



TECHNICAL BULLETIN

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REWORK OF TURBINE OUTLET TEMPERATURE (TOT) INDICATOR, PN 369A4521-5; AND TORQUE PRESSURE INDICATOR, PN 369H4526-5

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D thru 0212D, 0214D thru 0225D and 0227D thru 0229D.

All subject TOT and Torque Pressure Indicators in Spares Inventory for Model 369D Helicopter

B. Preface:

The information given in this Service Information Notice provides instructions for optional rework of the PN 369A4521-5 TOT indicator to the current 369A4521-7 configuration, and the PN 369H4526-5 Torque Pressure indicator to the current 369H4526-7 configuration, to allow the usage of higher TOT temperatures at 320 horsepower or less, so that operators may have an additional advantage on hot day conditions.

Certification of the Model 369D helicopter was performed at a maximum continuous power setting of 779° C, and the helicopter is fully capable of operating continuously at that power setting.

The engine manufacturer, however, specifies that if the engine is operated continuously at 74.3 PSI torque pressure (320 HP) or less, the maximum TOT is 755°C. The torque pressure indicator is therefore marked with a blue dot at 74.3 PSI and the TOT indicator with a yellow arc from 755°C to 810° C.

For continuous power in excess of 74.3 PSI but not exceeding 81.3 PSI, the maximum TOT is 738°C. The TOT indicator is thus also marked with a blue dot at 738° C.

It is to be noted that if the engine is operated in excess of the above values, the engine warranty will not be honored by DDA. The new TOT and torquepressure data are incorporated in the below referenced revision to the Model 369D Rotorcraft Flight Manual

C. Time of Compliance:

At owners and operators discretion

D. FAA Approval:

FAA APPROVED

E. Weight and Balance:

Weight and balance not affected

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F. Reference Publications:

Model 369D Basic HMI-Vol 1, Issued 15 September 1976; Revision No. 1, 15 November 1977

Model 369D FAA Approved Rotorcraft Flight Manual, Revised 1 February 1978 Detroit Diesel Allison Engine Operation and Maintenance Manual, 10W2

MATERIAL	
Nomenclature	Source
Paint, red (FED-STD-595) No. 11136	Commercial
Paint, white (FED-STD-595) No. 17875	Commercial
Paint, blue (FED-STD-595) No. 15123	Commercial
Paint, green (FED-STD-595) No. 14260	Commercial
Paint, black (FED-STD-595) No. 37078	Commercial

2. PART I — REWORK PROCEDURE FOR TORQUE PRESSURE INDICATOR

- (1). Rework PN 369H4526-5 torque pressure indicator to the 369H4526-7 configuration as follows: (See Figure 1.)
 - (a). Clean and wipe dry the glass face of indicator; apply a 0.06 inch diameter blue dot on glass face of torque pressure indicator at 74.3 PSI as shown.
 - (b). Apply a 0.06 inch wide white slippage mark on glass face and indicator housing at three o'clock position as shown.
 - (c). Reidentify instrument with PN 369H4526-7.
- (2). Record rework of PN 369H4526-5 torque pressure indicator to 369H4526-7 configuration in Components Record of helicopter Log Book.

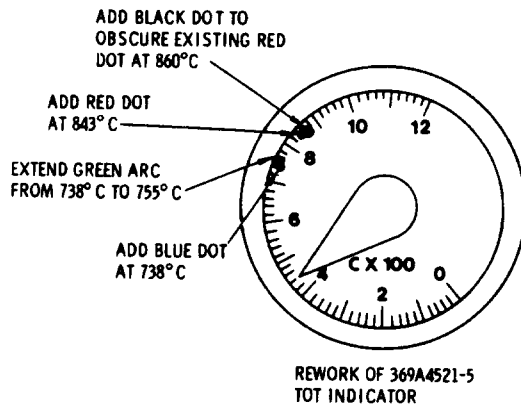
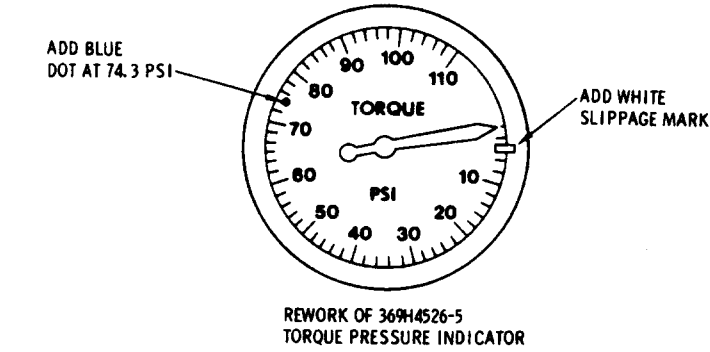
3. PART II – REWORK PROCEDURE FOR TOT INDICATOR

NOTE: The TOT indicator is hermetically sealed and must be evacuated and protected by trained personnel. If the instrument is unsealed by any facility other than an Inscó-approved repair station, the vendor warranty is automatically voided.

- (1). As applicable, remove TOT indicator from helicopter. (Refer to Basic HMI-Vol 1.)
- (2). Rework PN 369A4521-5 TOT indicator to the 369A4521-7 configuration as follows: (See Figure 1.)
 - (a). Using soldering iron, soften solder bond at center of instrument. Peel off strap and retain. Remove screws from case and remove instrument from case.
 - (b). Re-mark indicator dial to extend green arc from existing 738°C to 755° C; width of green arc is 0.100 inch.
 - (c). Apply a 0.06 inch diameter blue dot on indicator dial at 738° C.

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Figure 1. Rework of TOT Indicator and Torque Pressure Indicator

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- (d). Apply a 0.06 inch diameter red dot on indicator dial at 843° C as shown.
 - (e). Apply a 0.06 inch diameter (or larger) black dot to obscure existing red dot on dial at 860° C.
- (3). Check TOT indicator as follows:
- (a). Red line at 810°C
 - (b). Yellow arc from 755°C to 810°C
 - (c). Green arc from 360°C to 755°C
 - (d). Red dot at 843°C (refer to DDA Engine Operation and Maintenance Manual)
 - (e). Blue dot at 738°C
- (4). Insert instrument in case and secure with existing screws and strap. Apply solder bond at center of instrument.
- (a). Reidentify instrument with PN 369A4521-7.
- (5). Reinstall TOT indicator, per Basic HMI-Vol 1.
- (6). Perform calibration check of TOT indicating system, per Basic HMI-Vol 1..
- (7). Record rework of PN 369A4521-5 TOT indicator to 369A4521-7 configuration in Components Record of helicopter Log Book.