HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., January 4, 2010

# TECHNICAL MANUAL

# FIELD MAINTENANCE MANUAL
FOR
# HEAVY TYPE II SKID STEER LOADER (M400T)
(NSN 3805-01-552-4485) (EIC)
AND
# LIGHT TYPE III SKID STEER LOADER (M400W)
(NSN 3805-01-552-4487) (EIC)

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms) through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is https://aeps.ria.army.mil. The DA Form 2028 is located under the Public Applications section in the AEPS Public Home Page. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, e-mail, or fax your comments or DA Form 2028 directly to the U.S. Army TACOM Life Cycle Management Command. The postal mail address is U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LMPP / TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The e-mail address is tacomlcmc.daform2028@us.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

**DISTRIBUTION STATEMENT A** - Approved for public release; distribution is unlimited.

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**EQUIPMENT DATA**

**M400T and M400W Engine:**

- Manufacturer . . . . . Iveco
- Model. . . . . F5C
- EPA Level . . . . . Tier 3 Certified
- Aspiration . . . . . Turbo
- Firing Order . . . . . 1,3,4,2
- Fuel . . . . . Diesel
- Bore and Stroke. . . . . 3.89 x 4.09 in. (99 x 104 mm)
- Displacement. . . . . 195 cu. in. (3.2 L)
- Compression Ratio . . . . . 18:1
- Horsepower
  - Gross Bare Engine Power (SAE J1349). . . . . 74 hp (55 kW)
  - Net Engine Power (SAE J1349) . . . . . 69 hp (51 kW)
  - Peak Torque @ 1,400 rpm . . . . . 203 lb-ft (275 Nm)
- Engine Speeds
  - High Idle - No Load. . . . . 2,675 ± 75 rpm
  - Rated - Full Load . . . . . 2,500 rpm
  - Low Idle . . . . . 1,075 ± 75 rpm

**Travel Speeds:**

- M400T . . . . . 0 to 6.0 mph (0 to 9.6 kph)
- M400W . . . . . 0 to 7.1 mph (0 to 11.4 kph)

**Hydraulic System Flow Rates:**

- Auxiliary Hydraulic Circuit . . . . . 23.8 gpm (90.1 L/M)

**Electrical System:**

- Battery . . . . . Maintenance-free/900 CCA
- Alternator. . . . . 24 Volt, 45 amp
- Starter . . . . . 4.5 kW, 24 Volt

**Weights:**

- M400T . . . . . 9,100 lb (4,128 kg)
- M400W . . . . . 8,400 lb (3,810 kg)

**Lifting Capacity:**

- M400T . . . . . 2,100 lb (953 kg)
- M400W . . . . . 1,980 lb (898 kg)

**Lifting Capacity with Forks:**

- M400T . . . . . 1,330 lb (600 kg)
- M400W . . . . . 1,550 lb (700 kg)

**Tire Pressure**

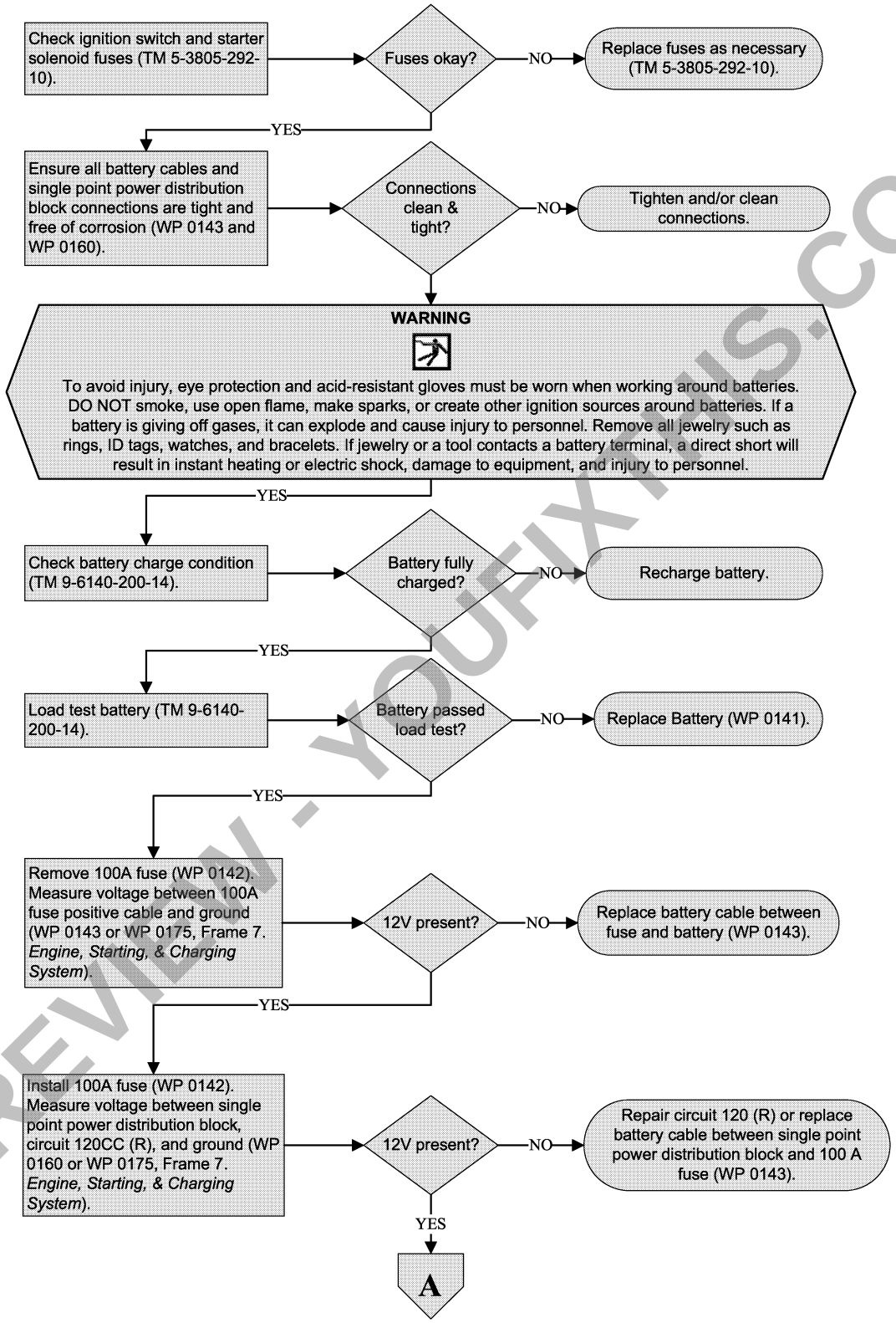
- M400W (only) . . . . . 40 to 50 PSI (276 to 345 kPa)



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

## ENGINE TROUBLESHOOTING - ENGINE DOES NOT CRANK




***CONTINUED***
***(page 0006-3)***



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**HYDROSTATIC SYSTEM – CONTINUED**

**Checking Charge Pressure/Flow - Continued**

5. Start engine and run engine at full throttle (TM 5-3805-292-10).

**NOTE**

Pressure must be a minimum of 362 psi (25 bar) at full throttle.

6. Read pressure gauge and record charge pressure reading.
7. Shut down engine (TM 5-3805-292-10).
8. If pressure is low, a drive motor could be damaged. Disconnect hoses to drive motors at pump and cap fittings. Start engine (TM 5-3805-292-10) and check charge pressure again.
   a. If pressure is correct, one or both drive motors may be damaged. Check and repair lines to motor. If lines OK, then replace drive motor(s) (WP 0066 for M400W LH Drive Motor, WP 0067 for M400W RH Drive Motor or WP 0076 for M400T).
   b. If pressure is not correct, replace tandem pump (WP 0068 for M400W or WP 0078 for M400T).
9. Shut down engine (TM 5-3805-292-10) and remove pressure gauge.
10. Install plug and new O-ring in test port.
11. Remove supports and lower machine to ground.
12. Close ROPS (WP 0134).

**END OF TASK**

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## FIELD MAINTENANCE

## PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

### INITIAL SETUP

**Tools and Special Tools**

Tool Kit, General Mechanic's (WP 0178, Item 33)

**Materials/Parts**

Antifreeze, Permanent, Ethylene Glycol, Inhibited (WP 0179, Item 1)
Diesel Fuel, DF-2 (WP 0179, Item 7)
Oil, Lubricating, Gear, GO 80/90 (WP 0179, Item 13)
Oil, Lubricating, OE/HDO-10 (WP 0179, Item 16)
Oil, Lubricating, OE/HDO-15/40 (WP 0179, Item 17)
Rag, Wiping (WP 0179, Item 19)
Sealing Compound (WP 0179, Item 25)

**References**

LO 5-3805-292-13
WP 0016
WP 0026
WP 0028
WP 0041
WP 0052
WP 0058
WP 0060
WP 0061
WP 0072
WP 0141
WP 0167

**Equipment Conditions**

Machine parked on level ground (TM 5-3805-292-10)
Loader arms raised (TM 5-3805-292-10)
Parking brake engaged (TM 5-3805-292-10)

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**REMOVAL – CONTINUED**

**Pulley Removal**

1. Remove serpentine belts (WP 0052).
2. Remove pulley (Figure 2, Item 1) from engine (Figure 2, Item 2).

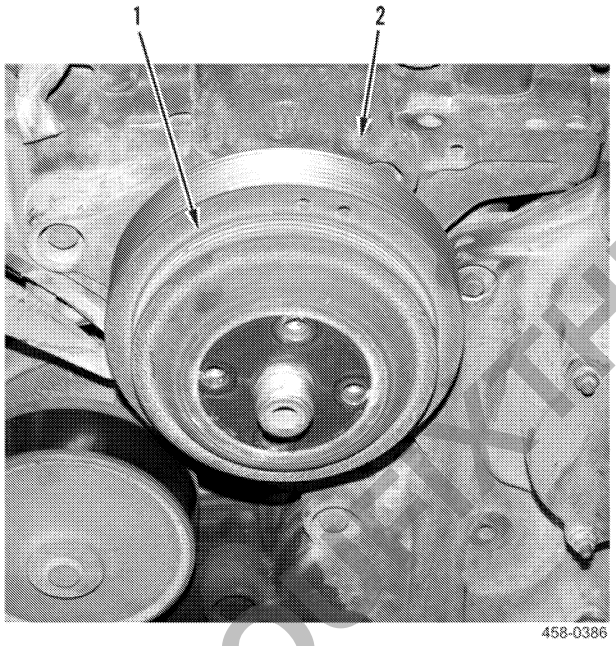



**Figure 2. Pulley.**

**END OF TASK**

**CLEANING AND INSPECTION**

**WARNING**



Solvent cleaning compound MIL-PRF-680 Type III is an environmentally compliant and low toxic material. However, it may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Keep away from open flames and other sources of ignition. Failure follow this warning may result in injury or death to personnel.



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**INSTALLATION – CONTINUED**

**NOTE**

- Install new tiedown straps as needed.
- Install lockwashers as noted during removal.

15. Position five wires (Figure 17, Item 4) on two terminals (Figure 17, Item 7) and install three new lockwashers (Figure 17, Item 6) and four nuts (Figure 17, Item 5).
16. Connect heater hose (Figure 17, Item 14) to engine and attach clamp (Figure 17, Item 1).
17. Position engine ground wires (Figure 17, Item 3) on engine and install nut (Figure 17, Item 2).
18. Connect electrical connector (Figure 17, Item 13).
19. Install cable (Figure 17, Item 12), new lockwasher (Figure 17, Item 10), and nut (Figure 17, Item 9) on terminals (Figure 17, Item 8) and position protective cover (Figure 17, Item 11).

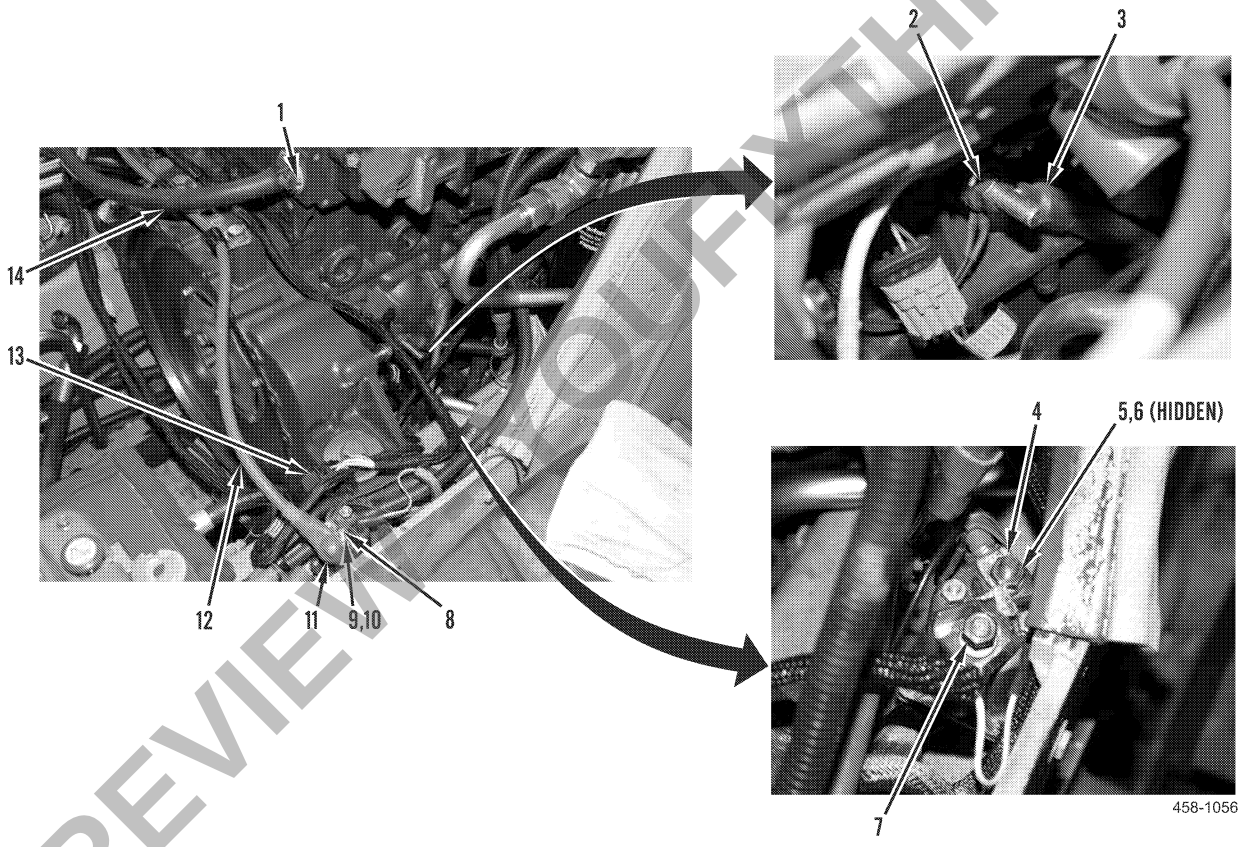



**Figure 17. Engine Hose and Electrical Connections.**

**END OF TASK**



PREVIEW OF FIXTHIS.COM
Download full manual at youfixthis.com

**INSTALLATION**

1. Install rear main oil seal (Figure 2, Item 3), rear main oil seal installer base (Figure 2, Item 1), and two screws (Figure 2, Item 2) to rear of engine.

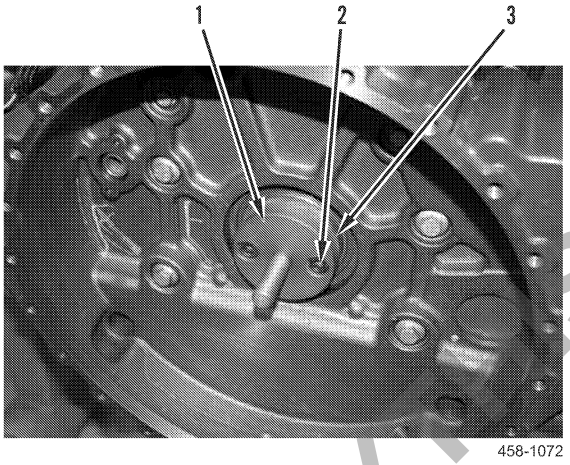



**Figure 2. Rear Main Oil Seal Installer Base.**

2. Lubricate new rear seal (Figure 3, Item 3) with clean engine oil and install new rear seal (Figure 3, Item 3) on rear of engine.
3. Install rear main oil seal installer cap (Figure 3, Item 1) and nut (Figure 3, Item 2) to rear main oil seal installer base (Figure 3, Item 4).
4. Turn nut (Figure 3, Item 2) to install rear seal to the proper depth.
5. Remove rear main oil seal installer nut (Figure 3, Item 2), cap (Figure 3, Item 1) and base (Figure 3, item 4) from rear of engine.

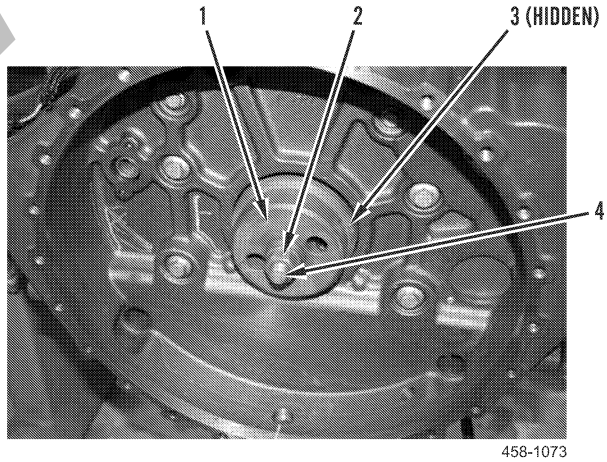



**Figure 3. Rear Main Oil Seal Installation.**

**END OF TASK**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**ADJUSTMENT**

**NOTE**

- Engine firing order is 1-3-4-2.
- Adjust rocker arms only if clearances are not as specified in procedure.

1. Find top dead center (TDC) (WP 0057).
2. With No. 1 cylinder at TDC of its compression stroke, measure clearance of No. 1 cylinder intake rocker arm (Figure 1, Item 3) and exhaust rocker arm (Figure 1, Item 6) using steps 8-15.
3. Measure clearance of No. 2 cylinder intake rocker arm (Figure 1, Item 3) using steps 8-11.
4. Measure clearance of No. 3 cylinder exhaust rocker valve (Figure 1, Item 6) using steps 8-15.
5. Using engine turning tool, rotate engine 360° and measure clearance of No. 4 cylinder intake rocker arm (Figure 1, Item 3) and exhaust rocker arm (Figure 1, Item 6) using steps 8-15.
6. Measure clearance of No. 3 cylinder intake rocker arm (Figure 1, Item 3) using steps 8-11.
7. Measure clearance of No. 2 cylinder exhaust rocker arm (Figure 1, Item 6) using steps 12-15.
8. Hold stud (Figure 1, Item 1) and loosen nut (Figure 1, Item 2) on intake rocker arm (Figure 1, Item 3).
9. Using a feeler gauge, measure clearance between intake rocker arm (Figure 1, Item 3) and intake valve cap (Figure 1, Item 4).
10. Turn stud (Figure 1, Item 1) and adjust intake rocker arm (Figure 1, Item 3) clearance to .01 ± .002 in. (0.25 ± 0.05 mm).
11. Hold stud (Figure 1, Item 1) and torque nut (Figure 1, Item 2) to 15 ± 1 lb-ft (20 ± 2 Nm) on intake rocker arm (Figure 1, Item 3).
12. Hold stud (Figure 1, Item 8) and loosen nut (Figure 1, Item 7) on exhaust rocker arm (Figure 1, Item 6).
13. Using a feeler gauge, measure clearance between exhaust rocker arm (Figure 1, Item 6) and exhaust valve cap (Figure 1, Item 5).
14. Turn stud (Figure 1, Item 8) and adjust exhaust rocker arm (Figure 1, Item 7) clearance to .02 ± .002 in. (0.50 ± 0.05 mm).
15. Hold stud (Figure 1, Item 8) and torque nut (Figure 1, Item 7) to 15 ± 1 lb-ft (20 ± 2 Nm) on exhaust rocker arm (Figure 1, Item 6).

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**INSTALLATION – CONTINUED**

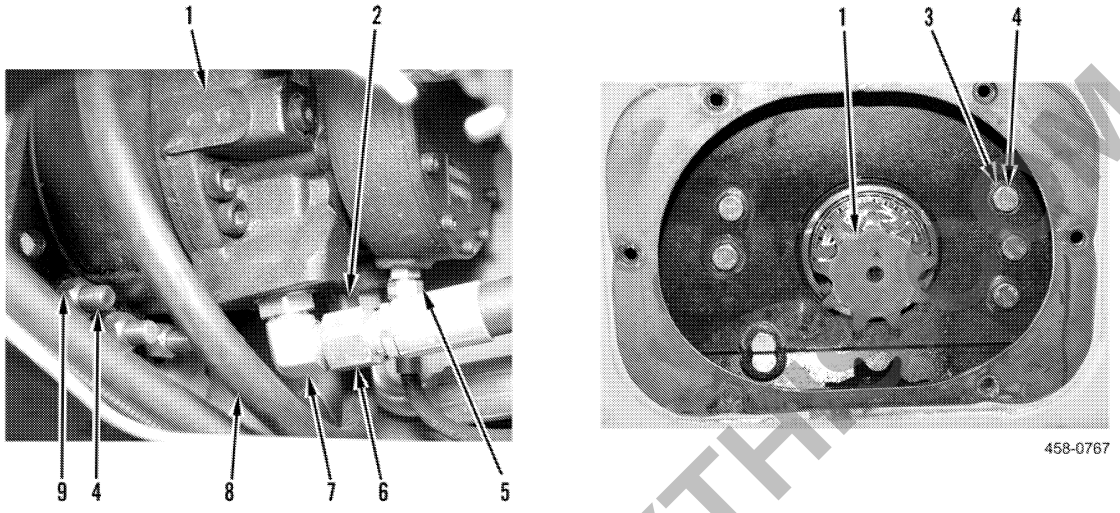



**Figure 4. Hydraulic Drive Motor.**

10. Position return oil manifold (Figure 5, Item 3) aside and install two spacers (Figure 5, Item 6), washers (Figure 5, Item 5), and bolts (Figure 5, Item 4).
11. Connect tube (Figure 5, Item 1) on return oil manifold (Figure 5, Item 3) and tighten fitting (Figure 5, Item 2).
12. Install clamp (Figure 5, Item 10) and bolt (Figure 5, Item 9) on tube (Figure 5, Item 1).
13. Install hydraulic hose (Figure 5, Item 7) and clamp (Figure 5, Item 8) on return oil manifold (Figure 5, Item 3).

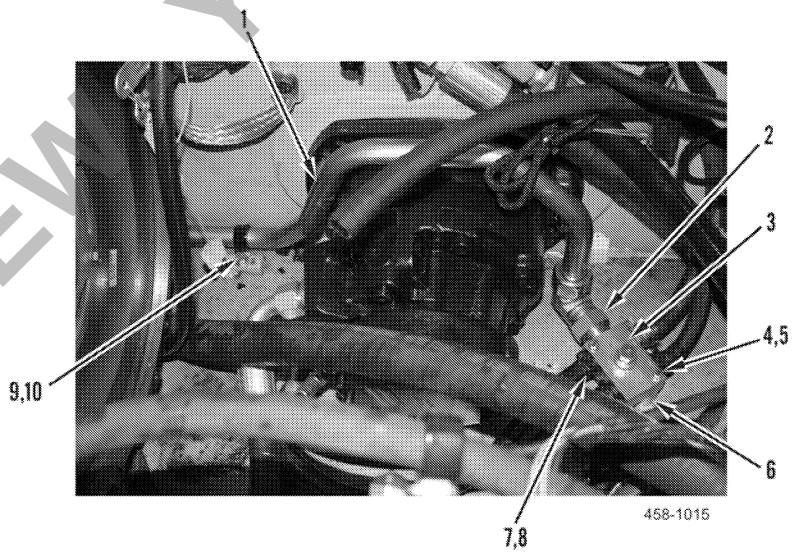



**Figure 5. Return Oil Manifold.**

**END OF TASK**



PREVIEW YOUFIXTHIS.COM
Download full manual at youfixthis.com

**TRACK ADJUSTMENT**

**WARNING**



Do not place hands or feet between track and roller Failure to follow this warning may result in injury to personnel.

**NOTE**

Allowable track sag is 1/2 to 3/4 in.

1. Measure from lower track top surface to bottom of center roller (Figure 7, Item 1).

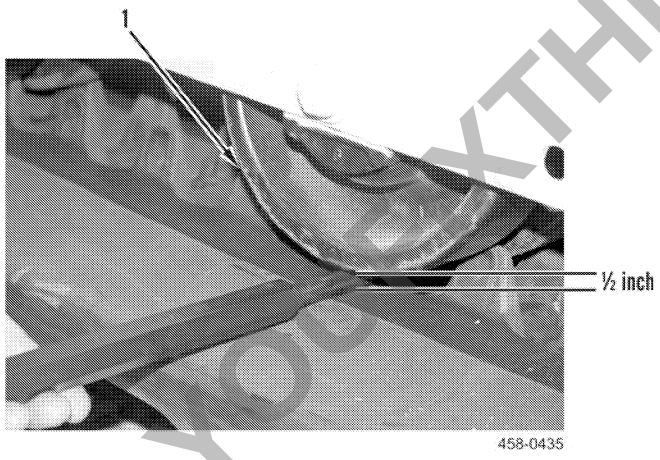



**Figure 7. Track Tension Check.**

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**END OF TASK**

**ASSEMBLY**

1. Lubricate new seal (Figure 7, Item 4) with clean hydraulic oil and install in cylinder head (Figure 7, Item 7).
2. Lubricate new seal (Figure 7, Item 5) with clean hydraulic oil and install in cylinder head (Figure 7, Item 7). Seal lips must be toward small end of the cylinder head.
3. Lubricate new seal (Figure 7, Item 6) with clean hydraulic oil and install in the cylinder head (Figure 7, Item 7). The seal lips must be toward large end of cylinder head.
4. Lubricate washer (Figure 7, Item 3) with clean hydraulic oil and install in groove on outside of cylinder head (Figure 7, Item 7). Install washer with flat side toward large end of cylinder head.
5. Lubricate new O-ring (Figure 7, Item 8) with clean hydraulic oil and install in groove next to washer (Figure 7, Item 3) on outside of cylinder head (Figure 7, Item 7).
6. Lubricate bore of cylinder head (Figure 7, Item 7) with clean hydraulic oil.
7. Push cylinder head (Figure 7, Item 7) onto piston rod (Figure 7, Item 13). If cylinder head will not slide easily onto piston rod, a soft hammer may be used.
8. Place a support below and near end of piston rod (Figure 7, Item 13) to prevent damage to piston rod.
9. Install piston (Figure 7, Item 11) on end of piston rod (Figure 7, Item 13).

**WARNING**



Use caution when using adhesives and sealants. Prolonged inhalation of vapors can cause lung irritation. Contact with skin can cause dermatitis. Wear gloves and safety goggles and use product in a well-ventilated area away from open flame. If ingested, keep individual calm and seek medical attention. DO NOT induce vomiting. If contact with skin or eyes is made, flush thoroughly with water. Dispose of cleanup rags IAW local policy and ordinances. Failure to follow this warning may result in injury to personnel.

**CAUTION**

Do not apply sealing compound to the first 1/4 in. of the piston rod.

10. Apply sealing compound to piston rod threads, 1/4 in. from open end of piston rod. Apply 1/2 in. of sealing compound to piston rod threads.
11. Install nut (Figure 7, Item 12) on piston rod (Figure 7, Item 13) and torque to 270 to 346 lb-ft (365 to 469 Nm).
12. Lubricate new seal (Figure 7, Item 9) with clean hydraulic oil and install in center groove on outside of piston (Figure 7, Item 11).
13. Lubricate new wear ring (Figure 7, Item 10) with clean hydraulic oil and install in end groove on opposite end of piston (Figure 7, Item 11).
14. Lubricate inside of lift cylinder (Figure 7, Item 1) and piston (Figure 7, Item 11) with clean hydraulic oil.
15. Push lift cylinder (Figure 7, Item 1) straight onto piston (Figure 7, Item 11).
16. Start lift cylinder (Figure 7, Item 1) onto piston rod (Figure 7, Item 13) assembly.
17. When piston (Figure 7, Item 11) is in smooth part of lift cylinder (Figure 7, Item 1), start cylinder head (Figure 7, Item 7) into lift cylinder.
18. Lubricate O-ring (Figure 7, Item 8) on cylinder head (Figure 7, Item 7) with clean hydraulic oil.
19. Tighten cylinder head (Figure 7, Item 7) to 300 ± 50 lb-ft (407 ± 68 Nm).
20. Install two fittings (Figure 7, Item 2) on lift cylinder (Figure 7, Item 1).



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

**REMOVAL – CONTINUED**

4. Remove three mounting capscrews (Figure 3, Item 1) from LH console (Figure 3, Item 2) and separate console from cab.

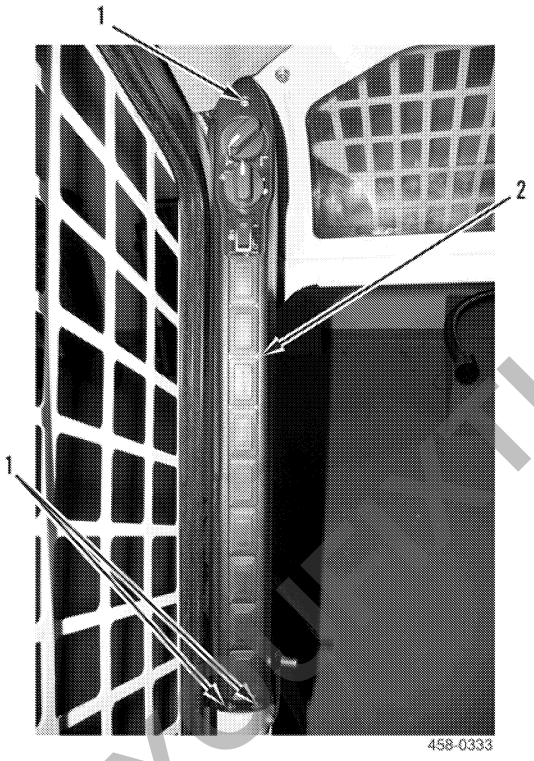



**Figure 3. LH Console.**

5. Disconnect three connectors (Figure 4, Item 1) from LH console (Figure 4, Item 2).
6. Remove A/C switch (WP 0135).
7. Remove blower switch (WP 0144).
8. Remove HVAC temperature control switch (WP 0153).

**END OF TASK**

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**CLEANING AND INSPECTION**

**WARNING**



Solvent cleaning compound MIL-PRF-680 Type III is an environmentally compliant and low toxic material. However, it may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Keep away from open flames and other sources of ignition. Failure follow this warning may result in injury or death to personnel.

1. Clean all parts (except rubber and plastic surfaces) and mating surfaces with solvent cleaning compound.

**WARNING**



Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. DO NOT direct compressed air against human skin. Make sure air stream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield. Failure to follow this warning may result in injury to personnel.

2. Dry parts with compressed air.
3. Inspect parts for wear, pitting, cracks, or corrosion and replace if necessary.

**END OF TASK**

**INSTALLATION**

Install console (Figure 2, Item 1) and four bolts (Figure 2, Item 2) on machine.

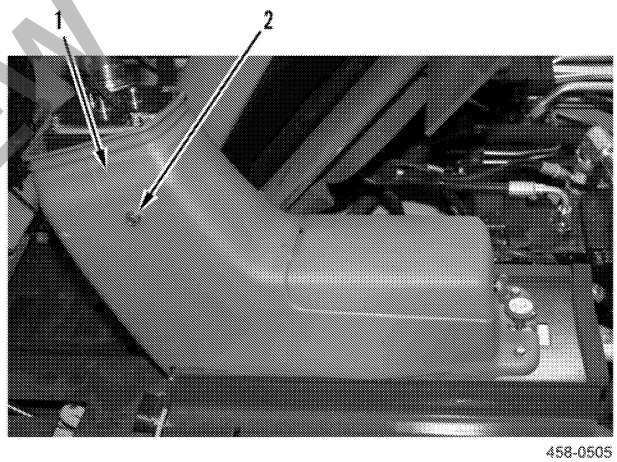



**Figure 2. Joystick Console Replacement.**

**END OF TASK**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**INSTALLATION – CONTINUED**

5. With assistance, position engine compartment hood (Figure 3, Item 1) on machine.
6. Slide rod (Figure 3, Item 10), two spacer sleeves (Figure 3, Item 13), and washers (Figure 3, Item 14) onto engine compartment hood (Figure 3, Item 1) through holes in frame.
7. Install two retaining rings (Figure 3, Item 15) on rod (Figure 3, Item 10).
8. Install support lift (Figure 3, Item 12) on engine compartment hood (Figure 3, Item 1).
9. Install clip (Figure 3, Item 11) on support lift (Figure 3, Item 12).
10. Install A/C condenser (Figure 3, Item 3) (WP 0091).
11. Install exhaust pipe (Figure 3, Item 2) (WP 0132).
12. Install two clamps (Figure 3, Item 4), spacer (Figure 3, Item 7), washer (Figure 3, Item 6), nut (Figure 3, Item 8), and nut (Figure 3, Item 9) on engine compartment hood (Figure 3, Item 1).

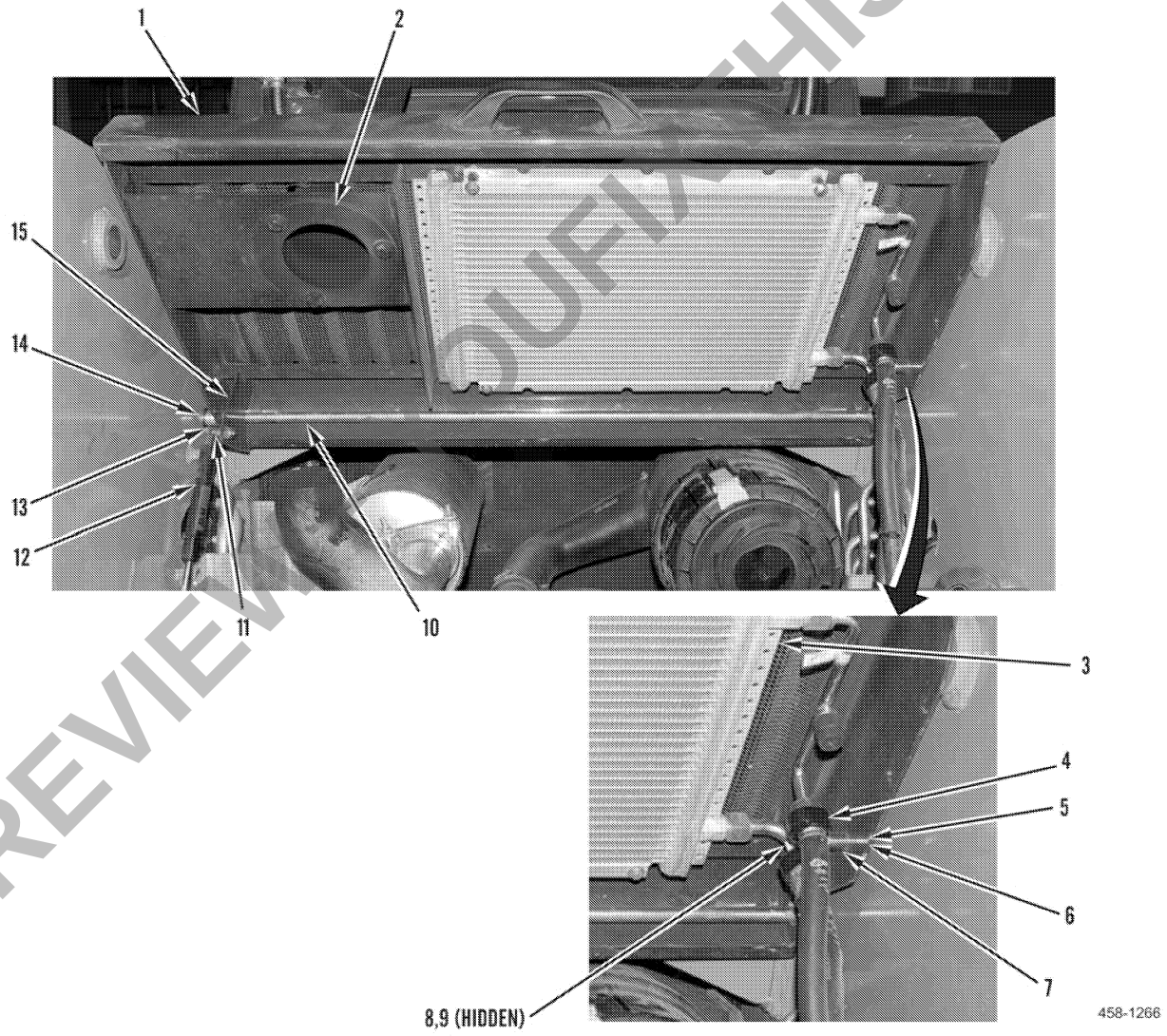



**Figure 3. Engine Compartment Assembly.**

**END OF TASK**



PREVIEW ONLY FIXTHIS.COM
Download full manual at youfixthis.com

**REMOVAL**

**CAUTION**

Failure to squeeze and hold locking clip before disconnecting connector may cause damage to connector and air filter restriction switch.

1. Squeeze and hold locking clip (Figure 1, Item 2) and disconnect connector (Figure 1, Item 1) from air filter restriction switch (Figure 1, Item 3).
2. Remove air filter restriction switch (Figure 1, Item 3) from intake air cleaner (Figure 1, Item 4) by turning counterclockwise.

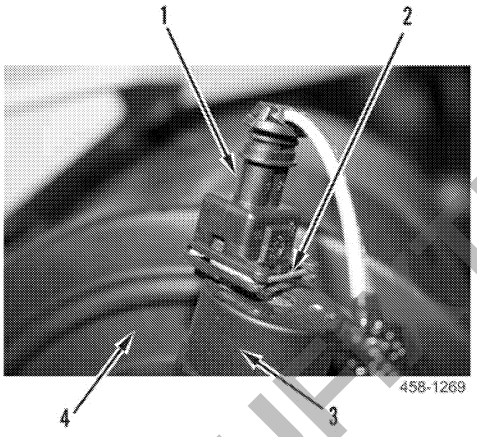



**Figure 1. Air Filter Restriction Switch.**

**END OF TASK**

**INSTALLATION**

**WARNING**



Use caution when using adhesives and sealants. Prolonged inhalation of vapors can cause lung irritation. Contact with skin can cause dermatitis. Wear gloves and safety goggles and use product in a well-ventilated area away from open flame. If ingested, keep individual calm and seek medical attention. DO NOT induce vomiting. If contact with skin or eyes is made, flush thoroughly with water. Dispose of cleanup rags IAW local policy and ordinances. Failure to follow this warning may result in injury to personnel.

1. Apply sealing compound to threads on intake air cleaner (Figure 1, Item 4).

**CAUTION**

Do not over tighten air filter restriction switch. Failure to follow this caution may cause damage to equipment.

2. Install air filter restriction switch (Figure 1, Item 3) on intake air cleaner (Figure 1, Item 4) by turning clockwise.
3. Connect wiring harness (Figure 1, Item 1) to air filter restriction switch (Figure 1, Item 3) and push locking clip (Figure 1, Item 2) in place.

**END OF TASK**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**HVAC WIRING HARNESS INSTALLATION – CONTINUED**

10. With assistance, Install outside cover (Figure 16, Item 1) and two bolts (Figure 16, Item 2) on machine.

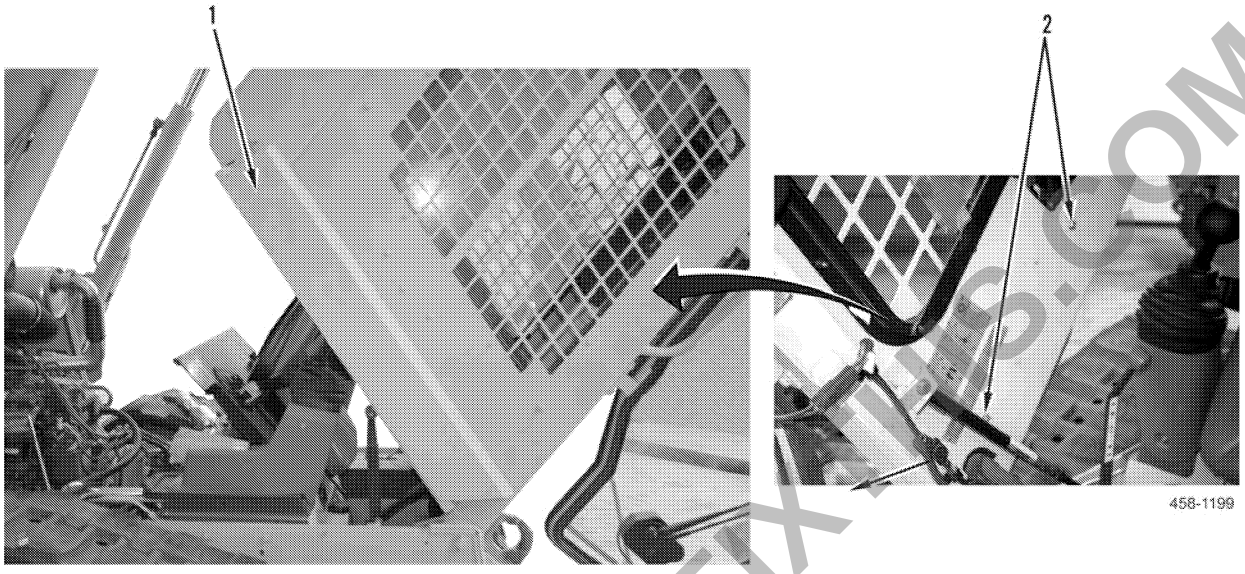



**Figure 16. Cover Installation.**

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**ASSEMBLY – CONTINUED**

18. Install hydraulic plate (Figure 15, Item 5) and two 90° elbows (Figure 15, Item 2) on assembly.
19. Connect two tees (Figure 15, Item 4) to two 90° elbows (Figure 15, Item 2).
20. Connect two hoses (Figure 15, Item 1) to two 90° elbows (Figure 15, Item 2).
21. Position hose cushion (Figure 15, Item 8) and plate (Figure 15, Item 7) and install capscrew (Figure 15, Item 6) on back blade (Figure 15, Item 3).

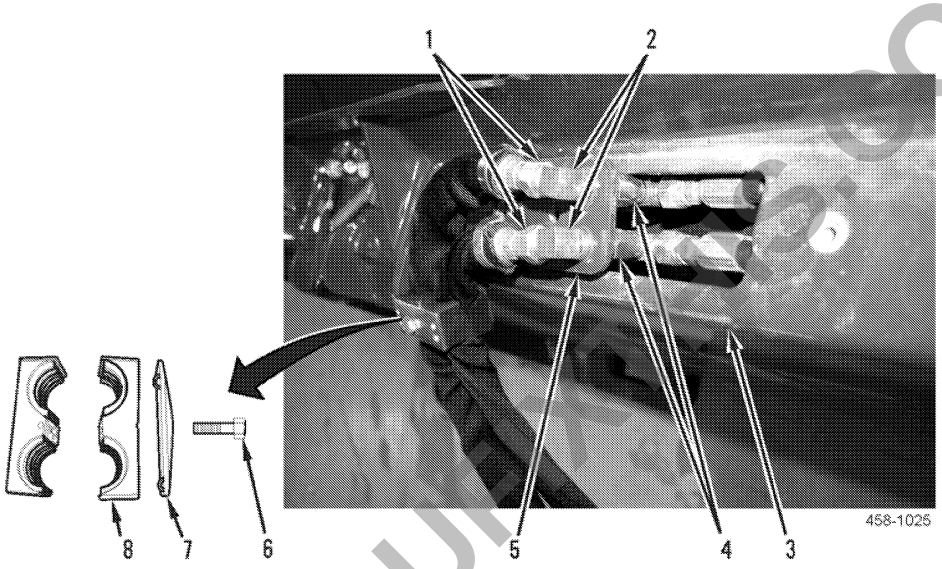



**Figure 15. Bucket Hoses.**

22. Position hydraulic cover (Figure 16, Item 5) on back blade (Figure 16, Item 6).
23. Install two washers (Figure 16, Item 3), new lockwashers (Figure 16, Item 2), and capscrews (Figure 16, Item 1) on hydraulic cover (Figure 16, Item 5).
24. Tighten capscrew (Figure 16, Item 4).

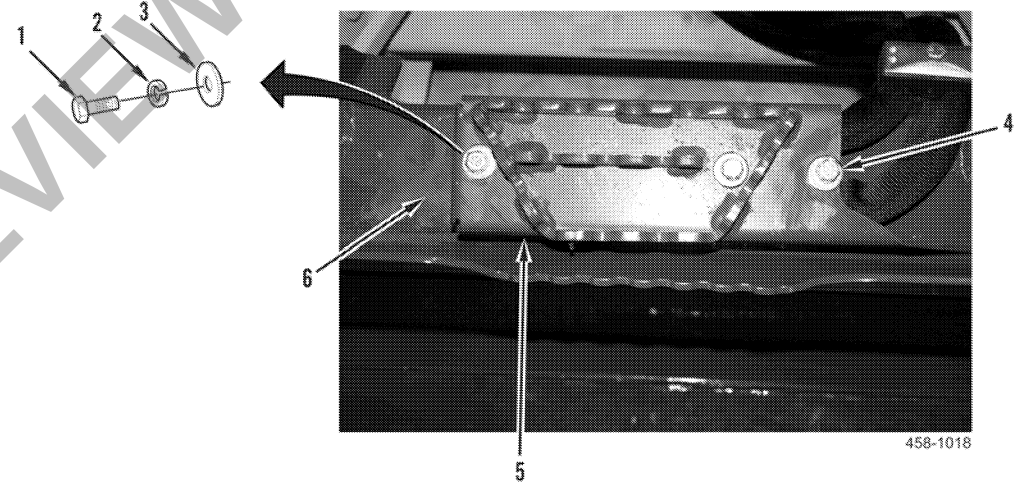



**Figure 16. Hydraulic Cover.**

**END OF TASK**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

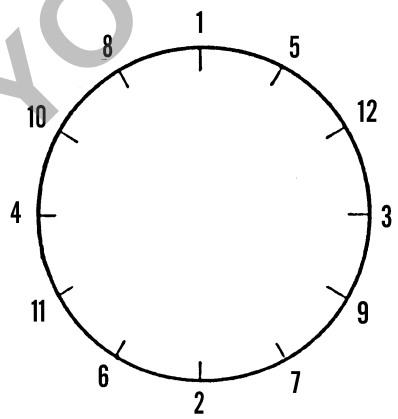
## FIELD MAINTENANCE
## TORQUE LIMITS

### SCOPE

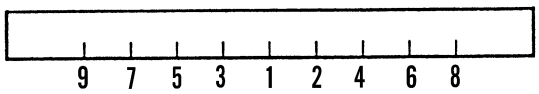
This work package lists standard torque values and provides general information for applying torque. Special torque values and tightening sequences are indicated in the maintenance procedures for applicable components.

### GENERAL

1. Always use torque values listed in Tables 1 and 2 when a maintenance procedure does not give a specific torque value.
   a. Table 1 provides torque limits for SAE standard fasteners.
   b. Table 2 provides torque limits for metric fasteners.
2. Unless otherwise indicated, standard torque tolerance shall be ± 10 percent.
3. Torque values listed are based on clean, dry threads. Reduce torque by 10 percent when engine oil is used as a lubricant. Reduce torque by 20 percent if new plated capscrews are used.
4. If the maintenance procedures do not specify a tightening order, use the following guides:
   a. Unless otherwise specified, lubricate threads of fasteners with clean oil (OE/HDO-10).
   b. When tightening fasteners above 30 lb-ft (41 Nm), use the torque pattern but only tighten to 70 percent of final value (multiply final value by 0.7). Repeat pattern until final value is reached.
   c. Tighten circular patterns using circular torque pattern and tighten straight patterns using straight torque pattern.




CIRCULAR TORQUE PATTERN




STRAIGHT TORQUE PATTERN

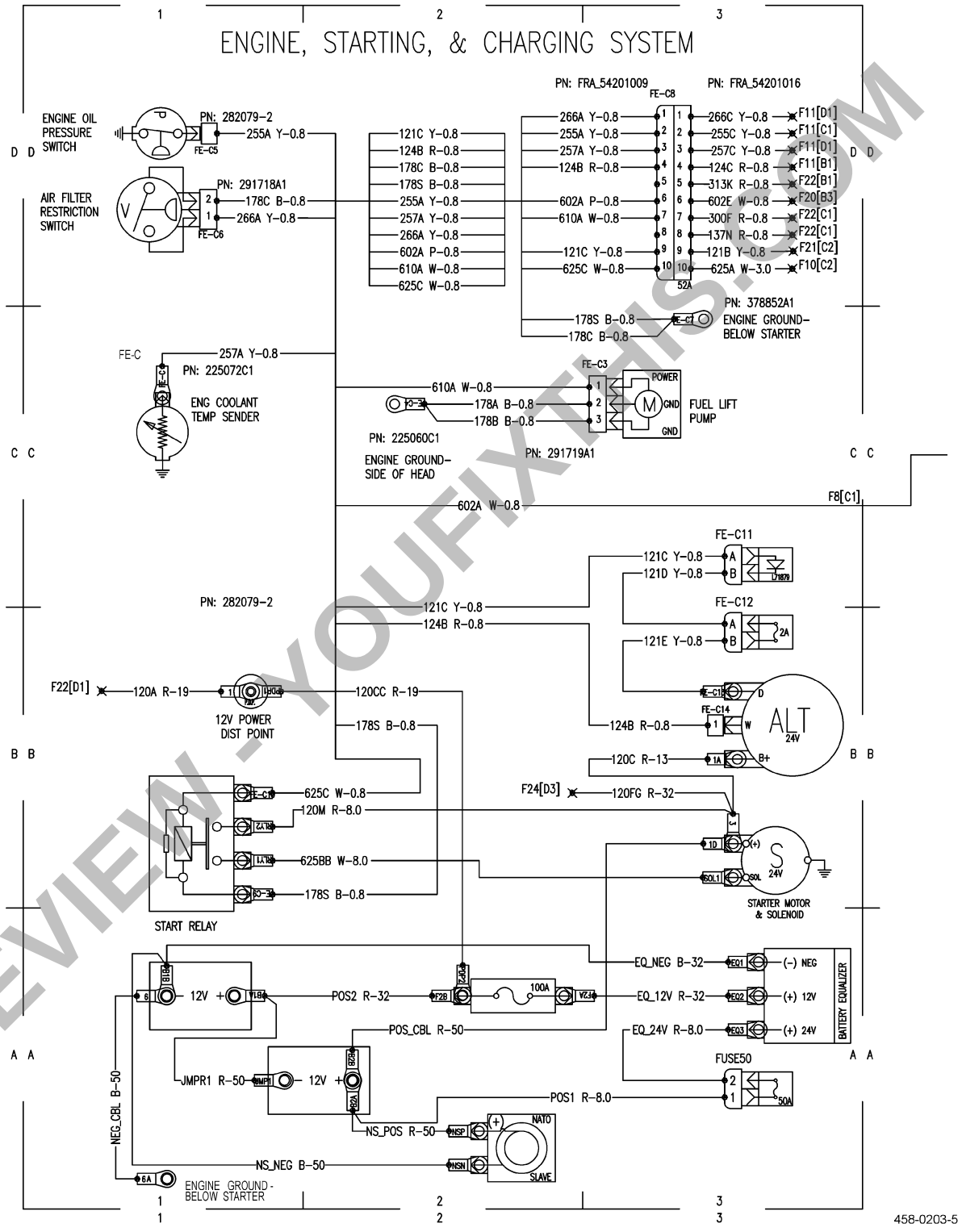
**CAUTION**

If replacement capscrews are of higher grade than those originally supplied, use torque specifications for the original. This will prevent equipment damage due to overtorquing.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com




Frame 7.



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

FIELD MAINTENANCE
MAINTENANCE ALLOCATION CHART (MAC)

Table 1. Maintenance Allocation Chart (MAC) for Skid Steer Loader.

| (1) | (2) | (3) | (4) | | | | (5) | (6) |
|---|---|---|---|---|---|---|---|---|
| | | | Maintenance Level | | | | | |
| | | | Field | | Sustainment | | | |
| | | | C | F | H | D | | |
| Group Number | Component/ Assembly | Maintenance Function | Crew | Maintainer | Below Depot | Depot | Tools and Equipment | Remarks |
| P | PMCS | | | | | | | |
| PC | Operator PMCS | | | | | | | |
| PC01 | Before | Inspect | 0.2 | | | | | A |
| PC02 | During | Inspect/ Service | 0.2 | | | | | A |
| PC03 | After | Inspect/ Service | 0.7 | | | | | A |
| PC04 | Weekly | Inspect/ Service | 0.2 | | | | | A |
| PC05 | Monthly | Inspect | 0.1 | | | | | |
| PF | Field PMCS | | | | | | | |
| PF01 | Semiannually | Service | | 8.0 | | | 33 | |
| PF02 | Annually | Service | | 8.4 | | | 33 | |
| A | Skid Steer Loader | | | | | | | |
| **AA** | **ENGINE INSTALLATION** | | | | | | | |
| AA01 | Alternator | Replace | | 5.4 | | | 30,33 | |
| AA02 | A/C Compressor | Replace | | 6.4 | | | 28,30,33, 34 | |
| AA03 | Radiator Overflow Tank | Replace | | 0.5 | | | 33 | D |
| AA04 | Engine Mounts | Replace | | 21.4 | | | 30,33,39 | |
| AA05 | Fan, Pulley, and Shroud, | Replace | | 4.3 | | | 30,33 | |
| AA06 | Inline Fuel Filter | Replace | | 0.7 | | | 33 | |
| AA07 | Fuel Lines | Replace | | 5.2 | | | 30,33 | |
| AA08 | Muffler and Pipes | Replace | | 1.5 | | | 33 | |
| AA09 | Radiator Hoses | Replace | | 6.4 | | | 33 | D |
| AA10 | Starter | Replace | | 1.5 | | | 33 | |



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



HEAVY PARTS - hand with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.



HIGH PRESSURE FLUID - high pressure fluid spraying human hand shows that fluid escaping under great pressure can cause injury or death.



HOT AREA - hand over object radiating heat shows that part is hot and can burn.



PINCH POINT - Object crushing human figure shows that areas between vehicles or parts present a danger to life or limb.



RADIOACTIVE - identifies a material that emits radioactive energy and can injure human tissue or organs.



SLICK FLOOR - wavy line on floor with legs prone shows that slick floor presents a danger from falling.



VAPOR - human figure in a cloud shows that material vapors present a danger to life or health.



POISON - skull and crossbones shows that a material is poisonous or is a danger to life.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

**CLEANING AND INSPECTION – CONTINUED**

**WARNING**



Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. DO NOT direct compressed air against human skin. Make sure air stream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield. Failure to follow this warning may result in injury to personnel.

3. Dry parts with compressed air.
4. Inspect parts for wear, pitting, cracks, or corrosion and replace if necessary.

**END OF TASK**

**INSTALLATION**

**WARNING**



Use caution when using adhesives and sealants. Prolonged inhalation of vapors can cause lung irritation. Contact with skin can cause dermatitis. Wear gloves and safety goggles and use product in a well-ventilated area away from open flame. If ingested, keep individual calm and seek medical attention. DO NOT induce vomiting. If contact with skin or eyes is made, flush thoroughly with water. Dispose of cleanup rags IAW local policy and ordinances. Failure to follow this warning may result in injury to personnel.

1. Install sealing compound on four plugs (Figure 3, Item 2) and adapter (Figure 3, Item 3).
2. Install four plugs (Figure 3, Item 2) and adapter (Figure 3, Item 3) on engine oil filter base (Figure 3, Item 1).

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**REMOVAL**

1. Remove three bolts (Figure 1, Item 1) and washers (Figure 1, Item 2) from floor plate (Figure 1, Item 3).
2. Remove floor plate (Figure 1, Item 3) from cab.

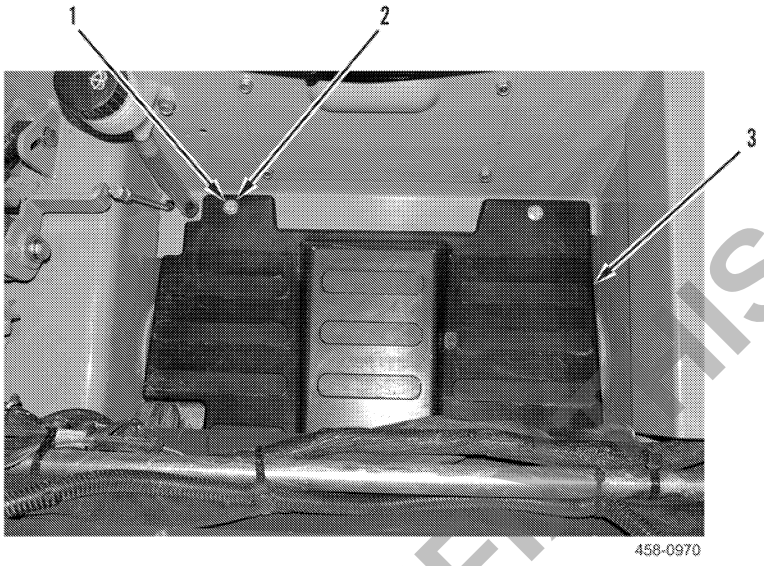



**Figure 1. Floor Plate.**

3. Remove locknut (Figure 2, Item 4) and bolt (Figure 2, Item 5) from support mounting plate (Figure 2, Item 3). Discard locknut.
4. Remove locknut (Figure 2, Item 6), washer (Figure 2, Item 7), bushing (Figure 2, Item 8), auxiliary hydraulic pedal (Figure 2, Item 1), rubber spacer (Figure 2, Item 9), spring (Figure 2, Item 11), pedal lock lever (Figure 2, Item 2), plate (Figure 2, Item 3), and bolt (Figure 2, Item 10) from machine. Discard locknut.

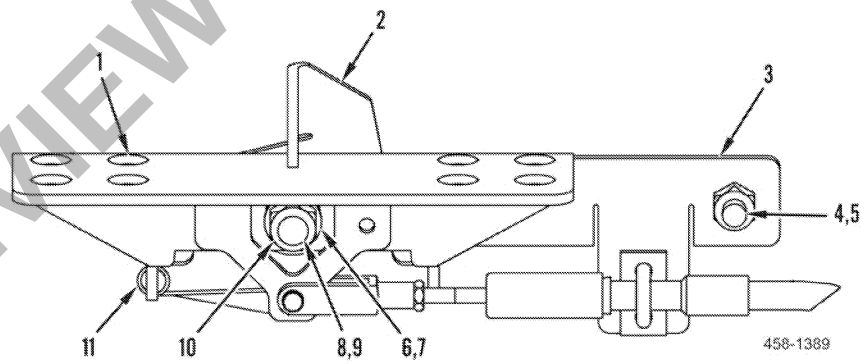



**Figure 2. Auxiliary Hydraulic Pedal.**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**REMOVAL**

1. Remove three bolts (Figure 1, Item 4), washers (Figure 1, Item 3), and locknuts (Figure 1, Item 2) from exhaust pipe (Figure 1, Item 5). Discard locknuts.
2. Remove exhaust pipe (Figure 1, Item 5) from engine compartment hood (Figure 1, Item 1).

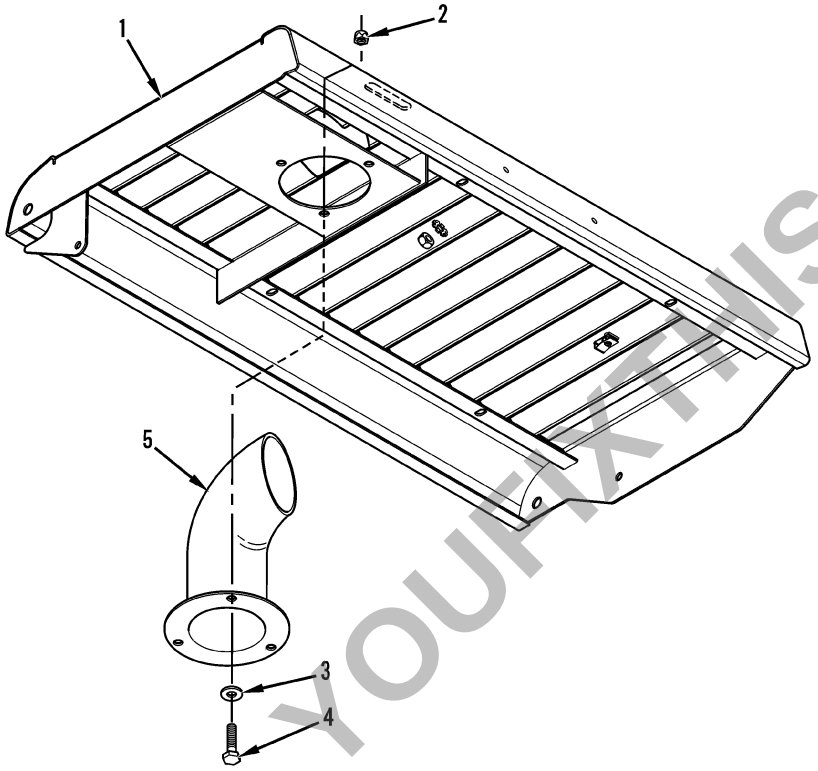



**Figure 1. Exhaust Pipe.**

**END OF TASK**

**CLEANING AND INSPECTION**

Clean and inspect all parts IAW *Mechanical General Maintenance Instructions* (WP 0172).

**END OF TASK**

**INSTALLATION**

1. Install exhaust pipe (Figure 1, Item 5) on engine compartment hood (Figure 1, Item 1).
2. Install three bolts (Figure 1, Item 4), washers (Figure 1, Item 3), and new locknuts (Figure 1, Item 2) on exhaust pipe (Figure 1, Item 5).

**END OF TASK**



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

# PREVIEW ONLY

You're viewing 25 of 1384 pages

## The full manual includes:

- All 1384 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

**GET FULL MANUAL NOW**

**Case M400T, M400W Technical Manual**

**Scan or click anywhere**
**youfixthis.com**

*Click anywhere on this page to get the full manual*