Service Manual

Compact Loadalls

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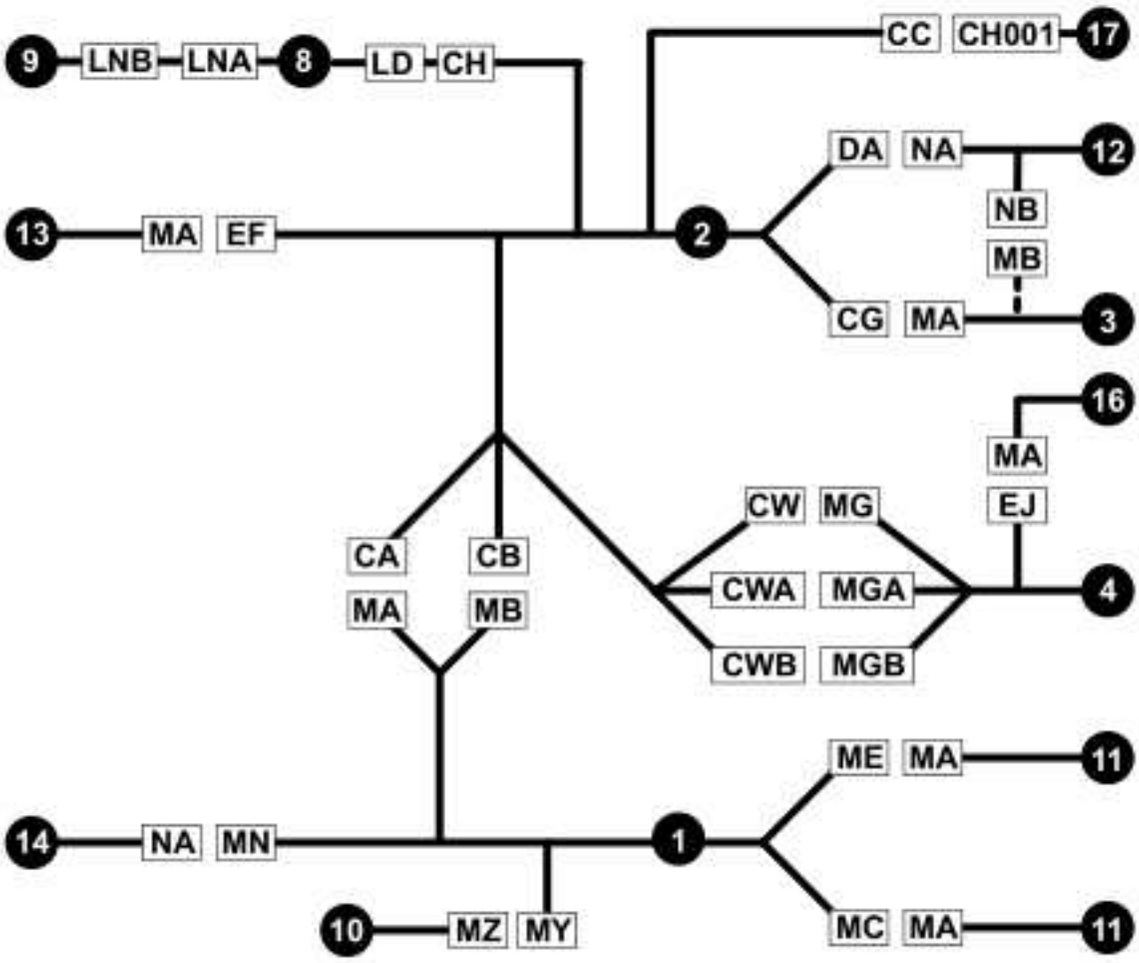
Technical Data

General Technical Data

Battery	12 volts, negative earth	
- Cold Crank amps for 1 minute to 1.4 VPC at -18°C (0°F)	410 to 58	
- Reserve capacity (minutes) for 25 amp load	170 to 230	
Alternator	520-40	524-50, 527-55
- Maximum output	65 amp	65 amp (up to SN 1069456)
- Nominal output		95 amp (from SN 1069457)
Light Bulbs	520-40	524-50, 527-55
- Headlights main/dip (Great Britain only)	60W/37.5W	
- Headlights main/dip	45W/40W	
- Headlights main		H3 55W (Halogen)
- Headlights dip		H7 55W (Halogen)
- Working lamps	55W (Halogen)	55W (Halogen)
- Front side lamps	5W	T 4W
- Stop/tail lamps	21W/5W	21/5W
- Reversing lamps	21W	21W
- Indicator lamps	21W	21W
- Number plate lamp	10W	
- Fog lamp	21W	21W
- Interior lamp	10W	10W
- Panel/warning lamps	1.2W	1.2W
- Beacon	55W (Halogen)	55W (Halogen)

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520-40 (from SN 1012394)



T002270-2-C1

Fig 4.

Item	Part No.	Issue	Description	Drawing
1	721/11620	4	Harness, Mainframe (Tier 2)	⇨ Fig 10. (C-100)
	332/R9208	3	Harness, Mainframe (Tier 3)	⇨ Fig 12. (C-102)
2	721/11624	3	Harness, Cab Panel (Tier 2)	⇨ Fig 30. (C-120)
	332/R9108	4	Harness, Cab Panel (Tier 3)	⇨ Fig 33. (C-123)
3	721/11387	6	Harness, Cab Roof (Deluxe)[1]	⇨ Fig 53. (C-143)
	721/11222	5	Harness, Cab Roof (Basic)	⇨ Fig 55. (C-145)
4	721/11621	1	Harness, Engine (SN 1012394 - 1012854)	⇨ Fig 57. (C-147)
	721/11973	3	Harness, Engine (from SN 1012855)	⇨ Fig 60. (C-150)
8	332/T9190	2	Harness load control Cab[2]	⇨ Fig 82. (C-169)
9	332/U0077	1	Harness Boom[2]	⇨ Fig 81. (C-168)
10	332/T8188	1	Harness, Number Plate	⇨ Fig 71. (C-159)
11	721/11305	3	Harness, Road Light	⇨ Fig 73. (C-160)
12	721/11753	1	Harness, Radio	⇨ Fig 74. (C-161)
13	721/11304	1	Harness, Road Light	⇨ Fig 72. (C-160)
15	721/11761	1	Harness, Float Option	⇨ Fig 76. (C-163)
16	721/12373	1	Harness, Electric Fuel Pump (from 1013700 - Tier 2)	⇨ Fig 80. (C-167)

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Table 19. Hydraulic oil temperature high.

Possible Cause	Action
Tank	– Hydraulic oil level too low. – Hydraulic oil wrong viscosity.
Cooler/radiator	– Cooling fan defective. – Oil contamination. – By-pass valve defective.
Transmission pump	– Incorrect valve settings. – Defective flushing valve. – Pump mechanical wear.
Drive motor	– Insufficient cooling. – Defective flushing valve. – Motor mechanical wear.

Table 20. Lack of Pulling Power

Action		Yes	No
1	Check machine: **a** Engine OK? **b** Tyres correct size and pressures? **c** Hydraulic oil temperature OK? **d** Dropbox and drive train OK?	Go to 2	Attend to fault on machine.
2	Check transmission pump settings. All OK?	Go to 3	Adjust settings
3	Test points MH (on pump): Check beginning of regulation setting. OK?	Go to 4	Adjust Settings, Check: – Reset as necessary. – Change motor.
4	Test points G (on motor), MA/MB (on pump): Is pressure G on motor same as MA/MB on pump?	Go to 5	Check electrical connections to direction valve.
5	Is pressure at M1 half that at G?	Go to 6	Beginning of regulation set to high. Adjust setting.
6	Can motor be controlled?	Machine fault.	– Check Timing pin mechanism for contamination or wear. – Mechanical Fault. – Adjust settings.

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524-50, 527-55 (From 1418025)

Because of the large quantity of data included, the electrical schematic diagram is divided into seven sheets.

Each of the main components have a unique identification code (For example, **EL** is the Engine Oil Pressure Switch).

The numbers are cable identification numbers. When a cable identification number has a suffix number, the suffix number is not shown except where this is necessary for clarity.

Fuses are numbered as shown on the fuse box in the cab.

Note: *Some of the components shown are optional; not all machines will have all components shown.*

Note: *For LCS/MC components refer to the separate schematic.* ⇨ ***LCS/LLMC Machines*** (🗋 C-53)

Table 1. Primary Fuses

Fuse	Sheet Reference
1	⇨ *Sheet 1 of 7* (🗋 C-39) Item **MJ001**
2	⇨ *Sheet 1 of 7* (🗋 C-39) Item **MK001**
3	⇨ *Sheet 1 of 7* (🗋 C-39) Item **MJ002**
4	⇨ *Sheet 1 of 7* (🗋 C-39) Item **MK002**
5	⇨ *Sheet 1 of 7* (🗋 C-39) Item **NJ**

Table 2. Main Fuses

Fuse	Sheet Reference
A1	⇨ *Sheet 1 of 7* (🗋 C-39)
A2	⇨ *Sheet 2 of 7* (🗋 C-41)
A3	⇨ *Sheet 3 of 7* (🗋 C-43)
A4	⇨ *Sheet 3 of 7* (🗋 C-43)
A5	⇨ *Sheet 3 of 7* (🗋 C-43)
A6	⇨ *Sheet 3 of 7* (🗋 C-43)
A7	⇨ *Sheet 5 of 7* (🗋 C-47)
A8	⇨ *Sheet 5 of 7* (🗋 C-47)
A9	⇨ *Sheet 5 of 7* (🗋 C-47)
A10	⇨ *Sheet 5 of 7* (🗋 C-47)
B1	⇨ *Sheet 6 of 7* (🗋 C-49)
B2	⇨ *Sheet 6 of 7* (🗋 C-49)
B3	⇨ *Sheet 6 of 7* (🗋 C-49)
B4	⇨ *Sheet 6 of 7* (🗋 C-49)
B5	⇨ *Sheet 6 of 7* (🗋 C-49)
B6	⇨ *Sheet 6 of 7* (🗋 C-49)
B7	⇨ *Sheet 6 of 7* (🗋 C-49)
B8	⇨ *Sheet 7 of 7* (🗋 C-51)
B9	⇨ *Sheet 7 of 7* (🗋 C-51)
B10	⇨ *Sheet 7 of 7* (🗋 C-51)

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Axial Piston Pump

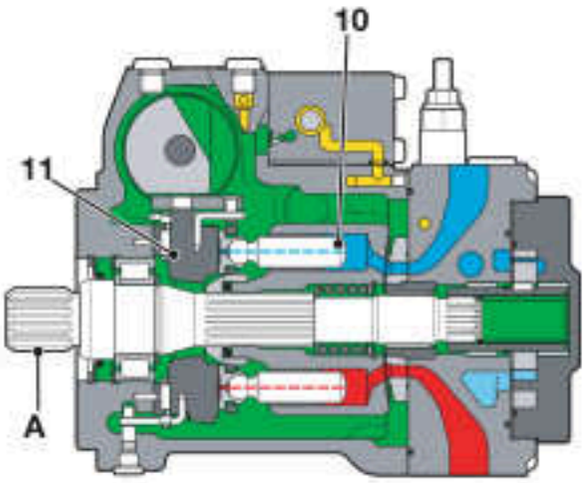


Fig 37.

The axial piston pump is a variable displacement pump **10**, which uses the swash plate design principle.

In this type of pump, the flow is directly proportional to the driven speed and to the swash plate angle, which may be infinitely variable from zero to full swash angle. Increasing the swash angle causes greater displacement and therefore greater flow.

Forward/reverse control is provided by solenoid valves **3a** and **3b**, which act on the act on the swash control piston **2**. ⇨ *Fig 39. (E-57)*. This switches the swash plate **11** in the pump from one direction to the other. Swivelling the swash plate over centre changes the direction of flow smoothly.

The swash angle is also affected by the displacement angle control valve **6**, which compensates for changes in load, e.g. 'pull down' of the engine speed due to increased load or a hydraulic service demand.

Charge Pump

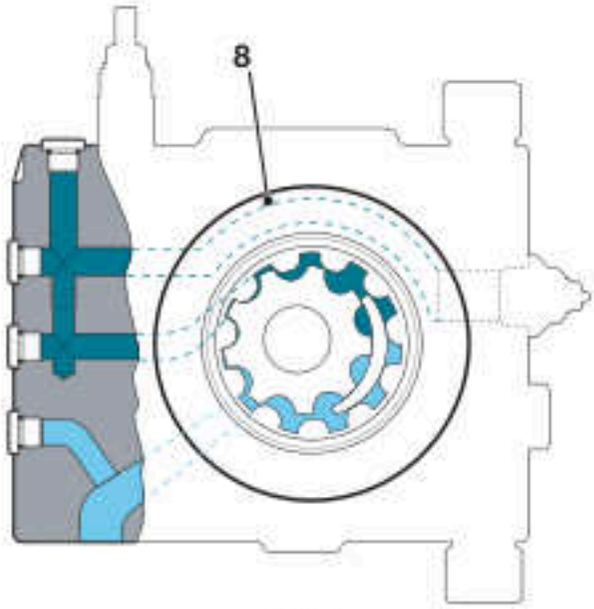


Fig 38.

The charge (or boost) pump **8** is a gear pump which provides the control pressure for the internal pump control circuits.

Filtration is provided in the charge pump circuit by an external filter **F**.

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