Service Manual

8014, 8016, 8018, 8020

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Section 2 - Care and Safety

Section 3 - Maintenance

Section A - Attachments

Section B - Body and Framework

Section C - Electrics

Section D - Controls

Section E - Hydraulics

Section F - Gearboxes

Section J - Track and Running Gear

Section K - Engine



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Fluids, Lubricants and Capacities

Table 1.

Item	Capacity Litres (Gal)	Fluid / Lubricant	International Specification
Fuel Tank	23.5 (5.2)	Diesel Oil	
Engine (Oil)	4.0 (0.9)	JCB 10W/30 Multigrade above -15°C (above 5°F)	MIL-L-46152, API CC/SF
		5W/20 -15°C to -25°C (5°F to 13°F)	API CC/SE (recommended)
Engine Coolant		JCB High Performance Antifreeze and Inhibitor/Water. ⇨ *Coolant Mixtures (🗋 3-12).*	ASTM D3306-74
Canopy	4.5 (1.0)		
Cab	5.0 (1.1)		
Track Gearbox (each)	0.3 (0.07)	JCB SAE 30 Engine Oil (Not Multigrade)	API CD/SF, MIL-L-46152, MIL-L-2104D
Track Idler Wheels	0.025 (0.006)	JCB HD90 Gear oil	API-GL-5, MIL-L-2105D
Track Rollers (bottom)	0.025 (0.006)	JCB HD90 Gear Oil	API-GL-5, MIL-L-2105D
Hydraulic System	30 (6.6)	JCB Special Hydraulic Fluid Up to 30°C (86°F) JCB Hydraulic Fluid 46 Over 30°C (86°F)	
Slew Ring Bearings		JCB MPL Grease	Lithium based no 2 consistency
Slew Ring Gear Teeth		JCB Slew Pinion Grease	
All Other Grease		JCB MPL Grease	Lithium based no 2 consistency

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Example of Schematic Circuit

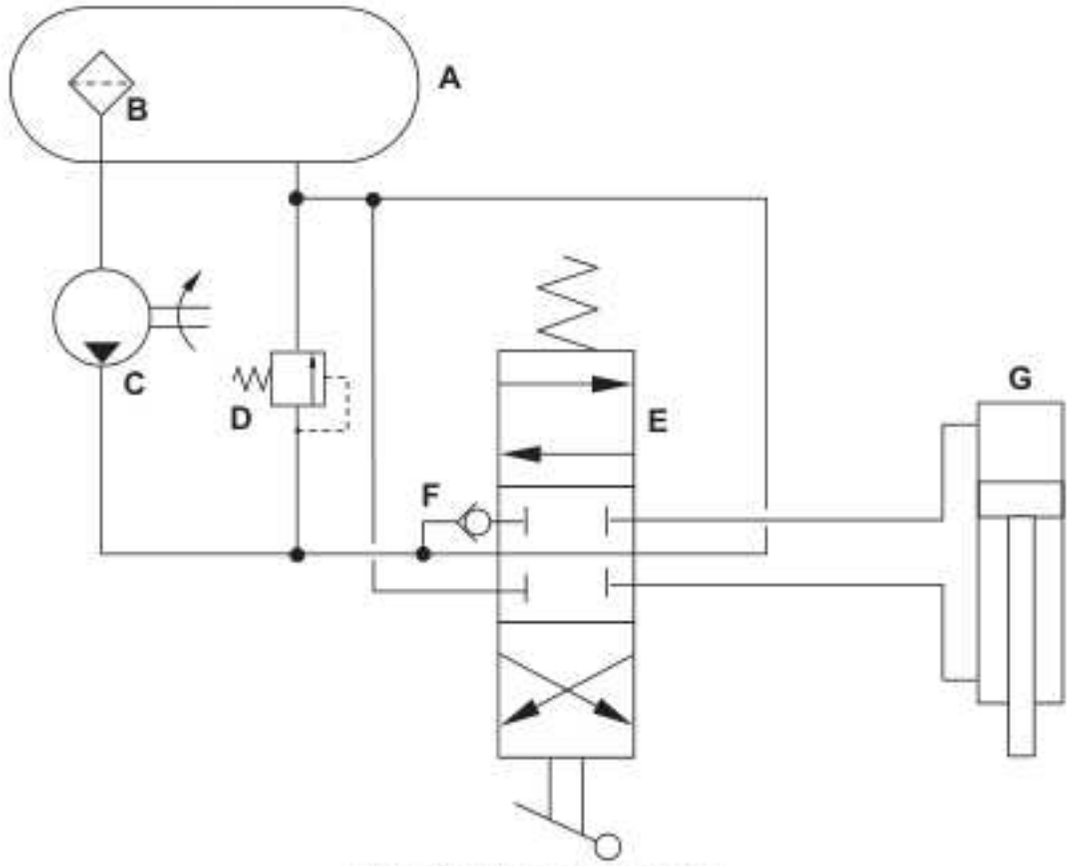


Fig 7. Simple Schematic Circuit

Some of the symbols described on the preceding pages have been arranged into a simple schematic circuit. ⇨ *Fig 7. (E-13)*.

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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Troubleshooting

Fault	Possible cause	Action
Overload to Engine	Speed is higher than standard	Re-adjust it as standard
	Setting pressure is higher than specifications	Re-adjust it to specifications
	Damage of internal parts of pump	Repair or renew
Low Pump flow or low pressure	Speed down of Engine	Re-adjust Engine speed
	Wrong Coupling	Repair or renew
	Damage of internal parts of pump	Repair or renew
Abnormal noise or abnormal vibration (Cavitations)	Air in the Oil	Check piping. Bleed the air in the hydraulic circuit
	Water in the Oil	Renew Oil
	Clogged up Suction filter	Clean or Renew
	High Suction pressure	Correct the pressure
	Damage of Piston shoe	Renew Piston shoe
	Installation condition is no good	Correct installation condition
	Wrong Coupling	Renew Coupling
Oil Leakage	Damage of O ring or packing	Renew O ring
	Loosened Plug	Tighten Plug
	Leaking from Oil seal	Renew Oil Seal

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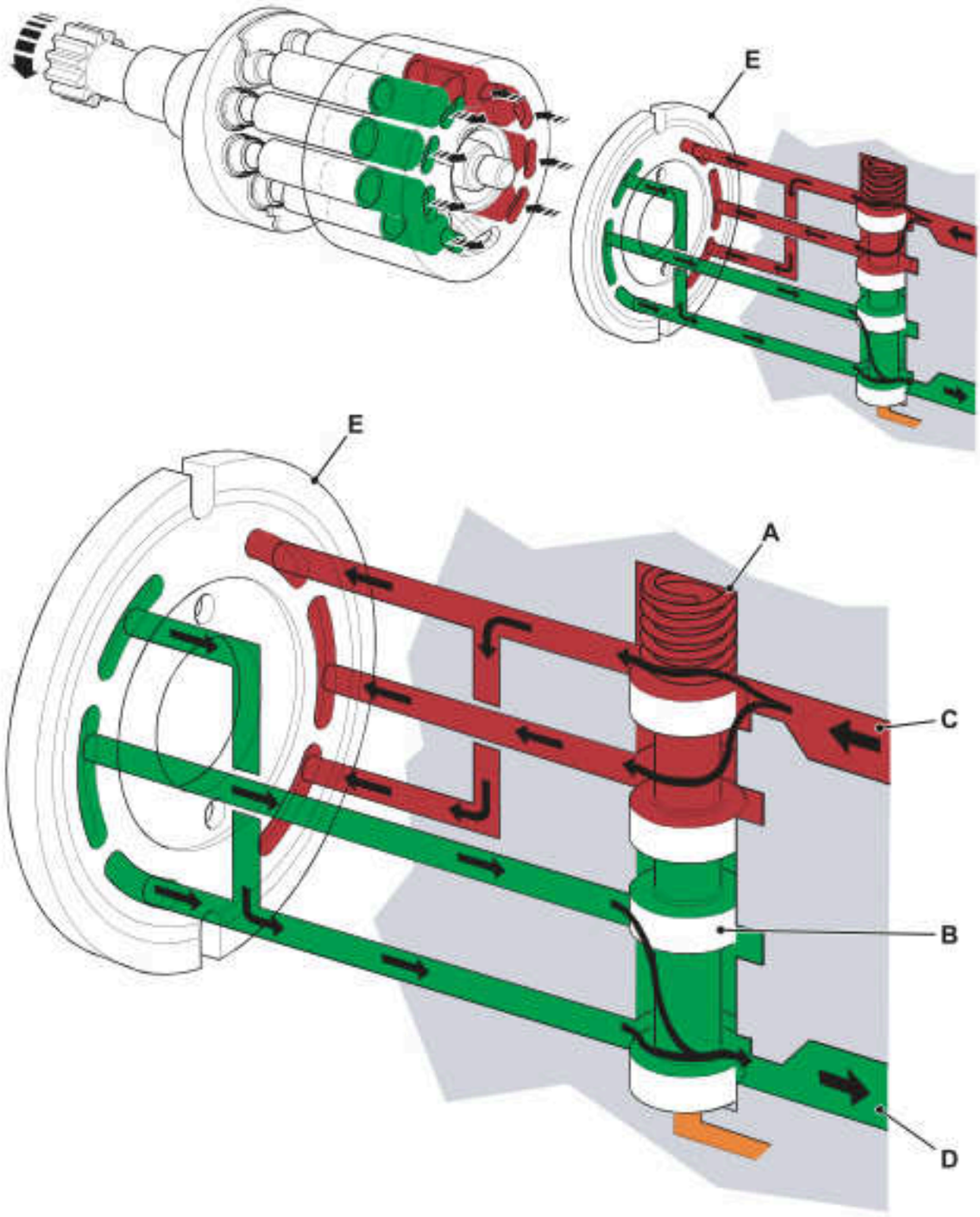


Fig 60.

⇨ *Motor Low Speed, High Traction Selected (where applicable) (E-79).*

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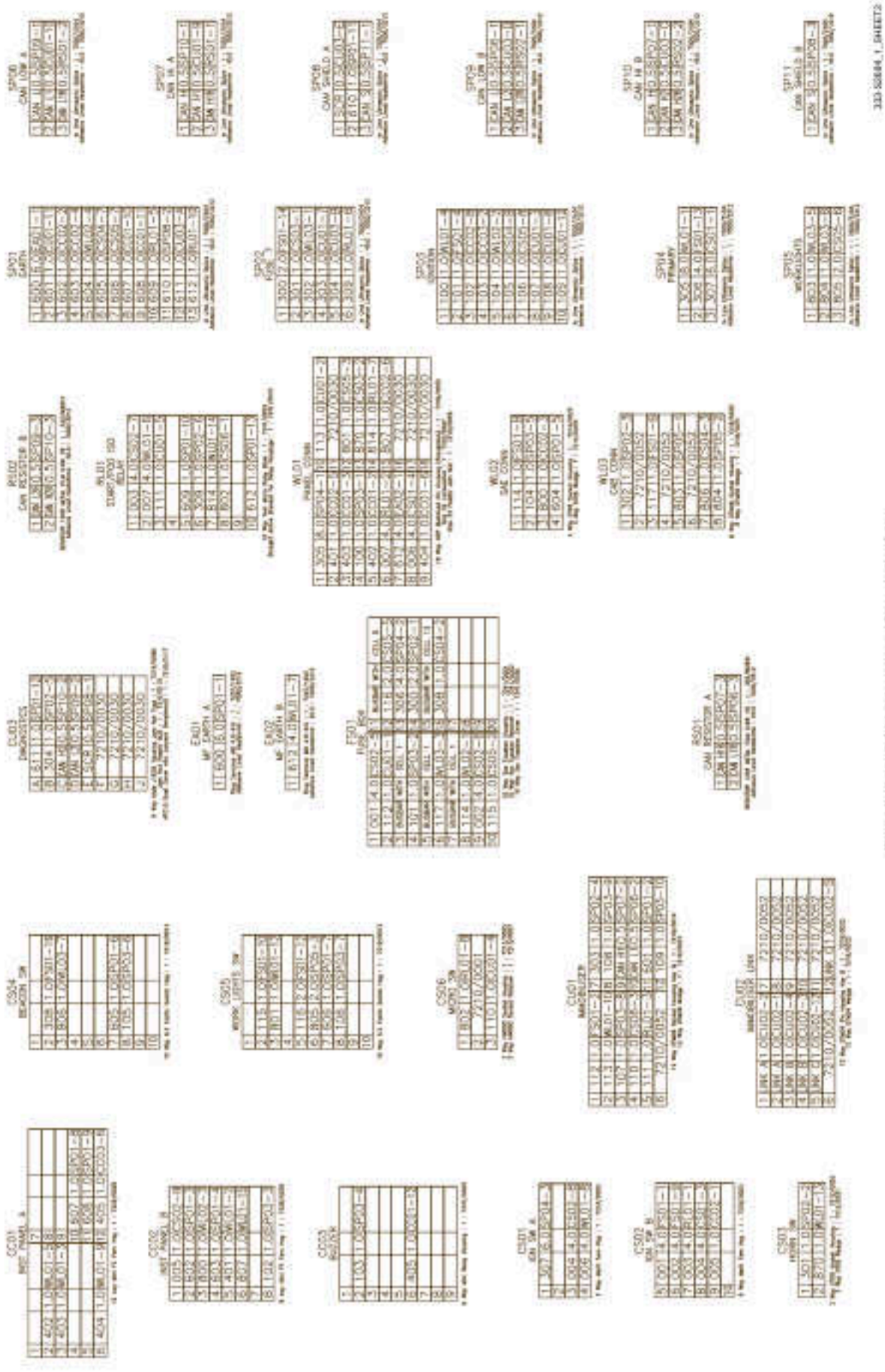


Fig 13. 333-S2684 issue 1 (Sheet 2 of 2)

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