

# ALERT SERVICE BULLETIN



A Textron Company

NO. 427-10-31

DATE Mar 01, 2010

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DATE
REV

**MODEL AFFECTED:** 427

**SUBJECT:** TAILBOOM ATTACHMENT HARDWARE,  
REPLACEMENT OF.

**HELICOPTERS AFFECTED:** 427 Helicopters serial number 56001 through 56084 and 58001 and 58002.

427 helicopters serial number 56085 and subsequent and 58003 and subsequent will have the intent of this bulletin accomplished prior to delivery.

**COMPLIANCE:** Accomplish this bulletin within 150 hours of operation or 90 days, whichever comes first, following release date of this bulletin.

## DESCRIPTION:

Bell Helicopter has reviewed the tailboom attachment installation of the model 427. It has been determined that the torque values specified in the maintenance manual and used during assembly of the 427 for the tailboom attachment bolts exceed the specified torque range recommended for subject bolts.

This bulletin requires the removal of the existing tailboom attachment hardware and installation of new hardware with reduced torque value. In addition, specific hardware installation/torquing procedure is provided for the tailboom to aft fuselage joint.

## APPROVAL:

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

**MANPOWER:**

Approximately 2.0 man-hours are required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available. The time estimated does not include the hardware retorque required after installation of the new hardware.

**WARRANTY:**

Owners / Operators of Bell Helicopters who comply with the instructions in this Bulletin will be eligible to receive a credit for the replacement parts outlined in the material section of this bulletin.

To receive this credit:

- Comply with the instructions contained in this Bulletin no later than the applicable hours in the “compliance section” of this ASB, or before May 30, 2010.
- Purchase replacement parts as required in the materials section of this bulletin from a Bell approved source.
- Submit an MMIR to the Bell Warranty Department.

Customers who do not comply with the instructions in this Bulletin by May 30, 2010 are not eligible for the special warranty credit listed above.

There is no labor associated with this bulletin.

**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>Quantity</u>
NAS627-27	Bolt	4
42FLW-720	Nut	4

**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>Quantity</u>	<u>Reference</u>
CA1000 6OZ	Compound	1	C-586 (Note 1)

Note 1: Mastinox 6856K (C-128) may be used as an alternate. Mastinox is available from Bell Helicopter Supply Centers under P/N: XMAS6856K/160CTG or from any Aviation Supply store.

**SPECIAL TOOLS:**

None required

**WEIGHT AND BALANCE:**

Not affected

**ELECTRICAL LOAD DATA:**

Not affected

**REFERENCES:**

BHT-427-IPB, Illustrated Parts Breakdown  
BHT-427-MM, Maintenance Manual, Chapter 5 and 53  
BHT-ALL-SPM, Chapter 2

**PUBLICATIONS AFFECTED:**

BHT-427-MM, Maintenance Manual, Chapter 53

**ACCOMPLISHMENT INSTRUCTIONS:**

1. Prepare helicopter for maintenance.
2. Remove access cover from the aft fuselage to gain access to the tailboom attachment hardware. Refer to BHT-427-MM, Chapter 53.

3. Support weight of the tailboom with an appropriate support device or stand installed close to aft end of the tailboom assembly.

**NOTE**

Discard hardware (mating nuts and bolts) every time it is removed from the tailboom/fuselage joint

4. Remove existing left upper attachment bolt, washers and nut. Discard removed bolt and nut.

**NOTE**

Replacement hardware (bolt and nut) shall be new.

5. Install new replacement bolt P/N NAS627-27, washer P/N 140-007-29S25E6, washer(s) P/N NAS1149G0732P and new nut P/N 42FLW-720 per procedure below and BHT-427-MM, chapter 53, revision 13, dated 19 February 2010.

- a) Coat shank of the new bolt with corrosion preventive compound (C-586). Do not apply compound on threads of bolt.
- b) Coat faying surfaces of the chamfered washer P/N 140-007-29S25E6 with corrosion preventive compound (C-586) and install washer on the new bolt. Fit the bolt/washer through the tailboom and the fuselage mating fitting.
- c) Install sufficient washers P/N NAS1149G0732P under the nut to obtain a minimum of 1 to a maximum of 3 threads showing beyond the nut after proper torque is obtained. Coat the faying surfaces of these washers with corrosion preventive compound (C-586) and fit over shank of the new bolt.

**NOTE**

For the initial installation, the tare torque of a new nut with mating bolt must be measured and added to the specified torque range.

- d) Coat new nut faying surface with corrosion preventive compound (C-586) prior to assembly. Do not apply compound on the threads of the nut and/or the bolt. Install nut on the bolt.
- e) Run the nut on the threads of the mating bolt with a dial indicator type torque wrench and measure existing tare. Minimum acceptable tare is 14 inch/lbs. Refer to BHT-ALL-SPM, Chapter 2.
- f) Torque the nut to 550 - 560 inch-lbs (62.1 to 63.3 Nm) plus measured tare torque.
- g) Back the nut off at least  $\frac{3}{4}$  of a turn before re-applying the torque to 550 - 560 inch-lbs (62.1 to 63.3 Nm) plus measured tare torque.

- h) After the torque is completed, coat bolt head, nut and washers with corrosion preventive compound (C-586) to fully seal the joint.
- 6. Repeat Step 4 and 5 at the three remaining bolt locations.
- 7. Reinstall aft fuselage access cover previously removed.
- 8. Insert BHT-427-MM Revision 13, dated 19 February 2010 in applicable maintenance manual
- 9. Annotate the helicopter technical records to reflect compliance with this bulletin.

**NOTE**

For torque check purposes, it is acceptable to use the minimum tare torque of 14 inch/lbs (1.58 Nm) per BHT-ALL-SPM added to the minimum specified torque range of 550-560 inch/lbs (62.1 to 63.3 Nm).

- 10. Perform a torque check of tailboom attaching bolts/nuts every 1 to 5 flight-hours following initial installation until torque stabilizes at all positions. Refer to BHT-ALL-SPM, Chapter 2, BHT-427-MM, Chapter 5, Special Inspections and BHT-427-MM, Chapter 53, revision 13, dated 19 February 2010.

**NOTE**

For torque check purposes, it is acceptable to use the minimum tare torque of 14 inch/lbs (1.58 Nm) per BHT-ALL-SPM added to the minimum specified torque range of 550-560 inch/lbs (62.1 to 63.3 Nm).

- 11. Perform a torque check of tailboom attaching bolts/nuts every 300 flight-hours of operation. Refer to BHT-ALL-SPM, Chapter 2, BHT-427-MM, Chapter 5, Scheduled Inspections or Airframe progressive inspection and BHT-427-MM, Chapter 53, revision 13, dated 19 February 2010.