CASE

REPAIR MANUAL

CRAWLER DOZER

750L
850L
TIER 3

87728445 NA

Issued 01Mar 08

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DISTRIBUTION SYSTEMS - A

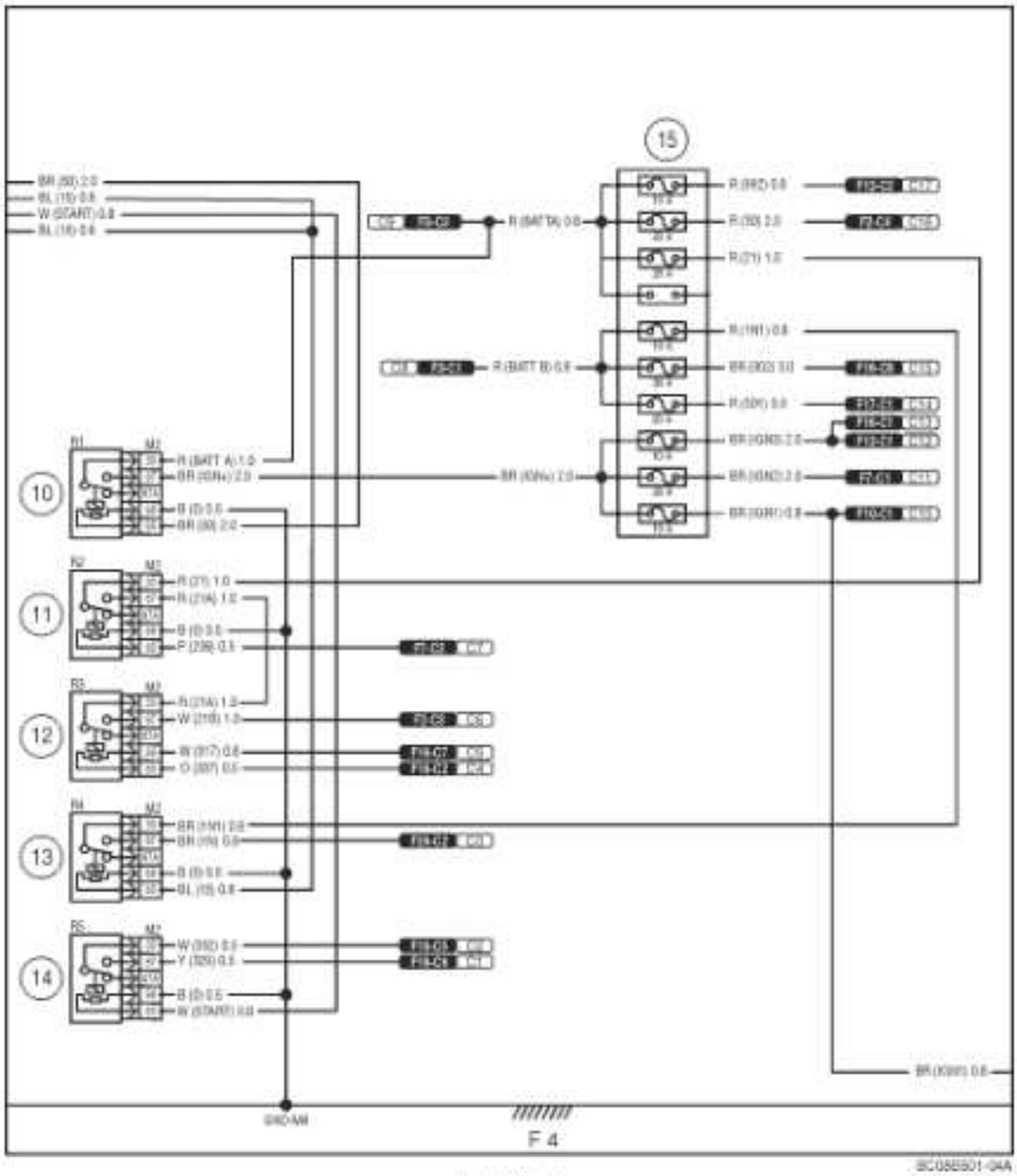
SECONDARY HYDRAULIC POWER SYSTEM - 12.A

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Wiring harness - Electrical schematic frame 04 Fuse and Relay Block



(10) Ignition Relay
(11) Vehicle Safety Relay
(12) Starter Relay
(13) Fleet Relay
(14) Start Sensing Relay
(15) Fuses F1 to F10

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3229-Injection processor error - stop engine

Control Module : EDC

IMPORTANT: *When available use special tool 380040185 harness diagnostic/repair kit and 380040188 electro injector test fixture.*

NOTE: *See engine repair manual for electrical schematic information.*

Cause:

1. Internal failure of ECU or TESTMODE takes too long.
2. Faulty reading from component.
3. Connectors not mated fully, pins not pushed into connector fully, bent pin or broken wire at rear of connector.
4. Wiring or circuits open.
5. Wiring or circuits shorted.

Solution:

1. Find out if the fault code is still active, refer to
   0000 - Retrieving fault codes, Crawlers

   Prior to clearing fault codes write down all fault codes, number of occurrences, and engine hours at last occurrence.

   (1) Turn ignition switch to RUN position to power instrument cluster.

   (2) Clear all fault codes from the cluster.

   (3) To check for fault code: Start and operate machine.

   A. NOT OK – Fault code 3229 is recorded again. Go to Step **2**.

   B. OK – Fault is not recorded again. OK for return to service.
2. Reset engine control module.

   (1) Reset engine control module by turning ignition switch OFF then back ON.

   A. OK – Return to Step **1** to confirm elimination of fault.

   B. NOT OK – Fault is recorded again. Go to Step **3**.
3. Replace the engine control module.

   Prior to changing the engine control module contact Technical Services Group for further assistance.

   (1) Remove and replace engine control module.

   (2) Write symptom on failed engine control module.

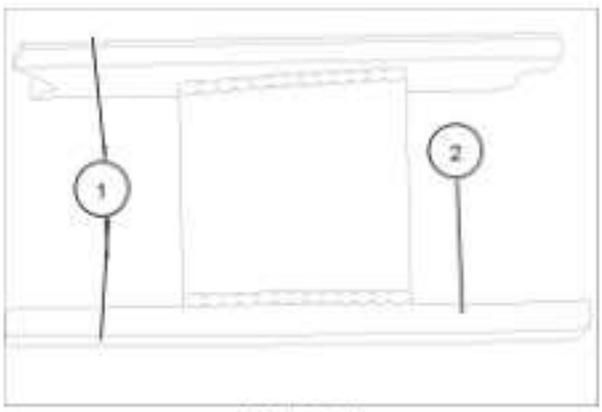
   A. Return to Step **1** to confirm elimination of fault. If fault is recorded again contact Technical Services Group for assistance.

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Pump Right hand pump - Pressure test

CAS1804

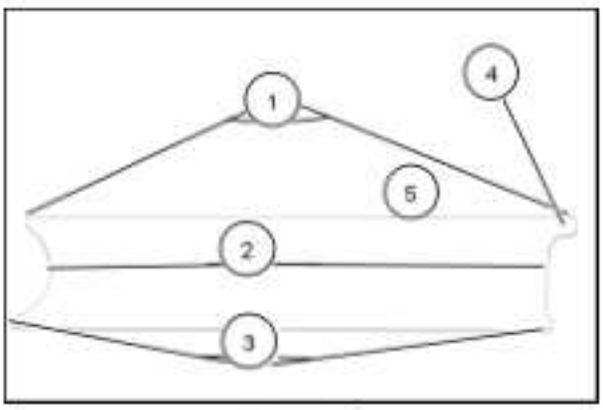
1. To test the hydrostatic pump relief valves, the drive sprockets must be locked in position. To properly lock the drive sprockets, while rotating in the forward direction, a pin must be inserted in the sprocket teeth, at the top of the track frame, and a stop bracket must be provided to prevent the locking pin from moving away from the sprocket. Locally fabricate a pair of steel track locking pin brackets, as shown.
2. Fabricate brackets to lock the sprockets. Use **12.7 mm** (**0.5 in**) thick steel.



SD37N480-01 1

(1)	The spread on the brackets to the outside edges should be **127 mm** (**5 in**).
(2)	Use **12.7 mm** (**0.5 in**) thick steel.

3. Fabricate the two end pieces as shown.



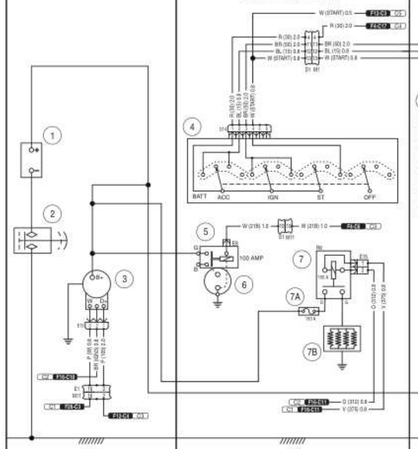
SD37N487-01 2

(1)	**241.3 mm** (**9.50 in**)
(2)	**215.9 mm** (**8.50 in**)
(3)	**228.6 mm** (**9.00 in**)
(4)	The tab is **9.52 mm** (**0.4 in**) high and the cut in from the end is **12.7 mm** (**0.5 in**).
(5)	The plates are **50.8 mm** (**2.0 in**) wide.

4. Run a diagonal weld on both sides of the bracing plate.

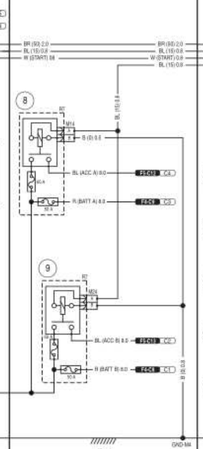
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CHARGING CIRCUIT

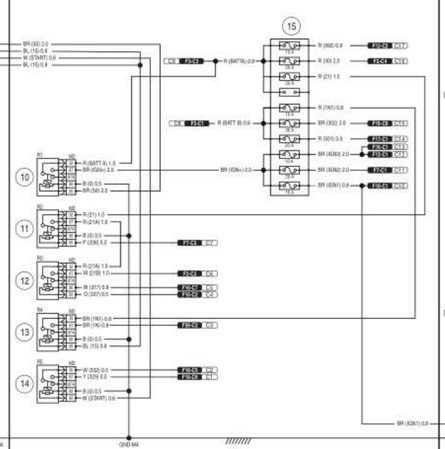


CRANKING CIRCUIT AND COLD START

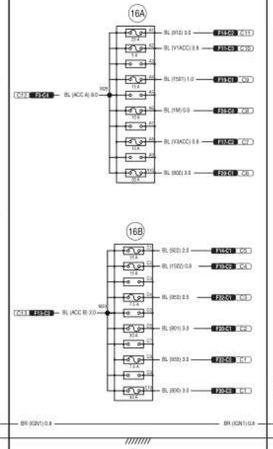
POWER RELAYS



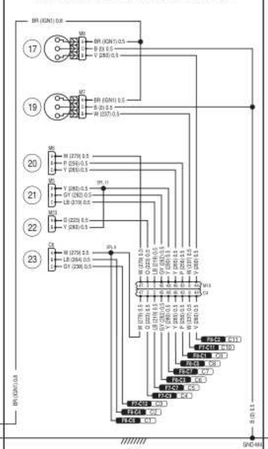
FUSE AND RELAY BLOCK



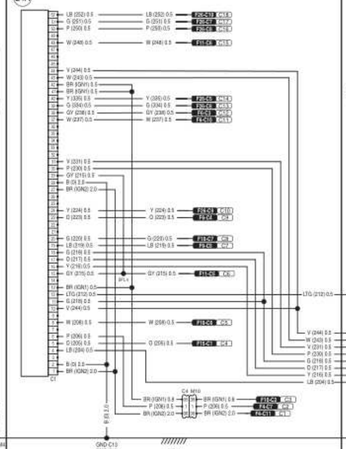
FUSE BLOCK



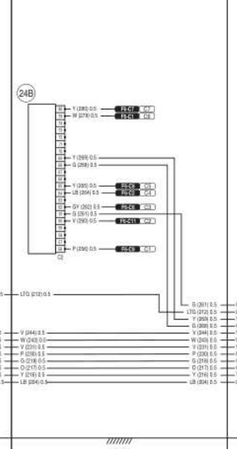
BRAKE, DECELERATOR, AND THROTTLE POTENTIOMETER



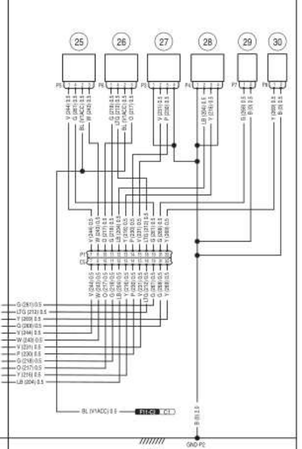
DRIVE TRAIN CONTROLLER



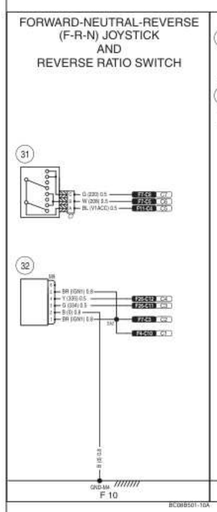
DRIVE TRAIN CONTROLLER



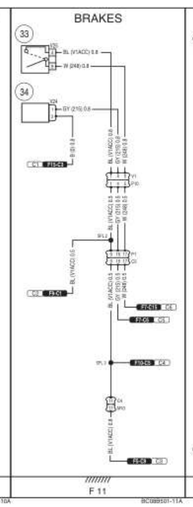
PUMPS AND MOTORS



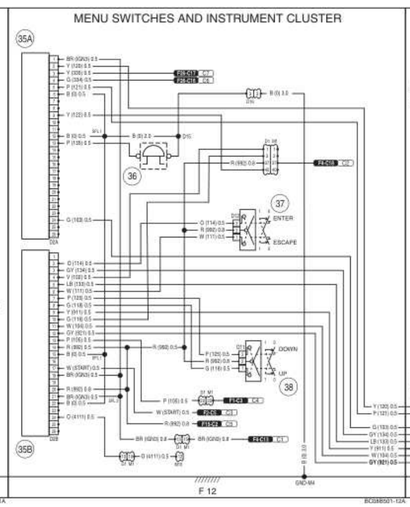
FORWARD-NEUTRAL-REVERSE (F-R-N) JOYSTICK AND REVERSE RATIO SWITCH



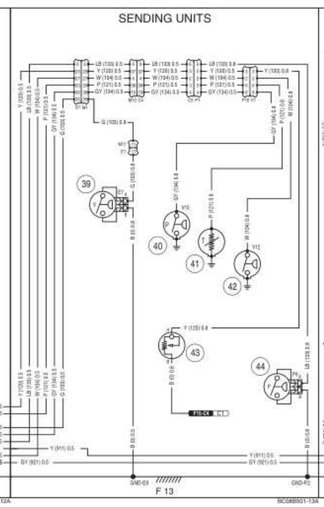
BRAKES



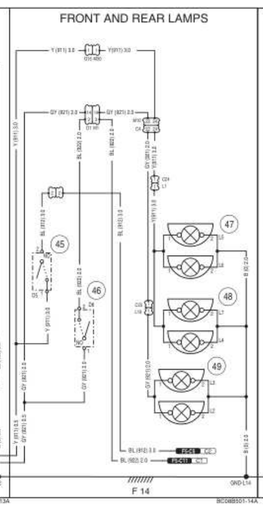
MENU SWITCHES AND INSTRUMENT CLUSTER



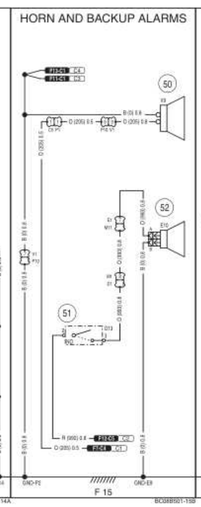
SENDING UNITS



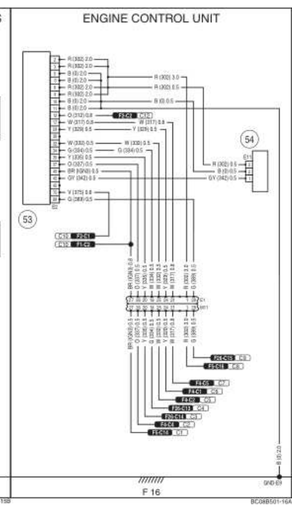
FRONT AND REAR LAMPS



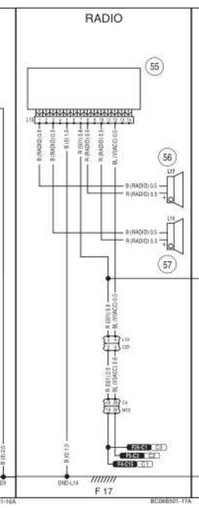
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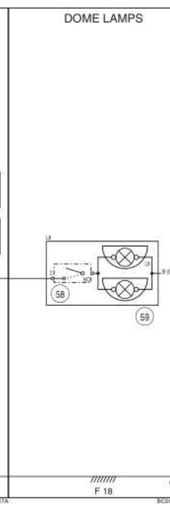
ENGINE CONTROL UNIT



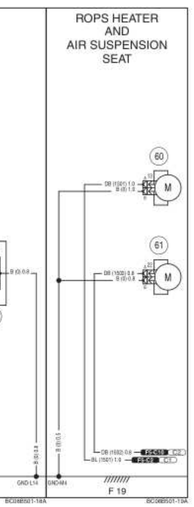
RADIO



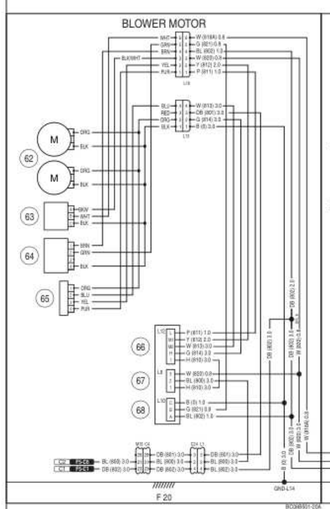
DOME LAMPS



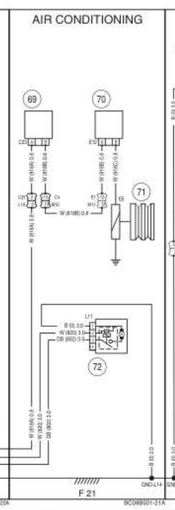
ROPS HEATER AND AIR SUSPENSION SEAT



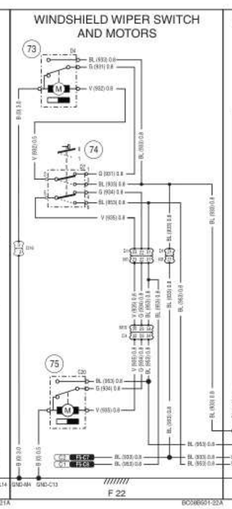
BLOWER MOTOR



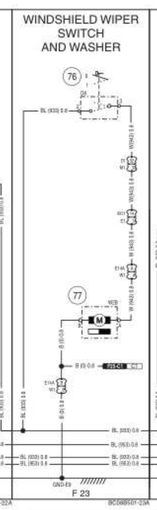
AIR CONDITIONING



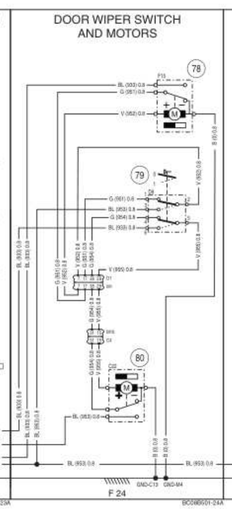
WINDSHIELD WIPER SWITCH AND MOTORS



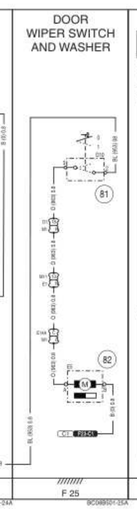
WINDSHIELD WIPER SWITCH AND WASHER



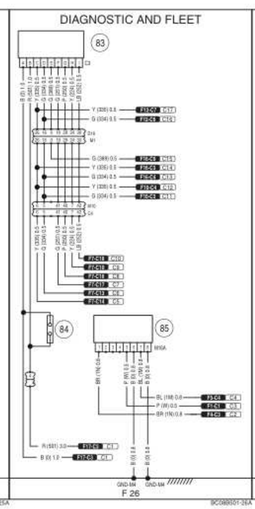
DOOR WIPER SWITCH AND MOTORS



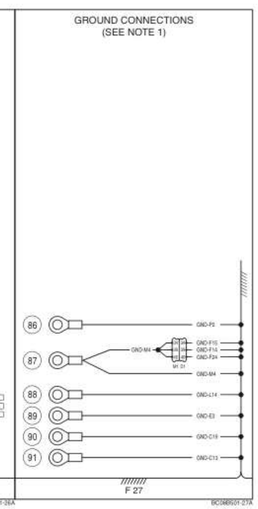
DOOR WIPER SWITCH AND WASHER



DIAGNOSTIC AND FLEET



GROUND CONNECTIONS (SEE NOTE 1)



COMPONENTS

FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS
FRAME 1 COMPONENTS 1 - 1. Batteries 1 - 2. Master Disconnect Switch 1 - 3. Alternator FRAME 2 COMPONENTS 2 - 4. Ignition Switch 2 - 5. Starter Solenoid 2 - 6. Starter 2 - 7. Grid Heater Relay 2 - 7A. Grid Heater Fuse 2 - 7B. Grid Heater FRAME 3 COMPONENTS 3 - 8. Power Relay - Module A 3 - 9. Power Relay - Module B FRAME 4 COMPONENTS 4 - 10. Ignition Relay 4 - 11. Vehicle Safety Relay 4 - 12. Starter Relay 4 - 13. Fleet Relay 4 - 14. Start Sensing Relay 4 - 15. Fuses F1 to F10 FRAME 5 COMPONENTS 5 - 16A. Fuses F11 to F20 5 - 16B. Fuses F1 to F10 FRAME 6 COMPONENTS 6 - 17. Right-Hand Brake Proximity Switch 6 - 18. Not Used 6 - 19. Left-Hand Brake Proximity Switch 6 - 20. Brake Position Sensor 6 - 21. Decelerator Position Sensor 6 - 22. Low Idle Switch 6 - 23. Throttle Position Sensor FRAME 7 COMPONENTS 7 - 24A. Drive Train Controller - Connector C1 FRAME 8 COMPONENTS 8 - 24B. Drive Train Controller - Connector C2	FRAME 9 COMPONENTS 9 - 25. Left-Hand Motor Speed Sensor 9 - 26. Right-Hand Motor Speed Sensor 9 - 27. Left-Hand Hydrostatic Pump 9 - 28. Right-Hand Hydrostatic Pump 9 - 29. Left-Hand Motor Solenoid 9 - 30. Right-Hand Motor Solenoid FRAME 10 COMPONENTS 10 - 31. Reverse Ratio Switch 10 - 32. Forward-Neutral-Reverse (F-N-R) Joystick FRAME 11 COMPONENTS 11 - 33. Brake Pressure Switch 11 - 34. Brake Solenoid FRAME 12 COMPONENTS 12 - 35A. Instrument Cluster A 12 - 35B. Instrument Cluster B 12 - 36. Warning Buzzer 12 - 37. Enter/Escape Switch 12 - 38. Up/Down Switch FRAME 13 COMPONENTS 13 - 39. Air Filter Restriction 13 - 40. Hydrostatic Filter Restriction Switch 13 - 41. Transmission Temperature 13 - 42. Equipment Filter Restriction Switch 13 - 43. Fuel Sending Unit 13 - 44. Transmission Charge Pressure Switch FRAME 14 COMPONENTS 14 - 45. Front Lamp Switch 14 - 46. Rear Lamp Switch 14 - 47. Front Lamps 14 - 48. Front Lamps (Optional) 14 - 49. Rear Lamps FRAME 15 COMPONENTS 15 - 50. Backup Alarm 15 - 51. Horn Switch 15 - 52. Horn FRAME 16 Components 16 - 53. Engine Controller 16 - 54. Water-in-Fuel Sensor	FRAME 17 COMPONENTS 17 - 55. Radio 17 - 56. Right Speaker 17 - 57. Left Speaker FRAME 18 COMPONENTS 18 - 58. Interior Lamp Switch 18 - 59. Interior Lamp FRAME 19 COMPONENTS 19 - 60. Heater - ROPS 19 - 61. Air Suspension Seat FRAME 20 COMPONENTS 20 - 62. Blower Motors 20 - 63. Thermostat 20 - 64. Water Valve 20 - 65. Resistor 20 - 66. Fan Speed Switch 20 - 67. Mode Switch 20 - 68. Temperature Switch FRAME 21 COMPONENTS 21 - 69. Air Conditioner Low Pressure Switch 21 - 70. Air Conditioner High Pressure Switch 21 - 71. Air Conditioner Clutch 21 - 72. Air Conditioner Condenser FRAME 22 COMPONENTS 22 - 73. Front Wiper Motor 22 - 74. Wiper Switch (Front/Rear) 22 - 75. Rear Wiper Motor FRAME 23 COMPONENTS 23 - 76. Washer Switch (Front/Rear) 23 - 77. Washer Pump (Front/Rear) FRAME 24 COMPONENTS 24 - 78. Wiper Motor (Left) 24 - 79. Wiper Switch (Left/Right) 24 - 80. Wiper Motor (Right) FRAME 25 COMPONENTS 25 - 81. Washer Switch (Left/Right) 25 - 82. Washer Pump (Left/Right)	FRAME 26 COMPONENTS 26 - 83. Connector - Diagnostic 26 - 84. 12 Volt Power Socket 26 - 85. Connector - Fleet Tracker FRAME 27 COMPONENTS 27 - 86. P2 - Located in Battery Compartment (Ground contacts in Frames 9, 13, and 15). 27 - 87. M4 - Located behind Console (Ground contacts in Frames 3, 4, 6, 10, 12, 19, 22, 24, and 26.) 27 - 88. L14 - Located top of Cab (Ground contacts in Frames 14, 17, 18, 20, and 21.) 27 - 89. E9 - Located at left-hand rear Engine Mount (Ground contacts in Frames 13, 15, 16, 23, and 25.) 27 - 90. C19 - Located near Drive Train Controller (Ground contacts in Frames 7 and 26.) 27 - 91. C13 - Located near Right-Hand Arm Rest (Ground contacts in Frames 22 and 24.)

ACTUATORS: LEVER, HAND, FOOT, COIL

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: TEMP, DIODE, PRESSURE, FLOAT LIQUID LEVEL; 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, INDICATES PARTIAL CONNECTOR, NOT ALL CONNECTIONS ARE SHOWN

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

WIRE IDENTIFICATION

B . . . BLACK
BL . . BLUE
BR. . TAN/BROWN
G . . . GREEN
GY . GREY
LB . . LIGHT BLUE
O . . . ORANGE
P . . . PINK
R . . . RED
V . . . VIOLET/PURPLE
W . . WHITE
Y . . . YELLOW

BL (000)-1.0 — WIRE COLOR, WIRE SIZE, WIRE NUMBER

NOTES

NOTE 1 See SECTION 4002 in the REPAIR MANUAL for locations and Troubleshooting information.

ELECTRICAL SCHEMATIC
750L and 850L CRAWLER

Additional copies of this Hydraulic and Electrical Schematic can be ordered through Technical Publications Distribution System.
The part number is 5-11880

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