



DN-190  
EN-83  
FN-70  
NN-011

# SERVICE BULLETIN

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## OVERRUNNING CLUTCH INSPECTION

### 1. PLANNING INFORMATION:

#### A. Aircraft Affected:

All McDonnell Douglas Helicopter Systems (MDHS) Model 369D, 369E, 369FF and 500N Series Helicopters.

#### B. Assembly/Components Affected by this Notice:

Overrunning Clutch Assemblies (P/N 369F5450-501).

#### C. Time of Compliance:

This Notice shall be accomplished as follows:

For helicopters with less than 100 hours of operation with the affected 369F5450-501 clutch assembly: After the initial 100 hours of operation and at each subsequent 100 hours of operation.

For helicopters with more than 100 hours of operation with the affected 369F5450-501 clutch assembly: Within the next 25 hours of helicopter operation and at each subsequent 100 hours of operation.

#### D. Reason:

To ensure the proper operation of the overrunning clutch assembly. Failure to accomplish the requirements of this Notice may result excessive vibration and wear of clutch components and possible loss of power to the helicopter drive system.

#### E. Description:

Procedures in this Notice provide owners and operators with information to inspect and, if necessary, replace the overrunning clutch assembly.

#### F. FAA Approval:

The technical design aspects of this Service Bulletin are FAA Approved.

#### G. Manpower:

2.0 man-hours to perform the inspection of the clutch. 14.0 man-hours if the overrunning clutch assembly has to be replaced.

#### H. Material/Part Availability:

Contact MDHS Warranty and Repair Department.

PARTS/SUPPLIES REQUIRED FOR REPLACING A 369F5450-501 CLUTCH ASSEMBLY			
Nomenclature	Part No.	Qty.	Source
Overrunning Clutch Assembly	369F5450-501	1	MDHS

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PARTS/SUPPLIES REQUIRED FOR REPLACING A 369F5450-1 CLUTCH SUB-ASSEMBLY			
Nomenclature	Part No.	Qty.	Source
Overrunning Clutch Sub-Assembly	369F5450-1	1	MDHS

PARTS/SUPPLIES REQUIRED WHEN REPLACING A 369F5450-501 WITH A NEW 369A5350-605 CLUTCH ASSEMBLY			
Nomenclature	Part No.	Qty.	Source
Overrunning Clutch Assembly	369A5350-605	1	MDHS
Coupling	369H5660	1	MDHS
Coupling Bolt	369A5528	1	MDHS
Shims	369A5526	2	MDHS
Bolt	NAS1104-4	4	MDHS
Washer	AN960KD416L	4	MDHS
Seal Assembly	369A8005-503	1	MDHS
Packing	NAS1593-017 or M83248/1-017 (Alternate)	1	MDHS

**I. Parts Policy:**

MDHS will provide a replacement 369F5450-1, -501 or a new 369A5350-605 clutch assembly and hardware as required. Return worn/spun 369F5450-1 or -501 clutch assemblies to MDHS Warranty and Repair Department. Refer to the parts request form at the end of this Bulletin.

**J. Weight and Balance:**

369F5450-501 = 7.98 lbs. 369A5350-605 = 5.38 lbs.

**K. Electrical Load Data:**

N/A

**L. Other Publications Affected:**

N/A

**2. ACCOMPLISHMENT INSTRUCTIONS:**

Refer to Figure 1.

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- (1). Gain access to the overrunning clutch.
- (2). Remove 369F5450-1 overrunning clutch sub-assembly from housing (Ref. CSP-HMI-2, Section 63-10-00).
- (3). Inspect clutch as follows:
  - (a). Visually inspect 369F5460-1 retainer, 369F5461-1 carrier and 369F5451-1 housing at MS16556-801 pin and shoulder for indications of wear from excessive spinning.

**NOTE:** 369F5461-1 carrier slot may not be in line with the slot in the 369F5460-1 retainer. As long as no wear is observed on the carrier or 369F5451-1 housing, this relative movement is acceptable.

- (b). **Condition A:** If inspection reveals existence of either of the two following situations, the 369F5450-501 clutch assembly is to be replaced with serviceable 369F5450-501 or a new/serviceable 369A5350-605 clutch assembly (Ref. CSP-HMI-2, Section 63-10-00).

- 1). 369F5451-1 clutch housing wear and/or MS16556-801 pin damage.
- 2). 369F5461-1 carrier wear.

- (c). **Condition B:** If inspection reveals existence of only the following situation, with no damage to the 369F5451-1 clutch housing and MS16556-801 pin, the currently installed 369F5450-1 clutch sub-assembly is to be replaced with a serviceable 369F5450-1 clutch sub-assembly.

- 1). Yielded material in the 369F5460-1 retainer outside diameter slotted area which interfaces with the MS16556-801 pin in the 369F5451-1 housing

**NOTE:** Installation of a new/serviceable 369A5350-605 or serviceable 369F5450-501 clutch assembly requires removal of the engine.

- (d). Record aircraft serial number, clutch serial number, run time on clutch and date of inspection.
- (4). If no wear, indication of spinning or pin damage is observed, reinstall 369F5450-1 overrunning clutch sub-assembly into 369F5451-1 housing.
- (5). Upon reaching 100 hours of additional operation time, return to step 2.(1). and proceed accordingly.

### 3. DISPOSITION OF PARTS REMOVED:

Return to MDHS.

### 4. COMPLIANCE RECORD:

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

### 5. POINTS OF CONTACT:

For further assistance, contact your local MDHS Field Service Representative (refer to the "At Your Service" handbook for address and telephone numbers) or contact the Field Service Department at MDHS, Mesa, Arizona. Telephone: 1-800-388-3378 or (602) 891-6342. DATAFAX: (602) 891-6782.

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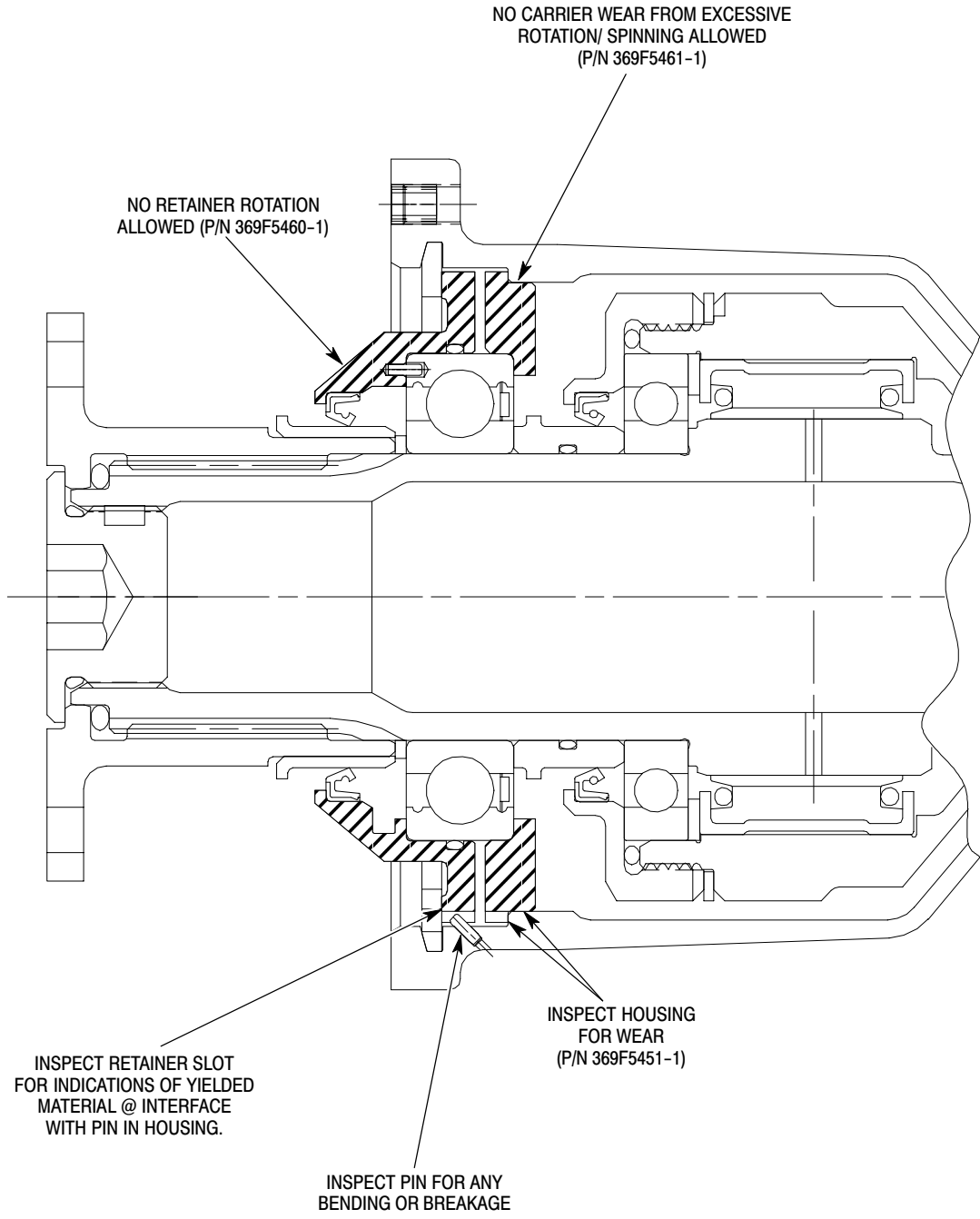


Figure 1. Inspection of Overrunning Clutch Assembly.

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**PARTS REQUEST FORM:** Please fill in the following information and return to MDHS for parts/supplies required for compliance. This form may be faxed to MDHS Warranty and Repair Department at (602) 891-3952.

Aircraft Ser. No. \_\_\_\_\_

Aircraft Total Time \_\_\_\_\_

Date \_\_\_\_\_

Part Ser. No. (if required) \_\_\_\_\_

Ship to:

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