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Maintenance

**AIRCRAFT FUNCTIONAL CHECK FLIGHTS
(FCF) OPERATIONAL CHECK FLIGHTS (OCF)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction prescribes procedures for functional check flights (FCF) and operational check flights (OCF) of aircraft assigned to the 375th Airlift Wing (AW) for C-9A, C-21, and transient aircraft; applies to all 375/932 AW personnel required to perform, support, or supervise FCFs or OCFs by implementing Air Force Technical Orders (T.O.) and directives. Per T.O. 1-1-300, Acceptance/Functional Check Flight and Maintenance OPR Check, and AMCI 21-101, Maintenance Management Policy, any operational check of an aircraft system that requires higher than normal taxiway speeds will be performed as an FCF. **This is a joint 375AW and 932AW instruction.**

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

In accordance with AMCI 21-101, Chapter 4, this revision adds the 375th Logistics Group Quality Assurance Assessment Program (QAAP) as the Maintenance Squadron's controlling agency for the FCF/OCF Program.

1. Procedures for Maintenance Aircraft Coordination Center (MACC) (375 AW/CPM):

- 1.1. Monitor the status of all aircraft requiring FCFs.
- 1.2. The MACC will assist Quality Assurance Representative (QAR) for C-21 aircraft and notify them of after-hours FCFs.
- 1.3. The MACC will assist Quality Assurance Evaluator (QAE) for transient aircraft and notify them of after-hours FCFs.
- 1.4. During nonduty hours, a QAR/QAE can be contacted through 375 AW/CPM for C-21 and transient aircraft.
- 1.5. Relay "Alpha Status" from the aircrew to maintenance/contractor upon termination of the FCF.

2. Procedures for Plans and Scheduling (375 MXS/LGM1P). When informed by Quality Assurance (QA) that an FCF is required, schedule the aircraft.

3. Procedures for Aircraft Generation (375 MXS/LGM1). The following will be accomplished by LGM1 for C-9A aircraft:

- 3.1. The production superintendent will review the aircraft AFTO Forms 781 for proper documentation.
- 3.2. Ensure required Dash 21 Equipment is onboard.
- 3.3. Inform QA when the aircraft is configured for flight.
- 3.4. Provide required maintenance personnel and supervisor 2 hours before the scheduled flight for the prior-to-flight briefing of aircrew. To maximize FCF efficiency, they will also be available for an after-flight debrief.

4. Procedures for QA:

- 4.1. Notify the Operations Group FCF OIC that a FCF is required. E-Mail the FCF OIC the FCF Briefing Check Sheet and schedule a prior-to-flight briefing.
- 4.2. Retain the aircraft forms and FCF Checklists until the aircrew arrives for the FCF briefing. Brief the FCF aircrew on the reason for the FCF and any special requirements to be accomplished.
- 4.3. The QA will conduct the debriefing of the FCF aircrew, review FCF forms for proper documentation during the debrief, and maintain the AF Form 2400, **Functional Check Flight Log**, AMC Form 41, **Flight Authorization**, and qualified aircrew certification letters.
- 4.4. The QA will be the point of contact for Defense Contracting Management Office (DCMO) for aircraft returning from depot-level maintenance. The QA will contact the FCF OIC for required pilots. DCMO will conduct the prior-to-flight briefing.

5. The following procedures are applicable to the QAR C-21 aircraft:

- 5.1. The QAR will inform MACC that an FCF is required.
- 5.2. The QAR will be available or on call for processing FCFs.
- 5.3. Inform the owning unit operations when the aircraft is ready for FCF.
- 5.4. The FCF should be scheduled during normal duty hours.
- 5.5. Prior to flight, review the aircraft forms with the contractor representative for the appropriate documentation and corrective actions of discrepancies .
- 5.6. The QAR and contractor representative will brief the FCF aircrew of special requirements to be accomplished.
- 5.7. The QAE and contractor representative will attend the debrief with the FCF aircrew and review the FCF forms for proper documentation.
- 5.8. The contractor will maintain the FCF forms upon completion.

6. The following procedures are applicable to the QAE transient aircraft:

- 6.1. Inform MACC that an FCF is required.
- 6.2. The QAE will be available or on call to process FCFs.
- 6.3. Inform the owning unit operations when the aircraft is ready for FCF.
- 6.4. The FCF should be scheduled during normal duty hours.
- 6.5. Review the aircraft forms with the owning unit maintenance representative for the proper documentation and corrective actions of discrepancies prior to flight .
- 6.6. The QAE and owning unit maintenance representative will brief the FCF aircrew of special requirements to be accomplished .
- 6.7. The QAE and owning unit maintenance representative will attend the debrief with the FCF aircrew.
- 6.8. The QAE will ensure all FCF forms and paperwork are forwarded to the owning unit by either the aircrew or the maintenance representative.

7. Procedures for the FCF OIC:

- 7.1. The FCF OIC will forward a copy of all FCF aircrew member certification letters and temporary waivers to QA to maintain their aircraft FCF files. Upon notification from QA, the FCF OIC will initiate contact with 375 OSS/OSO (Wing Current Operations) in order to schedule the aircraft and aircrew for a local flight on the day selected by QA and Plans and Scheduling.
- 7.2. The FCF OIC will coordinate with 11 AS/DO to ensure an aircraft commander and copilot is scheduled to fly the FCF .
 - 7.2.1. Ensure the aircraft commander is properly trained and designated on the OCF/FCF Certification Letter.
 - 7.2.2. Ensure 11 AS/DOCS provides flight orders for the FCF to the crew and the Scott Command Post.

8. Procedures for FCF Tasked C-9A Pilots:

- 8.1. Review all governing directives (to include AFI 11-401, AFI 11-206, AFI 21-101, AMCI 21-101, T.O. 1-1-300, and applicable -6 and -1 T.O.s) prior to the FCF.
- 8.2. Review the FCF Briefing Check Sheet (provided by QA) for the affected aircraft prior to the QA briefing.
- 8.3. Report to the QA office a minimum of 2 hours prior to scheduled departure time for the prior-to-flight briefing on the requirements for the FCF. Ensure all crewmembers are thoroughly familiar with the affected aircraft systems and planned FCF profile.
- 8.4. Conduct the flying portion of the FCF.
- 8.5. Report to the QA office for debriefing after the flight, reporting on all aspects of the affected systems and aircraft performance.
- 8.6. Complete the required AFTO Form 781 (AFORM Aircrew/Mission Flight Data Document) Series and FCF Worksheet.

8.7. A full profile FCF is normally flown. However, based on the 375 OG/CC recommendation, the FCF profile may be tailored for the maintenance requirement causing the FCF.

8.8. When operational requirements dictate, the 375 OG/CC may authorize temporary waivers for aircrew qualification. A copy will be forwarded to QAAP for the aircraft records .

8.9. The FCF crew is comprised of 2 FCF qualified pilots and a crewmember for in-flight observation and operations checks as required.

9. Procedures for FCF tasked C-21A Pilots:

9.1. Review all governing directives (to include AFI 11-401, AFI 21-206, AFI 21-101, AMCI 21-101, T.O. 1-1-300, and applicable -6 and -1 T.O.s) prior to the FCF.

9.2. The FCF crew will consist of a squadron-designated FCF aircraft commander and any current and qualified C-21 pilot.

9.3. Report to the QAR and contractor a minimum of 2 hours prior to the scheduled departure time, for the prior-to-flight briefing on the requirements for the FCF. Ensure all crewmembers are thoroughly familiar with the affected systems and planned FCF profile.

9.4. Conduct the flying portion of the FCF.

9.5. Report to the QAR and contractor for the debrief after the flight, reporting all aspects of the affected systems and aircraft performance.

9.6. Complete the required AFTO Form 781, (**AFORM Aircrew/Mission Flight Data Document**) Series and FCF Worksheet.

9.7. A full FCF profile is normally flown. Based on the T.O. 1C-21A-6CF-1, the FCF profile may be tailored for maintenance requirements causing the FCF .

10. Procedures for the Scott Command Post:

10.1. During nonduty hours, alert the FCF aircrew (alert 11 AS aircrews at all times). Aircrews will not be alerted on an ETIC. Inform transient aircrews of their responsibilities.

10.2. Relay "Alpha Status" from aircrew to MACC/contractor.

10.3. As required, provide radio/phone patch connections and/or conference sky-hook connections.

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

AFI 11-401, *Flight Management*

AFI 21-101, *Maintenance Management of Aircraft*

AFI 11-202, V3, *General Flight Rules*

AFI 21-206, *The Global Asset Positioning Program*

TO 00-20-5, *Aircraft, Drone, Aircrew Training Devices, Engines, and Air-Launched Missile Inspections, Flight Reports, and Support Maintenance Documents*

T.O. 1-1-300, *Acceptance/Functional Check Flight and Maintenance Operational Checks*

AMCI 21-101, *Maintenance Management*

Abbreviations and Acronyms

AF—Air Force Form

AFI—Air Force Instruction

AMCI—Air Mobility Command Instruction

AS—Airlift Squadron

AW—Airlift Wing

AWI—Airlift Wing Instruction

AFTO—Air Force Technical Order Form

DCMO—Defense Contracting Management Office

DO—Operations Officer

FCF—Functional Check Flight

LG—Logistics Group

LSS—Logistic Support Squadron

MAAC—Maintenance Aircraft Coordination Center

MXS—Maintenance Squadron

OCR—Operational Check Flight

OG/CC—Operations Group Commander

OIC—Officer In Charge

OPR—Office of Primary Responsibility

QA—Quality Assurance

QAAP—Quality Assurance Assessment Program

QAE—Quality Assurance Evaluator

QAR—Quality Assurance Representative

TO—Technical Order

Terms

CONTRACTOR—Used throughout this instruction for contractor-support aircraft in place of specific names.

Attachment 2

FUNCTIONAL CHECK FLIGHT BRIEFING

AIRCRAFT TAIL NUMBER _____

DATE _____

A2.1. Purpose of flight.

A2.2. Previous maintenance discrepancies recorded on the aircraft and the system or equipment related to the check flight.

A2.3. Flight Profile required for flight.

Aircraft Commander _____

Debriefer _____

NOTE: This document will be kept with the aircraft jacket file for 3 months after the date of the functional check flight.