

**BY ORDER OF THE
920 RESCUE WING COMMANDER**

**920 RESCUE WING INSTRUCTION
21-201**



6 JULY 2022

Maintenance

**FUNCTIONAL CHECK
FLIGHT/OPERATIONAL CHECK
FLIGHT AND HIGH SPEED TAXI
CHECKS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance* and extends the guidance of Air Force Instruction (AFI) 21-101, Air Force Reserve Command (AFRC) Supplement 1, *Aircraft and Equipment Maintenance Management*, technical orders (TOs) 1-1-300, *Maintenance Operational Checks and Check Flights*, 1C-130(H)J-6CF-1 /1H-60(H)G-6CL-1 *Acceptance and Functional Check Flight Checklist*, 1C-130(AHM)J-6/1H-60(H)-6, *Scheduled Inspection and Maintenance Requirements*, and 00-20-1, AFRC Supplement 1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*. This instruction has been coordinated between the 920th Maintenance Group Commander (MXG/CC) and 920th Operations Group Commander (OG/CC); and provides a standard procedure for accomplishment of all aircraft Functional Check Flight (FCF), Operational Check Flight (OCF) and High Speed Taxi (HST) check requirements. It applies to all 920th Rescue Wing (RQW) personnel having duties involving FCF/OCF/HST checks at Patrick SFB, FL. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Form 847, *Recommendation for Change of Publication*; and route to 920 MXG/MXQ. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records* and disposed of IAW the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS). (T-3)

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Major changes include updates to references due to HC-130J model aircraft, clarification of qualified FCF/OCF flight crews, updated 45SLD publication references.

1. Overview. Functional Check Flight Publications are as follows. Each FCF crewmember must understand the provisions of this instruction and: T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*; T.O. 1-1-300, *Acceptance/Functional Check Flights and Maintenance Operational Checks*; AFI 21-101, *Aerospace Equipment Maintenance Management*, Chapter 6; and the appropriate MDS-6CF Acceptance/Functional Check Flight Procedures Manual and associated -6CL checklist for unit aircraft.

1.1. Definitions.

1.1.1. Functional Check Flights (FCF). A flight dedicated to determining whether an aircraft and its components are functioning according the aircraft specific T.O. -6CF specifications. The FCF is normally conducted following maintenance work and prior to release of the aircraft for operational use. FCF requirements are -6, MXG/CC, or OG/CC directed. The aircraft -6CL is always used to record system/component performance and will be returned to Quality Assurance (QA) after debrief. A FCF qualified aircrew is required for FCF.

1.1.2. Operational Check Flights (OCF). Defined as flights done to verify a maintenance condition or to provide additional information to maintenance when troubleshooting an aircrew identified discrepancy. OCF's will be flown by experienced aircrews and will be briefed by QA following the same criteria as FCF. A FCF qualified crew is required when accomplishing checks that are specific to a MDS Functional Check Flight Procedures Manual. A FCF qualified aircrew is required OCF flights when a -6CL checklist is to be performed.

1.1.3. HST is a check that requires aircraft movement at higher than normal taxi speeds to operationally check completed maintenance. High speed taxi checks will be accomplished by an FCF certified aircrew.

1.1.4. Ground Run Involving Rotor Engagement (GR/RE). Conducted by qualified HH-60 crewmembers to accomplish operational or leak checks after maintenance has been performed on a component that cannot be checked otherwise. Also performed to troubleshoot vibrations or check vibrations after maintenance actions and prior to flight. If GR/RE involves ground taxi or hover checks a qualified FCF crew is required. T.O. guidance for specific maintenance actions (inspections, replacements or adjustments) specifies when a GR/RE is required. All open engine FOD inspections and idle speed checks must be accomplished prior to GR/RE. The aircrew preflight inspection must be accomplished before rotor engagement or taxi.

2. Roles and Responsibilities.

2.1. Aircraft Maintenance Squadron (AMXS).

2.1.1. Notifies Quality Assurance of known OCF/FCF aircraft and requirements.

2.1.2. Ensures the aircraft is ready for flight, to include aircraft forms/Maintenance Information System (MIS) and all required inspections.

2.1.2.1. Forms will be reviewed by the Production Superintendent or Supervisor prior to delivery to QA.

2.1.2.2. Delivers forms to QA prior to scheduled brief time.

2.1.3. Coordinates with Quality Assurance for necessary actions and briefing.

2.1.4. When a GR/RE is required:

2.1.4.1. AMXS will notify MOC with the requirement and time requested. MOC will notify Operations and annotate the events log with time and nature of request.

2.1.4.2. Operations will contact MOC with the status of crew availability

2.1.5. Initiates and coordinates an AF Form 2407, *Weekly/Daily Flying Schedule Coordination*, for the known OCF/FCF with the appropriate flying squadron when notified by Pro Supers.

2.2. Quality Assurance (QA).

2.2.1. Reviews the aircraft maintenance records/MIS IAW applicable technical orders.

2.2.2. Ensures the aircrew is qualified per the OG/CC authorization letter.

2.2.3. Briefs the FCF/OCF/High Speed Taxi aircraft commander in accordance with the FCF/OCF portion of the appropriate *MDS-6*, *-6CF*, and *-6CL*, AFI 21-101 Chapter 6, and T.O. 1-1-300. See *LCL-920MXG-10-9* or *LCL-920MXG-10-10* for briefing.

2.2.4. Notifies Maintenance Operations Center (MOC), Pro Super, when the QA briefing is complete and the approximate time the FCF/OCF crew is scheduled to arrive at the aircraft.

2.2.5. Debriefs the sortie along with MOC and the aircraft commander after the flight.

2.2.6. Ensure the FCF/OCF/HST checklist and brief checklist is filed with corresponding aircraft jacket file.

2.3. Flying Squadrons.

2.3.1. Provide the required FCF/OCF crew from designated crew members.

2.3.2. Ensure the FCF/OCF aircraft commander receives the FCF/OCF brief from QA.

2.3.3. Conduct the FCF/OCF in accordance with prescribed directives. See [Attachment 2](#).

2.3.4. Ensure the *-6CL* checklists are accomplished during the check flight.

2.3.5. Ensure flight crews debrief with Quality Assurance after an FCF/OCF.

2.3.6. Report GR/RE crew availability within 30 minutes of notification.

3. Weather Requirements. FCFs and those OCFs utilizing *-6CF* guidance are flown in visual meteorological conditions (VMC) during daylight hours. See T.O. 1-1-300 for exceptions.

4. FCF Crewmember Qualification and Training.

4.1. FCF crewmembers are certified by flying unit commanders. See AFI 11-2MDS series publications for additional guidance.

4.2. The FCF aircrew training program syllabus is maintained by 920 OG/OGV and flying unit training offices. HC-130J Pilot and HH-60 Pilot and Flight Engineer FCF training requires both ground and flight instruction. FCF training for other crew positions is directed at unit commander discretion.

4.3. A list of authorized FCF crewmembers is signed by the Operations Group Commander and a copy furnished to the Maintenance Group QA office.

4.4. If an FCF flight profile is needed to train new FCF crewmembers and FCF flights are not anticipated in the near future, flying squadrons may designate a T3 sortie to include "-6CF training" as well as normal continuation training. 920 MXG/CC and Maintenance QA concurrence is required, including agreement on the FCF profile events to be flown. The following procedures will be followed:

4.4.1. Normal FCF requirements for QA brief and debrief apply.

4.4.2. During the -6CF training phase of the flight, normal FCF requirements for crew composition, weather, and operating area apply.

5. Maintenance Procedures.

5.1. After the FCF/OCF aircrew has completed the QA briefing, no other QA-MX coordination is required until debrief of FCF sortie. If the same Aircraft Commander stays with the same aircraft, re-briefs for additional sorties on the same day are not required.

5.2. When the MIS is down, all maintenance will be accomplished and documented in the 781A forms prior to the next FCF sortie. The data will be input to the MIS once back on line.

5.3. OCF requirements will be determined by maintenance or by request of operations to validate an aircraft discrepancy or airworthiness.

5.4. OCF aircrews will be briefed by QA and are not required to be FCF qualified unless -6CF guidance is used in conjunction with the check.

5.5. Once the aircraft forms have been reviewed by QA, FCF/OCF notification will be generated via e-mail or LMR from 920 MXG/MXQ (QA) to appropriate Production Supervisor and MOC. MOC will notify the 301 RQS/DO and DOO (Current Operations), 39 RQS/DO and DOO of aircraft readiness.

5.6. FCF/OCF QA briefs will occur in the QA office.

5.7. FCF/OCF debriefs will occur in the MOC.

5.8. Helicopter vibration debrief discrepancies will be placed on a **Red Diagonal** not a **Red X**, due to the Unknown Condition IAW 00-20-1. Corrective action, will determine if an FCF (for a part adjusted or replaced) is required. Every effort will be made by the aircrew reporting the vibration to assist in troubleshooting or verifying the problem. Any vibration or track and balance check on an OCF or FCF will be held to FCF (-6CL) vibration or track and balance standards by authorized aircrew.

5.9. When engine FCF's are due, only one discrepancy per engine for -6 items is required for in-flight checks.(i.e. FCF required on #1 Engine due to replacement, or, FCF required on #2 Engine due to low power). All ground idle leak and ops checks will be documented as separate discrepancies.

6. FCF Area. The FCF area for HC-130 aircraft, and HH-60 aircraft requiring high altitude checks, is between the Patrick TACAN 095 and 155 degree radials from 5 to 30 DME. HH-60 FCF's not requiring a high altitude should use the helicopter training area as defined by local operating procedures and 45SWI 13-204V1-O, *Airfield Operations*.

JOHN C. DOBBIN, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101 AFRCSUP, *Aerospace Equipment Maintenance Management*, 13 August 2020

T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*

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

T.O. 1C-130(AHM)J-6, *Aircraft Scheduled Inspection and Maintenance Instructions*

T.O. 1C-130(AHM)J-6CF-1, *Acceptance/Functional Check Flight Procedures*

T.O. 1H-60(H)G--6, *Scheduled Inspection and Maintenance Requirements*

T.O. 1H-60(H)G-6CL, *Acceptance and Functional Check Flight Checklist*

45SWI 13-204V1-O, *Airfield Operations*, 19 March 2021

Adopted Forms

AF Form 2407, *Weekly/Daily Flying Schedule Coordination*

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 718A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

AMXS—Aircraft Maintenance Squadron

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

CF—Check Flight

CL—Checklist

FCF—Functional Check Flight

GR/RE—Ground Run Involving Rotor Engagement

HHQ—Higher Headquarters

IMC—Instrument Meteorological Conditions

LMR—Land Mobile Radio

MDS—Mission/Design/Series

MIS—Maintenance Information System

MOC—Maintenance Operations Center

MX—Maintenance

MXG—maintenance Group

OCF—Operational Check Flight

OG—Operations Group

PS&D—Plans, Scheduling and Documentation

QA—Quality Assurance

SW—Space Wing

TACAN—Tactical Air Navigation

TOLD—Takeoff and Landing Data

VMC—Visual Meteorological Conditions

Attachment 2

FUNCTIONAL AND OPERATIONAL CHECK REQUIREMENTS

Table A2.1. Functional And Operational Check Requirements.

Type Check	FCF Crew	QA Brief	FCF Weather Requirements	Use FCF Area	QA Debrief
FCF	X	X	X	X	X
OCF		X	X		X
High Speed Taxi Check	X	X			X