

**TECHNICAL BULLETIN**  
**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

No. 407-03-47

Date 10-29-03

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**MODEL AFFECTED:** 407

**SUBJECT:** TAIL ROTOR YOKE CLAMP RING 406-012-105-101, REPLACEMENT OF.

**HELICOPTERS AFFECTED:** Model 407 helicopters serial number 53000 through 53579.

[Model 407 helicopters serial number 53580 and subsequent will have the intent of this bulletin accomplished prior to delivery]

**COMPLIANCE:** At Customer's Option

**DESCRIPTION:**

Bell Helicopter has received reports indicating difficulties to balance the tail rotor assembly in cold weather operations. Investigation revealed a loss of preload on the trunnion bearing 407-312-100-101 in cold temperature, allowing sideways movement of the trunnion bearing in the yoke.

This technical bulletin provides instructions to replace the 406-012-105-101 clamp rings with 427-012-106-101 clamp rings. When replacing clamp ring 406-012-105-101 with clamp ring 427-012-106-101 both clamp rings shall be replaced.

The 427-012-106-101 clamp rings by design increase the preload on the 407-312-100-101 trunnion bearing and prevent sideways movement in cold weather operation.

Clamp ring 406-012-105-101 will no longer be procurable.

**APPROVAL:**

The engineering design aspects of this Technical Bulletin are Transport Canada approved.

**MANPOWER:**

No additional man-hour are required if this Bulletin is accomplished when the clamp rings are removed for any reason.

**MATERIALS:**

**Required Material:**

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

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
427-012-106-101	Ring, Clamp	2

**Consumable Material:**

The consumable materials required to accomplish this bulletin are listed in the applicable section of the maintenance manual and the component repair & overhaul manual.

**SPECIAL TOOLS:**

None required

**WEIGHT AND BALANCE:**

Not affected

**ELECTRICAL LOAD DATA:**

Not affected

**REFERENCES:**

BHT-407-MM Maintenance Manual  
BHT-407-CR&O Component Repair and Overhaul

**PUBLICATIONS AFFECTED:**

BHT-407-IPC Illustrated Parts Breakdown  
BHT-407-MM Maintenance Manual  
BHT-407-CR&O Component Repair and Overhaul

**ACCOMPLISHMENT INSTRUCTIONS:**

1. Remove tail rotor hub and blade assembly from the helicopter. Refer to the BHT-407-MM, Chapter 64.
2. Remove tail rotor blades from the tail rotor hub assembly. Refer to the BHT-407-MM, Chapter 64.
3. Remove the trunnion bearing from the yoke assembly. Refer to BHT-407-CR&O, Chapter 64.
4. Thoroughly clean the trunnion bearing outer races and the yoke trunnion bearing bores. Refer to BHT-407-MM, Chapter 64.
5. Perform visual inspection of the trunnion bearing and the tail rotor yoke trunnion bearing bores for damage. Refer to BHT-407-CR&O, Chapter 64.
6. Install the trunnion bearing in the yoke. Refer to BHT-407-MM, Chapter 64.
7. Install 427-012-106-101 clamp rings on the yoke assembly. Refer to BHT-407-MM, Chapter 64.
8. Install the tail rotor blades on the tail rotor hub assembly. Refer to BHT-407-MM Chapter 64.
9. Install the tail rotor hub and blade assembly on the helicopter. Refer to the BHT-407-MM, Chapter 64.
10. Perform dynamic balance of the tail rotor hub and blade assembly. Refer to BHT-407-MM, Chapter 18.
11. Use a vibrating stylus and change the tail rotor hub assembly dash number as follows:

407-012-101-407 113FM
12. Make an entry in the Helicopter and the Component Historical Records to show that this technical bulletin has been accomplished.