



A Textron Company

ALERT SERVICE BULLETIN

427-21-45

8 February 2021

MODEL AFFECTED: 427

SUBJECT: MAIN ROTOR PITCH LINK ASSEMBLY 406-010-413-125/-141, INSPECTION AND APPLICATION OF TORQUE SEAL LACQUER.

HELICOPTERS AFFECTED: Serial numbers 56001 through 56084, 58001, and 58002.

COMPLIANCE:

PART I: Within 100 flight hours or 3 months, whichever comes first after the release date of this bulletin.

PART II: Within 300 flight hours or 12 months whichever comes first after accomplishment of **PART I** and every 300 flight hours or 12 months thereafter.

DESCRIPTION:

Although there have been no reported events of pitch link tube assembly inserts debonding during flight operation, Bell has some concern over the possibility of such occurring and going unnoticed. Therefore, Bell is publishing this Alert Service Bulletin (ASB) to address this concern. **PART I** of this ASB introduces a one-time detailed visual inspection of the pitch link tube assembly and the application of a witness mark between the pitch link tube assembly insert and the tube. Bell spare parts will have the witness mark added to the pitch link tube assemblies prior to delivery. **PART II** of this ASB requires a recurring inspection for integrity of the witness mark and indications of movement of the insert. **PART II** of this ASB will be required to be accomplished on a recurring basis until such time that the requirement has been incorporated to the scheduled inspection program of the BHT-427-MM Maintenance Manual.

Applicability of this bulletin to any 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 Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 1.0 man-hour is required to accomplish **PART I** of this bulletin. Approximately 0.25 man-hour is required to accomplish **PART II** of this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIAL:

Required Material:

None required.

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 Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>	<u>Reference *</u>
2230-10536-00	Torque Seal Lacquer	1 OZ (1, 2, 3)	C-049
2110-07015-00	Dry-cleaning Solvent	1 GAL (1)	C-304
Commercial	Cleaning Cloth, Low-Lint	A/R	C-516

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

NOTES:

1. Quantity indicated is the format that the product is delivered in. Actual quantity required to accomplish the instructions in this bulletin may be less than what has been delivered.
2. 2230-10536-00 torque seal lacquer (C-049) is color yellow, however other colors are available, at customer's option, as shown in BHT-ALL-SPM Standard Practice Manual, in Chapter 13 under C-049.
3. Polyurethane paint (C-245) or 2230-10547-00 (Vibra-TITE Viz-Torque® 202) are acceptable alternates to C-049.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-ALL-SPM, Standard Practice Manual, Chapter 13.

PUBLICATIONS AFFECTED:

BHT-427-MM, Maintenance Manual, Chapters 5 and 67.

ACCOMPLISHMENT INSTRUCTIONS:**PART I: One-time inspection and application of torque seal lacquer**

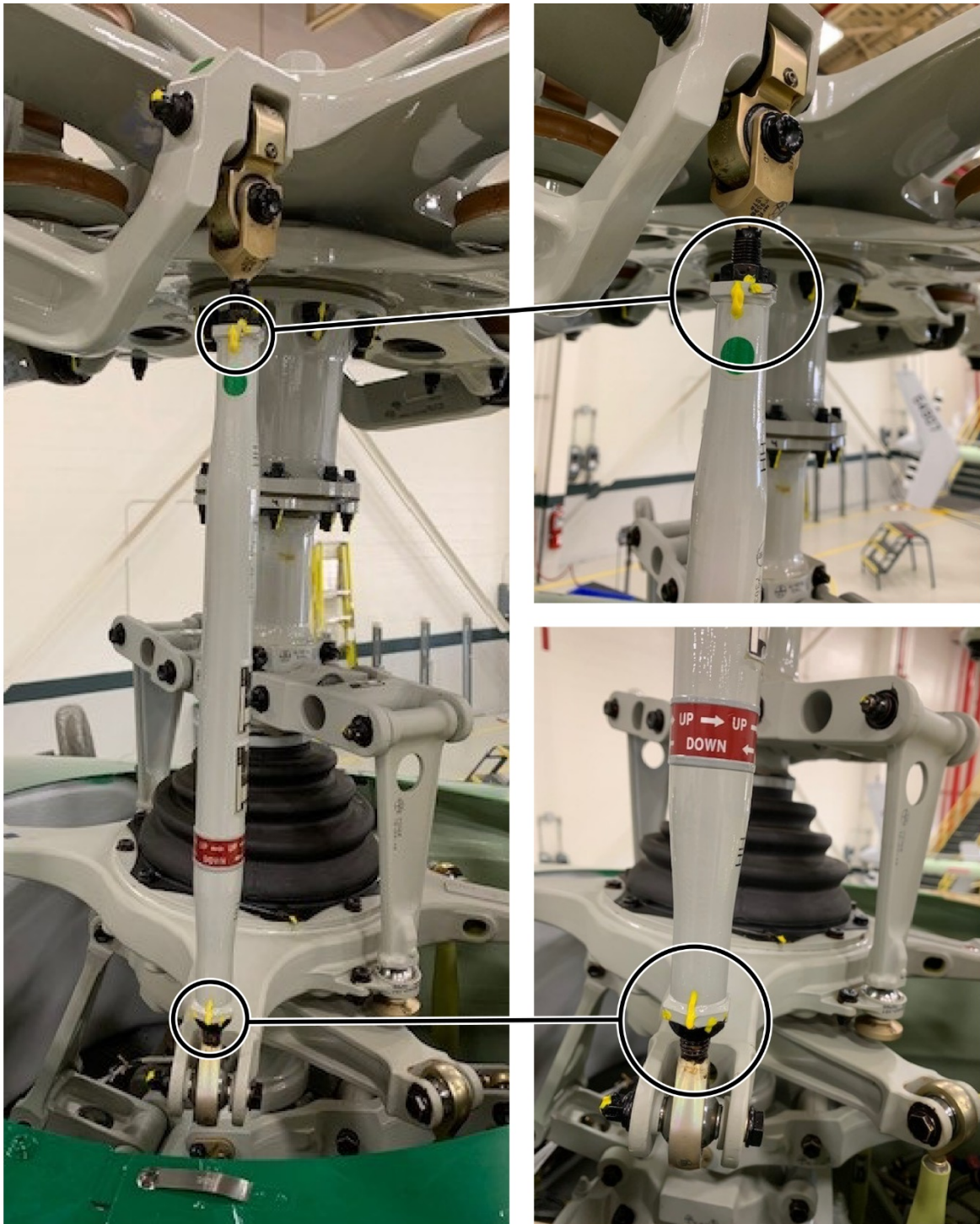
1. Prepare the helicopter for maintenance.
2. Carry out a detailed visual inspection (DVI) of each of the four pitch link tube assemblies for debonding of the upper and lower inserts. This can include, but not limited to, cracked paint, cracked sealant, and corrosion.
 - a. If inserts are not debonded, go to step 3.
 - b. If an insert is found debonded, or is suspected to be, contact Product Support Engineering (PSE) at productsupport@bellflight.com for disposition. Provide the following information:
 - i. Serial number of the helicopter the suspect parts are found.

- ii. Part number of the main rotor pitch link assembly.
 - iii. Serial number of the main rotor pitch link assembly.
 - iv. Total time since new of the main rotor pitch link assembly.
 - v. Whether it is the upper or lower insert (or both) that is found, or suspected to be, debonded.
 - vi. Pictures of the debonded, or suspected to be, insert(s).
 - c. Once disposition has been received from PSE, go to step 3.
3. Clean inserts and tube with a clean cloth (C-516) moistened with dry-cleaning solvent (C-304).
4. Apply torque seal lacquer (C-049), or equivalent, across the main rotor pitch link tube and the upper and lower inserts as shown (Figure 1).
5. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART I** of this Alert Service Bulletin.

PART II: Recurring inspection

1. Prepare helicopter for maintenance.
2. Inspect the condition of the torque seal lacquer (C-049) between the main rotor pitch link tube and the upper and lower inserts of all four main rotor pitch link assemblies.
 - a. If torque seal lacquer (C-049) is missing or damaged, carry out a detailed visual inspection of the main rotor pitch link tube assembly for debonding of the insert where the torque seal lacquer (C-049) is missing or damaged. This can include, but not limited to, cracked paint, cracked sealant, and corrosion.
 - (1) Remove any torque seal lacquer (C-049) residue, and clean inserts and tube with a clean cloth (C-516) moistened with dry-cleaning solvent (C-304).
 - (2) If the insert is not debonded, re-apply torque seal lacquer (C-049), or equivalent, as shown (Figure 1).
 - (3) If the insert is found debonded, or suspected to be, go to step 2.c.
 - b. If the torque seal lacquer (C-049) does not show indication of movement of the inserts, go to step 3.

- c. If an insert is found debonded, or is suspected to be, contact Product Support Engineering (PSE) at productsupport@bellflight.com for disposition. Provide the following information:
 - i. Serial number of the helicopter the suspect parts are found.
 - ii. Part number of the main rotor pitch link assembly.
 - iii. Serial number of the main rotor pitch link assembly.
 - iv. Total time since new of the main rotor pitch link assembly.
 - v. Whether it is the upper or lower insert (or both) that is found, or suspected to be, debonded.
 - vi. Pictures of the debonded, or suspected to be, insert(s).
 - d. Once disposition has been received from PSE, go to step 3.
3. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART II** of this Alert Service Bulletin.



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**Figure 1 – Torque Seal Lacquer (C-049) Application
(Model 407 Pitch Link Assembly Shown as an Example)**