Service Manual

8056

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Section 2 - Care and Safety

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Section A - Attachments

Section B - Body and Framework

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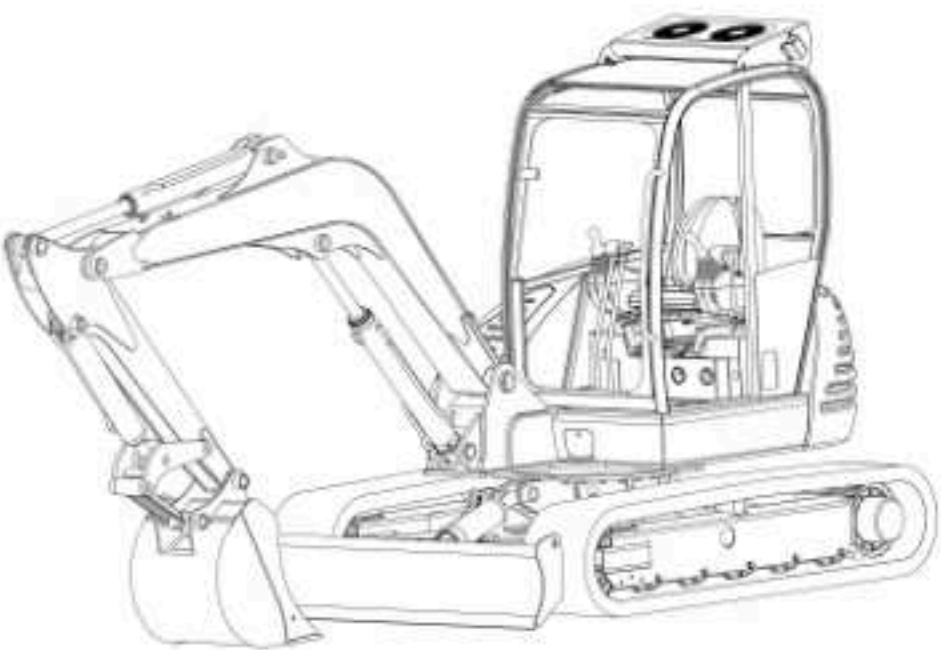
Section D - Controls

Section E - Hydraulics

Section F - Gearboxes

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Section K - Engine



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System Diagnosis

Normal gauge readings will depend on system components and ambient conditions, make sure that the valves are closed and the readings are stable and that the system has a full charge.

The pressures on the manifold at 25 °C, with the engine a 1500 rev/min, the blower on maximum and the thermostat set to maximum, should be approximately:

Contact JCB Service for the correct pressure settings.

Typically, the high pressure is 6 - 8 times the low pressure

Normally Functioning A/C System

Gauge Readings:	
Low Side Gauge	Normal
High Side Gauge	Normal
Other Symptoms:	
Sight Glass	Clear
Discharge Air	Cold
Normal Recharge Weight:	1575 grammes

Low R-134a Charge

Gauge Readings:	
Low Side Gauge	Low
High Side Gauge	Low
Other Symptoms:	
Sight Glass	Bubbles Continuously Visible

Diagnosis

System slightly low on R-134a, due to leak or incorrect charge.

Correction:

1. Leak test system.

2. Evacuate A/C system.

3. Repair system Leaks.

4. Charge system with R-134a.

5. Operate system and check performance.

Poor Refrigerant Circulation

Gauge Readings:	
Low Side Gauge	Zero to negative
High Side Gauge	Low
Other Symptoms:	
Receiver-drier	Frost on tubes from receiver-drier to evaporator

Diagnosis

Refrigerant flow obstructed by dirt, receiver-drier clogged

Correction:

1. Evacuate A/C System.

2. Replace receiver-drier.

3. Charge System with R-134a.

4. Operate System and Check Performance.

No Refrigerant Circulation

Gauge Readings:	
Low Side Gauge	Zero to negative
High Side Gauge	Low
Other Symptoms:	
Receiver-drier	Frost or moisture on tubes before and after receiver-drier

Diagnosis

Refrigerant flow obstructed by dirt, moisture or gas leakage from expansion valve heat sensing tube.

Correction:

1. Evacuate A/C system.

2. Check heat sensing tube at expansion valve. Replace expansion valve if necessary.

3. Remove expansion valve and attempt removal of dirt. If dirt cannot be removed, replace expansion valve.

4. Replace receiver drier.

5. Charge system with R-134a.

6. Operate system and check performance.

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Technical Data

General Electrical Data

Battery	
Type	D2
Voltage	12 V
Cold Crank Current	750 A
Capacity	110 ampere/hour
Starter Motor	2.2kW
Alternator	
Type	AAK4323
Output	14 Volts, 80A
Polarity	Negative earth

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Example of Schematic Circuit

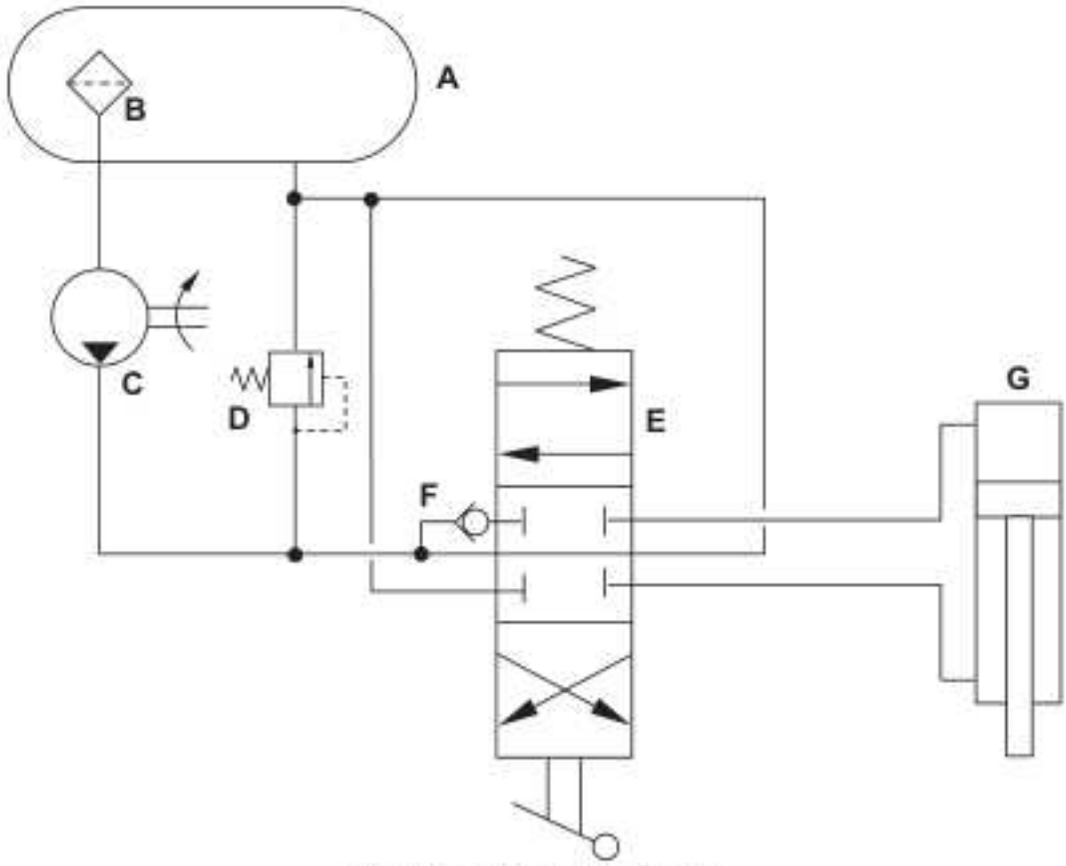


Fig 7. Simple Schematic Circuit

Some of the symbols described on the preceding pages have been arranged into a simple schematic circuit. ⇨ *Fig 7. (🗋 E-10)*.

Hydraulic tank **7-A** is a pressurised tank with an internally mounted strainer **7-B** on the suction line to the fixed displacement pump **7-C**. System pressure is limited to the setting of relief valve **7-D**.

Valve spool **7-E** is an open-centre spool that is in neutral position; flow from the pump passes through the spool and returns to the hydraulic tank.

If the lever operated spool is moved away from neutral position hydraulic fluid is directed to either head side or rod side of hydraulic ram **7-G**. Notice that the fluid must first open one way valve **7-F** before flowing to the ram.

Example Circuit Key

7-A	Hydraulic Tank
7-B	Strainer
7-C	Fixed Displacement Pump
7-D	Relief Valve
7-E	Spool
7-F	One Way Valve
7-G	Double Acting Hydraulic Ram

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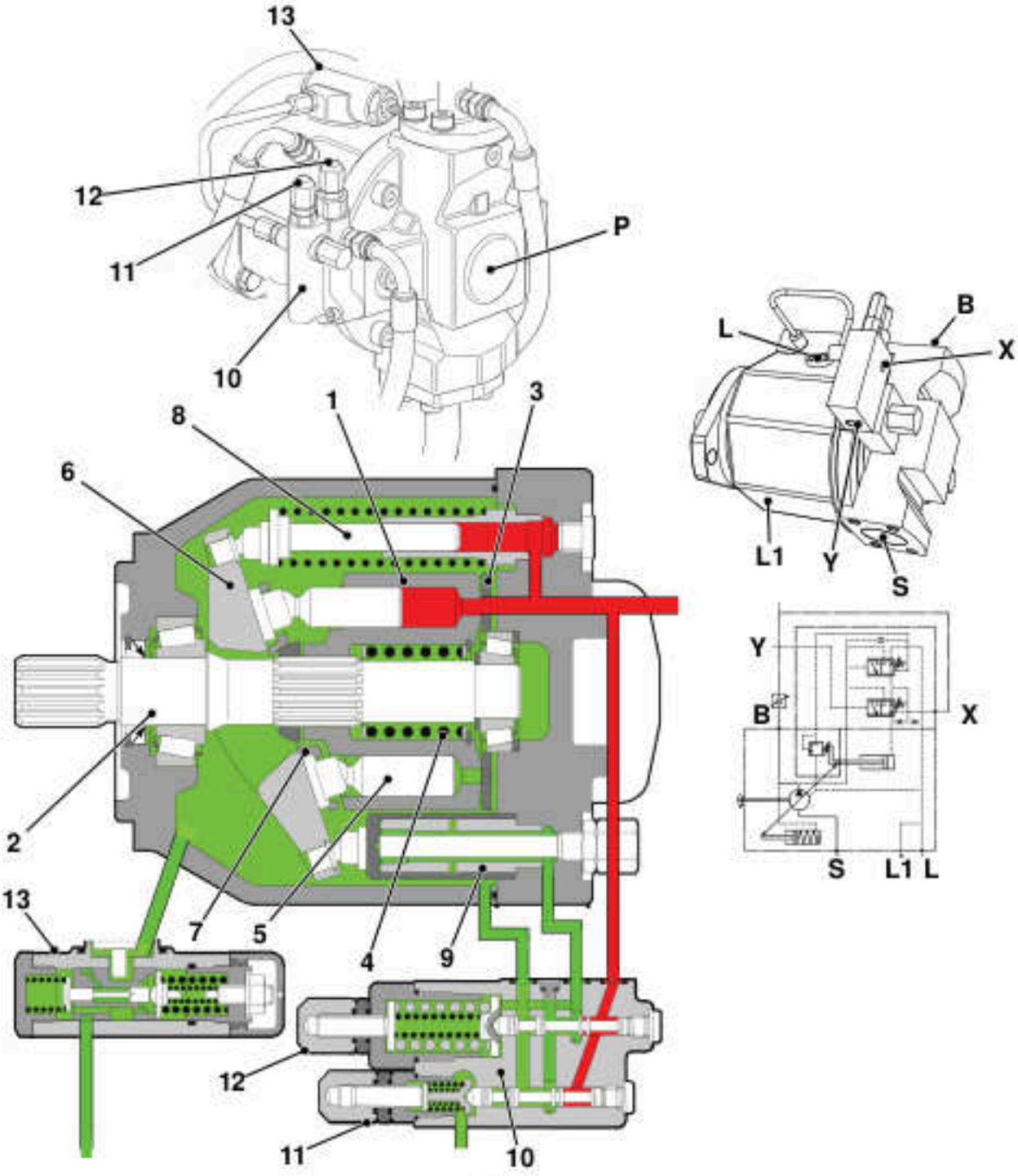


Fig 1.

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Crossline Relief Valves

When the operator returns the slew service to neutral, the momentum of the slewing superstructure turns the motor into a pump. This pressurised oil fills the open centre of poppet **A** and loads top of piston **G** which moves across compressing spring **B**. The momentum continues to increase the pressure load against poppet **A** until the spring force is overcome. Poppet **A** opens allowing excess pressure to vent through **C**.

As the slewing superstructure slows, momentum induced pressure begins to reduce. The spring **B** returns piston and poppet to their respective seats and the escape path for the oil is closed. The machine is consequently brought progressively and smoothly to rest.

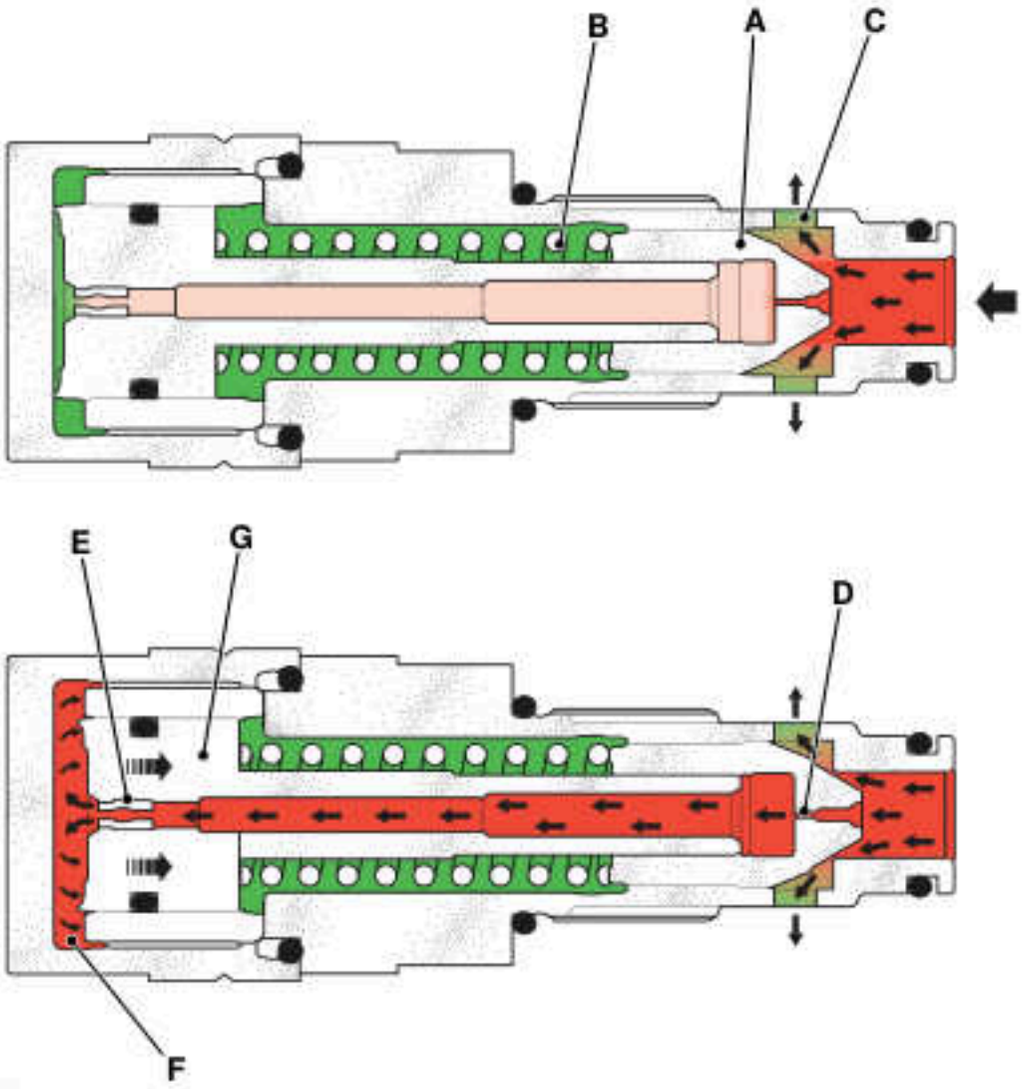


Fig 4.

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