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DATE: 27 OCTOBER 1978

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OVERRUNNING CLUTCH ASSEMBLY, PN 369A5350-603 – REWORK INSPECTION OF PN 369A5350-11 CLUTCH SUBASSEMBLY AND PN 369A5361 BALL BEARING PERIODIC INSPECTION OF PN 369A5350-21 CLUTCH SUBASSEMBLY

1. PLANNING INFORMATION:

A. Models Affected:

All Model 369A(YOH-6A); 369H. HE. HM, and HS Helicopter Serial No. 0201 and subsequent equipped with PN 369A5350-603 Overrunning Clutch Assembly.

All new and overhauled PN 369A5350-603 Overrunning Clutch Assemblies and PN 369A5350-11 Clutch Sub-assemblies in Spares Inventory.

B. Time of Compliance:

PART I Shall be accomplished within next 10 hours of helicopter operation.

Shall be accomplished prior to installation of Spares clutch assembly or subassembly on helicopter.

PART II - Shall be accomplished at each 300-Hour Periodic Inspection interval.

C. Preface:

PART I of this Service Information Notice lists a procedure for purging the existing grease used on the PN 369A5361 ball bearing in the PN 369A5350-11 clutch subassembly, and repacking the bearing with Aeroshell 22 or Mobil 28 grease to ensure that proper grease is used in the bearing. Upon completion of initial regreasing of the PN ball bearing per Part I of this Notice, the suffix letter "G" is to be added to the Serial Number on the ID plate of the clutch subassembly. A conditional engine-to-transmission alignment check is also included.

Instructions are also provided for replacement of the PN 369A5368 clutch retainer seal with a new PN 369A5368-3 seal. With the -3 seal installed, the PN 369A5350-11 clutch subassembly is reidentified as the PN 369A5350-21 configuration.

PART II of this Notice lists -a procedure for periodic inspection and releasing of the PN 369A5350-21 overrunning clutch assembly. to be accomplished at each 300-Hour Periodic Inspection Interval.

D. FAA Approval:

FAA Approved.

E. Weight and Balance:

Weight and balance not affected

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F. Reference Publications:

- 500 Series - Basic HMI, Issued 1 Oct 1972; Revision No. 7, 15 Dec 1976
- 500 Series - HMI Appendix B, Issued 1 Oct 1972a; Revision No. 6, 1 Aug 1976
- 500 Series - I-HMI Appendix C, Issued 1 Oct 1972; Revision No. 1, 1 Aug 1976
- 500 Series - HMI Appendix D, Issued 1 Oct 1973
- FAA Airworthiness Directive, Telex dated 31 Aug 1977
- FAA Airworthiness Directive 77-21-04, dated 11 Oct 1977;
- Amendment 39-3057, effective 23 Nov 1977

MATERIAL	
Nomenclature	Source
Grease (Aeroshell 22 or Mobil 28)	Shell Oil Co. or Mobil Oil Co.
Solvent (Varsol or equivalent)	Commercial

2. PART I – INITIAL REWORK

NOTE: Rework and inspection per Part I of this Notice is NOT applicable to PN 369A5350-21 clutch subassembly.

- (1). Remove clutch subassembly PN 369A5350-11 per Basic HMI.
- (2). Check serial number on ID plate on retainer of clutch subassembly

NOTE: The clutch subassembly serial number consists of six or seven digits. The first two or three digits indicate date of manufacture (i.e., 77 indicates July 1977; 116 indicates November 1976). The last four digits indicate sequence of manufacture and are to be considered as the basic serial number of the clutch subassembly.

1. If the basic serial number (last four digits) of the clutch subassembly is 4836 or lower and does not
 2. have both suffix letter "G" and suffix letter "S" following the serial number, rework the subassembly per steps c, thru q below.
3. If the basic serial number (last four digits)of the clutch subassembly is 4837 or higher, or if a lower serial number has both suffix letters "G" and "S", perform the following:
 - (a) As applicable, reidentify 369A5350-11 clutch assembly to -21 configuration on ID plate on forward side of retainer.
 - (b) Perform Part II of this Notice only.
- (3). Temporarily install coupling bolt, to maintain internal fluid.
- (4). Remove clutch retainer to expose 369A5361 ball bearing (see Figure 1).
- (5). Check 369A5361 ball bearing for excessive loss of grease.

NOTE

NOTE: If ball bearing is dry or grease is caked, inspect bearing as follows:

1. Inspect ball bearing for roughness, pitting, scoring, or discoloration from overhearing. Replace bearing, if any of the above is noted.
2. Check for bearing preload. If no discernible radial play is noted in the bearing, remove bearing per HMI Appendix C and measure journal OD. If OD of journal exceeds 1. 2505 inches, return clutch subassembly to HH for rework.

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- (6). Using solvent and brush, thoroughly remove existing grease from both bearing and retainer. Do NOT use compressed air to remove grease from -ball bearing. Inspect bearing for condition; if roughness, pitting, or scoring is noted, replace bearing.

NOTE: 1. New 369A5368 seals in spares may be upgraded to 369A5368-3 configuration by removing garter spring from seal.

2. Used 369A5368 seals may NOT be reworked to the 369A5368-3 configuration.

3. Installation of 369A5368-3 seal upgrades 369A5350-11 clutch subassembly to -21 configuration.

- (7). Remove existing 369A5368 seal and install new 369A5368-3 seal in retainer. Indicate new -3 seal installed by reidentifying 369A5350-11 clutch subassembly to -21 configuration in ID plate on forward side of retainer. (See Note above.)
- (8). Repack bearing 50 percent of capacity with Aeroshell 22 or Mobile 28 grease by packing open side of bearing level without forcing grease through bearing
- (9). Fill void in retainer 75 percent full with grease; reinstall retainer, Flat side ~f retainer faces unit; bevel side is out.

NOTE: Some clutch subassemblies may also have suffix letter "T" following serial number,

(10). Add suffix letter "G" to Serial Number on ID plate of subassembly (after suffix letter "T" as applicable).

(11). Coat clutch splines with Aeroshell 22 or Mobil 28 grease; carefully insert clutch subassembly into housing and secure with retaining ring.

(12). Remove coupling bolt, as applicable.

(13). Check oil level, per Basic HMI.

(14). Reinstall clutch coupling; torque coupling bolt to no less than 250-300 inch - pounds.

NOTE: If excessive loss of grease was noted in ball bearing in step 5, perform engine-to-transmission alignment check per HMI Appendix D. Remedy cause of misalignment, where noted.

(15). Reinstall main transmission drive shaft and other removed components, per Basic HMI.

(16). Record upgrade of 369A5350-11 clutch subassembly to -21 configuration in Component Record of helicopter Log Book.

(17). Record compliance with Part I of this Service Information Notice in Compliance Record of helicopter Log Book.

3. PART II- PERIODIC INSPECTION

- (1). Remove clutch subassembly PN 369A5350-21 per Basic HMI.
- (2). Temporarily install coupling bolt, to maintain internal fluid.
- (3). Remove clutch retainer to expose 369A5361 ball bearing (See Figure 1).
- (4). Check 369A5361 ball bearing for excessive loss of grease.

NOTE: If ball bearing is dry or grease is caked, inspect bearing as follows:

1. Inspect ball bearing for roughness pitting or scoring; or discoloration from overheating. Replace bearing, if any of the above is noted.

2. Check for bearing preload. If no discernible radial play is noted in the bearing, remove bearing per HMI Appendix C and measure journal OD. If OD of journal exceeds 1. 2505 inches, return clutch subassembly to HH for rework.

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- (5). Using solvent and brush, thoroughly remove existing grease—from both bearing and retainer. Do NOT use compressed air to remove grease from ball bearing. Inspect bearing for condition; if roughness, pitting or scoring is noted, replace bearing. Inspect 3(369A5368-3 seal in retainer; replace seal if cracked, broken, worn, or shows evidence of excess heating.
- (6). Repack bearing 50 percent to capacity with Aeroshell 22 or Mobil 28 grease by packing open side of bearing level without forcing grease through bearing cage.
- (7). Fill void in retainer 75 percent full with grease; reinstall retainer. Flat side of retainer faces unit; bevel side is out.
- (8). Coat clutch splines with Aeroshell 22 or Mobil 28 grease; carefully insert clutch subassembly into housing and secure with retaining ring.
- (9). Remove coupling bolt; check oil level per Basic HMI.
- (10). Reinstall clutch coupling; torque clutch coupling bolt to no less than 250- 300 inch-pounds.

NOTE

NOTE: If excessive loss of grease was noted in ball bearing in step 4, perform engine-to-transmission alignment check, per HMI Appendix D. Remedy cause of misalignment where noted.

- (11). Reinstall main transmission drive shaft and other removed components, per Basic HMI.
- (12). Record compliance with Part II of this Service Information Notice in Compliance Record of helicopter Log Book.

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NOTE

CLUTCH SUBASSEMBLY SERIAL NUMBER IS LOCATED ON ID PLATE ON FORWARD SIDE OF RETAINER.

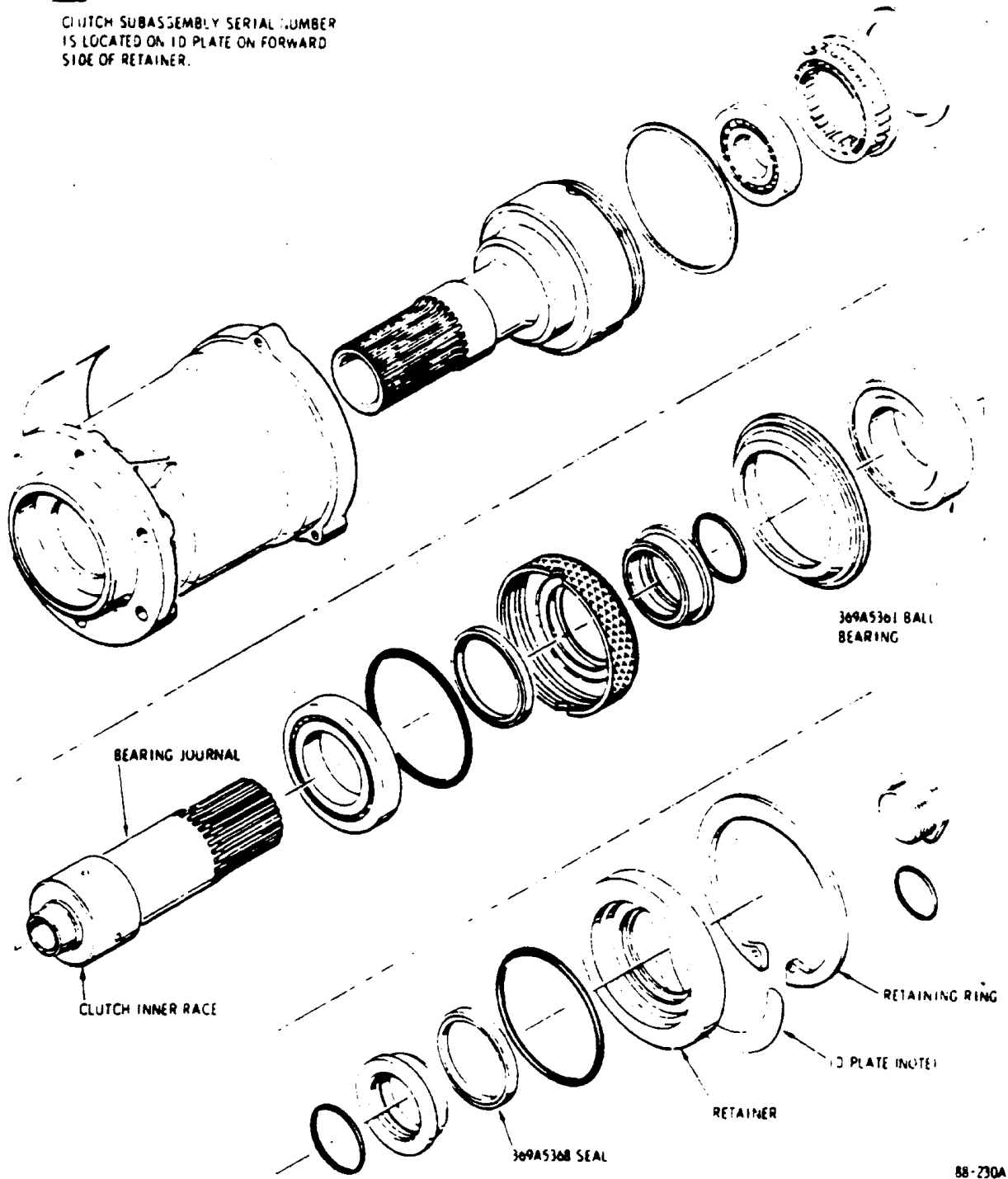


Figure 1. Overrunning clutch assembly.