Service Manual

Side Engine Loadalls

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Low R-134a Charge

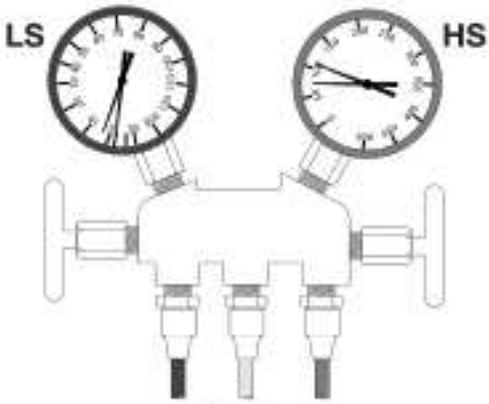


Fig 61.

Table 15. Gauge Readings

Gauge	Pressure
Low Side **LS**	Low: 0.5 bar (0.5 kgf cm²)(7.25 lbf in²)
High Side **HS**	Low: 9.8 bar (10 kgf cm²)(142 lbf in²)

Other Symptoms

Sight Glass (if fitted) - Bubbles continuously visible.

Diagnosis

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

Correction

1 Leak test system.

2 Evacuate Air Con. system

3 Repair system leaks.

4 Charge system with R-134a.

5 Operate system and check performance.

Poor Refrigerant Circulation

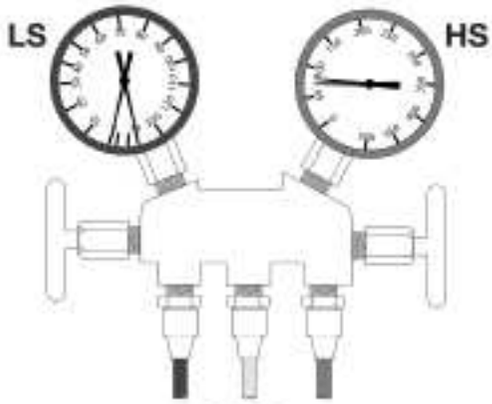


Fig 62.

Table 16. Gauge Readings

Gauge	Pressure
Low Side **LS**	Zero to negative: -1.0 bar (-1.1 kgf cm²)(-15 lbf in²)
High Side **HS**	Low: 5.4 bar (5.5 kgf cm²)(78 lbf in²)

Other Symptoms

Receiver Drier - Frost on tubes from receiver-drier to evaporator unit.

Diagnosis

Refrigerant flow obstructed by dirt, receiver-drier clogged.

Correction

1 Evacuate Air Con. system.

2 Replace receiver-drier.

3 Charge system with R-134a.

4 Operate system and check performance.

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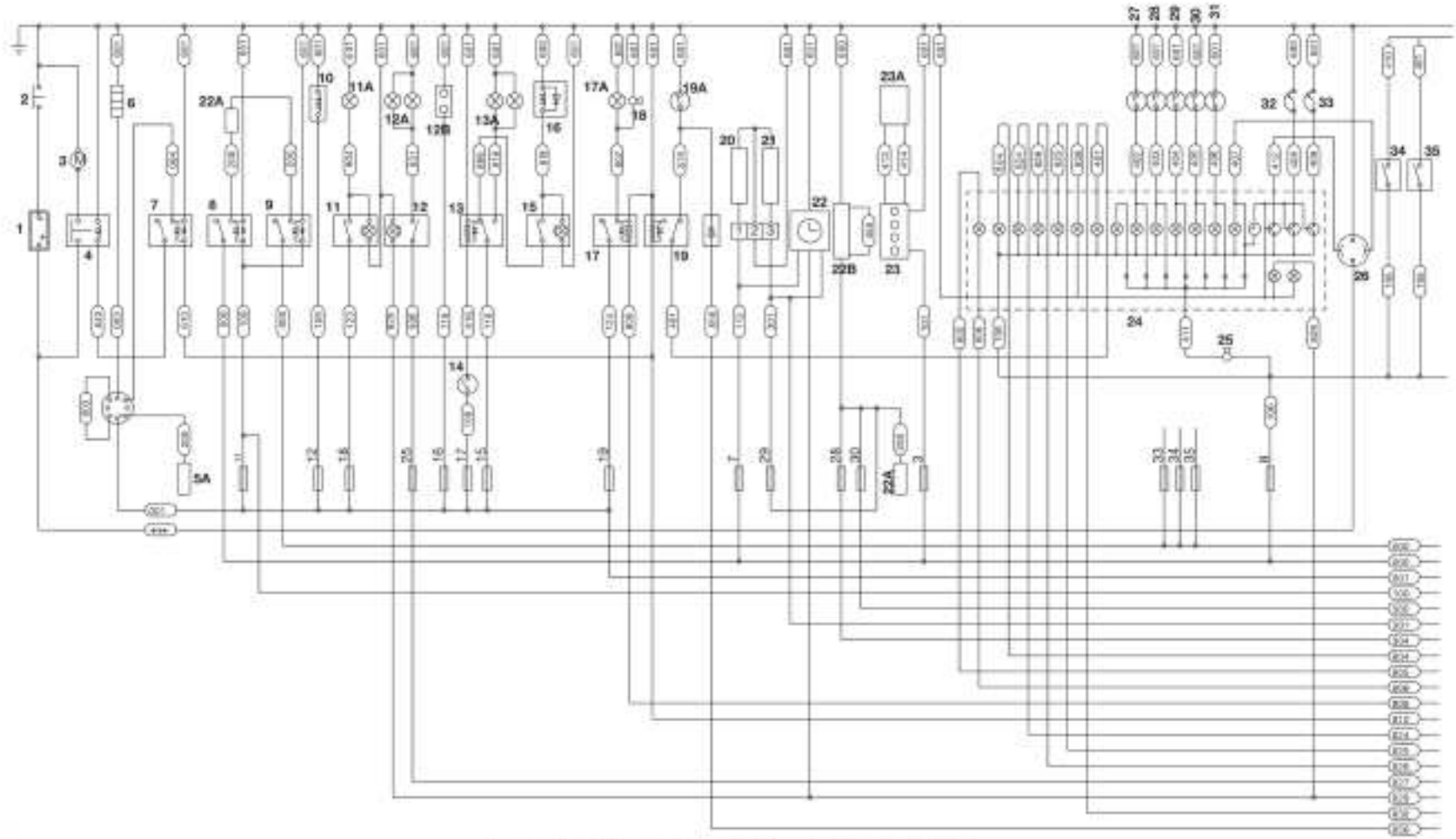


Fig 56. 540-170, 5508 From SN 1004131 (Sheet 1 of 4)

⇨ *Component Key (C-86)*

⇨ *Fig 57. (C-89)*, for Sheet 2 of 4.

⇨ *Fig 58. (C-90)*, for Sheet 3 of 4.

⇨ *Fig 59. (C-91)*, or Sheet 4 of 4 and Item **A**.

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Flow Rates	100 Hp	120Hp
Lift / Lower	85.0 litres/min (18.7 UK gal/min)	110 litres/min (24.2 UK gal/min)
Crowd / Tilt	85.0 litres/min (18.7 UK gal/min)	110 litres/min (24.2 UK gal/min)
Extend / Retract	85.0 litres/min (18.7 UK gal/min)	95 litres/min (20.9 UK gal/min)
Auxiliary		
A Port	85.0 litres/min (18.7 UK gal/min)	90 litres/min (19.8 UK gal/min)
B Port	75.0 litres/min (16.5 UK gal/min)	75.0 litres/min (16.5 UK gal/min)

Rams	Bore	Rod Dia.	Stroke	Open centre	Closed centre
Boom Lift	140mm (5.5in)	75mm (2.9in)	753mm (29.6in)	1894mm (74.5in)	1141mm (44.9in)
Boom Extension	70mm (2.7in)	50mm (1.9in)	2470mm (97.2in)	5225mm (205.7in)	2755mm (108.4in)
Tilt	110mm (4.3in)	50mm (1.9in)	474mm (18.6in)	1306mm (51.4in)	832mm (32.7in)
Displacement	120mm (4.7in)	60mm (2.3in)	294mm (11.5in)	946mm (37.2in)	652mm (25.6in)
Hitch	50mm (1.9in)	25mm (0.9in)	429mm (16.8in)	1028mm (40.4in)	599mm (23.5in)

Filter

Filter Type	Partial flow ('spin on')
Filtration Size	10 microns (0.0004 in)
Relief Valve Setting	1.05 bar (15 lbf/in²)
Suction Strainer	125 microns (0.005 in)

Hydraulic Tank

Capacity	112 litres (24.6 UK gals)

Fan Motor

Oil Flow	36.5 litres/min (8.0 UK gal/min) at 105 bar (1523 lbf/in²)
Max fan speed at Max engine rev/min	1800 100 rev/min(1)

(1) Machines are fitted with fan motors with fixed (non-adjustable) relief valves. Consequently the fan speed may vary by up to 100 rev/min from the quoted figure.

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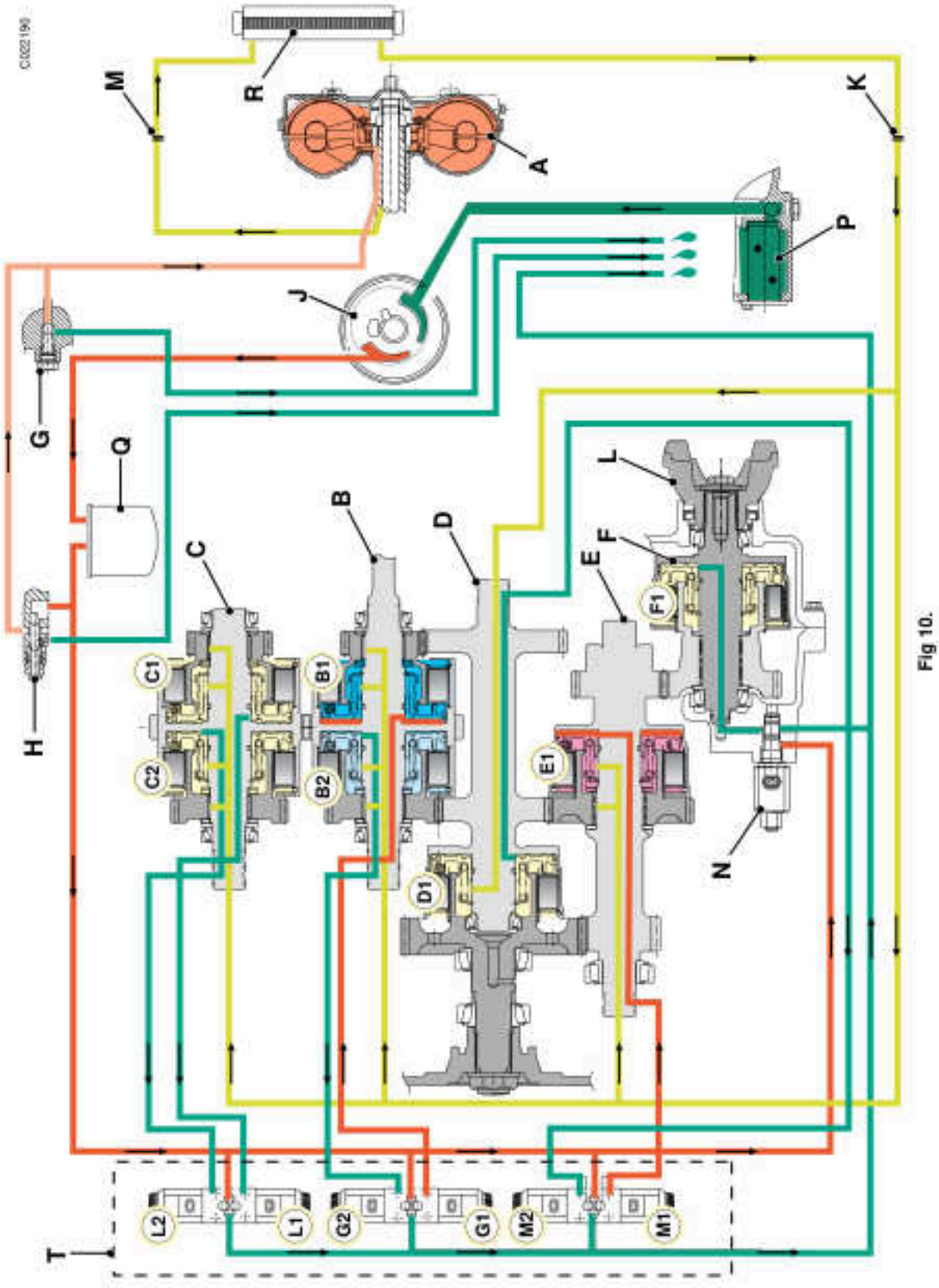


Fig 10.

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2 Wheel Drive Operation

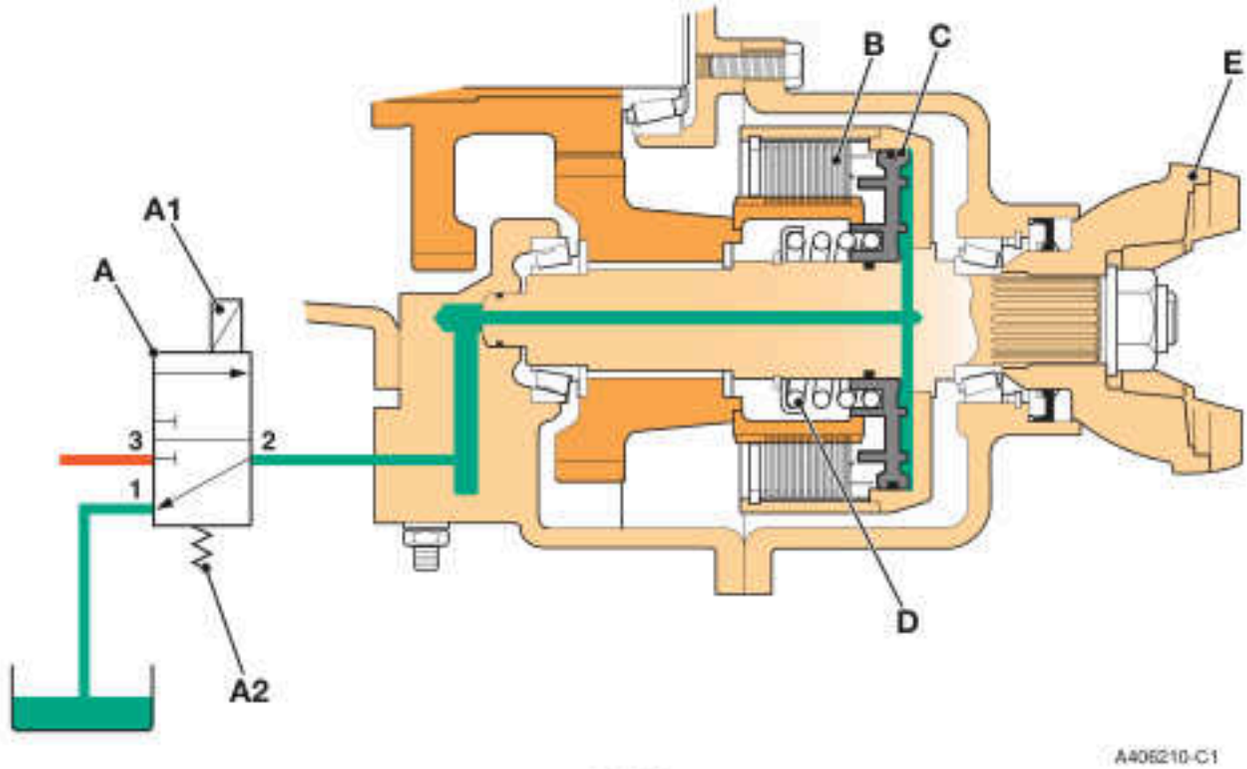


Fig 32.

When the switch is in the 2 wheel drive position, solenoid valve **A** is de-energised. With the solenoid **A1** de-energised, the valve spool moves under the force of the spring **A2**. The oil supply to the piston **C** is blocked (shown at port **3**). At the same time oil vents from the back of piston **C** to the sump via ports **1** and **2**.

Because there is no pressure behind piston **C**, the friction/counter plates of clutch pack **B** now freely rotate on the output shaft, thus disengaging drive to the front axle.

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