

**ALERT SERVICE BULLETIN**



NO. 412-08-130  
DATE Jun 17, 2008  
PAGE 1

DATE
REV

**MODEL AFFECTED:** 412 / 412EP

**SUBJECT:** FLIGHT CONTROLS – HYDRAULIC SERVO ACTUATOR RECALL FOR UNDERSIZED RADIUS

**PART AFFECTED:** HR Textron P/N 41000570-007 (BHT P/N 212-076-004-101), S/N HR3836H through HR3846H inclusive, and HR3848H through HR3850H inclusive.

**COMPLIANCE:** See vendor bulletin.

**DESCRIPTION:**

The purpose of this bulletin is to achieve complete distribution of the attached vendor bulletin to the current affected model distribution list on record by Bell Helicopter.

**APPROVAL:**

See vendor bulletin approval.

## ALERT SERVICE BULLETIN

### FLIGHT CONTROLS – HYDRAULIC SERVO ACTUATOR RECALL FOR UNDERSIZED RADIUS

#### 1. Planning Information

##### A. Effectivity

This service bulletin applies to 14 serial numbers assigned to hydraulic servo actuator, HR part number 41000570-007 (BHTI part number 212-076-004-101), used to control the tail rotor on Bell 205, 212, and 412 aircraft. The affected serial numbers are as follows:

HR3836H through HR3846H, inclusive, and HR3848H through HR3850H, inclusive.

##### B. Reason


Fourteen new production actuators are to be inspected once within the next 2,500 flight hours for a suspected undersized radius condition on cylinder, part number 41004576 (part of cylinder housing assembly, part number 41004577). All 14 actuators were manufactured and delivered during the fourth quarter of 2007.

##### C. Description

The use of an out-of-tolerance grinding wheel in the manufacture of cylinder, part number 41004576, created an incorrect radius with a sharp edge and introduced a stress riser. Although the cylinders were rejected in inspection, they were incorrectly dispositioned as acceptable by the Material Review Board (MRB). Subsequent stress analysis determined that the stress riser significantly reduces the trunnion's life cycle.

##### D. Approval

HR Textron Engineering:

 08-06-11

##### E. Manpower

Not affected.

##### F. Material – Cost and Availability

There is no cost to the customer for this inspection and possible repair. Costs for return shipping can be charged to recipient (HR Textron) on the shipping waybill.

- G. Tooling  
Not affected.
- H. Weight and Balance  
Not affected.
- I. Electrical Load Data  
Not affected.
- J. References  
Not affected.
- K. Other Publications Affected

The intent of this service bulletin will be incorporated into the next revision of 67-32-06, Component Maintenance Manual with Illustrated Parts List (for) Hydraulic Servo Actuator 41000570 (HR) and 212-076-004 (Bell).

## **2. Accomplishment Instructions**

- A. Inspect Hydraulic Servo Actuator serial number to determine if it matches one of the 14 impacted serial numbers. If the serial number is not within the listed range, no further action is necessary.
- B. If actuator serial number is within the range, operator must remove suspect actuator from aircraft and return it to HR Textron. Mandatory deadline for removal is within the next six months, or when 2,500 flight hours have been accumulated (whichever occurs first).
  - (1) HR Textron will perform a partial disassembly and inspect the cylinder, part number 41004576. Not all 14 assemblies in the serial number range will contain the undersized radius.
  - (2) Defective cylinders will be replaced and the actuators will be reassembled and tested. Remaining actuators with no defect will be reassembled and tested with original cylinder.
  - (3) All actuators will be returned with a maximum Turn-Around Time (TAT) of 14 days.
  - (4) All 14 actuators within the serial number range will be identified as being service bulletin-compliant. This service bulletin number (67A-05) will be impression-stamped onto existing modification plate 48088996-001.
- C. Send returned actuators to HR Textron Product Support, attention Eric Liu, at:  
HR Textron, 25200 W. Rye Canyon Road, Santa Clarita, CA 91355-1265.