

**BY ORDER OF THE COMMANDER
TRAVIS AIR FORCE BASE (AMC)**

**DEPARTMENT OF THE AIR FORCE
INSTRUCTION**



21-201

**AIR MOBILITY COMMAND
Supplement**

TRAVIS AFB

Supplement

24 NOVEMBER 2025

Maintenance

**FUNCTIONAL CHECK
FLIGHT/OPERATIONAL CHECK
FLIGHT/HIGH-SPEED TAXI**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no restrictions on the release of this publication.

OPR: 60 MXG/MXQ

Certified by: 60 MXG/CC
(Colonel Clinton B. Varty)

Supersedes: TRAVISAFBI21-201,
21 October 2019

Pages: 10

This operating instruction implements Department of the Air Force Policy Directive (DAFPD) 21-1, Maintenance of Military Materiel, and Department of the Air Force Instruction (DAFI) 21-101 and Air Mobility Command Supplement (AMCSUP) I, Aircraft and Equipment Maintenance Management, Applicable -6 Technical Orders. It standardizes procedures for managing effective Functional Check Flight (FCF), Operational Check Flight (OCF) and outlines procedures for a High-Speed Taxi. This operating instruction pertains to all personnel attached or assigned to Travis Air Force Base. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication adhere to AFI 33-322, Records Management and Information Governance Program, and disposed IAW the Air Force Records Disposition Schedule located in the Air Force Records Information Management System. The use of the name or mark of any specific

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SUMMARY OF CHANGES

This document has been revised and must be completely reviewed. Major changes include: FCF procedures, addition of KC-46 requirements, Maintenance Squadron responsibilities, and Quality Assurance responsibilities. Additionally, Attachments 2 through 5 have been revised to ensure accuracy of the FCF process.

1. General.

1.1. The 60 Maintenance Group Commander (MXG/CC) and 60 Operations Group Commander (OG/CC) have joint responsibility for effective management of the unit FCF program. The success of this program begins with cooperation between the Operations and Maintenance communities. Quality Assurance (QA) will work with the OGV to develop a viable program.

1.2. While OCFs are different in origin, the procedures established for conducting a FCF will be followed for the OCF as well. Documentation for the Operational Check Flight will be annotated as “OCF” on the AF Form 2400, Functional Check Flight Log.

2. FCF Procedures.

2.1. The 60 OG/OGV is the OPR for C-5, KC-10, KC-46 and C-17 FCF flights at home station. Prior to requesting aircrews to perform FCF, provide crew personnel information to the 60 OG/OGV. The 60 OG/RA will provide an authorized fund-cite for the appropriate entity completing the FCF (339 FLTS, 10 FLTS, Boeing).

2.1.1. The 60 OG/OGV will work with the local Travis Boeing Site Manager along with the Systems Group (SG) at Wright-Patterson AFB to schedule a C-17 FCF.

2.1.2. The C-5 FCF functions are conducted by the 339th Flight Test Squadron (FLTS), Warner-Robins AFB, GA.

2.1.3. The KC-46 FCF functions are conducted by the 10th Flight Test Squadron (FLTS), Oklahoma City, OK.

2.2. Crews sourced from home station will be appointed by the 60 OG/CC. FCF crew members will be highly qualified individuals from the following positions: OG/OGV evaluators, squadron evaluators or squadron flight instructors.

2.3. 60 OG/CC will brief the 349 OG/CC if 349th crew members are involved.

2.4. All crew members will attend the debrief after completion of every FCF/OCF.

3. OCF Procedures.

3.1. OCFs occur when maintenance determines a condition exists that cannot be operationally checked out or troubleshot while the aircraft is on the ground, and does not meet the criteria for an FCF. OCF aircrews do not need to be FCF-qualified to fly OCF missions, but they must be highly experienced as determined by the applicable squadron supervision.

4. High-Speed Taxi Checks.

4.1. Travis aircrews do not currently perform High-Speed Taxi checks for C-5, KC-10, KC-46, and C-17 aircraft. In the event a High-Speed Taxi is required at Travis AFB the 60/349 OG/OGV Standardization/Evaluation Division (along with the local Travis Site Manager and the SG at Wright-Patterson AFB for C-17 aircraft) will develop the required checklist.

4.2. Maintenance operational checks involving high-speed taxi of fixed wing aircraft will be accomplished and certified by pilots qualified IAW T. O. 1-1-300.

5. Maintenance Squadron Responsibilities.

5.1. Review the mission design series Dash-6 Technical Orders to ensure that any completed modifications or maintenance/repair actions necessitate an FCF/OCF.

5.2. Notify QA when aircraft requires an FCF/OCF.

5.3. Notify QA when aircraft is ready for Key Task List (KTL) inspection.

5.4. Document the FCF/OCF in the aircraft forms IAW T.O. 00-20-1.

5.5. Configure the aircraft for FCF/OCF according to technical data and local directives.

5.6. Ensure a highly qualified individual, as determined by the applicable squadron supervision, who performed maintenance on the affected system, attends both the initial FCF/OCF briefing and after flight debrief to provide any necessary inputs to flight activities.

5.7. If needed, supply a highly qualified individual as determined by the applicable squadron supervision for in flight operational checks.

6. 60/349 MXG Quality Assurance Responsibilities.

6.1. Conducts Quality Verification Inspection (QVI) on KTL item (Table 1.1).

6.2. Establish a QA point of contact (POC) for the FCF/OCF, 424-4886/2878.

6.2.1. QA POC will contact 60/349 MXG/CC and inform them of the (FCF/OCF).

6.3. Establish a POC from each of the following offices:

6.3.1. Operations Group Standardization/Evaluation (FCF/OCF OIC).

6.3.2. Applicable Squadron Maintenance Supervision.

6.3.3. Plans, Scheduling, and Documentation (PS&D).

6.3.4. QA Weight and Balance (W&B).

6.4. Contact the aircrew to coordinate the sequence of events for the FCF/OCF.

6.5. Contact PS&D to schedule the FCF/OCF.

6.6. Schedule the date, time, and location for FCF/OCF briefing. Attendees include: QA, AMXS supervision, FCF/OCF aircrew, PS&D and a highly qualified individual who performed maintenance on the affected system.

6.7. Debrief all FCF/OCF aircrew with the appropriate debrief function using the FCF checklist and aircraft forms to ensure all requirements have been accomplished.

6.8. Annotate AF Form 2400 and forward copy to PS&D for inclusion in the aircraft jacket file.

6.9. Ensure all completed copies of the Dash-6 Checklist (CL) is forwarded to PS&D.

7. Plans, Scheduling, and Documentation (PS&D) Responsibilities.

7.1. Coordinate the scheduling of the FCF/OCF with maintenance and applicable aircrew and post the information to the weekly and monthly flying schedules in the 60 MXG management information system.

7.2. All required aircraft forms and pertinent FCF/OCF documents are filed in the aircraft jacket file.

7.3. Ensure AFTO Form 95, Significant Historical Data is annotated with FCF/OCF information.

JAY A. JOHNSON, Colonel, USAF
Commander, 60 AMW

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

DAFPD 21-1, *Maintenance of Military Materiel*, 21 Feb 2024

DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 20 Dec 2023

DAFI 21-101 AMCSUP, *Aircraft and Equipment Maintenance Management*, 25 Jul 2024

T.O. 00-20-1 and AMCSUP, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*. 19 Dec 2023

T.O. 1-1-300, *Maintenance Operational Checks and Check Flights*, 15 Dec 2023

AFMAN 11-202V3, *Flight Operations*, 9 Jan 2022

Adopted Forms

AFTO Form 95, *Significant Historical Data*

AF Form 2400, *Functional Check Flight Log*

AF Form 847, *Recommendation for Change of Publication*

Prescribed Forms

N/A

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

DAFPD—Department of the Air Force Policy Directive

AMCSUP—Air Mobility Command Supplement

AQL—Acceptable Quality Limit

CC—Commander

FCF—Functional Check Flight **FLTS**-Flight Test Squadron **KTL**-Key Task List

MXG—Maintenance Group **OCF**-Operational Check Flight **OG**-Operations Group

OIC—Officer in Charge

OPR—Office of Primary Responsibility

POC—Point of Contact

PS&D—Plans, Scheduling, and Documentation

QVI—Quality Verification Inspection

QA—Quality Assurance

RDS—Records Disposition Schedule

RIL—Routine Inspection List

SG—Systems Group

W&B—Weight and Balance

Table A1.1. Key Task Listing.

CAT	SUBCATEGORY	RIL	AQL
KTL	C-17 KTL (REF: 1C-17A-6)	WING/VERTICAL STAB/HORIZONTAL STAB REPLACEMENT	2
KTL	C-17 KTL (REF: 1C-17A-6)	MAJOR RETROFIT MODIFICATION OR MAJOR STRUCTURAL REPAIRS	2
KTL	C-17 KTL (REF: 1C-17A-6)	ADJUSTMENTS/CHANGES THAT REQ FLT TO OPS CK	2
KTL	C-17 KTL (REF: 1C-17A-6)	THREE OR MORE NEW/OVERHAULED ENGINES INSTALLED	4 (per eng)
KTL	C-17 KTL (REF: 1C-17A-6)	THREE OR MORE ENGINE FUEL CONTROL REPLACEMENT OR REINSTALL	1 (per fuel cntl)
KTL	C-17 KTL (REF: 1C-17A-6)	ACFT REMOVED FROM EXTENDED STORAGE (>90 days)	10
KTL	C-17 KTL (REF: 1C-17A-6)	DEPOT MX/REPAIR ACCOMPLISHED THAT WARRANTS TEST FLT	3
KTL	C-5 KTL (REF: 1C-5A/M-6)	FIXED FLT CONTROL REPLACEMENT OR REINSTALL	2
KTL	C-5 KTL (REF: 1C-5A/M-6)	MAJOR RETROFIT MODIFICATION/MAJOR STRUCTURAL REPAIR	3
KTL	C-5 KTL (REF: 1C-5A/M-6)	ADJUSTMENTS/CHANGES THAT REQUIRE FLT TO CK	3
KTL	C-5 KTL (REF: 1C-5A/M-6)	THREE OR MORE NEW/OVERHAULED ENGINES INSTALLED	4 (per eng)
KTL	KC-10 KTL (REF: 1C-10(K)A-6WC-6)	MAJOR RETROFIT MODIFICATION OR FIXED FLT SURFACE REPAIR/REPLACEMENT	2
KTL	KC-10 KTL (REF: 1C-10(K)A-6WC-6)	MOVABLE PRIMARY FLT CONTROL SURFACE REPLACEMENT/MAJOR REPAIR	2
KTL	KC-10 KTL (REF: 1C-10(K)A-6WC-6)	ADJUSTMENT/REPLACEMENT/REPAIR/REINSTALLATION OF MAJOR FLT CONTROL COMPONENT	2
KTL	KC-10 KTL (REF: 1C-10(K)A-6WC-6)	REPLACEMENT OF ANY TWO ENGINES	3 (per eng)
KTL	KC-46 (REF: 1KC46-A-05-02-2000-00A0J-010A-A)	AFTER MAJOR REPAIR/RETROFIT MODIFICATIONS, OR AFTER MAJOR FIXED FLIGHT SURFACES HAVE BEEN REPLACED OR HAVE UNDERGONE MAJOR STRUCTURAL REPAIRS	2
KTL	KC-46 (REF: 1KC46-A-05-02-2000-00A0J-010A-A)	AFTER MOVEABLE PRIMARY FLIGHT CONTROL SURFACES (AILERONS, ELEVATORS & RUDDERS) HAVE BEEN REPLACED OR HAVE UNDERGONE MAJOR STRUCTURAL REPAIRS	2
KTL	KC-46 (REF: 1KC46-A-05-02-2000-00A0J-010A-A)	AFTER ADJUSTMENT, REPLACEMENT, OR REMOVAL AND REINSTALLATION OF MAJOR COMPONENTS OF THE FLIGHT CONTROL SYSTEM FOR WHICH AIRWORTHINESS CANNOT BE VERIFIED.	2
KTL	KC-46 (REF: 1KC46-A-05-02-2000-00A0J-010A-A)	AFTER REMOVAL AND REPLACEMENT OF ANY ENGINE	3

Attachment 2**C-5 FUNCTIONAL CHECK FLIGHT COORDINATION CHECKLIST**

- A2.1. Upon notification from AMXS/MXS, review applicable MDS-6 series T. O. to ensure maintenance condition necessitates a Functional Check Flight (FCF).**
- A2.2. Ensure QVI is performed on KTL item by qualified QA inspector.**
- A2.3. Coordinate activation of the FCF crew from the 339th Flight Test Squadron (FLTS) at Warner-Robins AFB, GA with PS&D and 60 OGV.**
- A2.4. Establish a point of contact for each of the following agencies:**
- A2.4.1. 60th Operations Group Standardization/Evaluation 60 OGV 424-1063.
 - A2.4.2. 60th Maintenance Group PS&D 424-4891/1755.
 - A2.4.3. Applicable squadron's Maintenance Superintendent (also coordinate availability of maintenance technician or lead technician for briefings).
 - A2.4.4. Assigned Weight and Balance personnel from QA will review aircraft W&B records.
- A2.5. Ensure maintenance preflight is accomplished 24 hours prior to FCF.**
- A2.6. Schedule date, time, and location for crew briefing.** Briefing should include:
- A2.6.1. Purpose of flight and previous maintenance discrepancies recorded on aircraft or engines that directly relate to the FCF.
 - A2.6.2. Review of the 781 series forms (including pertinent previously transcribed forms).
 - A2.6.3. Ensure proper documentation as to the purpose of the FCF is entered into the 781As IAW T.O. 00-20-1.
 - A2.6.4. Address any concerns that FCF crew or maintenance personnel may have.
- A2.7. Attend maintenance debrief after the flight.** QA will ensure:
- A2.7.1. Aircraft Commander signs off FCF discrepancy in 781A IAW T.O. 00-20-1 **Paragraph 5.4.1.2.1.**
 - A2.7.2. Completed copy of Dash-6 CL is obtained from Aircraft Commander.
 - A2.7.3. All pertinent information is annotated on AF Form 2400.
- A2.8. Maintain a copy of AF Form 2400 for deficiency and trend analysis.**
- A2.9. Forward a copy of AF Form 2400 and completed Dash-6 CL to PS&D.**
- A2.10. If the FCF was unsuccessful, this coordination sheet will be re-accomplished in its entirety.**

Attachment 3**KC-10 FUNCTIONAL CHECK FLIGHT COORDINATION CHECKLIST**

A3.1. Upon notification from AMXS/MXS, review applicable MDS-6 series T. O. to ensure maintenance condition necessitates a Functional Check Flight (FCF).

A3.2. Ensure QVI is performed on KTL item by a qualified QA inspector.

A3.3. Establish a point of contact for each of the following agencies:

A3.3.1. 60th Operations Group Standardization/Evaluation 60 OGV 424-1062.

A3.3.2. 60th Maintenance Group PS&D 424-4891/1755.

A3.3.3. Applicable Squadron's Maintenance Superintendent (also coordinate availability of required maintenance technician or lead technician for briefings).

A3.3.4. Assigned Weight and Balance personnel from QA will review aircraft W&B records.

A3.4. Ensure maintenance preflight is accomplished 24 hours prior to FCF.

A3.5. Schedule date, time and location for crew briefing. Briefing should include:

A3.5.1. Purpose of flight and previous maintenance problems and discrepancies recorded on aircraft or engines that directly relate to the FCF.

A3.5.2. Review of the 781 series forms (including pertinent previously transcribed forms).

A3.5.3. Ensure proper documentation as to the purpose of the FCF is entered into the 781As IAW T.O. 00-20-1.

A3.5.4. Address any concerns that FCF crew or maintenance personnel may have.

A3.6. Attend maintenance debrief after the flight. QA will ensure:

A3.6.1. Aircraft Commander signs off FCF discrepancy in 781A IAW T.O. 00-20-1 **Paragraph 5.4.1.2.1.**

A3.6.2. Completed copy of Dash-6 CL is obtained from Aircraft Commander.

A3.6.3. All pertinent information is annotated on AF Form 2400.

A3.7. Maintain a copy of AF Form 2400 for deficiency and trend analysis.

A3.8. Forward a copy of AF Form 2400 and completed Dash-6 CL to PS&D.

A3.9. If the FCF was unsuccessful, this coordinating sheet will be re-accomplished in its entirety.

Attachment 4**C-17 FUNCTIONAL CHECK FLIGHT COORDINATION CHECKLIST**

A4.1. Upon notification from AMXS/MXS, review applicable MDS-6 series T. O. to ensure maintenance condition necessitates a Functional Check Flight (FCF).

A4.2. Ensure QVI is performed on KTL item by a qualified QA inspector.

A4.3. Coordinate activation of the FCF crew with the Travis Boeing Site Manager, Systems Group (SG) at Wright-Patterson AFB with PS&D office and the 60 OG/OGV.

A4.4. Establish a POC for each of the following agencies:

A4.4.1. 60th Operations Group Standardization/Evaluation 60 OG/OGV 424-1055.

A4.4.2. 60th Maintenance Group PS&D 424-4891/1755.

A4.4.3. Applicable squadron's maintenance superintendent (also coordinate availability of maintenance technician or lead technician for briefings).

A4.4.4. Assigned Weight and Balance personnel from QA will review aircraft W&B records.

A4.5. Ensure maintenance preflight is accomplished 24 hours prior to FCF.

A4.6. Schedule date, time, and location for crew briefing. Briefing should include:

A4.6.1. Purpose of flight and previous maintenance discrepancies recorded on aircraft or engines that directly relate to the FCF.

A4.6.2. Review of the 781 series forms (including pertinent previously transcribed forms).

A4.6.3. Ensure proper documentation as to the purpose of the FCF is entered into the 781As IAW T.O. 00-20-1.

A4.6.4. Address any concerns that FCF crew or maintenance personnel may have.

A4.7. Attend maintenance debrief after the flight. QA will ensure:

A4.7.1. Aircraft Commander signs off FCF discrepancy in 781A IAW T.O. 00-20-1 **Paragraph 5.4.1.2.1.**

A4.7.2. Completed copy of -6CL is obtained from Aircraft Commander.

A4.7.3. All pertinent information is annotated on AF Form 2400.

A4.8. Maintain a copy of AF Form 2400 for deficiency and trend analysis.

A4.9. Forward a copy of AF Form 2400 and completed -6CL to PS&D.

A4.10. If the FCF was unsuccessful, this coordination sheet will be re-accomplished in its entirety.

Attachment 5**KC-46 FUNCTIONAL CHECK FLIGHT COORDINATION CHECKLIST**

A5.1. Upon notification from AMXS/MXS, review applicable MDS-6 Manual T. O. in IETIMS (1KC46-A-05-02, Part B) to ensure maintenance condition necessitates a Functional Check Flight (FCF).

A5.2. Ensure QVI is performed on KTL item by a qualified QA inspector.

A5.3. Coordinate activation of the FCF crew from the 10th Flight Test Squadron (FLTS) at Oklahoma City, OK with PS&D and 60 OG/OGV.

A5.4. Establish a point of contact for each of the following agencies:

A5.4.1. 60th Operations Group Standardization/Evaluation 60 OGV 424-1062.

A5.4.2. 60th Maintenance Group PS&D 424-4891/1755.

A5.4.3. Applicable squadron's maintenance superintendent (also coordinate availability of required maintenance technician or lead technician for briefings).

A5.4.4. Assigned Weight and Balance personnel from QA will review aircraft W&B records.

A5.5. Ensure maintenance preflight is accomplished 24 hours prior to FCF.

A5.6. Schedule date, time and location for crew briefing. Briefing should include:

A5.6.1. Purpose of flight and previous maintenance problems and discrepancies recorded on aircraft or engines that directly relate to the FCF.

A5.6.2. Review of the 781 series forms (including pertinent previously transcribed forms).

A5.6.3. Ensure proper documentation as to the purpose of the FCF is entered into the 781As IAW T.O. 00-20-1.

A5.6.4. Address any concerns that FCF crew or maintenance personnel may have.

A5.7. Attend maintenance debrief after the flight. QA will ensure:

A5.7.1. Aircraft Commander signs off FCF discrepancy in 781A IAW T.O. 00-20-1 **Paragraph 5.4.1.2.1.**

A5.7.2. Completed copy of Dash-6 CL is obtained from Aircraft Commander.

A5.7.3. All pertinent information is annotated on AF Form 2400.

A5.8. Maintain a copy of AF Form 2400 for deficiency and trend analysis.

A5.9. Forward a copy of AF Form 2400 and completed Dash-6 CL to PS&D.

A5.10. If the FCF was unsuccessful, this coordinating sheet will be re-accomplished in its entirety.