

CHAPTER 12 — SERVICING

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SERVICING

12-1. SERVICING



STRAINED OR DISCOLORED SIGHT GAUGE GLASSES MAY GIVE FALSE INDICATION OF OIL/FLUID QUANTITY. IF FALSE INDICATION IS SUSPECTED, SHAKE HELICOPTER BY TAIL SKID AND OBSERVE SIGHT GAUGE OIL/FLUID MOVEMENT. REPLACE ANY SIGHT GAUGE GLASS THAT DOES NOT PROVIDE ADEQUATE INDICATION OF FLUID LEVEL.

This chapter contains instructions to replenish fuel, lubricating oil, and hydraulic fluid, and to lubricate the helicopter. Defueling and fuel cell purging instructions are also included.

[Figure 12-1](#) identifies servicing points, defueling, and drain valve locations. [Table 12-1](#) specifies usable materials for fuel, lubricating oil, and hydraulic fluid.

12-2. MAIN FUEL SYSTEM

All five interconnected cells of the main fuel system are serviced through a single filler located on the right side of the helicopter. A grounding jack is provided near the filler. Sump drains are located in the bottom of the right and left fuel cells beneath the cabin floor. System defuel valves are accessible through the bottom skin behind the aft cabin bulkhead. A system filter is located ahead of each of the two engine power sections. The filters are connected to the caution panel for indication of an impending bypass condition.

12-3. MAIN FUEL SYSTEM — FUELING/DEFUELING PREPARATION

WARNING

USE EXTREME CAUTION DURING FUELING/DEFUELING PROCEDURES.

FUEL IS EXTREMELY FLAMMABLE AND MAY BE IGNITED BY STATIC OR FRICTION SPARKS, HOT EXHAUST PIPES, LIGHTED CIGARETTES, ELECTRICAL DEVICES, OR SIMILAR IGNITION SOURCES.

PERSONNEL SHOULD NOT BE ABOARD HELICOPTER DURING FUELING/DEFUELING PROCEDURES.

WHEN HELICOPTER FUEL COMES IN CONTACT WITH SKIN, A SOLVENT ACTION OCCURS WHICH REMOVES NATURAL FATS AND OIL THAT MAY EXPOSE THE SKIN TO INFECTIOUS DERMATOSIS. EXTENSIVE VAPOR INHALATION MAY CAUSE SERIOUS ILLNESS. ACCIDENTAL SWALLOWING OF FUELS WILL RESULT IN INTERNAL INJURY AND POSSIBLE DEATH. PERSONNEL WHO ARE SUBJECTED TO SPLASHED OR SPRAYED FUEL SHOULD REMOVE CONTAMINATED CLOTHING AS SOON AS POSSIBLE AND WASH DOWN/SHOWER WITH LARGE AMOUNTS OF WATER. DO NOT REMOVE CONTAMINATED CLOTHING NEAR POTENTIAL IGNITION SOURCES.

1. Allow only qualified personnel engaged in fueling/defueling operations in the area. Allow no one to carry matches, cigarette lighters, or other sparking or flame producing devices in the area.
2. Do not perform fueling/defueling operations when high winds are considered hazardous or when electrical storms are within 3 miles (5 km) of the area.
3. Do not allow personnel fueling/defueling the helicopter to wear shoes with protruding nails or taps, or static producing clothing such as nylon, rayon or wool.
4. Do not perform fueling/defueling near a drainage ditch or similar low place where combustible vapors may accumulate.

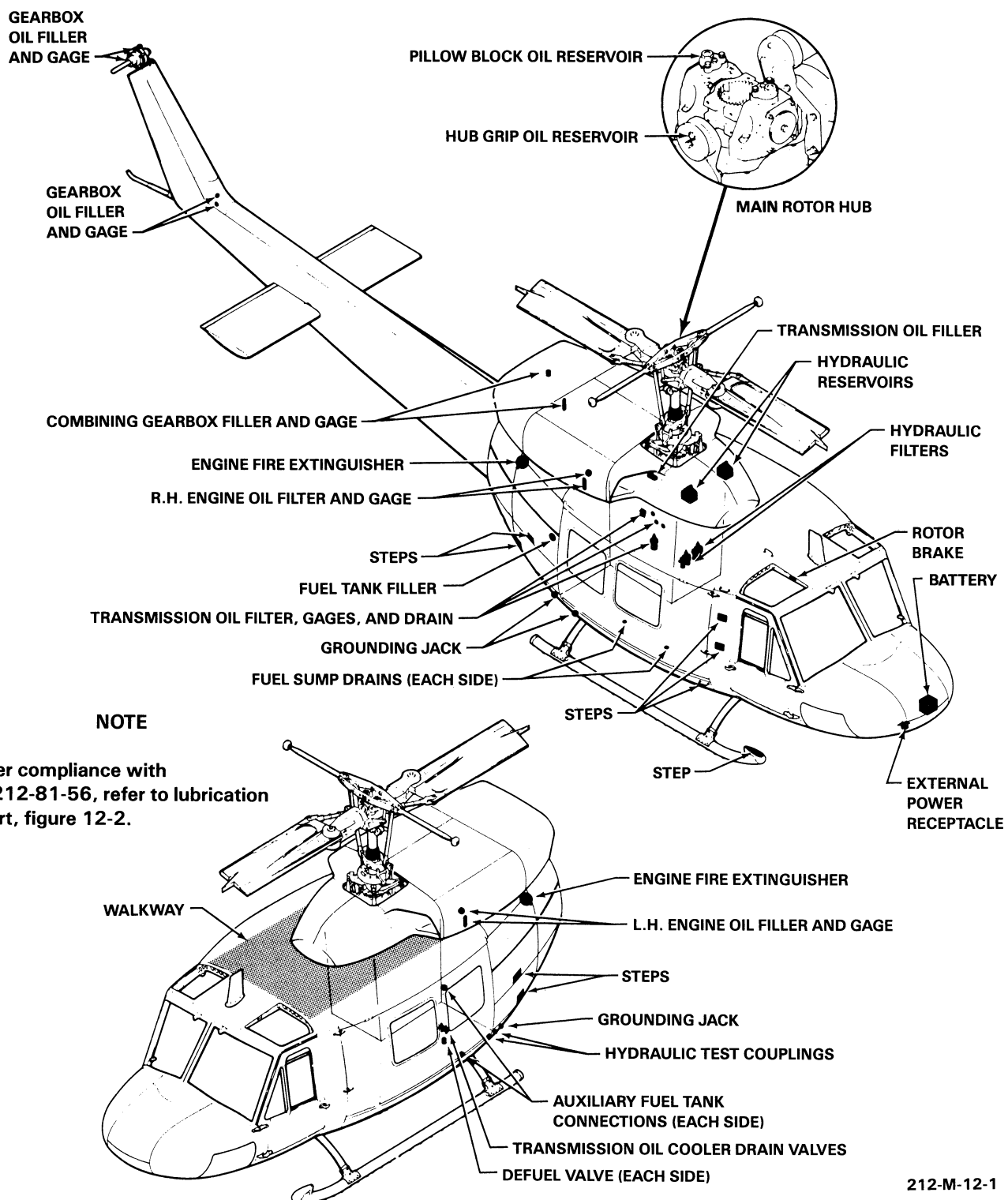


Figure 12-1. Servicing Points

Table 12-1. Servicing Materials and Capacities

NOMENCLATURE	MATERIAL SPECIFICATION	CAPACITY	REMARKS
MAIN FUEL SYSTEM			
Turbine Fuel	BHT-212-FM	217.0 gallons	All ambient temperatures.
ENGINE OIL SYSTEM			
Lubricating Oil	BHT-212-FM	1.60 gallons	Left power section. Do not mix oils.
Lubricating Oil		1.60 gallons	Right power section. Do not mix oils.
Lubricating Oil		1.25 gallons	Combining gearbox. Do not mix oils.
TRANSMISSION OIL SYSTEM			
Lubricating Oil	BHT-212-FM	11.0 quarts	Do not mix oils.
INTERMEDIATE GEARBOX			
Lubricating Oil	BHT-212-FM	0.19 quart	Do not mix oils.
TAIL ROTOR GEARBOX			
Lubricating Oil		0.40 quart	Do not mix oils.
MAIN ROTOR HUB BLADE GRIPS			
Lubricating Oil	BHT-212-MD-1	1.0 quart per grip	Do not mix oils.
PILLOW BLOCKS			
Lubricating Oil	BHT-212-MD-1	0.12 quart per block	Do not mix oils.
HYDRAULIC SYSTEM NO. 1			
Hydraulic Fluid	BHT-212-FM	4.7 quarts	
HYDRAULIC SYSTEM NO. 2			
Hydraulic Fluid		4.25 quarts	
Hydraulic Fluid Reservoirs		2.64 quarts per reservoir	
ROTOR BRAKE SYSTEM			
Hydraulic Fluid	BHT-212-FM	1.0 pint	

5. Do not perform fueling/defueling in a hangar. Position helicopter at least 50 feet (15 m) from any building or smoking area, and at least 500 feet (152 m) from any radar system.
6. Do not allow another aircraft to operate within 100 feet (30 m) of the area.
7. Position servicing unit as far from helicopter as hose will permit, and such that it may be driven or towed away in case of an emergency. Set parking brake.
8. Position a fully charged 50-pound (22 kg) CO₂ fire extinguisher with an extension assembly in an accessible place. Make sure fire extinguishers on service unit are readily available.
9. Maintain clear paths for immediate evacuation of personnel and vehicles in case of emergency.
10. Do not allow other aircraft within 20 feet (6 m) of helicopter.
11. If fuel cell filler cap is to be removed for any reason other than fueling, grasp helicopter grounding jack adjacent to fuel cell filler cap with bare hand to dissipate static electricity prior to removing cap.

WARNING

ACCOMPLISH THE BONDING PROCEDURES IN THE FOLLOWING STEPS IN ORDER LISTED OR STATIC ELECTRICITY MAY CAUSE FUEL TO IGNITE AND CAUSE INJURY OR DAMAGE TO EQUIPMENT.

12. Bond fueling/defueling equipment and helicopter as follows prior to removing fuel hose filler dust cap and/or helicopter fuel cell filler cap or prior to using defueling valve.
 - a. Bond fueling equipment to the helicopter by use of a cable.
 - b. Bond fuel hose nozzle with a nozzle bonding cable to one of the helicopter grounding jacks.

12-4. MAIN FUELING SYSTEM — FUELING

1. Accomplish fueling preparation steps outlined in [paragraph 12-3](#).
2. Make sure helicopter electrical power is off. If electrical power is required, turn BATTERY BUS 1 and 2 switches ON and position remaining switches as required prior to start of fueling operation. Do not accomplish further switching until fueling is complete, except as required by an emergency condition.
3. Confirm fuel in fueling vehicle is correct type prior to refueling. Refer to [Table 12-1](#) for list of approved fuels.

NOTE

Comply with bonding instructions in [step 12](#) of [paragraph 12-3](#) prior to accomplishing following steps.

4. Remove fuel hose nozzle dust cap.
5. Remove fuel cell filter cap.

CAUTION

DO NOT LEAVE NOZZLE UNATTENDED AT ANY TIME DURING REFUELING OPERATION.

6. Fill fuel cells and then remove hose nozzle from fuel cell.
7. Install filler cap and nozzle dust cap.
8. Place BATTERY BUS switches and required system switches to OFF, if required.
9. Remove fuel hose nozzle bonding cable from helicopter grounding jack.
10. Remove bonding cable from helicopter and fueling equipment.
11. In the event of a fire emergency, accomplish the following as quickly as possible:
 - a. Stop fuel flow.

- b. Separate helicopter and service unit.
- c. Sound alarm.
- d. Attempt rescue and contain fire.

complete, except as required by an emergency condition.

12-5. MAIN FUELING SYSTEM — DEFUELING

- 1. Accomplish defueling preparation steps outlined in [paragraph 12-3](#).

NOTE

If helicopter is being defueled with defueling type vehicle, accomplish [step 2 through step 14](#).

If helicopter is being defueled with boost pumps, accomplish [step 15](#).

- 2. Notify fire department of defueling operation, location, anticipated start time, and estimated time of completion.
- 3. Make sure that all electrical power is off.

NOTE

Comply with bonding instructions in [step 12](#) of [paragraph 12-3](#) prior to accomplishing following steps.

- 4. If helicopter is being defueled because of an accident or incident, or if quality of fuel is questionable, sample and test drained fuel. Dispose of fuel or return fuel to storage as test results indicate.

NOTE

Comply with bonding instructions in [step 12](#) of [paragraph 12-3](#) prior to accomplishing following steps.

- 5. Make sure that all helicopter electrical power is off. If electrical power is required, turn BATTERY BUS switches ON and position other switches as required prior to starting defueling operation. Do not accomplish additional switching until defueling is

- 6. Remove filler cap and insert defueling tube/hose into helicopter fuel cell.

- 7. Pump fuel from helicopter. Stop pump as soon as fuel flow stops.

- 8. Remove defueling tube/hose and replace filler cap. Disconnect defuel tube/hose ground wire from helicopter.

- 9. Remove access plates under fuel cell sumps.

- 10. Position suitable container under helicopter.

- 11. Remove plugs from defuel valves.

- 12. Disconnect cable from helicopter and defueler equipment. Move defueler away from helicopter.

- 13. Dispose of fuel as noted in [step 4](#).

- 14. Purge fuel cells as outlined in [paragraph 12-6](#).

- 15. Defuel with helicopter boost pumps as follows:

- a. Accomplish [step 2 through step 5](#).

- b. Disconnect engine fuel pressure hose above engine deck. Connect a suitable hose to engine fuel pressure connection that will transfer fuel to a suitable container or servicing unit.

- c. Open fuel cell interconnect valves and actuate appropriate boost pump to pump fuel out of helicopter.

- d. Shut off boost pump as soon as fuel flow stops.

- e. Install hose disconnected in [step b](#).

- f. Disconnect grounding cables.

- g. Dispose of fuel as noted in [step 4](#).

- h. Purge fuel cells ([paragraph 12-6](#)).

12-6. MAIN FUEL SYSTEM — PURGING FUEL CELLS

MATERIALS REQUIRED

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

NUMBER	NOMENCLATURE
C-009	Lubricating Oil

WARNING

ON A STILL DAY (NO WIND CONDITION), FUEL VAPOR CAN ACCUMULATE IN AREA OF HELICOPTER (EVEN IN AN OPEN AREA), POSSIBLY PRODUCING AN EXPLOSIVE MIXTURE. UNDER THIS CONDITION, PERSONNEL SHOULD BE CLEARED FROM AREA EVEN AFTER PURGE LINES ARE INSTALLED AND INERT GAS IS FLOWING UNTIL 8 HOURS OF PURGING IS COMPLETED.

1. Defuel helicopter ([paragraph 12-5](#)).

NOTE

Use dry, filtered compressed air or inert gas (nitrogen or carbon dioxide) as outlined in [step 2](#) and [step 3](#).

2. Purge fuel cells using dry, filtered, compressed air as follows:

- a. Open all sump drains and drain lines.
- b. Insert compressed air hose in cell filler inlet under cap and seal with masking tape.
- c. Blow air through cell at 60 to 100 PSI (414 to 689 kPa) for a period of 8 hours.
- d. Remove air hose from cell inlet. Wait 1 hour.
- e. Check interior of fuel cell with explosimeter (combustible gas indicator calibrated for fuel vapors) for level of vapors.

- f. Explosimeter reading shall be less than 20%. If reading is more than 20%, repeat [step a through step c](#) until reading is less than 20%.

3. Purge fuel cells using inert gas (nitrogen or carbon dioxide) as follows:

WARNING

REMOVE FIBER HORN WHEN USING A FIRE EXTINGUISHER BOTTLE AS A SOURCE OF CARBON DIOXIDE (CO₂) FOR PURGING FUEL CELLS. GROUND NOZZLE TO HELICOPTER. DISCHARGE CO₂ INTO FUEL CELL SLOWLY (1 POUND PER MINUTE). RAPID PASSAGE OF GAS THROUGH A HOSE CAN GENERATE STATIC ELECTRICAL CHARGES. RAPID DISCHARGE OF GAS ALLOWS RAPID EXPANSION OF GAS (LOWERING THE TEMPERATURE WITH POSSIBLE DAMAGE TO CELL AS A RESULT). NITROGEN OR OTHER INERT GAS MAY BE USED WITH THE SAME PRECAUTIONARY MEASURES OUTLINED ABOVE.

- a. Open all sump drains and drain lines.
 - b. Insert gas hose in cell filler inlet and seal with masking tape.
 - c. Blow inert gas through cells for a period of 8 hours.
 - d. Shut off inert gas flow and remove gas hose from cell inlet. Wait 1 hour.
 - e. Check interior of fuel cell with explosimeter (combustible gas indicator calibrated for fuel vapors) for level of fuel vapors.
 - f. Explosimeter reading shall be less than 20%. If reading is more than 20%, repeat [step a through step c](#) until reading is less than 20%.
4. Fog interior of fuel cell with lubricating oil ([C-009](#)). Close drains and replace filler cap. Do not close vents.

12-7. OIL SYSTEM

The engine, transmission, tail rotor drive gearboxes, and main rotor hub may be serviced with MIL-PRF-7808, MIL-PRF-23699, or DOD-PRF-85734 (except engine) lubricating oil. Refer to the [BHT-212-FM](#) for a list of approved oils and restrictions.

NOTE

Transmissions modified to P/N 212-040-001-131 require DOD-PRF-85734 lubricating oil or MIL-PRF-7808 lubricating oil only. Helicopters using P/N 212-040-001-131 transmission may also use DOD-PRF-85734 lubricating oil in intermediate and tail rotor gearboxes ([BHT-212-FM](#)).

It is recommended when systems are serviced, either for an oil change or routine quantity serving, that the oil container be agitated prior to opening. If oil pressure fluctuation is accompanied by foaming, drain and service with agitated oil. When using quart cans, open end that has been on bottom during storage.

12-8. CHANGING OIL TYPES

NOTE

An appropriate entry shall be made in helicopter and engine logbooks. The entry shall show type and brand name of oil to prevent inadvertent mixing of lubricating oils. Refer to engine manufacturer's manual for additional information, and oil change intervals for the engine.

NOTE

Do not use MIL-PRF-23699 or DOD-PRF-85734 lubricating oil when ambient temperature falls below -40°F (-40°C).

1. Before changing types of lubricating oil from MIL-PRF-7808 to MIL-PRF-23699 or DOD-PRF-85734, replace decals shown in [Chapter 11](#) with appropriate decals denoting type of lubricating oil in system.

NOTE

MIL-PRF-7808, MIL-PRF-23699, or DOD-PRF-85734 lubricating oils shall not be mixed. If this should occur, drain system and refill with approved lubricating oil.

2. To change oil type, perform the following steps:

a. Drain lubricating oil from system. Inspect and clean filter and strainers as required.

b. Fill oil system with specification of lubricating oil to be used.

c. Operate system for a period of 30 minutes to 1 hour to heat oil to operating temperature. Shut down engine.

d. Inspect and clean system oil filters and strainers. If heavy contamination of filters and strainers is noted, proceed with [step e through step h](#). If little or no contamination of filters and strainers is noted, release helicopter for service and proceed with [step g](#) and [step h](#).

e. Drain lubricating oil from oil system and discard oil.

f. Refill oil system with specification of lubricating oil to be used and release helicopter for service.

g. Inspection and cleaning of oil system fillers and strainers is required after 5 and 15 hours of operating time.

h. After 15 hour inspection of oil system filters and strainers, revert to normal inspection interval.

12-9. ENGINE OIL SYSTEM

The engine assembly has three independent oil systems, each with its own filler and oil level sight gauge. Fillers and gauges for left and right engine power sections are outboard of the accessory gearboxes and are accessible by opening engine cowling. The third gauge is on the aft side of the reduction gearbox, with access through the aft right engine cowl below the exhaust ejectors. The third system oil filler is located in the aft top fairing between the exhaust ejectors. The third oil system cooler and strainer may be drained by opening the drain valve located on the engine deck. Avoid excessive oil

spillage if the chip detector plug is removed to completely drain the system.

Engine oil system maintenance practices are contained in [Chapter 79](#). Refer to the [BHT-212-FM](#) for a list of approved oils.

12-10. TRANSMISSION OIL SYSTEM

The transmission sump case serves as the reservoir for this system. The filler is located on the upper right side of the transmission and is accessible when the forward pylon fairing is opened. Oil level sight gauges may be viewed through the right side of the pylon support structure in the cabin with the aid of a light controlled by a pushbutton switch. A sump drain valve is located directly beneath the sump. An external filter, in return line from the oil cooler, is located inside the pylon structure at the right side and has a red indicator that will be visible when the filter is in an impending bypass condition. Drain valves in the oil collector lines are accessible through the bottom fuselage skin inboard of F.S. 169.0. Refer to the [BHT-212-FM](#) for a list of approved oils and for the location of the filler. Maintenance practices are contained in [Chapter 63](#).

12-11. TRANSMISSION OIL SYSTEM — SEEPAGE RATES

Main transmission oil seepage shall not exceed two drops per minute from any single source or shall not exceed a total of 15 drops per minute from all sources on transmission.

12-12. TAIL ROTOR GEARBOXES

Oil level in the intermediate and tail rotor gearboxes may be checked on the sight gauges and replenished, as required. Intermediate gearbox and tail rotor gearbox maintenance practices are contained in [Chapter 63](#). Refer to the [BHT-212-FM](#) for a list of approved oils.

12-13. TAIL ROTOR AND INTERMEDIATE GEARBOX OIL SYSTEMS — SEEPAGE RATES

Gearbox oil seepage shall not exceed two drops per minute from any single source or shall not exceed a

total of six drops per minute from all sources on a gearbox.

12-14. MAIN ROTOR HUB

Transparent plastic sight gauges are on grip and pillow block reservoirs for checking oil level. Oil level shall be maintained at one-half indication. Refer to [BHT-212-MD-1](#) for approved lubricants.

12-15. STABILIZER BAR DAMPERS

Check timing and service only as necessary ([Chapter 62](#)).

12-16. HYDRAULIC SYSTEMS

Access to hydraulic reservoirs is gained by opening the forward pylon fairing. The hydraulic system No. 1 reservoir is on the right side and the hydraulic system No. 2 reservoir is on the left side. Pressure and return filters, with red pop-out indicators that will be visible when filter requires change, are located in the integrated valve and filter assemblies in the pylon. The hydraulic system No. 1 integrated valve and filter assembly is located at the lower front center of the lift beam. The hydraulic system No. 2 integrated valve and filter assembly is located aft of the lift beam on the left side of the pylon.

Filters may be checked from inside cabin through an access door on the forward side of the pylon structure. A supplemental indicator is located to the right of the helicopter centerline at W.L. 22.00, and is visible through the lower right nose window. With the engine running and hydraulic circuit breakers closed, a green indication verifies that systems are operating without clogging. Under the same circumstances, a red indication warns there is an impending bypass condition. Refer to the [BHT-212-FM](#) for approved hydraulic fluid type.

The rotor brake hydraulic system is a separate self-contained system. Refer to [Figure 12-1](#) for the location of the filler, and to the [BHT-212-MD-1](#) for approved lubricating fluids.

12-17. ROTOR BRAKE SERVICING**MATERIALS REQUIRED**

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

NUMBER	NOMENCLATURE
C-002	Hydraulic Fluid

The rotor brake hydraulic system is a separate, self-contained system. Refer to [paragraph 12-1](#) for approved hydraulic fluid and for location of fillers.

1. Fully apply rotor brake.
2. Remove reservoir filler cap (1, [Figure 12-2](#)) of rotor brake master cylinder (3), located on top, right forward area of cabin roof.
3. Check fluid level of reservoir is 0.50 inch (12.7 mm) below bottom of filler neck.
4. If fluid level is low, replenish with hydraulic fluid ([C-002](#)).

5. Install reservoir filler cap (1).

6. Release rotor brake by returning rotor brake handle (4) of rotor brake master cylinder (3) to stow position.

12-18. BATTERY

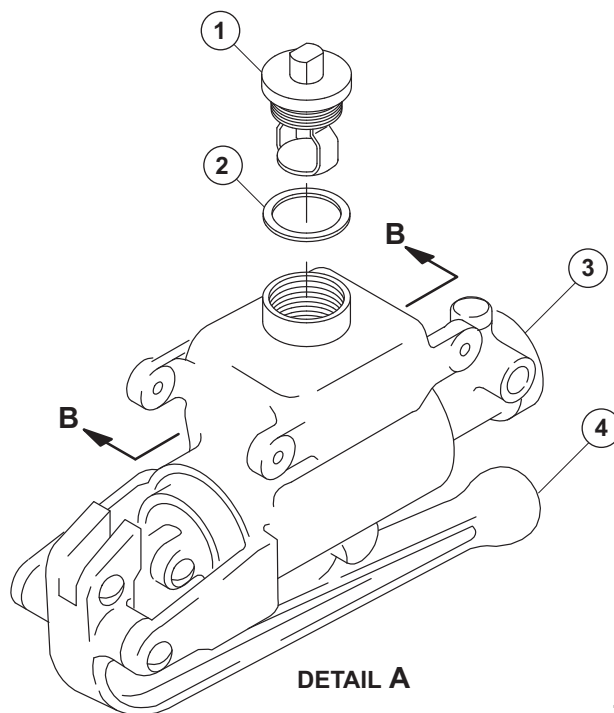
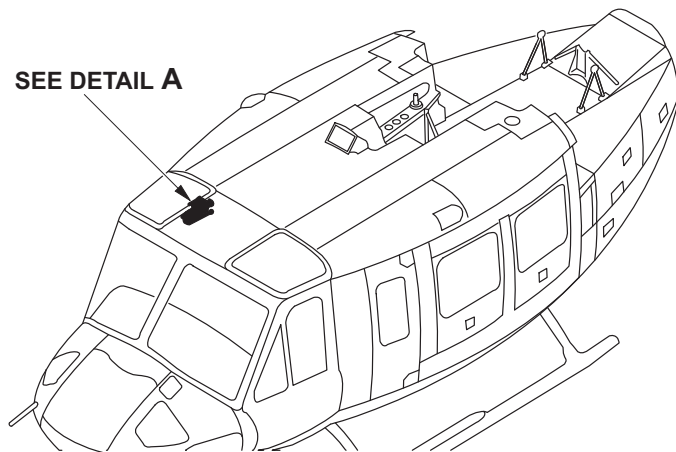
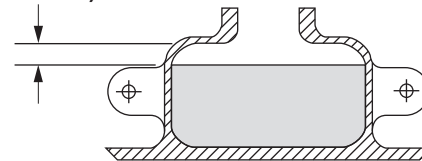
The nickel cadmium battery is located in the helicopter nose compartment. Refer to the [BHT-ELEC-SPM](#) and the battery manufacturer's service manual for servicing and maintenance.

12-19. FIRE EXTINGUISHERS**12-20. ENGINE FIRE EXTINGUISHER BOTTLES**

Check gauges of engine compartment fire extinguisher bottles through the inspection door in the sides of the engine cowling. If the gauge is below acceptable limit, refer to [Chapter 26](#).

12-21. PORTABLE FIRE EXTINGUISHERS

Check gauges of portable fire extinguishers in cabin ([Chapter 26](#)).


 0.5 IN.
 (12.7 mm)

SECTION B-B
FLUID LEVEL

1. Reservoir filler cap
2. Packing
3. Rotor brake master cylinder
4. Rotor brake handle

Figure 12-2. Rotor Brake Servicing

412_MM_12_0002+

LUBRICATION

12-22. LUBRICATION

Figure 12-3 illustrates each area that requires lubrication with grease-type lubricant. The legend of this illustration lists items to be lubricated.

1. After each day of operation in rain, snow, or after washing helicopter, all exposed control bearings should be purge lubricated to remove trapped moisture and ensure a lubricant film is applied to susceptible surfaces.
2. Parking helicopters outside in a heavy dew environment requires that all exposed control bearings be purge lubricated every 7 days to ensure no voids exist that could trap moisture.
3. If helicopter is stored for periods in excess of 45 days without operation or service, purge lubricate all bearings.

12-23. LUBRICATION SYMBOLS

The lubrication chart (Figure 12-3) uses symbols and abbreviations to indicate the required lubricant, method of application, and time interval for lubrication of each component listed. A key on the chart indicates meaning of symbols and abbreviations.

12-24. LUBRICATION — LUBRICANT RESTRICTIONS (204-040-755-005)

MATERIALS REQUIRED

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

NUMBER	NOMENCLATURE
C-015	Lubricant 204-040-755-005 (Tube Pack)

WARNING

LUBRICANT MAY CAUSE EYE AND SKIN IRRITATION. AVOID CONTACT WITH

EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

NOTE

Do not exceed lubrication intervals specified on lubrication chart.

CAUTION

LUBRICANT IN ORIGINAL TUBES AND COMPONENTS CONTAINING LUBRICANT 204-040-755-005 (TUBE PACK) ([C-015](#)) MUST BE STORED AT MODERATE AMBIENT TEMPERATURES, PREFERABLY LESS THAN 80°F (26.7°C). ELEVATED STORAGE TEMPERATURES PROMOTE OIL SEPARATION FROM THE LUBRICANT.

1. Lubricant 204-040-755-005 (tube pack) ([C-015](#)) shelf life is 4 years from packing date on container.

NOTE

Make sure grease is thoroughly mixed prior to use.

2. In-stock components which utilize lubricant 204-040-755-005 (tube pack) ([C-015](#)) must be pulled from stock and relubricated upon expiration of the original 4-year shelf life of the lubricant.

3. Once a component lubricated with lubricant 204-040-755-005 (tube pack) ([C-015](#)) goes into service, the relubrication interval is dictated by the calendar and service-time schedule, whether the component is installed on a helicopter or is subsequently removed and returned to stock as a spare on the shelf.

4. Lubricant in original tubes and components containing 204-040-755-005 lubricant should be stored at moderate ambient temperatures, preferably less than 80°F (26.7°C). Elevated storage temperatures promote oil separation from the lubricant.

5. Ensure grease is thoroughly mixed prior to use.

12-25. FLEX COUPLING LUBRICATION LOG**MATERIALS REQUIRED**

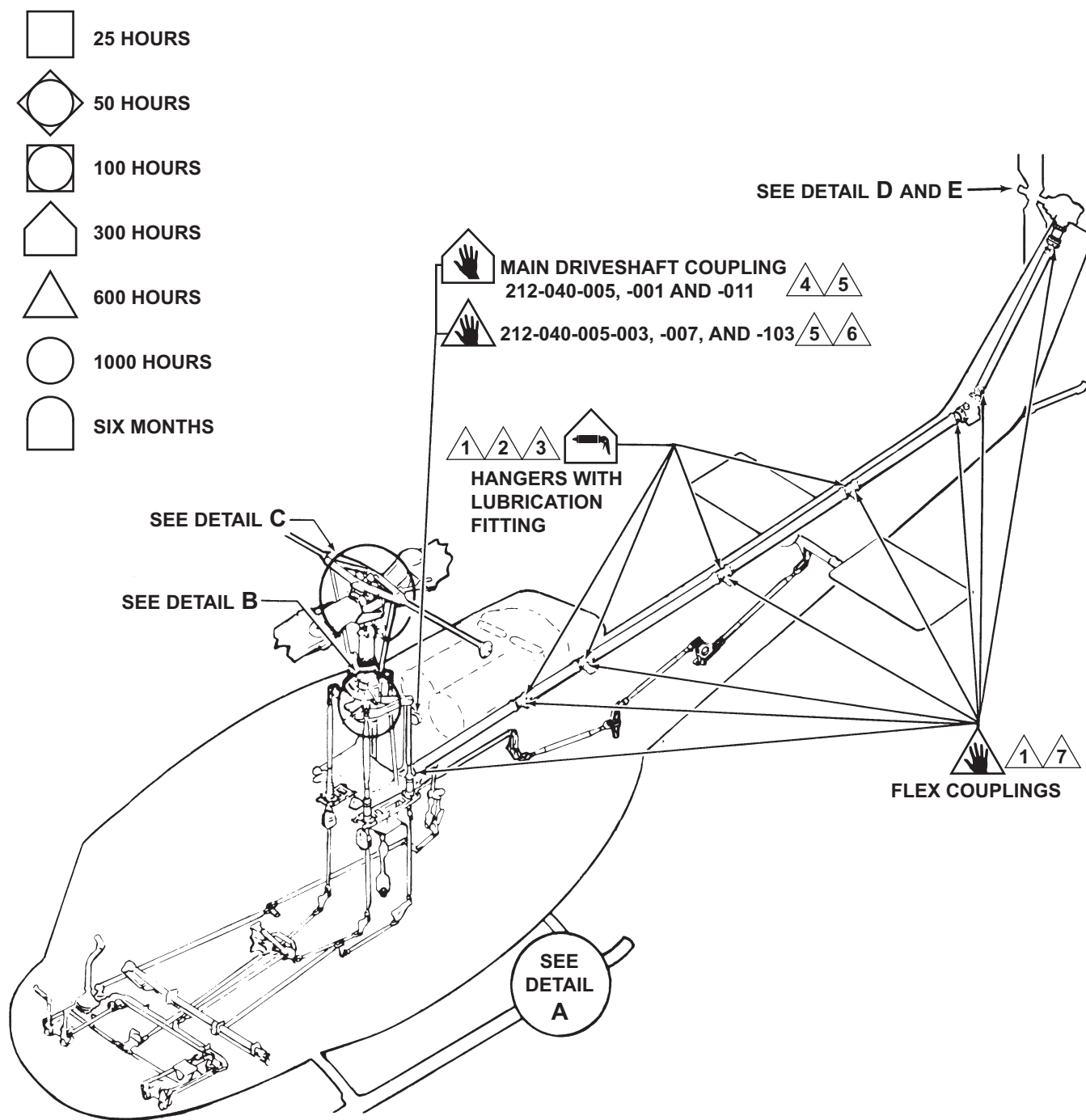
Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-015	Lubricant 204-040-755-005 (Tube Pack)

The flex coupling lubrication log as shown in [Table 12-2](#) shall be maintained any time a component using lubricant 204-040-755-005 (tube pack) ([C-015](#)) is installed on the helicopter. This log shall be maintained listing date lubricant 204-040-755-005 was applied in component. This lubricant carries an operational hour and a calendar life as specified in this chapter. Lubricant shall be replaced at requirement occurring first (hours/months).

Table 12-2. Flex Couplings Lubrication Log (Example Only)

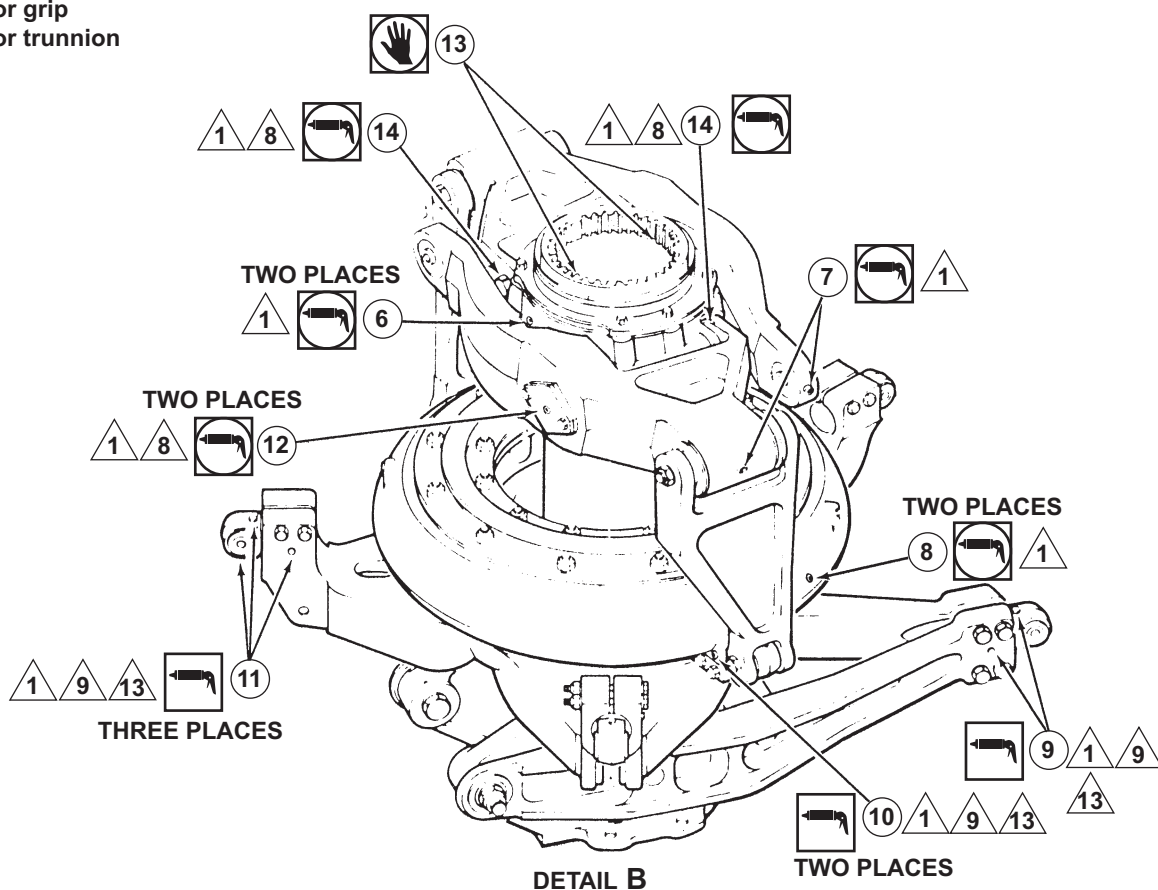
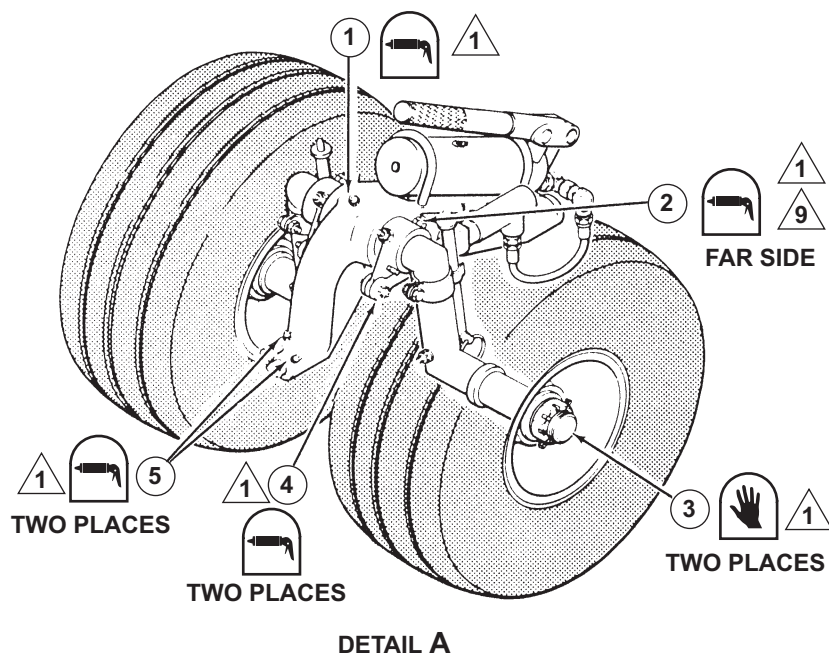
PART NUMBER	NOMENCLATURE	DATE LUBRICATED	AIRFRAME HOURS	DATE LUBRICATED	AIRFRAME HOURS
	Main Driveshaft				
	Transmission Tail Rotor Drive Output Coupling				
	Tail Rotor Driveshaft Hanger (8)				
	Intermediate Gearbox Input Quill				
	Intermediate Gearbox Output Quill				
	Tail Rotor Gearbox Input Quill				



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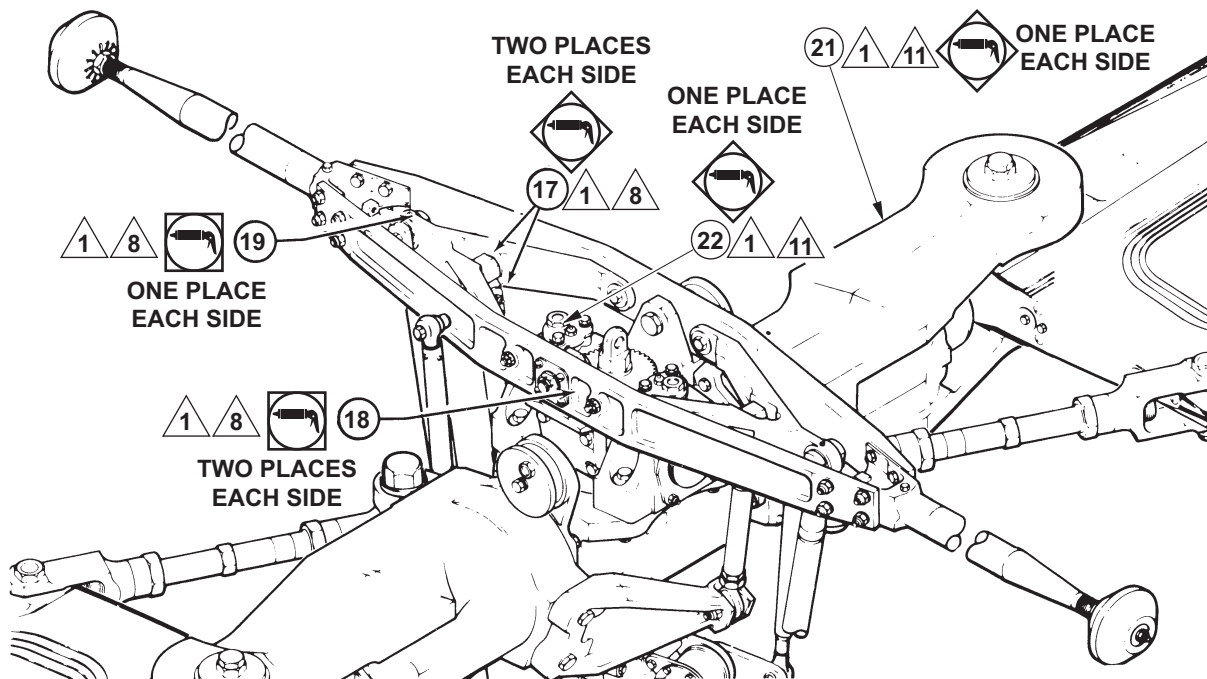
Figure 12-3. Lubrication Chart (Sheet 1 of 4)

1. Axle pivot point
2. Actuating cylinder trunnion
3. Wheel bearing
4. Pin assembly
5. Securing pin
6. Collective sleeve bearing
7. Scissor bearing
8. Swashplate bearing
9. Collective lever trunnion
10. Outer control plate trunnion
11. Control plate trunnion
12. Scissors pivot cover plate
13. Collective sleeve spline
14. Scissors pivot needle bearing (P/N 212-010-407 scissors)
15. Crosshead bearing
16. Antitorque control lever
17. Pitch change link universal
18. Stabilizer centerframe bearing
19. Mixing lever bearing
20. Trunnion bearing
21. Main rotor grip
22. Main rotor trunnion

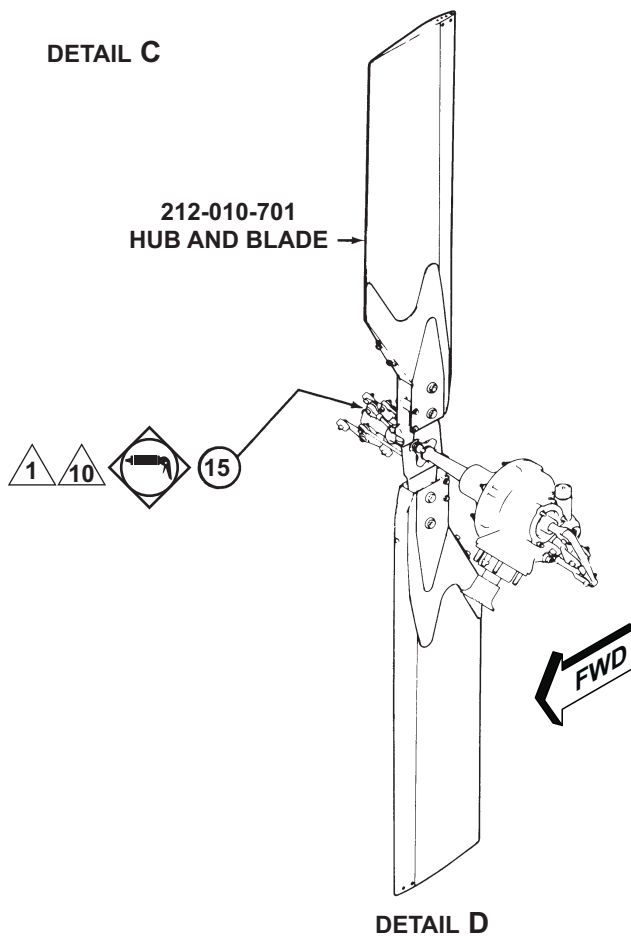


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Figure 12-3. Lubrication Chart (Sheet 2 of 4)



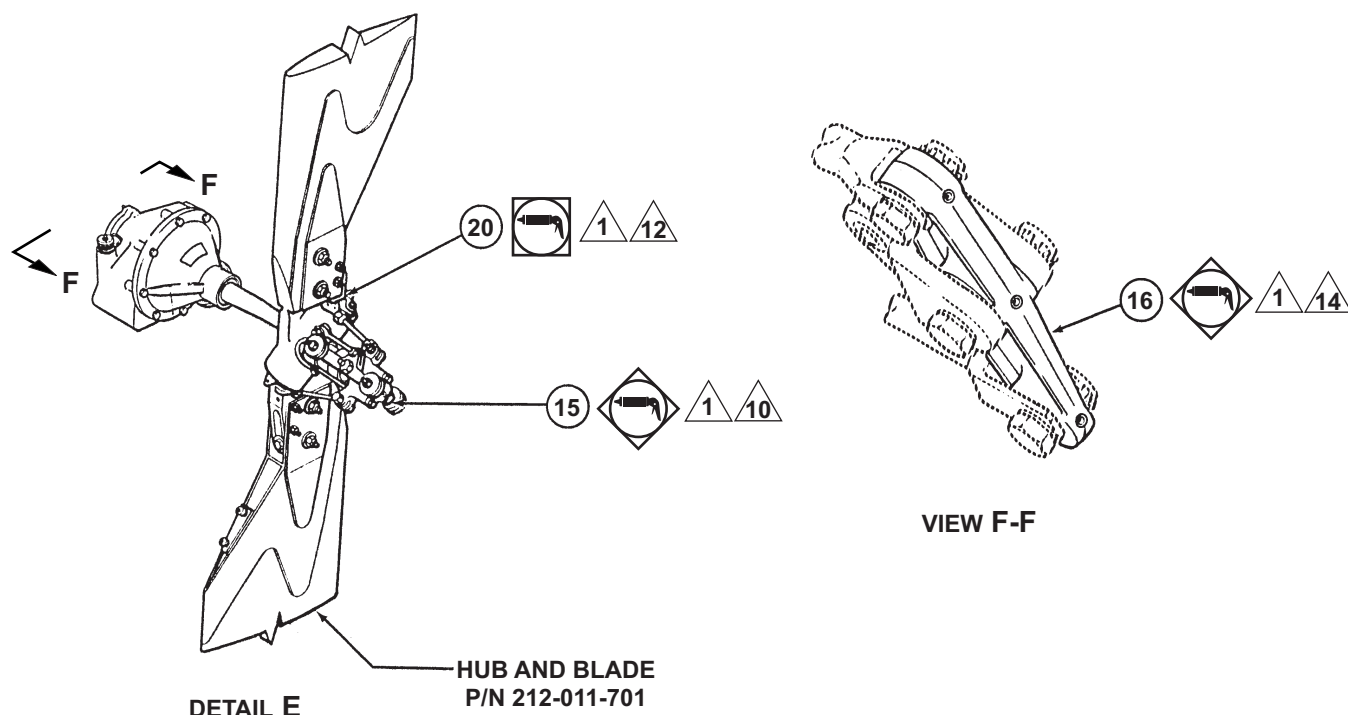
DETAIL C



DETAIL D

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Figure 12-3. Lubrication Chart (Sheet 3 of 4)



NOTES

- 1 Use MIL-PRF-81322 grease (C-001),
- 2 Lubricate hanger bearing by slowly pumping grease into fitting until grease may be seen around bearing seal. Use caution because excessive pump pressure may push seal from bearing.
- 3 Lubricate tail rotor hanger bearing with Mobil 28 conforming to MIL-PRF-81322 grease (C-001).
- 4 Lubricate couplings on P/N 212-040-005-011 main driveshaft every 300 hours or 3 months: whichever occurs first.
- 5 Use grease (C-015), P/N 204-040-755-005. Grease (C-015) has a shelf storage life of 4 years whether stored in original container or in a component. If a component is not put in service prior to expiration of the 4 year shelf life of the grease, component shall be relubricated prior to installation on a helicopter. After initial operation of component on the helicopter, refer to lubrication chart for lubrication intervals.
- 6 Lubricate couplings on P/N 212-040-005-003, -007, and -103 main driveshaft every 600 hours or 12 months; whichever occurs first.
- 7 Lubricate tail rotor driveshaft couplings every 600 hours or six months; whichever occurs first.
- 8 Lubricate more frequently if conditions warrant.
- 9 Purge lubricate.
- 10 Do not overlubricate crosshead bearing. Two shots of grease each 50 hours of operation is considered adequate.
- 11 If T.B. 212-81-56 has been complied with, purge lubricate main rotor grips and trunnions with MIL-PRF-81322 grease (C-001) each 50 hours of operation. Refer to T.B. 212-81-56 for lubrication instructions.
- 12 Lubricate until grease passes seal.
- 13 Every 4th 25 (100 hours) rotate bearing 180° and purge lubricate (Chapter 5).
- 14 Lubricate lever assembly P/N 209-011-712-101 every 50 hours of operation.

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Figure 12-3. Lubrication Chart (Sheet 4 of 4)

