

TECHNICAL BULLETIN
Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

No. 214ST-00-163

Date 06-14-00

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MODEL AFFECTED: 214ST

SUBJECT: INTRODUCTION OF NEW TRANSMISSION RING
GEAR CASE ASSEMBLY, P/N 214-040-361-101

HELICOPTERS AFFECTED: All Model 214ST helicopters, S/N 28101 THRU
28200.

COMPLIANCE: At customer's option

DESCRIPTION:

A new transmission ring gear case assembly, P/N 214-040-361-101, has been developed to replace the current case assemblies, P/N 214-040-761-005 and -111. The -361-101 case assembly is fabricated from stainless steel and will provide improved serviceability over the aluminum alloy -761-005/-111 case assemblies.

The change in case material will require adjustment of helicopter weight and balance (refer to Weight and Balance section) after installation of transmissions incorporating the -361-101 case assembly. Overhaul requirements for the -361-101 case assembly are described in the ACCOMPLISHMENT INSTRUCTIONS section of this bulletin.

APPROVAL:

The engineering design aspects of this bulletin are FAA/DER approved.

MANPOWER:

No additional man-hours are required if accomplished during transmission overhaul.

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.

-NOTE-

Existing P/N 214-040-761-111 case assemblies currently in BHT spares stock will be used to depletion.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
214-040-361-101	Case Assembly	1

SPECIAL TOOLS:

Refer to BHT-214ST-CR&O, Chapter 63, for required tooling.

WEIGHT AND BALANCE:

Compliance with this bulletin affects the weight and balance of the helicopter as shown in the following chart. Adjust ballast, as necessary, to return helicopter empty weight within allowable center-of-gravity limits (refer to BHT-214ST-MM, Chapter 8).

<u>Weight</u>	<u>Arm</u>	<u>Longitudinal Moment</u>	<u>Arm</u>	<u>Lateral* Moment</u>
+66.5 Lbs +30.2 kg	239.9 in. 6093 mm	+15953 in-Lbs +1840.1 kg x mm/100	0.0 in. 0.0 mm	0 in-Lbs 0 kg x mm/100

* In lateral calculations, - is left and + is right.

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

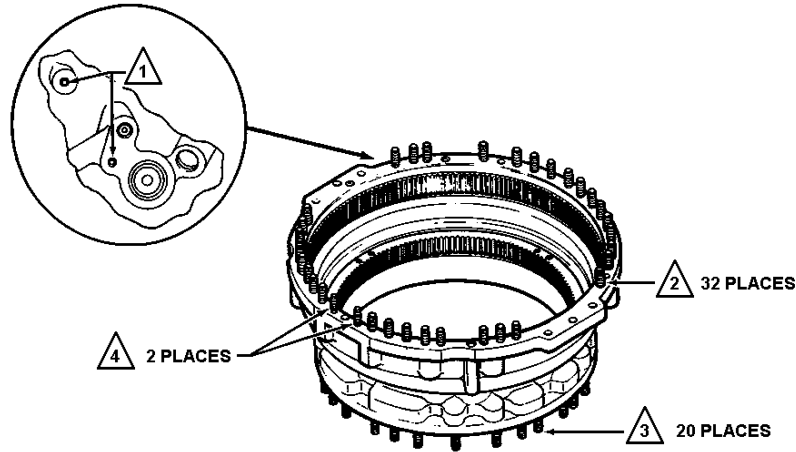
BHT-214ST-IPB, Chapter 63
BHT-214ST-MM, Chapter 8
BHT-214ST-CR&O, Chapter 63

PUBLICATIONS AFFECTED:

BHT-214ST-IPB, Chapter 63
BHT-214ST-CR&O, Chapter 63

ACCOMPLISHMENT INSTRUCTIONS:

1. Install the P/N 214-040-361-101 case assembly in the P/N 214-040-002 transmission assembly as noted in BHT-214ST-CR&O, Chapter 63.
2. After installation of a P/N 214-040-002 transmission assembly incorporating the P/N 214-040-361-101 case assembly, adjust helicopter weight and balance as necessary per BHT-214ST-MM, Chapter 8.
3. Overhaul/inspection requirements and wear/damage limits are identical for the P/N 214-040-761 and P/N 214-040-361 Ring Gear Case Assemblies. However, stud replacement data for the P/N 214-040-361 case is different than that for the P/N 214-040-761 case. Stud replacement data for the P/N 214-040-361 Ring Gear Case Assembly is provided in Figure 1 of this bulletin.



STUD TYPE, HOLE, AND INSTL DATA		
STUD LOCATION	STANDARD (STRAIGHT)	OVERSIZE (STEPPED)
1	AN125981 Thru AN125986 stud instl torque, 50 to 95 in-lb (5.64 to 10.73 Nm) instl height, 0.72 to 0.78 in. (1.83 to 1.98 cm)	0.265 to 0.272 in. (6.73 to 6.90 mm) dia hole x 0.75 in. (19.05 mm) deep 0.327 to 0.334 in. (8.30 to 8.48 mm) dia hole x 0.062 in. (1.57 mm) deep 5/16 - 18 UNC-3B THD x 0.59 in. (14.99 mm) deep AN150837 Thru AN150842 stud instl torque, 50 to 110 in-lb (5.64 to 12.42 Nm) instl height, 0.72 to 0.78 in. (1.83 to 1.98 cm)
2	214-040-363-101 Thru -111 stud instl torque 175 to 375 in-lb (19.77 to 42.36 Nm) Instl height, 1.09 to 1.15 in. (2.76 to 2.92 cm)	Drilling of oversize holes and instl of stepped studs not permissible these locations.
3	AN126611 Thru AN126616 instl torque, 175 to 375 in-lb (19.77 to 42.36 Nm) instl height, 1.10 to 1.16 in. (2.79 to 2.95 cm)	0.376 to 0.383 in. (9.55 to 9.72 mm) dia hole x 0.85 (2.16 cm) deep 0.452 to 0.459 in. (11.48 to 11.65 mm) dia hole x 0.060 in. (1.52 mm) deep 7/16 - 14 UNC-3B THD x 0.68 in. (17.2 mm) deep AN151449 thru AN151454 stud instl torque, 175 to 475 in-lb (19.77 to 53.66 Nm) instl height, 1.10 to 1.16 in (2.79 to 2.95 cm)
4	AN126533 Thru AN126538 stud instl torque, 100 to 225 in-lb (11.29 to 25.42 Nm) instl height, 1.00 to 1.06 in. (2.54 to 2.69 cm)	Drilling of oversize holes and instl of stepped studs not permissible these locations.

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STUD REPLACEMENT
214-040-361-101 RING GEAR CASE ASSEMBLY

FIGURE 1