

SCHEDULED INSPECTIONS

5-7. SCHEDULED INSPECTIONS

WARNING

FAILURE TO CORRECT CONDITIONS SUCH AS, BUT NOT LIMITED TO, CORROSION, EROSION, MECHANICAL DAMAGE, OR OBVIOUS WEAR FOUND DURING A SCHEDULED INSPECTION COULD SERIOUSLY AFFECT THE AIRWORTHINESS OF THE HELICOPTER.

Scheduled inspections include the airframe and the component inspections. The scheduled airframe inspection intervals are related to the airframe operating time. The scheduled component inspection intervals are related to the component operating time.

5-8. AIRFRAME INSPECTION PROGRAM

Bell Helicopter Textron has developed two airframe inspection programs that give you the flexibility to permit maximum helicopter use. They are the Airframe Periodic Inspection and the Airframe Progressive Inspection. You can choose one of the Bell programs or you can design your own program. You are responsible for the selection of an inspection program and for its approval by the governing civil aviation authority.

5-9. Airframe Progressive Inspection Program

If you choose the Airframe Progressive Inspection program, you may need to get approval from your local airworthiness authority. This inspection is divided into six separate events of similar workload. Refer to Table 5-1 and Figure 5-1.

Do an event of the Airframe Progressive Inspection (paragraph 5-12) at intervals of 50 hours. After you complete Event Number 6, the cycle begins again with Event Number 1 (Table 5-1). You must do a minimum of one complete cycle (all six events) within a 12 calendar month period. If you do not complete all six events in a 12 calendar month period, the remaining events must be completed prior to operating the helicopter. The following scheduled inspections shall also be performed at their specified intervals:

- Deleted.
- 300 hour inspection for optional equipment (paragraph 5-19)
- 600 hour inspection (paragraph 5-20)
- 600 hour or 12 month inspection (paragraph 5-21) every 600 hours or 12 calendar months, whichever comes first
- 12 month inspection (paragraph 5-22) every 12 calendar months
- 24 month inspection (paragraph 5-23) every 24 calendar months
- 1200 hour inspection (paragraph 5-23A)
- 1200 hour or 24 month inspection (paragraph 5-24) every 1200 hours or 24 calendar months, whichever comes first
- 2500 hour inspection (paragraph 5-24A)

Table 5-1. Progressive Inspection Events

AIRFRAME HOURS	EVENT NUMBER	MAINTENANCE ZONES
50	1	1 and 2
100	2	3
150	3	4
200	4	5 and 6
250	5	7 and 8
300	6	9 and 10

5-10. Airframe Periodic Inspection Program

Do an Airframe Periodic Inspection (paragraph 5-18) every 12 calendar months or every 300 hours, whichever occurs first. You must do a minimum of one complete Airframe Periodic Inspection within a 12 month calendar period. The following scheduled inspections shall also be performed at their specified intervals:

- 150 hour inspection (paragraph 5-18A)

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- 300 hour inspection for optional equipment (paragraph 5-19)
- 600 hour inspection (paragraph 5-20)
- 600 hour/12 month inspection (paragraph 5-21) every 600 hours or 12 calendar months, whichever comes first
- 12 month inspection (paragraph 5-22) every 12 calendar months
- 24 month inspection (paragraph 5-23) every 24 calendar months
- 1200 hour inspection (paragraph 5-23A)
- 1200 hour/24 month inspection (paragraph 5-24) every 1200 hours or 24 calendar months, whichever comes first
- 2500 hour inspection (paragraph 5-24A)

5-11. CHANGING INSPECTION PROGRAM

You must use either the Airframe Periodic Inspection program or the Airframe Progressive Inspection program from the start. You can change between the two programs at any airframe operating time. To change from an Airframe Progressive Inspection program to an Airframe Periodic Inspection program (or to change your progressive inspection event sequences), do a complete 300 hour Airframe Periodic Inspection. To change from an Airframe Periodic Inspection program to an Airframe Progressive Inspection program, do a complete 300 hour Airframe Periodic Inspection.

The owner/operator is responsible for not exceeding the specific time interval of any scheduled airframe inspection procedure.



SCHEDULED INSPECTIONS

5-23. 24 MONTH INSPECTION

DATA REFERENCE	INSPECTION TASK DESCRIPTION	INITIAL	
		MECH	OTHER
	DATE: _____ W.O. _____ FACILITY: _____ HELICOPTER S/N: _____ REGISTRY NO.: _____ TOTAL TIME: _____ SIGNATURE: _____		
Chapter 28	<u>FUEL SYSTEM</u> 1. Remove the fuel transfer/fuel boost pump assemblies. Look into the fuel cells. Examine them for unwanted material, water contamination, and fungus growth. 2. Disassemble, examine, and functionally test the fuel transfer/fuel boost pump check/thermal relief valves for condition.		
Chapter 95	3. Do a calibration of the fuel quantity system.		
Chapter 67	<u>CONTROLS</u> 1. Inspect the cyclic spring link for condition.		
Chapter 67	<u>FLIGHT CONTROL BOLTS/NUTS</u> 1. Examine the bolts and the nuts of the flight controls for condition.		
Chapter 29	2. Examine the bypass spool valve of the servo actuators for correct movement.		
BHT-407-FM-1 or BHT-407-FM-2	<u>GROUND RUN</u> 1. Complete a ground run at 100% N_R to check for leaks and confirm system operation.		

COMPONENT OVERHAUL SCHEDULE**5-34. COMPONENT OVERHAUL SCHEDULE**

The Component Overhaul Schedule ([Table 5-5](#)) provides the time interval between overhaul for each applicable helicopter component.

WARNING

DO NOT APPLY TOLERANCES TO PARTS WITH A LIMITED AIRWORTHINESS LIFE ([CHAPTER 4](#)).

WARNING

DO NOT EXCEED RETIREMENT LIFE FOR CRITICAL COMPONENTS. REFER TO AIRWORTHINESS LIMITATIONS SCHEDULE ([CHAPTER 4](#)).

SOME PARTS INSTALLED AS ORIGINAL EQUIPMENT ON MILITARY HELICOPTERS MAY HAVE A LOWER AIRWORTHINESS LIFE AND/OR OVERHAUL SCHEDULE THAN WHEN USED ON A COMMERCIAL HELICOPTER. CONSEQUENTLY, PARTS THAT HAVE BEEN USED ON MILITARY HELICOPTERS SHOULD NOT BE USED ON COMMERCIAL HELICOPTERS.

CAUTION

OVERHAUL SCHEDULE FOR SOME KIT COMPONENTS AND/OR PARTS IS NOT COVERED IN THIS SCHEDULE. REFER TO APPLICABLE MAINTENANCE MANUAL SUPPLEMENT FOR KIT COMPONENTS SCHEDULE.

NOTE

Refer to [paragraph 5-6](#) for information on overhaul tolerance.

NOTE

Neither assignment of a time period for overhaul of a component or failure to assign a time period for overhaul of a component constitutes a warranty of any kind. The only warranty applicable to helicopter and any component is that warranty included in the Purchase Agreement for the helicopter or component.

The overhaul interval specified for any given part number contained in this Component Overhaul Schedule applies to all successive dash numbers (or suffixes) for that item unless otherwise specified.

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Table 5-5. Component Overhaul Schedule

NOMENCLATURE	PART NUMBER 	OVERHAUL INTERVAL (HOURS)
MAIN ROTOR HUB		
Hub Assembly	407-010-100-103	2500 hours
MAIN ROTOR CONTROLS		
Swashplate and Support	406-010-401-115	2500 hours
DRIVE SYSTEM		
Input Driveshaft	206-340-300-107	 1250 hours
Rotor Brake Disc	206-340-301-101	 3000 hours
Rotor Brake Caliper	206-340-301-103	 1800 hours
Freewheel	406-040-500-123	3000 hours
Transmission	407-040-006-103/-107	 2500 hours
Transmission	407-040-006-111	 4500 hours
Transmission	407-040-006-115/-123/-127	5000 hours
Transmission	407-040-007-103	5000 hours
Mast Assembly	407-040-011-101	2500 hours
Rotor Brake Caliper	407-340-302-101	 1800 hours
Rotor Brake Caliper	407-340-302-101FM	 1800 hours
Rotor Brake Caliper	407-340-302-103	 3000 hours
Input Driveshaft	407-340-310-101	 2500 hours
Rotor Brake Disc	407-340-318-101	  12,000 hours
Rotor Brake Caliper	407-540-304-101FM	 3000 hours
Rotor Brake Caliper	427-340-352-113	3600 hours
TAIL ROTOR SYSTEM		
Tail Rotor Gearbox	406-040-400-115/-117/-117FM	 2500 hours

Table 5-5. Component Overhaul Schedule (Cont)

NOMENCLATURE	PART NUMBER [△] ₁	OVERHAUL INTERVAL (HOURS)
TAIL ROTOR SYSTEM (CONT)		
Tail Rotor Gearbox	406-040-400-119	5000 hours
Tail Rotor Hub	407-012-101-107	2500 hours
POWER PLANT		
Engine	250-C47B 250-C47B/8	Refer to Rolls-Royce Operations and Maintenance Manual (CSP21001)
ELECTRICAL		
Starter-generator	206-062-200-113	1000 hours
NOTES:		
[△] ₁	The operating time specified for overhaul of any given part number listed applies to all successive dash numbers (or suffixes) for that component, unless otherwise specified.	
[△] ₂	As identified in TB 407-04-60 , a 4500-hour overhaul applies to transmission 407-040-006-107 if modified per TB 407-03-41 , and transmission 407-040-006-111 and subsequent.	
[△] ₃	Input driveshaft 206-340-300-107 must be overhauled every 1250 hours of operation. Overhaul is to be accomplished by Kamatics Corporation only. Return driveshaft to Bell Helicopter Textron (BHT) per Information Letter (IL) GEN-04-98 . Refer to Chapter 4 for retirement life.	
[△] ₄	Input driveshaft 407-340-310-101 must be overhauled every 2500 hours of operation. Overhaul is to be accomplished by Kamatics Corporation only. Return driveshaft to Bell Helicopter Textron (BHT) per Information Letter (IL) GEN-04-98 .	
[△] ₅	As used on S/N 53000 through 53442 Pre BHT-407-II-30 , refer to Northwest Dynamics Document No. B0223-OM for overhaul instructions (BHT-407-CR&O-V).	
[△] ₆	As used on S/N 53443 through 53631 Pre TB 407-05-67 , refer to Northwest Dynamics Document No. B0223-OM for overhaul instructions (BHT-407-CR&O-V).	
[△] ₇	As used on S/N 53000 through 53442 Post BHT-407-II-30 , refer to Northwest Dynamics Document No. B0223-OM for overhaul instructions (BHT-407-CR&O-V).	
[△] ₈	As used on S/N 53632 and subsequent, refer to Northwest Dynamics Document No. B0223-OM4 for overhaul instructions (BHT-407-CR&O-V).	
[△] ₉	As used on S/N 53000 through 53631 Post TB 407-05-63 and TB 407-05-67 , refer to Northwest Dynamics Document No. B0223-OM4 for overhaul instructions (BHT-407-CR&O-V).	

17. Apply a coating of corrosion preventive compound (C-101) to all bolt heads, washers, nuts, and exposed threads after installation.

18. Do a swashplate tilt friction check 10 to 25 hours after adjustment (Chapter 5). Readjust to within limits, if required.

67-166. COLLECTIVE LEVER AND LINK

The collective lever (12, Figure 67-117) and collective control link (23) are in the front and at the bottom of the swashplate support. The collective lever and collective control link move the pivot sleeve (2) vertically on the swashplate support to change the pitch on all the main rotor blades at the same time.

67-167. Collective Lever and Link — Removal

1. Put the maintenance platforms adjacent to the transmission on the left and right sides of the helicopter.



PUT A CLEAN CLOTH OR FOAM PAD BELOW THE PIVOT SLEEVE BEFORE YOU REMOVE THE COLLECTIVE CONTROL LINK. THE PIVOT SLEEVE WILL SLIDE DOWN ON THE SUPPORT WHEN THE COLLECTIVE LINK IS REMOVED. FAILURE TO DO THIS CAN CAUSE DAMAGE TO THE SUPPORT.

- 2. Remove the collective control link (23, Figure 67-117) per paragraph 67-47.
- 3. Remove screws (5), washers (4), and pins (3) that secure collective lever (12) to pivot sleeve (2).
- 4. Remove nut (6), washers (8 and 16), and bolt (15) that hold collective lever (12) to collective link (17). Remove collective lever.
- 5. Remove nut (22), washers (20), and bolt (19) that hold collective link (17) to the swashplate support. Remove collective link.
- 6. Remove two spacers (18) in collective link (17) bolt holes.

67-168. Collective Lever and Link — Inspection and Repair

- 1. Clean the collective lever (12, Figure 67-117) per paragraph 67-2.
- 2. Examine collective lever (12) for damage. Refer to the BHT-407-CR&O manual for damage limits and repair procedures.
- 3. Examine the inner bushings in collective lever (12) and collective link (17) for wear and damage. Replace the bushing if the Teflon lining is worn through (BHT-407-CR&O).
- 4. Examine spacers (18) for damage. Refer to the BHT-407-CR&O if you find damage.

67-169. Collective Lever and Link — Installation

MATERIALS REQUIRED

Refer to BHT-ALL-SPM for specifications.

NUMBER	NOMENCLATURE
C-101	Corrosion Preventive Compound
C-104	Corrosion Preventive Compound
C-405	Lockwire

- 1. Put the maintenance platforms adjacent to the transmission on the left and right sides of the helicopter.
- 2. Install spacers (18, Figure 67-117) in collective link (17) bolt hole.

NOTE

- Apply a coating of corrosion preventive compound (C-104) to all bolt shanks prior to installation. Do not apply corrosion preventive compound to the bolt threads.
- 3. Position collective link (17) on the swashplate support and secure with bolt (19), washers (20), and nut (22) . Safety nut with cotter pin (21).

NOTE

Make sure the straight edge of the collective lever (12) faces up.

4. Position the collective lever (12) on the collective link (17) and secure with the bolt (15), washers (16 and 8), and nut (6) . Safety the nut with the cotter pin (7).

5. Position the pins (3) in the collective lever (12) and the pivot sleeve (2) and secure with the washers (4) and the screws (5) . Safety the screws with lockwire (C-405) to the collective lever.

6. Install the collective control link (23) (paragraph 67-49).

7. Apply a coating of corrosion preventive compound (C-101) to all bolt heads, washers, nuts, and exposed threads after installation.

67-170. SWASHPLATE DRIVE ASSEMBLY

The swashplate drive assembly turns the outer ring of the swashplate at the same speed as the mast (20, Figure 67-118) and permits the vertical movement of the collective control. The swashplate drive assembly is connected to the mast and the outer ring of the swashplate. The swashplate drive assembly is made of the hub set (1), drive levers (10), drive links (14), gimbal ring (21), anti-drive lever (24), and anti-drive link (25).

67-171. Swashplate Drive Assembly — Removal

1. Put the maintenance platforms adjacent to the transmission on the left and right sides of the helicopter.

2. Examine the main rotor hub, main rotor blades, pitch links, and swashplate for color code marks. Apply new color code marks if damaged or missing (Chapter 11).

NOTE

If you must remove the gimbal ring (21, Figure 67-118), do step 3 and step 4. If you

will not remove the gimbal ring assembly, go to step 5.

3. Remove the pitch links (paragraph 67-175).

4. Remove the main rotor hub and blades (Chapter 62).

5. Remove the cotter pins (13, Figure 67-118), nuts (12), washers (6), spacers (8), and bolts (4) that hold the drive levers (10) to the gimbal ring (21).

6. Remove the cotter pins (13), nuts (11), washers (7), spacers (9), and bolts (5) that hold the drive levers (10) to the drive links (14). Remove the drive levers.

7. Remove the cotter pins (17), nuts (18), and washers (16) that hold the drive links (14) to the bearing and liner (15) on the outer ring. Remove the drive links.

8. Install a 1/4-28 bolt into the drive pins (22) that hold the gimbal ring (21) to the hub set (1). Hold the gimbal ring and use the bolt to remove the drive pins. Lower the gimbal ring carefully onto the top of the boot (19).

9. Remove the nuts (23), washers (2), and bolts (3) that hold the hub set (1) on the mast (20). Move the hub set up the mast until it is above the splines. Disconnect the two halves of the hub set and remove them from the mast.

10. Remove the gimbal ring (21) from the mast (20).

11. Remove the nut (32), washers (33), spacer (42), and bolt (34) that secure the anti-drive link (25) to the inner ring (31).

12. Remove the nut (35), washers (36), spacers (43), and bolt (37) that secure the anti-drive link (25) to the anti-drive lever (24). Remove the anti-drive link.

13. Remove the nut (38), washers (39), spacer (44), and bolt (40) that secure the anti-drive lever (24) to the support (41). Remove the anti-drive lever.

SWASHPLATE AND SUPPORT ASSEMBLY — ASSEMBLY

67-28. SWASHPLATE AND SUPPORT ASSEMBLY — ASSEMBLY

NOTE

Before you do the assembly of the swashplate and support assembly, make sure the surface finish of applicable parts is acceptable or restored.

SPECIAL TOOLS REQUIRED

NUMBER	NOMENCLATURE
0.25 inch (6.35 mm) drive (0 to 75 inch-pounds (0 to 8.4 Nm))	Torque Wrench
0.375 inch (9.525 mm) drive (0 to 300 inch-pounds (0 to 33.9 Nm))	Torque Wrench
Item No. 1 (Figure 67-2) or equivalent	Workaid
Item No. 2 (Figure 67-3) or equivalent	Workaid
Item No. 3 (Figure 67-3) or equivalent	Workaid
Item No. 4 (Figure 67-4) or equivalent	Workaid
Item No. 5 (Figure 67-4) or equivalent	Workaid
Item No. 6 (Figure 67-4) or equivalent	Workaid

SPECIAL TOOLS REQUIRED (Cont)

NUMBER	NOMENCLATURE
Item No. 7 (Figure 67-4) or equivalent	Workaid
Commercial	Feeler Gauge
Commercial	Heat Gun/Heat Lamp

MATERIALS REQUIRED

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-001	Grease
C-101	Corrosion Preventive Compound
C-104	Corrosion Preventive Compound
C-251	Sealant
C-405	Lockwire

1. Install the seal (13, [Figure 67-54](#)) in the outer cap assembly (25), as shown in [Figure 67-56](#).
2. Install the seal (13, [Figure 67-54](#)) in the outer ring assembly (12), as shown in [Figure 67-57](#).
3. Install the duplex bearing (18, [Figure 67-54](#)) in the outer ring assembly (12), as shown in [Figure 67-58](#).
4. Install the outer cap assembly (25, [Figure 67-54](#)) over the outer ring assembly (12) and adjust with the shim (23), as shown in [Figure 67-59](#).
5. Install the inner ring assembly (47, [Figure 67-54](#)) in the outer ring assembly (12), as shown in [Figure 67-60](#).

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6. Install the inner cap (20, [Figure 67-54](#)) over the inner ring assembly (47) and adjust with the shim (19), as shown in [Figure 67-61](#).
7. Install the pivot bearing race set (74, [Figure 67-54](#)) and, as applicable, the pivot sleeve assembly (29 or 30), as shown in [Figure 67-62](#).
8. Install the swashplate support assembly (55, [Figure 67-54](#)), as shown in [Figure 67-63](#).
9. Install the upper bearing race (22, [Figure 67-54](#)) and the shims (19 and 21), as shown in [Figure 67-64](#).
10. Install the collective lever assembly (35, [Figure 67-54](#)) and collective lever link assembly (52), as shown in [Figure 67-65](#).
11. Install the antidrive lever assembly (60, [Figure 67-54](#)) and the antidrive link assembly (68), as shown in [Figure 67-66](#).
12. Install the bearing and liner (9, [Figure 67-54](#)) assembly, as shown in [Figure 67-67](#).
13. Adjust the swashplate friction, as shown in [Figure 67-68](#).
14. Apply grease (C-001) to the swashplate and support assembly (BHT-407-MM, Chapter 12).
15. Rotate the outer ring assembly (12, [Figure 67-54](#)) and ensure smooth operation.
16. Apply a coating of corrosion preventive compound (C-101) to all bolt heads, washers, nuts, and exposed threads after installation.

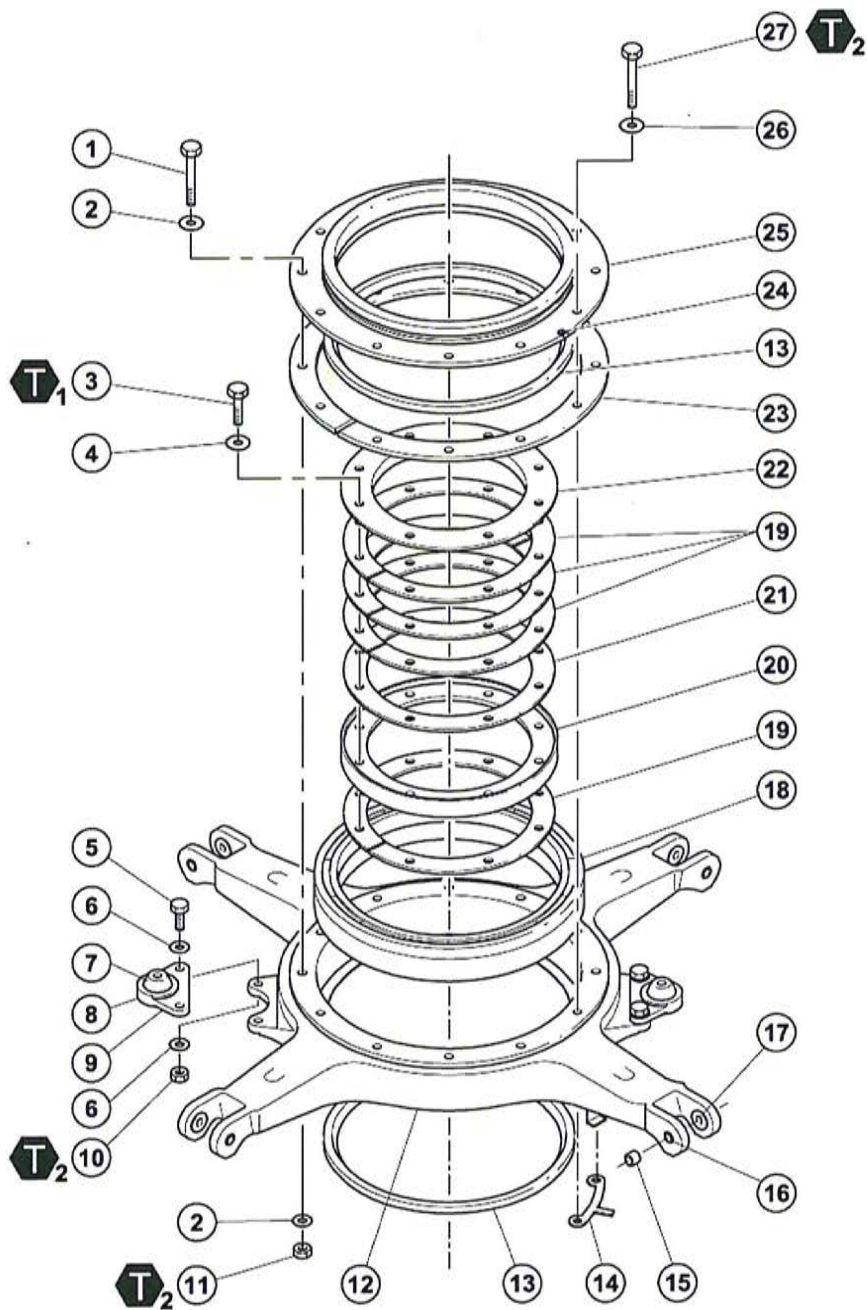


Figure 67-54. Swashplate and Support Assembly — Assembly (Sheet 1 of 3)

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- | | |
|-------------------------------|------------------------------------|
| 1. Bolt | 38. Pivot pin |
| 2. Washer | 39. Washer |
| 3. Bolt | 40. Nut |
| 4. Washer | 41. Cotter pin |
| 5. Bolt | 42. Bolt |
| 6. Washer | 43. Washer |
| 7. Bearing | 44. Spacer |
| 8. Liner | 45. Bushing |
| 9. Bearing and liner | 46. Bushing |
| 10. Nut | 47. Inner ring assembly |
| 11. Nut | 48. Bolt |
| 12. Outer ring assembly | 49. Washer |
| 13. Seal | 50. Bolt |
| 14. Interrupter | 51. Spacer |
| 15. Spacer | 52. Collective lever link assembly |
| 16. Bushing | 53. Bushing |
| 17. Bushing | 54. Bushing |
| 18. Bearing | 55. Swashplate support assembly |
| 19. Shim | 56. Nut |
| 20. Cap | 57. Cotter pin |
| 21. Shim | 58. Spacer |
| 22. Race | 59. Bushing |
| 23. Shim | 60. Antidrive lever assembly |
| 24. Fitting | 61. Bushing |
| 25. Cap assembly | 62. Bolt |
| 26. Washer | 63. Washer |
| 27. Bolt | 64. Spacer |
| 28. Bearing | 65. Bushing |
| 29. Pivot sleeve assembly | 66. Nut |
| 30. Pivot sleeve assembly | 67. Cotter pin |
| 31. Bushing | 68. Antidrive link assembly |
| 32. Bushing | 69. Cotter pin |
| 33. Bolt | 70. Nut |
| 34. Washer | 71. Bracket |
| 35. Collective lever assembly | 72. Bearing |
| 36. Bushing | 73. Insert |
| 37. Screw | 74. Bearing race set |
| | 75. Spacer |

 **1** 50 TO 70 IN-LBS
(5.65 TO 7.91 Nm)

 **2** 75 TO 95 IN-LBS
(8.47 TO 10.7 Nm)

 **3** 60 TO 85 IN-LBS
(6.78 TO 9.61 Nm)

 **4** 95 TO 110 IN-LBS
(10.7 TO 12.4 Nm)

 **5** 20 TO 25 IN-LBS
(2.26 TO 2.83 Nm)

NOTE

 **1** Refer to the configuration table for applicability.

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Figure 67-54. Swashplate and Support Assembly — Assembly (Sheet 3 of 3)

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A Textron Company

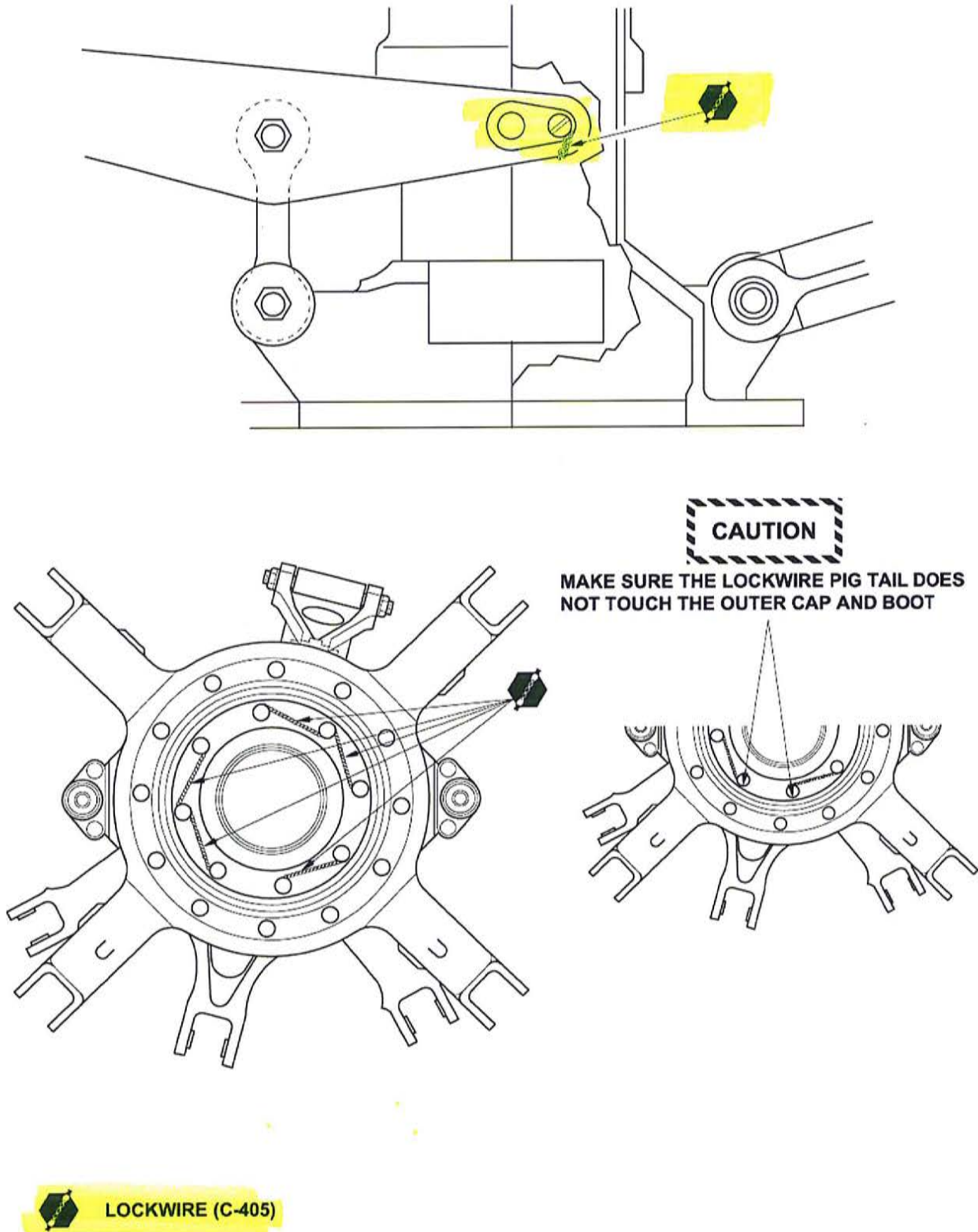
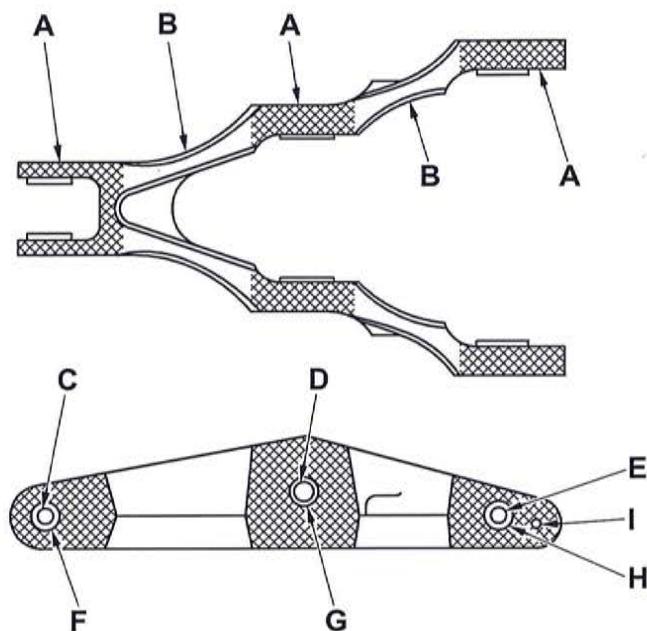


Figure 67-55. Swashplate and Support Assembly — Lockwire Installation

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COLLECTIVE LEVER ASSEMBLY (406-010-408-101)
 MATERIAL: ALUMINUM ALLOY

NO.	REF LTR	CHARACTERISTIC	INSPECTION METHOD	LIMIT
1.	A	Mechanical/ corrosion damage	Measure	Maximum 0.005 inch (0.127 mm).
2.	B	Mechanical/ corrosion damage	Measure	Maximum 0.010 inch (0.254 mm).
3.	A	Maximum area per full depth repair	Measure	0.15 square inch (96.8 mm ²). Replace if exceeded.
4.	B	Maximum area per full depth repair	Measure	0.25 square inch (161 mm ²). Replace if exceeded.
5.	A	Number of repairs	Visual	One per segment.
6.	B	Number of repairs	Visual	One per segment.
7.	A	Edge chamfer to repair damage	Measure	

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Figure 67-30. Collective Lever Assembly — Wear, Damage, and Repair Limits (Sheet 1 of 2)