

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

A Subsidiary of Textron Inc.

No. 230-00-30

Date 08-04-00

Page 1 of 5

DATE
REV

**MODEL AFFECTED:** 230

**SUBJECT:** MAIN ROTOR HUB ASSEMBLY P/N 222-012-101-105 AND -109 CONFIGURATION CHANGE AND UPGRADE

**HELICOPTERS AFFECTED:** Model 230 Helicopters S/N 23001 through S/N 23038

**COMPLIANCE:** At Customer's Option

**DESCRIPTION:**

This bulletin provides information to operators that have a requirement to upgrade the main rotor hub assembly to the latest configuration. Table 1 lists the components that comprise the major differences for hub dash number configurations.

Certified design configuration of the helicopters at time of delivery were as follows:

<u>Helicopter Serial No</u>	<u>Main Rotor Hub Assembly Part Number</u>
23001 through 23038	222-012-101-105

Main rotor hub assembly P/N 222-012-101-109 is the current spare replacement.

The use of a later dash numbered hub assembly on an earlier helicopter serial number is approved. The use of an earlier dash number hub assembly on a later helicopter serial number is not authorized. To do so places the helicopter out of the certified design configuration.

A dash number identification change in the hub assembly records is required. Historical records must be annotated with the new part numbers and retirement lives as applicable.

**APPROVAL:**

The engineering design aspects of this bulletin are Transport Canada approved.

**MANPOWER:**

No man-hour requirements are stated, as the length of time for upgrades will vary on the upgrade required. Upgrades at time of maintenance should result in no addition to man-hour requirements normally incurred.

**MATERIALS:**

Reference ACCOMPLISHMENT INSTRUCTIONS, standard replacement parts for overhaul are not included. Material will be available through your Bell Helicopter Supply Center.

**SPECIAL TOOLS:**

Reference Model 230 Series Component Repair and Overhaul Manual, Volume 2, Chapter 62.

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

BHT-230-MM-2, Chapter 4 and 5

BHT-230-MM-6, Chapter 62

BHT-230-CR&O-2, Chapter 62, Component Repair and Overhaul

Alert Service Bulletin 230-94-6 Flapping Spring Inspection

Alert Service Bulletin 230-95-10 Grip bolts inspection and retorque

Alert Service Bulletin 230-98-13 Grip and Flapping bearing bolts retorque

Alert Service Bulletin 230-98-15 Flapping bearing attach bolts inspection

Technical Bulletin 230-94-7 Hub and blades chordwise balance increase

Technical Bulletin 230-95-12 Flapping spring 222-310-117-105 introduction

**PUBLICATIONS AFFECTED:**

BHT-230-MM-2, Chapter 4 and 5  
BHT-230-MM-6, Chapter 62  
BHT-230-CR&O-2, Chapter 62, Component Repair and Overhaul

**ACCOMPLISHMENT INSTRUCTIONS:**

Table 1 lists the major components of dash numbered configurations, but does not contain parts and hardware common to all configurations. These items are contained in the Illustrated Parts Catalog.

Overhaul main rotor hub assembly in accordance with Model 230 Series Component Repair and Overhaul Manual and Technical Bulletin 230-95-12.

The upgraded Main rotor hub assembly must have its data plate and Historical Record reidentified to new part number that the Main rotor hub assembly was upgraded to. The suffix "FM" will be added after the part dash number to indicate "Field Modified". The serial number of field modified part shall never be altered or changed.

Example: Upgrade the Main rotor hub assembly P/N 222-012-101-105 to 222-012-101-109 configuration. Reidentify Main rotor hub assembly data plate and Historical Service Record to new part number: 222-012-101-~~105~~-109FM  
Retain existing serial number.

TABLE 1  
MAIN ROTOR HUB ASSEMBLY

PART NUMBER	NOMENCLATURE	CONFIGURATION		NOTES
		-105	-109	
222-012-101	Hub Assembly	-105	-109	
MS21250-06010	Bolt	X	X	(2)
222-010-154-111	Trunnion	X	X	
222-011-102-105	Yoke	X	X	
222-011-108-105	O/B Spindle Assembly	X	X	
222-011-113-103	Shaft Pendulum	X	X	
222-011-114-103	Support	X	X	
222-012-102-101	Pitch Horn	X	X	
222-012-104-101	Grip Assembly	X	X	
222-012-109-101	Shim I/B	X	X	
222-012-110-103	Shim O/B	X	X	
222-310-114-111	Flapping Bearing	X	X	
222-310-117-103	Flapping Spring	X		(3) (4)
222-310-117-105	Flapping Spring		X	(4)
222-310-125-103	Bearing, I/B	X	X	
222-310-126-101	Bearing O/B	X	X	
222-310-127-101	Bolt	X	X	
222-310-128-101	Bolt, Spindle I/B	X	X	(1)
222-310-129-101	Bolt, Spindle O/B	X	X	(1)

**NOTES**

- (1) 2500 hour airworthiness life limitation. Refer to BHT-230-MM-2, Chapter 4.
- (2) When installing bolts retaining the flapping springs and supports to the trunnion, if the shim thickness is greater than .032 inch, use bolts P/N NAS 626-10 (alt. MS21250-06010). If the shim thickness is less than .032 inch, use bolts P/N NAS 626-8 (alt. MS21250-06008).
- (3) For spare parts replacement, use flapping spring P/N 222-310-117-105. Refer to note (4)
- (4) Install flapping bearing P/N 222-310-117-105 in accordance with procedures in Technical Bulletin 230-95-12.