

ROUTINE

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**ANNOUNCEMENT OF APPROVAL AND RELEASE OF
NONDESTRUCTIVE TEST EQUIPMENT
INSPECTION PROCEDURE MANUAL
TM 1-1520-254-23, TECHNICAL MANUAL AVIATION UNIT MAINTENANCE
(AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL
NONDESTRUCTIVE INSPECTION PROCEDURES FOR
OH-58 HELICOPTER SERIES**

**Headquarters, Department of the Army, Washington, D. C.
1 May 1997**

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

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL REFERENCES TO TM 1-1520-254-23, TECHNICAL MANUAL AVIATION UNIT MAINTENANCE (AVUM) AND AVIATION INTERMEDIATE MAINTENANCE (AVIM) MANUAL NONDESTRUCTIVE INSPECTION PROCEDURES FOR OH-58 HELICOPTER SERIES, HAVE BEEN INCORPORATED INTO THE TM 55-1520-228-23(SERIES), AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL ARMY MODEL OH-58A AND OH-58C HELICOPTERS.

- 1. Priority Classification. Routine**
- 2. Purpose.** The purpose of this technical bulletin (TB) is to announce the approval and release of the nondestructive test equipment inspection procedure manual, TM 1-1520-254-23, Technical Manual Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) Manual Nondestructive Inspection Procedures for OH-58 Helicopter Series. This manual shall be referred to when performing inspections on the OH-58A and OH-58C aircraft.
- 3. Description.** Approved nondestructive test inspection procedures are referenced in Table 1. Refer to TM 1-1520-254-23, Technical Manual Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) Manual Nondestructive Inspection Procedures for OH-58 Helicopter Series, for safety information, part locations, inspection method descriptions, and complete procedures Do not attempt to perform any nondestructive test inspection without first referring to TM 1-1520-254-23 as this TB does not provide adequate information to properly perform the inspections.
- 4. How to Use.** The columns in Table 1. Approved Nondestructive Test Inspection Components/Assemblies, are defined as follows:

(1) Procedure Number: references the procedure number in TM 1-1520-254-23, Technical Manual Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) Manual Nondestructive Inspection Procedures for OH-58 Helicopter Series.

(2) Component/Assembly: provides the list of parts approved for nondestructive test Inspections on the OH-58A/C aircraft. Parts not listed have not been approved for nondestructive test inspection and shall be inspected as referenced in TM 55-1520-228-23 (Series), Aviation Unit and Intermediate Maintenance Manual Army Model OH-58A and OH-58C Helicopters.

(3) Inspect For: provides the approved manner of , inspection., All other types of Inspection shall be performed as referenced In TM 55-1520-228-23 (Series) Aviation Unit and Intermediate Maintenance Manual Army Model OH-58A and OH-58C Helicopters

(4) Maintenance Category: details the approved maintenance level for each nondestructive test inspection.

(5) Inspection Equipment Requirements: provides the approved nondestructive Inspection method/equipment to perform the inspection. Refer to Notes for the legend.

(6) Remarks: provides the approved backup method/equipment to perform the inspection. Refer to Notes for the legend.

NOTE

Legend for the nondestructive Inspection methods/equipment referenced in columns (5) and (6):

- | | | | |
|-----|------------------------------|-----|---------------------|
| 001 | Fluorescent Penetrant Method | 004 | Ultrasonic Method |
| 002 | Magnetic Particle Method | 005 | Bond Testing Method |
| 003 | Eddy Current Method | 006 | Radiographic Method |

Table 1. Approved Nondestructive Test Inspection Components/Assemblies.

(1) PROCEDURE NUMBER	(2) COMPONENT/ ASSEMBLY	(3) INSPECT FOR	(4) MAINTENANCE CATEGORY			(5) INSPECTION EQUIPMENT REQUIREMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
2-2	Main Rotor Hub Grips	Cracks		✓		003	
2-3	Main Rotor Pitch Horn	Cracks		✓		003	
2-4	Main Rotor Hub Pin	Cracks		✓		002	
2-5	Main Rotor Hub Fitting	Cracks		✓		002	
2-6	Main Rotor Trunnion	Cracks		✓		002	
2-7	Main Rotor Hub Yoke	Cracks		✓		002	
2-8	Main Rotor Blade Latch Retainer Bolt	Cracks		✓		002	
2-9	Main Rotor Hub Static Stop	Cracks		✓		003	
2-10	Main Rotor Yoke Pillow Block	Cracks		✓		003	
2-11	Main Rotor Blade Bolt	Cracks		✓		002	
2-12	Main Rotor Blade	Cracks		✓		003	Backup 001
2-13	Main Rotor Blade	Voids		✓		005	
2-14	Swashplate and Support Assembly Pivot Sleeve	Cracks		✓		003	Backup 001

Table 1. Approved Nondestructive Test Inspection Components/Assemblies.

(1) PROCEDURE NUMBER	(2) COMPONENT/ ASSEMBLY	(3) INSPECT FOR	(4) MAINTENANCE LEVEL			(5) INSPECTION EQUIPMENT REQUIREMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
2-15	Swashplate and Support Assembly Stud	Cracks		✓		002	Backup 001
2-16	Swashplate and Support Assembly Inner Ring	Cracks		✓		003	Backup 001
2-17	Swashplate Support	Cracks		✓		003	Backup 001
2-18	Collective Lever Link (Idler)	Cracks		✓		003	Backup 001
2-19	Swashplate and Support Assembly Pin	Cracks		✓		002	Backup 001
2-20	Collective Lever	Cracks		✓		003	Backup 001
2-21	Outer Ring	Cracks		✓		003	Backup 001
2-22	Inner Cap	Cracks		✓		003	Backup 001
2-23	Outer Cap	Cracks		✓		003	Backup 001
2-24	Lever, Idler	Cracks		✓		003	
2-25	Pitch Link Tube Assembly	Cracks		✓		003	
2-26	Pylon Idler Link	Cracks		✓		003	
2-27	Pylon Swashplate Collar Set	Cracks		✓		003	
2-28	Tail Rotor Hub Yoke	Cracks		✓		003	Backup 001
2-29	Tail Rotor Hub Trunnion	Cracks		✓		002	
2-30	Tail Rotor Hub Housing	Cracks		✓		003	Backup 001
2-31	Tail Rotor Blades	Cracks		✓		001	
2-32	Tail Rotor Blades	Voids		✓		005	
3-2	Grease Retainer Plate	Cracks		✓		001	
3-3	Shaft Centering Spring	Cracks		✓		002	
3-4	Outer Coupling	Cracks		✓		002	
3-5	Spur Gear	Cracks		✓		002	
3-6	Main Input Shaft	Cracks		✓		002	
3-7	Gearshaft, Inner Race	Cracks		✓		002	
3-8	Gearshaft, Outer Race	Cracks		✓		002	
3-9	Tail Rotor Drive Gear	Cracks		✓		002	

Table 1. Approved Nondestructive Test Inspection Components/Assemblies.

(1) PROCEDURE NUMBER	(2) COMPONENT/ ASSEMBLY	(3) INSPECT FOR	(4) MAINTENANCE LEVEL			(5) INSPECTION EQUIPMENT REQUIREMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
3-10	Bearing Cap Cracks	Cracks		✓		003	Backup 001
3-11	Bearing Housing	Cracks		✓		003	Backup 001
3-12	Freewheeling Shaft Assembly	Cracks		✓		002	
3-13	Freewheeling Housing Assembly	Cracks		✓		003	Backup 001
3-14	Freewheeling Housing Assembly Bolt	Cracks		✓		002	Backup 001
3-15	Drag Pin	Cracks		✓		001	
3-16	Mast	Cracks		✓		002	
3-17	Mast Assembly Locking Plate	Cracks		✓		002	Backup 001
3-18	Mast Bearing Nut	Cracks		✓		002	
3-19	Mast and Seal Plate	Cracks		✓		002	
3-20	Bearing Liner	Cracks		✓		002	
3-21	Spindle (Transmission)	Cracks		✓		002	
3-22	Oil Cooling Blower Assembly	Cracks		✓		003	
3-23	Blower Shaft Assembly	Cracks		✓		002	
3-24	Splined Adapters	Cracks		✓		002	
3-25	Disc Assembly	Cracks		✓		001	
3-26	Tail Rotor Gearbox	Cracks		✓		003	
4-2	Forward and Aft Fuselage Sections	Cracks		✓		003	
4-3	Honeycomb and Bonded Panels	Voids		✓		005	
4-4	Fore and Aft Engine Firewalls	Cracks		✓		001	
4-5	Tailboom Section	Cracks		✓		003	
4-6	Vertical Fin Assembly	Voids		✓		005	
4-7	Vertical Fin Supports	Cracks		✓		003	
4-8	Vertical Fin Mount Bolts	Cracks		✓		002	

Table 1. Approved Nondestructive Test Inspection Components/Assemblies.

(1) PROCEDURE NUMBER	(2) COMPONENT/ ASSEMBLY	(3) INSPECT FOR	(4) MAINTENANCE LEVEL			(5) INSPECTION EQUIPMENT REQUIREMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
4-9	Pylon Supports	Cracks		✓		002	
4-10	Pylon Support Link	Cracks		✓		002	
4-11	Molded Assembly	Cracks		✓		003	Backup 001
4-12	Yoke	Cracks		✓		002	
4-13	Engine Mounts	Cracks		✓		002	
4-14	Transmission Support Straps	Cracks		✓		003	
4-15	Skid Saddles	Cracks		✓		003	
4-33	Vertical Fin	Water		✓		006	
4-34	Fore and Aft Cross Tube Assemblies	Cracks		✓		004	
5-2	T63-A-720 Engine Ac- cessories	Cracks		✓		001	
5-3	T63-A-720 Engine Sys- tems and Components	Cracks		✓		001	
6-2	Hydraulic Pump, Valve, Actuators, and Reser- voir Bodies	Cracks		✓		003	Backup 001
6-3	External Driveshaft, Piston Rods, and Rod Ends	Cracks		✓		002	
6-4	Solenoid Valve Body	Cracks		✓		003	Backup 001
6-5	Cockpit Flight Control Assemblies	Cracks		✓		003	
6-6	Bellcranks, Walking Beams, and Actuating Levers	Cracks		✓		003	

5. Points of Contact.

a. Technical point of contact for this TB is Mr. Wayne Suchman, AGSE-PM, AMSAT-D-WAG, DSN 693-1924 or commercial (314)263-1924, e-mail: wsuchman@emh4.wsmd.stl.army.mil.

b. Nondestructive Test Inspection technical point of contact for this TB is Mr. Scott Huddleston, DSN 693-1923 or commercial (314)263-1923, e-mail: shuddles@emh4.wsmd.stl.army.mil.

6. Reporting of Errors and Recommending Improvements. You can help improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you Instructions for sending an electronic 2028 may be found at the back of this manual.

TB 1-1520-22823-1

By Order of the Secretary of the Army.

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6. **Zip:** 77777
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9. **Pub Title:** TM
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22. **Reference:** 6
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