



# Service Kit

## 753-05194

Date: 9/12/2005

Subject: 718-0683 Hydraulic Pump Service Replacement

Models Affected: N/A

**Read through and understand these instructions completely before proceeding with repair.**

**PURPOSE:** This service kit provides the new pump, coupler hardware, mounting hardware and instructions to replace the 718-0683 hydraulic pump which is no longer available.

**NOTE:** These materials are prepared for use by trained technicians who are experienced in the service and repair of equipment of the kind described in this publication, and are not intended for use by untrained or inexperienced individuals. Such individuals should seek the assistance of an authorized service technician or dealer.

**NOTE:** Save this Instruction Sheet. Refer to it when ordering replacement parts.

### Service Kit Contents

(See Figure 1)

ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	718-04127	1	PUMP: HYDRAULIC: 9.5 GPM (W/KEY)
2	710-0376	4	SCREW: HEX: 5/16"-18 x 1.0:GR5:STD
3	712-04063	4	NUT: FLANGELOCK: 5/16"-18:GRF
4	717-0891	1	COUPLING w/ SPIDER: .75 x .50 x 2.12
5	718-04395	1	COUPLING HALF: .875 DIAMETER
6	718-04392	1	COUPLING HALF: .500 DIAMETER
7	735-04103	1	BUSHING: SPIDER: COUPLING
8	714-0122	1	KEY: SQ: 3/16" x .75"
9	710-1842	2	SCREW: SOC: SET: 1/4"-20 x .38
10	*	1	THIS INSTRUCTION SHEET

\* - Not Available Separately

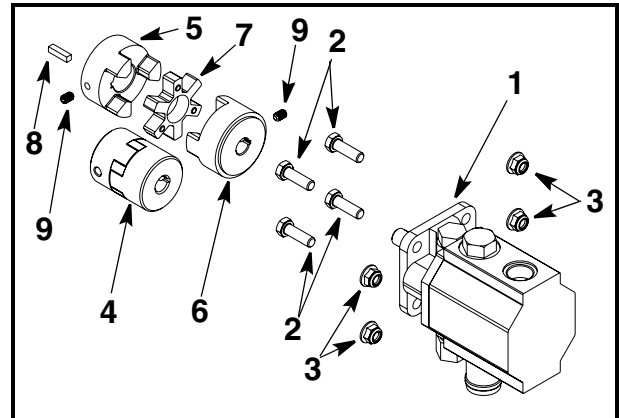


FIGURE 1

#### Pre-service Preparation:

1. Turn off the engine and allow engine and muffler to cool.
2. Disconnect the spark plug wire from the spark plug and ground wire to the engine block.
3. Block both log splitter wheels in the front and rear so the log splitter cannot roll forward or backwards.

**CAUTION! Operate the ram directional control lever to the EXTEND and RETRACT positions several times to relieve any pressure in the hydraulic system.**

4. Drain the hydraulic oil reservoir tank into a clean container.
5. Contaminants in the fluid can damage the hydraulic components. Flushing the reservoir tank and hoses with kerosene whenever service is performed on the tank, hydraulic pump or valve is recommended.

6. With the hydraulic oil reservoir tank empty, disconnect both hoses from the hydraulic pump. Drain the hoses into a suitable container and flush with kerosene. Remove and retrain the high pressure port adapter fitting from the old pump.

**NOTE:** Always dispose of used hydraulic oil and engine oil at approved recycling centers only.

7. Change the hydraulic filter every 50 hours of operation or when service is performed on the tank, hydraulic pump or valve. Use only a 10 micron hydraulic filter. Order filter part number 723-0405.

#### Disassembly (Refer to Figure 2):

8. To provide access to the bolt heads of the pump w/ coupling/ pump support bracket subassembly and coupling shield mounting bolts (B), the engine must be removed first.
9. Using an allen wrench, remove and discard the set screw securing the engine crankshaft coupling half.
10. Remove and retain the engine mounting bolts. Remove the engine from the frame.

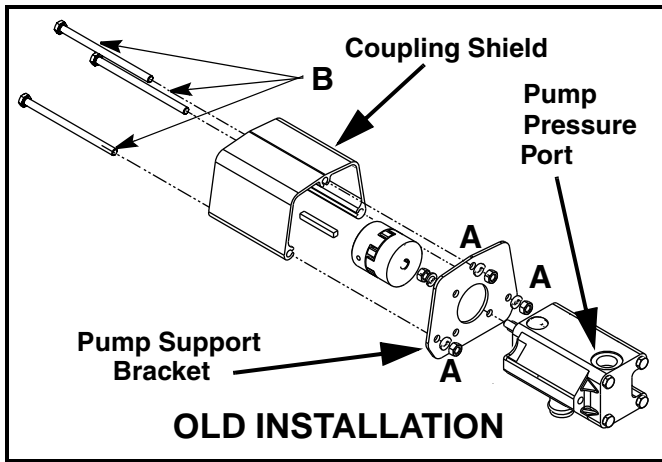


FIGURE 2

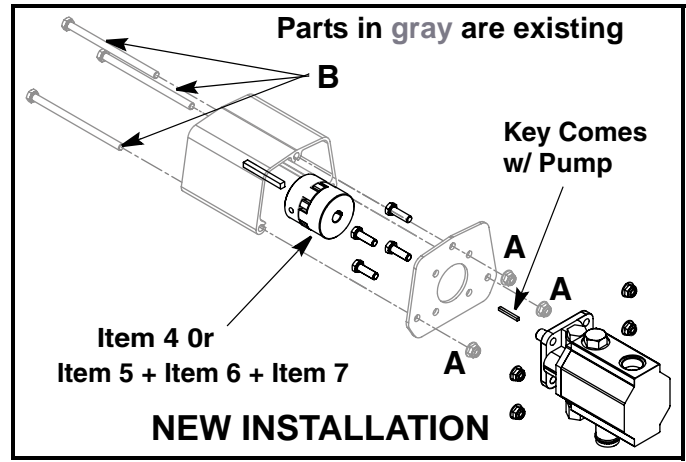


FIGURE 3

11. Remove the three nuts and lock washers (A) that secure the pump w/coupling and pump support bracket subassembly to the coupling shield.

12. Remove the pump w/coupling and pump support bracket subassembly.

13. If engine crankshaft coupling half is still on the engine, slide the engine coupling half off the engine crankshaft and discard.

14. Loosen the set screw on the pump coupling half. Remove and discard the pump coupling half and urethane spider insert.

**NOTE:** Observe the position of the pump's pressure output port and the orientation of the pump support bracket for correct reassembly later.

15. Remove and discard the two nuts and lock washers that secure the pump to the pump support bracket. Discard the old pump.

**New Pump Subassembly Build: (Refer to Figure 3)**

16. Attach new Pump w/ key, Item 1, to the pump support bracket using the four Hex Screws, Item 2, and four Flange Lock Nuts, Item 3. Tighten securely. Ensure that the new pump is orientated in the correct position on the pump support bracket to properly align with the hydraulic hoses. Install the pressure port fitting removed in Step 6.

17. Install the high pressure port adapter fitting, removed in Step 6, in the new pump's high pressure port.

18. If the engine crankshaft diameter is .75" (3/4") in diameter, select complete Coupling, Item 4. Discard Coupling Halves Items 5 and 6 and Spider Item 7.

If the engine crankshaft is .88" (7/8") in diameter, select engine Coupling Half, Item 5, pump Coupling Half, Item 6 and Coupling Spider Bushing, Item 7. Discard complete Coupling Item 4.

19. Install the appropriate pump coupling half onto the pump shaft with it's new key. Install a new Set Screw, Item 9, into the new pump's new coupling half. Do not tighten at this time.

20. Install the new urethane Spider Bushing onto the pump coupling half.

21. Install, by a few threads only, a new Set Screw, Item 9, into the selected engine coupling half.

22. Place the appropriate engine coupling half and required key, selected in Step 18, onto the urethane spider bushing.

23. Align the pump subassembly to the coupling shield. Rotate the pump's coupling half until the set screw faces the opening in the coupling shield. Do not tighten the set screw.

24. With the three mounting bolts (B) set into the engine mounting frame, slide the coupling shield onto the three mounting bolts (B) and then the pump subassembly onto the three mounting bolts (B). Refer to Figure 3.

25. Secure the coupling shield and pump subassembly with the three lock washers and nuts (A) removed in Step 11. Tighten hardware securely.

26. As the engine is placed back onto the frame, align the coupling assembly on the pump to the engine crankshaft and keyway. Re-install the engine onto the engine mounting frame ensuring to align the engine key and coupling half onto the crankshaft.

27. Secure the engine to the frame using the bolts removed in Step 10.

Proceed to **"Adjusting the Coupler Clearance:"**  
on Page 3

### Adjusting the Coupler Clearance:

28. Slide the engine coupling half and key up onto the engine crankshaft until the end of the crankshaft and key are flush with the inner portion of the engine coupling half. (Check to ensure that there is space between the end of the engine support bracket and coupling half). Tighten engine coupling half to the crankshaft. Torque set screw to 78 in-lbs. See Figure 4.

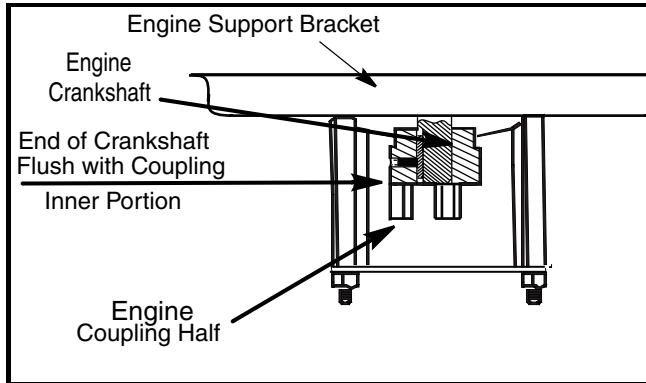


FIGURE 4

29. Slide the pump coupling half towards the engine coupling half until there is a .010" to .060" clearance/gap between the spider bushing and the engine coupling half. Use a feeler gauge between the spider bushing and the engine coupling half. Tighten engine coupling half to the pump shaft. Torque set screw to 78 in-lbs. See Figure 5.

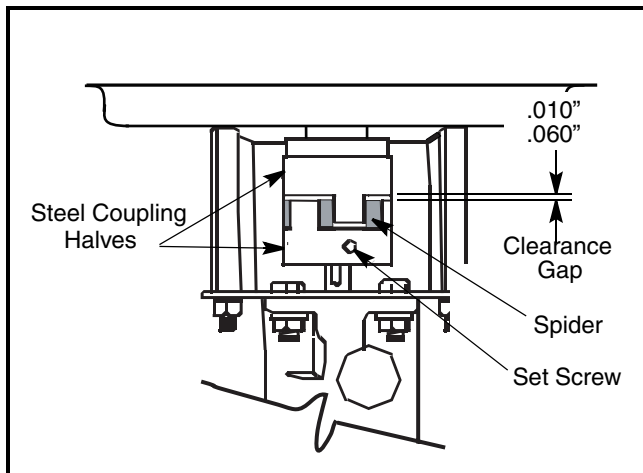


FIGURE 5

30. Re-install the suction hose and pressure output hoses to the new pump.

31. Lubricate the beam area with engine oil where the splitting wedge will slide. Do not use grease.

### Priming the Pump and Purging the System:

32. Remove the vented reservoir dipstick. Refill the reservoir with the recommended fresh, clean hydraulic fluid. Refer to the Operator's Manual Set-up section for the recommended hydraulic fluid.

33. Check the fluid level using the dipstick. Do not overfill.

34. Replace the dipstick securely.

35. Ensure that the spark plug wire is still disconnected from the spark plug.

36. Prime the pump by pulling the recoil starter as far as it will go. Repeat approximately 10 times.

37. Reconnect the spark plug wire to the spark plug. Start the engine following the instructions in the Operation Section of the Operator's Manual.

38. Using the control valve lever, cycle the wedge to full extended and then retracted position.

39. With the wedge in the retracted position, refill the reservoir within range marked on the dipstick.

40. Extend and retract the wedge 12 complete cycles to remove trapped air in the system.

**WARNING!** Much of the original fluid has been drawn into the cylinder and hoses. Make certain to check the reservoir fluid level (with the wedge in the retracted position) and refill as necessary to prevent damage to the hydraulic pump.

This completes the installation of the new pump.