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Maintenance

**FUNCTIONAL AND OPERATIONAL CHECK
FLIGHTS**

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This instruction implements AFDPO 21-1, *Managing Aerospace Equipment Maintenance, Management*, AFI 21-101, *Aerospace Equipment Maintenance Management*, TO 1-1-300, *Acceptance/Functional Check Flight and Maintenance Operational Checks*, TO 00-20-5, *Aerospace Vehicle/Equipment Inspection and Documentation*, and 1C-135A-6CF-1, *Acceptance and/or Functional Check Flight Procedure Manual*. It establishes a standard procedure for the accomplishment of all functional check flight requirements. It's applicable to all personnel assigned or attached to the 940th Air Refueling Wing who have duties involving functional check flights (FCFs) and operational check flights (OCFs).

SUMMARY OF REVISIONS

This revision changes the title of the ARWI from Functional Check Flights to Functional and Operational Check Flights (FCFs and OCFs). AFI 21-101, *Maintenance Management of Aircraft*, to AFI 21-101, *Aerospace Equipment Maintenance Management* in the purpose statement. Paragraph **1.2.** changed to read, Operations Group (OG) Commander will request support from the 418th Flight Test Squadron, Edwards AFB CA. Paragraph **2.2.** had minor changes. Paragraph **3.1.** was changed to read; Accomplished by the QA Superintendent. There were two paragraphs **3.1.s.** The second one was changed to **3.2.** and the remaining paragraphs were renumbered. A bar (|) indicates revision from previous edition.

1. RESPONSIBILITIES:

1.1. Quality Assurance in close cooperation with the Aircraft Maintenance Squadron (AMXS) will supervise all FCFs in accordance with the appropriate dash (-) 6 inspection requirements technical order, TO 1-1-300 and other pertinent directives.

1.2. Operations Group (OG) Commander will request support from the 418th Flight Test Squadron, Edwards AFB CA for FCFs. OCF's will be accomplished by the 940 OG aircrews.

2. PROCEDURES:

2.1. Flight Crew Composition. The flight crew for all FCFs/OCFs will be the minimum crew required consistent with the specific check required. Structure of the flight crew will be in accordance with TO 1-1-300, paragraph 5, and modified to include specialists to perform in-flight checks. No passengers will be allowed.

2.2. Clearances. When the FCFs/OCFs cannot be conducted in accordance with VFR conditions due to weather, the urgency of the mission will be determined by the OG Commander in accordance with TO 1-1-300, paragraph 6.

2.3. FCF/OCF Area. All check flights will be accomplished along a route of flight approved by the OG Commander and appropriate controlling agencies and regulations. Any flight requirements outside this route will be cleared through Base Operations when the clearance is filed and will be noted in the remarks section of the clearance. All in-flight system checks such, as actuation of emergency systems will be accomplished in the flight test zone and in accordance with TO 1C-135A-6CF-1.

2.3.1. Emergency Fuel Dump Areas:

2.3.1.1. Primary Area: Published holding area at BAB 333 radial, 41 DME at FL250 or above.

2.3.1.2. Secondary Area: In cases of extreme emergency, pilots will coordinate fuel jettison with ARTCC and report IAW AFI 11-2KC-135Vol3Ch10/940 ARW Supplement, C/KC-135 Operations - Local Operating Guidelines .

2.3.2. Aircrews will make every effort to adhere to these guidelines and those set forth in TO 1C-135A-1, Section III, depending on the nature of the emergency.

2.4. Inspection and Preparation of Aircraft Maintenance Records. The crew chief will provide the Quality Assurance (QA) section with current maintenance forms, AFTO Form 781 series, when all maintenance, including preflight has been completed. Quality Assurance will review the records to verify that necessary maintenance and inspection was accomplished and required entries or transcriptions are complete .

2.4.1. A blank AFTO 781A, Maintenance Discrepancy and Work Document, will be attached to the FCF checklist (TO 1C-135A-6CL-1). All discrepancies discovered during the FCF will be recorded on these forms and will be kept with the FCF checklist. Upon completion, all open discrepancies will be transcribed to the AFTO Form 781A for the aircraft. QA will review the FCF checklist and the attached AFTO Form 781A for adequacy of corrective actions. After completion of the review, the checklist and AFTO forms will be forwarded to Plans, Scheduling and Documentation to be filed in the aircraft documents file. Crew chiefs will be allowed a time period of forty-eight (48) hours for corrective actions and/or transcribing of FCF discrepancies before forwarding FCF forms to Quality Assurance.

2.4.2. OCF. An entry will be entered in the AFTO Form 781A detailing reason why the OCF is required. After the OCF the aircrew will sign off the entry per TO 00-25-5, if the aircraft fails the OCF a detailed discrepancy will be entered into the aircraft's AFTO Form 781A by the OCF aircrew.

2.4.3. High Speed Taxi Checks must be approved by the OG/CC and performed by the 418th Flight Test Squadron.

2.4.4. QA will maintain a FCF and OCF log.

3. FCF/OCF CREW BRIEFING:

- 3.1. Accomplished by the QA Superintendent.
- 3.2. Purpose and extent of the functional/operational check.
- 3.3. Previous maintenance problems and discrepancies recorded on the aircraft, system or equipment.
- 3.4. Individual crew member's FCF responsibilities.
- 3.5. Documentation requirements for the AFTO Form 781 series forms and the Dash (-) 6 FCF checklist, when applicable.
- 3.6. Review aircraft weight and balance documents.

4. FCF/OCF PROCEDURES AND CHECKLIST:

- 4.1. TO 1C-135A-6CF-1, *Acceptance and/or Functional Check Flight Procedures*, will be used to conduct the FCF and TO 1C-135A-6CL-1 for actual required readings and remarks. When FCFs/OCFs are accomplished to test specific equipment or systems, only applicable portion will be used.
- 4.2. The completed checklist, aircraft forms and FCF/OCF information file will be returned to Quality Assurance by the crew chief upon completion of the FCF/OCF.

5. DEBRIEFING PROCEDURES:

- 5.1. A formal debrief will be accomplished. The AMXS production supervisor, QA representative, crew chief, and the FCF/OCF crew will attend the debrief.
- 5.2. During debriefing, the checklist and aircraft forms will be reviewed to determine if all requirements were accomplished.

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Commander