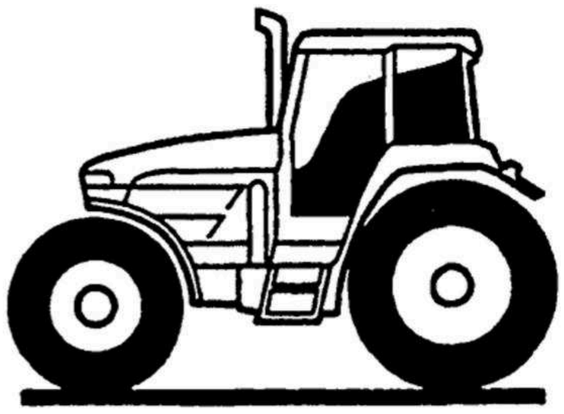


NEW HOLLAND
60 Series
8160
8260
8360
8560
Tractors

REPAIR MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

40816040

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SECTION 1

ENGINES

CHAPTER 1

ENGINE

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GROUP 10 – GENERAL FEATURES AND SPECIFICATIONS

Model (T=Turbocharged)		8160	8260	8360 (T)	8560 (T)
No of Cylinders		6	6	6	6
Bore	ins	4.4	4.4	4.4	4.4
	(mm)	111.8	111.8	111.8	111.8
Stroke	ins	5.0	5.0	5.0	5.0
	(mm)	127.0	127.0	127.0	127.0
Displacement	cu in	456	456	456	456
	(cu cm)	7472	7472	7472	7472
Compression Ratio		17:5–1	17:5–1	17:5–1	17:5–1
Cylinder Bore Compression at cranking speed of 200 R.P.M	lbs/in^2	375	375	375	375
	bar	25.5	25.5	25.5	25.5
Firing Order		153624	153624	153624	153624
Idle Speed R.P.M		700 800	700 800	700 800	700 800
Maximum no Load Speed R.P.M		2370–2420	2370–2420	2370–2420	2480 2530
Rated Engine Speed		2200	2200	2200	2300

CYLINDER BLOCK

Taper of Cylinder Bore
0.001 in (0.025mm) Repair Limit
0.005 in (0.127mm) Wear Limit

Cylinder Bore out of Round
0.0015 in (0.030mm) Repair Limit
0.0050 in (0.127mm) Wear Limit

Cylinder Bore Diameters
4.4007–4.4032 in (111.778–111.841mm)

Rear Oil Seal Bore Diameter
5.542–5.546 in (140.77–140.87mm)

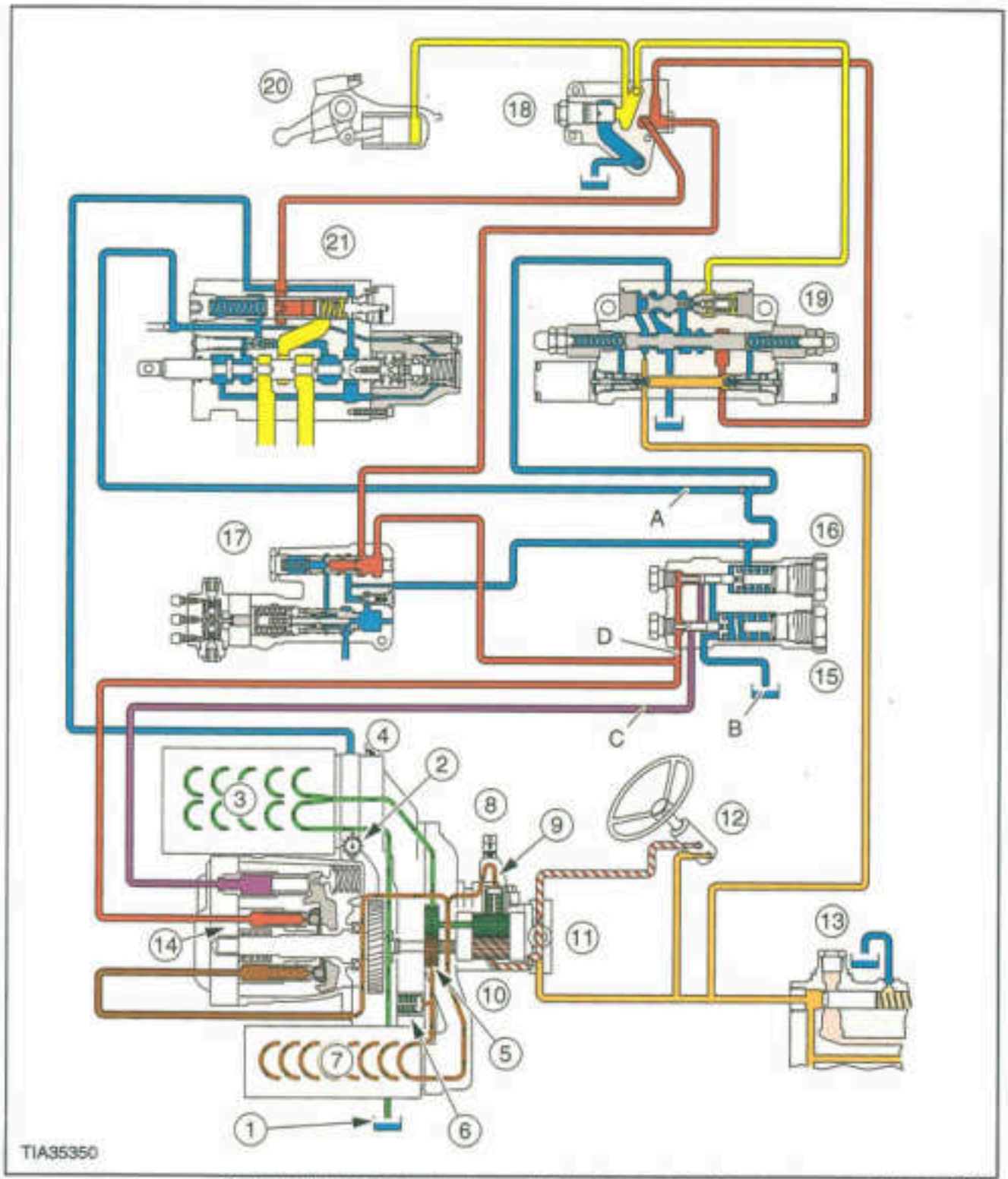
Block to Head Surface Flatness
0.003 in (0.08mm) in any 6 in (152mm)
0.001 in (0.03mm) in any 1 in (25.40mm)

CYLINDER HEAD

Valve Guide Bore Diameter
0.3728–0.3738 in (9.469–9.495mm)

Head to Block Surface Flatness
0.001 in (0.03mm) in any 1 in (25.40mm), or 0.005 in (0.127mm) overall limit

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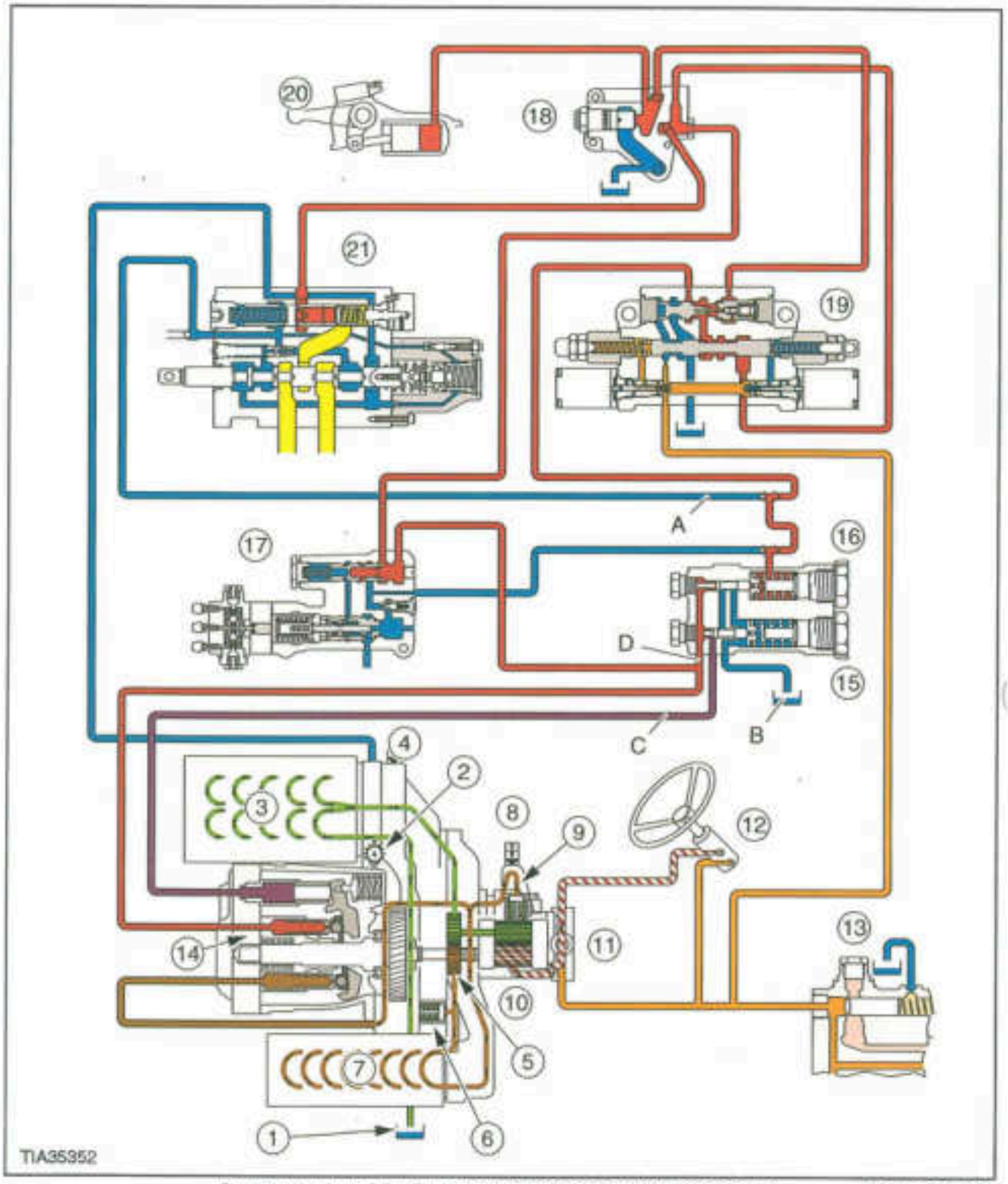


Control of Variable Flow Piston Pump with Closed Center Load Sensing When Regulating Standby Pressure (Low Pressure Standby)

Figure 8-2-9

- Steering System Oil
- Standby Pressure Oil 310–350 lbf/in² (21–24 bar)
- Low Pressure Circuit Oil 232–261 lbf/in² (16–18 bar)
- Charge Pressure Oil 23–50 lbf/in² (1.6–3.4 bar)
- Return to Reservoir Oil
- Control Pressure Oil
- Suction Oil
- Lubrication Circuit
- Trapped Oil

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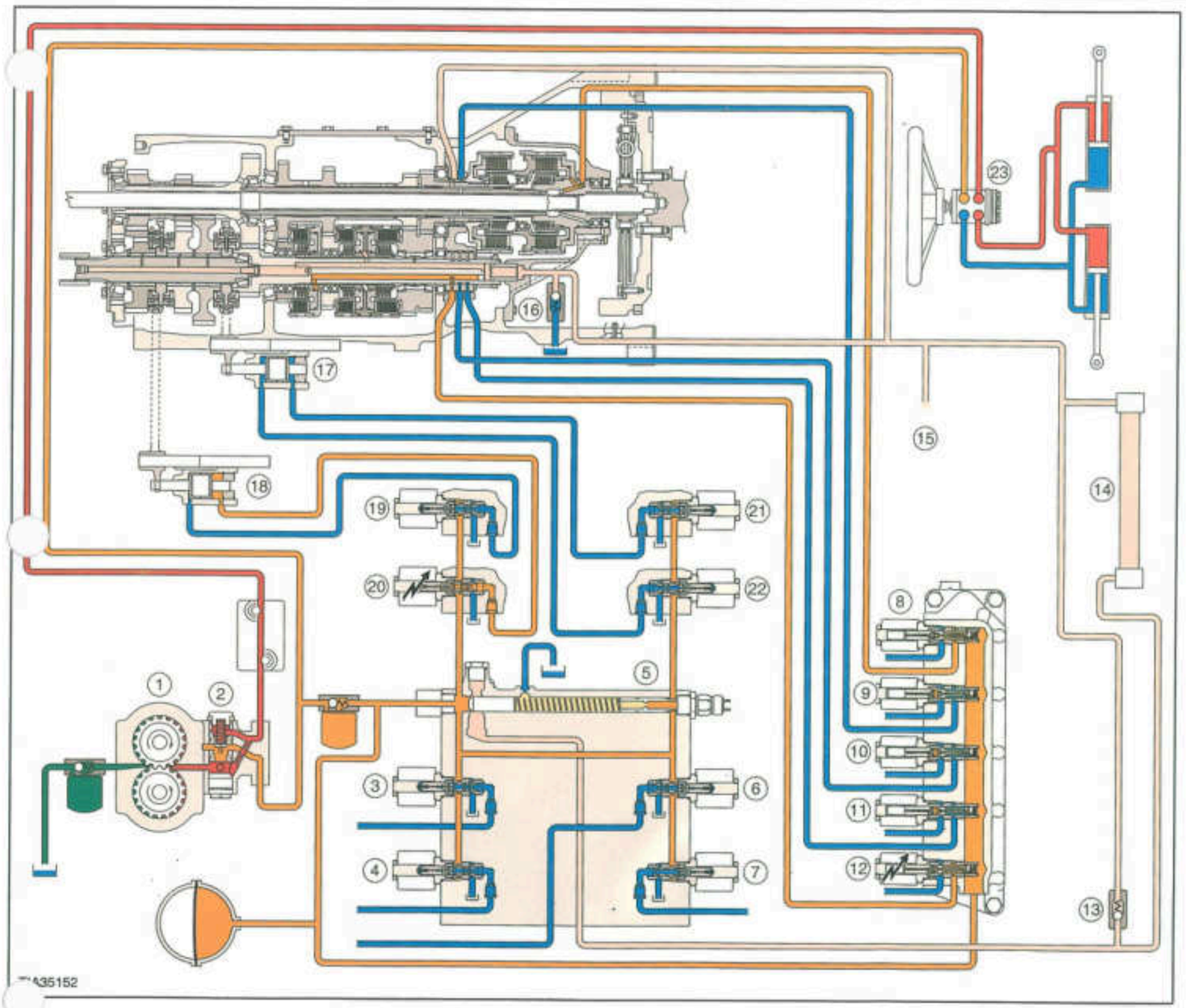


Control of Variable Flow Piston Pump with Closed Center Load Sensing When Limiting Maximum System Pressure (High Pressure Standby)

Figure 8-2-12

- Steering System Oil
- System Pressure Oil @ 2750 lbf/in² (190 bar)
- Control Pressure Oil
- Charge Pressure Oil 23–50 lbf/in² (1.6–3.4 bar)
- Return to Reservoir Oil
- Low Pressure Circuit Oil @ 232–261 lbf/in² (16–18 bar)
- Suction Oil
- Lubrication Circuit
- Trapped Oil

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Steering, Low Pressure and Lubrication Circuit
Tractors with Semi Powershift Transmission

- Steering System Oil
- Lubrication Circuit Oil
- Low Pressure Circuit Oil @ 16 – 18 bar (230 – 261 lbf/in²)
- Return to Reservoir Oil
- Suction Oil

1. Steering and Low Pressure Circuit Pump
2. Steering Flow Control Valve
3. Differential Lock
4. PTO Engagement Solenoid
5. Low Pressure Regulating Valve
6. Differential Lock Solenoid
7. Four Wheel Drive Solenoid
8. A Clutch PWM Valve
9. B Clutch PWM Valve
10. C Clutch PWM Valve
11. D Clutch PWM Valve
12. E Clutch PWM Valve
13. Oil Cooler By-Pass Valve
14. Oil Cooler
15. Lubrication to Pump Drive Gear, PTO and Lift Cross Shaft
16. Lubrication Circuit Relief Valve
17. Actuator – Low and High Range Synchronizer
18. Actuator – Medium and Reverse Range Synchronizer
19. Reverse Range Solenoid Valve
20. Medium Range Solenoid Valve
21. Low Range Solenoid Valve
22. High Range Solenoid Valve
23. Steering Motor

Figure 8-1-55

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