

**BY ORDER OF THE COMMANDER
916TH AIR REFUELING WING**

**916TH AIR REFUELING WING
INSTRUCTION 21-103**



7 NOVEMBER 2012

Maintenance

**FUNCTIONAL/OPERATIONAL CHECK
FLIGHT PROCEDURES (FCF/OCF)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Colonel Kenneth C. Bunting)

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance*. It extends the guidance of Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*. It establishes Functional Check Flight (FCF) and Operational Check Flight (OCF) procedures. It ensures proper coordination with the 916th Maintenance Group Commander, 916th Quality Assurance Office, 916th Aircraft Maintenance Squadron, 916th Operations Group Commander, and the 916th Standardization and Evaluation Office. It applies to each of the above agencies and all personnel involved in the scheduling and performance of FCF or OCF. Additional references include (AFI) 11-401, *Aviation Management*, (AFI) 13-201, *Airspace Management*, Technical Order (T.O.) 1C-135-6, *Aircraft Scheduled Inspection and Maintenance Requirements*. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Information Management Tool (AF IMT) 847, *Recommendation for Change of Publication*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/rds>.

SUMMARY OF CHANGES

This instruction has been fully revised. This document must be completely reviewed due to this substantial review. Revision also includes FCF/OCF Checklist as **attachment 2**.

1. Responsibilities.

1.1. The Maintenance Group and the Operations Group both share in FCF/OCF responsibility and procedures. Quality Assurance (QA) is the office responsible for management of the FCF/OCF program in the Maintenance Group. The Standardization and Evaluation office is responsible for management of the FCF/OCF program in the Operations Group. The following procedures and responsibilities apply in the performance of functional check flights and operational check flights. The terms FCF or OCF will include both flight and ground operational checks performed by the aircrew.

1.2. FCFs will be accomplished only by aircrew designated in writing by the 916th Operations Group Commander as FCF qualified. OCFs may be accomplished by any qualified flight crew.

1.3. The Quality Assurance office will review the aircraft records for accuracy prior to scheduled FCF meeting in accordance with applicable technical orders and directives.

1.4. FCF/OCFs will be scheduled when required by T.O. 1C-135A-6 or when directed by the Maintenance Group Commander to determine the status of an aircraft.

1.5. Weather minimums for FCFs/OCFs will be established in accordance with T.O. 1-1-300, *Acceptance/Functional Check Flight and Maintenance OPR Checks*.

1.6. The Standardization and Evaluation Office will manage the FCF training program and all aircrew requirements.

1.7. High speed taxi checks will not be accomplished.

2. Aircraft Maintenance Squadron (AMXS).

2.1. Ensures the aircraft is prepared in accordance with AFI 21-101 (Inspection, Servicing, etc.).

2.2. Prepares the aircraft for any additional flight requirements (Configuration, Fuel Load, etc).

2.3. Reviews the aircraft forms for accuracy, ensuring all maintenance actions/inspections are completed and all AFTO 781 forms and Maintenance Information System (G081) are documented properly in accordance with -6 and 00 series TOs.

2.4. Services the aircraft as required for the FCF/OCF.

2.5. Prepares a folder for the flight crew to include a history of all discrepancies, corrective actions, and maintenance operational checks that were accomplished.

3. Production Supervisor.

3.1. Reviews AFTO 781 forms for accuracy in accordance with -6 and 00 series TOs.

3.2. Schedules the FCF/OCF through the 916th Maintenance Operations Flight, Scheduling Section, who in turn will coordinate the FCF through 916th Operations Support Squadron, Mission Development.

3.3. Reviews previous maintenance problems and discrepancies recorded regarding the aircraft or system requiring the FCF/OCF.

3.4. Documents additional discrepancies for the FCF/OCF or operational checks in the aircraft AFTO 781 forms.

3.5. Provides the aircraft forms to the Quality Assurance Office for final review two hours prior to the scheduled FCF meeting.

4. Quality Assurance Office.

4.1. Validate that the existing condition justifies an FCF/OCF. Review T.O. 1C-135-6, Section II, Part C and verify what type of check flight is necessary.

4.2. Review current aircraft weight and balance documents for the FCF/OCF.

4.3. Maintain the AF IMT 2400, *Functional Check Flight Log*.

4.4. Schedules a meeting with the FCF/OCF crew, Production Superintendent, crew chief, and additional personnel as required prior to the FCF/OCF.

4.4.1. Coordinates with 916 OG/OGV on the nature of the FCF/OCF, including the nature of the maintenance action, requirements for the FCF/OCF and Operational Risk Management (ORM) evaluation of the proposed flight.

4.4.2. Briefs the flight crew on discrepancy requiring FCF/OCF in accordance with AFI 21-101. Note any work that was accomplished on the affected system.

4.5. Initiates an FCF/OCF checklist attachment 2 of this instruction.

5. FCF Flight Crew.

5.1. Informs the 916 Operations Group Commander or designated representative on the purpose, profile and weather conditions the day of the FCF for approval.

5.2. Ensures the overall safe conduct of the FCF/OCF and operational check.

5.3. Accomplishes the FCF/OCF in accordance with directives.

5.4. Ensures discrepancies are entered on the aircraft forms in a clear and concise manner.

5.5. Completes applicable portions of the FCF/OCF checklist in accordance with T.O. 1C-135(K)R-6CL-1.

5.6. Completes a formal debrief at the conclusion of the flight with the Production Supervisor and QA.

5.7. After completion of the FCF/OCF, if the aircraft is released, enter the following statement in the "CORRECTIVE ACTION" block, "FCF or OCF completed, aircraft released for flight." The pilot who accomplishes the FCF will initial over the symbol in the "SYM" block and enter his/her signature in the "INSPECTED BY" block.

GREGORY S. GILMOUR, Colonel, USAFR
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003
AFI 11-401, *Aviation Management*, 10 Dec 2010
AFI 13-201, *Airspace Management*, 01 Dec 2006
AFI 21-101 AFRC SUP 1, *Aircraft and Equipment Maintenance Management*, 26 July 2010
AFMAN 33-363, *Management of Records*, 01 Mar 2008
T.O. 1-1-300, *Acceptance/Functional Check Flight and Maintenance OPR Checks*, 14 Nov 2007
T.O. 1C-135-6, *Aircraft Scheduled Inspection and Maintenance Requirements*, 17 Jan 2011
T.O. 1C-135(K)R-6CL-1, *Pilot's Abbreviated Functional Check Flight Checklist*, 01 Feb 2010

Adopted Forms

AF IMT 847, *Recommendation for Change of Publication*
AF IMT 2400, *Functional Checkflight Log*
AFTO Form 781A, *Maintenance Discrepancy and Work Document*
AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document*

Abbreviations and Acronyms

AF—Air Force
AFI—Air Force Instruction
AFMAN—Air Force Manual
AFPD—Air Force Policy Directive
AFRC—Air Force Reserve Command
AMXS—Aircraft Generation Squadron
ARW—Air Refueling Wing
ARWI—Air Refueling Wing Instruction
AFTO—Air Force Technical Order
CC—Current Commander
FCF—Functional Check Flight
G081—Maintenance Information System
IAW—In Accordance With
IMT—Information Management Tool
MXG—Maintenance Group

QA—Quality Assurance

OCF—Operational Check Flight

OPR—Office of Primary Responsibility

QANTTAS—Quality Assurance Tracking and Trend Analysis System

RDS—Records Disposition Schedule

TO—Technical Order

Attachment 2
FCF/OCF CHECKLIST

Aircraft: _____

Date: _____

FCF/OCF Discrepancy _____

Quality Assurance

Review current Weight & Balance documents for the FCF/OCF _____

Review all historical data, maintenance problems, discrepancies, G081 8070
Screen, and Ops checks regarding to the aircraft or system requiring FCF/OCF _____

Coordinate with P&S to schedule a meeting with FCF Crew, Production
Supervisor, Crew Chief, and any additional personnel as required _____

Prior to Flight Brief

Sign out 1C-135-6CL-1, from T.O. Library and provide to FCF Crew _____

Brief FCF Crew on discrepancy requiring FCF/OCF _____

Initiate Functional Check Flight Log (AF IMT 2400) _____

Have the following members in attendance sign below:

Aircraft Commander _____

Crew Chief _____

Production Supervisor _____

QA _____

Post Flight Debrief

Conduct a formal debrief with FCF Crew and subject matter expert _____

If aircraft released from FCF/OCF, have Pilot sign off applicable discrepancy
“FCF or OCF completed, aircraft released for flight” and sign the INSPECTED
BY block _____

Document AF IMT 2400, Functional Check Flight Log _____

Receive 1C-135-6CL-1 from FCF Crew and return to T.O. Library _____

Take a copy of completed FCF/OCF Checklist to P&S to file with
aircraft jacket file _____

Input the FCF/OCF information into the Quality Assurance Tracking and
Trend Analysis System (QANTTAS). _____