

Bell Helicopter **TEXTRON**

A Subsidiary of Textron, Inc.

April 2, 2001

TO: All Owners/Operators of Bell 214B/214B-1 Helicopters

SUBJECT: REVISION "A" TO TECHNICAL BULLETIN 214-90-63: ENGINE TO TRANSMISSION DRIVESHAFT ASSEMBLY P/N 214-040-006, CONFIGURATION CHANGE AND UPGRADE

Technical Bulletin 214-90-63 dated 3-19-90 has been revised to include:

- 1) An additional configuration.
- 2) Revise and update configuration notes and references.

TECHNICAL BULLETIN

Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

No. 214-90-63
 Date 3-19-90
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DATE 04-02-2001
REV A

MODEL AFFECTED: 214B/214B-1

SUBJECT: ENGINE TO TRANSMISSION DRIVESHAFT ASSEMBLY P/N 214-040-006, CONFIGURATION CHANGE AND UPGRADE

HELICOPTERS AFFECTED: Model 214B/214B-1 Helicopters s/n 28001 through 28070.

COMPLIANCE: At Customer's Option

DESCRIPTION:

This bulletin provides information to operators that have a requirement to upgrade the engine to transmission driveshaft assembly to the latest configuration. The helicopter certified design and spare parts configuration at time of delivery were as follows:

<u>Helicopter Serial No.</u>	<u>Driveshaft Assembly</u>
28001-28020*	214-040-006-007*
28021-28046	214-040-006-011
28047-28070	214-040-006-101
28071-Sub and Spares	214-040-006-103

*28001 through 28006 may use P/N 214-040-006-005 Driveshaft Assembly as an alternate.

The use of an earlier dash number engine to transmission driveshaft assembly on a later helicopter serial number is not authorized and places the helicopter out of conformance with approved FAA type design. The use of a later dash number engine to transmission driveshaft assembly on an earlier helicopter serial number is approved.

Table 1 lists the components that comprise the engine to transmission driveshaft assembly dash number configuration differences for P/N 214-040-006-007 and higher. Refer to TB 214-76-1 for conversion of a P/N 214-040-006-005 assembly to a -007

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assembly. A dash number identification change on the engine to transmission driveshaft assembly data plate is required when upgrading an assembly configuration. Historical records must be annotated with the new part numbers and retirement times, as applicable. | A

APPROVAL:

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

MANPOWER:

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

MATERIALS:

Reference ACCOMPLISHMENT INSTRUCTIONS. Standard replacement parts for overhaul are not included unless they are affected by a configuration difference. Materials will be available through your Bell Helicopter Supply Center.

SPECIAL TOOLS:

Refer to Model 214B Component Repair and Overhaul Manual, Chapter 66.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-214B-IPB Illustrated Parts Breakdown
BHT-214B-CR&O Component Repair and Overhaul
ASB 214-81-16, dated 2-3-81, "Zinc Chromate, Thermal Limit Indicator, Addition Of".
(Cancelled by ASB 214-93-51) | A

- ASB 214-93-51, Revision A, dated 3-4-94, "Main Driveshaft and Tail Rotor Drive System Grease Lubrication Coupling, Overtemperature Indicators, Installation Of".
- T.B. 214-76-1, Revision A, dated 1-26-77, "Part I – Disassembly, Inspection, and Reassembly of Driveshaft Assembly, P/N 214-040-006-005; Part II – Mod. Of Engine to Transmission Driveshaft Assembly, P/N 214-040-006-005".
- T.B. 214-93-75, Revision A, dated 8-12-93, "Main Driveshaft Hardware, Improvement Of."

PUBLICATIONS AFFECTED:

None affected.

ACCOMPLISHMENT INSTRUCTIONS:

1. Disassemble, inspect, and assemble the engine to transmission driveshaft assembly in accordance with Chapter 66 of BHT-214B-CR&O.
2. Upgrading the engine to transmission driveshaft assembly to a later configuration will require incorporating parts as shown in Table 1. Parts listed are only those that differ from one configuration to another or which are affected by spare parts replacements. All parts that are to be retained in service shall be submitted to normal overhaul inspections to determine serviceability.
3. Refer to TB 214-76-1 for upgrade of the P/N 214-040-006-005 Driveshaft Assembly to the P/N 214-040-006-007 Driveshaft Assembly.
4. The upgraded engine to transmission driveshaft assembly must have the data plate and historical service record card reidentified to the new part number. The suffix "FM" will be added after the part dash number to indicate "Field Modified". Using a vibrating stylus, line through existing part dash number and mark new dash number + FM adjacent to original dash number. **The serial number of a field modified part will not be altered or changed.**

Example: Upgrade the Model 214B engine to transmission driveshaft assembly P/N 214-040-006-011 to the -103 configuration. Reidentify driveshaft assembly data plate and historical service record to new part number: 214-040-006-~~011~~-103FM

Retain existing serial number.

TABLE 1 - MODEL 214B ENGINE TO TRANSMISSION DRIVESHAFT CONFIGURATIONS

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>CONFIGURATION/QUANTITY</u>				<u>NOTES</u>
214-040-006	Driveshaft	-007				(1)(2)
			-011			(3)
				-101		(3)
					-103	(4)
214-040-658-005	Coupling (Xmsn-Outer)	1	1	1		(5)
214-040-658-103	Coupling (Xmsn-Outer)				1	
214-040-678-001	Ring	1	1			(6)
214-040-846-001	Ring			1	1	
214-040-681-001	Ring	1				(7)
214-040-681-003	Ring		1	1	1	
214-040-683-001	Ring	1				(8)
214-040-683-003	Ring		1	1	1	
214-040-685-001	Ring	1	1			(9)
214-040-847-001	Ring			1	1	
214-040-686-001	Retainer	1	1			
214-040-317-101	Retainer			1	1	

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TABLE 1 - MODEL 214B ENGINE TO TRANSMISSION DRIVESHAFT CONFIGURATIONS (cont'd)

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>CONFIGURATION/QUANTITY</u>				<u>NOTES</u>
		-007	-011	-101	-103	
214-040-006	Driveshaft					
214-040-697-001	Housing	1				
214-040-697-003	Housing		1	1	1	
214-040-698-001	Housing	1				
214-040-698-003	Housing		1	1	1	
AN4-5A	Bolt	14	14	14		(10)
NAS1004-3A	Bolt				6	
NAS1004-5A	Bolt				8	
AN960-416L	Washer	14	14	14		(11)
AN960-416	Washer				14	
140-026-1	Washer				6	
206-040-329-003	Washer				8	

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NOTES

- (1) Refer to TB 214-76-1 for upgrade of P/N 214-040-006-005 to P/N 214-040-006-007.
- (2) Driveshaft assembly installation hardware (transmission end– AN4-5A Bolt, 8 each, and AN460-416L Washer, 8 each; engine end– AN4-5A Bolt, 6 each, and AN460-416L Washer, 6 each) superseded by AN4-6A Bolts, 8 each, AN460-416L Washer, 8 each, and AN960-416 Washers, 16 each, on transmission end; and, AN4-6A Bolt, 6 each, AN460-416L Washer, 6 each, and 140-026-1 Washer, 12 each, on engine end. All holes in a given bolt pattern must have identical hardware. (3)
- (3) Driveshaft assembly installation hardware (transmission end– AN4-6A Bolt, 8 each, AN460-416L Washer, 8 each, and AN960-416 Washer, 16 each; engine end – AN4-6A Bolt, 6 each, AN460-416L Washer, 6 each, and 140-026-1 Washer, 12 each) superseded by hardware noted in TB 214-93-75. All holes in a given bolt pattern must have identical hardware.
- (4) Install driveshaft assembly in helicopter using hardware per TB 214-93-75. All holes in a given bolt pattern must have identical hardware.
- (5) Superseded by P/N 214-040-658-103. Replace P/N 214-040-658-005 Coupling, P/N AN4-5A Bolt (8 each), and AN960-416L Washer (8 each) as a unit with P/N 214-040-658-103 Coupling, NAS 1004-5A Bolt (8 each), P/N AN960-416 Washer (8 each), and P/N 206-040-329-003 Washer (8 each). Reference TB 214-93-75.
- (6) Superseded by P/N 214-040-846-001.
- (7) Superseded by P/N 214-040-681-003.
- (8) Superseded by P/N 214-040-683-003.
- (9) Superseded by P/N 214-040-847-001.
- (10) Superseded by P/N NAS1004-3A Bolt (6 each) at engine end and P/N NAS1004-5A Bolt (8 each) at transmission end. Refer to Note (5) for transmission end hardware when P/N 214-040-658-103 Coupling is installed. Reference TB 214-93-75.
- (11) Superseded by P/N 140-026-1 Washer (6 each) and P/N AN960-416 Washer (6 each) at engine end and P/N 206-040-329-003 Washer (8 each) and P/N AN960-416 Washer (8 each) at transmission end. Refer to Note (5) for transmission end hardware when P/N 214-040-658-103 Coupling is installed. Reference TB 214-93-75.

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