

ALERT SERVICE BULLETIN



NO. 427-09-29
DATE Oct 19, 2009
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DATE
REV

MODEL AFFECTED: 427

SUBJECT: TAIL ROTOR DRIVESHAFT HANGER BEARING BRACKET P/N 427-044-223-101, REWORK OF.

HELICOPTERS AFFECTED: Model 427 helicopters serial number 56001 through 56073, 56077, 58001, 58002 and all spares.

Model 427 helicopters serial numbers 56074 through 56076, 56078 and subsequent and 58003 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: As soon as possible but no later than next scheduled inspection or December 31, 2009 whichever comes first

DESCRIPTION:

Bell Helicopter received a report of a broken tail rotor driveshaft hanger bearing bracket P/N 427-044-223-101. Investigation revealed that the part fractured due to fatigue. The crack originated in the radius near an area where a tool had cut into the bracket for a flat faying surface. Refer to Figure 1 for details.

This Bulletin introduces a one time inspection of the bracket and provides rework procedures for the polishing of both sides of the bracket. The rework will eliminate the tooling marks and increase the fatigue strength to reduce the potential for cracking in service.

APPROVAL:

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

MANPOWER:

Approximately 4.0 man-hours are required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

WARRANTY:

Owners / Operators of Bell Helicopters who comply with the instructions in this Bulletin will be eligible to receive a labor credit of \$300.00 towards the accomplishment 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 December 31 2009.
- Submit an MMIR to the Bell Warranty Department.

Customers who fail to comply with the instructions in this Bulletin after the December 31 2009 are not eligible for the special warranty credit listed above.

MATERIAL:

No material 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 Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>	<u>Reference</u>
Alodine	Chemical film material	A/R	C-100
Scotchbrite TY A	Scotchbrite	A/R	C-407

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 53
BHT-427-CR&O Component Repair and Overhaul Manual

PUBLICATIONS AFFECTED:

None affected

ACCOMPLISHMENT INSTRUCTIONS:

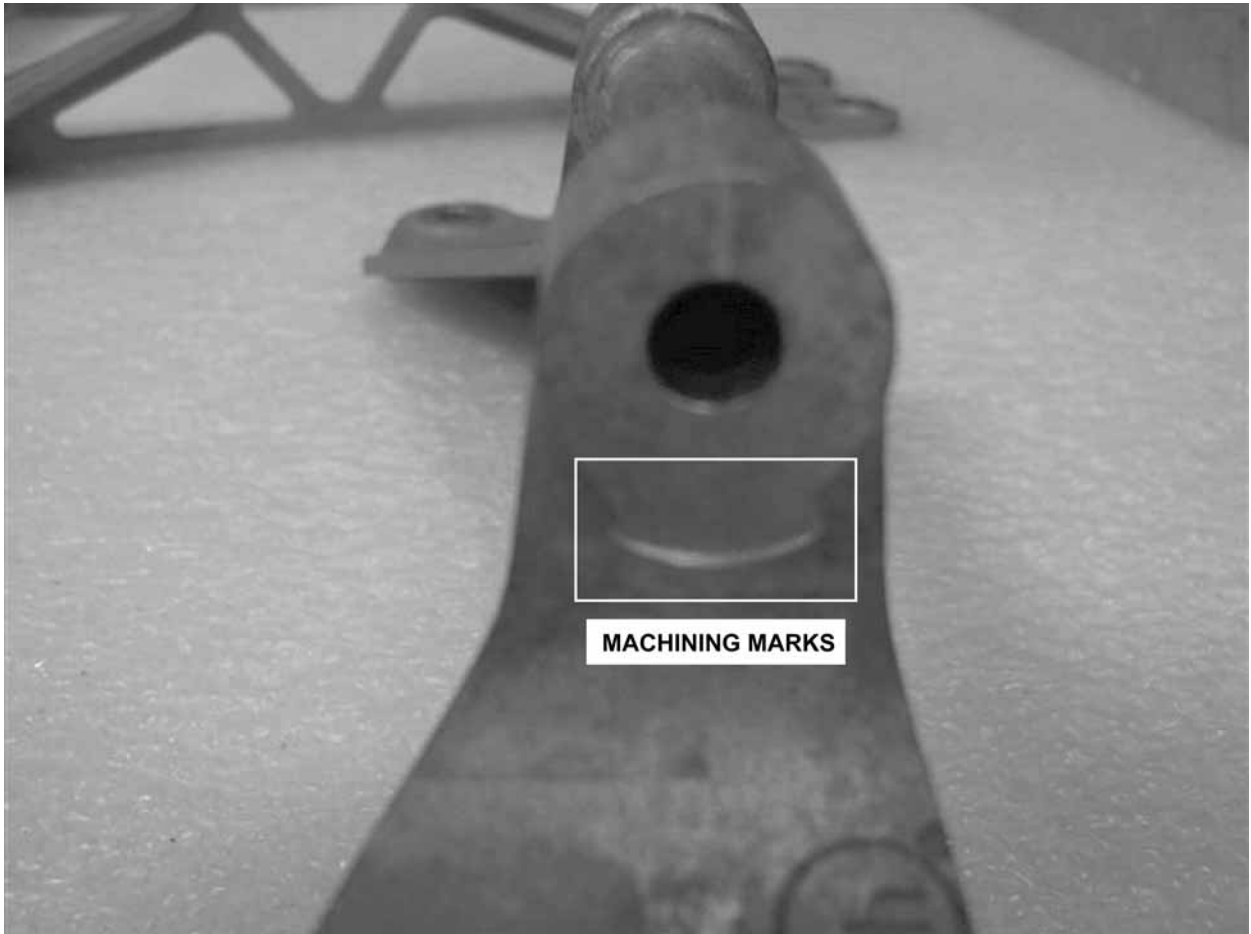
1. Prepare the helicopter for maintenance.
2. Remove the necessary fairing and cowl assembly to gain access to the blower housing assembly. Refer to BHT-427-MM, Chapter 53
3. Support forward end of aft shaft assembly P/N 427-040-325-105. Remove bolts, washers and nuts attaching link assemblies P/N 406-040-318-107 to aft fan shaft bearing hanger P/N 406-040-317-101 and hanger bracket P/N 427-044-223-101.

-NOTE-

Do not disturb the shims bonded on top of the support P/N 427-030-609-101.

4. Remove bolts, washers and nuts attaching hanger bracket P/N 427-044-223-101 to the support. Remove hanger bracket from the aircraft.
5. Clean hanger bracket. Refer to BHT-ALL-SPM.
6. Using Fluorescent Penetrant Inspection method, inspect affected areas of the bracket to detect crack(s). Refer to BHT-ALL-SPM.

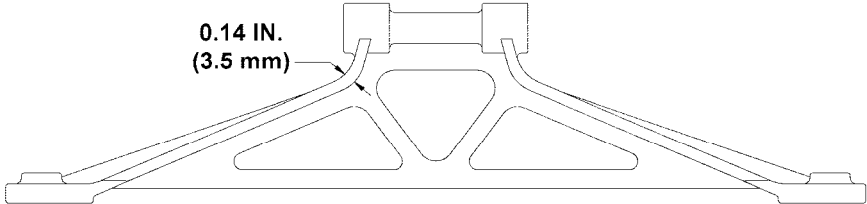
7. Rework both side of bracket P/N 427-044-223-101 as follows:
 - a) Using 180 grit sand paper, polish out the noted machining step smooth with the adjacent surfaces. Remove minimum material needed to remove the machining marks in the radius area. Maintain existing 0.50 radius and minimum web thickness of 0.140 inch. Refer to Figure 2.
 - b) Polish reworked area using 280 grit sand paper. Final polish smooth reworked area using scotchbrite (C-407).
 - c) Apply chemical film material (C-100) to reworked areas. Refer to BHT-ALL-SPM. Refer to Figure 3.
8. Reinstall bracket on the aircraft. Refer to BHT-427-MM, Chapter 53.
9. Reinstall link assemblies P/N 406-040-318-107 to aft fan shaft bearing hanger P/N 406-040-317-101 and hanger bracket P/N 427-044-223-101. Refer to BHT-427-MM, Chapter 53.
10. Reinstall previously removed fairing and cowl assembly.
11. Annotate the aircraft records to reflect compliance with this bulletin.



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Machining marks on bracket P/N 427-044-223-101

Figure I



Bracket P/N 427-044-223-101

View looking forward

Figure 2



View of reworked bracket assembled on aircraft

Bracket P/N 427-044-223-101

Figure 3