SERVICE MANUAL

LB75.B
LB90.B
LB95.B
LB110.B
LB115.B 4WS
BACKHOE LOADERS

NEW HOLLAND
CONSTRUCTION

6036702103

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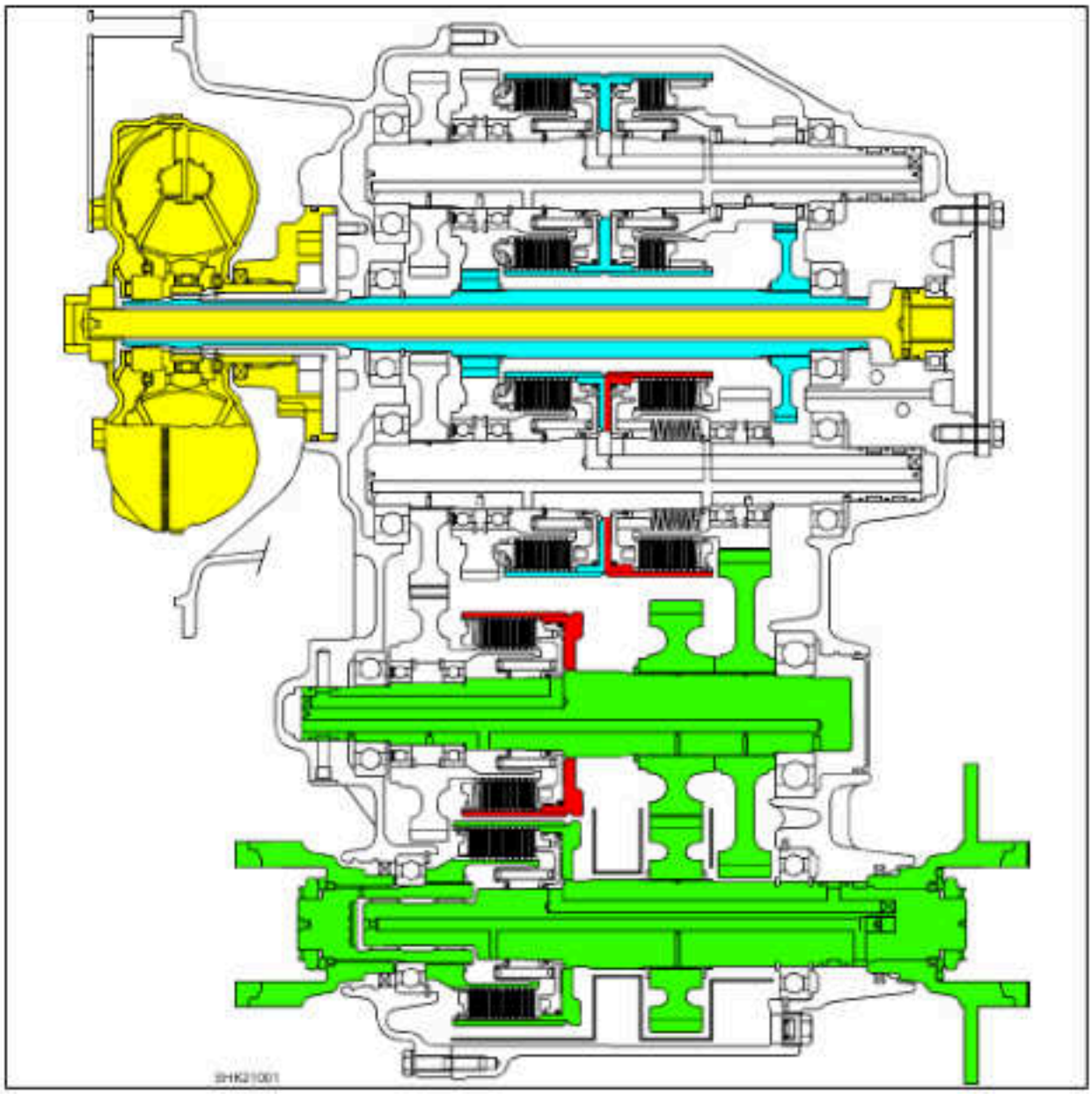
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4 Wheel Drive Transmission – 4 Wheel Steer

Converter and pump drive section

Input or directional clutches

Range clutches

Output section

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One hydraulic circuit operating

When a single hydraulic circuit is operated the spool in the control valve section moves, allowing oil to flow past the lands of the spool and apply pressure to the metering element of the pressure compensating valve.

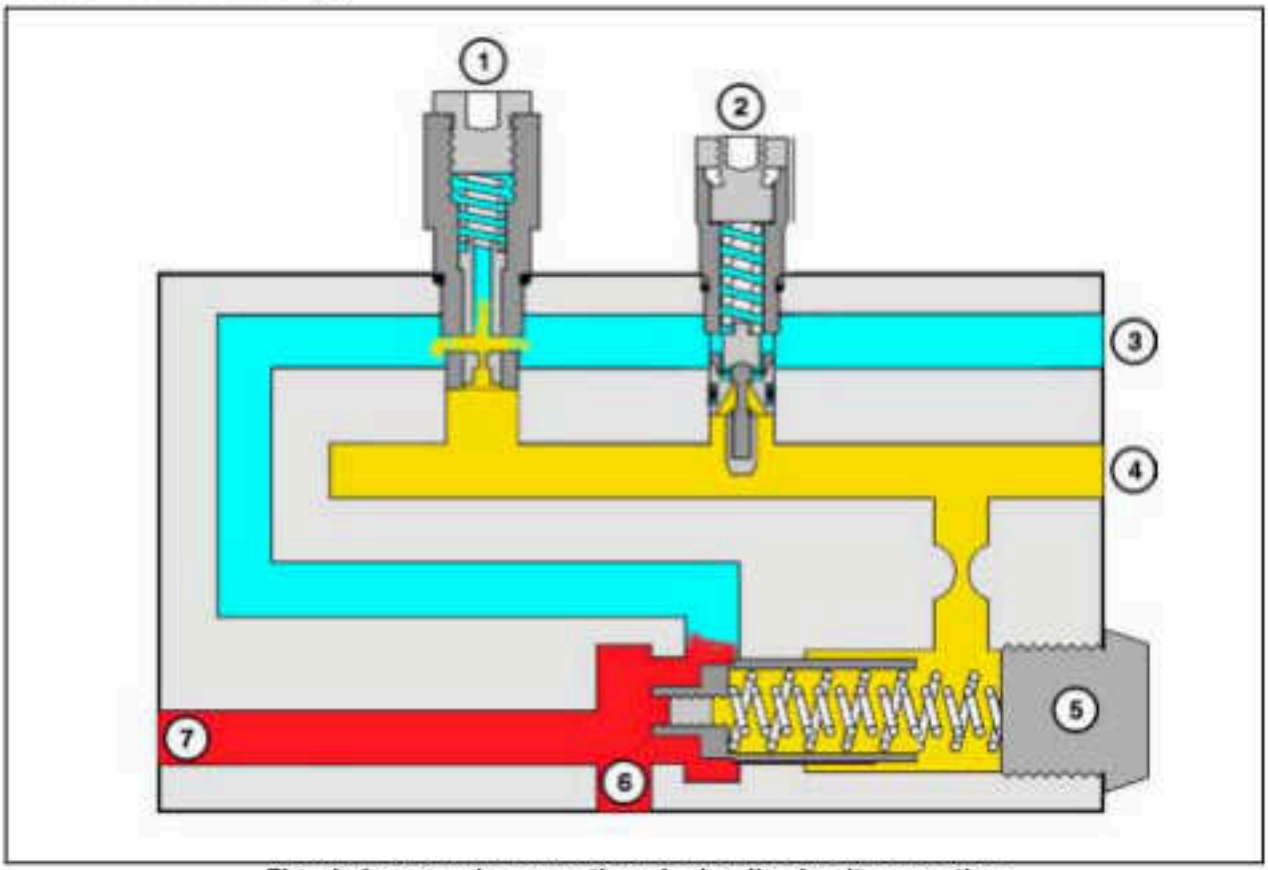
The metering element moves upwards to allow oil to flow to the load check valve and at the same time uncovers the drilling in the spool portion of the pressure compensator valve enabling the operating pressure to be sensed in the load sensing gallery.

As pressure increases to open the load non-return check valve, load sensing pressure is applied to the spring side of the flow balance valve in the backhoe control valve end cover. A higher pressure is now required to operate the flow balance valve and pump pressure increases accordingly.

When pump pressure overcomes the pressure behind the load check valve, the valve opens allowing oil to flow into the cylinder port.

Exhaust oil from the cylinder returns to reservoir through the other port in the control valve section.

If the load sensing pressure in a circuit reaches 195 bar the load sensing relief valve in the backhoe control valve end cover will operate. Pump pressure is now limited to 210 bar. This being the pressure required to overcome the pressure of the flow balancing valve spring (15 bar) plus the load sensing pressure controlled at 195 bar.



Flow balancer valve operation - hydraulic circuits operating

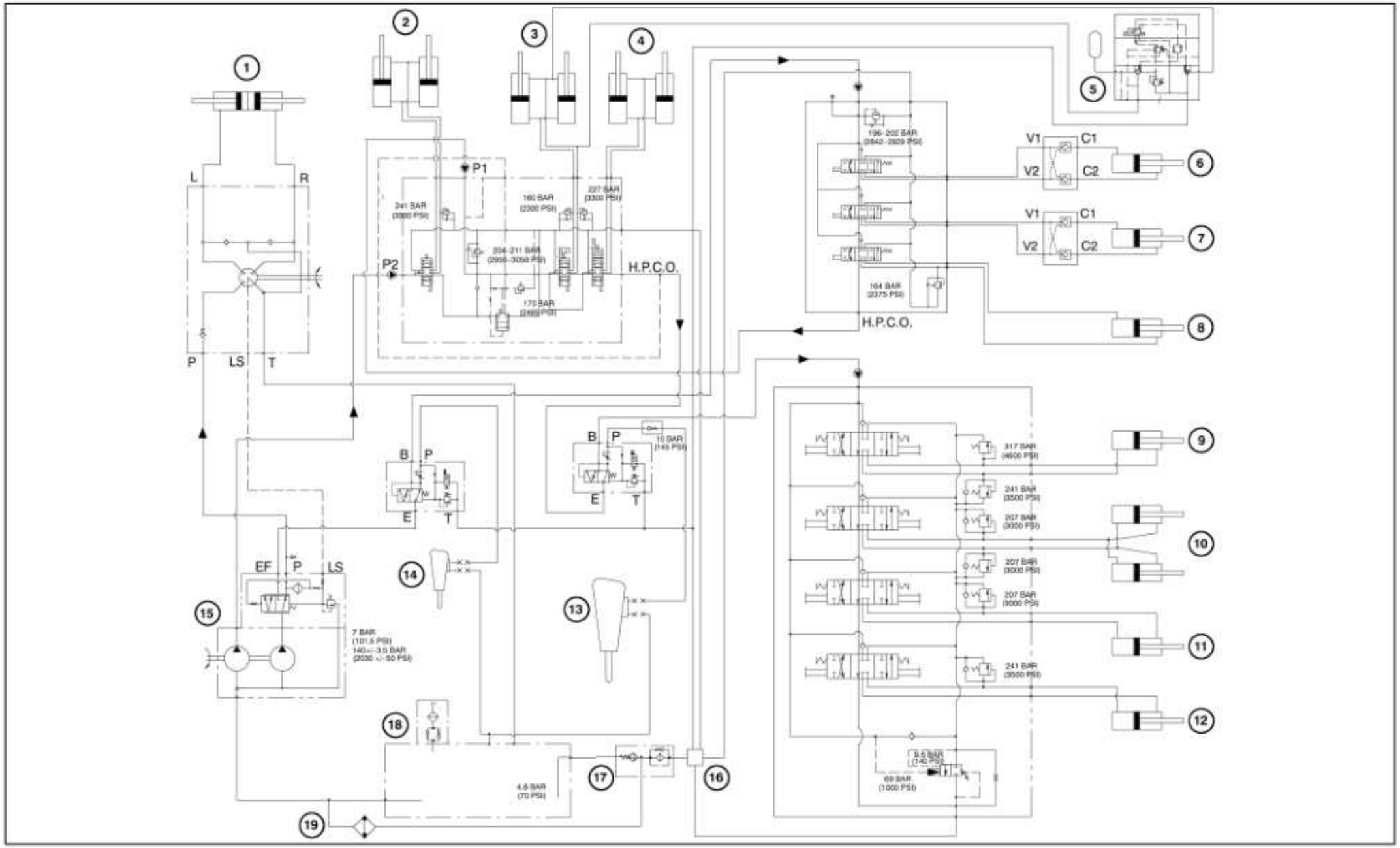
Return to reservoir

Load sensing pressure

Pump pressure

1. Load sensing bleed orifice 1 l/min
2. Load sensing limiter (system relief valve)
3. Return to reservoir
4. Load sensing line
5. Pump flow balancer (unload) valve
6. Pump flow INTAKE
7. To backhoe control valves

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Main Hydraulic System - 2 and 4 Wheel Drive (with Options)

12/2004

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