

# TECHNICAL BULLETIN

**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

No. 222U-00-90

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DATE

REV

**MODEL AFFECTED:** 222U

**SUBJECT:** TRANSMISSION ASSEMBLY P/N 222-040-003-111, -119 AND -123, CONFIGURATION CHANGE AND UPGRADE

**HELICOPTERS AFFECTED:** Model 222U Serial Number 47501 through 47574

**COMPLIANCE:** At Customer's Option

**DESCRIPTION:**

This bulletin provides operators with the information required to upgrade a transmission assembly to the latest configuration. Table 1 lists the components that comprise the differences between transmission assembly dash number configurations.

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

<u>Helicopter S/N</u>	<u>XMSN Assy P/N</u>
47501 through 47574	222-040-003-111

Transmission Assembly P/N 222-040-003-123 is the current spare replacement.

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

Following upgrade, the dash number identification must be updated in the transmission assembly records.

**APPROVAL:**

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

**MANPOWER:**

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

**MATERIAL:**

Reference ACCOMPLISHMENT INSTRUCTIONS. Material will be available through your Bell Helicopter Textron Supply Center.

**SPECIAL TOOLS:**

Reference Model 222 Series Component Repair and Overhaul Manual Volume 2, Chapter 63.

**WEIGHT AND BALANCE:**

Not affected

**ELECTRICAL LOAD DATA:**

Not affected

**REFERENCES:**

BHT-222U-MM-6, Chapter 63  
BHT-222-CR&O-2, Chapter 63  
Technical Bulletin 222U-87-42, Transmission water shield installation  
IL 222U-90-2, Transmission top case bushing replacement.  
IL GEN-94-53, Powertrain component corrosion prevention.  
OSN GEN-96-28, Transmission spiral bevel gear cracks.

**PUBLICATIONS AFFECTED:**

BHT-222U-MM-6, Chapter 63  
BHT-222-CR&O-2, Chapter 63

**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 Transmission assembly in accordance with Model 222 Series Component Repair and Overhaul Manual.

The upgraded transmission assembly must have its data plate and Historical Record reidentified to new part number that the transmission 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 transmission assembly P/N 222-040-003-111 to the -123 configuration. Reidentify transmission assembly data plate and Historical Service Record to new part number: 222-040-003-~~111~~-123 FM.  
Retain existing serial number.

Table 1

TRANSMISSION ASSEMBLY P/N

PART NUMBER	NOMENCLATURE	-111	-119	-123	NOTE
222-040-003	Transmission assembly		(10)	(11)(12)	
222-031-616-101	Fitting Assembly	X			(1)
222-031-616-103	Fitting Assembly	X	x	x	
222-031-619-101	Mount Assembly	X			(3)
222-031-620-101	Mount Assembly	X			(4)
222-031-663-101	Shield, L / H		x	x	(2) (12)
222-031-663-103	Shield, R / H		x	x	(2) (12)
222-040-069-101	Case assembly	X			(5)
222-040-069-105	Case assembly		x	x	
222-040-109-103	Gear	X			(6)
222-040-109-105	Gear		x	x	
222-040-115-001	Gear	X			(7)
222-040-115-101	Gear		x	x	
222-340-052-103	Pump assembly	X			(8)
222-340-091-101	Pump assembly		x	x	(8)
222-375-019-003	Transmitter	X			(9)
222-375-077-105	Transmitter		x	x	
230-031-619-101	Mount assembly		x		(12) (3)
230-031-620-101	Mount assembly		x		(12) (4)
AN815-12D	Union (qty 2)	X	x	x	13

-NOTES-

1. For spares replacement, use Fitting Assembly P/N 222-031-616-103.
2. Shields may be installed on –111 transmission per Technical Bulletin 222U-87-42.
3. For spares replacement of P/N 222-031-619-101 Mount assembly, P/N 222-030-535-107 Clevis assembly, P/N 20-057-6-22D bolt and P/N MS 17825-6 nut as a unit, use P/N 230-031-619-101 Mount assembly, P/N 230-030-535-103 Rod end assembly, P/N 20-057-6-30D bolt, P/N MS14144L6 nut and P/N 22-008C24-30-20 bushing as a unit.
4. For spares replacement of P/N 222-031-620-101 Mount assembly, P/N 222-030-535-111 Clevis assembly, P/N 20-057-6-22D bolt and P/N MS 17825-6 nut as a unit, use P/N 230-031-620-101 Mount assembly, P/N 230-030-535-101 Rod end assembly, P/N 20-057-6-30D bolt, P/N MS14144L6 nut and P/N 22-008C24-30-20 bushing as a unit.
5. For spares replacement, use Case assembly P/N 222-040-069-105.
6. For spares replacement, use Gear P/N 222-040-109-105.
7. For spares replacement, use Gear P/N 222-040-115-101.
8. For spares replacement of Pump assembly P/N 222-340-052-103, use Pump assembly P/N 222-340-091-101 and two (2) P/N M83248/1-037 packing as a unit.
9. For spares replacement, use Transmitter P/N 222-375-077-105.
10. Transmission assembly P/N 222-040-003-119 is used in Model 230.
11. Transmission Assembly P/N 222-040-003-123 is the same as –119 except the L/H and R/H mounts and shields are not installed.  
That configuration provides a single Transmission Assembly that may be installed on any model 222 and 230.
12. Installation of Transmission Assembly P/N 222-040-003-123 in Model 222 or 230 aircraft will require installation of the L/H and R/H mounts and shields. Refer to applicable maintenance and/or overhaul manuals for installation instructions.

-NOTES-

13. Union P/N AN815-12D is the interface with the transmission oil inlet and outlet hoses to the oil cooler.