

ALERT SERVICE BULLETIN

430-13-51

PSL7000000051

3 September 2013

**MODEL AFFECTED:** 430

**SUBJECT:** P/N 430-001-007-101, TAIL ROTOR CONTROL TUBE ASSEMBLY MODIFICATION.

**HELICOPTERS AFFECTED:** Serial numbers 49001 through 49121.

Serial numbers 49122 and subsequent were equipped with control tube assembly P/N 430-001-007-105 prior to delivery and are not affected by this bulletin.

Helicopters equipped with control tube assembly P/N 430-001-007-105 per Technical Bulletin 430-04-35 are not affected by this bulletin.

**COMPLIANCE:** As soon as practical but no later than next 50 hour inspection or **31 October 2013** whichever occurs first.

**DESCRIPTION:**

Bell Helicopter has received 2 reports of P/N 430-001-007-101 control tube assembly bonded clevis failure. Investigation revealed that the clevis failed due to fatigue caused by oscillation of the control tube assembly.

This Alert Service Bulletin introduces a one-time inspection of control tube assembly P/N 430-001-007-101 to verify if chaffing damage exists on the tube. In addition, procedure is provided to apply some lead tape to the control tube. This modification will reduce the amplitude of radial vibration and prevent contact of the tube with adjoining parts and structure.

Previously, Technical Bulletin 430-04-35 was issued to replace the P/N 430-001-007-101 with a new -105 control tube assembly. As soon as sufficient parts become available, a revision to this bulletin will require mandatory removal from service of all P/N 430-001-007-101 control tubes.

Applicability of this bulletin to any P/N 430-001-007-101 spare part shall be determined prior to its installation on an affected helicopter.

**APPROVAL:**

The engineering design aspects of this bulletin are Transport Canada Civil Aviation (TCCA) approved.

**CONTACT INFO:**

For any questions regarding this bulletin, please contact:

Bell Helicopter Product Support Engineering - Intermediate Helicopters  
Tel: 450-437-2077 / 1-800-463-3036 / pseinter@bh.com

**MANPOWER:**

Approximately 2.0 man-hours are required to complete this bulletin. This estimate is based on hands-on time, and may vary with personnel and facilities available.

**WARRANTY:**

Owners / Operators of Bell Helicopters who comply with the instructions in this Bulletin will be eligible to receive prorated/non prorated replacement parts as applicable, listed in the bulletin. Bell Helicopter has recently introduced enhancements to the VISTA Portal which allocates specific warranty entitlement for an aircraft by serial number. The Product Service Letter (PSL) number which will be listed below the bulletin number on the introduction page is going to be a required field when submitting a claim for replacement parts, labor, and/or freight. If you receive an ASB or TB that does not have a PSL number, then there is no warranty entitlement for that bulletin.

Labor entitlement: ~~Yes~~/No \$0.00

To receive parts, labor, and/or freight under warranty:

- Comply with the instructions contained in this Bulletin no later than the applicable date in the “compliance section”.

- If there is a PSL number identified in the bulletin you will be required to enter this PSL number which will validate warranty entitlement for the selected aircraft. Please ensure that you use the Bulletin tab on the warranty section in VISTA to file your claim.

NOTE: Customers who fail to comply with the instructions in this Bulletin before the 31 October 2013 are not eligible for the special warranty listed above.

**MATERIAL:**

**Required Material:**

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty</u>
2000-06610-00	Tape 2 inch wide	1 Roll

**Consumable Material:**

The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Reference</u> *
2110-06257-00	Methyl Ethyl Ketone (Note 1)	A/R	C-309
2100-00061-00	Acetone	A/R	C-316

Note 1: As an alternate to Methyl Ethyl Ketone, Acetone C-316 may be used.

\* C-XXX numbers refer to the consumables list in BHT-ALL-SPM Standard Practices Manual

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

Negligible.

**ELECTRICAL LOAD DATA:**

Not affected.

## REFERENCES:

BHT-430-MM Maintenance Manual  
BHT-430-CR&O Component Repair and Overhaul Manual  
Technical Bulletin 430-04-35, Rev B dated March 20, 2009

## PUBLICATIONS AFFECTED:

None affected.

## ACCOMPLISHMENT INSTRUCTIONS:

1. Prepare helicopter for maintenance.
2. Remove panels and covers as required to gain access to tail rotor control tube P/N 430-001-007-101. Refer to BHT-430-MM.
3. Disconnect control tube assembly P/N 430-001-007-101 from forward lever and aft bellcrank. Remove control tube assembly from the helicopter.
4. Thoroughly inspect the control tube assembly for damage. Refer to BHT-430-CR&O-4, Chapter 67, Paragraphs 67-4, 67-5 and Figure 67-1 for damage limits, repair and refinish procedure. Make sure that the bonded clevis is exempt of damage and is securely bonded to the control tube
  - a. If the control tube assembly meets the criteria of the inspection/repair listed above, proceed to step 5.
  - b. If the damage(s) on the control tube exceed the listed limits, submit a detailed description of the damage(s) to [PSEINTER@BH.COM](mailto:PSEINTER@BH.COM) with a sketch of the tube including size, dimension and exact location of each damage on the tube. Ensure that you indicate the forward and aft position of the control tube. Bell Helicopter Engineering will analyze the damages on the tube and determine if it may return to service.
5. Modify control tube assembly as follows:
  - a. The control tube (without the clevises) measures 72.15 inches overall. Measure and using a pen or pencil, lightly mark the center of the tube.
  - b. Measure and cut quantity of 4, 30 inch long pieces from the roll of tape, P/N 2000-06610-00. DO NOT remove the peel ply from the tape at this time.
  - c. Measure and using a pen or pencil, mark the center of each piece of tape.
  - d. Using a lint free cloth, wipe the entire surface of the tube using MEK (C-309) to remove the oily film.

- e. Remove the peel ply from one piece of tape and carefully apply it on the tube making sure that you align the center mark of the tape with the center mark of the tube. The tape must be in full contact with the surface of the tube without kinks or air bubbles. Rubbing the tape down with a smooth edged plastic piece or similar object will help the tape adhere better and conform to the tube surface.
  - f. Remove the peel ply from the second piece of tape and apply it precisely over the first piece of tape previously bonded to the tube per step e. The tape must be in full contact with the tape already on the tube without kinks or air bubbles. Rubbing the tape down with a smooth edged plastic piece or similar object will help the tape adhere better and conform to the surface.
  - g. Remove the peel ply from the third piece of tape and carefully apply it on the tube, 180 degrees from the tape applied in step e and step f above, making sure that you align the center mark of the tape with the center mark of the tube. The tape must be in full contact with the surface of the tube without kinks or air bubbles. Rubbing the tape down with a smooth edged plastic piece or similar object will help the tape adhere better and conform to the tube surface.
  - h. Remove the peel ply from the fourth piece of tape and apply it precisely over the third piece of tape previously bonded to the tube per step g. The tape must be in full contact with the tape already on the tube without kinks or air bubbles. Rubbing the tape down with a smooth edged plastic piece or similar object will help the tape adhere better and conform to the surface.
6. Install the modified control tube assembly in the helicopter. Reconnect the control tube to the forward lever and aft bellcrank. Refer to BHT-430-MM.
  7. Reinstall panels and covers previously removed. Refer to BHT-430-MM.
  8. Make an entry in the helicopter logbook and historical service records indicating compliance with this Alert Service Bulletin.