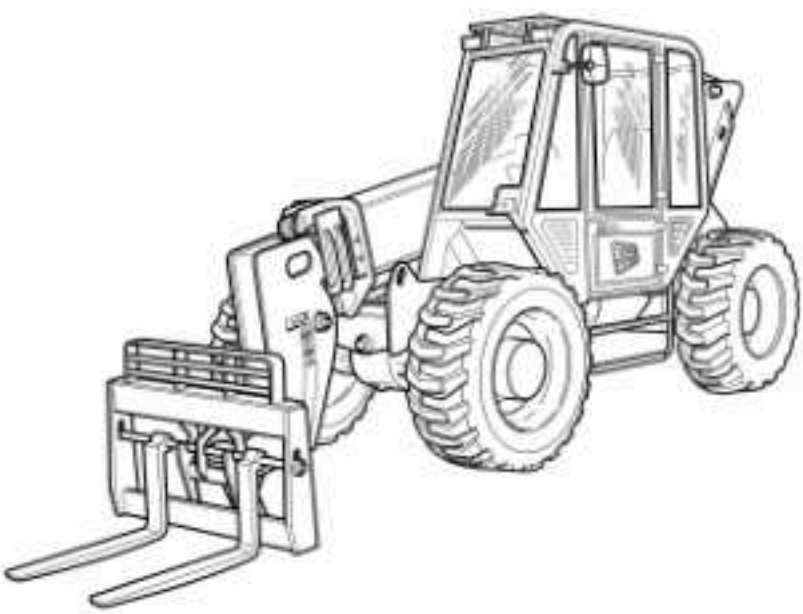
Service Manual

506C, 506CHL, 508C Loadalls

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Section 2 - Care and Safety
Section 3 - Routine Maintenance
Section A - Attachments
Section B - Body and Framework
Section C - Electrics
Section D - Controls
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Section G - Brakes
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16 Instrument Panel Harness from M 1184000 (JCB 444 engine introduction) supersedes 721/00680

721/11833	1		⇨ C-122)

Main components connected to this harness

- Front wiper
- Work lights
- Heater resistors
- Warning lights
- Dump switch
- Relay base
- Diode gate
- Ignition relay
- Ignition switch
- Work light switch
- Secondary fuse box
- Wiper switch
- Chassis harness connector
- Cab ground
- Cab gauges and gauge illumination

17 Battery Earth Harness

706/68400	1	Early machines	⇨ (C-125)

18 Battery Positive Lead

718/09500	1	Tier I models	⇨ (C-126)

19 Battery Negative Lead

718/09600	1	All models	⇨ (C-127)

20 Battery Positive Lead

718/20198	1	Tier II models	⇨ (C-128)

21 2-Way Link

718/44900	1	Harness adapter required to M585288	⇨ (C-129)

22 Work Light

718/48100	1	To M585282	⇨ (C-130)

23 Alternator Power Lead

718/49700	1		⇨ (C-131)

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Rams	Bore	Rod Dia.	Stroke
Boom Lift	120mm (4.7in)	75mm (3.0in)	1020mm (40.1in)
Boom Extension	110mm (4.3in)	75mm (3.0in)	3187mm (125.5in)
Tilt Ram	120mm (4.7in)	65mm (2.5in)	422mm (16.6in)
Displacement	120mm (4.7in)	65mm (2.5in)	335mm (13.2in)
Sway	110mm (4.3in)	50mm (1.9in)	178mm (7.0in)

Filter	
Filter Type	Partial flow ('spin on')
Filtration Size	25 microns (0.001 in)
Relief Valve Setting	2 bar
Suction Strainer	125 microns (0.005 in)

Fan Motor	
Type	Gear type
Theoretical Displacement	8.4 cc/rev
Relief valve setting	175 +/- 3.5 bar (2537 +/- 50.75 lbf/in^2)
Max fan speed at Max engine rev/min	tba
Rotation	Clockwise

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Dismantling and Assembly

506C

Before removing and dismantling the pump, check flow and pressure. If either of these are low and cannot be corrected at the relief valve, the appropriate pump section must be renewed completely. Renewal of components such as gears, bearings and housing will not effect a permanent cure. If the pump output is satisfactory but there is external leakage, the pump should be removed and dismantled for re-sealing only.

Before removing and dismantling the pump, make sure the exterior of the pump and working area is thoroughly cleaned and free of possible sources of contamination.

Dismantling

For pump components, ⇨ *Fig 21. (🗋 E-43)*.

1 Remove drive gear **21A** and key **21D** using a suitable puller, do not lever or hammer as this will result in internal damage to the pump.

2 Remove sharp edges and burrs from the shaft to avoid seal damage.

3 Mark body **21E** and flange **21F** to ensure correct assembly.

4 Undo bolts **21G** to remove the priority valve housing **21M**.

Note: *Bolt **21J** is used to secure the pump to the engine.*

5 Undo nuts **21N** and separate body **21E** from flange **21F**, slide the flange off square to the shaft. Take care not to damage machined faces by prising them apart - use a soft faced hammer.

6 Use a drift to remove the outer shaft seal **21Q**, then remove circlip **21R** and inner shaft seal **21S**. Take care not to damage the shaft seal recess.

7 Remove drive shaft **21V** and balance plate **21W** then remove driven gear **21Z** and balance plate **21AA**. Note the positions of balance plates **21W** and **21AA** to ensure correct assembly.

8 Unscrew load sense connector **21AF** and plug **21AK**, remove spring **21AH** and priority valve spool **21AJ**.

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Turn

Note: *The following description is based on the priority valve fitted to early 506C machines.*

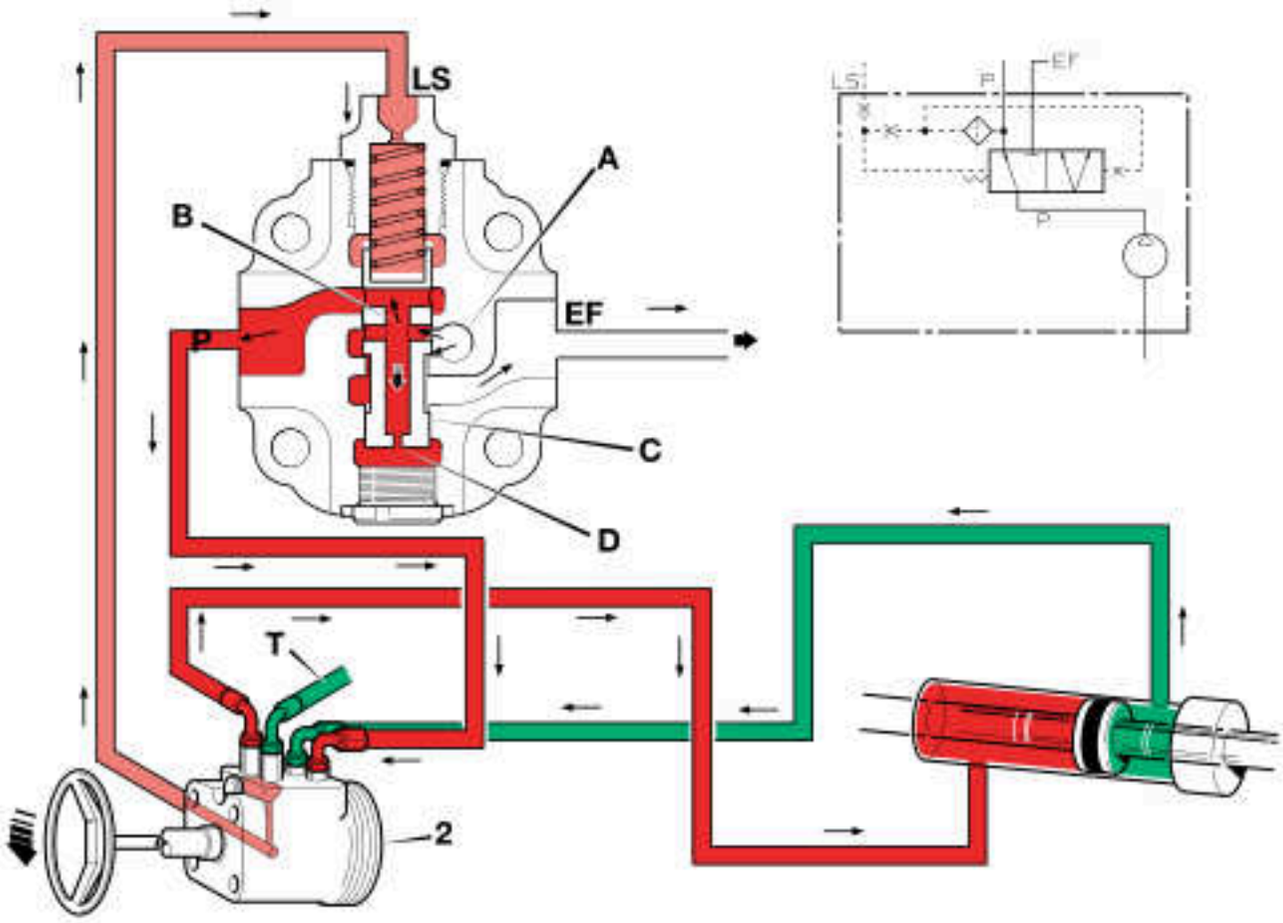


Fig 7.

As the steering unit **2** is operated, pressure is applied to the spring end of the priority valve spool **C** via sensing line **LS**.

The reduced pressure difference across the priority valve spool **C** causes the spool to move down under spring force. The pump outlet pressure at **A** flows through port **P** via the priority valve spool **C**. The oil then flows to the steer unit **2** and on to the steer rams to turn the wheels in the direction required.

The excess oil flows via port **EF** to the control valve. See ***Hydraulic Pump***, Section E.

When the steering reaches the required position, sensing pressure via port **LS** ceases, restoring the pressure difference across the priority valve spool **C** allowing full flow to tank.

Maximum steering pressure is controlled by the relief valve in the steering unit **2**.

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