SERVICE BULLETIN

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* Supersedes HN-230, DN-177, EN-68 and FN-55, dated 21 November 1990.

SUBJECT: PRE-FLIGHT CHECK AND ONE-TIME INSPECTION OF TAIL ROTOR BLADES

SUMMARY: Due to a failure of a tail rotor blade root fitting, MD Helicopters, Inc. (MDHI) is requiring operators to perform an inspection of all aluminum tail rotor blades to ensure that no crack exists in the tail rotor blade root fitting **and** that the tail rotor blade root fitting has proper wall thickness. Thin wall thickness in the tail rotor blade root fitting can lead to tail rotor blade failure.

PURPOSE: The purpose of this Notice is to provide operators with procedures on how to perform a daily pre-flight check of the tail rotor blades and instructions on how to use the MDHI provided tools to inspect the tail rotor blade root fitting area for proper wall thickness. This revision to this notice is being issued to allow operators additional time to comply with the requirements of this notice.

MODELS AFFECTED: All MDHI 369 Series helicopters equipped with affected tail rotor blades. All tail rotor blades and tail rotor assemblies in Spares Inventories. All affected tail rotor blades are listed in the following table.

AFFECTED TAIL ROTOR BLADE ASSEMBLIES

Part Number	Blade Serial Numbers
369A1613 (all dash numbers)	Prior to 7959
369D21613 (all dash numbers)	Prior to 6482
369D21615 (all dash numbers)	Prior to 1358
369D21606 (all dash numbers)	Prior to 0538
421-088 (all dash numbers)	Prior to 0218

New 369 Series helicopters delivered on 01 September 1990 and thereafter and all tail rotor assemblies or tail rotor blades delivered thereafter were factory inspected and meet MDHI specifications.

Tail rotor blades with yellow dots applied to the aft edge of the root fitting and those above the affected serial number range have been inspected for proper root fitting wall thickness and do not have to comply with the requirements of this Notice.

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TIME OF COMPLIANCE:

PART I – Daily Pre–Flight Check – Shall be accomplished at the initial pre–flight check before the first flight of each day after receipt of this Notice until the requirements of **PART II** have been accomplished.

PART II – One–TIme Inspection of Tail Rotor Blade – Shall be accomplished within the next 100 hours of helicopter operation after receipt of tools but no later than 01 June 1991. The tools will become available approximately February 1991. Tools to perform **PART II** can be loaned from a MDHI Field Service Representative, an Approved MDHI Service Center or the MDHI Warranty and Repair Department.

REFERENCE PUBLICATIONS: (Use the manuals listed below or any later revisions.)
369H Basic HMI (CSP–H–2) Revised 15 June 1990
369D/E/F/FF HMI (CSP–HMI–2) Issued 31 October 1990

SUPPLY/PARTS:

PARTS LIST

Nomenclature	Part No.	Qty.	Source
Inspection tool	369D21633–1–40201(Part 1)	1	MDHI
Inspection tool	369D21633–1–40201(Part 2)	1	MDHI
Crush washer	369H5309	A/R	MDHI Warranty andRepair Dept.
O–ring	2–122C873–70	A/R	MDHI Warranty andRepair Dept.

AIRCRAFT CHECK/INSPECTION AND CORRECTION PROCEDURES:

PART I - DAILY PRE-FLIGHT CHECK OF TAIL ROTOR BLADE

a. Visually check both sides of each tail rotor blade in the area detailed in Figure 1, Detail A, for any indications of cracking.

b. Tail rotor blades having indications of cracking shall be removed from service and returned to MDHI for further inspection and warranty consideration.

c. As required, install acceptable tail rotor blades per the applicable maintenance manual.

PART II - ONE-TIME INSPECTION OF TAIL ROTOR BLADE ROOT FITTING

a. Procure inspection tooling from an Approved MDHI Service Center, a MDHI Field Service Representative or the MDHI Warranty and Repair Department.

NOTE

Ensure tail rotor blades, crush washers and bushings are marked so they can be reinstalled in the exact location and orientation from which they were removed.

b. Remove tail rotor blades per the applicable maintenance manual.

CAUTION

DO NOT attempt to force the inspection tool to install the retention bolt.

c. With HS610C6244R375X375 bushing (Qty. 1) (369A1624-BSC root fitting) or 369H5308 bushings (Qty. 2) and 369H5309 crush washers (369A1624-3 root fitting) installed, ensure, there are no foreign objects inside the bore of the tail rotor blade root fitting. With root fitting vertical, inboard end up, insert the 369D21633-1-40201 Part I inspection tool into the I.D. of the root fitting. Align root fitting strap retention holes with tool hole. (See Figure 1, Detail B.) Attempt to install the retention bolt through the root fitting and tool holes.

NOTE

Tail rotor blade is ***acceptable*** if tail rotor blade retention bolt ***cannot*** be inserted thru root fitting and inspection tool (Part 1) holes. Unacceptable tail rotor blades shall be removed from service and returned to MDHI Warranty and Repair Department for further inspection and warranty consideration.

d. With HS610C6244R375X375 bushing (Qty. 1) (369A1624-BSC root fitting) or 369H5308 bushings (Qty.2) and 369H5309 crush washers (369A1624-3 root fitting) installed, position the 369D21633-1-40201 Part 2 inspection tool (tab end outboard) over one side of the root fitting. Align the holes in the inspection tool with the blade attach holes in the root fitting. For the 369A1624-BSC root fitting, use washers on each side of the root fitting (equal amounts) to center the inspection tool on the root fitting (See Figure 1, Detail C.). Attempt to install the retention bolt through the tool and the root fitting. (See the following CAUTION.)

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CAUTION

DO NOT attempt to bend or force the inspection tool to install the **retention bolt.**

NOTE

Tail rotor blade is ***acceptable*** when the tail rotor blade attachment bolt ***cannot*** be inserted thru the root fitting holes and both sides of the inspection tool (Part 2). Unacceptable tail rotor blades shall be removed from service and returned to MDHI Warranty and Repair Department for further inspection and warranty consideration.

e. Repeat step d. with the inspection tool positioned on opposite side of blade.

CAUTION

Tail rotor blades, crush washers and bushings must be reinstalled in the exact location and orientation from which they were removed to ensure proper blade attachment.

f. Apply a yellow dot to acceptable tail rotor blades on the trailing edge of the root fitting approximately 1/2 inch outboard from the bushing. (See Figure 1, Detail A.)

g. Install acceptable tail rotor blades per the applicable maintenance manual.

h. Verify the tail rotor assembly is correctly balanced per the applicable maintenance manual.

WEIGHT AND BALANCE: N/A.

RECORDING AND COMPLIANCE:

Record compliance to **PART II** of this Service Information Notice in the Compliance Record section of the helicopter Log Book.

POINTS OF CONTACT:

For further information or loan of inspection tools contact your local MDHI Field Service Representative (refer to the latest revision of the Product Support handbook for address and telephone numbers) or contact the Field Service Department at MDHI, Mesa, Arizona. Telephone: 1-800-445-1516 or (602) 891-6342.

The resultant inspection/check to affected models as described by the procedures in this Notice has been shown to comply with Federal Aviation Regulations and is FAA Approved.

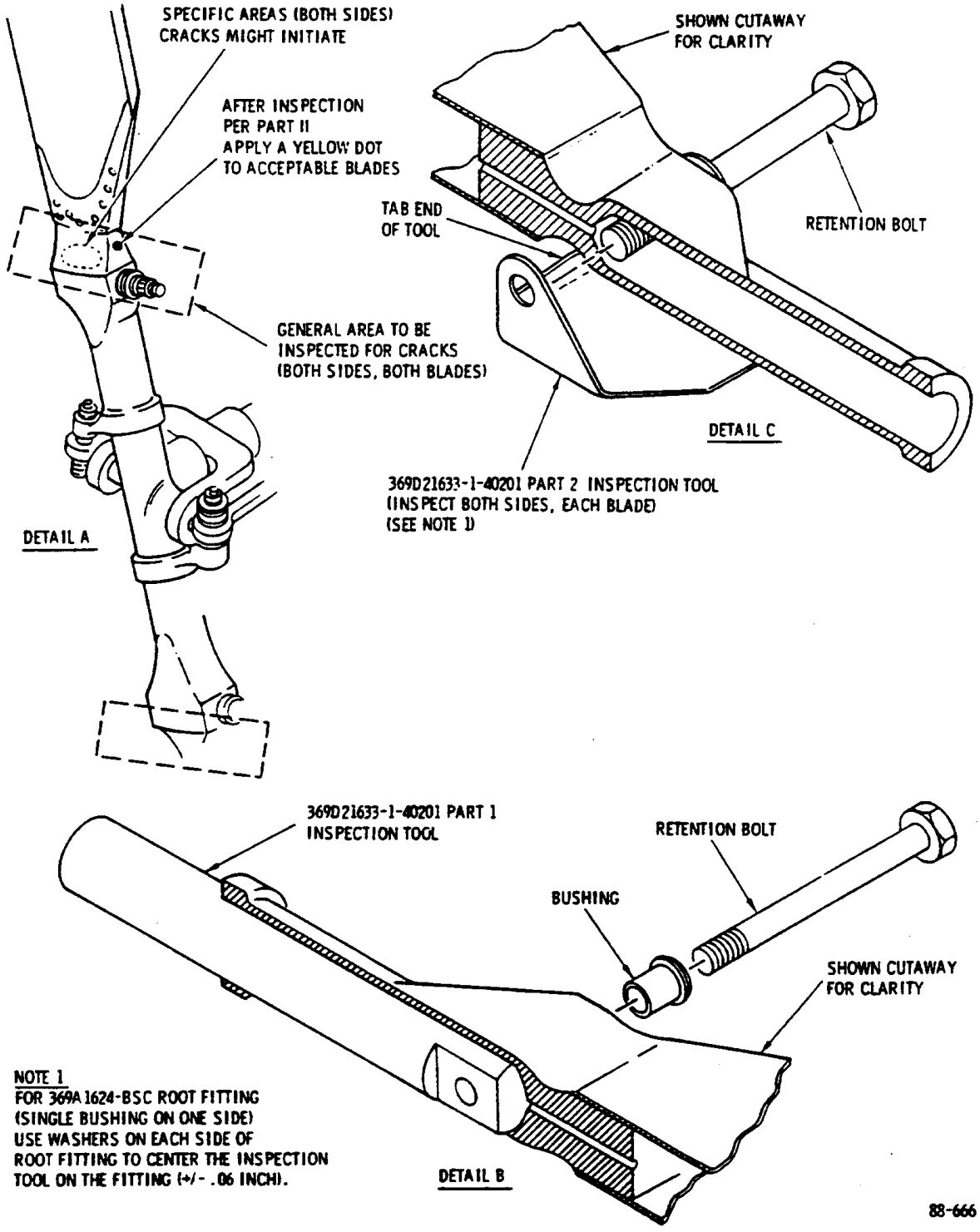

Figure 1. Inspection of Tail Rotor Blade Root Fitting.