

# **SERVICE BULLETIN**

HN-215.2\* DN-156.2\* EN-46.2\* FN-34.2\* NN-010

**DATE: 11 APRIL 1997** 

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\* Supersedes Service Information Notices HN-215.1, DN-156.1, EN-46.1 and FN-34.1, dated 14 October 1988.

## OVERRUNNING CLUTCH OUTER RACE INSPECTION

### 1. PLANNING INFORMATION:

- **A.** Aircraft Affected: All MD Helicopters, Inc. (MDHI) 369A (OH-6A), 369H, 369D, 369E, 369FF and 500N Series Helicopters. All spares inventories of 369A5350-11, -21, -31 and -41 Overrunning Clutch Sub-Assemblies.
- **B.** Assembly/Components Affected by this Notice: Overrunning Clutch Assemblies (P/N 369A5350-603) and Overrunning Clutch sub-assemblies (P/N 369A5350-11, -21, -31 and -41) which contain Overrunning Clutch Outer Race, P/N 369A5352-BSC, serial numbers 0692 thru 0927.
- C. Reason: MDHI has determined that some outer races may have been improperly processed during manufacturing. Therefore, all clutch assemblies with 369A5352-BSC, serial numbers 0692 thru 0927 outer races will have to be replaced and removed from service. Failure to comply with the requirements of this Notice may result in loss of engine drive to the rotor system which may result in an engine overspeed condition and/or a forced landing situation.
- **D.** <u>Description</u>: Procedures in this Notice provide owners and operators with information to inspect and, if necessary, replace the outer race of the 369A5350 overrunning clutch assembly.
- **E.** <u>FAA Approval</u>: The technical design aspects of this Service Bulletin are FAA Approved.
- **F.** <u>Manpower</u>: One half manhour to inspect aircraft records. Two manhours to inspect overrunning clutch subassembly, plus two manhours to remove and replace outer race, if required.
- **G.** <u>Time of Compliance</u>: The requirements of this Notice shall be accomplished within the next 50 hours of helicopter operation or by 31 July 1997, whichever occurs first. All spares inventories shall comply with the inspection requirements of this Notice prior to installation into a helicopter or within 30 days of the date of this Notice, whichever occurs first.

### **NOTE**

Outer races with serial numbers 0692 thru 0927 should be removed from service regardless of heat treat number. 369A5352-BSC outer race assemblies with these serial numbers that have been inspected and returned to service as a result of HN-215.1, DN-156.1, EN-46.1 and FN-34.1 are affected by the requirements of this Notice and must be removed.

369A5352-5 overrunning clutch outer race assemblies are not affected by this Notice.

**H.** <u>Interchangeability</u>: The 369A5352-5 outer race, together with the W1593-018 wave washer, replaces the 369A5352-BSC outer race.



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I. Material/Part Availability: Contact MDHI Warranty and Repair Department.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Outer Race	369A5352-5	A/R	MDHI
Wave Washer	W1593-018	A/R	MDHI

- **J.** Parts Policy: If during the inspection portion of this Notice, operators find an outer race (369A5352-BSC) with an affected serial number, remove the part and notify MDHS Warranty and Repair Department. MDHI Warranty and Repair will exchange the affected part for a new outer race and an overrunning clutch assembly overhaul kit (99-369A5350-603) at no cost to the operator or customer. This offer expires 31 July 1997. This parts exchange policy is for the purpose of complying with this Service Information Notice and in no way affects any other MDHI parts exchange policy, either past or future.
- **K.** <u>Tooling</u>: Pliers, Snap-ring (TRUARC) #7 Tip and a torque wrench (0-500 In. lbs.). These tools are commercially available.

L. Weight and Balance: N/A

M. Electrical Load Data: N/A

N. Other Publications Affected: N/A

## 2. ACCOMPLISHMENT INSTRUCTIONS:

### **NOTE**

It is not necessary to remove coupling from overrunning clutch to perform this inspection.

- **A.** Inspect aircraft records to determine what serial number outer race (369A5352-BSC) is installed in the overrunning clutch assembly.
- **B.** If 369A5352-BSC outer race serial number cannot be determined through aircraft records, remove overrunning clutch sub-assembly per instructions contained in the Handbook of Maintenance Instructions (CSP-HMI-2, Section 63-10-00 for 369D/E/FF/500N) or (CSP-H-2, Section 9 for 369H).
- C. Inspect outer race and record serial number of outer race in Log Book.

#### NOTE

Serial numbers are clearly vibroscribed on outer surface of the outer race on affected parts. (See Figure 1.)

**D.** If the outer race serial number is not 0692 thru 0927, proceed to step F. If the outer race serial number is 0692 thru 0927, proceed to step E.



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**E.** Replace outer race of overrunning clutch assembly per Part CSP-COM-5 (369D/E/F/500N) or Basic HMI, Appendix C (369H).

**F.** Reinstall clutch sub-assembly into clutch housing per CSP-HMI-2, Section 63-10-00 (369D/E/FF/500N) or Section 9 of HMI (369H).



Ensure that clutch sub-assembly retaining ring is installed WITH BEVELED SIDE OUTWARD.

- **G.** Check clutch oil level per the applicable HMI.
- 3. **DISPOSITION OF PARTS REMOVED:** RETURN TO MDHI.
- 4. COMPLIANCE RECORD:

Record compliance to this Service Bulletin in the Compliance Record section of the helicopter Log Book.

POINTS OF CONTACT: For further assistance, contact your local MDHI Field Service Representative (refer to the Business Development and Customer Support handbook for address and telephone numbers) or contact the Field Service Department at MDHI, Mesa, Arizona. Telephone: 1-800-388-3378 or (602) 891-6342. DATAFAX: (602) 891-6782.

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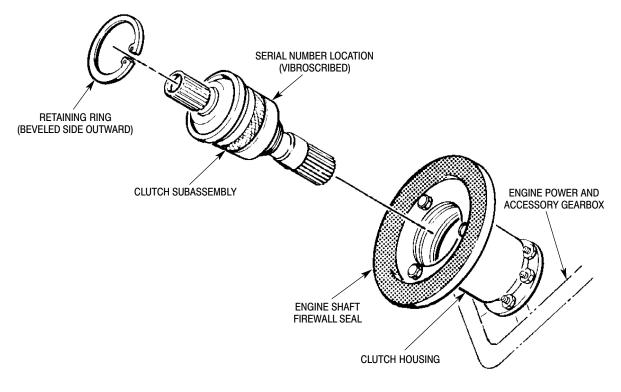


Figure 1. Inspection of Overrunning Clutch Assembly Outer Race.

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