NEW HOLLAND

LOADER LANDSCAPER

U80B TIER 3

REPAIR MANUAL

87728505 NA

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Repair Manual
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TROUBLESHOOTING PROCEDURE

Check the machine for oil leaks and damaged or missing parts. Repair as required.

Is the oil in the hydraulic reservoir at the correct level?
- No → Fill reservoir to proper level. See Section 1002.
- Yes ↓

With the oil at operating temperature, operate all systems. Is the problem in the steering system only?
- No → See Section 8002 for troubleshooting instructions.
- Yes ↓

See the hydraulic schematic in the rear pocket and check the hose connections. Are the hoses connected correctly?
- No → Connect the hoses according the hydraulic schematic.
- Yes ↓

With the oil at operating temperature and the engine running at low idle, is the steering wheel difficult to turn?
- No → Does the steering control valve return to NEUTRAL when the steering wheel is not being turned?
  - No ↓ Replace or repair the steering control valve according to instructions in Section 5001 and 5003.
- Yes ↓

Check the setting of the relief valve according to the instructions in this section. Is the setting correct?
- No → Replace or repair the steering control valve according to instructions in Section 5001 and 5003.
- Yes ↓

Check to see that the spool for the flow control valve in the inlet of the loader control valve moves freely. See Section 8005 and repair as required. Is there still a problem?
- No → Troubleshooting complete.
- Yes ↓

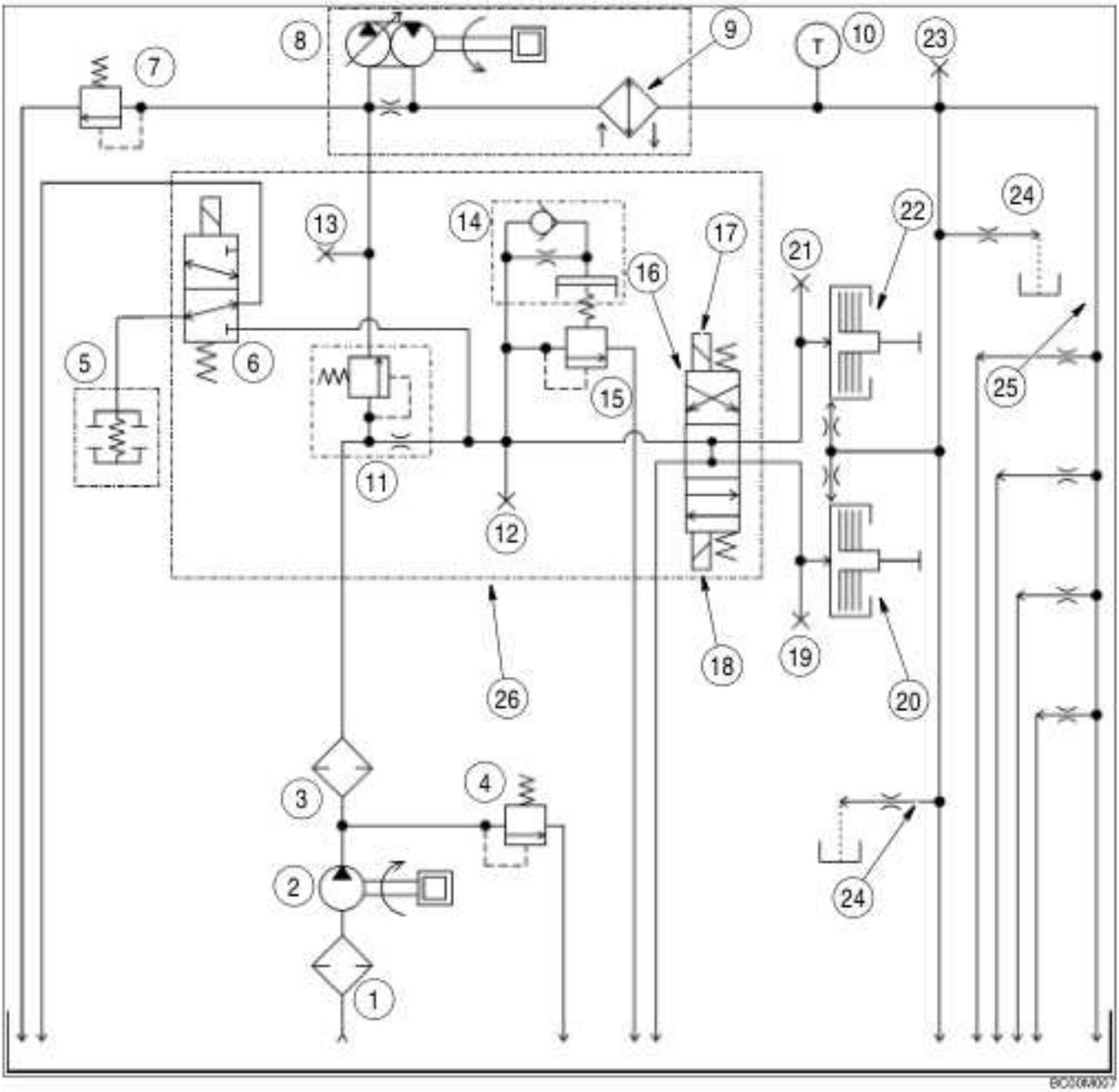
Check the piston packing for the steering cylinder according to instructions in this section. Is the piston packing good?
- No → Repair as required according to instructions in Section 5004.
- Yes ↓

Do the flowmeter test for the hydraulic pump according the instructions in Section 8002. Is the hydraulic pump good?
- No → Replace or repair the hydraulic pump according to the instructions in Section 8004.
- Yes ↓

Replace or repair the steering control valve according to the instructions in Section 5001 and 5003.

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2 WHEEL DRIVE SCHEMATIC

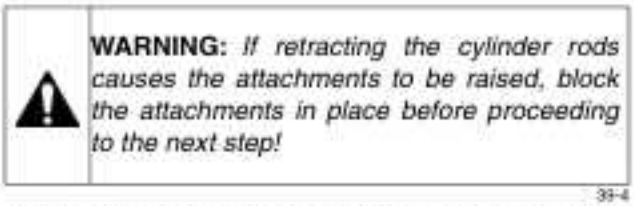


1. STRAINER
2. SUPPLY PUMP
3. FILTER (FULLFLOW/WITH BY-PASS, 15 MICRON)
4. COLD OIL BY-PASS
5. TO DIFFERENTIAL LOCK (REAR AXLE)
6. DIFFERENTIAL LOCK SOLENOID
7. TORQUE CONVERTER RELIEF VALVE
8. TORQUE CONVERTER
9. OIL COOLER
10. OIL TEMPERATURE SENDER (OIL COOLER)
11. FLOW DIVIDER
12. REGULATED CLUTCH PRESSURE
13. TORQUE CONVERTER INLET PRESSURE
14. MODULATOR CIRCUIT (PRESSURE MODULATION FOR FORWARD/REVERSE)
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25. LUBRICATION TO BEARINGS AND CLUTCH PACKS
26. CONTROL VALVE ASSEMBLY

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FLUSHING WATER FROM THE HYDRAULIC SYSTEM

1. Start and run the engine at 1500 rpm (r/min).
2. Completely retract the cylinders of all attachments on the machine. Angle the blade to the right, the right cylinder will be fully retracted and the left will be fully extended. Stop the engine.



NOTE: *Any attachment or part of an attachment that is raised must be supported with acceptable equipment to prevent the attachment from falling.*

3. Move each control lever in both directions to release pressure in the hydraulic circuits.
4. Loosen and remove the filler cap from the reservoir.
5. Drain the hydraulic oil from the reservoir.
   A. See Section 1002 for capacity specifications.
   B. Have available acceptable equipment to drain the hydraulic oil.
   C. Remove the drain plug from the bottom of the reservoir.
6. Remove the hydraulic filter elements from the machine.
7. Install new hydraulic filter elements on the machine.
8. Install the drain plug in the bottom of the reservoir.
9. Fill the hydraulic reservoir with hydraulic fluid. See Section 1002 for specifications.
10. Disconnect the line from the OPEN end and CLOSED end of each cylinder.
11. Be sure all control levers are in the NEUTRAL position.
12. Start and run the engine at low idle.

IMPORTANT: *Check the oil level in the hydraulic reservoir frequently while doing step 13. Have another person hold a container under the hydraulic lines while you do step 13.*

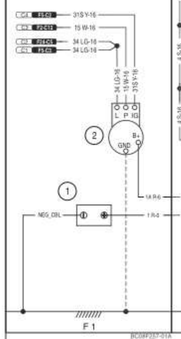
13. Slowly move each control lever in both directions until oil begins to flow from the open line. Hold the control lever in place until clean oil flows from the open line.
14. Stop the engine.
15. Connect the system line to the CLOSED end of each cylinder.
16. Connect a suitable drain line to the OPEN end of each cylinder and place the other end in an acceptable container for contaminated oil.
17. Start the engine and run the engine at low idle.
18. Slowly and completely extend all cylinders. As the piston rod comes in/out of the cylinder, oil will be pushed out of the OPEN end of the cylinders.

NOTE: *Any attachment or part of an attachment that is raised must be supported with acceptable equipment to prevent the attachment from falling.*

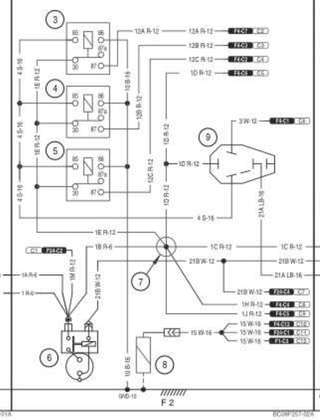
19. Support any attachments that will be in the RAISED position.
20. Stop the engine.
21. Disconnect the drain lines and connect the system lines to the cylinders.
22. Check the oil level in the hydraulic reservoir. Add oil as required. See Section 1002 for specifications.
23. Install the filler cap on the reservoir.
24. Remove the hydraulic filter elements from the machine.
25. Install new hydraulic filter elements on the machine.
26. Start and run the engine at 1500 rpm (r/min), operate each hydraulic circuit to completely extend and retract the cylinders.
27. Stop the engine and check for leaks. Check the oil level in the hydraulic reservoir. Add oil as required. See Section 1002 for specifications.

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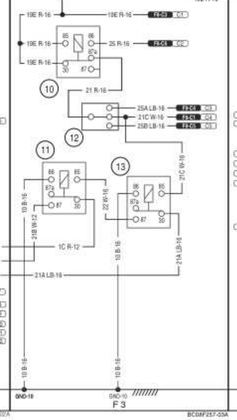
CHARGING SYSTEM



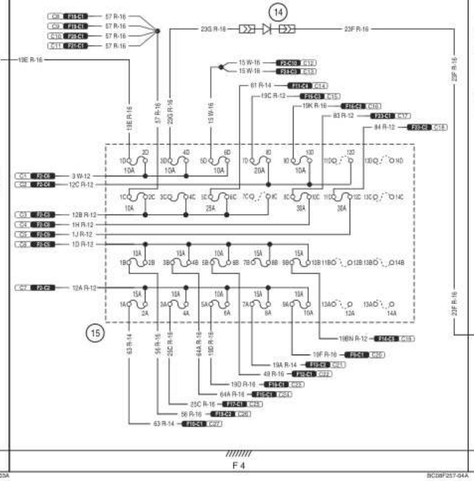
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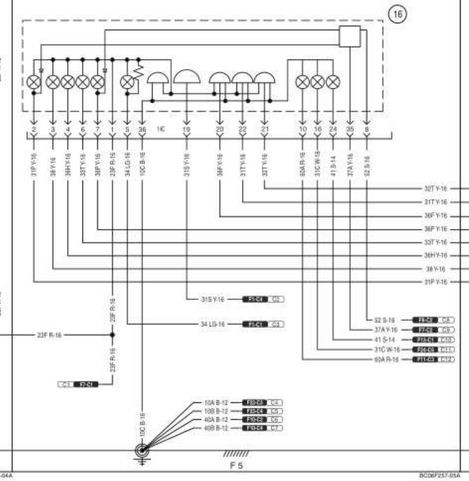
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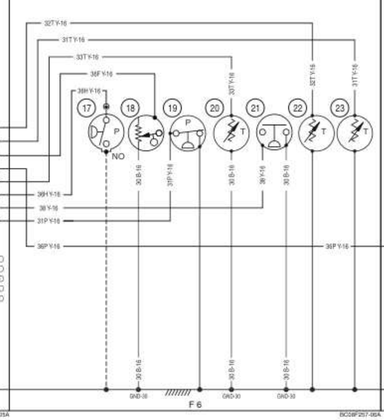
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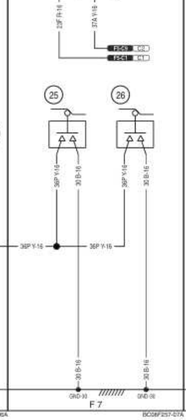
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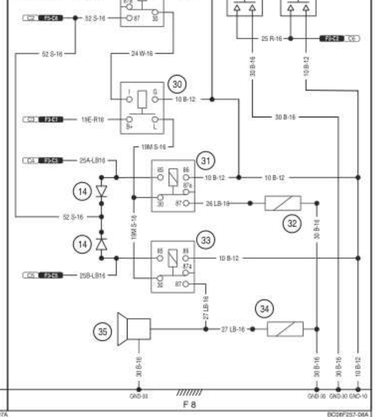
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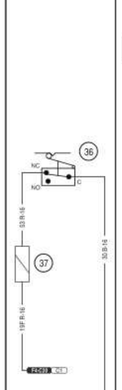
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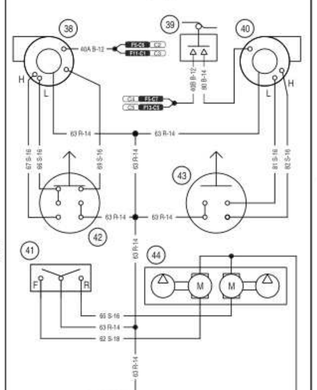
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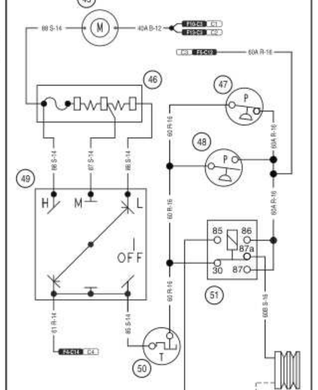
RETURN-TO-DIG



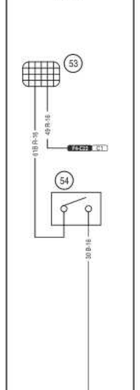
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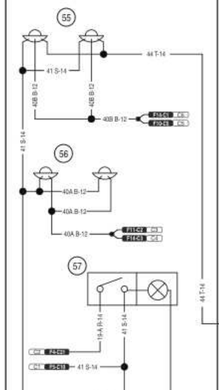
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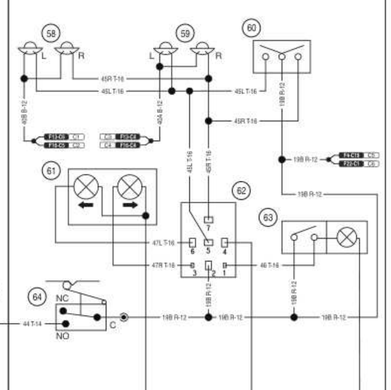
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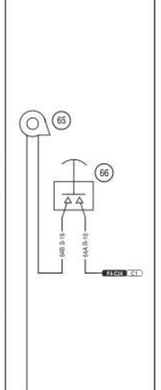
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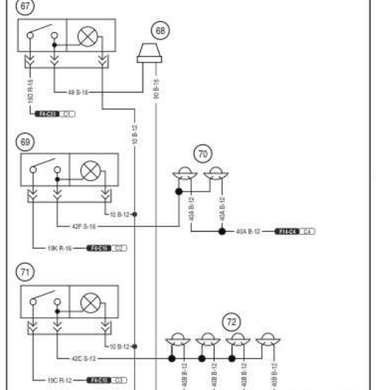
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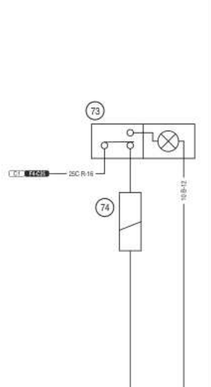
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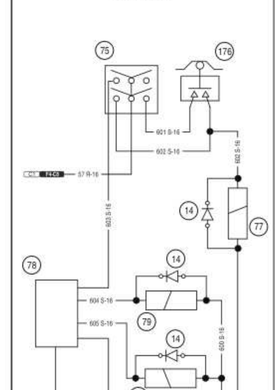
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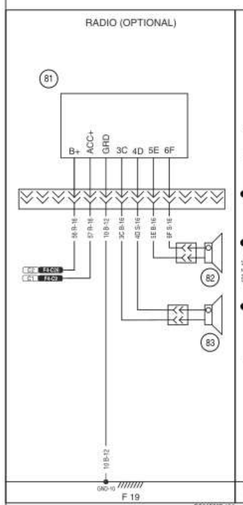
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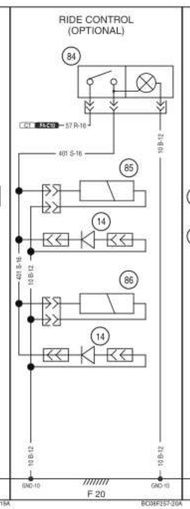
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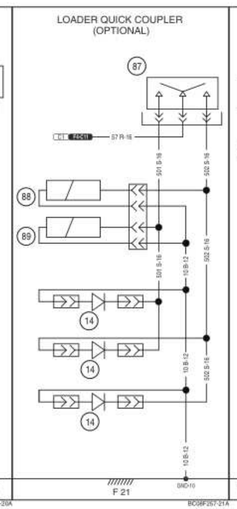
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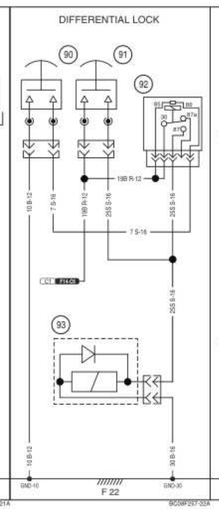
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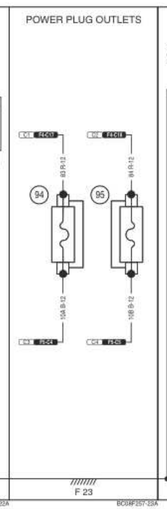
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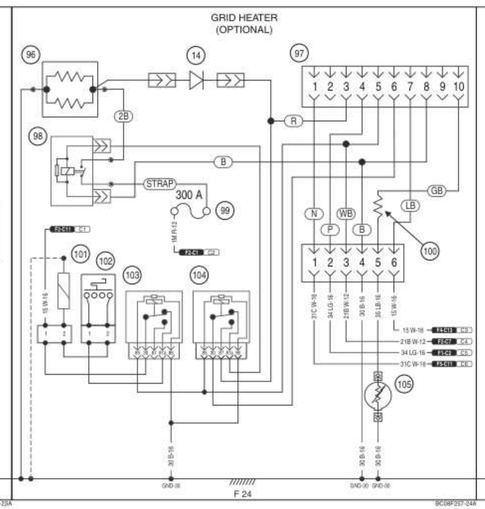
DIFFERENTIAL LOCK



POWER PLUG OUTLETS



GRID HEATER (OPTIONAL)



FRAME NUMBER - COMPONENT NUMBER	FRAME NUMBER - COMPONENT NUMBER	FRAME NUMBER - COMPONENT NUMBER	FRAME NUMBER - COMPONENT NUMBER	FRAME NUMBER - COMPONENT NUMBER
FRAME 1 COMPONENTS 1 - 1. Battery 1 - 2. Alternator FRAME 2 COMPONENTS 2 - 3. Power Relay - #1 2 - 4. Power Relay - #2 2 - 5. Power Relay - #3 2 - 6. Starter 2 - 7. Power Junction Stud 2 - 8. Fuel Shutoff Solenoid 2 - 9. Ignition Switch FRAME 3 COMPONENTS 3 - 10. Clutch Relay 3 - 11. Starter Relay 3 - 12. F-N-R Switch 3 - 13. Neutral Relay FRAME 4 COMPONENTS 4 - 14. Diode 4 - 15. Fuse Block FRAME 5 COMPONENTS 5 - 16. Instrument Cluster FRAME 6 COMPONENTS 6 - 17. Hydraulic Filter Restriction Switch 6 - 18. Fuel Level Sender 6 - 19. Oil Pressure Switch 6 - 20. Rear Axle Temperature Sender 6 - 21. Air Filter Restriction Switch 6 - 22. Transmission Temperature Sender 6 - 23. Coolant Temperature Sender FRAME 7 COMPONENTS 7 - 24. Warning Buzzer 7 - 25. Parking Brake Switch #1 7 - 26. Parking Brake Switch #2	FRAME 8 COMPONENTS 8 - 14. Diode 8 - 27. Shuttle Interlock Relay 8 - 28. Shift Handle - Clutch Cutout Switch 8 - 29. Loader Handle - Clutch Cutout Switch 8 - 30. Shuttle Interlock Timing Relay 8 - 31. Forward Relay 8 - 32. Forward Solenoid 8 - 33. Reverse Relay 8 - 34. Reverse Solenoid 8 - 35. Backup Alarm FRAME 9 COMPONENTS 9 - 36. Return-to-Dig Limit Switch 9 - 37. Return-to-Dig Solenoid FRAME 10 COMPONENTS 10 - 38. Front Wiper Motor 10 - 39. Rear Wiper Disconnect Switch 10 - 40. Rear Wiper Motor 10 - 41. Windshield Washer Switch 10 - 42. Front Wiper Switch 10 - 43. Rear Wiper Switch 10 - 44. Windshield Washer Pump FRAME 11 COMPONENTS 11 - 45. Blower Motor 11 - 46. Resistor Board and Thermal Fuse 11 - 47. Air Conditioner Low Pressure Switch 11 - 48. Air Conditioner High Pressure Switch 11 - 49. Blower Switch 11 - 50. Air Conditioner Thermostat 11 - 51. Air Conditioner Relay 11 - 52. Air Conditioner Compressor Clutch FRAME 12 COMPONENTS 12 - 53. Dome Lamp 12 - 53. Dome Lamp Switch	FRAME 13 COMPONENTS 13 - 55. Tail Lamps 13 - 56. Front Driving Lamps 13 - 57. Driving Lamp Switch FRAME 14 COMPONENTS 14 - 58. Rear Turn Lamps 14 - 59. Front Turn Lamps 14 - 60. Turn Signal Switch 14 - 61. Turn Signal Indicator 14 - 62. Flasher Relay 14 - 63. Flasher Switch 14 - 64. Brake Lamp Switch FRAME 15 COMPONENTS 15 - 65. Horn 15 - 66. Horn Switch FRAME 16 COMPONENTS 16 - 67. Beacon Switch 16 - 68. Rotating Beacon (Optional) 16 - 69. Front Work Lamp Switch 16 - 70. Front Work Lamps 16 - 71. Rear Work Lamp Switch 16 - 72. Rear Work Lamps FRAME 17 COMPONENTS 17 - 73. 4 Wheel Drive Engage Switch 17 - 74. 4 Wheel Drive Solenoid	FRAME 18 COMPONENTS 18 - 14. Diode (Optional) 18 - 75. 3-Point Hitch Mode Control Switch (Optional) 18 - 76. 3-Point Hitch Control Valve Switch (Optional) 18 - 77. Lock Valve Solenoid (Optional) 18 - 78. Laser Control Box (Optional) 18 - 79. Laser Solenoid (Optional) 18 - 80. Laser Solenoid (Optional) FRAME 19 COMPONENTS 19 - 81. Radio (Optional) 19 - 82. Left Speaker (Optional) 19 - 83. Right Speaker (Optional) FRAME 20 COMPONENTS 20 - 14. Diode (Optional) 20 - 84. Glide Ride Control Switch (Optional) 20 - 85. Accumulator Solenoid (Optional) 20 - 86. Tank Solenoid (Optional) FRAME 21 COMPONENTS 21 - 14. Diode (Optional) 21 - 87. Loader Quick Coupler Switch (Optional) 21 - 88. Upper Solenoid (Optional) 21 - 89. Lower Solenoid (Optional) FRAME 22 COMPONENTS 22 - 90. Loader Lever Differential Lock Switch 22 - 91. Side Console Differential Lock Enable Switch 22 - 92. Differential Lock Enable Relay 22 - 93. Differential Lock Solenoid FRAME 23 COMPONENTS 23 - 94. Power Plug #1 23 - 95. Power Plug #2	FRAME 24 COMPONENTS 24 - 14. Diode (Optional) 24 - 96. Grid Heater (Optional) 24 - 97. Cold Start Controller (Optional) 24 - 98. Cold Start Relay (Optional) 24 - 99. 300 Ampere Fuse (Optional) 24 - 100. Resistor 3.01K ±1 Percent (Optional) 24 - 101. KKSB Solenoid (Optional) 24 - 102. KKSB Thermo Switch (Optional) 24 - 103. KKSB Cutout Relay (Optional) 24 - 104. Grid Heater Relay (Optional) 24 - 105. Cold Start Temperature Sender (Optional)

ACTUATORS: LEVER, HAND, FOOT, COIL, TEMP, DIODE, PRESSURE, FLOAT LIQUID LEVEL

CONTACT CONFIGURATIONS: S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T., MOMENTARY / MAINTAINED CONTACTS

MISCELLANEOUS SYMBOLS: VARIABLE RESISTOR, RESISTOR, FUSE, CIRCUIT BREAKER

HOUSINGS: VACUUM SWITCH, PRESSURE SWITCH, LAMP, MOTOR, TEMPERATURE SWITCH, MALE TERMINAL, FEMALE TERMINAL, COMPONENT NUMBER

SHOWS CIRCUIT SPLICE CONNECTION (SPL-99)

SHOWS CIRCUIT CROSSING NOT CONNECTED

INDICATES EXTERNAL GROUND

INDICATES INTERNALLY GROUNDED COMPONENT

NOT ALL CONNECTIONS ARE SHOWN

FEMALE CONNECTOR, MALE CONNECTOR, CONNECTOR NUMBER, CONNECTOR IDENTIFICATION, INDICATES PARTIAL CONNECTOR

WIRE IDENTIFICATION

B . . BLACK	O . . . ORANGE
DB. . DARK BLUE	P . . . PURPLE
G . . . GREEN	R . . . RED
K . . . PINK	S . . . GRAY
LG. . LIGHT GREEN	T . . . TAN
LB. . LIGHT BLUE	W . . . WHITE
DG . DARK GREEN	Y . . . YELLOW

WIRE NUMBER, WIRE SIZE, WIRE COLOR

CIRCUIT CONTINUATION: Frame Number and Circuit Number where Circuit continues. CIRCUIT TAGS. FRAME - CIRCUIT. Circuit Number assigned to Circuit in Frame.

NOTES

NOTE 1: See the Repair Manual for the Troubleshooting Procedures of the Electrical Components.

ELECTRICAL SCHEMATIC
U80B TIER 3 LOADER LANDSCAPER

Additional copies of this Hydraulic and Electrical Schematic can be ordered through Technical Publications Distribution System. The part number is 5-13650

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