



A Textron Company

## TECHNICAL BULLETIN

**429-18-58**

**PSL 633**

3 December 2018

Revision A, 13 May 2019

Revision B, 23 August 2021

**MODEL AFFECTED:** 429

**SUBJECT:** BELLCRANK ASSEMBLIES 429-001-523-101, 429-001-523-103, 429-001-532-101, AND 429-001-532-103, UPGRADE OF.

**HELICOPTERS AFFECTED:** Serial numbers 57001 through 57296.

[Serial number 57297 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

**COMPLIANCE:** 24 months after the release of revision B of this bulletin.

### DESCRIPTION:

This Technical Bulletin introduces the procedures to upgrade the 429-001-523-101/-103 and 429-001-532-101/-103 bellcrank assemblies to the latest configuration 429-001-523-107 and 429-001-532-107 which utilizes corrosion resistant steel bearings. File a Bulletin claim against PSL 633. Bellcranks upgraded in accordance with this Technical Bulletin will not be affected by Alert Service Bulletin (ASB) 429-15-21 Revision C.

**Revision A** of this Technical Bulletin corrects the location of the 140-055A7 washers. The washers should be bonded to the lower surface of the upper three bellcrank assembly arms. Bellcranks received new from Bell spares had the washers orientated correctly. Bellcranks received reconditioned from Bell spares or those that have been modified as per the original issue of this Technical Bulletin will have the washer bonded to upper surface. Bell recommends removing the washers and bonding new washers to the lower surface as per step 8 of this Technical Bulletin.

**Revision B** of this Technical Bulletin makes the replacement of the bearings with the corrosion resistant steel bearings mandatory per ASB 429-15-21 Rev C within 24 months from date of issuance of ASB 429-15-21.

**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 18.0 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 replacement parts as applicable, listed in the **MATERIAL** section of the bulletin. Bell has recently introduced enhancements to the “MyBell 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. This is going to be a required field when submitting a claim on the Bulletins Tab for replacement parts and/or labor if applicable. 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: NO

To receive entitlement 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 when you file your claim.

**MATERIAL:**

**Required Material:**

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

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>
429-301-010-101	Bearing	6
429-301-012-101	Bearing	6
120-013-4A	Sleeve	6
140-055A7	Washer	3
NAS6604-8	Bolt	8 (1)

**NOTE 1:** Bellcrank assemblies 429-001-523-107FM, 429-001-532-107FM, 429-001-523-107 and 429-001-532-107 must be installed using a quantity of 4 each NAS6604-8 bolts.

**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>
2000-09910-01	Adhesive, Urethane Base	4OZ (1)	C-301
2010-05988-00	Sealant, Corrosion Inhibitor	2.5OZ (1)	C-251

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

**NOTE 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.

**SPECIAL TOOLS:**

T101873-13 Ring Stake Tool.

**WEIGHT AND BALANCE:**

Not Affected.

**ELECTRICAL LOAD DATA:**

Not affected.

## REFERENCES:

BHT-429-IPB, Illustrated Parts Breakdown  
BHT-429-MM, Maintenance Manual  
BHT-ALL-SPM, Standard Practice Manual

## PUBLICATIONS AFFECTED:

BHT-429-IPB, Illustrated Parts Breakdown, Chapter 67

## ACCOMPLISHMENT INSTRUCTIONS:

-NOTE-

Bellcrank assemblies 429-001-523-101/-103 and 429-001-532-101/-103 may be sent to Customer Property Return (CPR) for upgrade. Customers may receive a 429-001-523-101FM and/or 429-001-532-101FM, 429-001-523-107FM and/or 429-001-532-107FM, which are equivalent to, and optional alternates to, the 429-001-523-107 and 429-001-532-107 assemblies respectively.

1. Prepare helicopter for maintenance.
2. Remove the 429-001-523-101/-103 and the 429-001-532-101/-103 roof mounted bellcrank assemblies (BHT-429-MM-1 Chapter 67).
3. Identify and record the assembly part number by reading the ink stamp on the lower surface of the bellcrank assembly's support.
4. Disassemble the 429-001-523-101/-103 and the 429-001-532-101/-103 roof mounted bellcrank assemblies.
5. Discard the six MS27646-41 pivot bearings (1, Figure 2).
6. Remove and discard the six MS27643-4 arm assembly bearings (2) and the sleeves 120-13-4A (BHT-ALL-SPM).

-NOTE-

The sleeve 120-13-4A requires machining prior to the installation of the 429-301-012-101 bearing.

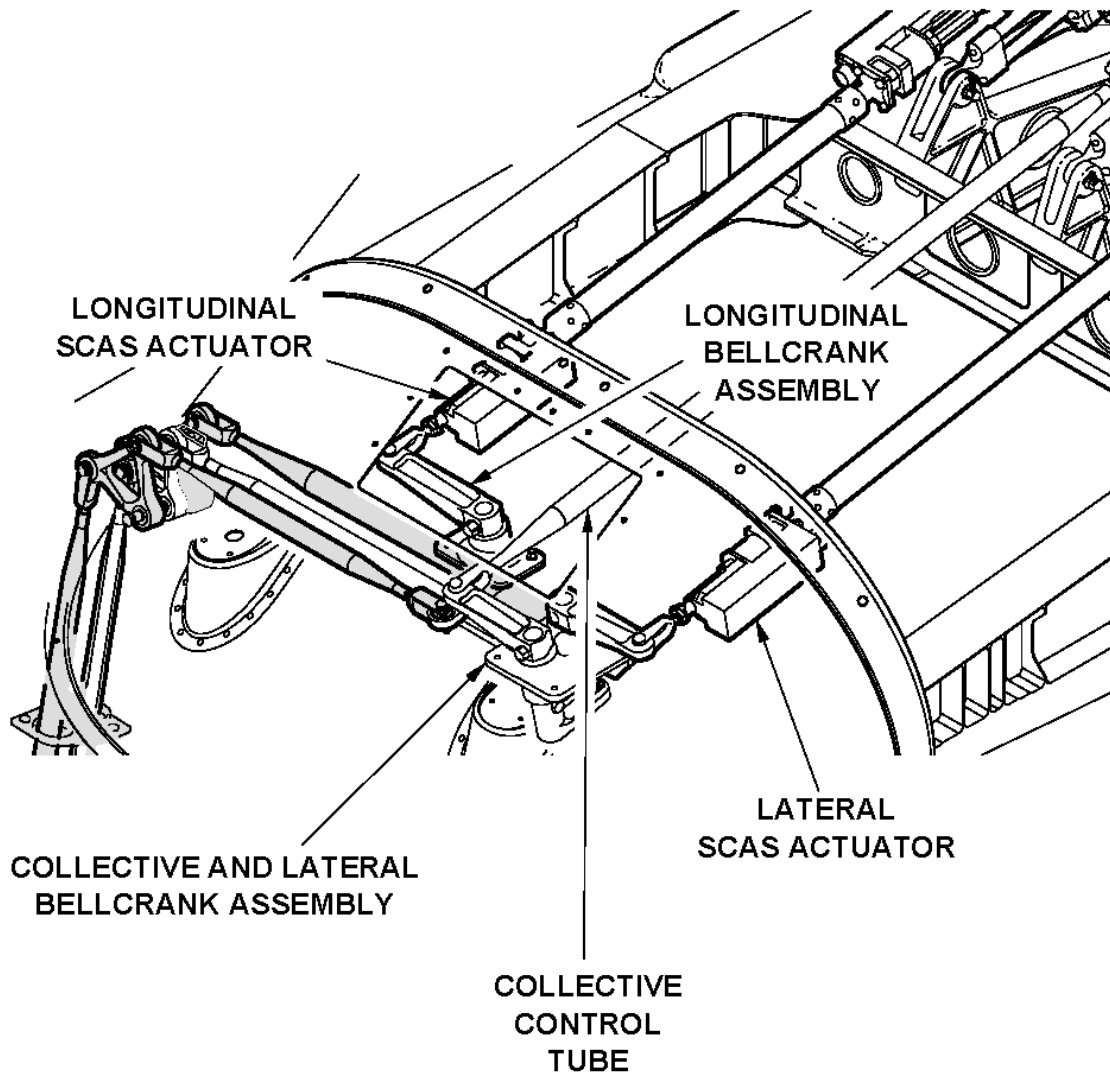
7. Install the 120-13-4A sleeves and the 429-301-012-101 bearings in the upper arm assemblies (3, 4, and 5) (BHT-ALL-SPM).

8. Lightly abrade the lower surface of the upper arms (3, 4, and 5) and bond the 140-055A7 (9) washer to the lower surface of upper arms using adhesive (C-301). After the adhesive cures, edge seal the washer using sealant (C-251) (Figure 3, View A).
9. Using a black permanent ink pen, re-identify the three upper arms (3, 4, and 5) by striking through the "-101" and writing "-107FM". The upper arm assemblies should now be identified as 429-001-525-107FM, 429-001-527-107FM, and 429-001-530-107FM.
10. Install the 120-13-4A sleeves and the 429-301-012-101 bearings in the lower arms (6, 7, and 8) (BHT-ALL-SPM).
11. Using a black permanent ink pen, re-identify the three lower arms (6, 7, and 8) by striking through the "-101" and writing "-105FM". The lower arm assemblies should now be identified as 429-001-526-105FM, 429-001-528-105FM and 429-001-531-105FM.
12. Assemble the roof mounted bellcrank assemblies using the 429-301-010-101 pivot bearings (1) (BHT-429-MM-1 Chapter 67).
13. If the bellcrank assemblies are identified as 429-001-523-101 and 429-001-532-101, using a black permanent ink pen, re-identify them by adding "FM" after the part number. If the bellcrank assemblies are identified as 429-001-523-103 and 429-001-532-103, using a black permanent ink pen, strike through the "-103" and add "-107FM". The bellcrank assemblies should now be identified as 429-001-523-101FM and 429-001-532-101FM or 429-001-523-107FM and 429-001-532-107FM.

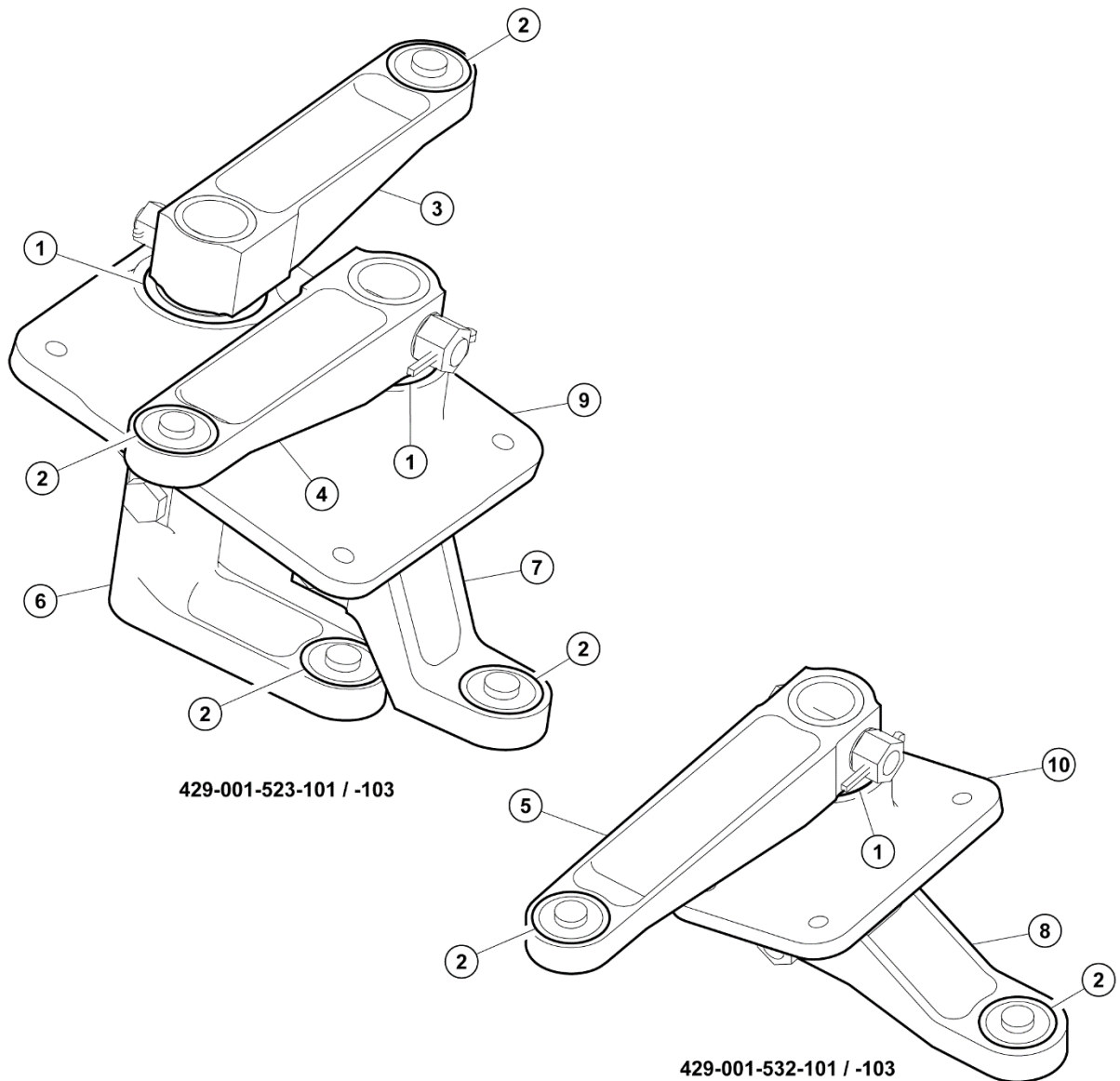
-NOTE-

The 429-001-523-101FM and the 429-001-532-101FM bellcranks assemblies must be installed using a quantity of four each NAS6604-10 bolts. The 429-001-523-107FM, 429-001-532-107FM, 429-001-523-107, and 429-001-532-107 bellcranks must be installed using a quantity of four each NAS6604-8 bolts.

14. Install the roof mounted bellcrank assemblies (BHT-429-MM-1 Chapter 67).
15. Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.



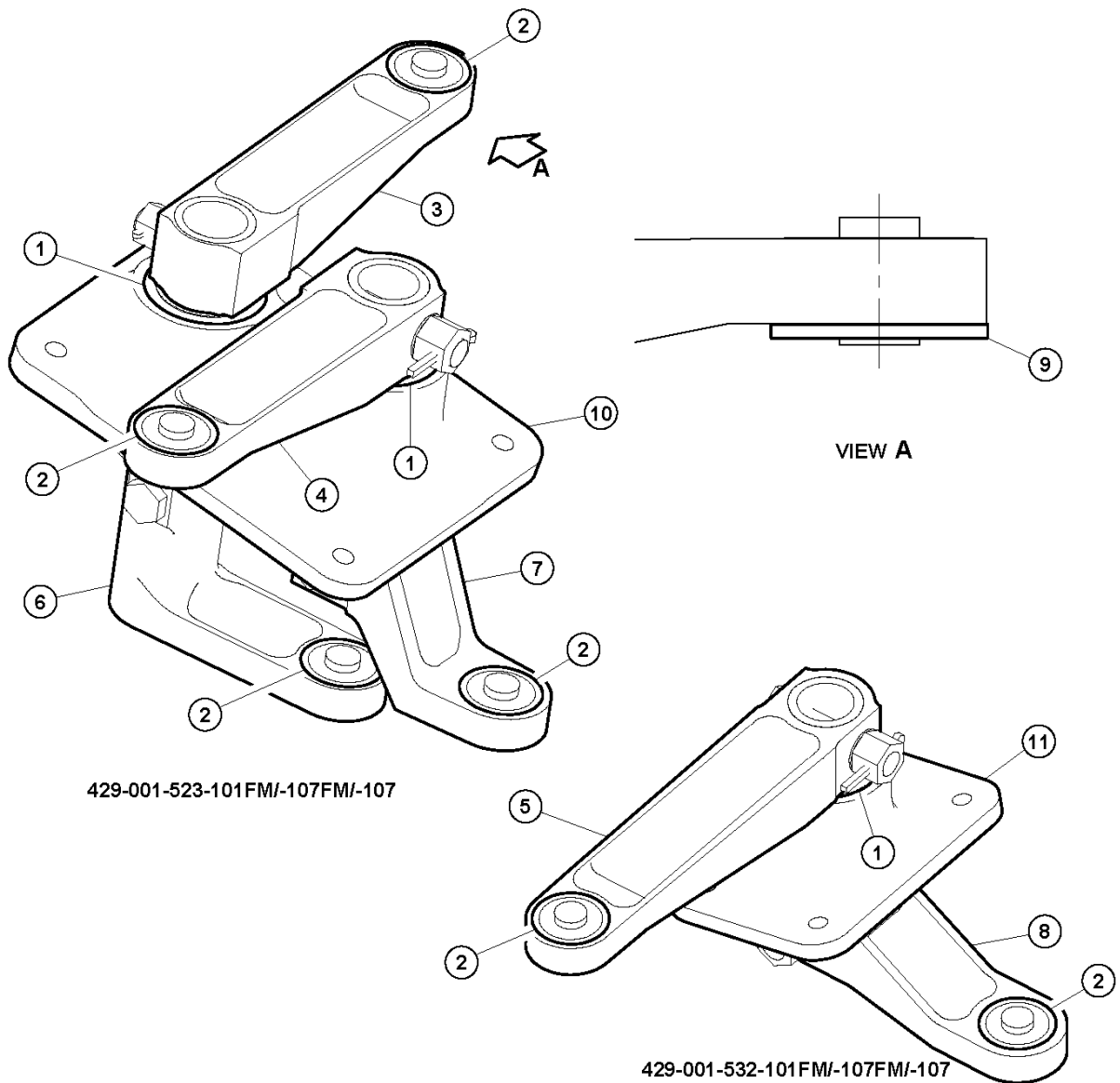
**Figure 1 - Bellcrank Assemblies**



- 1. Pivot bearing (MS27646-41) 6 Reqd
- 2. Bearing (MS27643-4) 6 Reqd
- 3. Upper collective arm assembly (429-001-525-101)
- 4. Upper lateral arm assembly (429-001-527-101)
- 5. Upper longitudinal arm assembly (429-001-530-101)
- 6. Lower collective arm assembly (429-001-526-101)
- 7. Lower lateral arm assembly (429-001-528-101)
- 8. Lower longitudinal arm assembly (429-001-531-101)
- 9. Support (429-001-505-101 or 429-001-507-101)
- 10. Support (429-001-504-101 or 429-001-506-101)

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**Figure 2 – Bellcrank Assembly Details**



1. Pivot bearing (429-301-010-101) 6 Reqd
2. Bearing (429-301-012-101) 6 Reqd
3. Upper collective arm assembly (429-001-525-107/-107FM)
4. Upper lateral arm assembly (429-001-527-107/-107FM)
5. Upper longitudinal arm assembly (429-001-530-107/-107FM)
6. Lower collective arm assembly (429-001-526-105/-105FM)
7. Lower lateral arm assembly (429-001-528-105/-105FM)
8. Lower longitudinal arm assembly (429-001-531-105/105FM)
9. Washer 140-055A7
10. Support (429-001-507-101) or (429-001-505-101 for 429-001-523-101FM)
11. Support (429-001-506-101) or (429-001-504-101 for 429-001-532-101FM)

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**Figure 3 – Bellcrank Assembly Details**