

Bell Helicopter **TEXTRON**

A Subsidiary of Textron, Inc.

Oct 29, 2004

INFORMATION LETTER 407-04-86

TO: All Owners/Operators of Bell 407 series Helicopters

SUBJECT: Thomas Coupling Disks 407-340-340-101/-103, 50 hours recurring inspection cancellation of

Bell Helicopter has conducted a fatigue test on subject disc pack coupling to determine their inspection requirement. Based on the favorable result of that evaluation, the inspection frequency is now changed from a recurring 50 flight-hour to a recurring 300 flight-hour inspection. This new inspection frequency matches the helicopter recurring 300 flight-hour schedule inspections.

Maintenance Manual BHT-407-MM, Chapter 4, table 4-2 has been revised to remove the mandatory 50 flight-hour inspection and reflect this change. Current 300 flight-hour schedule inspection as stated in the Maintenance Manual BHT-407-MM, Chapter 5 already contains the appropriate inspection requirement.

Bell MODEL **407**



MAINTENANCE MANUAL VOLUME 1 GENERAL INFORMATION

NOTICE

The instructions set forth in this manual, as supplemented or modified by Alert Service Bulletins (ASB) or other directions issued by Bell Helicopter Textron and Airworthiness Directives (AD) issued by the appropriate airworthiness authority, shall be strictly followed.

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**22 FEBRUARY 1996
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REFERENCE TO OTHER MANUALS

Reference is made to the Model 407 Structural Repair Manual (BHT-LIGHT-SRM-1) throughout this manual.

This manual is currently in preparation and has not yet been released. Until this manual is issued, when reference to data contained in this manual is made, please contact Product Support Engineering for assistance.

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CHAPTER 4 — AIRWORTHINESS LIMITATIONS

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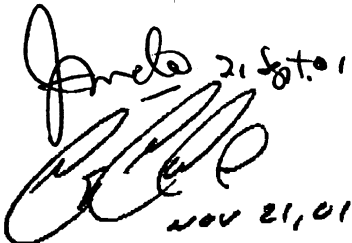
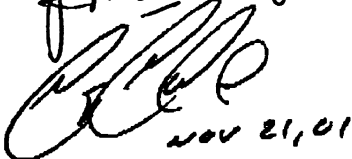
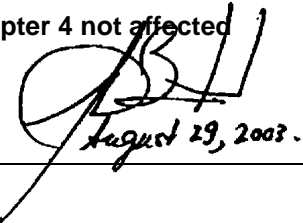
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The Airworthiness Limitations Schedule is approved by the Minister and specifies the maintenance required by any applicable airworthiness or operational rules unless an alternative program has been approved by the Minister.



Chief Engineering
Aircraft Certification
Transport Canada

REVISION NO.	DATE OF SIGNATURE	TC SIGNATURE
Revision 1 (01 Apr. 96)	29 Mar. 96	
Revision 2 (01 Jun. 96)	Not Applicable	Chapter 4 not affected
Revision 3 (26 Oct. 96)	26 Oct. 96	
Revision 4 (16 Dec. 96)	Not Applicable	Chapter 4 not affected
Revision 5 (18 Jul. 97)	18 Jul. 97	
Revision 6 (14 Apr. 98)	14 Apr. 98	
Revision 7 (01 May 98)	Not Applicable	Chapter 4 not affected
Revision 8 (01 Sept. 98)	Not Applicable	Chapter 4 not affected
Revision 9 (30 Nov. 98)	30 Nov. 98	
Revision 10 (16 Feb. 01)	Not Applicable	Chapter 4 not affected
Revision 11 (23 Mar. 01)	Not Applicable	Chapter 4 not affected
Revision 12 (08 May 01)	08 May 01	
Revision 13 (21 Sept. 01)	21 Sept. 01	 21 Sept. 01
Revision 14 (21 Nov. 01)	21 Nov. 01	 Nov 21, 01
Revision 15 (18 Jan 02)	Not Applicable	Chapter 4 not affected
Revision 16 (07 Jun 02)	Not Applicable	Chapter 4 not affected
Revision 17 (25 Oct 02)	Not Applicable	Chapter 4 not affected
Revision 18 (29 Aug 03)	29 Aug. 03	 August 29, 2003.


REVISION NO.	DATE OF SIGNATURE	TC SIGNATURE
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Revision 20 (12 NOV 04)	12 NOV 04	 Nov. 12, 2004

Table 4-1. Airworthiness Limitations Schedule (Cont)

COMPONENT	PART NUMBER ^{△1}	RETIREMENT YEARS/HOURS/RIN ^{△2}
NOTES:		
^{△8} These components were identified as life-limited items in the Revision 6 of the airworthiness limitation schedule. They are now "on condition" items. They will be removed from Table 4-1 at the subsequent revision if their status stays unchanged.		
^{△9} Input drive shaft 206-340-300-107 must be overhauled every 1,250 hours of operation.		
^{△10} The input drive shaft 206-340-300-105 must be removed from service upon reaching 1250 hours in service. Refer to ASB 407-01-45 for details.		
^{△11} Pylon side beams 407-010-201-105, 407-010-203-105 are to be subjected to an airworthiness inspection. See Table 4-2 for details.		
^{△12} Tailboom assemblies 407-030-801-107, 407-530-014-101, 407-530-014-103 are to be subjected to an airworthiness inspection. See Table 4-2 for details.		
^{△13} Reservoir per DOT-3HT and DOT exemption letter DOT-E-8162. This reservoir is part of reservoir assembly P/ N 407-073-848-101.		
^{△14} Aeronautical Accessories Incorporated (AAI) crosstube assemblies listed are BHT-approved production and spare alternates.		

Table 4-2. Inspection Limitations Schedule

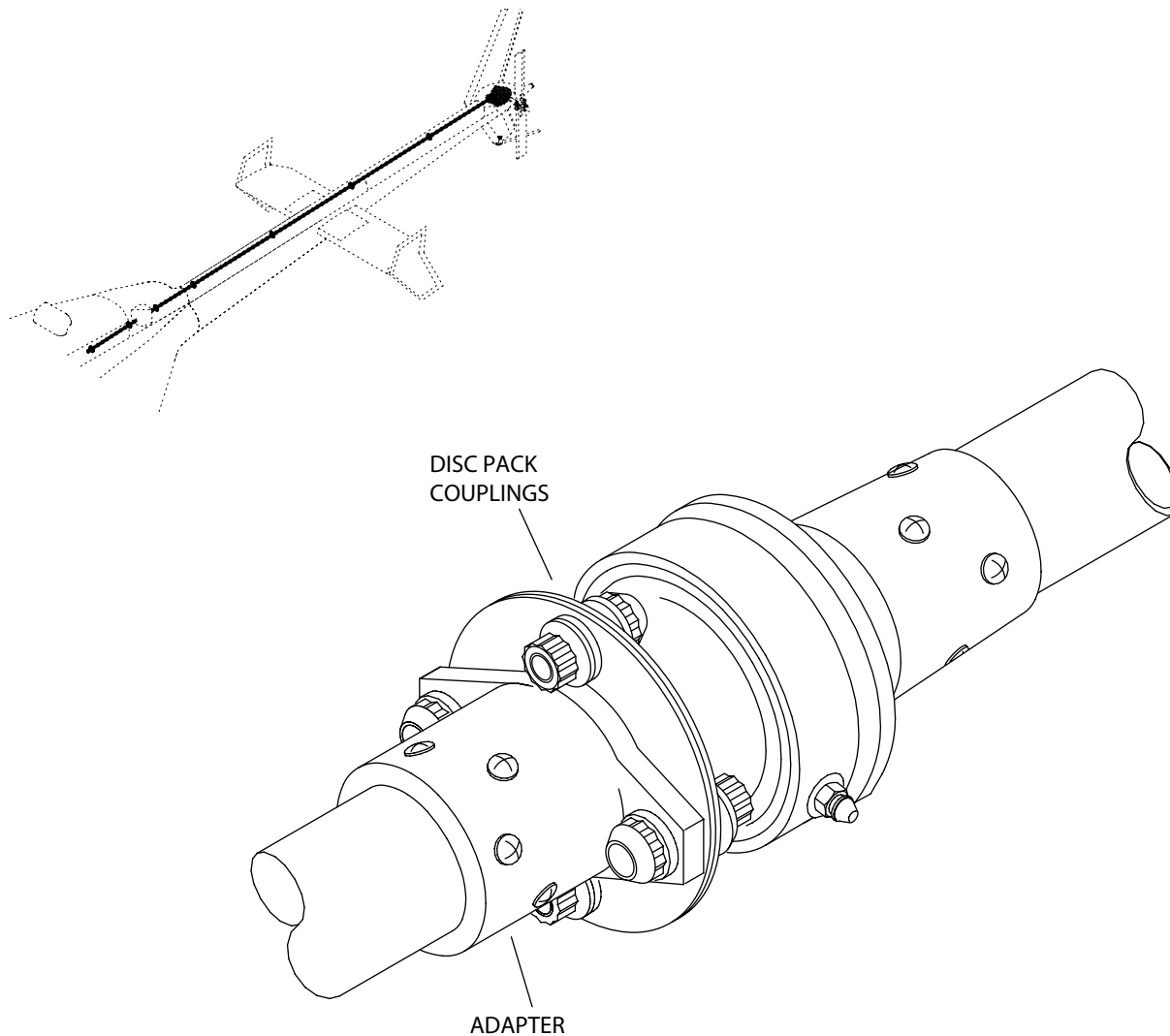
COMPONENT	PART NUMBER ^①	INSPECTION INTERVAL (HRS OPERATING TIME) ^②
Thomas Coupling Disks	406-040-340-101	25 hours ^③
Pylon Side Beam	407-010-201-105, 407-010-203-105	300 hours ^⑪
Bearing, Tail Rotor Hanger	407-340-339-103	25 hours ^⑦
Swashplate Bearing	406-310-402-101	50/150 hours ^⑤
Tail Rotor Blade	407-016-001-101	300 hours ^⑧
Yoke Assembly	407-010-101-101	100 hours ^④
Tailboom Assembly	407-030-801-101/-105	Pre-Flight Check/50 hours ^{⑥⑫}
Tailboom Assembly	407-030-801-201	300 hours ^{⑨⑫}
Tailboom Assembly	407-030-801-107, 407-530-014-101/-103	150 hours ^{⑩⑫}

NOTES:

^① Inspection limitation for the part number listed applies to all successive dash numbers for that component unless otherwise specified.

Table 4-2. Inspection Limitations Schedule (Cont)

COMPONENT	PART NUMBER ①	INSPECTION INTERVAL (HRS OPERATING TIME) ②
NOTES:		
② Refer to Chapter 5 for inspection requirements.		
③ Inspect couplings 406-040-340-101 every 25 hours of operation. Refer to ASB 407-97-13, Transport Canada Aviation Airworthiness Directive CF-97-20R1 and Federal Aviation Authority Airworthiness Directive 97-24-17. Refer to Figure 4-1 for inspection details.		
④ Refer to Figure 4-2 for inspection details.		
⑤ The swashplate bearing 406-310-402-101 must be removed from service not later than December 31, 1998 and replaced by bearing 406-310-402-103. Refer to ASB 407-97-11 and Transport Canada Aviation Airworthiness Directive CF-97-22 Bell.		
⑥ You must do a pre-flight check of all tailbooms in service. On tailbooms that have accumulated 600 hours or more in service, do a visual inspection within the next 25 hours and every 50 hours of tailboom operation thereafter. Refer to ASB 407-99-26 Revision A, dated 05-05-00. Refer to Figure 4-3 for inspection details.		
⑦ Refer to Figure 4-4 for inspection details.		
⑧ Refer to Figure 4-5 for inspection details.		
⑨ Refer to Figure 4-6 for inspection details.		
⑩ You must do an inspection of tailbooms 407-030-801-107, 407-530-014-101/-103 every 150 hours of operation. Refer to Figure 4-7 for inspection details.		
⑪ You must do a 10X inspection of pylon side beams 407-010-201-105, 407-010-203-105 that have accumulated 1000 hours or more in service every 300 hours of operation. Do a fluorescent penetrant inspection upon reaching 2500 hours in service. Refer to Figure 4-8 for inspection details.		
⑫ Contact Bell Helicopter Textron Product Support Engineering for changes or modifications to the structure in area where a mandatory airworthiness inspection is specified.		

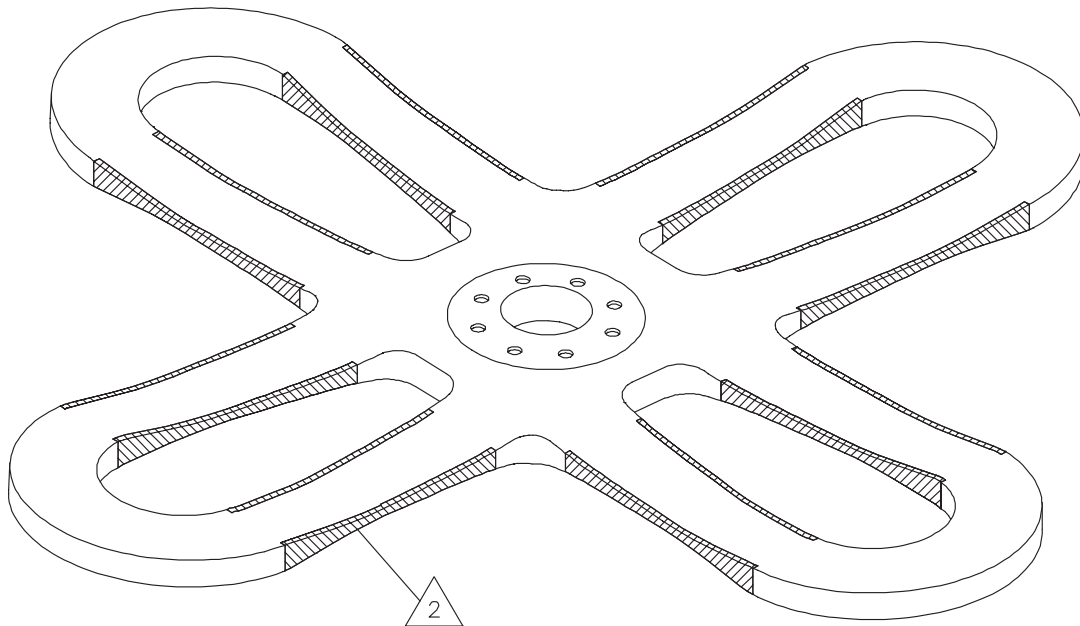
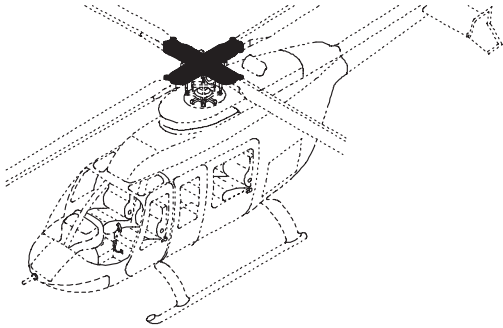


NOTES:

1. Perform a visual inspection of the disc pack coupling. Disassembly of the disc pack coupling is not necessary.
2. Perform a detailed visual inspection of the disc pack coupling for any scratches, cracks, fretting, and corrosion.
3. Make sure that the laminate gapping is in limits, refer to Chapter 65 for limits.

407MM_04000_00010_001_C01

Figure 4-1. Disc Pack Coupling (P/N 406-040-340-101) — Inspection



NOTES:

1. Perform a visual inspection – of main rotor yoke flexures (all locations). Inspection can be done on aircraft with main rotor yoke installed.

2. Perform a detailed visual inspection (shaded areas) for evidence of cracking or delamination on the inside and outside edges of flexures.

3. Refer to BHT-407-CR&O (Chapter 62) for damage criteria.

407MM_04000_00020_001_C00

Figure 4-2. Main Rotor Yoke (P/N 407-010-101-101) — Inspection