



# TECHNICAL BULLETIN

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## FIELD REPAIR – CYCLIC TRIM ACTUATOR ASSEMBLIES, PN 369A7170 SERIES AND PN 369A7171 SERIES\*

### 1. PLANNING INFORMATION

#### A. Models Affected

500D Model 369D Helicopter Serial No. 0003D through 0439D.

All spares trim actuator assemblies with actuator having Calco Part Number and Serial Number listed below:

Calco P/N	Calco S/N
8222M7*	212 or below
8222M6*	860 or below

\*Actuators identified with letter "R" following Calco Part Number on housing are NOT affected by this Notice.

#### B. Time of Compliance

At owners and operators discretion.

#### C. Preface

Tests at HH indicate that loosening of the drive gear retention nut of the cyclic trim actuator may occur. The information given in this Service Information Notice lists procedures to remove and reinstall the retention nut with a Loctite sealant. In addition, procedures are given to determine whether the actuator is inoperative due to a stalled rather than an electrical failure.

It is to be noted that the helicopter can be operated safely with the trim actuators inoperative, even at the extreme of trim travel.

For helicopters not experiencing any problems with the trim actuators, it is recommended that at owners and operators discretion the actuator be reworked per this Notice at the next major inspection period.

#### D. Reference

500D Basic HMI – Vol I, Issued 15 September 1976; Revision No. 2, 27 November 1978

#### E. Weight and Balance

Weight and balance not affected.

#### F. FAA Approval

The technical design aspects of this Bulletin are FAA Approved.

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## 2. ACCOMPLISHMENT INSTRUCTIONS

### A. Tools, Equipment, and Materials

TOOLS AND EQUIPMENT	
Nomenclature	Source
DC Milliammeter, 0 – 5 amperes	Weston Model 931 or equivalent
DC Voltmeter, 0 – 50 volts	Weston Model 931 or equivalent
Variable DC Power Supply, 10 – 36 volts	NJE Model SY 36–10 or equivalent

MATERIAL	
Nomenclature	Source
Sealant; Loctite #290	Loctite, Inc.

### B. Procedure

#### NOTE:

- Rework of operative trim actuators is recommended at major inspection period.
  - Rework is NOT applicable to actuators having letter “R” following vendor part number on actuator housing.
- (1). Remove cyclic trim actuator from helicopter, per Basic HMI – Vol I.
    - (a). If actuator is inoperative, bench test unit to determine whether mechanical (stalled), electrical or other mechanical failure exists.
      - 1). A reading of 0.0 to 0.1 amperes indicates electrical failure; replace actuator.
      - 2). The motor runs, but the output shaft does not move, indicates a mechanical failure; replace actuator.
      - 3). A reading of 0.7 amperes (approximately), or actuator extends part way and stalls, indicates stalled failure; rework actuator per steps (2). through (8). below.
  - (2). Remove lockwire and six screws securing actuator cover to housing.



When removing housing, note location and number of shims on each gear for reassembly in proper location.

**NOTE:** Step (3). not applicable if actuator is operative. Perform steps (4). through (8). below.

- (3). Using fingers only, check gear drive retention (hex) nut for looseness. If nut is loose, rework per instructions below. If nut is NOT loose, replace actuator assembly.
- (4). Remove nut and clean threads. Reinstall nut using Loctite #290 on threads. Torque nut to 30 to 40 inch-pounds.
- (5). Reinstall actuator cover with existing screws; lockwire screws.



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- (6). Add letter "R" at end of vendor part number on actuator housing.
- (7). As applicable, reinstall trim actuator, per Basic HMI - Vol I.
- (8). Record rework of trim actuator per this Notice in Components Record of helicopter Log Book.