CASE

REPAIR MANUAL

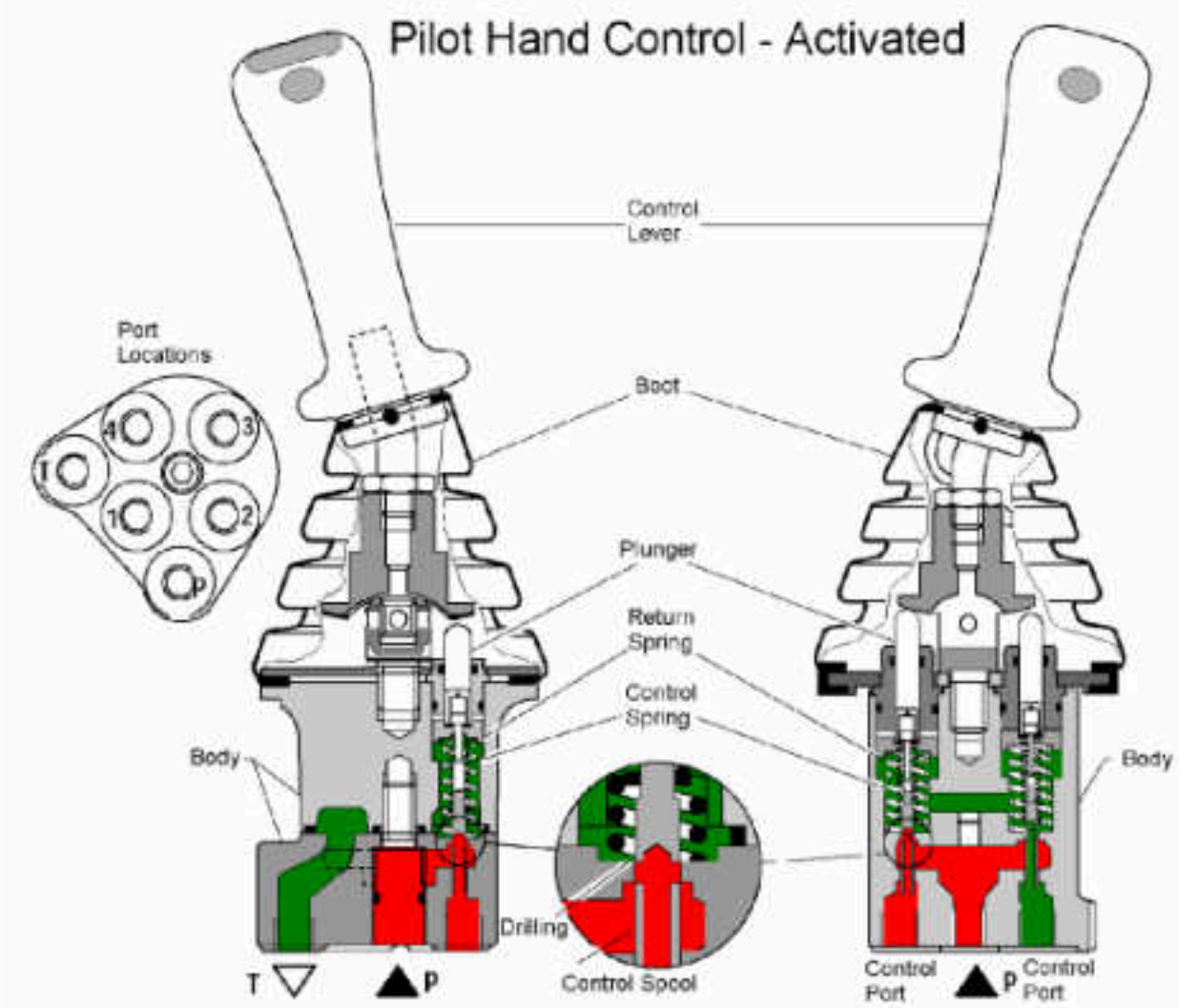
SKID STEER/COMPACT TRACK LOADER

450
465
450CT
SERIES 3

87634780 NA

Issued 01Jan08

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Straight Forward Travel

The hydrostatic pump displacement is infinitely variable between zero and 100%. A given swashplate position can be affected by drive system pressure, control pressure to the pilot hand control valve from the anti-stall cartridge, pilot hand control lever position, pump drive speed, as well as the servo stroking piston centering springs. Flow direction is determined by which pump servo cylinder control port is pressurized. Steering is caused by porting an opposing pressure to the servo piston causing the servo piston to return towards neutral. The slower the travel side causes the machine to steer in that direction. There are four shuttle check valves installed in the lower section of the travel system. These shuttle check valves interconnect a number of the control spool output ports.

•One of the shuttle check valves interconnects the output from control spool number 1 to both the E and F output ports. The backup alarm switch is also actuated when this controller is activated.

•Another shuttle check valve interconnects the output from control spool number 2 to both the C and F output ports.

•Another shuttle check valve interconnects the output from control spool number 3 to both the C and D output ports.

•Another shuttle check valve interconnects the output from control spool number 4 to both the D and E output ports.

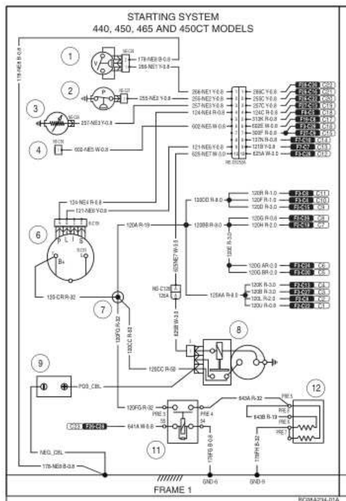
Actuating the travel control lever toward the straight forward direction causes controller number 3 to be pressurized in proportion to the distance that the lever is moved.

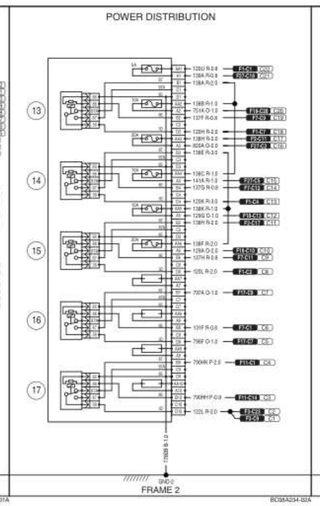
Activating controller number 3 causes the machine to travel straight in the forward direction by pressurizing both the C and D Shuttle Check Valves.

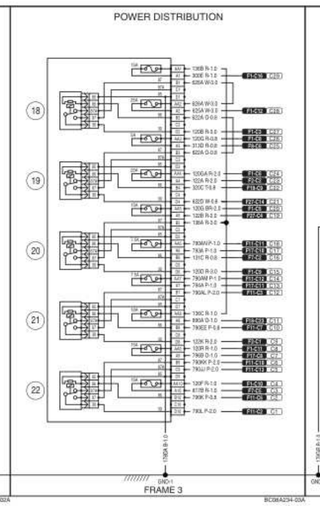
Pressurized oil from the C Shuttle Check Valve is connected to the RH Forward servo piston through controller port C and pump port X4B.

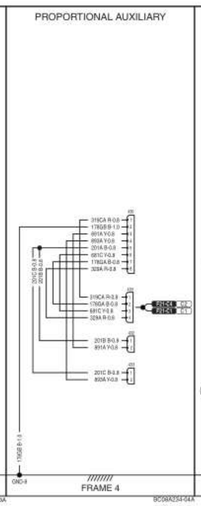
Pressurized oil from the D Shuttle Check Valve is connected to the LH Forward servo piston through controller port D and pump port X4A.

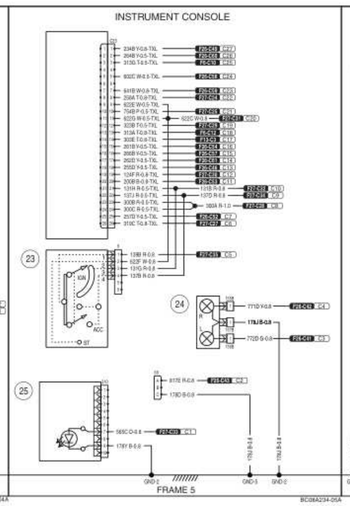
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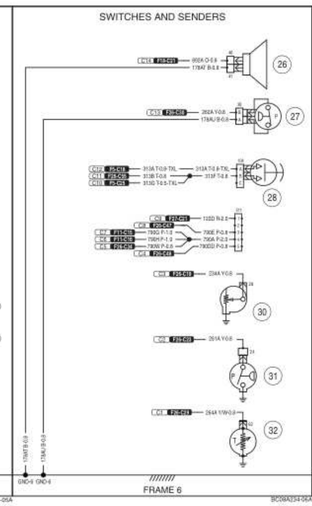


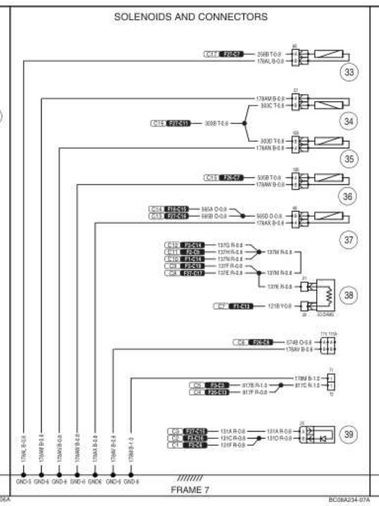


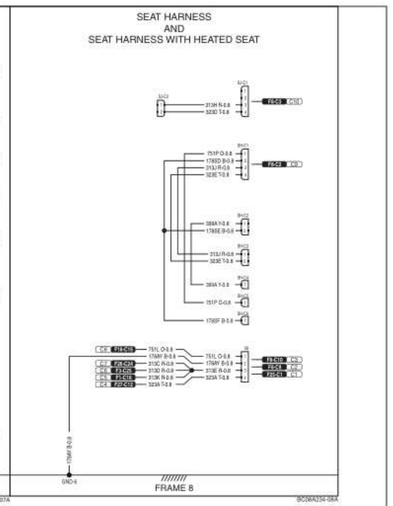


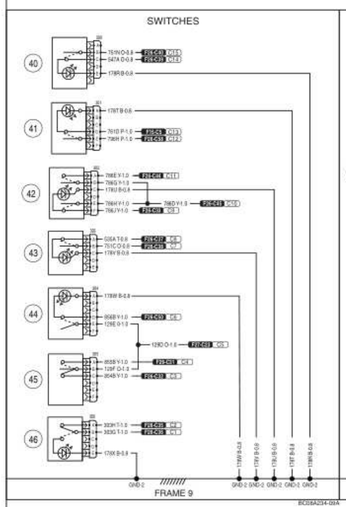


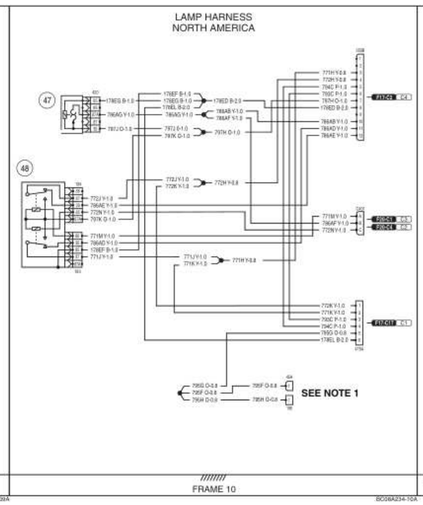


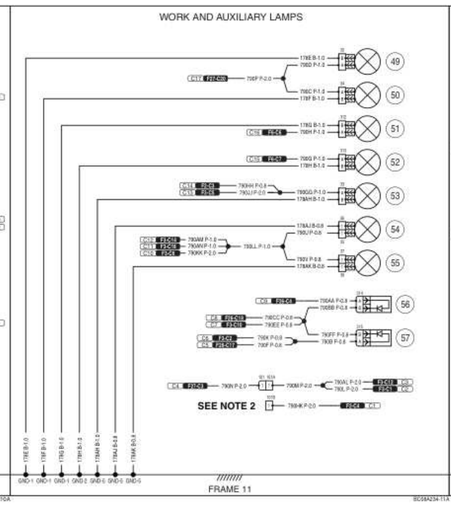


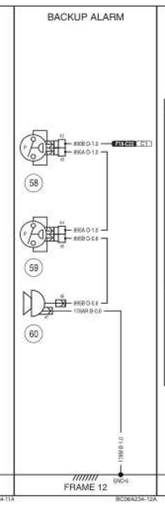


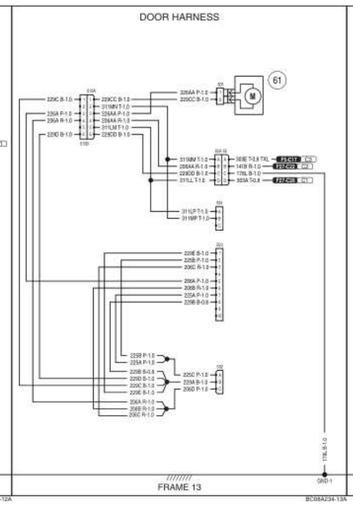


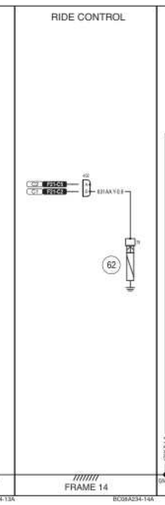


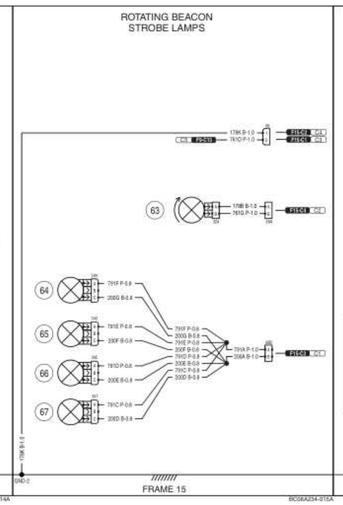


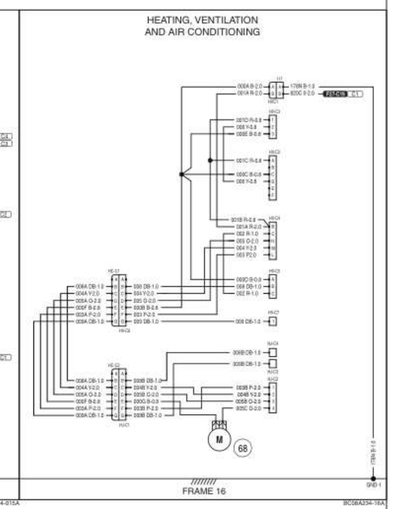


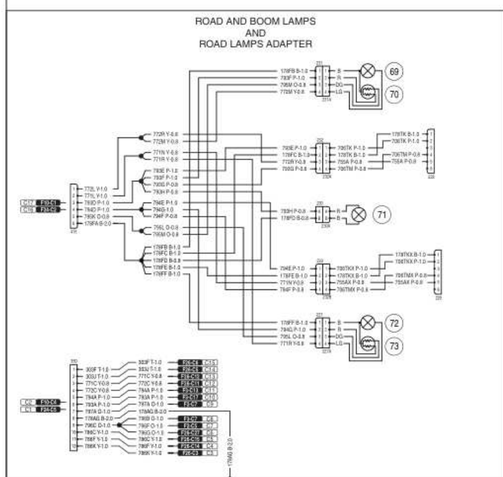


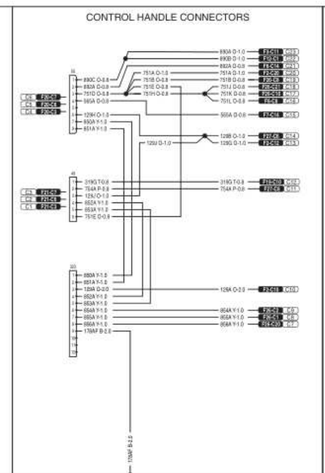


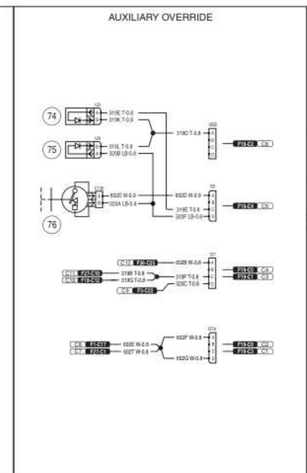


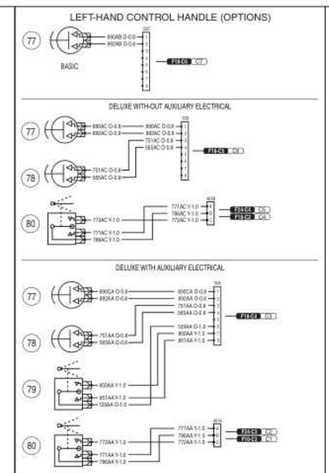


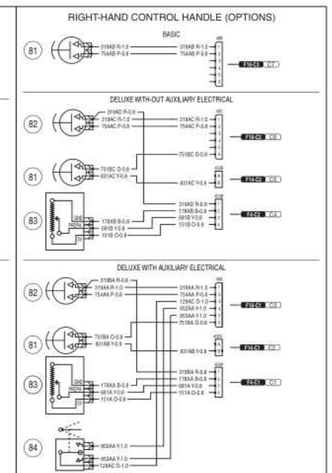












COMPONENTS

FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS
FRAME 1 COMPONENTS 1 - 1. Air Filter Restriction Switch 1 - 2. Engine Oil Pressure Switch 1 - 3. Engine Coolant Temperature Sender 1 - 4. To Fuel Delivery System 1 - 5. Not Used 1 - 6. Alternator 1 - 7. Power Distribution Point 1 - 8. Starter Motor and Solenoid 1 - 9. Battery 1 - 10. Not Used 1 - 11. Coil 1 - 12. Grid Heater FRAME 2 COMPONENTS 2 - 13. Optional Power Relay - 1 2 - 14. Optional Power Relay - 2 2 - 15. HVAC Relay 2 - 16. Hazard/Turn Relay 2 - 17. Lamp Relay -3 FRAME 3 COMPONENTS 3 - 18. Starting Relay 3 - 19. Start/Interlock Relay 3 - 20. Main Power Relay 3 - 21. Lamp Relay - 1 3 - 22. Lamp Relay - 2 FRAME 4 COMPONENTS None Assigned FRAME 5 COMPONENTS 5 - 23. Ignition Switch 5 - 24. Turn Signal Indicator 5 - 25. 2-Speed Indicator FRAME 6 COMPONENTS 6 - 26. Horn 6 - 27. Charge Pressure Switch 6 - 28. Seat Bar Switch 6 - 29. Not Used 6 - 30. Fuel Level Sender 6 - 31. Hydraulic Filter Pressure Switch 6 - 32. Hydraulic Oil Temperature Sender	FRAME 7 COMPONENTS 7 - 33. Brake Release and Tandem Pump 7 - 34. Override Solenoid 7 - 35. Loader Valve Solenoid 7 - 36. Hi-Flow Solenoid 7 - 37. 2-Speed Solenoid 7 - 38. Alternator Excite 7 - 39. Reverse Polarity Protection Diode FRAME 8 COMPONENTS None Assigned FRAME 9 COMPONENTS 9- 40. Hydraulic Coupler Switch 9- 41. Beacon Switch 9- 42. Hazard Switch 9- 43. High Flow Switch 9- 44. Auxiliary Electric ON/OFF Switch 9- 45. Auxiliary Electric Forward/Reverse Switch 9- 46. Loader Lock-Out Switch FRAME 10 COMPONENTS 10- 47. Flasher Module 10- 48. Turn Signal Conversion Module FRAME 11 COMPONENTS 11- 49. Left-Hand Front Work Lamp 11- 50. Right-Hand Front Work Lamp 11- 51. Left-Hand Auxiliary Work Lamp 11- 52. Right-Hand Auxiliary Side Lamp 11- 53. Rear Work Lamp 11- 54. Left-Hand Rear Position Lamp 11- 55. Right-Hand Rear Position Lamp 11- 56. Light Diode #1 11- 57. Light Diode #2 FRAME 12 COMPONENTS 12- 58. Backup Alarm Switch 12- 59. Backup Alarm Switch 12- 60. Backup Alarm	FRAME 13 COMPONENTS 13- 61. Washer Switch FRAME 14 COMPONENTS 14- 62. Ride Control Solenoid FRAME 15 COMPONENTS 15- 63. Rotating Beacon 15- 64. Left-Hand Front Strobe 15- 65. Right-Hand Front Strobe 15- 66. Right-Hand Rear Strobe 15- 67. Left-Hand Rear Strobe FRAME 16 Components 16- 68. Blower Motor FRAME 17 COMPONENTS 17- 69. Left-Hand Rear Turn Lamp 17- 70. Left-Hand Rear Tail/Brake Lamp 17- 71. License Lamp 17- 72. Right-Hand Rear Turn Lamp 17- 73. Right-Hand Rear Tail/Brake Lamp FRAME 18 COMPONENTS None Assigned FRAME 19 COMPONENTS 19- 74. Diode 19- 75. Diode 19- 76. Auxiliary Hydraulic Spool Neutral Switch FRAME 20 COMPONENTS 20- 77. Horn 20- 78. Two-Speed 20- 79. Front Electrical Control Switch #1 20- 80. Turn Signal Switch FRAME 21 COMPONENTS 21- 81. Park Brake 21- 82. Ride Control 21- 83. Prop Auxiliary 21- 84. Front Electrical Control Switch #2	FRAME 22 COMPONENTS None Assigned FRAME 23 COMPONENTS None Assigned FRAME 24 COMPONENTS 24- 85. Flasher Module 24- 86. Timer Relay FRAME 25 COMPONENTS 25- 87. Timer Relay 25- 88. Brake Switch 25- 89. Brake Switch FRAME 26 COMPONENTS None Assigned FRAME 27 COMPONENTS None Assigned FRAME 28 COMPONENTS None Assigned

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

HOUSINGS: VACUUM SWITCH, PRESSURE SWITCH, LAMP, MOTOR, TEMPERATURE SWITCH

CONTACT CONFIGURATIONS: S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T.

MISCELLANEOUS SYMBOLS: MOMENTARY CONTACTS, MAINTAINED CONTACTS, VARIABLE RESISTOR, RESISTOR, FUSE, CIRCUIT BREAKER, MALE TERMINAL, FEMALE TERMINAL, COMPONENT NUMBER

SHOWS CIRCUIT SPLICE CONNECTION (SPL-90) — SHOWS CIRCUIT CROSSING NOT CONNECTED

INDICATES EXTERNAL GROUND — INDICATES INTERNALLY GROUNDED COMPONENT

FEMALE CONNECTOR, MALE CONNECTOR, CONNECTOR NUMBER, CONNECTOR IDENTIFICATION, RELAY, REAR, CONNECTOR NUMBER, SIDE, SIDE — INDICATES PARTIAL CONNECTOR, NOT ALL CONNECTIONS ARE SHOWN

CIRCUIT CONTINUATION

Frame Number and Circuit Number where Circuit continues.

CIRCUIT TAGS: FROM, TO

FRAME - CIRCUIT — CIRCUIT

Circuit Number assigned to Circuit in Frame

WIRE IDENTIFICATION

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

BL (933) 0.8
702A G-1.0
WIRE NUMBER, WIRE COLOR, WIRE SIZE

NOTES

NOTE 1: Connect 45A to connector 45 on the Chassis Harness, and Plug Connector 196 to the Backup Switch instead.
NOTE 2: Connect 101 and 101B for European Configuration.
NOTE 3: Connect 45B to Connector 45C on the Brake Lamp Harness.

ELECTRICAL SCHEMATIC
450, 465 SKID STEER AND 450 CT COMPACT TRACK LOADER
TIER 3 CAB UPGRADE MACHINES

Additional copies of this Hydraulic and Electrical Schematic can be ordered through Technical Publications Distribution System.
The part number is 5-9640

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