



A Textron Company

## **ALERT SERVICE BULLETIN**

**429-24-63**

21 March 2024

Revision A, 30 May 2024

Revision B, 6 November 2024

**MODEL AFFECTED:** 429

**SUBJECT:** TAIL ROTOR BLADE 429-016-101-105 ABRASION STRIP, INSPECTION OF.

**HELICOPTERS AFFECTED:** **PART I:** Serial numbers 57001 and subsequent.

**PARTS II & III:** Serial numbers 57001 and subsequent, equipped with tail rotor blade serial numbers listed in Table 1.

**COMPLIANCE:**

**PART I** – Before next flight after the release of this bulletin.

**PART II** – Before each engine start after the release of this bulletin.

**PART III** – Every 25 hours after the release of this bulletin.

**DESCRIPTION:**

Bell has noticed a sudden increase in reports from the field of tail rotor abrasion strip cracks. Upon investigation, it was determined that a crucial step in the fabrication of the abrasion strip was missed by one of the suppliers which can result in the presence of stress risers leading to fatigue cracking of the part. This bulletin requires the marking of affected tail rotor blades and subsequent checks and inspections to capture any potential cracks until a terminating action is determined. Tail rotor blade assemblies that have been found to have cracked abrasion strips during the performance of this bulletin shall be kept until further instructions from Bell are received. If the identification of affected tail rotor blades cannot be complied with on location, or if a helicopter with affected tail rotor blade(s) is not located near a maintenance facility at the time of bulletin release, the helicopter can be ferried provided that all four tail rotor blades are checked

in accordance with **PART II** and have no cracks on the abrasion strip. The ferry flight shall be completed in only one flight (one leg).

**Revision A** of this bulletin adds notes to the **ACCOMPLISHMENT INSTRUCTIONS** section and **Table 1** on the applicability of this bulletin for tail rotor blades with an “R” at the end of the part number. These tail rotor blades have had the abrasion strip replaced and are no longer affected by this bulletin. Operators that have already complied with the original release of this bulletin meet the intent of this revision.

**Revision B** of this bulletin adds three more affected tail rotor blade serial numbers (VL00356366, VL00357736 and VL00361951) to **Table 1**.

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 0.75 man-hour is required to complete **PART I** of this bulletin. Approximately 0.05 man-hour is required to complete **PART II** of this bulletin. Approximately 0.5 man-hour is required to complete **PART III** 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:**

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>
429-016-101-105	Tail Rotor Blade Assy	As Required (1)

**NOTE 1:** Only required if a crack is found on the abrasion strip.

**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>
2100-00006-00	Cleaning compound	5 Gal (1, 2)	C-318
Commercial	Cheesecloth	1	C-486
Commercial	Paint marker	1	N/A

\* 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. Or equivalent aviation approved detergent.

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

429-IPB Illustrated Parts Breakdown  
429-MM Maintenance Manual

**PUBLICATIONS AFFECTED:**

None affected.

**ACCOMPLISHMENT INSTRUCTIONS:**

## PART I – Inspection Before Next Flight

1. Prepare the helicopter for maintenance.

-NOTE-

If step 2 cannot be complied at location or helicopter with affected tail rotor blade(s) is not located near a maintenance facility at the time of bulletin release, helicopter can be ferried if all four tail rotor blades are checked in accordance with **PART II** and have no cracks on the abrasion strip. The ferry flight shall be completed in only one flight (one leg).

-NOTE-

Tail rotor blades with serial numbers listed in **Table 1** that have an “R” suffix at the end of the part number (ex.: 429-016-101-105R) have had their abrasion strip replaced and are no longer affected.

2. Determine if the installed tail rotor blades are affected by this bulletin using the list of serial numbers in Table 1. If one or more blades are affected, continue to the next step. If none of the blades are listed in Table 1, go to step 6.
3. Thoroughly clean the abrasion strip of the affected (as listed in Table 1) tail rotor blades with a cleaning compound (C-318) and cheesecloth (C-486).
4. Using a bright light, visually inspect both sides of the abrasion strip of each affected tail rotor blade for the presence of chordwise cracks. Refer to Figure 1 for zone to be inspected. If one or more cracks are found, replace the blade before next flight ([DMC-429-A-64-10-00-01A-520A-A](#) and [DMC-429-A-64-10-00-01A-720A-A](#)).
5. If the affected blade abrasion strip does not present any cracks, apply a visual identification mark on the blade with a paint marker as shown in Figure 1. The color shall be clearly visible and different than blue, orange, red and Green.
6. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART I** of this Alert Service Bulletin.

## PART II – Visual Check Before Each Engine Start

-NOTE-

PART II can be omitted for the first engine start following the completion of PART I.

-NOTE-

This check can be performed by a pilot or a licensed mechanic.

-NOTE-

A flashlight shall be used in low ambient lighting conditions.

1. Before each engine start, visually check both sides of the abrasion strip of the tail rotor blade assemblies that are identified with the paint mark for the presence of chordwise cracks. Refer to Figure 1 for zone to be checked and Figure 2 for an example of a typical crack. If one or more cracks are found, replace the tail rotor blade assembly before next flight ([DMC-429-A-64-10-00-01A-520A-A](#) and [DMC-429-A-64-10-00-01A-720A-A](#)).
2. Make an entry in the helicopter logbook indicating compliance with **PART II** of this Alert Service Bulletin.

### **PART III – Recurring Inspection Every 25 Hours**

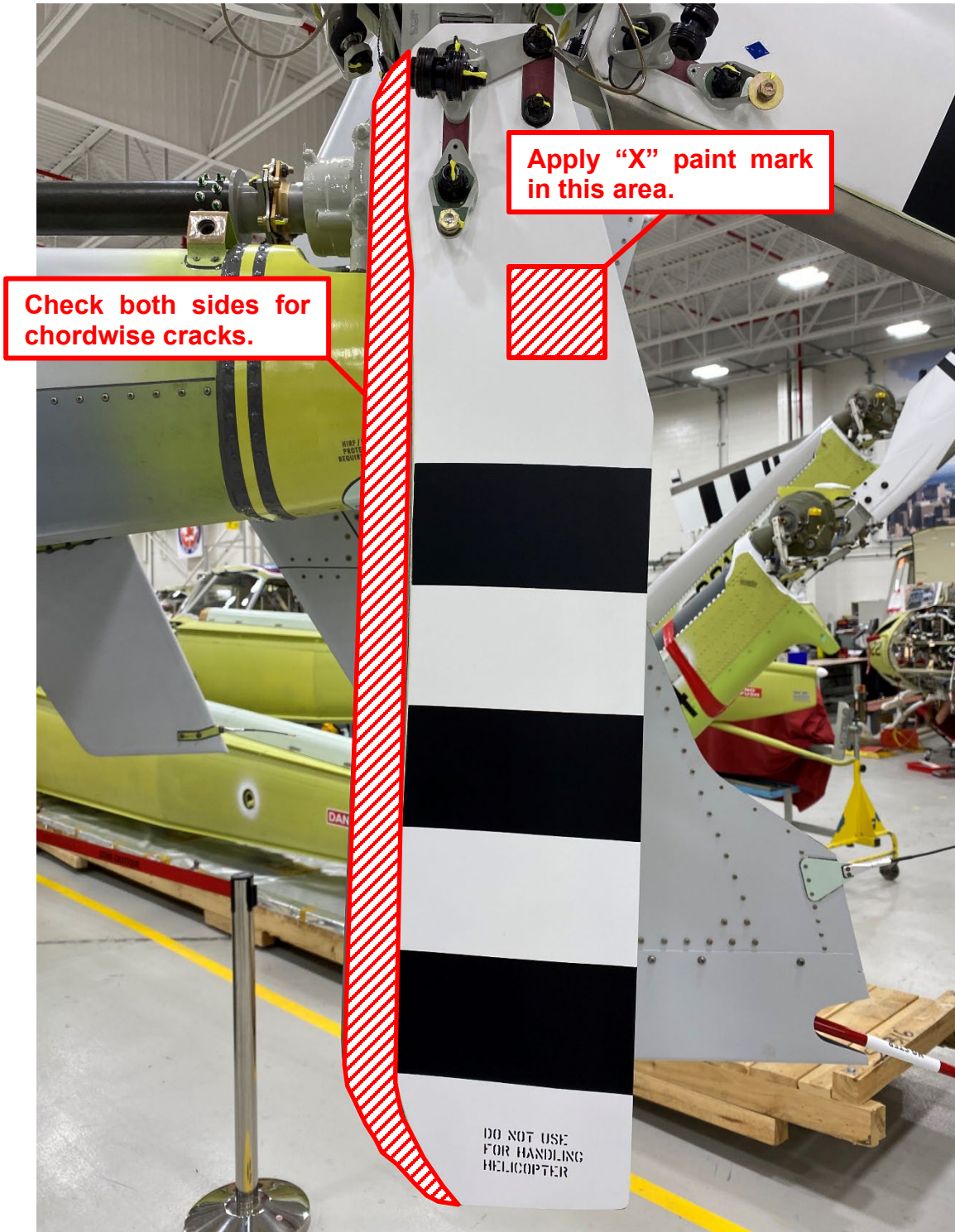
1. Prepare the helicopter for maintenance.
2. On tail rotor blades identified with the paint mark. Thoroughly clean the abrasion strip with a cleaning compound (C-318) and cheesecloth (C-486).
3. Using a bright light, visually inspect the abrasion strips of the marked tail rotor blades for presence of chordwise cracks. Refer to Figure 1 for zone to be inspected. If one or more cracks are found, replace the blade before next flight ([DMC-429-A-64-10-00-01A-520A-A](#) and [DMC-429-A-64-10-00-01A-720A-A](#)).
4. If required, re-apply the paint mark per **PART I**, step 5 of this bulletin.
5. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART III** of this Alert Service Bulletin.

## Table 1- Affected Tail Rotor Blade Assemblies

(Sequential serial numbers in table are listed from top to bottom)

VL00030380	VL00216037	VL00249581	VL00284160	VL00289266	VL00310683	VL00335787	VL00356365
VL00030382	VL00220694	VL00249588	VL00284161	VL00291534	VL00311073	VL00339073	VL00356366
VL00030383	VL00221483	VL00249590	VL00284162	VL00291535	VL00311075	VL00339074	VL00357691
VL00030384	VL00221484	VL00249922	VL00284163	VL00291536	VL00312940	VL00339075	VL00357692
VL00030385	VL00221485	VL00249924	VL00284164	VL00291538	VL00314426	VL00339076	VL00357734
VL00041432	VL00223168	VL00265911	VL00286169	VL00301044	VL00316356	VL00339077	VL00357735
VL00144690	VL00223169	VL00265912	VL00286170	VL00302433	VL00319034	VL00339078	VL00357736
VL00144691	VL00223170	VL00265913	VL00286181	VL00302434	VL00319039	VL00339079	VL00357739
VL00144692	VL00223171	VL00265914	VL00286182	VL00302435	VL00322057	VL00339080	VL00357741
VL00148256	VL00224395	VL00267560	VL00286183	VL00303609	VL00322058	VL00339081	VL00357742
VL00150433	VL00224396	VL00269197	VL00286184	VL00303610	VL00322059	VL00341630	VL00361949
VL00150435	VL00224441	VL00269198	VL00286185	VL00303611	VL00322064	VL00341631	VL00361951
VL00155491	VL00224442	VL00269199	VL00286186	VL00303613	VL00322065	VL00341948	VL00361952
VL00165145	VL00224444	VL00270682	VL00287845	VL00303614	VL00322066	VL00342861	VL00365988
VL00165149	VL00226761	VL00270685	VL00287847	VL00303615	VL00327051	VL00342862	VL00366127
VL00165150	VL00226762	VL00270686	VL00287848	VL00303616	VL00327052	VL00344810	VL00367553
VL00168343	VL00226764	VL00274054	VL00287890	VL00303618	VL00328218	VL00344873	VL00371717
VL00176340	VL00230561	VL00274055	VL00289159	VL00303619	VL00328219	VL00344875	VL00371718
VL00202533	VL00230563	VL00276935	VL00289160	VL00303620	VL00328220	VL00344877	VL00372739
VL00202919	VL00230564	VL00276936	VL00289161	VL00303621	VL00328446	VL00349648	VL00372740
VL00205190	VL00234488	VL00280173	VL00289162	VL00310181	VL00328447	VL00349649	VL00372873
VL00205191	VL00234489	VL00280174	VL00289163	VL00310183	VL00328621	VL00349650	VL00372874
VL00205192	VL00234490	VL00280175	VL00289165	VL00310577	VL00333564	VL00349651	VL00372876
VL00207790	VL00234493	VL00283219	VL00289166	VL00310578	VL00333566	VL00349652	
VL00207791	VL00237546	VL00283220	VL00289262	VL00310579	VL00333568	VL00349654	
VL00207792	VL00249575	VL00283221	VL00289263	VL00310580	VL00335183	VL00354842	
VL00209537	VL00249579	VL00283222	VL00289264	VL00310581	VL00335784	VL00355135	
VL00209539	VL00249580	VL00284159	VL00289265	VL00310682	VL00335786	VL00356364	

**Note:** Tail rotor blades with an "R" at the end of the part number (ex.: 429-016-101-105R) have had their abrasion strip replaced and are no longer affected by this bulletin.



**Figure 1- Application of Paint Mark and Visual Check Zone**





**Figure 2 - Example of a Typical Abrasion Strip Crack**