TM 1-1520-228-MTF

TECHNICAL MANUAL

MAINTENANCE TEST FLIGHT MANUAL

ARMY MODEL OH-58A/C HELICOPTER

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

This manual supersedes TM 55-1520-228-MTF, dated 01 November 1988, including all changes.

HEADQUARTERS
DEPARTMENT OF THE ARMY

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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You may also provide DA Form 2028 information to AMCOM via e-mail, datafax, or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of the applicable Operator's manual immediately preceding the hardcopy 2028. For the World Wide Web use: https://amcom2028.redstone.army.mil.

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SECTION I. INTRODUCTION

1. Purpose. The purpose of this manual is to provide complete instructions for performing a maintenance test flight of OH-58A/C helicopters. For the specific conditions which require a general or limited maintenance test flight, refer to TM 1-1500-328-23, TM 55-1520-228-23-1/2, and TM 11-1520-228-23.

2. Definition.

a. Maintenance Test Flight. A functional test flight for which the primary purpose is to determine whether the airframe, power plant, accessories, and other equipment are functioning in accordance with predetermined requirements while subjected to the intended environment.

b. Warnings, Cautions, and Notes. Warnings, Cautions, and Notes are used to emphasize important and critical instructions and are used for the following conditions:

WARNING

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc. which if not strictly observed, could result in injury to, or death of, personnel or long term health hazards.

CAUTION

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc. which, if not strictly observed, could result in damage to, or destruction of, equipment or loss of mission effectiveness.

NOTE

Highlights an essential operating or maintenance procedure, condition, or statement.

3. General Information.

a. This manual covers only maintenance test flight of OH-58A/C helicopters and in no way supercedes any information contained in TM 55-1520-228-10 or TM 1-1520-228-CL, but is to be used in conjunction with the -10 and -CL. For the purpose of maintenance test flights only, this manual satisfies all the requirements of the -CL from “Before Starting Engine Checks” through “Engine Shutdown Checks.”

b. Crew requirements will be as specified in TM 1-1500-328-23 and TM 1-1520-228-10.

c. The duration of the general or limited test flight will be in accordance with the requirements of TM 1-1500-328-23.

4. Special Instructions.

a. Cargo and Passengers. Cargo and passengers are prohibited on maintenance test flights.

b. Forms and Records. Forms and records will be checked prior to the maintenance test flight to determine maintenance performed and type of test flight required (i.e., general or limited).

c. Configuration. The configuration of the helicopter should be determined prior to the maintenance test flight in order to determine performance parameters.

d. Post Test Flight Inspection. A thorough visual inspection will be performed to the extent necessary to assure that deficiencies or shortcomings that may have developed as a result of the maintenance test flight are detected.

e. Reference. When a maintenance test flight is required to assure proper operation of a specific system(s), refer to the applicable maintenance manual for the limits of that system.

f. Symbol(s) Preceding Numbered Steps.

(1) Asterisked Checks. An asterisk (*) prior to a check requires that the Test Flight Check sheet be annotated. Record a check (√) for satisfactory performance, or an (X) for a problem detected, with a short statement entered in the remarks block of the check sheet.

(2) If Installed. The symbol (O) prior to a step indicates that this step shall be performed if the associated equipment is installed on the aircraft.

g. Maintenance Test Flight Check Sheet. The sample check sheet contained in Section V will be used on all Maintenance Test Flights. When a test flight is performed for the purpose of determining if specific equipment or systems are operating properly, completion of only that portion of the Maintenance Test Flight (MTF) Check Sheet applicable to the specific equipment or systems being tested is needed. The helicopter test flight Check Sheets may be locally reproduced. Continuation sheets may be used when necessary. Items that prove to be unsatisfactory during the test flight, and require corrective action, shall be listed in the remarks block during flight and transferred to DA Form 2408-13-1 immediately after termination of the flight. The sheet will be attached to DA Form 2408-13-1 upon completion. After accumulation of two or more sheets, the data should be reviewed to determine if trends are developing.

h. Series and Effectivity Codes. Procedural requirements peculiar to individual series and configurations are indicated by the following codes:

A — OH-58A

C — OH-58C

NOTE

All OH-58A and OH-58C model aircraft are now equipped with the T63-A-720 Engine.

i. Symbol(s) procedding numbered steps.

O — Indicated if installed.

SECTION II. MAINTENANCE TEST FLIGHT CHECKLIST

General. This section contains the maintenance test flight requirements peculiar to Army model OH-58A/C helicopters. Conditions requiring accomplishment of test flights shall be in accordance with TM 1-1500-328-23. The requirements contained herein are established to assure a thorough inspection of the helicopter before flight, during flight, and upon completion of the maintenance test flight. The right side of the checklist (Troubleshooting Reference) is cross-indexed to the troubleshooting guides contained in Section III. A dash between references means "through;" a comma means "and". The references list the possible abnormal conditions, indications, or malfunctions which could be encountered while performing the procedure.

PROCEDURE	TROUBLESHOOTING REFERENCE
PRIOR TO MAINTENANCE TEST FLIGHT	
*1. Forms and records — Check.	
*2. Preflight — Perform IAW TM 1-1520-228-10.	
3. Special preflight checks — Complete as applicable.	

PROCEDURE	TROUBLESHOOTING REFERENCE
BEFORE STARTING ENGINE CHECKS	
1. Pedals — Adjust as required.	
2. Seat belts and shoulder harness — Fasten and adjust.	
3. Shoulder harness, inertia reel, and lock — Check operation and leave unlocked.	
4. Cyclic control — Friction off, check freedom of movement through full range of travel (note main rotor pitch change).	H1, 12, 15
5. Collective control — Friction off, check freedom of movement through full range of travel (note main rotor pitch change and coupling effect).	H6, 7
6. Pedals — Check pedals through full range of travel, and no binding.	H3, 4
7. Throttle — Full Open, close to idle stop, check for positive stops. Check idle release, close throttle.	E1, 37
8. Avionics — Off. Set as required.	

PROCEDURE	TROUBLESHOOTING REFERENCE

BEFORE STARTING ENGINE CHECKS (CONT)

9. System Instruments — Check gage security, static indications, and range marking in accordance with TM 1-1520-228-10.

NOTE

Any round instrument which has a range marking on glass face must also have a white slippage mark from the glass to frame.

	A MODEL		**C MODEL**
a.	ENG OIL PRESsure.	a.	Gas producer tachometer.
b.	ENG OIL TEMPerature.	b.	TOT gage.
c.	AMPS meter.	c.	ENG OIL Temperature.
d.	FUEL QTY.	d.	ENG OIL Pressure.
e.	TORQUE meter.	e.	XMSN OIL pressure.
f.	TOT gage.	f.	AMPS meter.
g.	Gas Producer Tachometer.	g.	FUEL QTY.
h.	Dual Tachometer.	h.	TORQUE meter.
	(1) ENGINE.	i.	Dual Tachometer.
	(2) ROTOR.		(1) ENGINE.
			(2) ROTOR.