

TECHNICAL BULLETIN
Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

No. 222U-01-92

Date 01-19-01

Page 1 of 4

MODEL AFFECTED: Model 222U

SUBJECT: MAIN DRIVESHAFT ASSEMBLY P/N 222-044-006-111, INTRODUCTION OF

HELICOPTERS AFFECTED: Model 222U S/N 47501 through 47574

COMPLIANCE: At Customer's Option.

DESCRIPTION:

Bell Helicopter Textron has received reports of internal corrosion of P/N 222-044-006-109 engine to transmission driveshaft assemblies.

A new drive shaft assembly, P/N 222-044-006-111, has been created to address the reported problems. This new assembly will have inner and outer couplings that use an Ion Vapor Deposited Aluminum (IVDA) coating on all areas currently cadmium plated and/or primed. In addition, to eliminate galling of shaft assembly and inner coupling during assembly and disassembly, the 222-044-685-105 shaft pilot diameter has been carburized and the 222-044-607-103 inner coupling pilot diameter has been nitrided to increase resistance to damage. The inner coupling retention nut has also been silver plated to assist in preventing corrosion.

The new P/N 222-044-607-103 and P/N 222-044-672-105 inner and outer couplings are Ion Vapor Deposited Aluminum (IVDA) coated and do not require primer application per Technical bulletin 222U-95-81.

The new 222-044-006-111 driveshaft still requires the installation of the overtemperature indicators (TEMP-PLATES) on the outer couplings per Alert Service Bulletin 222U-93-40

- NOTE -

The IVDA coating is chromate treated, giving the coupling a tan to iridescent gold appearance. Unlike cadmium plated couplings, this coating may lighten in color while in service. DO NOT use the color of the coupling to determine an overheat condition, check the Templates in accordance with the maintenance manual.

Driveshaft assembly P/N 222-044-006-111 will be supplied as a spare replacement for all earlier driveshaft assemblies. In addition, the detail parts of driveshaft assembly P/N 222-044-006-111 will be supplied as spare replacement for all earlier detail parts.

This bulletin provides information to operators that have a requirement to upgrade main driveshaft assemblies to the latest configuration.

APPROVAL:

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

MANPOWER:

No additional man-hours will be required to accomplish this bulletin when done in conjunction with driveshaft disassembly.

MATERIALS:

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

SPECIAL TOOLS:

Not required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-222U-MM-6, Chapter 63
BHT-222U-CR&O-2, Chapter 63
ASB 222U-93-40 Main Rotor and Tail Rotor Driveshaft Grease Coupling Over-Temperature Indicators Installation of.
ASB 222U-94-42 Driveshaft P/N 222-044-685-101 Inspection of.
ASB 222U-95-46 Shaft Assy P/N 222-044-685-101 Recall and Replacement of.
TB 222U-87-28 Main Driveshaft Assemblies Calendar Inspection Addition of.
TB 222U-95-81 Driveshaft Outer Coupling P/N 222-044-672-101 and Inner Coupling P/N 222-044-607-003 Corrosion Protection of.

PUBLICATIONS AFFECTED:

BHT-222U-MM-6, Chapter 63
BHT-222U-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.

The helicopter certified design configurations at time of delivery were as follows:

Helicopter Serial No.	Driveshaft Assembly Part Number
47501-47574	222-044-006-109

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

Overhaul main driveshaft assembly in accordance with Chapter 63, Volume II, of Model 222 Series Component Repair and Overhaul Manual.

The upgraded main driveshaft assembly must have its data plate and Historical Record reidentified to the new part number that the driveshaft 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 will not be altered or changed.

Example: Upgrade main driveshaft assembly P/N 222-044-006-109 to the -111 configuration. Reidentify driveshaft assembly data plate and Historical Service Record to new part.

Number: 222-044-006-~~109~~-111FM.

Retain existing serial number.

TABLE 1. MAIN DRIVESHAFT P/N 222-044-006

CONFIGURATION

PART NUMBER	NOMENCLATURE	DASH NUMBERS		NOTES
222-044-006	Driveshaft Assembly	-109	-111	
222-044-607-003	COUPLING	X		(1) (5)
222-044-607-103	COUPLING		X	(6)
222-044-654-103	NUT	X		(2)
222-044-654-105	NUT		X	
222-044-672-101	COUPLING	X		(3) (5)
222-044-672-105	COUPLING		X	(6)
222-044-685-101	SHAFT	X		(4) (7)
222-044-685-103	SHAFT	X		(4) (8)
222-044-685-105	SHAFT		X	(8)

- NOTES -

1. Superseded in Spares by P/N 222-044-607-103.
2. Superseded in Spares by P/N 222-044-654-105.
3. Superseded in Spares by P/N 222-044-672-105.
4. Superseded in Spares by P/N 222-044-685-103 or -105
5. Couplings already modified/primed per Technical Bulletin 222U-95-81 may be kept in service and primer may be reapplied as required. However, Technical Bulletin 222U-95-81 should no longer be applied on original couplings.
6. Application of primer per Technical Bulletin 222U-95-81 is not permitted on couplings coated with Ion Vapor Deposited Aluminum (IVDA).
7. Shaft Inside diameter is protected with Epoxy Zinc coating.
8. Shaft Inside diameter is protected with Cadmium plating.