MODELS AFFECTED: 407

SUBJECT: **TAIL ROTOR DRIVE, SHIMMING PROCEDURE BEARING SUPPORT TO BEARING HANGER, INTRODUCTION OF.**

HELICOPTERS AFFECTED: 407, Serial Numbers 53000, 53002 through 53065, 53067, and 53069 through 53075.

[Serial Numbers 53001, 53066, 53068, and 53076 and subsequent will have the intent of this bulletin completed before delivery.]

COMPLIANCE: At the next scheduled inspection, but no later than 30 June 1997.

DESCRIPTION: This Bulletin introduces a procedure for shimming between the bearing supports and the bearing hangers on the tailboom. Shimming removes any gap that exists and the possibility of stress on the supports that can occur during clamp-up.

APPROVAL: The engineering design aspects of this Service Bulletin are Transport Canada approved.

MANPOWER: Approximately 4.0 man-hours are necessary to complete this Bulletin. The man-hours are based on hands-on time and can change due to the personnel and facilities available.

MATERIAL:

Required Material:

The material that follows is necessary to complete this Bulletin and can be procured through your Bell Helicopter Textron Supply Center.

PART NUMBER	NOMENCLATURE	QUANTITY
120-008C24E9	PEEL SHIM	4
MS24665-136	COTTER PIN	4
NAS1149F0463P	WASHER	4
NAS1149F0432P	WASHER	8

Consumable Material:

None required.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-407-MM-5, rev.3- 28 October 1996:

Chapter 53, Cowls and fairings.

BHT-407-MM-7, rev.3- 28 October 1996:

Chapter 65, Tail rotor drive.

BHT-407-IPB, rev.2- 1 June 1996:

Chapter 65, Tail rotor drive.

PUBLICATIONS AFFECTED:

BHT-407-MM-7, rev.3- 28 October 1996:

Chapter 65, Tail rotor drive.

BHT-407-IPB, rev.2- 1 June 1996:

Chapter 65, Tail rotor drive.

ACCOMPLISHMENT INSTRUCTIONS:

1. Get access to the tail rotor driveshaft section on the tailboom. Refer to BHT-407-MM-5, Chapter 53, for the removal of the aft fairing assembly and the tail rotor driveshaft cover.

- NOTE -

The instructions to determine the amount of shims required is the same for the four tail rotor driveshaft bearing supports. Repeat the steps 2. to 5. for the four bearing supports.

2. Remove the cotter pin (1, Figure 1, Sheet 1) and loosen the nut (2) from the bolt (4) that attaches the tail rotor driveshaft bearing hanger (5) to the bearing support (6, 7, 8, or 9). Do not remove the bolt (4). Refer to BHT-407-MM-7, Chapter 65.

3. Slide the tail rotor bearing hanger (5), on its bolt, until it is against one flange of the bearing support (6, 7, 8, or 9) (Figure 1, Sheet 2). With the use of a feeler gauge, carefully measure the free gap between the tail rotor bearing hanger (5) and the other flange of the bearing support. Record the gap measurements.

4. Prepare the shims (refer to Figure 1, View B or View C).

5. Do an alignment of the tail rotor driveshaft before you secure the installation of the tail rotor bearing supports. Refer to BHT-407-MM-7, Chapter 65.

6. Keep the tail rotor driveshaft aligned. Install the washers (3) and nuts (2). Tighten the nuts as shown on Figure 1, Sheet 2. Install the cotter pin (1).

7. Make an entry in the helicopter historical record to show that this Alert Service Bulletin is completed.

8. Make an entry in the Record of Alert Service Bulletins in the Maintenance Manual.

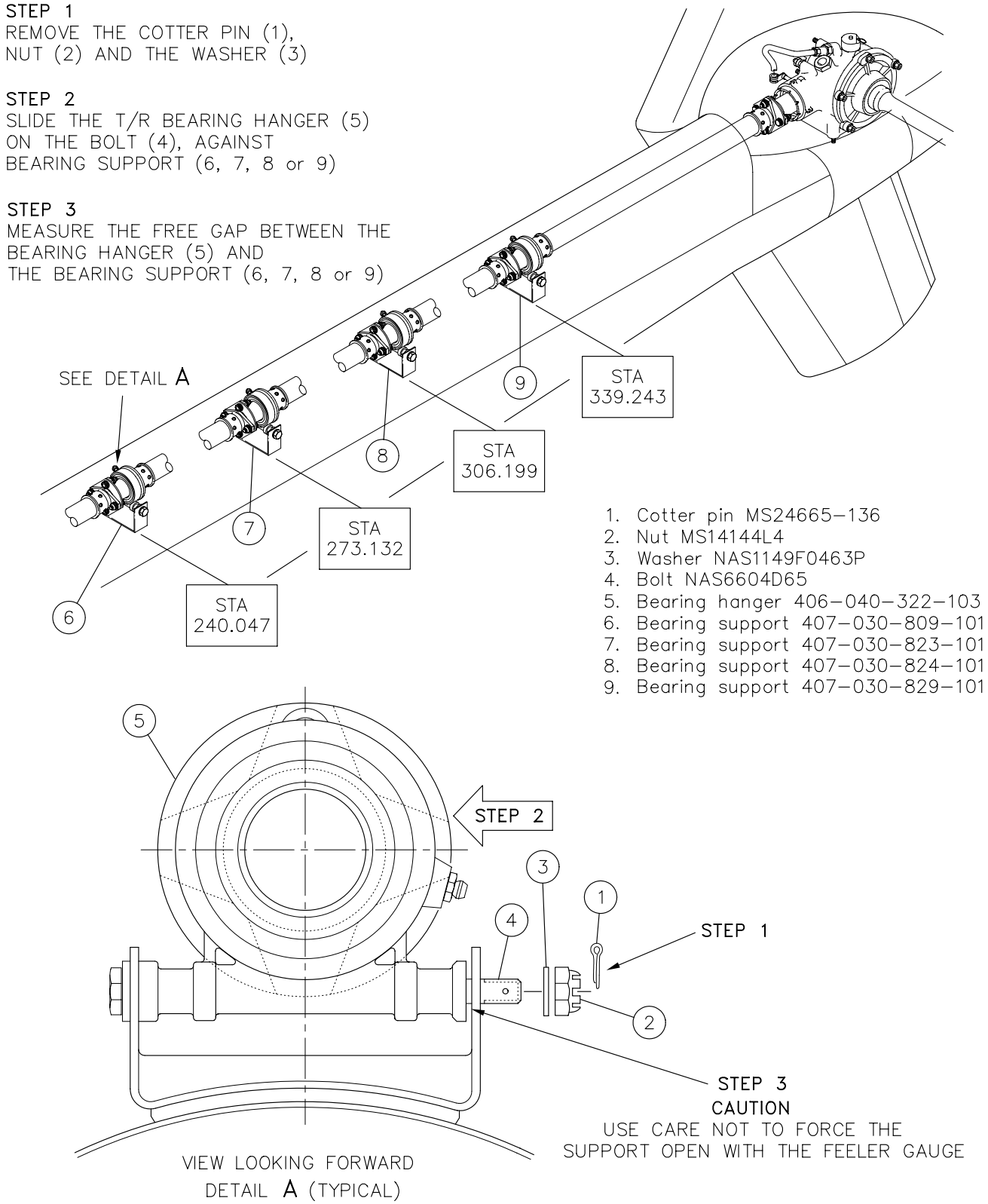
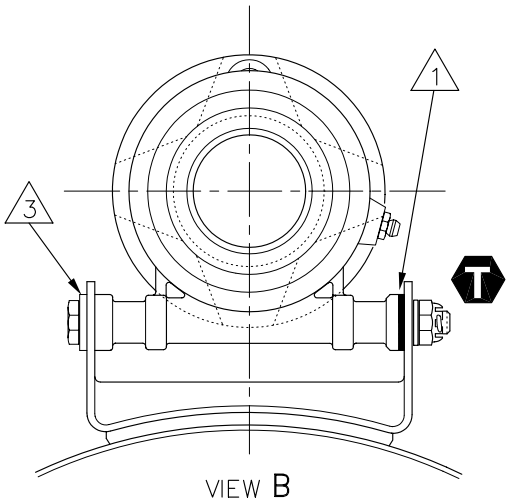
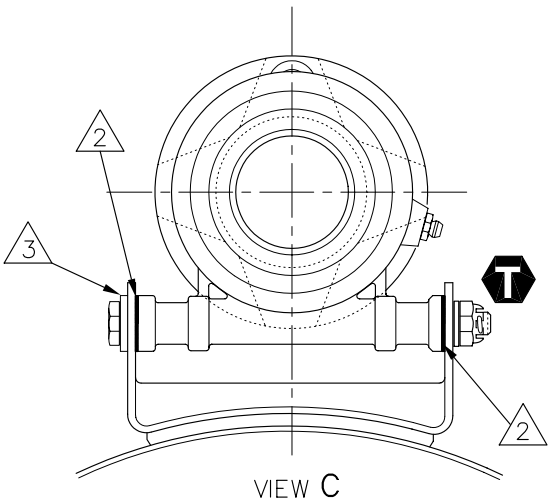


Figure 1. Shimming procedure (Sheet 1 of 2).



VIEW B
LOOKING FORWARD

SHIM LOCATION FOR A GAP
OF 0.010 IN. (0.254 mm) AND LESS



VIEW C
LOOKING FORWARD

SHIM LOCATION FOR A GAP
OF 0.010 IN. (0.254 mm) AND GREATER

T 50 TO 70 IN–LBS
(5.7 TO 7.9 Nm)

NOTES

1. If the measured gap is 0.010 in. (0.254 mm) or less, peel the shim 120–008C24E9 to the same thickness as the measured gap within 0.002 in. (0.0508 mm) and put it between the bearing hanger and the bearing support on the nut side of the bearing support. Measured gap of 0.002 inch (0.0508 mm) or less does not require a shim.

2. If the measured gap is more than 0.010 in (0.254 mm), peel the shim 120–008C24E9 into two shims that have a combined thickness that is the same as the measured gap within 0.002 (0.0508 mm) and their individual thicknesses are equal within 0.004 in (0.1016 mm). Install one shim between the bearing hanger and the bearing support on the bolt head side and one between the bearing hanger and the bearing support on the nut side of the bearing support.

3. Use an additional washer NAS1149F0463P, or a maximum of two washer NAS1149F0432P as required to align the cotter pin with the slot in the nut. Make sure that the nut does not touch the bolt grip.

Figure 1. Shimming procedure (Sheet 2).