

**BY ORDER OF THE COMMANDER  
6TH AIR MOBILITY WING**

**MACDILL AIR FORCE BASE  
INSTRUCTION 21-105**

**28 OCTOBER 2003**



**Maintenance**

**FUNCTIONAL CHECK FLIGHT (FCF)/  
OPERATIONAL CHECK FLIGHT (OCF) AND  
HIGH SPEED TAXI CHECK (HSTC)  
PROGRAMS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This Instruction establishes procedures, assigns responsibilities, and outlines actions pertaining to the Functional Check Flight (FCF)/Operational Check Flight (OCF) and High Speed Taxi Check programs (HSTC). It is used in conjunction with AFI 21-101, *Aerospace Equipment Maintenance Management*. All actions involving the 6th Operations Group (6 OG) have been coordinated with and approved by the 6 OG Commander (6 OG/CC).

**SUMMARY OF REVISIONS**

**This document is substantially revised and must be completely reviewed.**

**1. Responsibilities.**

1.1. The 6th Maintenance Group Commander (6 MXG/CC) and 6 OG/CC have joint responsibility for the effective management of the FCF/OCF and HSTC programs. The Maintenance and Operations communities will work closely together in planning and conducting unit-level FCF/OCF and HSTCs.

1.2. The maintenance focal point for FCF/OCF and HSTC matters is Quality Assurance (QA). The operations focal point for FCF/OCF and HSTC matters is the FCF Officer in Charge (OIC), designated here as the 6 OG Standardization and Evaluation Office (OGV). QA and OGV will work closely together to ensure the FCF/OCF and HSTC are performed safely and by the most qualified, available crew.

**2. Procedures.**

2.1. FCF/OCF will be accomplished in accordance with the following technical orders (TO): TO 1-1-300, *Acceptance/Functional Check Flight and Maintenance OPR Checks*, TO 1C-135A-6; *Aircraft Scheduled Inspection and Maintenance Requirements*, applicable Mission Design Series (MDS) -1, -2 TOs; -6CF-1; -6CL-1; -6CL-2; -6CL-3. Also, FCF/OCF will be performed upon completion of other maintenance/repair actions (i.e., Cannibalizations (CANN)) where owning squadron (AMXS/MXS) supervision deems an FCF/OCF is appropriate and the 6 MXG/CC or designated representative signs the FCF/OCF recommendation letter (**Attachment 2**). Check Flights and HSTCs will be performed during daylight hours under visual meteorological conditions. All aircraft form entries will be documented in accordance with TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*.

2.2. The Aircraft Maintenance Squadron (AMXS) Production Superintendent and/or the Maintenance Squadron (MXS) Production Superintendent will:

2.2.1. Notify Maintenance Operation Squadron (MOS) Scheduling and QA of the requirement for an FCF/OCF or HSTC, providing them with the aircraft type and reason for the FCF/OCF or HSTC requirement.

2.2.2. Ensure required personnel and aircraft transcribed forms are readily available for review by the FCF/OCF and HSTC, QA program manager and aircrew at the designated time and place for the FCF/OCF or HSTC prior-to-flight aircrew briefing.

2.2.3. Ensure the appropriate specialists attend crew debriefings after FCF/OCF flights or HSTC.

2.3. MOS Scheduling will:

2.3.1. Confirm the need for the FCF/OCF or HSTC, notify Operations Scheduling, provide them with the aircraft type and tail number, and request a time and place for the FCF/OCF or HSTC aircrew briefing.

2.3.2. After receiving this information, notify QA of the time and place for the FCF/OCF or HSTC prior-to-flight aircrew briefing.

2.4. QA will:

2.4.1. Validate that the existing condition requires an FCF/OCF or HSTC. After confirmation, coordinate with OGV the requirements to be performed during the FCF/OCF or HSTC and prepare the FCF/OCF checklist. Prior to FCF/OCF crew briefing, review aircraft AFTO 781-series forms, **Maintenance Discrepancy and Work Document**, for all corrective/completed actions and place a preprinted copy of AFTO 781A (**Attachment 3**) in the aircraft forms binder.

2.4.2. Meet with FCF/OCF/HSTC aircrew at the scheduled time and place for the prior-to-flight aircrew briefing.

2.4.3. Notify representatives (AMXS Supervision, Pro-Super, or Crew Chief) from the organization with aircraft ownership of the time and place of the FCF/OCF/HSTC prior-to-flight aircrew briefing. Also notify the 6th Air Mobility Wing, Flight Safety Office (6 AMW/SEF) of this briefing.

2.4.3.1. Owning aircraft organization will ensure maintenance personnel are immediately available to answer aircrew questions, such as discrepancy and corrective actions for the condition(s) requiring the FCF/OCF/HSTC.

2.4.4. Brief and explain the purpose of the FCF/OCF or HSTC using the FCF/OCF/HSTC Briefing/Debriefing Worksheet (**Attachment 4**) with the aircraft commander and aircrew. Discuss previous maintenance problems and discrepancies corrected on the aircraft, system, and/or equipment relating to the FCF/OCF/HSTC.

2.4.5. Review the aircraft primary Weight and Balance (W&B) Handbook (if applicable).

2.4.6. Maintain an aircraft FCF/OCF file. As a minimum, this file will include:

2.4.6.1. AF Form 2400, **Functional Check Flight Log**, for FCFs only.

2.4.6.2. AMC Form 41, **Flight Authorization**.

2.4.6.3. Certification Letters designating aircrew members approved by the 6 OG/CC (or designated representative) and OGV to perform FCFs and HSTC. Ensure there is an Instructor Pilot (IP) and Instructor Boom (IB) as applicable for OCF.

2.4.7. Send a copy of the AF Form 2400 and any other appropriate FCF documents to MOS Scheduling for filing in the aircraft jacket file (applies to FCFs only).

2.4.8. Attend aircrew debriefing after FCF/OCF flights or HSTC and ensure the FCF/OCF Briefing/Debriefing Worksheet (**Attachment 4**) is filled out properly.

2.5. OGV will:

2.5.1. Be involved with, coordinate, and work closely with QA, maintenance, and operations to ensure an effective FCF/OCF and HSTC program. Actively promote safety and standardization in the unit FCF/OCF and HSTC program.

2.5.2. Issue written certification on the AMC Form 41, designating the most qualified crew available, when a current FCF crew is unavailable. OGV will ensure QA receives a copy of the AMC Form 41 for the FCF file (applies to FCFs and HSTC).

2.5.3. Work with Operations Training to develop local FCF/OCF/HSTC checklists, policies, and procedures, and coordinate them with QA. Establish a standard FCF/OCF/HSTC profile and procedures for assigned aircraft.

2.5.4. Develop a local FCF/OCF/HSTC checklist for aircraft in accordance with TO 1-1-300 and review checklists annually.

2.5.5. Ensure compliance with weather condition requirements contained in TO 1-1-300.

2.6. 6th Operations Support Squadron, Current Operations Flight (6 OSS/OSO), will:

2.6.1. Once notified of the requirement for a FCF/OCF or HSTC, coordinate with QA to determine FCF/OCF or HSTC requirements.

2.6.2. Schedule the FCF/OCF mission to include flight duration, fuel load, and appropriate qualified crew. Notify MOS Scheduling of the FCF/OCF mission and coordinate a time and place for the prior-to-flight aircrew briefing.

### 3. Operational Check Flights (OCF).

3.1. Fly OCFs when any of the following conditions exist:

3.1.1. An OCF is required by –6 technical data.

3.1.2. The 6 MXG/CC deems it necessary due to maintenance actions/repairs.

3.2. Maintenance Supervisors will evaluate aircraft recovering from CANN actions to decide if an OCF is required before returning the aircraft to regular service by thoroughly evaluating the overall aircraft condition and the extent to which aircraft systems were affected by parts removal and installation.

3.3. Once the determination is made that an OCF is required, AMXS/MXS Supervision, MOS Scheduling, Operations Scheduling, OGV, and QA will coordinate and follow the same FCF/OCF procedures as outlined in AFI 21-101.

3.4. When an FCF/OCF or HSTC is requested; OGV will coordinate with Operations to decide if a Stan/Eval (or other suitably qualified) aircrew should accomplish the FCF/OCF or HSTC.

**4. High-Speed Taxi Checks (HSTC).** Maintenance coordinates with QA and OGV for circumstances in which a high-speed taxi check is requested. Perform high-speed taxi checks with qualified FCF aircrews according to applicable aircraft Dash 1-series publications and maintenance TOs. Configure aircraft with the minimum fuel practical to accomplish the high-speed taxi check to minimize brake and tire wear. Aircrews performing high-speed taxi checks will complete takeoff data.

**NOTE:** Ensure enough fuel is on board to execute a take-off, fly a normal pattern, and land with applicable reserves should unexpected circumstances require take-off.

DAVID M. SNYDER, Colonel, USAF  
Commander

**Attachment 1**

**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION**

***References***

AFI 21-101, *Aerospace Equipment Maintenance Management*

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*

TO 1-1-300, *Acceptance/Functional Check Flight and Maintenance OPR Checks*

TO 1C-135A-6; *Aircraft Schedule Inspection and Maintenance Requirements*

**Attachment 2**

**FCF/OCF RECOMMENDATION LETTER**

MEMORANDUM FOR: 6 MXG/MXQ

FROM: REQUESTING UNIT: \_\_\_\_\_

SUBJECT: FCF/OCF

1. The following discrepancy(ies) was discovered on \_\_C-135\_\_, serial number \_\_\_\_\_

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2. Corrective action(s) taken: \_\_\_\_\_

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FCF is/is not recommended for the above discrepancy and corrective action.

OCF is/is not recommended for the above discrepancy and corrective action.

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

1st Ind, 6 MXG/MXQ

TO: 6 MXG/CEM

Approved/Disapproved

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

2d Ind, 6 MXG/CEM

TO: 6 MXG/CC

Approved/Disapproved

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

3d Ind, 6 MXG/CC

TO: 6 MXG/MXQ

Approved/Disapproved

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_



DATE FROM: _____		TO _____		MDS: C135R	SERIAL NUMBER: _____		PAGE ____ OF ____ PAGES	
SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER		CF 781A	XF 781K	DATE CORRECTED	
---	7293		FCF/OCF PACKAGE		<input type="checkbox"/>	<input type="checkbox"/>		
WUC/REF DESIGNATOR 01000		FAULT CODE	STA CODE	CORRECTIVE ACTION				
DISCREPANCY								
MXGQA FORMS REVIEW BY PRODUCTION SUPER OR HIGHER DUE								
UPON COMPLETION OF FCF / OCF								
CORRECTED BY						EMPLOYEE NO		
DISCOVERED BY (PRINT)				EMPLOYEE NO	INSPECTED BY			EMPLOYEE NO
SUPPLY DOC NBR	UJC	PART NUMBER	NOMENCLATURE	QTY	SUPPLY DOC NBR	UJC	PART NUMBER	NOMENCLATURE QTY
SYM	JCN	DATE DISC	INFORMATION OR DOC NUMBER		CF 781A	XF 781K	DATE CORRECTED	
---	7294		FCF/OCF PACKAGE		<input type="checkbox"/>	<input type="checkbox"/>		
WUC/REF DESIGNATOR 01000		FAULT CODE	STA CODE	CORRECTIVE ACTION				
DISCREPANCY								
MXGQA FORMS REVIEW BY QA UPON COMPLETION OF FCF / OCF								
CORRECTED BY						EMPLOYEE NO		
DISCOVERED BY (PRINT)				EMPLOYEE NO	INSPECTED BY			EMPLOYEE NO
SUPPLY DOC NBR	UJC	PART NUMBER	NOMENCLATURE	QTY	SUPPLY DOC NBR	UJC	PART NUMBER	NOMENCLATURE QTY

AFTO FORMS 781A

MAINTENANCE DISCREPANCY AND WORK DOCUMENT

Attachment 4

FCF/OCF BRIEFING/DEBRIEFING WORKSHEET

ALL PURPOSE CHECKLIST		PAGE	1	OF	2	PAGES
TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA AIRCRAFT FCF / OCF BRIEFING WORKSHEET		OPR QA		DATE		
NO.	ITEM <i>(Assign a paragraph number to each item. Draw a horizontal line between each major paragraph.)</i>					
	<p>1. ACFT MDS: _____ ACFT TAIL #: _____ ACFT TIME: _____</p> <p>2. FCF / OCF ATTEMPT: _____</p> <p>3. AIRCREW ON CURRENT ORDERS: _____</p> <p>4. ACFT COMMANDER: _____</p> <p>5. ACFT FORMS REVIEW:</p> <p style="margin-left: 20px;">A. PURPOSE OF FCF / OCF / HIGH SPEED TAXI: _____</p> <p style="margin-left: 20px;">_____</p> <p style="margin-left: 20px;">_____</p> <p style="margin-left: 20px;">B. EQUIPMENT TO BE CHECKED / -6 CHECKLIST: _____</p> <p style="margin-left: 20px;">C. PREVIOUS MAINTENANCE PROBLEMS / DISCREPANCIES: _____</p> <p style="margin-left: 20px;">_____</p> <p style="margin-left: 20px;">_____</p> <p>6. DOCUMENTATION REQUIREMENTS:</p> <p style="margin-left: 20px;">A. AFTO FORM 781A (FCF / OCF WORKSHEET) YES: _____</p> <p style="margin-left: 20px;">B. GO81 FORMS (8035) YES: _____</p> <p style="margin-left: 20px;">C. FCF / -6 CHECKLIST YES: _____</p> <p>7. INDIVIDUAL CREW MEMBER RESPONSIBILITY:</p> <p style="margin-left: 20px;">A. OBTAIN WEATHER WAIVER IAW TO 1-1-300: _____ ( IF APPLICABLE)</p> <p style="margin-left: 20px;">B. SIGN EXCEPTIONAL RELEASE: _____</p> <p style="margin-left: 20px;">C. FLY FCF / OCF PROFILE WITHIN BOUNDARIES OF LOCAL FCF / OCF AREA: _____</p> <p style="margin-left: 20px;">D. DEBRIEF WITH QA AND RESPONSIBLE WORK CENTER REP: _____</p> <p style="margin-left: 20px;">E. COMPLETE ALL REQUIRED DOCUMENTATION: _____</p>					
	<p>_____ QUALITY ASSURANCE BRIEFER</p> <p>_____ DATE</p> <p>_____ TIME</p>					
	(DEBRIEF ON REVERSE)					

