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Maintenance

**AIRCRAFT STRUCTURAL INTEGRITY
PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFD 21-1, *Managing Aerospace Equipment Maintenance*. It establishes responsibilities and procedures for managing the 18th Wing Aircraft Structural Integrity Program (ASIP). It applies to 18th Wing and associate units at Kadena AB. This publication does not apply to the Air National Guard or US Air Force Reserve. Air Force Specialty Code 2A3X1B (F-15/F-111 Avionics Systems Instrumental and Flight Control) personnel are critical to the program's effectiveness.

1. References: AFI 63-1001, *Aircraft Structural Integrity Program*, PACAFI 21-101, *Objective Wing Aircraft Maintenance*, TOs 1F-15-101, *Service Usage Recorder Program Data Collection and Reporting*, 1F-15C-2-31JG-30-1, *Indicating/Recording Systems*, 1C-135(K)A-2-11GA-7-1, *General Aircraft Monitoring System*, 1C-135(K)S-2-11JG-10-1, *Radio, Communication, and Navigation System*, 1C-135-101, *Aircraft Structural Assessment Data*, and 1E-3A-2-31-1, *Instrument System*.

2. Responsibilities: 18 OG ASIP Manager ensures all fighter squadrons (FS), 909th Air Refueling Squadron (ARS), 961st Airborne Air Control Squadron (AACS), squadron maintenance officers (SMO), and all squadron ASIP monitors, crew chiefs, and 18th Maintenance Squadron (MXS) Repair and Reclamation (R&R) technicians take necessary actions to ensure compliance with this 18th Wing instruction.

3. Procedures:

3.1. 18 OG ASIP Manager will function as the base ASIP project officer in accordance with (IAW) PACAFI 21-101 and will:

3.1.1. Coordinate between all applicable agencies responsible for maintaining ASIP equipment to ensure equipment is repaired and reinstalled in aircraft as soon as possible.

3.1.2. Complete a signal data recorder system (SDRS) status report each month and forward to 5 AF/LGMN, OC-ALC/TISOB, and addressees outlined in TOs.

- 3.1.3. Review and forward all ASIP correspondence to appropriate agencies.
- 3.1.4. Establish an ASIP training program to be implemented by FS flight chiefs. Training will include the purpose, goal, and operation of the F-15 SDRS.
- 3.2. Each FS airplane general (APG) flight chief will implement the ASIP training program established by the 18 OG ASIP Manager for all crew chiefs assigned to SDRS-equipped aircraft (F-15 only).
- 3.3. FS specialist flight chief will:
 - 3.3.1. Implement the training program established by 18 OG ASIP Manager to all F-15/F-111 Avionics Systems Instrument and Flight Control personnel and all personnel cross-utilized on the SDRS (F-15 only).
 - 3.3.2. Designate a primary and alternate SDRS monitor and forward the appointments in writing to 18 OG ASIP Manager.
 - 3.3.3. Ensure that no SDRS is placed on order until a malfunction is verified by built-in test (BIT). SDRS monitors will also ensure all malfunctioning parts are placed on order expeditiously with priority 03-AZ (F-15 only).
- 3.4. F-15 crew chiefs will:
 - 3.4.1. Check the avionics status panel (ASP-37 and ASP-38) after every flight. If latched, document on an AFTO Form 241, **F-15 Bit Fault Record**, and send the form with the pilot to debrief.
 - 3.4.2. Ensure a SDRS placard is installed in both the aircraft and in the front jacket of the AFTO Form 781 series IAW TO 1F-15-101.
 - 3.4.3. Brief the pilot that the aircraft is SDRS-equipped.
 - 3.4.4. Ensure a discrepancy is entered in the AFTO Form 781A, **Maintenance Discrepancy and Work Document**, and Core Automated Maintenance System (CAMS) for an F-15/F-111 Avionics Systems Instrumental and Flight Control specialist to examine position transducers after maintenance is performed in SDRS-affected areas.
 - 3.4.5. Enter readouts from the exceedance counter on the AFTO Form 241 and send the form with the pilot to debrief.
- 3.5. Repair & Reclamation shop will: Complete an AFTO Form 238, **F-15 Component Serialization Record**, whenever an F-15 strut assembly, stabilator, or wing assembly is replaced and forward it to the agency listed in TO 1F-15-101.
- 3.6. F-15 sortie generation flight (SGF) debriefers will:
 - 3.6.1. Use computerized fault reporting system (CFRS) to initiate a work center event (WCE) in CAMS for each ASP-37 or ASP-38 latched.
 - 3.6.2. Update counter display unit (CDU) and counter accelerator unit (CAU) serial numbers in CFRS every 3 months.
 - 3.6.3. Update CFRS each time a CDU/CAU update sheet is generated by a specialist section.

3.6.4. Download AFTO Form 239, **F-15 Flight Log and Exceedance Counter Data Record**, information from CFRS to a disk and forward to WR-ALC/LFEFS, Robins AFB, GA 31098, IAW debrief procedures.

3.7. F-15 SGF SDRS monitors will:

3.7.1. Ensure a CDU/CAU update sheet is completed and sent to debrief each time the exceedance counter (CDU) or transducer (CAU) is replaced.

3.7.2. Maintain a SDRS log to collect all SDRS malfunction messages and record their corrective action. The log will also contain a general purpose form for each tail number assigned SDRS equipment. Information recorded on the general purpose form will include the SDR serial number, cassette tape serial number, percent of tape remaining, aircraft time at last inspection, SDRS status, current off-base requisition number(s), and status of any removed component(s).

3.7.3. Take action on all SDRS malfunction messages and forward corrective actions to the 18 OG ASIP Manager as soon as possible.

3.7.4. Perform monthly inventory and status check of all SDRS-equipped aircraft. Inventory results will be forwarded to the 18 OG ASIP Manager and recorded in the SGF SDRS log the first week of each month. Inventory will include the recorder and cassette installation date.

3.7.5. Check all SDRS-equipped aircraft for percent of tape remaining prior to aircraft deployment to ensure enough tape remains until the aircraft's return to home station. Ensure any SDRS-equipped F-15 aircraft deploying on operational missions from Kadena Air Base has a serviceable SDRS and tape with more than 50 percent tape remaining. Ensure a replacement tape is available before removing the tape with less than 50 percent. Do not remove a tape if there is no replacement tape available on the base.

3.7.6. Ensure all maintenance performed on SDRS is documented in the SGF ASIP log.

3.7.7. Verify monthly with their squadron supply technician the status of all ASIP parts on order, using the D04 (Daily Transaction), and D18 (Priority Monitor) reports. **NOTE:** Do not transfer a partially used cassette to another aircraft. Install a new cassette.

3.8. The 909 ARS/961 AACS maintenance schedulers are responsible for inputting a WCE into CAMS requesting the 909 ARS/961 AACS Guidance and Control Shop for recorder-equipped aircraft for a preflight and post-flight check of the flight load data recorder system (FLDRS).

3.9. The 909 ARS/961 AACS Guidance and Control Shop will be responsible for system maintenance on recorder-equipped aircraft IAW TOs 1C-135(K)A-2-11GA-7-1, 1C-135(K)A-2-11JG-10-1, and 1E-3A-2-31-1. 909 ARS/961 AACS will also initiate a monthly FLDRS report. Monthly report will be coordinated through the 18 OG ASIP Manager.

3.10. The 909 ARS/961 AACS Debriefing and Operations Systems Management will ensure that flight crews complete an individual AFTO Form 76, **C/KC-135 Aircraft Structural Assessment Data**, IAW TO 1C-135-101 on non-recorder-equipped aircraft for each flight, regardless of the type of mission flown. Debriefers will verify the end of mission totals and information in blocks 2, 3, and 7 against the AFTO Form 781, **AFORMS Aircrew/Mission Flight Data Document**. Debrief and Operations Systems Management will review the AFTO Form 76 for accurate completion prior to submission to the 18 OG ASIP Manager, who will forward all completed AFTO Forms 76 no later than 5 working days following landing date of flight to OC-ALC/TISOB, Tinker AFB OK 73145.

3.11. 961 AACS Debriefing and Operations Systems Management will ensure that flight crews complete an individual AFTO Form 117, **USAF E-3 IATP Flight Log**, IAW 1E-3A-2-31-1.

JAMES B. SMITH, Brigadier General, USAF
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