



A Textron Company

ALERT SERVICE BULLETIN

429-19-45
16 April 2019

MODEL AFFECTED: 429

SUBJECT: 429-012-120-101 CURVIC COUPLING,
INSPECTION OF

HELICOPTERS AFFECTED: Serial numbers 57001 through 57343, 57346
through 57349, 57352 through 57356 and 57362.

[Serial numbers 57344, 57345, 57350, 57351, 57357
through 57361, 57363 and subsequent will have the
intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: Within 10 flight hours or 7 days, whichever occurs
first after the release date of this bulletin.

DESCRIPTION:

Bell has received a report of an improperly installed 429-012-120-101 Curvic Coupling. It was found that the teeth could rest on top of each other during installation of the tail rotor hub and blade assembly instead of meshing together. This Alert Service Bulletin introduces a one-time inspection for the engagement of the Curvic Coupling drive teeth. 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
INTERMEDIATE Tel: 450-437-2077 / 1-800-463-3036 / productsupport@bellflight.com

MANPOWER:

Approximately 0.5 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:

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

MATERIAL:

None required.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-429-MM Maintenance Manual, Chapter 64

PUBLICATIONS AFFECTED:

None affected.

ACCOMPLISHMENT INSTRUCTIONS:

1. Prepare the helicopter for maintenance.
2. Flap the inboard and outboard tail rotor blades to gain visual access to the 429-012-120-101 Curvic Coupling teeth.
3. Using a bright light, inspect the inboard and outboard Curvic Coupling teeth for proper engagement with the inboard and outboard flapping bearing teeth.
 - a. If the teeth are found to be improperly engaged as illustrated in Figure 1, proceed to step 6.
 - b. If the teeth are found to be properly engaged as illustrated in Figure 2, proceed to step 4.
4. Inspect for axial play between both the inboard and outboard hub and blade assemblies.
 - a. If play is found, proceed to step 6.
 - b. If no play is found, proceed to step 5.

-NOTE-

When applying a lead/lag force to the inboard and outboard hub and blade assemblies, some play may be detected due to the feathering bearings.

5. Inspect for play between the teeth of the Curvic Coupling and both inboard and outboard flapping bearing teeth by applying a lead/lag force to the inboard and outboard hub and blade assemblies.
 - a. If play is found, proceed to step 6.
 - b. If no play is found, proceed to step 12.
6. Remove the tail rotor hub and blade assembly. (DMC-429-A-64-10-00-00A-520A-A)
7. Inspect the teeth of the 429-012-120-101 Curvic Coupling for damage. (DMC-429-A-64-10-00-00A-310A-A)
8. Inspect the teeth of the inboard and outboard flapping bearings for damage. (DMC-429-A-64-20-00-00A-310A-A)
9. Install a serviceable tail rotor hub and blade assembly. (DMC-429-A-64-10-00-00A-720A-A)

10. If the teeth of the 429-012-120-101 Curvic Coupling were found improperly engaged per Step 3, perform a rigging check of the directional control system. (DMC-429-A-67-20-00-00A-280A-A)
11. Submit any anomalies noted during inspection to Product Support Engineering at productsupport@bellflight.com. **Make sure that the following is in the subject line of the e-mail:**
 - a. Service directive number: ASB 429-19-45
 - b. Helicopter serial number
 - c. Operator name.
12. Make an entry in the helicopter logbook and historical service records indicating compliance with this Alert Service Bulletin.



Figure 1 – Example of Improperly Engaged Curvic Coupling

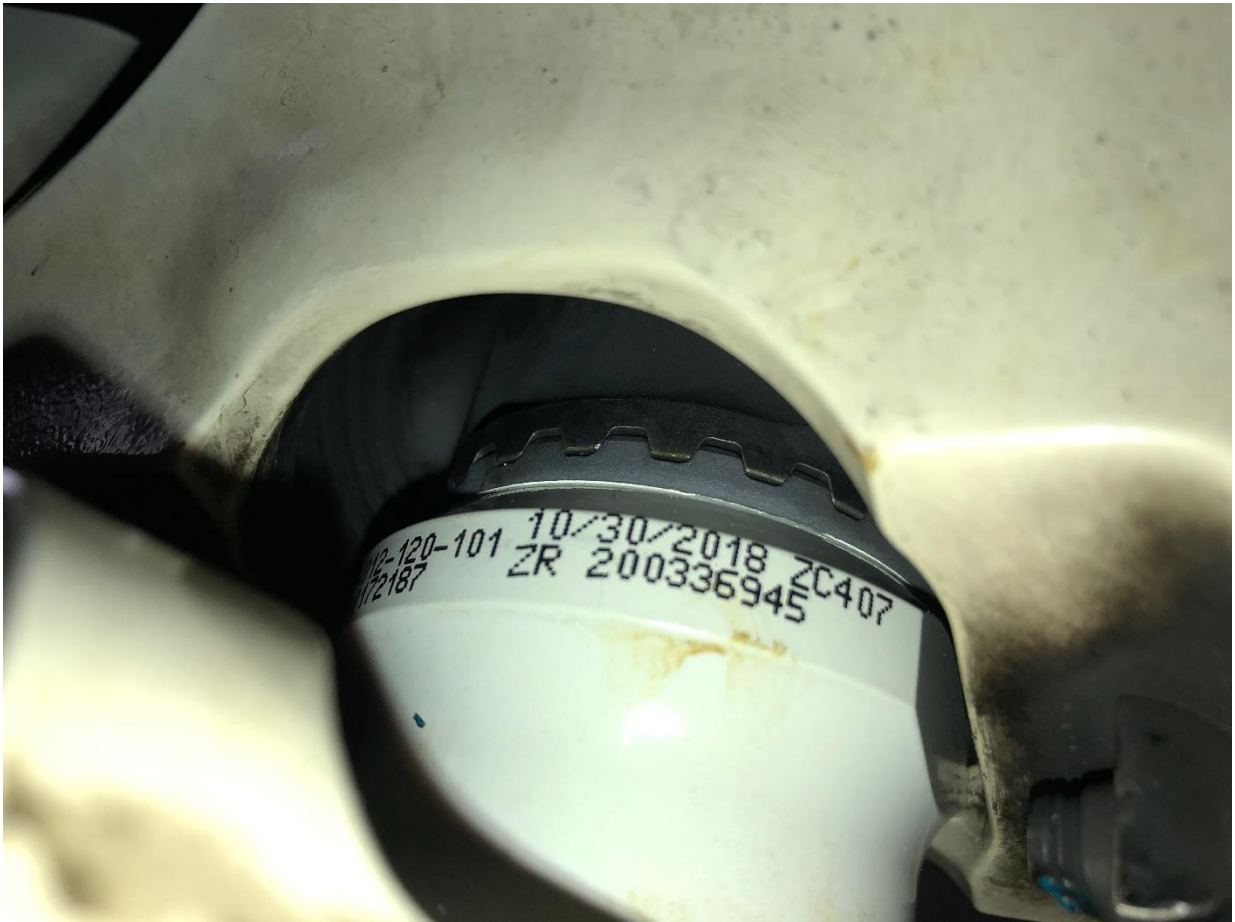


Figure 2 – Example of Properly Engaged Curvic Coupling