.4. Do not remove tools from a dispatchable CTK for use at another job site without Production Superintendent approval and annotated on AF Form 1297.

8.5.5.6. Portable Electronic Devices (PEDs) are not authorized in classified processing areas as follows: The use of portable electronic devices or wearable fitness devices capable of Bluetooth or wireless connectivity into any COMSEC area is prohibited. A COMSEC area is any area used for storing, generating, or repairing COMSEC material. This includes any location or aircraft with

operational COMSEC equipment and all COMSEC storage containers. Any eTools in classified processing areas shall have all wireless (Wi-Fi/Bluetooth) capabilities disabled administratively.

8.6. Tool and Equipment Marking and Identification.

8.6.2.3.1. Do not etch flammable containers with either manual or electrical etcher. These items will be stenciled or permanently marked by non-electrical means.

8.7. Locally Manufactured, Developed, or Modified Tools and Equipment.

8.7.4. Requestors initiate **OG Form 3, or equivalent**, requesting authorization to locally manufacture and use a particular tool or piece of equipment.

8.7.4.1. The form must include full justification for the tool and a description of the use for each item. It must also list all applicable diagrams, T.O. references and include pictures or drawings or any other supporting information as attachments.

8.7.4.2. 319 OG/CC is approving authority for all locally manufactured tools for each location.

8.7.4.3. The QA local manufacture program monitor copies and files all documents associated with the request and forwards all original documents to the initiator. QA and the owning work center will maintain records of all approved locally designed tools and equipment.

8.8. Tool Room Operations and Security.

8.8.2.1.3. Establish a separate support section in the functional area for the duration of the field activity or incorporate with the host unit's support section.

8.8.2.1.3.1. If a separate CTK custodian is not assigned, the senior person will assure CTK custodian responsibilities are met. The custodian will be briefed on local CTK/lost tool procedures by the host AMU or AMXS support section chief.

8.8.3. Crash recovery equipment in Emergency Response Vehicles (ERV), trailers, and mobility kits will be considered a CTK. They will have a nine-digit EID number assigned and follow dispatchable CTK guidance in this instruction.

8.8.3.1. Equipment contained in trailers, mobility kits, and ERV will not be used for routine aircraft maintenance. Positive control of equipment will be maintained through the MIL and TC- MAX.

8.8.3.1.1. Keys for trailers and kits will be secured in the work center when not in use, and controlled using TC-MAX.

8.8.3.1.2. Equipment keys will remain with ERV keys during the duty day, then secured in the work center (R&R) when not in use.

8.8.3.1.3. ACC Form 140 and MIL will be maintained in the work center to document use of equipment, inventories, and inspections when TC-MAX is not available.

8.8.4. The Production Superintendent or weekend supervisor will perform an inventory of the CTK/equipment upon turn-in when a secondary party is not otherwise available.

8.8.5. Access will be limited to personnel on the applicable access letter. The tool room will be secured when unattended.

8.9. Lost Item/Tool Procedures.

8.9.2.1.1. If the lost item poses a threat to other aircraft that might taxi through the affected

area, the MOC will inform the OG/CC (or equivalent) and base operations so taxi routes can be adjusted. The Production Superintendent will initiate a "QUICK FREEZE" and stop all maintenance activity on the affected aircraft/equipment and in the immediate area. 319 RW GSUs and FOLs will follow local procedures.

8.9.2.3.3. The MOC will complete a lost tool/object incident notification checklist and assign a control number to the lost tool/object if the tool/object is not found within the 1-hour search period. 319 RW GSUs and FOLs will follow local procedures.

8.9.2.3.3.1. In FOLs that do not operate a MOC, the Expediter/Production Superintendent will immediately notify QA and the unit's operations officer/maintenance superintendent.

8.9.2.3.4. The Wing FOD Monitor will track all lost tool and object reports in sequential order by the lost tool and objects digit control number. 319 RW GSUs and FOLs will follow local procedures.

8.9.2.6.4. If aircraft or support equipment is involved, personnel with impound authority will make the decision to impound. The decision will be relayed through the MOC which will then notify QA and Production Superintendent and AMU/squadron supervision.

Chapter 11

ADDITIONAL MAINTENANCE REQUIREMENTS AND PROGRAMS

11.1. Facility Housekeeping and Contamination Control.

11.1.4. CE will be the sole source of keys for all mechanical rooms. Under no conditions will mechanical rooms be used for storage. Door and door swing area are to be kept clear of snow and ice for Fire Dept. safety. GSUs and FOLs will follow local CES guidance.

11.1.5. It is the facility manager and/or user's responsibility to clear snow from parking aprons, driveways, sidewalks, steps, and stoops immediately around their facility. Keep all hangar doors, overhead doors, and personnel doors free and clear of all snow/ice buildup that might impede door operation and door closing. Keep snow clear of all intake/exhaust vents and from around fire plugs on the side of the facility. GSUs and FOLs will follow local CES guidance.

11.1.6. Ensure facility occupants do not tamper with, replace, or repair installed electrical equipment (electrical wiring, exhaust fans, etc.), except those items considered occupant's responsibility (e.g. light bulbs under 10 feet high, fuse elements up to 25 amps, resetting circuit breakers, labeling circuit breaker panels). The facility manager is responsible for replacing light bulbs in fixtures less than 10 feet high or lights that can be reached by ladder. CE craftsmen are responsible for replacing bulbs in fixtures over 10 feet high, including exit lights, unless they are LED. Procurement of all bulbs is the facility manager's responsibility, and for fixtures over 10 feet high, must be on hand before CE craftsman respond. Building managers can procure light bulbs through Envision store on base or through a local source in the community. High voltage systems (600 volts or higher) requiring special equipment or outside lighting systems, such as poles, fire light, signs, street and security lighting, will be maintained solely by the BCE. GSUs and FOLs will follow local CES guidance.

11.6. Red Ball Maintenance.

11.6.10. Maintenance performed on MCE/LRE during flight will be considered Red Ball maintenance.

11.8. Foreign Object Damage (FOD) Prevention Program.

11.8.1.1. A 319 OG/QA office representative will be the Wing FOD Monitor and must be appointed in writing by the 319 RW/CV.

11.8.3.1. MCE/LREs are included in the equipment listing.

11.8.3.2.2.1. If technical data does not specify, engine intakes shall be plugged or masked with barrier paper aft of maintenance area being performed. The Intake Maintenance Checklist for 319 OG and/or FOLs will be used for FO accountability. (**Attachment 13**) This does not apply to inspections.

11.8.3.3.1. Covers will only be removed when performing intake or exhaust inspections/maintenance, when engines are to be operated, or upon crew ready time.

11.8.3.6.6. Hats will not be worn on the flight line except as follows: The OG/CC can authorize

wear of hats for weather or safety (i.e. watch caps, beanies, bump hats, boonie hats). GSU/FOLs will follow host wing gear policy.

11.8.3.7.2. FOD containers will be stenciled with "FOD" in at least 2" letters. FOD pouches which will be clearly marked with letters at least ½" tall.

11.8.3.7.3. All FOD containers regardless of size and location, including trash receptacles, will be emptied at the end of each shift.

11.8.3.9.3. AFTO Form 350, *Reparable Item Processing Tag*, will be attached to any removed parts/components that will not be reinstalled by the end of the shift, regardless of location to end item or serviceability.

11.8.3.9.4. Attach screw bags to removed parts/components with unattached hardware. Document screw bag labels with Equipment I.D., nomenclature, quantity, and employee number (example: Aircraft 80-1091, Panel R-2 screws, 18 each, 01234).

11.8.3.10.2. Each unit possessing towable sweepers e.g., FOD Boss, will develop a plan for sweeper usage.

11.8.3.11.3. FOD walk responsibilities are as follows:

11.8.3.11.3.1. A FOD walk will be held at least annually. This will be coordinated and scheduled by the Wing FOD Monitor. All 319 RW units will participate, and inspection areas will be the runways, all taxi ways, and ramps. All FOLs will comply with applicable installation policy.

11.8.3.11.3.2. When FOD is discovered on the flight line, the area will be cleaned immediately. If debris is excessive, personnel will contact the MOC or Base Operations to request sweeper dispatch.

11.8.3.11.3.3. Airfield Management controls all ramp/taxiway sweeper operations per local OI.

11.8.3.11.4. 319 AMXS:

11.8.3.11.4.1. APG/Avionics: 600 series hangars or 3 bay as applicable, RQ-4B parking/launch spots on Charlie ramp as applicable.

11.8.3.11.4.2. Ground communication: Inside of the LRE and MCE shelters.

11.8.3.11.5. Fuel Shop: 600 series hangars or 3 bay as applicable.

11.8.3.12.1.1. Ensure MCEs and LREs remain FOD free at all times. Food and beverages are considered FOD.

11.8.3.12.2.1. Perform a thorough FOD check after exiting the MCEs and LREs. If small pieces of debris are present, the area will be vacuumed.

11.8.3.14.3. Securing pins and the like will be installed in holes/slots when not in use to prevent loss or damage and will be secured with a lanyard.

11.8.3.15.1. AGE will be inspected for foreign objects immediately after service inspection prior to dispatch to flight line and or using organization.

11.8.3.17.1. For vehicles with magnetic bars installed, the vehicle operator will inspect and remove all FO at the beginning of each shift, prior to turn in, and each time an FO check is accomplished. If the vehicle is driven off the flightline, the magnetic bar will be inspected prior to flightline re-entry. GSUs and FOLs will follow local flightline guidance.

11.8.3.18.1. FOD removal tool will be attached to the key ring.

11.8.3.22. Only re-sealable containers are authorized on the flightline. Open glass containers or metal cans are not authorized on the flightline or in maintenance industrial areas. Personnel shall not place open containers near electronic equipment within vehicles, to prevent spill hazards.

11.8.3.23. Personnel will account for all items in their possession when entering an industrial work area and before exiting. The job site and equipment must be free of FO prior to departure.

11.8.5. All 319 RW units involved in flight line duties will appoint a unit FOD Monitor and an alternate and forward a letter of appointment to the 319 RW FOD Monitor. OG Staff is exempted from this requirement.

11.8.5.3.1. The Wing FOD Monitor and impoundment official will jointly investigate any aircraft/engine FOD incidents. Additionally, the Wing Safety Office will perform a separate, independent investigation. In the event the wing FOD Monitor is not available, a Quality Assurance representative will perform the initial investigation.

11.8.5.3.2. After the Wing FOD Monitor and Wing Safety Office have completed their independent investigations, they will provide an initial report in accordance with DAFI 91-204, Safety Investigations and Reports, of all circumstances surrounding the incident.

11.8.5.3.3. The Wing FOD Monitor will brief the Vice Wing Commander and OG/CC or designated representatives within 24 hours of the incident by e-mail.

11.8.5.3.4. For each FOD incident, the Wing FOD Monitor will submit a final report, documented in the established ACC format, to the Vice Wing Commander no later than 7 working days after completion of the investigation. The Wing Safety Office will provide an incident debriefing to the Vice Wing Commander during directed safety meetings.

11.8.5.5.8. Be the point of contact for all 319 RW FOD/DOPP issues, to include incidents and prevention measures at FOLs.

11.8.5.5.9. Serve as the point of contact for planning and execution of base FOD walks. 11.8.5.5.10.

Immediately notify the 319 RW/CV of all known damage and details from FOD.

11.8.5.5.11. Be the point of contact for all 319 RW Lost Tool/Object issues. Maintain original copies of Lost Tool/Object reports for one year. 319 RW GSUs and FOLs will follow local procedures.

11.8.5.5.12. Attend pre-construction briefings for airfield construction/repairs.

11.8.6.4.5. All damage, regardless of size and impact on serviceability, will be reported to 319 RW/CV.

11.8.6.9.2. Results of the investigation will be briefed to the 319 RW/CV and sent to all aircraft supervision for the affected MDS for future prevention.

11.8.6.9.3. QA personnel deployed to FOLs will be acting FOD monitor.

11.8.6.9.3.1. All 319 RW FOD incidents at GSUs and FOLs will be investigated by the host Wing FOD monitor, unless it is not established, or the FOD incident is the direct result of 319 RW deployed/assigned personnel. All 319 RW GSUs and FOLs will follow home station FOD polices per AFI 21-101_ACCSUP.

11.8.7.1.2. Additional attendees are Unit FOD Monitors or alternates. If a mandatory attendee is unable to attend the meeting, their deputy or alternate will attend.

11.9. Dropped Object Prevention (DOP) Program.

11.9.1.2. A 319 OG/QA office representative will be the Wing DOP Monitor and must be appointed in writing by the 319 RW/CV.

11.9.1.3. Deployed/FOL DOP Monitor will be the QA representative that serves as the FOD monitor and maintain a DOP continuity book.

11.9.1.4. Immediately notify the 319 RW/CV of all known damage and details from DOP incidents.

11.9.3.2.2.1. The completed ACC FOD/DOP Excel Worksheet will be sent to 319 RW DOP Monitor within 12 hours.

11.13. Cannibalization Program.

11.13.3.5. The AMXS MOO/SUPT or GSU/FOL equivalent are responsible for the overall management of their respective CANN programs.

11.13.3.5.1. The AMXS MOO/ SUPT or GSU/FOL equivalent will assign a CANN manager, (normally the DCC assigned to the aircraft) to oversee forms documentation and entries into IMDS.

11.13.5.3. DMS inputs CANN actions into IMDS after notification of a CANN by the Production Superintendent.

11.13.5.3.1. DMS provides a job control number to the performing work center and processes the CANN in IMDS.

11.13.5.4. DMS will immediately notify the Production Superintendent after receipt of the replacement part. The Production Superintendent will decide whether the part will be installed or deferred.

11.13.5.4.1. DMS will utilize IMDS to defer installation.

11.13.5.5. Production Superintendents will coordinate CANN actions between units/flights when mission requirements dictate. CANN actions to fill GSU/FOL supply shortfalls require MXG/CC approval.

11.13.5.6. For engine-to-aircraft CANNs, the flight line Production Superintendent will coordinate with the Production Superintendent overseeing support shop functions.

11.14. Hangar Queen Aircraft.

11.14.5. The Hangar Queen Manager will review the aircraft AFTO Form 781 series daily and ensure no disparity with IMDS.

11.14.5.1.2. Once all forms documentation/maintenance actions are completed, units must notify QA prior to first flight for the final rated forms review (flight for release from Hangar Queen status). QA will be notified through the MOC a minimum of 48 hours prior to first flight.

11.14.5.1.3. QA will perform a rated inspection on all aircraft forms initiated since the last flight and prior to the first flight on all Hangar Queen Aircraft, a maximum of 48 hours prior to the flight, at the inspector's discretion. The inspection will be documented in the LEAP database.

11.14.5.6. MOC will update HQ ACC/A4 Hangar Queen Tracker IAW ACC Supp, when any Hangar Queen Status changes.

11.14.6. The Hangar Queen Manager will review the aircraft AFTO Form 781 series daily and ensure no disparity with IMDS.

11.14.7. For aircraft experiencing extended Hangar Queen down time, units may request QA perform Hangar Queen forms review at 30-day intervals.

11.14.8. Hangar Queen Category 3 aircraft will be released from hangar queen status by accomplishing the 319 RW QA OCF checklist.

11.16. Aircraft Inlet/Intake/Exhaust Certification.

11.16.6. Member must receive initial certification within 60 days of formal course completion. After 60 days they must re-accomplish formal training.

11.16.6.1. All personnel that go overdue will be decertified and will not accomplish inspections until properly recertified.

11.18. Engine Blade Blending Training and Certification Program.

11.18.8.3.1. Blade blend repair action will be loaded in IMDS against the engine S/N for each applicable blade number.

11.19. Engine Flexible Borescope Inspection Training and Certification Program.

11.19.3. Member must receive initial certification within 60 days of formal course completion. If not certified within 60 days, they must re-accomplish formal training.

11.28. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program.

11.28.2.4.1.2. See **Attachment 18** for CDDAR specific responsibilities and procedures at Grand Forks AFB.

11.28.2.4.3.1. All 319 RW FOLs/GSUs will follow CDDAR specific responsibilities and procedures outlined in host Wing publications.

11.28.2.5.4. AMXS and associated GSUs/FOLs, will provide initial response, and tow team if required for RQ-4 aircraft declared IFEs. Applicable contractor will provide initial response, AMXS will only respond if the IFE results in an aircraft disabled on the active runway or a CDDAR event is initiated.

11.34. Wing Avionics Manager (WAM).

11.34.1.22. The 319 OG WAM will manage the OmniStar program and contract.

11.34.1.23. Alternate WAMs are authorized at 319 OG GSUs/FOLs, as needed. They will report to the primary 319 OG WAM for any requirements and specific duties.

11.43. Cold Weather Hangar Door.

11.43.1. When the ambient air temperature is 32 degrees Fahrenheit (0 degrees Celsius) or below, the following precautions apply in addition to those covered in the normal procedures.

11.43.1.1. Ensure increased emphasis and attention by flightline expeditors, production superintendents, maintenance operations, facility managers, and occupants.

11.43.1.2. Hangar doors will be kept closed until the aircraft or equipment has reached the hangar and will only be opened when the aircraft or equipment is positioned for entry or exit, and closed immediately thereafter.

11.43.1.3. Brief all appropriate personnel on use of proper hangar door procedures to safeguard hangar conditions during cold weather.

11.43.1.4. Before opening or closing hangar doors, ensure the door tracks are clean and free of debris, ice, snow, and other objects that may hinder door movement.

11.43.1.5. Ensure outside weather shields are not covered with ice or snow, or frozen to the ground, before moving doors.

11.43.2. Because of the possibility of extensive hangar infrastructure damage in freezing weather, lock-out/tag-out procedures may be modified under these circumstances to accommodate the most expeditious closing of the doors.

11.43.2.1. Maintenance Production Superintendent (ACC) or 319 OSS/QAE (T/A) must authorize and oversee the movement and verify that the door motor clutch is disengaged before proceeding.

11.43.2.2. After the doors are closed, and hangar infrastructure damage mitigated, lock-out/tag-out procedures must be immediately completed.

11.43.2.3. Notify the MOC or the CP and initiate an emergency work order with CES to have the malfunctioning door repaired.

11.45. Corrosion Program.

11.45.1.1.1. **(Added)** Joint Corrosion Control Prevention training for assigned maintenance personnel (excluding 2A7X3) is provided through the MyLearning Website (<https://lms-jets.cce.af.mil/moodle/enrol/index.php?id=13295>) but will require prior coordination with the UTM for enrollment.

11.45.1.1.2. Section training monitors will ensure personnel complete initial and annual refresher training as applicable.

Chapter 14

MAINTENANCE PLANS, SCHEDULING AND DOCUMENTATION (PS&D).

14.1. Responsibilities.

14.1.3.7. Each AOR location has an assigned scheduling representative that will manage all AVDO, TCTO, TCI and scheduling duties. All locations will report to Grand Forks MO Scheduling.

14.1.3.8. Beale and Grand Forks scheduling will maintain their assigned aircraft block JML's within their AOR location.

14.1.4.4.3. Each AOR location will create and maintain their own MTP for their scheduling shops.

14.1.5. Each AOR location has an appointed AVDO representative and will manage AVDO responsibilities for each assigned aircraft, in conjunction with Grand Forks Wing Scheduling.

14.2. Data Documentation.

14.2.2. Each AOR location has an assigned Scheduling representative and will manage jacket files for assigned aircraft, in conjunction with Grand Forks Wing Scheduling.

14.2.2.3.5. RQ- 4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.2.4.2.1.2. Meetings will also include QA, Supply, Egress, or appropriate back shops.

14.2.5.1.1. Meetings will also include QA, Supply, or appropriate back shops.

14.2.7.2.1. QA will ensure all records are isolated from access by unauthorized personnel until relieved by higher authority.

14.2.7.4. The MOC will notify QA, Analysis and PS&D of the aircraft tail number, type mishap, location, and time of mishap.

14.3. Configuration, TCTO, SI and TCI Management.

14.3.1.2.1. The using organization/work center will order, manage, and dispose of HAZMAT items for applicable TCI/TCTOs utilizing the cradle-to-grave methodology. The document/requisition number will be forwarded to PS&D NLT 3 duty days after request.

14.3.3.1. Each AOR location has an assigned Scheduling representatives and will manage their TCTO program for assigned aircraft, in conjunction with Grand Forks Wing Scheduling.

14.3.3.1.5. The owning scheduling agency will be responsible for contacting the FOLs to confirm the applicability of the TCTO. If the FOL has an assigned scheduler, confirmation of the TCTO is still required. Example: If a TCTO is received by the AGE scheduler, it is their responsibility to contact the FOL and determine its applicability. If a scheduler is not assigned to the owning agency, PS&D shall perform the responsibilities and contact the FOLs.

14.3.4.1.1. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.2.4. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.2.4.2.2. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.3. Each AOR location has an assigned Scheduling representative and will manage their Time Change program for assigned aircraft, in conjunction with Grand Forks Wing Scheduling.

14.3.4.3.1. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.3.3.3.2. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.3.5.3. The minimum attendees for the monthly TCI reconciliation meeting are Wing TC Manager, PS&D, Production, and Flight Service Center (FSC).

14.3.4.3.5.4. PS&D will chair the monthly TCI meeting. PS&D will publish AF IMT 2410, *Inspection/TCTO Planning Checklist* /meeting minutes on the PS&D shared point and keep on file for a minimum of one year.

14.3.4.3.5.5. At the monthly reconciliation meeting, PS&D will brief on TCI parts on order/on hand and complete the 100 percent reconciliation of due-outs prior to the TCI monthly meeting and brief on any issues or limiting factors. PS&D will brief next TCI quarterly forecast to de-conflict any issues with work centers, any PDM requirements, TCI on extension that are expiring within 90 days and any other current TCI issues that need to be addressed.

14.3.4.3.6.1. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.3.4.3.6.2.1. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.4.1.2.9.1. Beale and Grand Forks both have assigned engine managers that will manage their assigned Block's engines.

14.5. Maintenance and FHP Planning Cycle.

14.5.4.4.3.2.2. RQ-4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

14.5.5.3.1. For the 319 OG the final signature will be the 319 OG/CC and submitted to 319 OG PS&D. 319 OG PS&D will coordinate a combined 319 RW signature to the 319 RW/CC.

14.5.5.3.2. Each AOR location has an assigned Scheduling representatives and will manage their Monthly Maintenance program for assigned aircraft, in conjunction with Grand Forks Wing Scheduling.

14.5.5.5. All maintenance schedules will be sent to Grand Forks MO Scheduling to be routed for Wing CC signature.

14.5.6.1.1. Each location possessing AGE will brief their own overdue AGE inspections at the Group standup meeting. GSUs/FOLs will follow local guidance.

14.5.6.7. For the 319 OG the final signature will be the 319 OG/CC and submitted to 319 OG

PS&D. 319 OG PS&D will coordinate a combined 319 RW signature to the 319 RW/CC.

14.6. Contingency and Expeditionary Responsibilities.

14.6.1.5.1.5. Deployed schedulers will physically verify status and location for on-hand TCIs and TCTO kits.

Chapter 16

AEROSPACE VEHICLE COATING AND MARKING REQUIREMENTS

16.2. Coating System Scoring and Maintenance.

16.2.3. CP&S will track post wash paint score inspection in IMDS. RQ- 4/RD-2 weapon systems use a -05 TO system for scheduled maintenance.

Chapter 17

319 RW STATIC DISPLAY AIRCRAFT REQUEST REQUIREMENTS.

17.1. All requests for statics on Grand Forks AFB will be submitted via Static Display Request, (Attachment 14) and will be forwarded to 319 OG/CAG via e-mail no later than 3 weeks prior to the required date. At the time of request, all special requests need to be submitted, and already coordinated with 319th Public Affairs office.

17.2. The standard limit for static displays is 3 per month. All efforts will be made to meet this limit. More than 3 static displays per month will require approval by 319 OG/CC.

17.3. Static display requirements will be discussed at the Shared Resources meeting. Approval or non-approval will be obtained by 319 OG/CAG. PS&D will reflect the static display in the weekly schedule.

17.4. For retirements, an aircraft static is only authorized for senior enlisted (E-7 to E-9) and Lt Col and above (O-5 to O-10). Personnel not assigned to OG will require 319 OG/CC approval.

TIMOTHY A. MONROE, Colonel, USAF
Commander, 319th Reconnaissance Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- DAFI 21-101**, *Aircraft and Equipment Maintenance Management*, 8 November 2022
AFI 21-101_ACCSUP, *Aircraft and Equipment Maintenance Management*, 22 April 2021
DAFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 3 October 2023
DAFI 91-204, *Safety Investigations and Reports*, 10 March 2021
DAFI 90-160, *Publication and Forms Management*, 14 April 2022
AFI 33-324, *The Air Force Information Collections and Reports Management Program*, 22 July 2019
DAFMAN 91-203, *Air Force Occupational Safety Fire and Health Standards*, 25 March 2022
TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 26 September 2022
TO 00-20-2, *Maintenance Data Documentation*, 23 August 2023
TO 32-1-101, *Use and Care of Hand Tools and Measuring Tools*, 19 August 2023

Prescribed Forms

- ACC Form 140**, *CTK Inventory and Control Log*
ACC Form 145, *Lost Tool/Object Report*
ACC FOD/DOP Excel Worksheet

Adopted Forms

- AF Form 847**, *Recommendation for Change of Publication*
AF Forms 1800, *Operator's Inspection Guide and Trouble Report*
AF Form 2691, *Aircraft/Missile Equipment Property Record*
AF Form 2692, *Aircraft/Missile Equipment Transfer/Shipping Listing*
AF Form 3952, *Chemical Hazardous Material Request Authorization Form*
AF IMT 1297, *Temporary Issue Receipt*
AF IMT 2410, *Inspection/TCTO Planning Checklist*
AFTO Form 95, *Significant Historical Data*
AFTO Form 244, *Industrial/Support Equipment Record*
AFTO Form 350, *Reparable Item Processing Tag*
AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*
AFTO Form 781A, *Maintenance Discrepancy and Work Document*
AFTO Form 781C, *Avionics Configuration and Load Status Document*

Abbreviations and Acronyms

- CA/CRL**—Custodian Authorization/Custody Receipt Listing
CND—Can Not Duplicate
CTK—Composite Tool Kit
DBM—Database Manager
DMS – Decentralized Material Support **DOPP**—
Dropped Object Prevention Program **DR**—Deficiency
Report
EID—Equipment Identification Designator

ELC—Enterprise Location Codes
ERV—Emergency Response Vehicles
ETIMS—Enhanced Technical Information Management System
FOL—Forward Operating Location
FCF—Functional Check Flight
FHP—Flying Hour Program
GSU—Geographically Separated Unit
HST—High Speed Taxi
IMPAC—International Merchant Purchasing Authorization Card
LRE—Launch Recovery Element
LMR—Land Mobile Radio
LCL—Local Checklist
LJG—Local Job Guide
LWC—Local Work Card
MEP—Master Entry Plan
MCE—Mission Control Element
MIL—Master Inventory List
MSAT—Maintenance Scheduling Application Tool
MSDS—Material Safety Data Sheet
MSEP—Maintenance Standardization & Evaluation Program
OCF—Operational Check Flight
PED—Portable Electronic Device
PRD—Pilot Reported Discrepancy
RDS—Records Disposition Schedule
RPS—Remotely Piloted System
RSO—Remote Split Operations
SCR—Special Certification Roster
TDI—Time Distribution Index
WWID—Worldwide Identification (code for TCMax®)

Attachment 2

FLYING SCHEDULING EFFECTIVENESS

Figure A2.1. Purpose

1. Sortie Surge rules: 319 OG PS&D will ensure the printed sortie surge rates exceed the daily sortie rate (average contracted sortie per O&M day based on the applicable monthly sortie/flying hour contract) of the unit by at least 50 percent, but not less than the contract required sorties scheduled on the monthly contract/plan. The statement "Sortie Surge" will be printed in the remarks section of the affected day's flying schedule.

2. Cross country takeoffs and returns will be during approved airfield operation hours.

3. Minimum turn times from landing to takeoff to include normal home station and sortie surge flying:

Global Hawk Unmanned Aircraft

System RQ-4B (Block 20/30/40):

Summer-Land to launch 3.0

hours Winter- Land to launch

3.0 hours

RD-2A (MCE): Land to launch 3.0

Hours RD-2B (LRE): Land to launch

3.0 Hours

*Required for aircraft tow to/from runway

4. Standard aircrew ready times are as follows:

| MDS | Called Crew Ready | Aircrew Show Time |
|-------------------------|-------------------|-------------------|
| RQ-4 | 2+00 | 1+45 |
| RQ-4 (Cold/Hot Weather) | 1+30 | 1+15 |
| RD-2A (MCE) | 1+45 | 1+45 |
| RD-2B (LRE) | 1+45 | 1+45 |

NOTE: RQ-4 engine start will occur as required per local conditions.

5. Standard scheduling time lines and schedule format rules:

- a. Monthly contracts will be electronically delivered by 319 OSS Operations Scheduler to 319 OG PS&D NLT Wednesday the first week of the month for the following month's schedule.
- b. Monthly schedules will be completed and published to the GFAFB official SharePoint site. NLT 1600 Friday by 319 OGPS&D.
<https://grandforks.eim.acc.hedc.af.mil/org/319arw/69rg/PSD/Forms/AllItems.aspx>
- c. Weekly operations requirements will be electronically delivered by the OSS Operations Scheduler to 319 OG PS&D NLT 1400 Tuesday prior to the next week's flying period.

- d. Weekly flying schedules will be electronically delivered to 319 OG PS&D office email box by the dedicated AMU schedulers NLT 1300 Wednesday for consolidation prior to 1000 OG/MXG scheduling meeting.
 - e. The final weekly and monthly schedules will be completed and published to the GFAFB official SharePoint site NLT 1600 Friday prior to the effective week by 319 OG PS&D.
<https://grandforks.eim.acc.hedc.af.mil/org/319arw/69rg/PSD/Forms/AllItems.aspx>
6. All monthly and weekly schedules to include sortie surges will be completed IAW electronic formatted template provided by 319 OG PS&D. Any changes or additions will require coordination through 319OG/CC or designated representative.

Attachment 3

MAINTENANCE SCHEDULING EFFECTIVENESS

Figure A3.2. Maintenance Scheduling Effectiveness

A3.2.2.1. **(Added)** Dedicated AMU scheduler will inform AMU supervision of previous weeks MSE.

A3.2.2.2. **(Added)** Review IMDS screen 122 NLT 1500 daily for the previous day's maintenance to determine if maintenance actions were completed.

A3.2.2.3. **(Added)** Notify AMU (Supervision and PS&D) and brief at daily production meeting all maintenance actions not completed.

A3.2.2.4. **(Added)** Compute maintenance scheduling effectiveness rates before 0900 on the first duty day after each effective week.

Attachment 4

FLYING SCHEDULING REPORTING PROCEDURES

Figure A4.2. Sortie Sequence Numbers.

To allow for accurate tracking of statistics, the below listed sortie sequence numbers will be used by all Aircraft Maintenance Units and Operating Squadrons assigned to Grand Forks AFB.

Table A4.1. (Added) Sortie Sequence Numbers for Grand Forks AFB

| <u>SQUADRON</u> | <u>RQ-4</u> 348 RS | <u>RD-2B</u> <u>(LRE)</u> 348 RS | <u>RD-2A</u> <u>(MCE)</u> 348 RS |
|-------------------------|-----------------------|--|--|
| Normal Flying Schedule | 301-310 | 311-320 | 321-329 |
| FCF / OCF | 331-334 | 341-344 | 351-354 |
| Added Sorties | 335-339 | 345-349 | 355-359 |
| X-Country / Busy Relays | 360-364 | 370-374 | 380-384 |
| Exercise | 365-369 | 375-379 | 385-389 |
| Higher Headquarters | 390-392 | 393-395 | 396-399 |

Table A4.2. RQ-4/RD-2 Sortie Sequence Numbers for GFAFB AFB

| <u>SQUADRON</u> | <u>12 RS</u> <u>RQ-4</u> | <u>12 RS</u> <u>LRE</u> | <u>12 RS</u> <u>MCE</u> |
|------------------------|-----------------------------|----------------------------|----------------------------|
| Normal Flying Schedule | 001-010 | 011-020 | 021-030 |
| FCF / OCF | 031-034 | 040-044 | 050-054 |
| Added Sorties | 035-039 | 045-049 | 055-059 |
| X-Country / Busy Relay | 060-064 | 070-074 | 080-084 |
| Exercise | 065-069 | 075-079 | 085-089 |
| Higher Headquarters | 090-092 | 093-095 | 096-099 |

Table A4.3. (Added) Sortie Sequence Numbers for Detached RQ-4B/RD-2 Units

| <u>SQUADRON</u> | <u>7 RS</u> <u>RQ-4</u> | <u>7 RS</u> <u>LRE</u> | <u>4RS</u> <u>RQ-4</u> | <u>4RS</u> <u>LRE</u> |
|-------------------------|----------------------------|---------------------------|---------------------------|--------------------------|
| Normal Flying Schedule | 401-709 | 410-419 | 201-210 | 211-220 |
| FCF / OCF | 430-434 | 440-444 | 231-234 | 247-244 |
| Added Sorties | 435-439 | 445-449 | 235-239 | 245-249 |
| X-Country / Busy Relays | 460-464 | 470-474 | 260-264 | 270-274 |
| Exercise | 465-469 | 475-479 | 265-269 | 275-279 |
| Higher Headquarters | 490-492 | 493-495 | 290-292 | 293-295 |

Attachment 5

DEPLOYED OPERATIONS AND OFF-STATION SORTIES

Figure A5.3. Deployed RQ-4/RD-2 Sortie Sequence Numbers.

| <u>SQUADRON</u> | <u>380 AEW</u> <u>RQ-4</u> | <u>380 AEW</u> <u>LRE</u> | <u>380 AEW</u> <u>MCE</u> |
|-------------------------|-------------------------------|------------------------------|------------------------------|
| Normal Flying Schedule | 701-705 | 711-715 | 721-725 |
| FCF / OCF | 741-745 | 721-730 | 731-735 |
| Added Sorties | 746-750 | 756-760 | 761-765 |
| X-Country / Busy Relays | 781-785 | 786-790 | 766-770 |

Attachment 6

RQ-4A/B AIRCRAFT "RED X" CRITERIA LISTING

Table A6.1. RQ-4A/B Aircraft Red X Criteria Listing.

11000 – AIRFRAME

1. EXCESSIVE "G" LOAD UNUSUAL VIOLENT MANEUVERS
2. DROPPED OBJECT
3. LIGHTNING DAMAGE
4. AIRCRAFT STRUCTURAL DAMAGE

13000 – LANDING GEAR SYSTEM

1. RETRACTION OR EXTENSION FAILURE NLG SHIMMY
2. UNSAFE INDICATION
3. BRAKES INOP
4. HOT BRAKES
5. HARD LANDING
6. HIKE/DEHIKE FAULT

14000 – FLIGHT CONTROL SYSTEM

1. UNCOMMANDED INPUT TO FLIGHT CONTROL SYSTEM
2. FLIGHT SURFACE MALFUNCTION (INCLUDING INDICATION MALFUNCTIONS)

23000 – POWER PLANT

1. POWER LOSS, STALLS STAGNATION, SURGES, UNCOMMANDED AUTO ACCELERATION, ABNORMAL VIBRATION (BEYOND LIMITS)
2. FLAME OUTS
3. NO STARTS (TWO CONSECUTIVE TIMES)
4. OVER TEMPERATURES
5. OVER SPEED
6. ABNORMAL OIL PRESSURE
7. ENGINE IDLE OUT OF TOLERANCE
8. FOD
9. INCORRECT INDICATION
 - a. RPM INDICATOR
 - b. OIL PRESSURE INDICATION
 - c. FUEL FLOW INDICATION

41000 – ENVIRONMENTAL CONTROL SYSTEM (ECS)

1. ECS OVER HEAT
2. FWD OR AFT TEMPERATURE SENSORS INOP
3. FWD OR AFT COMPARTMENT PRESSURIZATION FAULT

42000 – ELECTRICAL POWER

1. BATTERY 1, 2, OR 3 FAILURE
2. AC OR DC POWER FAILURE

3. INVERTER FAILURE

44000 – LIGHTING SYSTEM

1. STROBES INOP
2. FORMATION LIGHTING INOP

45000 – HYDRAULIC POWER SYSTEM

1. SYSTEM SURGING OR FAILURE
2. INDICATING SYSTEM MALFUNCTION

46000 – FUEL SYSTEM

1. FEED PROBLEMS
2. FUEL INBALANCE, UNCORRECTABLE
3. EXCESSIVE FUEL CONSUMPTION
4. UNCOMMANDED FUEL VENTING
5. FUEL PUMP MALFUNCTION
6. TRANSFER PROBLEMS
7. LOW FUEL INDICATION MALFUNCTION

57000 – INTEGRATED GUIDANCE AND FLIGHT CONTROLS

1. AIR DATA MALFUNCTION
2. INTEGRATED MISSION MANAGEMENT COMPUTER (IMMC) FAILURE
3. NAVIGATION FAILURE
4. LCP1 OR LCP2 INOP ON CAMA
5. LESS THAN TWO C2 LINKS

62000 – VHF COMMUNICATION

1. ATC RADIO INOP

65000 – IFF SYSTEM

1. TOTAL INOP
2. MODE 3A, C INOP
3. MODE 4 INOP (AS MISSION REQUIRES)

Attachment 7

RD-2A MISSION CONTROL ELEMENT "RED X" CRITERIA LISTING

Table A7.1. RD-2A Mission Control Element Red X Criteria Listing

10000 – SHELTER

1. LIGHTNING STRIKE
2. MAJOR STRUCTURAL DAMAGE

41000 – ENVIROMENTAL CONTROL SYSTEMS

1. TOTAL LOSS OF POWER
2. LACK OF COLD AIR FLOW (PRIMARY ANDBACKUP)

42000 – MCE POWER DISTRIBUTION

1. TOTAL POWER LOSS (UPS ANDGENERATOR)
2. POWER FLUCTUATION

57D00 CREW COMMUNITIONS

1. C2 WORKSTATION INOP
2. UNCOMMANDED INPUT TO FLIGHT CONTROL SYSTEM

59000 – CREW COMMUNICATIONS

1. TOTAL COMMUNICATION FAILURE

68000 – SATELLITE COMMUNICATIONS

1. KU SATCOM INOP (MISSIONREQUIRED)
2. REMOTE REACHBACK INOP (MISSIONREQUIRED)

69000 – MISC COMMUNICATIONS EQUIPMENT

1. LOSS OF GPS
2. LOSS OF MISC COMMS
3. VOSIP AND STE INOP

Attachment 8

RD-2B LAUNCH AND RECOVERY ELEMENT “RED X” CRITERIA LISTING

Table A18.1. RD-2B Launch and Recovery Red X Criteria Listing.

10000 – SHELTER

1. LIGHTNING STRIKE
2. MAJOR STRUCTURAL DAMAGE

41000 – ENVIROMENTAL CONTROL SYSTEMS

1. TOTAL LOSS OF POWER
2. LACK OF COLD AIR FLOW (PRIMARY AND BACKUP)

420000 – MCE POWER DISTRIBUTION

1. TOTAL POWER LOSS (UPS AND GENERATOR)
2. POWER FLUCTUATION

57000 – CREW COMMUNICATIONS

1. C2 WORKSTATION INOP
2. UNCOMMANDED INPUT TO FLIGHT CONTROL SYSTEM

59000 – CREW COMMUNICATIONS

1. TOTAL COMMUNICATION FAILURE

63000 – ATC VOICE COMMUNICATIONS

1. ATC VOICE INOP

69000 – MISC COMMUNICATIONS EQUIPMENT

1. LOSS OF GPS
2. LOSS OF MISC COMMS
3. VOSIP OR STE INOP
4. KG-75 INO

Attachment 9

319 RW MAINTENANCE LMR CALL SIGNS

Table A9.1. 319 RW Maintenance LMR Call Signs.

| 319TH OPERATIONS GROUP | |
|---|-----------------------|
| Commander | Warrior 3 |
| Deputy Commander | Warrior 3A |
| OG Superintendent | Warrior 3B |
| Quality Assurance Superintendent | QA Super |
| Quality Assurance Mobile Units | QA 1 through 15 |
| Maintenance Operations Center | MOC |
| 319 AIRCRAFT MAINTENANCE SQUADRON | |
| Commander | Hawk Lead |
| Maintenance Operations Officer | Hawk 1 |
| Squadron Superintendent | Hawk Chief |
| 319 AMXS / AIRCRAFT MAINTENANCE UNIT | |
| OIC | Hawk 2 |
| Production Superintendent | Hawk Super |
| Expediter | Hawk 4 |
| VTC Operator | Hawk 10 |
| Crew Chiefs | Hawk APG |
| Tow Team | Hawk Tow |
| Specialist Section | Hawk 5 |
| Crash and Recovery | Draggin 1 |
| Transient Alert Personnel | TA 1/2 |
| 319 AMXS / COMMUNICATIONS MAINTENANCE UNIT | |
| OIC | Hawk 11 |
| Production Superintendent | Hawk 12 |
| Ground Comm | Hawk 6 |
| CMU Expediter | Hawk 7 |
| MCE | MCE |
| LRE | LRE |

| 319 AMXS / EQUIPMENT MAINTENANCE UNIT | |
|--|---------------------|
| OIC | Hawk 9 |
| Production Superintendent | Hawk 8 |
| AGE | AGE |
| Fuels | Fuels |
| Metals Tech | Metals Tech |
| NDI | NDI |
| Sheet Metal | Sheet Metal 1 |
| 4 RS (Andersen) | |
| Commander | Crow 1 |
| DO/ADO | Crow 2 |
| MOO | Crow 3 |
| Ops Super | Crow Ops |
| Pro Super | Crow Super |
| APG | Crow 4 |
| Avionics | Crow 5 |
| Support | Crow Support |
| COSO | Crow Supply |
| Quality Assurance | Crow QA |
| Chase Vehicle | Hawkeye |
| Launch Lead | Crow 10 |
| Recovery Lead | Crow 6 |
| 4 RS (Yokota) | |
| Commander | Taka 1 |
| DO/ADO | Taka 2 |
| MOO | Taka 3 |
| Ops Super | Taka Ops |
| Pro Super | Taka Super |
| APG | Taka 4 |
| Avionics | Taka 5 |
| Support | Taka Support |
| COSO | Taka Supply |
| Quality Assurance | Taka QA |
| Chase Vehicle | Hawkeye |
| Launch Lead | Taka 10 |
| Recovery Lead | Taka 6 |

| 348TH RECONNAISSANCE SQUADRON | |
|--------------------------------------|-------------|
| Commander | Rico 1 |
| Operations Supervisor | Rico 2 |
| Mobile | Hawkey e |

| 7TH Reconnaissance Squadron | |
|------------------------------------|-------------|
| Commander | Vader |
| Director of Operations | Cyclops |
| Maintenance Operations Officer | MOO |
| Contractor Site Lead | Global 1 |
| Contractor Dep. Site Lead | Global 2 |
| Production Superintendent | Global 3 |
| Sensor Maintenance | Global 4 |
| Quality Assurance | QA |
| VTC Operator | Matrix |
| Chase Car | Hawkey e |
| Launch/Recovery Element | LRE |
| LRE Pilot for Standard Flight | Forte 10 |
| LRE Pilot for Delivery Flight | Hawk 10 |
| Aerospace Ground Equipment | AGE |
| Maintenance Operations Center | MOC |

Attachment 10

MANUAL JOB CONTROL NUMBERS

Figure A10.1. 319 AMXS.

| | |
|------------------------------|-----------|
| AGE | 1000-1100 |
| CREW CHIEF | 1101-1200 |
| GROUND SYSTEMS | 1301-1400 |
| METALS TECH | 1401-1500 |
| MOC | 1601-1700 |
| NDI | 1701-1800 |
| NET SYSTEMS | 1801-1900 |
| NORTHROP GRUMMAN CONTRACTORS | 1901-2000 |
| SHEET METAL | 2101-2200 |
| SPECIALISTS | 2201-2300 |
| SUPPLY | 2301-2400 |
| SUPPORT/CTK | 2401-2500 |

Figure A10.3. 4 RS.

| | |
|-----------------------|-----------|
| RAYTHEON | 1000-1049 |
| FALLS CHURCH | 1050-1099 |
| QUALITY ASSURANCE | 1100-1149 |
| MECHANICS/TECHNICIANS | 1150-1199 |
| PLANS & SCHEDULING | 1200-1249 |

Figure A10.4. 7 RS.

| | |
|-----------------------|-----------|
| RAYTHEON | 7450-7499 |
| FALLS CHURCH | 7500-7549 |
| QUALITY ASSURANCE | 7550-7599 |
| MECHANICS/TECHNICIANS | 7600-7649 |
| PLANS & SCHEDULING | 7650-7699 |
| AGE | 7700-7799 |
| SHEET METAL | 7750-7799 |
| METALS TECHNOLOGY | 7800-7849 |
| NDI | 7850-7899 |

**Attachment 11
WWID LIST**

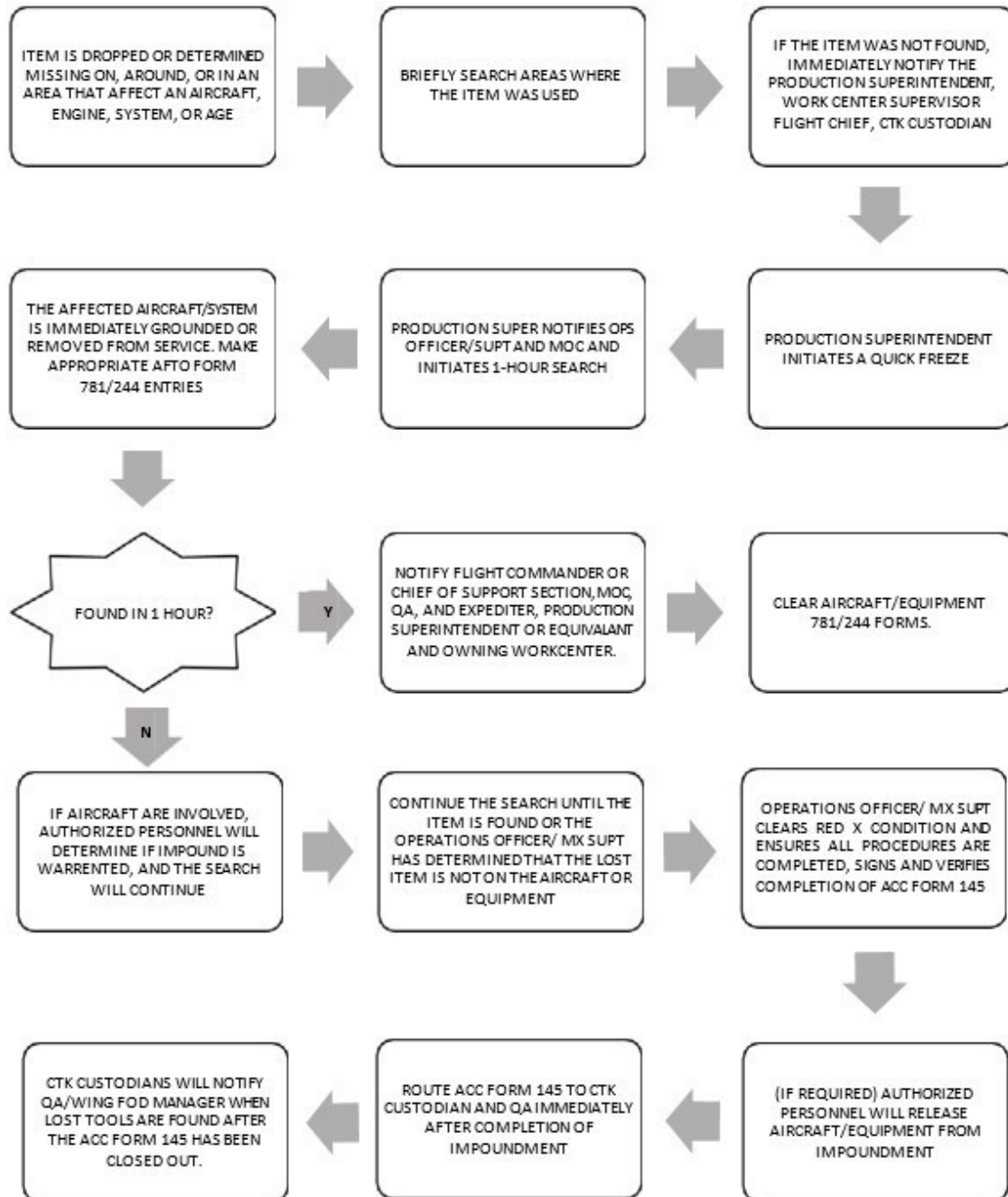
Figure A11.1. WWID List.

| UNIT | WWID |
|------------------------------------|--|
| 319 AMXS | <u>AIRCRAFT</u> <u>MX</u> GMAM <u>ASM</u> GMMB <u>MT</u> GMMS <u>NDI</u> GMMN <u>FUELS</u> GMMF <u>CMU</u> GMGC |
| 319 AGE | GMMG |
| 319 OG Crash & Recovery | GMMW |
| 319 OG/QA | GMQA |
| 4 RS | <u>AIRCRAFT</u> <u>MX</u> BDGH <u>COMM MX</u> BDGC |
| 4 RS | ATGH |
| 18 ACCS | GMBN |
| 7 RS | <u>AIRCRAFT</u> <u>MX</u> SNAM <u>BACKSHOP</u> MX |

Attachment 12

LOST TOOL/OBJECT FLOW CHART

Figure A12.1. Lost Tool/Object Flow Chart.



Attachment 13

INTAKE MAINTENANCE AND RIVET REPLACEMENT CHECKLIST

Figure A13.1. Intake Maintenance and Rivet Replacement Checklist.

| INTAKE MAINTENANCE AND RIVET REPLACEMENT CHECKLIST | | PAGE 1 OF 1 PAGES |
|--|--|--------------------------|
| 319 OG-FORM | | OPR 319 OG/MXQA DATE |
| NO. | ITEM <i>(Assign a paragraph number to each item. Draw a horizontal line between each major paragraph.)</i> | C/W |
| NOTE | Technician will complete this checklist for all Intake Maintenance or Intake Rivet Replacement. Check the box in the C/W column to show completion, write N/A if task is not applicable. | |
| 1 | Prior to starting the task: | |
| a | Complete a thorough CTK inspection | <input type="checkbox"/> |
| b | Check the AFTO Form 781A for discrepancy documentation. | <input type="checkbox"/> |
| c | If required , Enter the following discrepancies in the AFTO 781As: Red X for barrier material and tape installed. Red X for post intake maintenance tool and FO inspection Red X for cure check (if sealant was applied). Any delayed discrepancies that may have been created. | <input type="checkbox"/> |
| 2 | Remove all items from pockets. An intake suit and booties are required if physical entry into the intake is needed. Remove restricted area badge. | <input type="checkbox"/> |
| 3 | Perform intake damage evaluation and verify documented discrepancy. Number of damaged fasteners _____ fastener location _____ Was a sealant repair required YES / NO . If yes: Type used _____ Lot # _____ Cure time _____ | <input type="checkbox"/> |
| 4 | If required , install barrier paper/tape just aft of work area. Ensure the intake is <u>completely</u> sealed to prevent FO migration. | <input type="checkbox"/> |
| 5 | Rivet removal and installation: | |
| a | Number of fasteners replaced _____ Can all drilled residue be removed YES / NO ? If NO contact the Pro Super. Are rivets in sealed area YES / NO ? If YES , contact the Pro Super. | |
| 6 | Ensure ALL rivet heads, stems, washers and shavings are accounted for and bagged for disposal. | <input type="checkbox"/> |
| 7 | A qualified 7-level will: Inspect any repair and/or fastener installation Perform a tool and FO inspection | <input type="checkbox"/> |
| 8 | Printed Name and emp # of technician: _____ Printed Name and emp # of 7-level: _____ Acraft tail # _____ JCN _____ Date repairs completed _____ | |

This checklist will be completed on the job site and turned into QA within 24 hours of repair completion, IAW AFI 21-101 ACC SUP Para. 11.8.3.9.1

Attachment 14

319TH OPERATIONS GROUP STATIC DISPLAY & BRIEFING COORDINATION FORM

Figure A14.1. 319th Operations Group Static Display & Briefing Coordination Form

319th Operations Group Static Display & Briefing Coordination Form

319 OG/CAG Contact Info: DSN: (312) 362-5421/6086 Comm: (701) 747-5421/6086 Email: 69rg.cag@us.af.mil (preferred method)

*Static Display: planner must provide escorts: 1 member with a Restricted Area Badge per 5 visitors. Free Zones NOT authorized.

Planner Info: Rank/Title: Full Name:

Phone: Email:

Title of Visit/Event:

Justification:

Visit/Event Details: Requested Date: Requested Time:

- Static Display - Aircraft Only**
- Static Display with Subject Matter Experts - SMEs role with the aircraft, RQ-4 characteristics, and Q&A**
- Unclassified Capes Briefing - Unclassified RQ-4 capabilities**
- Classified Capes Briefing* - Classified RQ-4 capabilities**
- Intel Brief* - Classified details on specific missions**

*All attending classified briefings must submit visit requests in JPAS. GHOC visits use "GHOC" all others use "319 OG".

Visit requests have been submitted for all visitors SMO codes: 319 OG: **GM1CF264** GHOC: **SSO GF**

Remarks: (Include any specific asks, i.e. requesting classified capes brief in GHOC)

Distinguished Visitors in Group:

| Rank/Full Name: | Group/Organization: | Title/Position: |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

319 OG Coordination for support:

| Office | Yes / No | Location | Briefer | Notes | Signature |
|--------|---|----------------------|----------------------|----------------------|----------------------|
| MXS | <input type="checkbox"/> <input type="checkbox"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| RS | <input type="checkbox"/> <input type="checkbox"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Attachment 15

RQ-4 AIRCRAFT INITIAL ACCEPTANCE INSPECTION CHECKLIST

Figure A15.1. RQ-4 Aircraft Initial Acceptance Inspection Checklist.

| Aircraft : | | Date: |
|-----------------------------------|--|--------------------------------------|
| Acceptance Inspection POC: | | |
| <u>WORKCENTER</u> | <u>TASK</u> | <u>CW Date & Initials</u> |
| AMU | Delivers aircraft jacket file to PS&D. | |
| WING PS&D | Places aircraft in appropriate status for a maximum of 5 calendar days upon aircraft arrival. | |
| PS&D | Reviews delivered jacket file; ensures all documentation is included; distributes documentation to appropriate work centers as indicated below: | |
| | AMU Aircraft serial number checklist. | |
| | AMU AF 2692 (-21 Verification). | |
| | ENG 2 AFTO 95s (ENGINE & ENGINE TCTO) and all other engine maintenance documentation. | |
| | MGMT Update LRU AFTO 95s (20 Total) in IMDS. | |
| | PS&D 781 J – Updates aircraft & engine times. | |
| | PS&D 781K – Updates scheduled maintenance. | |
| | QA Weight & balance forms (GH digital format). | |
| | WING AFTO 95 (TCTO) -- Loads into IMDS. | |
| PS&D | Schedules acceptance inspection JST in IMDS. | |
| AMU | Perform visual inspection under all removed panels/fairings for defects (i.e. missing/loose components, chafing, and orange wire left over from test) IAW 1-1A-8, 1-1A-14 and RQ4 EPFS series TOs. | |
| AMU | Register emergency locator transmitter (ELT) beacon to Beale AFB as the new owner using web site http://www.beaconregistration.noaa.gov . | |
| AMU | Perform emergency locator transmitter (ELT) operational checkout. | |
| AMU | Verify OMNISTAR subscription and transfer to Beale as new subscriber. | |
| AMU | Verify INMARSAT subscription and transfer to Beale as new subscriber. | |
| AMU | Performs general visual inspection of engine IAW Rolls Royce task 72-00-200-801. | |
| AMU | Completes engine serially controlled item checklist – returns checklists to engine management for input into IMDS. | |
| AMU | Performs 7 level verification of visual inspection of engine. | |

| | | |
|-----------|--|--|
| AMU | Accounts for all -21 equipment; signs AF FORM 2692 – Turns over control of -21 and all non-specified configuration equipment to support section – forwards AF FORM 2692 to PS&D for jacket file. | |
| PRO SUPER | Verify UCFs are current | |
| PRO SUPER | Coordinates with DCC, ENGINES, AFETS, FSR, and QA to review all discrepancies discovered and determines if a | |
| PRO SUPER | Ensure aircraft fuel card is ordered. | |
| QA | Verify aircraft configuration/781C is current. | |
| AMU | Completes draft AIDR – forwards to Pro Super for certification. | |
| PRO SUPER | Forwards draft AIDR to Product Improvement Office for submittal and must be submitted within 5 days of AI completion. | |
| PIM | Must submit AIDR to ACC & ALC within 15 days from completion of AI. | |

Attachment 16

RD2-A MCE ACCEPTANCE INSPECTION CHECKLIST

Figure A16.1. RD2-A MCE Acceptance Inspection Checklist.

| | | |
|-----------------------------------|--|--------------------------------------|
| MCE # : | | Date: |
| Acceptance Inspection POC: | | |
| <u>WORKCENTER</u> | <u>TASK</u> | <u>CW Date & Initials</u> |
| CMU | Deliver MCE jacket file to PS&D | |
| PS&D | Review delivered jacket file; ensures all documentation is included; distributes documentation to appropriate work centers as indicated below: | |
| | AMU | MCE serial number checklist |
| | PS&D | 781K – updates scheduled maintenance |
| | WING PS&D | AFTO 95 (TCTO) – loads into IMDS |
| PS&D | Schedule acceptance inspection JST in IMDS | |
| CMU | Perform inventory of equipment (hardware, external cables & support equipment). Document condition and status | |
| CMU | Perform inventory of system software. Document status on AFTO 470 (accounted for/missing/not supplied). | |
| CMU | Perform inventory of restoral software (physical media). Document status on AFTO 470 (accounted for/missing/not supplied). | |
| CMU | Document all serially controlled items and turn in to PS&D for inputs into IMDS. | |
| CMU | Perform shelter set-up. | |

Attachment 17

RD2-B LRE ACCEPTANCE INSPECTION CHECKLIST

Figure A17.1. RD2-B LRE Acceptance Inspection Checklist.

| | | |
|-----------------------------------|--|--------------------------------------|
| MCE # : | | Date: |
| Acceptance Inspection POC: | | |
| <u>WORKCENTER</u> | <u>TASK</u> | <u>CW Date & Initials</u> |
| CMU | Deliver LRE jacket file to PS&D | |
| PS&D | Review delivered jacket file; ensures all documentation is included; distributes documentation to appropriate work centers as indicated below: | |
| | ACMU LRE serial number checklist | |
| | PS&D 781K – updates scheduled maintenance | |
| | WING PS&D AFTO 95 (TCTO) – loads into IMDS | |
| PS&D | Schedule acceptance inspection JST in IMDS | |
| CMU | Perform inventory of equipment (hardware, external cables & support equipment). Document condition and status | |
| CMU | Perform inventory of system software. Document status on AFTO 470 (accounted for/missing/not supplied). | |
| CMU | Perform inventory of restoral software (physical media). Document status on AFTO 470 (accounted for/missing/not supplied). | |
| CMU | Perform inventory of all cryptographic controlled items (CCI). Validate with base COMSEC manager. | |
| CMU | Document all serially controlled items and turn in to PS&D for inputs into IMDS. | |
| CMU | Perform shelter set-up. | |

Attachment 18 CDDAR PROGRAM

Figure A18.1. CDDAR Program

A18.1. GENERAL

A18.1.1. The purpose of this Instruction is to define and outline specific CDDAR requirements and individual responsibilities between 319th Reconnaissance Wing (RW) and tenant units as identified by AFI 21-101, but **shall** also fulfill the requirements outlined in TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*; which is used to provide CDDAR guidance for organizations, either military or civilian, whose duties are related directly or indirectly to the performance of aerospace emergency rescue and mishap response. Supervisors at all levels must recognize the sources of hazards and resources to apply appropriate safety practices to minimize their effect. There are an infinite variety of possible emergency and crash recovery situations; therefore specific procedures cannot be prescribed for every situation.

A18.1.2. The 319 RWCDDAR program is a combined effort between the 319 RW, 319th Operations Group (OG) and tenant units. The 319th Aircraft Maintenance Squadron (AMXS) will maintain possession of the crash recovery response trailer, equipment and vehicle. The trailer will contain necessary tools, equipment, spare wheels/tires, axle jacks and safety equipment to perform immediate response operations on the RQ-4 aircraft. The trailer, equipment and vehicle will be used, if needed, for any CDDAR event. Vehicles required for CDDAR and location can be found on **Page 60**. 1.2.1. 319 OG CDDAR Team Chief will maintain a copy of their capability shortfall list with respect to RQ-4 support requirements.

A18.1.2.2. 319 OG CDDAR Team Chief will identify, in a memorandum for record (MFR), a list of the CDDAR team members, personnel and equipment limitations, and ways to mitigate deficiencies in support of unknown transient aircraft needs. The MFR will be provided to 319 OG Commander.

A18.1.3. 319 OG will be the primary response organization for all transient aircraft incidents; however, 319 AMXS will provide CDDAR Team Chief coverage and will supplement any additional needs for transient aircraft.

A18.1.4. 319 AMXS will be the primary response organization for all RQ-4 aircraft incidents.

A18.1.5. The U.S. Customs and Border Protection (CBP) are not Department of Defense (DOD) assets. CBP personnel have their own recovery procedures and will be responsible for their recovery actions.

A18.1.6. Grand Sky Tenants are not DOD assets. Grand Sky's personnel have their own recovery procedures and will be responsible for their aircraft recovery actions. The DOD may assist with fire, crash, and rescue at the request of Grand Forks County IAW the Joint Use Agreement.

A18.1.7. The CDDAR program is designed to recover crashed, damaged and disabled aircraft in a minimum time period consistent with the following considerations:

A18.1.7.1. Safety of response personnel involved with recovery operations.

A18.1.7.2. Requirement to open the runway for operational use.

A18.1.7.3. Prevention of secondary damage to the aircraft.

A18.1.7.4. Preservation of evidence for mishap or accident investigations IAWAFI 91-202, *The Air Force Mishap Prevention Program* and AFI 91-204, *Safety Investigations and Reports*.

A18.1.7.5. Due to the many unknown factors of airframe conditions immediately following a crash landing, do not attempt to use special equipment or procedures not included in the specific aircraft technical orders, without approval of the specific airframe system manager/engineer.

A18.1.8. In accordance with AFI 91-204 when an aircraft is under investigation by the Interim Safety Board (ISB), recovery operations will NOT proceed until the board president in coordination with the installation commander releases the aircraft. Personnel who are not engaged in the investigation will remain outside the recovery area. The CDDAR team may be called upon to perform tasks as required by the investigation team. Furthermore, the aircraft and crash site will only be disturbed as required to eliminate an imminently dangerous situation to the aircraft, support equipment and/or personnel. Refer to 319 RW IEMP 10-2 for further information.

A18.1.9. Incidents involving aircraft made up of composite structure may cause serious injury or death to those in contact with it. TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information* contains information regarding aircraft-specific composite component location and should be consulted when responding to aircraft incidents. The transient aircraft's home base will determine transient aircraft's composite materials risk and requirements for PPE.

A18.1.10. Personnel will use extreme caution in and around a disabled aircraft. CDDAR Personnel will ensure that the aircraft remains stable at all times to prevent movement or shifting. It may be necessary to moor the aircraft or to stabilize using airbags.

A18.2. SPECIFIC RESPONSIBILITIES

A18.2.1. 319 RW/CC will coordinate and approve on-/off-base recovery actions, IAWGFAFB IEMP 10- 2.

A18.2.2. 319th Reconnaissance Wing (RW)

A18.2.2.1. 319th Command Post (CP):

A18.2.2.1.1. Notify all pertinent agencies that a CDDAR response is required and provide the MDS, number of souls on board, fuel load, location of incident/mishap site and the location of the staging area, as established by the Incident Commander (IC).

A18.2.2.1.2. Maintain and initiate accident/incident checklists for aircraft mishap and notify all supporting agencies.

A18.2.2.1.3. Ensure radio traffic is held to essential transmissions during emergencies and enforce radio discipline during the recovery process.

A18.2.2.1.4. Coordinate with support organizations such as Transient Alert (TA), 319 AMXS MOC,

319 LRS and 319 CES for resources/actions required for CDDAR operations.

A18.2.2.2. Wing Safety will provide a Safety Representative to monitor the removal of the crashed aircraft.

A18.2.2.3. Transient Alert (TA):

A18.2.2.3.1. TA personnel will assist and coordinate with the 319 OG CDDAR team representative on all transient aircraft mishaps to determine needs and support capabilities.

A18.2.2.3.2. Will assist in removal of disabled transient aircraft from active runway.

A18.2.2.3.3. Appoint and identify CDDAR team members in an MFR.

A18.2.3.319th Mission Support Group (MSG):

A18.2.3.1. 319 MSG/CC or designated representative will:

A18.2.3.1.1. Request Explosive Ordnance Disposal (EOD) support, if required, contact security forces, security forces will contact Grand Forks police department, and Grand Forks police department will contact Fargo Bomb Squad.

A18.2.3.1.2. Provide additional equipment or supplies deemed necessary by the CDDAR Team Chief. Source through base equipment and supply first. If not available, engage Contracting for rental or purchase options. The 319th Contracting Flight (CONF) will obtain 319 LRS/CC approval prior to renting or leasing any equipment considered vehicles in accordance with AFI 24-302, *Vehicle Management*.

A18.2.3.2. 319th Civil Engineer Squadron (CES):

A18.2.3.2.1. Provide initial response for fire suppression.

A18.2.3.2.2. Provide initial site survey on fire damaged composites, exposed personnel, prevailing weather conditions/wind direction and degree of site exposed to fire/impact/explosion.

A18.2.3.3. 319th Logistics Readiness Squadron (LRS):

A18.2.3.3.1. Provide tractor trailers, forklifts, and drivers, as necessary, to support equipment needs and transport wreckage to the assembly point. An all-terrain forklift may also be required depending on the mishap condition and location.

A18.2.3.3.2. Vehicles will be available on a 24-hour basis. If the base does not own or have immediate access to any of these vehicles, coordinate with the 319 CONF to obtain equipment needs. Vehicles that may be required to support a CDDAR effort are listed in **Attachment 19**.

A18.2.3.3.2.1. The primary response vehicle will be a 6-passenger, 4-wheel drive pick-up with pintle hook/ball hitch and trailer (utility body). The vehicle and pintle hook/ball hitch need to be rated to tow the crash response trailer. It will be equipped with necessary emergency lights and a

radio capable of monitoring all maintenance nets, to include the Maintenance Operations Center (MOC)

and fire dispatch net independently, with the capabilities to switch to Air Traffic Control (ATC) nets.

A18.2.3.3.3. Provide POL support to the Incident Commander (IC) and CDDAR Team Chief, as required. This will include on-scene de-fueling of aircraft as well as refueling of support equipment (i.e. AGE and heavy equipment).

A18.2.3.4. 319th Contracting Flight (CONF):

A18.2.3.4.1. Will work closely with CDDAR Team Chief to meet immediate needs during a mishap. This may include after-hours pay adjustments for Transient Alert or coordinating with outside agencies to acquire equipment needs.

A18.2.3.4.2. Coordinate closely with 319 LRS to have a contingency plan in place to rent or lease vehicles from a local supplier. Vehicles that may be required to support a CDDAR effort are listed on **Page 62**.

A18.2.3.5. 319th Security Forces:

A18.2.3.5.1. Will cordon off the area surrounding the crash site.

A18.2.3.5.2. Establish an ECP only allowing in authorized personnel.

A18.2.4.319th Medical Group (MDG):

A18.2.4.1. 319th Bioenvironmental Flight:

A18.2.4.1.1. Assist with advanced composite response procedures when called upon by IC and/or CDDAR Team Chief. Only qualified personnel with adequate Personal Protective Equipment (PPE) will be allowed to enter hazardous area.

A18.2.4.1.2. The on-scene Bioenvironmental Engineering representative, IC and CDDAR Team Chief will determine the PPE that will be utilized. When dealing with transient aircraft, the transient aircraft home station will assist with the hazard and PPE determination. Any additional PPE concerns and/or training will be addressed and accomplished prior to beginning the recovery operation as determined by potential health risks of radiation, composite material, blood-borne pathogens and toxic chemical hazards that may be associated with the accident.

A18.2.5.319th Operations Group (OG):

A18.2.5.1. 319 OG/CC is responsible for establishing and executing the CDDAR program and will appoint, in writing, CDDAR team chiefs.

A18.2.5.1.1. Is responsible to the 319 RW/CC for all operational matters and decisions affecting handling of aircraft emergencies.

A18.2.5.1.2. Works with the 319 AMXS/CC, 319 OSS Operations Supervisor and ATC to obtain information or give directions.

A18.2.5.1.3. Will coordinate with applicable 319 MSG personnel (LRS, CONF, etc....) if additional

equipment and personnel support is needed.

A18.2.5.2. 319 OG Quality Assurance (QA):

A18.2.5.2.1. Upon notification of a 319 OG or 319 TA mishap, impound and secure all records, aircraft forms, servicing documents and any other data pertinent to mishap/accident investigations IAW AFI 91-204, *Safety Investigations and Reports*. Transfer impounded documents to Interim Safety Board (ISB)/Safety Investigation Board (SIB) president.

A18.2.5.2.2. Provide mishap aircraft Weight and Balance (W&B) to the 319 OG CDDAR Team Chief prior to aircraft recovery.

A18.2.5.2.3. Coordinate with the aircraft's home station MXG to obtain mishap aircraft Weight and Balance (W&B) prior to aircraft recovery for Transient Aircraft.

A18.2.5.3. 319 AMXS:

A18.2.5.3.1. Is responsible for RQ-4 recovery but will assist the 319 OG with transient aircraft recovery as needed.

A18.2.5.3.2. 319 AMXS/CC, upon notification of a recovery operation, will designate the 319 OG CDDAR Team Chief. If the operation will be ongoing, two team chiefs will be designated for 24-hour coverage. These individuals will be readily identifiable by a WHITE hard hat.

A18.2.5.3.3. Will maintain RQ-4 CDDAR team chiefs and key personnel to mobilize the CDDAR response trailer, if needed, in response to a transient aircraft incident.

A18.2.5.3.3.1. 319 OG CDDAR team representative will coordinate with identified 319 AMXS personnel to determine needs and provide 319 RW CDDAR team personnel for transient aircraft. 319 OG CDDAR team representative will contact the owning agency of any transient aircraft to provide a Maintenance Recovery Team and specific aircraft equipment.

A18.2.5.3.4. Will maintain and store CDDAR equipment and complete required inspections for the 319 RW and its tenants. Required inspections will be tracked and documented on the item applicable AF Form 1800, AFTO Form 244, or AFTO Form 95 (as required). The equipment should include, but not limited to:

A18.2.5.3.4.1. Composite Equipment Trailer

A18.2.5.3.4.2. Aircraft Lifting Sling

A18.2.5.3.4.3. Aircraft Airbags

A18.2.5.3.4.4. Belly Bands, Shackles and/or Spreader Bar

A18.2.5.3.4.5. Aircraft Towing Cables

A18.2.5.3.5. The CDDAR Team Chief will identify any shortfalls in support capabilities in writing to the 319 AMXS/CC and will identify plans to mitigate shortfalls. Shortfalls include but are not limited to equipment and personnel shortages.

A18.2.5.3.6. Will provide a written list of people authorized to enter the crash site.

A18.2.5.4. 319 AMXS MOC:

A18.2.5.4.1. Maintain and initiate accident/incident checklists for all aircraft mishaps and notify all supporting agencies.

A18.2.5.4.2. Ensure radio traffic is held to essential transmissions during emergencies and enforce radio discipline during the recovery process.

A18.2.5.4.3. Coordinate with support organizations for resources/actions required for CDDAR operations.

A18.2.5.4.4. Provide leadership with updates, as requested.

A18.2.5.4.5. Maintain a copy of the CDDAR emergency recall roster.

A18.2.5.5. 319 AMXS AGE will provide AGE to support and sustain the recovery effort as requested by IC and/or CDDAR Team Chief.

A18.3. CDDAR PROCESS

A18.3.1. CDDAR Team Chief in addition to the requirements in AFI 21-101, *Aircraft and Equipment Management*, and TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, will:

A18.3.1.1. Be designated by the 319 AMXS Commander.

A18.3.1.2. Be the single on-scene focal point for CDDAR operations.

A18.3.1.3. Report directly to the IC to coordinate all CDDAR aircraft operations.

A18.3.1.4. When two CDDAR team chiefs are required, the lead CDDAR Team Chief will:

A18.3.1.4.1. Update the CDDAR recall roster and provide a copy to the MOC, Command post, the 319 AMXS/CCE, and the 319 MSG/CCE. Members will be identified as Team Chief or Team Member on the crash recovery recall roster.

A18.3.1.4.2. Maintain a CDDAR continuity book containing: current recall roster, training plan with qualification dates for all members, host/tenant support agreement, detailed equipment lists, checklist and any waivers that may apply. See **Attachment 20**.

A18.3.1.5. Provide qualified personnel for containment, clean-up and disposal of advanced aerospace material/composite IAW TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information*. Work with Bioenvironmental and reference the proper technical orders to ensure proper PPE is available.

A18.3.1.5.1. These members will wear, at a minimum, hooded Tyvek suits, leather gloves, nitrile

rubber gloves, steel toe boots and a HEPA full face respirator (member must be respirator qualified for the recovery) if there is a threat of contacting composite materials. All seams will be covered and sealed with duct tape.

A18.3.1.5.2. Prior to recovery, components containing composite fiber material that has been damaged must be coated with fixate (50% water, 50% floor wax) and wrapped with plastic sheeting.

A18.3.1.6. Provide qualified composite fiber personnel to mark damaged composite items with one red flag, burnt composite with one blue flag and all other aircraft components/items with one yellow flag.

A18.3.2. Upon notification of an accident, the CDDAR Team Chief will:

A18.3.2.1. Begin the recall process to assemble the CDDAR team. During normal duty and non-duty hours, team members will respond immediately to the designated location based on the nature of the CDDAR event.

A18.3.2.1.1. 319 RW CDDAR events: CDDAR team members will respond to Bldg. 609 during duty and non-duty hours. During non-duty hours, CDDAR team members will report within one-hour of notification.

A18.3.2.2. Ensure the CDDAR trailer is inventoried and operational.

A18.3.2.3. Ensure all CDDAR equipment pre-use inspections are completed.

A18.3.2.4. Ensure any additional tools/equipment (i.e. e-tools, additional flashlights, water jugs, etc.) are checked out and secured in the trailer.

A18.3.2.5. Ensure all CDDAR personnel are present and qualified.

A18.3.2.6. Obtain all known aircraft information and the location of the staging area.

A18.3.3. Prior to entering the mishap site, the CDDAR Team Chief will:

A18.3.3.1. Report to the IC and provide the status of the CDDAR team, tools, equipment, vehicles and/or any other supplies/consumables that may be required.

A18.3.3.2. Determine the known state of damage to the aircraft and the final location of wreckage/damaged aircraft.

A18.3.3.3. Ensure mishap aircraft status is properly documented in applicable aircraft 781 series forms.

A18.3.3.4. Consult with QA to determine the mishap aircraft's last known W&B.

A18.3.3.5. Consult with ISB President, CES, Fire Department, Bioenvironmental, Security Forces, Wing Safety, QA and Mortuary Affairs, if required, to determine safest and most efficient recovery.

A18.3.4. Upon entering the mishap site, the CDDAR Team Chief will:

A18.3.4.1. Obtain clearance from IC and ISB/SIB president to proceed with recovery.

A18.3.4.2. Conduct safety briefing detailing all possible health issues that they may be exposed to, including fibers and inhalable dusts as aircraft parts are moved or modified by cutting, breaking, twisting or hammering.

A18.3.4.3. Assign qualified personnel to positions prior to recovery operations (i.e. special vehicle operator, console operator, safety observer, etc.). In the event of a major mishap, additional members may be augmented to assist in CDDAR operations under the direct supervision of the CDDAR Team Chief and team members.

A18.3.4.4. Ensure mishap scene and aircraft is rendered safe for maintenance, to the maximum extent possible, given aircraft circumstances and level of damage.

A18.3.4.4.1. For transient aircraft, 319 OG/TA personnel will safe the aircraft and scene to the maximum extent possible. 319 OG/TA will coordinate specialized aircraft equipment and personnel needs through the 319 OG CDDAR representative to conduct recovery operations.

A18.3.4.4.2. For RQ-4 aircraft, 319 OG CDDAR Team Chief will begin recovery operations in accordance with RQ-4 technical orders.

A18.3.4.5. Ensure PPE is properly used and all safety procedures outlined in applicable aircraft TOs are followed.

A18.3.5. Upon completion of recovery operations, the CDDAR Team Chief will:

A18.3.5.1. Notify the IC of completion.

A18.3.5.2. Ensure all CDDAR equipment is cleaned, inspected, repaired (if required) and stowed in the crash recovery trailer.

A18.3.5.3. Document the lessons learned to improve the CDDAR training program.

A18.3.5.4. Brief the 319 AMXS/CC and 319 OG/CC on recovery operations.

A18.4. SUPPORT FOR CDDAR COREHOURS/AFTERHOURS

A18.4.1. CDDAR support during flying hours will require immediate response by all applicable CDDAR team members based on the aircraft involved.

A18.4.1.1. For RQ-4:

A18.4.1.1.1. On-Duty: AMXS MOC will initiate a CDDAR recall by notifying the Production Super who will then notify the appropriate personnel and CDDAR Team Chief.

A18.4.1.1.2. Off-Duty: 319 RW/CP will initiate a CDDAR recall by notifying the 319 AMXS/CC who will then notify the appropriate personnel and CDDAR Team Chief.

A18.4.1.2. For Transient Aircraft:

A18.4.1.2.1. 319 RW/CP will initiate the recall by notifying 319 OG/CC and 319 AMXS/CC. 319 OG will provide identified CDDAR team members to handle transient aircraft.

A18.4.2. When an afterhours CDDAR recovery crew is required, 319 RW/CP will contact personnel through the Emergency Notification List. They will then notify the stand-by CDDAR Team Chief. The Team Chief will continue with the recall roster.

A18.4.3. An emergency recall roster will be kept by the CDDAR team. If required, the 319 RW/CP will provide emergency contact information to the CDDAR Team Chief.

A18.4.4. Team members will notify the CDDAR Team Chief when their contact information changes to ensure continuity of the recall roster.

A18.4.5. For incidents involving tenant units other than 319 OG (CBP and Grand Sky), 319 RW/CP will notify designated POCs from their organizations.

A18.4.5.1. 319 OG CDDAR team representative will act as a liaison to coordinate any available services authorized by 319 RW/CC

Attachment 19

VEHICLE REQUIREMENTS

Figure A19.1. Vehicle Requirements.

| Vehicle Requirements | Owning Organization |
|------------------------------------|------------------------------|
| Aircraft Tow Vehicle | 319 OG/TA and/or Owning Unit |
| Crane | 319 CONF |
| All Terrain Forklift | 319 LRS |
| Radio Equipped Truck | 319 OG/TA and 319 AMXS |
| Equipment Trailer | 319 AMXS |
| Bulldozer | 319 LRS and/or 319 CONF |
| 40' Flatbed Semi-Tractor & Trailer | 319 LRS |

Attachment 20

CDDAR CHECKLIST

Figure A20.1. CDDAR Checklist

| | Yes | No | N/A |
|---|-----|----|-----|
| 1. Assemble and account for all CDDAR members | | | |
| 2. Verify status of aircraft from the IC on: | | | |
| a. Location of aircraft | | | |
| b. Type of aircraft | | | |
| c. Souls on board | | | |
| d. Armament | | | |
| e. Fuel type and load | | | |
| f. Aircraft's position | | | |
| g. Wind direction and velocity | | | |
| h. Entry Control Point (ECP) location | | | |
| i. Ensure CDDAR members are on the Entry Access List | | | |
| ii. Authorized personnel use only the ECP for entering and exiting site | | | |
| i. Safe route to crash scene | | | |
| 3. Verify aircraft is safe for maintenance | | | |
| 4. Verify mishap of aircraft is documented in 781 forms | | | |
| 5. Verify W&B of aircraft with QA | | | |
| 6. Consult with ISB President, CES, Fire Department, Bioenvironmental, Security Forces, Wing Safety, QA and Mortuary Affairs for status | | | |
| PRECAUTIONS | | | |
| - Fuel leaks and vapors | | | |
| - Leaking battery acid | | | |
| - Hot metals | | | |
| - Unstable structures | | | |
| - Tripping hazards | | | |
| - Composites | | | |
| - Munitions | | | |
| - Remains | | | |
| 7. If applicable, contact appropriate agencies for heavy equipment use | | | |

**CAMERA-READY STANDARD DEPARTMENTAL PUBLICATION TEMPLATE
INSTRUCTION/MANUAL**

DRAFT NOT FOR IMPLEMENTATION OR COMPLIANCE

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| 8. Explain CDDAR plan and procedures to IC | | | |
| 9. Get clearance to perform CDDAR actions from IC | | | |
| 10. Ensure all CDDAR members have applicable PPE and are currently qualified | | | |

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|--|--|--|--|
| a. Safety toed boots | | | |
| b. Leather gloves | | | |
| c. Hearing protection | | | |
| d. Eye protection | | | |
| e. Hard hats | | | |
| 11. Perform safety brief with all CDDAR members CAUTIONS <ul style="list-style-type: none"> - PPE is required before entry into the crashsite - Do not proceed until system or area has been safed of: <ul style="list-style-type: none"> - Blood borne pathogens (i.e. Hepatitis B & C, HIV, etc.) - Composite materials WEATHER <ul style="list-style-type: none"> - Adverse or extreme weather conditions - Winter (i.e. snow, ice, wind chill factor, frostbite, etc.) - Summer (i.e. heat exhaustion, dehydration, sunburn, etc.) GENERAL AREA SAFETY PRECAUTIONS <ul style="list-style-type: none"> - No smoking within 300 feet of crash area - Spark producing equipment will not be operated without CDDAR Team Chief approval - Stay alert to vehicles and aircraft movement - Watch for air leaks, air bag shifting, bag punctures, hose disconnections or ruptures - If you see problems, notify the Team Chief or Safety immediately | | | |
| 12. If applicable, contact Bio and mark all damaged composites | | | |
| 13. If applicable, cover all damaged composite on aircraft | | | |
| 14. Pre-brief all CDDAR members on recovery set-up | | | |
| 15. Set-up recovery equipment | | | |
| 16. Brief all CDDAR members on recovery process | | | |
| 17. Complete CDDAR procedures | | | |
| 18. Notify IC of CDDAR completion | | | |
| 19. Brief all CDDAR members of tear down operation | | | |

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| 20. Ensure all CDDAR equipment is clean, inspected and repaired (if applicable) | | | |
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