821C
WHEEL LOADER

Service Manual

7-13053

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CAPACITIES AND LUBRICANTS

Engine oil
- Capacity with filter change ..... 20.8 litres (22 U.S. quarts)
- Type of oil ..... Case No. 1 Engine Oil - see engine oil recommendations on page 3

Engine cooling system
- Capacity ..... 32.1 litres (34 U.S. quarts)
- Type of coolant ..... Ethylene glycol and water mixed for lowest ambient temperature (at least 50/50 mix)

Fuel tank
- Capacity ..... 268 litres (70.8 U.S. gallons)
- Type of fuel ..... See diesel fuel specifications on page 4

Hydraulic system
- Hydraulic reservoir refill capacity ..... 90 litres (95.2 U.S. quarts)
- Total system ..... 174 litres (184 U.S. quarts)

Type of oil ..... MS-1209 Hy-Tran Ultra®

Transmission
- Refill capacity with filter change ..... 12.3 litres (13 U.S. quarts)
- Total system capacity ..... 26.5 litres (28 U.S. quarts)

Type of oil ..... Case No. 1 Engine Oil (15W-40)

Axles
- Capacity of center bowl
  - Front ..... 18.9 litres (20 quarts) 135H EP Plus 1.9 litres (4 pints) B91246
  - Rear ..... 13.7 litres (14.5 quarts) 135H EP Plus 1.4 litres (3 pints) B91246
- Capacity of planetary (each)
  - Front ..... 6.0 litres (6.5 quarts) 135H EP
  - Rear ..... 5.5 litres (6 quarts) 135H EP
- Type of lubricant ..... Case (MS1316) 135H EP (SAE 85W-140)
- Limited slip additive ..... Case B91246

Brake system
- Type of fluid (same as hydraulic system) ..... MS-1209 Hy-Tran Ultra®

NOTE: *DO NOT use an alternate oil in the axles. The brake components in the axles could be damaged as a result of using an alternate oil.*

Conversion Formulas

Imperial quart = litres x 0.879877
Imperial gallons = litres x 0.219969

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35 – Brake Warning Pressure Switch

Check Points	Reading	Possible Cause of Bad Reading
NOTE: *Brake pressure warning switch opens at 11 724 kPa (1700 psi).*		
NOTE: *Put the master disconnect switch and the ignition switch in the ON position.*		
Terminal B for wire 0 to ground	Continuity	Bad ground circuit.
Terminal A for wire 33P to ground	Approximately 11.5 volts	Check circuit 33P.
NOTE: *Disconnect the wires from the brake warning pressure switch (35).*		
Between terminals A and B of the switch	Continuity	Bad brake warning pressure switch (35).
NOTE: *Start and run the engine at idle.*		
Between terminals A and B of the switch	No continuity	Bad brake warning pressure switch (35).
NOTE: *If the readings are correct see hydraulic brake troubleshooting section to check brake pressures.*		

36 – Coolant Level Sender

Check Points	Reading	Possible Cause of Bad Reading
Terminal for wire 0 to ground	Continuity	Bad ground circuit.
NOTE: *Put the master disconnect switch and the ignition switch in the ON position.*		
Terminal A for wire 33P to ground	Approximately 1.6 volts AC	Check circuit 33P, also check the instrument cluster (43A).
NOTE: *If the readings are correct replace the coolant level sender (36).*		

37 – Fuel Level Sender

Check Points	Reading	Possible Cause of Bad Reading
Terminal for wire 0 to ground	Continuity	Bad ground circuit.
NOTE: *Put the master disconnect switch and the ignition switch in the ON position.*		
Terminal A for wire 36F to ground	Approximately 5 volts	Check the instrument cluster (43A).
NOTE: *If the readings are correct replace the fuel level sender (37).*		

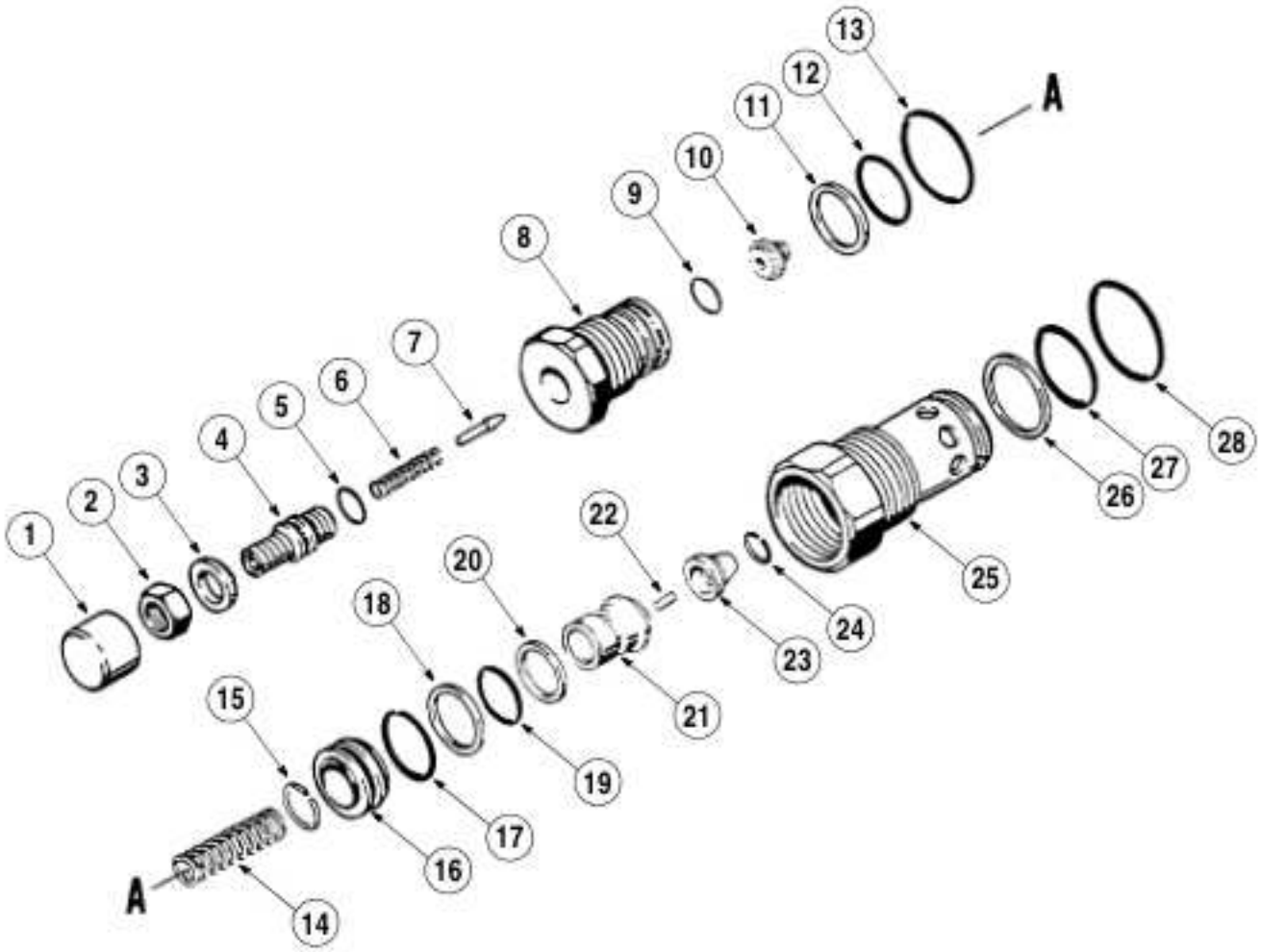
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SPECIFICATIONS

Clutch KV and KR plate clearance	2.7 mm (0.106 inches)
Clutch K1 plate clearance	2.4 mm (0.094 inches)
Clutch K2, K3 plate clearance	1.8 mm (0.071 inches)
Clutch K4 Plate Clearance	1.2 mm (0.047 inches)

NOTE: *The J I Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.*

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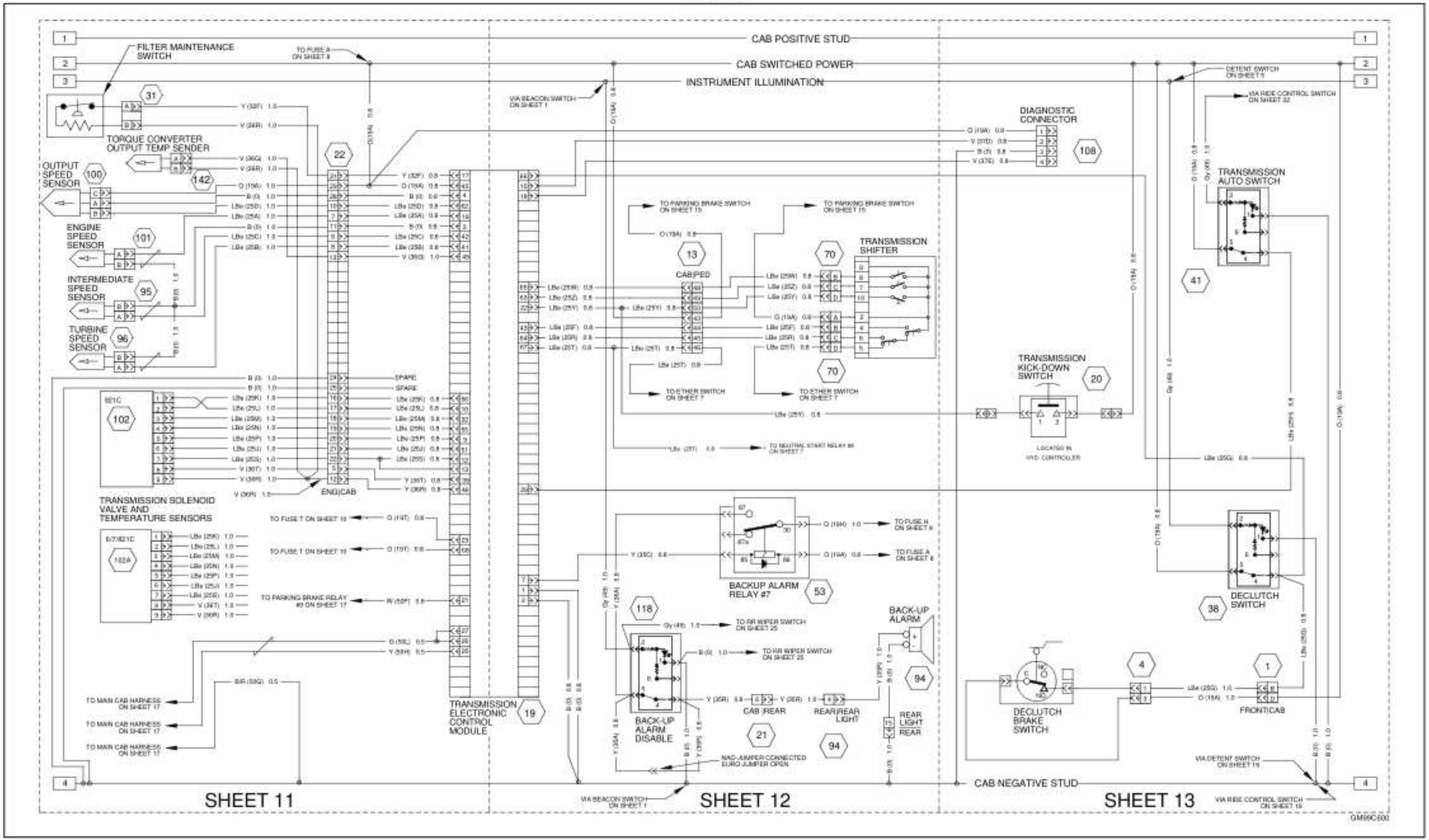
1. CAP (IF USED)	7. PLUNGER	13. O-RING	19. O-RING	25. BODY
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3. WASHER	9. O-RING	15. RETAINING RING	21. POPPET	27. O-RING
4. ADJUSTING SCREW	10. PLUNGER SEAT	16. SLEEVE	22. ROLL PIN	28. O-RING
5. O-RING	11. BACKUP RING	17. O-RING	23. SCREEN	
6. SPRING	12. O-RING	18. BACKUP RING	24. RETAINING RING	

FIGURE 12 - CIRCUIT RELIEF AND ANTICAVITATION VALVE - EXPLODED VIEW

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TRANSMISSION ELECTRICAL SCHEMATIC

FIGURE 11



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