

ALERT SERVICE BULLETIN

Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

NO. 222-03-95

DATE June 26, 2003

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| |
|-------------|
| DATE |
| REV |

MODEL AFFECTED: 222 and 222B

SUBJECT: HONEYWELL LTS 101 ENGINE, INSPECTION OF FUEL PUMP INTERNAL DRIVE SPLINES.

HELICOPTERS AFFECTED: Model 222 helicopters serial number 47006 through 47089.

Model 222B helicopters serial number 47131 through 47156.

COMPLIANCE: In accordance with Honeywell Service Bulletin No. LTS101-73-20-0229

DESCRIPTION:

Honeywell has released Service Bulletin No. LTS101-73-20-0229 for the inspection of the fuel pump internal drive splines.

To avoid excessive internal spline wear, which may result in fuel pump failure and engine shutdown, a repetitive inspection of the fuel pump internal splines at 300 hours intervals is being introduced

Failure to comply with the service bulletin could result in distress of the fuel pump internal splines. This distress could result in a loss of engine power.

APPROVAL:

Not Required

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MANPOWER:

Refer to Honeywell Service Bulletin No. LTS101-73-20-0229 for manpower estimate for the inspection of the fuel pump drive splines.

MATERIAL:

Refer to Honeywell Service Bulletin No. LTS101-73-20-0229.

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not Affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

Honeywell Service Bulletin No. LTS101-73-20-0229.

PUBLICATIONS AFFECTED:

None affected

ACCOMPLISHMENT INSTRUCTIONS:

1. Comply with Honeywell Service Bulletin No. LTS101-73-20-0229.

Honeywell SERVICE BULLETIN

Engines, Systems & Services

Category 1: Safety

FUEL SYSTEM – INSPECTION OF FUEL PUMP INTERNAL DRIVE SPLINES

1. PLANNING INFORMATION

A. EFFECTIVITY

| <u>Part No.</u> | <u>Engine Model No.</u> | <u>Serial No.</u> | <u>Aircraft Application</u> |
|-----------------|-------------------------|-------------------|-----------------------------|
| 4-001-000-16 | LTS101-600A-2 | All | Aerospatiale AS350 |
| 4-001-000-26 | LTS101-600A-3 | All | Aerospatiale AS350 |
| 4-001-000-31 | LTS101-600A-3A | All | Aerospatiale AS350 |
| 4-001-000-12 | LTS101-650B-1 | All | BK117 |
| 4-001-000-25 | LTS101-750B-1 | All | BK117 |
| 4-002-000-05 | LTS101-650C-3 | All | Bell 222 |
| 4-002-000-07 | LTS101-650C-3A | All | Bell 222 |
| 4-002-000-06 | LTS101-750C-1 | All | Bell 222 |

- (1) All LTS101-650C-3, 650C-3A, and 750C-1 Gas Turbine Engines which incorporate Honeywell Fuel Pump Part No. 4-302-014-09 and 4-301-523-01.
- (2) All LTS101-750B-1, LTS101-600A-2/-3/-3A, and LTS101-650B-1/-750B1 Gas Turbine Engines which incorporate Honeywell Fuel Pump Part No. 4-301-128-12 or 4-301-377-03.

B. REASON

Inspections of "lead the fleet" fuel pumps returned at 600 to 1200 hour intervals disclosed excessive internal drive spline wear on some of the returned pumps. To avoid excessive internal spline wear, which may result in fuel pump failure and engine shutdown, a repetitive inspection of the fuel pump internal spline at 300 hour intervals is being required.

WARNING: FAILURE TO COMPLY WITH SERVICE BULLETIN COULD RESULT IN DISTRESS OF THE FUEL PUMP INTERNAL SPLINES. IF LEFT UNCORRECTED, THIS DISTRESS COULD RESULT IN A POTENTIAL LOSS OF ENGINE POWER AND CAUSE SERIOUS INJURY OR DEATH TO PERSONNEL AND DAMAGE TO THE AIRCRAFT.

C. DESCRIPTION

This Service Bulletin provides a drawdown schedule and required interval for fuel pump spline inspections.

D. COMPLIANCE

Compliance addresses a safety of flight issue. Compliance to be accomplished in accordance with the drawdown schedule shown in Table 1. Compliance requires an initial 300 hour pump inspection followed by repetitive 300 hour, time between inspection or time since last inspections. The 10 percent extension of inspection interval authorized in the maintenance manual for inspections does not apply to this inspection.

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Table 1. Fuel Pump Inspection Drawdown Schedule

| Fuel Pump Part No. | Current Fuel Pump Time | Comply Within |
|--------------------|----------------------------|---|
| 4-301-128-12 | Since New, Overhaul, Time | |
| 4-301-523-01 | Between Inspection or Time | |
| 4-302-014-09 | Since Last Inspection | |
| 4-301-377-03 | | |
| | 0 to 250 Hours | Not to exceed 300 hours pump time since new, last overhaul, time between inspection, or time since last inspection. |
| | 251 to 1150 Hours | 50 Hours |

For pumps inspected and returned to service time to continue, Goodrich Pump and Engine Control System (GPECS) compliance is shown through stamping the number 3 at the end of the part number line of the identification plate to signify a 300 hour inspection followed by the number representing the inspection sequence.

Example: 31 – 1st 300 hour inspection
 32 – 2nd 300 hour inspection
 33 – 3rd 300 hour inspection
 etc.

E. APPROVAL

The accomplishment instruction section of this Service Bulletin has been FAA approved.

F. MANPOWER

Approximately 2.5 manhours to remove and replace fuel pump.

G. MATERIAL – COST AND AVAILABILITY

(1) Contact GPECS for cost and inspection lead-time or availability of exchange fuel pump. Shipments and inquiries should be sent to one of the following addresses:

GPECS
 Control Systems Division
 Talcott Road
 West Hartford, CT 06110
 Attn.: Program Administrator
 Telephone: (860) 523-2202
 Fax: (860) 532-2237

Goodrich Control Systems
 GMBH
 Bataverstrasse 80
 4040 Neuss Rhein
 Germany
 Attn.: Program Administrator
 Telephone: (49) 2101-5230
 Fax: (49) 2101-523-445

(2) Refer to Customer Service Letter (CSL) 145 for additional information.

H. TOOLING – PRICING AND AVAILABILITY

Refer to applicable Maintenance Manual for tooling requirements.

I. WEIGHT AND BALANCE.

None.

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J. ELECTRICAL LOAD DATA.

Not changed.

K. REFERENCES

- (1) GPECS Service Bulletin No. 73-13, Revision 4, Engine Fuel and Control – Main Fuel Pump, Inspection of the Drive Shaft Assembly Splines and Service Bulletin 73-16, GPECS Models MFP-261 and MFP-265 Main Fuel Pump.
- (2) The following publications, based on engine model, should be used for accomplishment of this Service Bulletin.

| <u>Overhaul Manual</u> | <u>Maintenance Manual</u> | <u>Illustrated Parts Catalog</u> |
|------------------------|---------------------------|----------------------------------|
| LTS101-3 | LTS101-2.1 | LTS101-4.1 |
| | LTS101-2.2 | LTS101-4.2 |
| | LTS101-2.3 | LTS101-4.4 |
| | LTS101-2.4 | LTS101-4.8 |
| | | LTS101-4.9 |

L. OTHER PUBLICATIONS AFFECTED

Applicable Illustrated Parts Catalogs and Maintenance Manuals.

M. FAMILY TREE CHARTS OF MODIFICATION RELATIONSHIPS

None.

NOTE: To obtain satisfactory results, procedures in this publication must be accomplished in accordance with accepted industry maintenance practices and prevailing government regulations. Honeywell is not responsible for the quality of work performed in complying with this publication unless Honeywell performs such work. Such responsibility rests with the entity performing the work and the owner or operator.

2. ACCOMPLISHMENT INSTRUCTIONS

CAUTION: FUEL CONTROL MUST BE POSITIONED ABOVE FUEL PUMP DURING DISASSEMBLY OF PUMP AND CONTROL. THIS WILL PREVENT FUEL LEAKAGE INTO FUEL CONTROL DRIVE BEARING CAVITY, AND PREVENT BLUE GREASE CONTAMINATION.

NOTE: Refer to the applicable engine maintenance or overhaul manual sections for removal and assembly procedures.

- A. Remove affected fuel pump in accordance with instructions in the applicable maintenance manual.
- B. Return affected fuel pump with corresponding Component Record Card to GPECS.

CAUTION: TO PREVENT LEAKAGE ENSURE THAT NEW PACKING, PART NO. M25988/1-012, IS PROPERLY INSTALLED ON FUEL PUMP BY-PASS PORT PRIOR TO INSTALLATION OF FUEL CONTROL.

- C. Install fuel pump in accordance with instructions in the applicable maintenance manual.

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- D. Compliance with this Service Bulletin must be recorded in the engine logbook when Fuel Pump Part No. 4-301-128-12, 4-302-014-09, 4-301-377-03 or 4-301-523-01 with serial number followed by the suffix 31, 32, 33, etc. and subsequent inspection designations are installed on engine.
- E. Complete and return Notice of Service Bulletin Compliance (attached).

NOTICE OF SERVICE BULLETIN COMPLIANCE

Honeywell Engines, Systems & Services
111 S. 34th Street
P.O. Box 52181
Phoenix, AZ , 85072-2181 USA

Attention: Manager, Customer Support Engineering (LT 101)
Mail Stop 404-246

Dear Sir:

This is to inform you that the Service Bulletin has been complied with as indicated below:

SERVICE BULLETIN _____ REVISION _____ DATE _____
Engine Model _____ Serial # _____ Hours _____ Cycles _____

FOLD

HERE

FOLD

HERE

Fan Model _____ Serial # _____ Hour _____ Cycles _____

GP Module _____ Serial # _____ Hour _____ Cycles _____

CT Module _____ Serial # _____ Hour _____ Cycles _____

AGB Module _____ Serial # _____ Hour _____ Cycles _____

Components Removed:

Part Number _____ Serial # _____ Hour _____ Cycles _____

Aircraft Type _____ Serial # _____ Hour _____ Cycles _____

FOLD

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HERE

Very truly yours,

Signed: _____

Operator: _____

Location: _____

Date: _____

PLACE
STAMP
HERE

Honeywell Engines, Systems & Services
111 S. 34th Street
P.O. Box 52181
Phoenix, AZ 85072-2181, USA

Attention: Manager, Customer Support Engineering (LT 101)
Mail Stop: 404-246