SERVICE MANUAL

T7030 / T7040 / T7050 / T7060

Tractor

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C416 20 AMP MULTI B+

PLUG CONNECTION C416 20 AMP MULTI B+			
LOCATION	CABLE NUMBER	CIRCUIT	WIRING DIAGRAM
1	57E (B)	VEHICLE EARTH (ALL)	**Wiring harness - Electrical schematic frame 23 (A.30.A)**
2	3070C (P)	POWER SUPPLY SOCKET ON THE B-PILLAR	
3	9032 (Y/G)	STARTER SWITCH+ TO SOCKET	

NOTE: *The colour coding of the cables is described in* ***Wiring harness - Overview (A.30.A)****.*

C417 8A RING TERMINALS (2 OFF)

PLUG CONNECTION C417 8A RING TERMINALS (2 OFF)			
LOCATION	CABLE NUMBER	CIRCUIT	WIRING DIAGRAM
1	57 (B)	VEHICLE EARTH (ALL)	**Wiring harness - Electrical schematic frame 23 (A.30.A)**
2	3070 (P/W)	POWER SUPPLY SOCKET ON THE B-PILLAR	

NOTE: *The colour coding of the cables is described in* ***Wiring harness - Overview (A.30.A)****.*

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Code	Description	Cause	Controller Pin	Information
4510	Front remote no.1 – driver faulty	MID EHR1_DIAGNOSTIC CAN message indicates driver is faulty (Fault code = 0x42)	N/A	Driveline oil temperature. Driveline oil contamination. Hydraulic pressures. EHR valve **Hydraulic pump - Pressure test (A.10.A)**, EHR valve. **Control module - Configure (A.50.A)**
4511	Front remote no.1 – potentiometer faulty	MID EHR1_DIAGNOSTIC CAN message indicates pot is faulty (Fault code = 0x43)	N/A	Driveline oil temperature. EHR valve. **Control module - Configure (A.50.A)**
4512	Front remote no.1 – unable to reach neutral	MID EHR1_DIAGNOSTIC CAN message indicates unable to reach neutral (Fault code = 0x81)	N/A	Driveline oil temperature. Driveline oil contamination. Hydraulic pressures. EHR valve **Hydraulic pump - Pressure test (A.10.A)**, EHR valve. **Control module - Configure (A.50.A)**
4513	Front remote no.1 – spool not in neutral at key on	MID EHR1_DIAGNOSTIC CAN message indicates spool is not neutral at key on (Fault code = 0x82)	N/A	Hydraulic pressures. **Hydraulic pump - Pressure test (A.10.A)**, EHR valve. **Control module - Configure (A.50.A)**
4514	Front remote no.2 – no control message received	MID EHR2_DIAGNOSTIC CAN message indicates no control messages (Fault code = 0x11)	N/A	Hydraulic pressures. **Hydraulic pump - Pressure test (A.10.A)**, EHR valve. **Control module - Configure (A.50.A)**
4515	Front remote no.2 – control message not plausible	MID EHR2_DIAGNOSTIC CAN message indicates control message is corrupted (Fault code = 0x13)	N/A	EHR valve connector **X698**, inline harness connector **X304**, EHR valve. **Control module - Configure (A.50.A)**.
4516	Front remote no.2 – EEPROM error	MID EHR2_DIAGNOSTIC CAN message indicates valve EEPROM is corrupted (Fault code = 0x16)	N/A	Driveline oil temperature. EHR valve. **Control module - Configure (A.50.A)**
4517	Front remote no.2 – switched to failsafe	MID EHR2_DIAGNOSTIC CAN message indicates valve is set to fail safe because a setpoint is required (Fault code = 0x17)	N/A	EHR valve. **Control module - Configure (A.50.A)** Error code 4517
4518	Front remote no.2 – under voltage	MID EHR2_DIAGNOSTIC CAN message indicates under voltage (Fault code = 0x21)	N/A	EHR valve connector **X698**, inline harness connector **X304**, EHR valve. **Control module - Configure (A.50.A)**.

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ENVIRONMENT CONTROL Heating, ventilation and air-conditioning - Torque

Cylinder head screws of the air conditioning compressor	**24.5-26.5 Nm (18-19.5 lbf.ft)**
Retaining screw of the compressor clutch front plate	**11.0-14.0 Nm (8-10 lbf.ft)**
Retaining screws of the air conditioning compressor	**20.5-25.5 Nm (15-19 lbf.ft)**

ENVIRONMENT CONTROL Heating, ventilation and air-conditioning - Special tools

Certified Refrigerant Recover, Recycling and Recharge Equipment suitable for the type of refrigerant gas used on tractor are required when servicing air conditioning systems.
This special equipment is available through recognised suppliers of air conditioning equipment. Refer to the Tool supplier for details on the latest equipment available for servicing the air conditioning system.

Vacuum/charge Portable system	New Holland Tool No.294030
Recovery/recharge Portable system	**294161**
Evaporator and condenser cleaner	**293831**
Electronic Gas Leak Detector	**294036**
Manifold Gauge Set (Where required)	**292744**
COMPRESSOR TOOLS: Sanden SDH715 Kit	**297422**

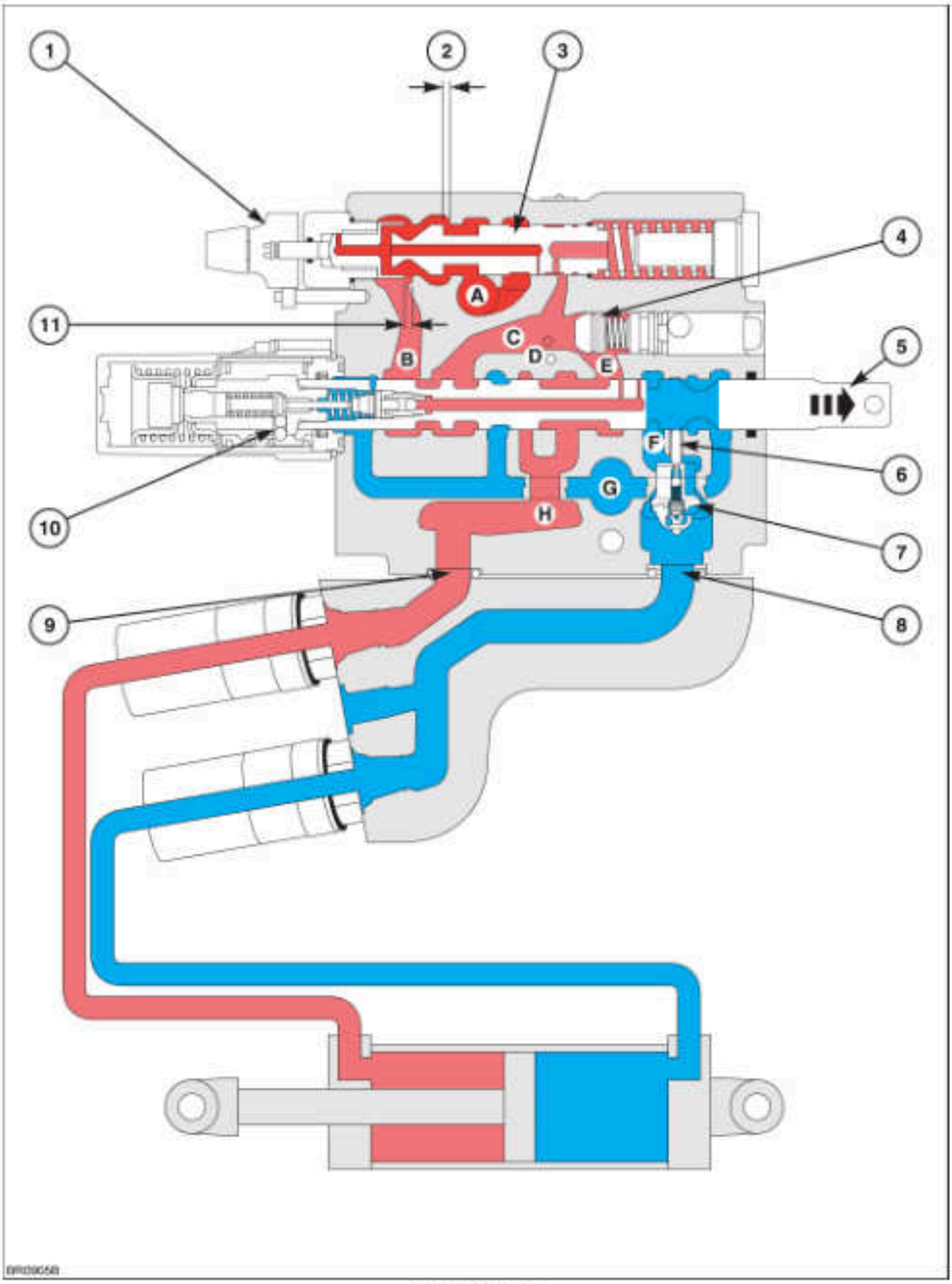
ENVIRONMENT CONTROL Heating, ventilation and air-conditioning - General specification

Refrigerant specifications	New Holland specification 82000810 (R134a)
Refrigerant filling	**0.9 kg (1.98 lb)**
Refrigerant oil specifications	New Holland specification 82008750 (ISO 46 viscosity) Sanden SP10
Refrigerant oil filling quantity (air conditioning compressor and system)	**186 - 228 cm^3**
Air conditioning compressor Manufacturer and type	Sanden SD7H15

At an ambient temperature of **22 - 49 °C (75 - 120 °F)** the cooling power is approximately. **4.5 kW**.

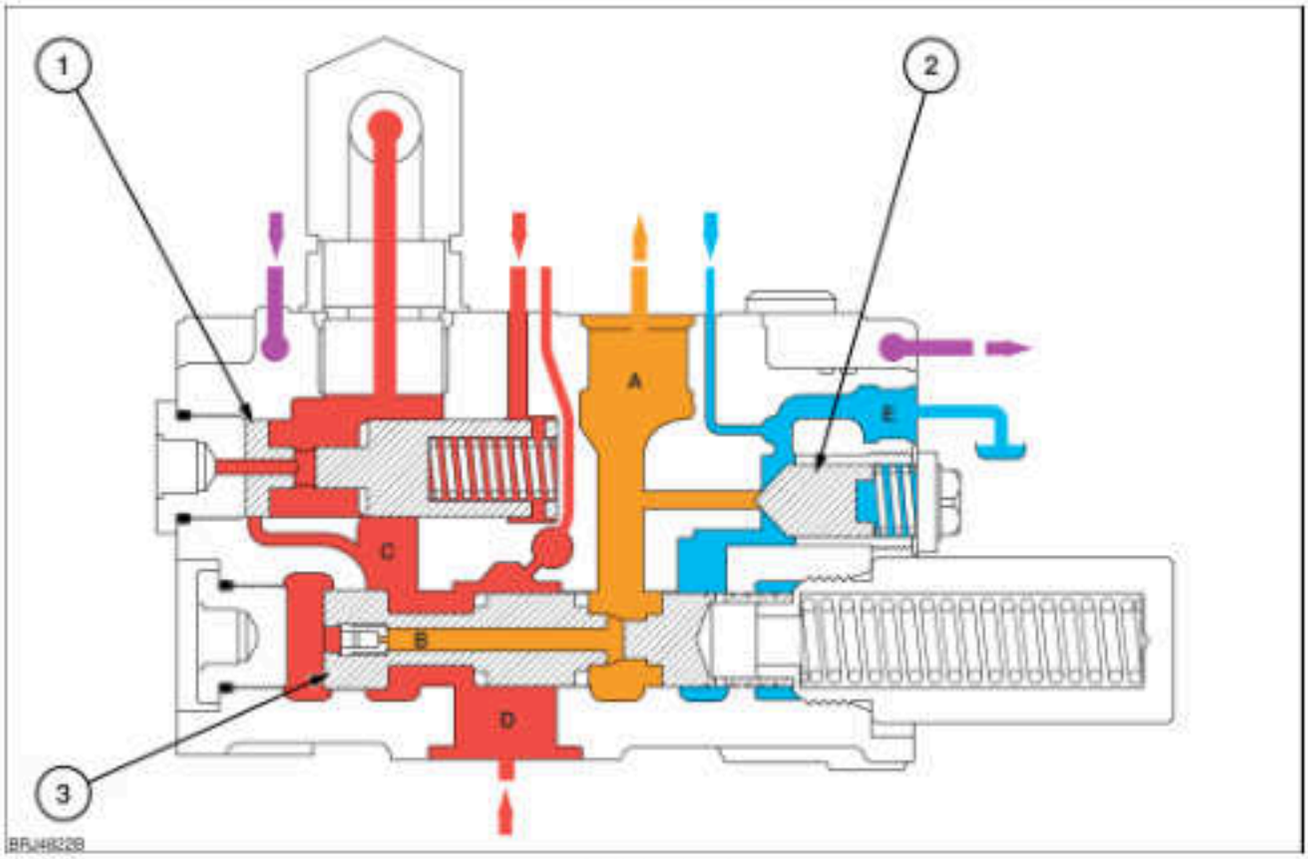
NOTE: *The actual cooling power depends on the setting made by the driver.*

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Priority/Regulator valve - Dynamic description



BAILEYCCM317FSA 1

Pressure Reducing Priority Valve

The regulated flow of oil discharged from the variable displacement piston pump is directed to the low and high pressure hydraulic circuits via the trailer brake valve (where fitted) and the pressure regulating valve.

Because pump output is initially directed through the trailer brake valve (where fitted), the system ensures that the trailer brakes have priority over other hydraulic circuits.

The pressure regulating valve is located on the top of the variable displacement pump and controls the maximum pressure of oil in the low pressure hydraulic circuit while at the same time directing high pressure system oil to the hydraulic power lift and remote control valves.

The low pressure hydraulic circuit, which is regulated at a pressure of **23 bar** (**333.50 psi**)) operates the electronic remote valve spools (where fitted), P.T.O., differential lock, four wheel drive engagement system and transmission control circuits.

When the pressure in the system is below **23 bar** (**333.50 psi**)the low-Pressure regulating valve **(3)** is held to the left by the spring allowing system pressure oil (Gallery **(D)**) from the variable displacement piston pump to flow to the low pressure hydraulic circuits through gallery **(A)** to give flow priority to the low-pressure circuit..

The resulting pressure in gallery **(A)** is sensed in the pressure sensing gallery **(B)** drilled through the centre of the spool. As the pressure in gallery **(A)** increases, the spool moves against the spring restricting the flow of oil into gallery **(A)** to maintain the pressure of oil in the low pressure hydraulic circuit at **23 bar** (**333.50 psi**)), while at the same time allowing system pressure oil to flow into gallery **(C)** .

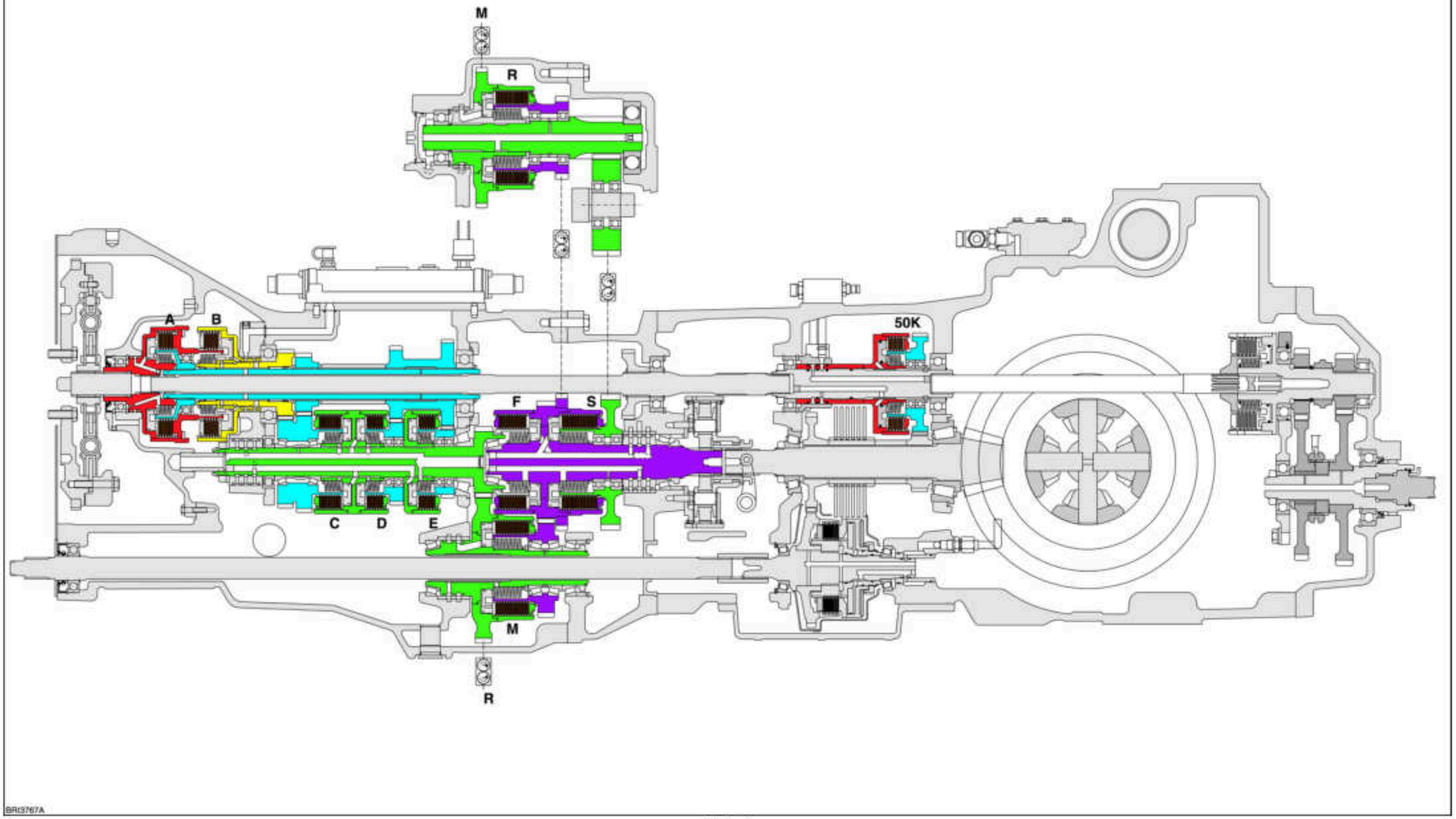
It can now be seen that the spool moves back and forth to maintain the low pressure circuit oil at **23 bar** (**333.50 psi**)), while at the same time allowing system pressure oil to be directed to the high pressure hydraulic circuit for operation of the hydraulic lift and remote control valves.

When the high pressure hydraulic circuits are not in operation the priority valve **(1)** ensures an adequate supply is fed to the trailer brake valve (where fitted), and low pressure circuits to maintain circuit pressure of **23 bar** (**333.50 psi**)).

To prevent any damage occurring due to excessive pressures in the low pressure hydraulic circuit, the low pressure circuit safety valve **(2)** will operate whenever the pressure increases to **28 bar** (**406.00 psi**). Should this occur the safety valve poppet will lift off its seat and vent the circuit to reservoir through gallery **(E)**.

Refer to **Priority/Regulator valve - Hydraulic schema (A.14.A)**

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