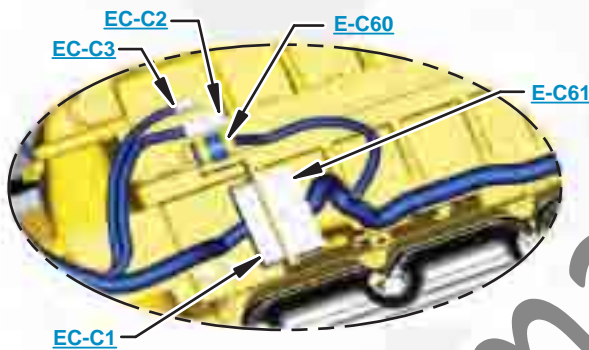


This document is best viewed at a screen resolution of 1024 X 768.

To set your screen resolution do the following:
RIGHT CLICK on the **DESKTOP**.
 Select **PROPERTIES**.
CLICK the **SETTINGS TAB**.
MOVE THE SLIDER under **SCREEN RESOLUTION** until it shows **1024 X 768**.
CLICK OK to apply the resolution.

The Bookmarks panel will allow you to quickly navigate to points of interest.



Click on any text that is BLUE and underlined. These are hyperlinks that can be used to navigate the schematic and machine views.

VIEW ALL CALLOUTS

When only one callout is showing on a machine view this button will make all of the callouts visible. This button is located in the top right corner of every machine view page.

| HOTKEYS (Keyboard Shortcuts) | | |
|------------------------------|-------------|------------------------|
| | FUNCTION | KEYS |
| | Zoom In | "CTRL" / "+" |
| | Zoom Out | "CTRL" / "-" |
| | Fit to Page | "CTRL" / "0" (zero) |
| | Hand Tool | "SPACEBAR" (hold down) |
| | Find | "CTRL" / "F" |



Schematic

769D Off-Highway Truck,
and 771D Quarry Truck
Electrical System

769D:
BBB475-UP

771D:
BCA327-UP

Volume 1 of 2: Engine and Chassis Wiring
Volume 2 of 2: Battery and Fuse Block Wiring

COMPONENT LOCATION

Volume 1 of 2 - ENGINE AND CHASSIS WIRING



| Component | Schematic Location | Machine Location | Component | Schematic Location | Machine Location |
|--|--------------------|------------------|-------------------------------------|--------------------|------------------|
| Alarm, Action | E-7 | C | Sensor, RH Turbo Inlet Press | B-7 | 30 |
| Alarm, Backup | C-15 | 12 | Sensor, RH Wheel Speed | A-15 | 34 |
| Alternator | B-8 | 2 | Sensor, Secondary Cam S/T | C-3 | E |
| Battery | A-7 | 3 | Sensor, Shift Lever Position | G-8 | 38 |
| Beacon | C-10 | B | Sensor, T/C Temp | B-7 | 32 |
| Bus Bar | B-8 | 15 | Sensor, Throttle Position | D-5 | C |
| Control, EMS II | G-2 | 8 | Sensor, Turbo Outlet Pressure | C-3 | E |
| Control, Engine ECM | A-2 | 8 | Solenoid, A/C Clutch | C-7 | 2 |
| Control, Integrated Braking Control | F-13 | 8 | Solenoid, Air Horn | G-13 | 7 |
| Control, TPMS | D-15 | 5 | Solenoid, ARC Cont | I-2 | 17 |
| Control, XMSN / Chassis | D-12 | 5 | Solenoid, ARC Supply | I-1 | 17 |
| Converter, 24V / 12V | I-12 | 7 | Solenoid, Cylinder Head #1,#3,#5,#7 | C-2 | 26 |
| Ground, Cab | D-11 | 17 | Solenoid, Cylinder Head #2,#4,#6,#8 | B-2 | 26 |
| Ground, Engine 1 | A-2 | 15 | Solenoid, Down Shift | C-13 | 32 |
| Ground, Engine 2 | B-6 | 27 | Solenoid, Exhaust Diverter | E-11 | 48 |
| Ground, Frame 1 | A-6 | 15 | Solenoid, Lockup Clutch | C-13 | 18 |
| Ground, Frame 2 | C-11 | 17 | Solenoid, Lower | C-11 | 32 |
| Ground, Frame 3 | B-10 | 28 | Solenoid, Rail Pressure Valve | C-3 | 26 |
| Ground, Rear Cab Boss 1 | F-11 | 17 | Solenoid, Raise | C-11 | 32 |
| Ground, Rear Cab Boss 2 | E-15 | D | Solenoid, Start Aid | B-6 | 37 |
| Module, Quad Gage | H-3 | A | Solenoid, TCS 4 way | A-14 | 47 |
| Module, Speedo/Tech | I-3 | A | Solenoid, TCS Proportional | A-14 | 47 |
| Module, Wiper Delay | I-15 | A | Solenoid, Up Shift | C-13 | 32 |
| Monitor, TPMS Operator | G-8 | A | Suppressor, Arc A/C | C-8 | 28 |
| Motor, A/C Blower | E-5 | A | Suppressor, Horn Solenoid | G-13 | 7 |
| Motor, LH Window | I-10 | A | Suppressor, Key Switch ARC | E-5 | A |
| Motor, Secondary Steering EVAC | A-7 | 15 | Switch, A/C ON | D-4 | C |
| Motor, Starter | A-8 | 17 | Switch, A/C Refrigerant Pressure | C-8 | 2 |
| Motor, Windshield Washer | B-10 | 38 | Switch, A/C Thermostat | E-5 | C |
| Motor, Wiper | I-5 | 33 | Switch, Air Dryer | B-8 | 4 |
| Outlet, Power +12V | H-8 | A | Switch, ARC Pressure | I-1 | 28 |
| Receptacle, Aux Start | A-7 | 17 | Switch, Auto Retarder | D-4 | C |
| Relay, Secondary Steering EVAC Prelube | B-7 | 17 | Switch, Blower | G-3 | A |
| Relay, Start | A-8 | 17 | Switch, Brake Overstroke | B-8 | 39 |
| Resistor, Blower Motor Dropping | E-5 | A | Switch, Coolant Flow | C-3 | 26 |
| Sender, Fuel Level | B-8 | 21 | Switch, Disconnect | A-6 | 40 |
| Sender, XMSN Speed | C-3 | 18 | Switch, Door | E-7 | 41 |
| Sensor, Air Brake Pressure | I-13 | 9 | Switch, Ground Level Shutdown | B-5 | 46 |
| Sensor, Air Inlet Temperature | B-3 | E | Switch, Hazard | F-6 | A |
| Sensor, Atmospheric Pressure | C-3 | E | Switch, Headlamp | E-5 | C |
| Sensor, Body Up | C-15 | 25 | Switch, Horn | H-5 | A |
| Sensor, Brake Oil Temp | B-8 | 26 | Switch, Key Start | G-2 | A |
| Sensor, Coolant Temperature | C-3 | E | Switch, Machine Lockout | F-1 | 37 |
| Sensor, Engine Oil Pressure | B-3 | E | Switch, Manual Retard Braking | H-1 | C |
| Sensor, Engine Oil Temperature | B-3 | E | Switch, Power Window | I-10 | A |
| Sensor, Engine Speed | B-7 | 24 | Switch, SEC/ ParkBK Pressure | I-14 | 9 |
| Sensor, Fan Speed | B-8 | 2 | Switch, Secondary Steer Pressure | G-1 | 38 |
| Sensor, Fuel Temperature | B-3 | E | Switch, Service Brake Pressure | I-14 | D9 |
| Sensor, Hoist Lever Position | G-8 | 38 | Switch, Steering Pressure | B-8 | 4 |
| Sensor, LH Front Strut Pressure | E-1 | 28 | Switch, Stop Lamp | H-14 | 9 |
| Sensor, LH Rear Strut Pressure | C-15 | 29 | Switch, Suppl Steering | D-2 | A |
| Sensor, LH Wheel Speed | A-15 | 33 | Switch, TCS Test | E-3 | A |
| Sensor, Primary Cam S/T | C-3 | E | Switch, Transmission Gear | C-13 | 35 |
| Sensor, Rail Pressure | C-3 | E | Switch, Turn Sig/ Wiper/Washer | H-4 | A |
| Sensor, RH Front Strut Pressure | E-1 | 30 | Switch, XMSN Filter Pressure | C-8 | 28 |
| Sensor, RH Rear Strut Pressure | B-15 | 31 | | | |

Machine locations are repeated for components located close together.
 A = Located inside of cab.
 B = Located inside of right console.
 C = Located inside of left console.

D = Located around relay panel.
 E = Located around hydraulic oil tank.
 F = Located around pilot manifold.
 G = Located under platform.

COMPONENT LOCATION

Volume 2 of 2 - BATTERY AND FUSE BLOCK WIRING



| Component | Schematic Location | Machine Location |
|-------------------------|--------------------|------------------|
| Alternator Breaker | <u>B</u> | <u>A-8</u> |
| Relay - Backup Alarm | <u>64</u> | <u>E-3</u> |
| Relay - Engine Pre-Lubr | <u>D</u> | <u>B-3</u> |
| Relay - Headlamp | <u>D</u> | <u>D-3</u> |
| Relay - HighBeam | <u>D</u> | <u>E-3</u> |
| Relay - Secondary Steer | <u>65</u> | <u>A-3</u> |
| Relay - Serv Lamp | <u>D</u> | <u>B-3</u> |
| Relay - Start AID | <u>D</u> | <u>A-3</u> |
| Relay - Stop Lamp | <u>D</u> | <u>F-3</u> |
| Relay - Wiper | <u>D</u> | <u>C-3</u> |
| Stop Lamp Suppressor | <u>D</u> | <u>F-7</u> |

Machine locations are repeated for components located close together.

A = Located inside of cab.

B = Located inside of right console.

C = Located inside of left console.

D = Located around relay panel.

E = Located around hydraulic oil tank.

F = Located around pilot manifold.

G = Located under platform.

CONNECTOR LOCATION

Volume 1 of 2 - ENGINE AND CHASSIS WIRING



| Connector Number | Schematic Location | Machine Location |
|--------------------------------|----------------------|--------------------|
| CONN 1 | I-15 | 8 |
| CONN 2 | B-14 | 12 |
| CONN 3 | B-14 | 12 |
| CONN 4 | A-13 | 35 |
| CONN 5 | B-13 | 35 |
| CONN 6 | B-13 | 35 |
| CONN 7 | G-14 | 53 |
| CONN 8 | B-12 | 32 |
| CONN 9 | G-13 | 7 |
| CONN 10 | C-12 | 49 |
| CONN 11 | H-12 | 49 |
| CONN 12 | I-12 | 14 |
| CONN 14 | D-11 | 7 |
| CONN 15 | H-11 | 6 |
| CONN 16 | C-10 | 28 |
| CONN 17 | C-9 | 49 |
| CONN 18 | G-9 | D |
| CONN 19 | H-9 | 14 |
| CONN 20 | I-9 | 44 |
| CONN 21 | D-8 | 28 |
| CONN 22 Service Tool Connector | I-8 | 55 |
| CONN 23 | B-7 | 2 |
| CONN 24 | D-7 | 28 |
| CONN 25 | D-6 | 49 |
| CONN 26 | G-6 | 54 |
| CONN 27 Payload Download Port | I-6 | 55 |
| CONN 28 | B-5 | 17 |
| CONN 29 Service Tool Connector | B-5 | 26 |
| CONN 30 | C-5 | 26 |
| CONN 31 Product Link Switch | E-5 | A |
| CONN 32 | F-5 | A |
| CONN 33 Start Aid Switch | D-4 | A |
| CONN 34 | F-4 | 56 |
| CONN 35 | G-4 | 44 |
| CONN 36 | B-3 | 26 |
| CONN 37 | G-1 | 57 |
| CONN 38 | G-1 | 57 |
| CONN 39 | H-3 | A |

The connectors shown in this chart are for harness to harness connectors. Connectors that join a harness to a component are generally located at or near the component. See the Component Location Chart.

CONNECTOR LOCATION

Volume 2 of 2 - BATTERY AND FUSE BLOCK WIRING



| Connector Number | Schematic Location | Machine Location |
|------------------|---------------------|--------------------|
| CONN 18 | C-8 | D |
| CONN 19 | E-8 | 14 |

The connectors shown in this chart are for harness to harness connectors. Connectors that join a harness to a component are generally located at or near the component. See the Component Location Chart.

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| Component Identifiers (CID¹) Module Identifier (MID²) Caterpillar Transmission /Chassis Control System (MID No. 027) | |
|---|---|
| CID | Component |
| 0168 | Electrical System |
| 0190 | Speed Sensor (Engine) |
| 0248 | CAT Data Link |
| 0269 | Sensor Power Supply |
| 0420 | Relay (Secondary Steering) |
| 0444 | Start Relay |
| 0562 | Relay (Secondary Steering) |
| 0590 | Electronic Control Module (English) |
| 0627 | Brake Switch (Parking) |
| 0700 | Sensor (Transmission Gear) |
| 0701 | Speed Sensor (Transmission Output) |
| 0702 | Position Sensor (Shift Lever) |
| 0704 | Pressure Switch (Service Brake) |
| 0706 | Electronic Control (Body Up Switch) |
| 0707 | Solenoid Valve (Upshift) |
| 0708 | Solenoid Valve (Downshift) |
| 0709 | Solenoid Valve (Lockup Clutch) |
| 0718 | Transmission System |
| 0724 | Solenoid Valve (Body Raise) |
| 0725 | Solenoid Valve (Body Lower) |
| 0773 | Rotary Position Sensor (Hoist Lever) |
| 0967 | Machine Application |
| 1236 | Lamp (Body Up Indicator) |
| 1326 | Location Code |
| 1394 | Solenoid Valve (Exhaust Diverter) |
| Caterpillar Monitoring Module (MID No. 030) | |
| CID | Component |
| 0168 | Electrical System Voltage |
| 0254 | Payload Electronic Control Module |
| 0350 | Lift Linkage Position Sensor |
| 0364 | Head End Lift Cylinder Pressure Sensor |
| 0769 | Rod End Lift Cylinder Pressure Sensor |
| 0817 | Internal Backup Battery |
| 0820 | Keypad Data Link |
| 0826 | Torque Converter Oil Temperature Sensor |

| Engine Electronic Control Module (MID No. 036) | |
|---|--|
| CID | Component |
| 0070 | Parking Brake Switch |
| 0149 | Ride Control Solenoid 2 |
| 0168 | Electrical System Voltage |
| 0190 | Engine Speed Sensor |
| 0248 | CAT Data Link |
| 0356 | Tilt Dump Solenoid 1 |
| 0363 | Ride Control Solenoid 1 |
| 0367 | Ride Control Switch |
| 0368 | Transmission Auto/Manual Switch |
| 0506 | Implement ECM |
| 0621 | Downshift Switch |
| 0622 | Upshift Switch |
| 0623 | Directional Switch |
| 0631 | Transmission Clutch 1 Solenoid |
| 0632 | Transmission Clutch 2 Solenoid |
| 0633 | Transmission Clutch 3 Solenoid |
| 0634 | Transmission Clutch 4 Solenoid |
| 0635 | Transmission Clutch 5 Solenoid |
| 0636 | Transmission Clutch 6 Solenoid |
| 0638 | Starter Solenoid |
| 0650 | Harness Code |
| 0671 | Transmission Output Speed Sensor |
| 0687 | Options ID Code |
| 1521 | Part-Throttle Auto shift Selector Switch |



| Brake Electronic Control System (MID No. 116) | |
|---|--|
| CID | Component |
| 0084 | Speed Sensor (Ground) |
| 0091 | Position Sensor (Throttle) |
| 0168 | Electrical System Voltage |
| 0190 | Speed Sensor (Engine) |
| 0248 | CAT Data Link |
| 0269 | Sensor Power Supply |
| 0627 | Pressure Switch (Service Brake) |
| 0689 | Solenoid Valve (Left Rear Traction Control) |
| 0690 | Solenoid Valve (Right Rear Traction Control) |
| 0700 | Position Sensor (Transmission Gear) |
| 0701 | Speed Sensor (Transmission Output) |
| 0702 | Position Sensor (Transmission Shift Lever) |
| 0704 | Pressure Switch (Service Brake) |
| 0710 | Solenoid Valve (Auto Retarder) (Supply) |
| 0711 | Solenoid Valve (Auto Retarder Control) |
| 0712 | Indicator Lamp (Retarder) |
| 0713 | Rocker Switch (Auto Retarder) |
| 0714 | Pressure Switch (Auto Retarder) |
| 0715 | Pressure Switch (Retarder) |
| 0718 | Transmission System |
| 0719 | Proportional Solenoid Valve (Traction Control) |
| 0966 | Indicator Lamp (Traction Control) |
| 0967 | Machine Application |
| 1225 | Pressure Sensor (Left Parking Brake Oil) |
| 1226 | Pressure Sensor (Right Parking Brake Oil) |
| 1326 | Incorrect Location Code |

| Failure Mode Identifiers (FMI) ¹ | |
|---|--|
| FMI No. | Failure Description |
| 0 | Data valid but above normal operational range. |
| 1 | Data valid but below normal operational range. |
| 2 | Data erratic, intermittent, or incorrect. |
| 3 | Voltage above normal or shorted high. |
| 4 | Voltage below normal or shorted low. |
| 5 | Current below normal or open circuit. |
| 6 | Current above normal or grounded circuit. |
| 7 | Mechanical system not responding properly. |
| 8 | Abnormal frequency, pulse width, or period. |
| 9 | Abnormal update. |
| 10 | Abnormal rate of change. |
| 11 | Failure mode not identifiable. |
| 12 | Bad device or component. |
| 13 | Out of calibration. |
| 14 | Parameter failures. |
| 15 | Parameter failures. |
| 16 | Parameter not available. |
| 17 | Module not responding. |
| 18 | Sensor supply fault. |
| 19 | Condition not met. |
| 20 | Parameter failures. |

¹The FMI is a diagnostic code that indicates what type of failure has occurred.

| Monitoring System Operator Modes | |
|----------------------------------|--------|
| Operator Mode | Number |
| Service Meter | 1 |
| Odometer | 2 |
| Tachometer | 3 |
| Resettable Load Counter | 4 |
| Diagnostic Scrolling | 5 |

¹ The CID is a diagnostic code that indicates which component is faulty.

² The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.

| Monitoring System Service Modes | |
|------------------------------------|--------|
| Service Mode | Number |
| Operator Mode Sequence | 0 |
| Harness Code | 1 |
| Numeric Readout | 2 |
| Service | 3 |
| Digital Tattletale | 4 |
| Units | 5 |
| Permanent Load Count | 6 |
| Calibration (Transmission Control) | 7 |

Resistor, Sender and Solenoid Specifications

| Part No. | Component Description | Resistance (Ohms) ¹ |
|----------|---|---|
| 3E-1906 | Solenoid: A/C Clutch | 17.6 ± 0.6 |
| 3E-6333 | Solenoid: Start Aid | 6 |
| 3E-8691 | Solenoid: Arc Contol & Arc Supply | 31 ± 3 |
| 9G-9988 | Solenoid: TCS 4 Way | 24.9 ± 0.4 |
| 3T-0062 | Solenoid: Proportional | 16 |
| 185-0008 | Solenoid: Horn Air | 74 ± 2.0 |
| 101-3430 | Solenoid: Exhaust Diverter | 31.1 ± 2.4 |
| 107-0677 | Solenoid: Rail Pressure Valve | 10.1 |
| 150-8202 | Solenoid: Cylinder #1 thru #8 | 2.1 ± 0.2 |
| 156-2829 | Solenoid: Lower Raise | 8.3 |
| 125-9740 | Resistor: Blower Motor Dropping | A-C 2.0 ± 0.01 B-C 1.0 ± 0.05 C-D 0.36 ± 0.02 |
| 212-1439 | Sender: Fuel Level | Full: 92 - 98 Empty: 0.0 - 3.5 |
| 144-6292 | Solenoid: Down & Up Shift Lockup Clutch | 32.6 ± 1.6 |

¹ At room temperature unless otherwise noted.

Off Machine Switch Specification

| Part No. | Function | Actuate | Deactuate | Contact Position |
|----------|-----------------------------------|---|--------------------------------------|--|
| 3E-2034 | Switch - Service Brake | 80kPa MAX (11.6 psi MAX) | 50 ± 20 kPa (7.2 ± 2.9 psi) | Normally Closed |
| 3E-5464 | Switch - A/C Thermostat Temp | 1.1 ± 0.8 °C (30 ± 1.4 °F) | 2.2 ± 0.8 °C (36 ± 1.4 °F) | Normally Closed |
| 3E-6428 | Switch - Coolant Flow | 362 ± 29 mN (1.3 ± .1 oz) | 303 mN (1.8 oz) | Normally Open |
| 3E-6450 | Switch - Steering Pressure | 1200 kPa (174 psi) | 700 ± 100 kPa (101.5 ± 14.5 psi) | (A-C) Normally Closed (A-B) Normally Open |
| 103-4977 | Switch - Retard BK Pressure | 60 kPa (8.7 psi) | 28 ± 15 kPa (4.1 ± 2.1 psi) | Normally Open |
| 111-9563 | Switch - Arc Pressure | 80 kPa 11.6 psi | 55 ± 20 kPa (7.8 ± 2.9 psi) | Normally Closed |
| 114-5333 | Switch - A/C Refrigerant Pressure | 275 - 1750 kPa ¹ (39.9 - 253.8 psi) | -- -- | Normally Open ² |
| 227-6744 | Switch - XMSN Filter Pressure | 276 ± 28 kPa (40 ± 4.0 psi) | 179 kPa (26 psi MIN) | Normally Closed |
| 160-2445 | Switch - Secondary Parking Brake | 517 ± 35 kPa (74.9 ± 5 psi) | 448 ± 35 kPa (64.9 ± 5 psi) | Normally Open |
| 166-7781 | Switch - Stop Lamp | 45 kPa MAX (6.5 psi MAX) | 5 kPa MIN (0.7 psi MIN) | Normally Open |

¹ With increasing pressure the closed condition can be maintained up to 2800 kpa (405 psi), with decreasing pressure the closed condition can be maintained down to 170 kpa (25psi).

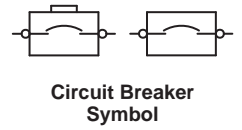
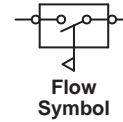
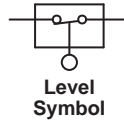
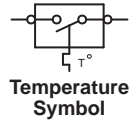
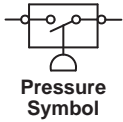
² Contact position at the contacts of the harness connector.

HARNESS and WIRE

Electrical Schematic Symbols



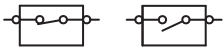
Symbols



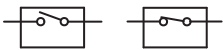
Symbols and Definitions



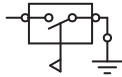
Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.



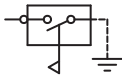
Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.



Switch (Normally Closed): A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the component.



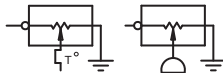
Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.



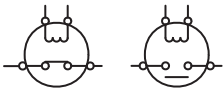
Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.



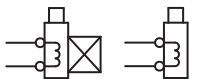
Reed Switch: A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.



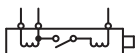
Sender: A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.



Relay (Magnetic Switch): A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.



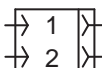
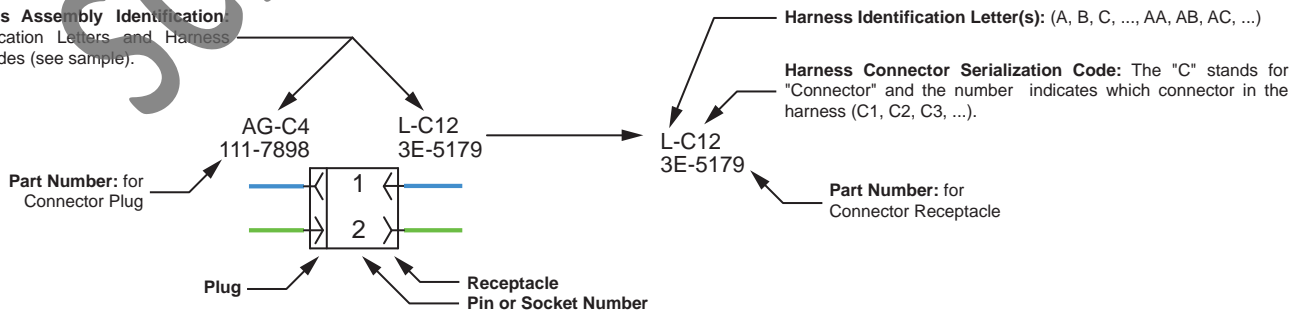
Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.



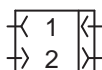
Magnetic Latch Solenoid: A magnetic latch solenoid is an electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

Harness and Wire Symbols

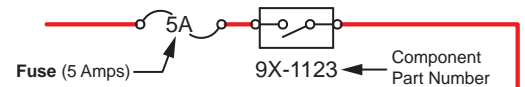
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).



Deutsch connector: Typical representation of a Deutsch connector. The plug contains all sockets and the receptacle contains all pins.

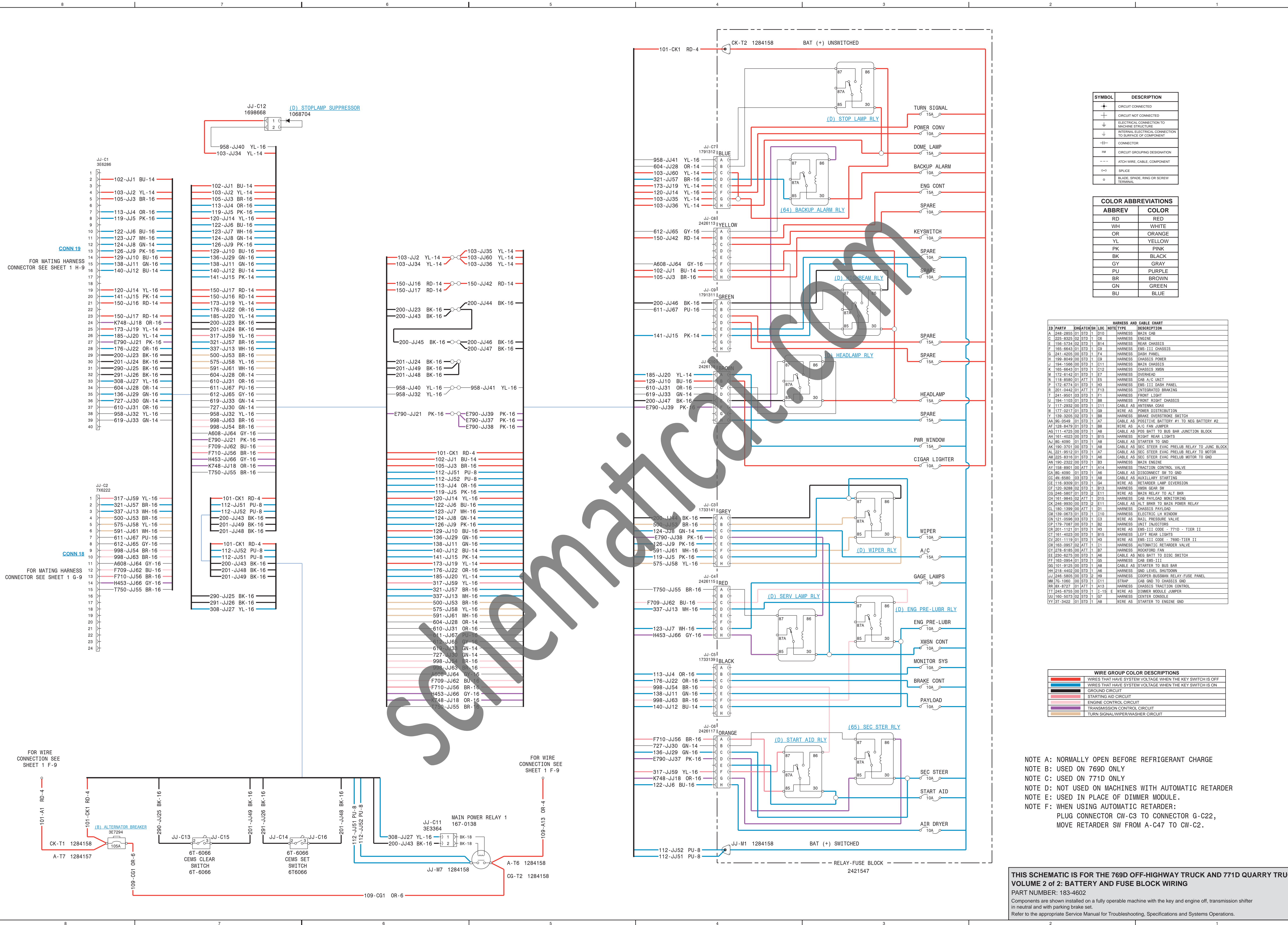


Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug and receptacle contain both pins and sockets.



Harness identification code: This example indicates wire group 325, wire 135 in harness "AG".

Wire Gauge
Wire Color



| SYMBOL | DESCRIPTION |
|--------|--|
| + | CIRCUIT CONNECTED |
| + | CIRCUIT NOT CONNECTED |
| ↓ | ELECTRICAL CONNECTION TO MACHINE STRUCTURE |
| ↓ | INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT |
| → | CONNECTOR |
| HM | CIRCUIT GROUPING DESIGNATION |
| --- | ATCH WIRE, CABLE COMPONENT |
| ○ | SPACE |
| ○ | BLADE, SPACER, RING OR SCREW TERMINAL |

| COLOR ABBREVIATIONS | |
|---------------------|--------|
| ABBREV | COLOR |
| RD | RED |
| WH | WHITE |
| OR | ORANGE |
| YL | YELLOW |
| PK | PINK |
| BK | BLACK |
| GY | GRAY |
| PU | PURPLE |
| BR | BROWN |
| GN | GREEN |
| BU | BLUE |

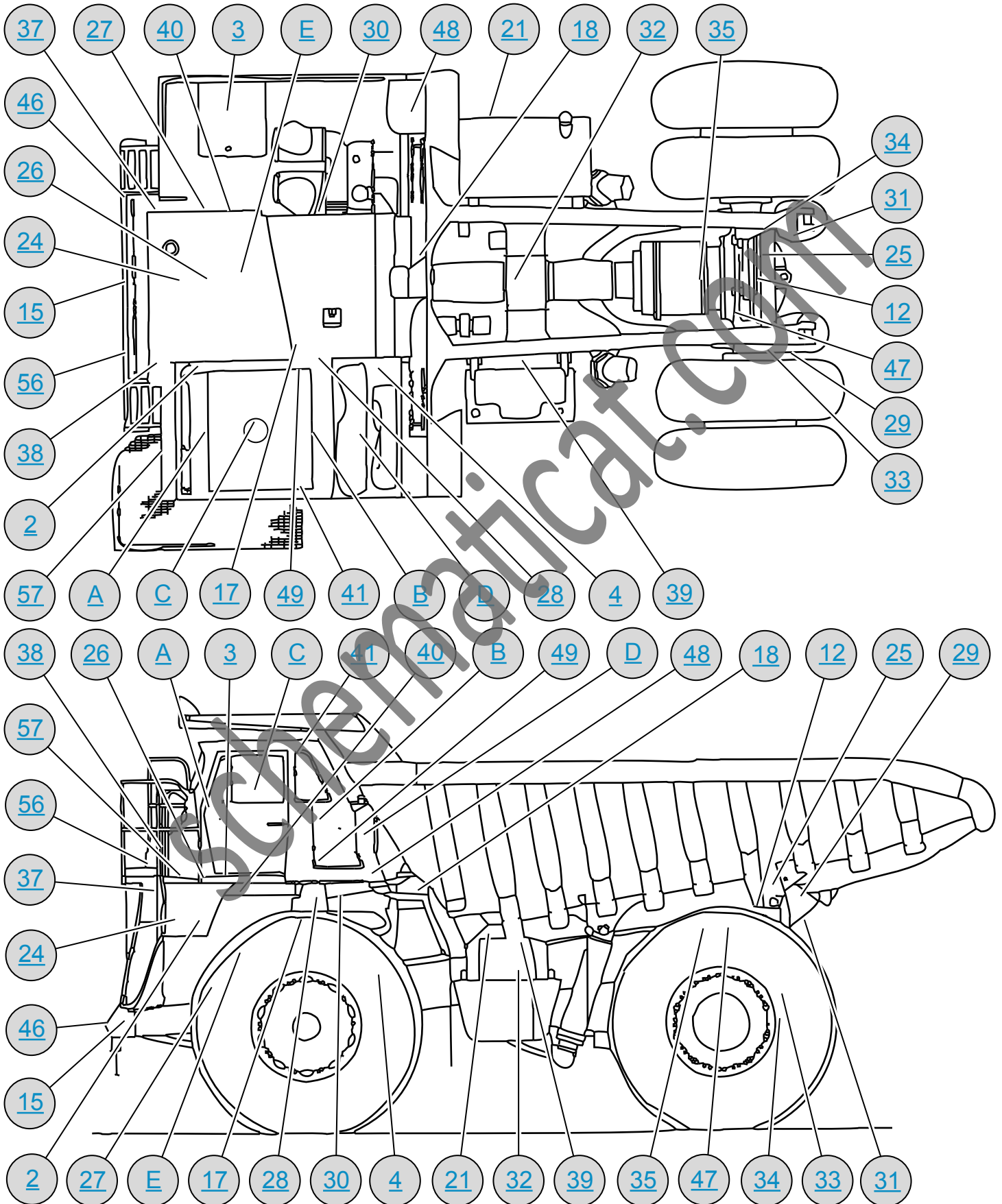
| ID (PART#) | QTY | DESCRIPTION | LOC | NOTE |
|-------------|-----|-------------|--------|--|
| A 248-8955 | 01 | STD 1 | D10 | HARNESS MAIN CAB |
| C 325-8328 | 02 | STD 1 | G6 | HARNESS FRONT LIGHT |
| E 186-5724 | 02 | STD 1 | B14 | HARNESS REAR CHASSIS |
| F 185-8643 | 01 | STD 1 | G9 | HARNESS FRONT CHASSIS |
| G 241-4205 | 02 | STD 1 | F4 | HARNESS DASH PANEL |
| H 199-8049 | 02 | STD 1 | G9 | HARNESS CHASSIS POWER |
| J 194-1966 | 02 | STD 1 | C11 | HARNESS MAIN CHASSIS |
| K 185-8643 | 01 | STD 1 | C12 | HARNESS CHASSIS WORN |
| M 172-6142 | 01 | STD 1 | E7 | HARNESS OVERHEAD |
| N 118-8580 | 01 | ATT 1 | F5 | HARNESS CAB A/C UNIT |
| P 172-6774 | 01 | STD 1 | H3 | HARNESS EMS-111 DASH PANEL |
| R 201-0442 | 01 | ATT 1 | F13 | HARNESS INTEGRATED BRAKING |
| T 241-9501 | 02 | STD 1 | F1 | HARNESS FRONT LIGHT |
| U 194-1103 | 01 | STD 1 | B8 | HARNESS FRONT RIGHT CHASSIS |
| V 117-2828 | 02 | STD 1 | F11 | CABLE AS BATTERIES GND |
| W 177-5217 | 01 | STD 1 | G9 | WIRE AS POWER DISTRIBUTION |
| Y 139-3206 | 02 | STD 1 | B8 | HARNESS BRAKE OVERSTROKE SWITCH |
| AA 185-8549 | 01 | STD 1 | A7 | CABLE AS POSITIVE BATTERY #1 TO NEG BATTERY #2 |
| AB 128-8478 | 01 | STD 1 | B8 | WIRE AS A/C FAN JUMPER |
| AD 111-4725 | 02 | STD 1 | A8 | CABLE AS POS BATT TO BUS BAR JUNCTION BLOCK |
| AE 101-4023 | 02 | STD 1 | B15 | HARNESS RIGHT REAR LIGHTS |
| AJ 185-4090 | 01 | STD 1 | A8 | CABLE AS STARTER TO GND |
| AK 190-3733 | 02 | STD 1 | A8 | CABLE AS SEC STEER EVAC PRELUB RELAY TO JUNG BLOCK |
| AL 221-9512 | 01 | STD 1 | A7 | CABLE AS SEC STEER EVAC PRELUB MOTOR TO MOTOR |
| AM 225-8316 | 01 | STD 1 | A6 | CABLE AS SEC STEER EVAC PRELUB MOTOR TO GND |
| AN 190-2325 | 02 | STD 1 | B8 | HARNESS MAIN SWIVE |
| AP 118-9848 | 02 | ATT 1 | A14 | HARNESS TRACTION CONTROL VALVE |
| CA 185-4090 | 01 | STD 1 | A6 | CABLE AS DISCONNECT SW TO GND |
| CC 148-6588 | 03 | STD 1 | A8 | CABLE AS AUXILIARY STARTING |
| CE 116-8306 | 01 | STD 1 | G4 | WIRE AS RETARDER LAMP DIVERSION |
| CF 120-5286 | 02 | STD 1 | B13 | HARNESS TRASH GRAB SW |
| CG 246-6807 | 01 | STD 2 | E11 | WIRE AS MAIN RELAY TO ALT BKR |
| CH 181-9848 | 02 | ATT 1 | D15 | HARNESS CAB PAYLOAD MONITORING |
| CI 246-6920 | 02 | STD 2 | E11 | CABLE AS ALT BKR TO MAIN POWER RELAY |
| CL 180-1399 | 02 | ATT 1 | D1 | HARNESS CHASSIS PAYLOAD |
| CM 159-0873 | 01 | STD 1 | F10 | HARNESS ELECTRIC LH WINDOW |
| CN 121-0596 | 03 | STD 1 | C3 | WIRE AS REAR PRESSURE VALVE |
| CP 179-7087 | 02 | STD 1 | B2 | HARNESS UNIT INJECTORS |
| CQ 201-1121 | 01 | STD 1 | H3 | WIRE AS EMS-111 COOK - 7710 - TIER II |
| CR 161-4023 | 02 | STD 1 | B15 | HARNESS LEFT REAR LIGHTS |
| CS 201-1119 | 01 | STD 1 | H3 | WIRE AS EMS-111 COOK - 7990 - TIER II |
| CV 163-0992 | 02 | ATT 1 | I11 | HARNESS AUTOMATIC RETARDER VALVE |
| CY 278-6195 | 02 | ATT 1 | B7 | HARNESS ROCKFORD FAN |
| CA 190-6276 | 02 | STD 1 | A6 | CABLE AS RES BATT TO DISC SWITCH |
| CF 183-0954 | 01 | STD 1 | G5 | HARNESS CAB EMS-111 |
| GG 101-9125 | 02 | STD 1 | A8 | CABLE AS STARTER TO BUS BAR |
| HH 118-4452 | 02 | STD 1 | A8 | HARNESS HAND LEVEL SWITCHING |
| JJ 146-5805 | 02 | STD 2 | H9 | HARNESS COOPER-BISSMAN RELAY FUSE PANEL |
| MM 176-1060 | 02 | STD 1 | C11 | STRAP CAB GND TO CHASSIS GND |
| NR 8X-8727 | 01 | ATT 1 | A13 | HARNESS CHASSIS TRACTION JUMPER |
| TT 245-6755 | 02 | STD 1 | I 15 E | WIRE AS DIMMER MODULE JUMPER |
| UU 190-5075 | 02 | STD 1 | G7 | HARNESS CENTER CONSOLE |
| VV 137-3422 | 01 | STD 1 | A8 | WIRE AS STARTER TO ENRINE GND |

| WIRE GROUP COLOR DESCRIPTIONS | |
|-------------------------------|---|
| (Red line) | WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF |
| (Blue line) | WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON |
| (Black line) | GROUNDING CIRCUIT |
| (Green line) | STARTING AID CIRCUIT |
| (Purple line) | ENGINE CONTROL CIRCUIT |
| (Pink line) | TRANSMISSION CONTROL CIRCUIT |
| (Yellow line) | TURN SIGNAL/WIPER/WASHER CIRCUIT |

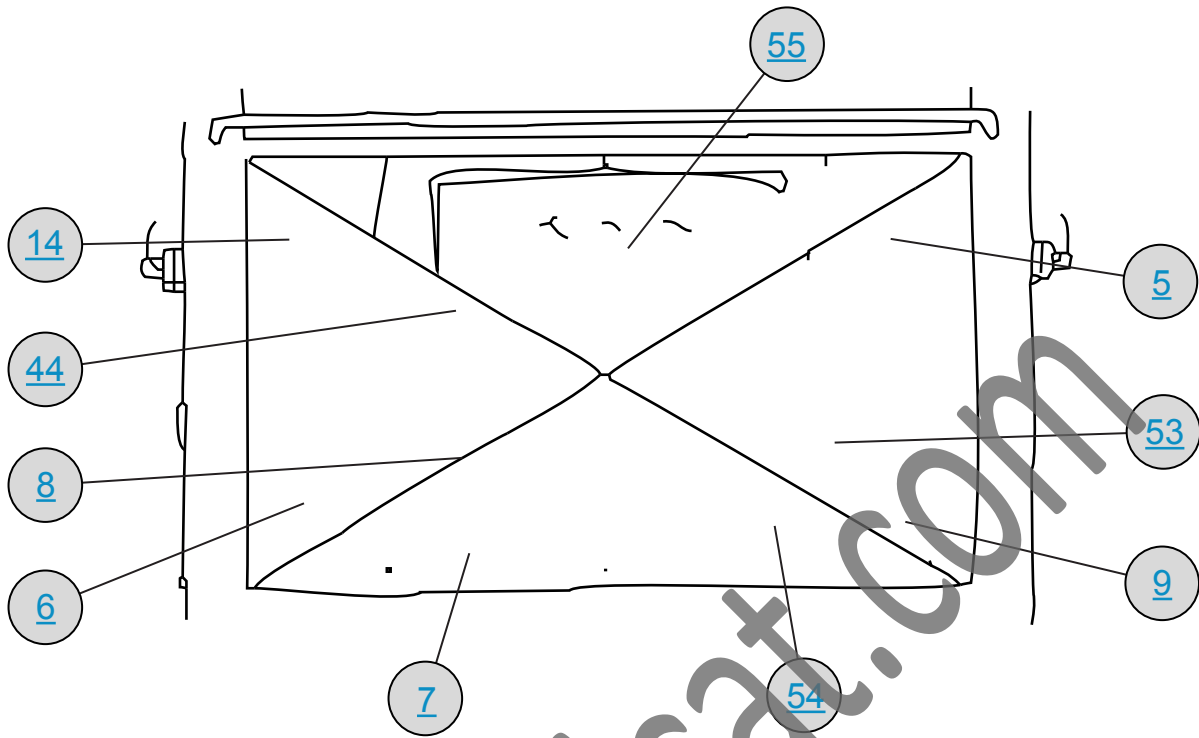
- NOTE A: NORMALLY OPEN BEFORE REFRIGERANT CHARGE
- NOTE B: USED ON 769D ONLY
- NOTE C: USED ON 771D ONLY
- NOTE D: NOT USED ON MACHINES WITH AUTOMATIC RETARDER
- NOTE E: USED IN PLACE OF DIMMER MODULE.
- NOTE F: WHEN USING AUTOMATIC RETARDER:
PLUG CONNECTOR CW-C3 TO CONNECTOR G-C22,
MOVE RETARDER SW FROM A-C47 TO CW-C2.

THIS SCHEMATIC IS FOR THE 769D OFF-HIGHWAY TRUCK AND 771D QUARRY TRUCK
VOLUME 2 of 2: BATTERY AND FUSE BLOCK WIRING
 PART NUMBER: 183-4602
 Components are shown installed on a fully operable machine with the key and engine off, transmission shifter in neutral and with parking brake set.
 Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

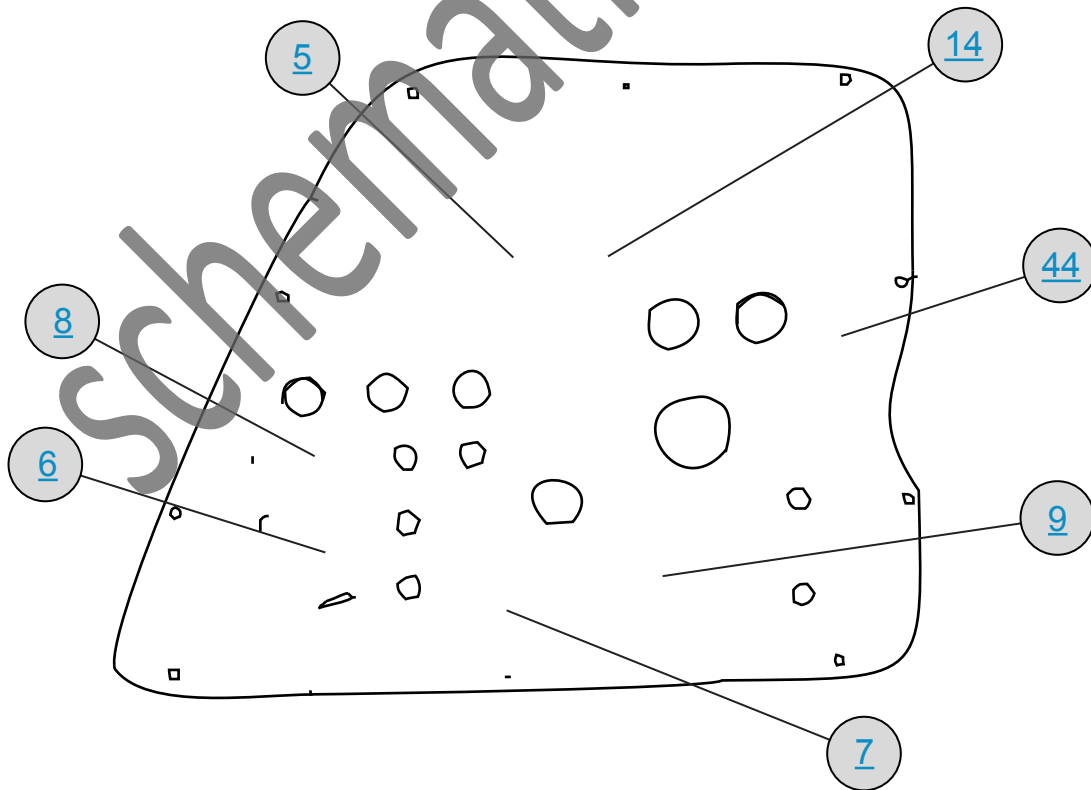
MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS - ENGINE AND CHASSIS WIRING



REAR COMPARTMENT - ENGINE AND CHASSIS WIRING

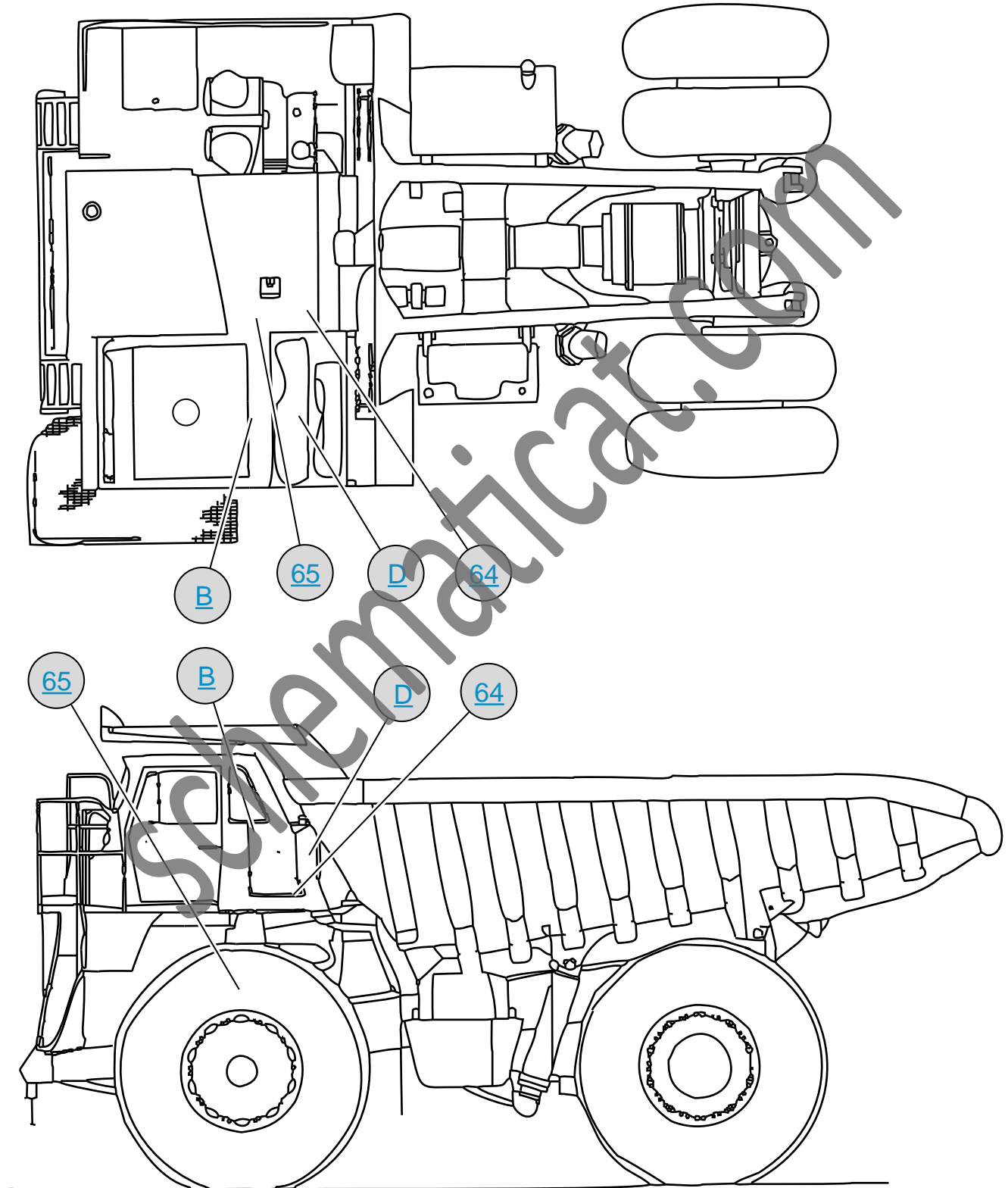


REAR COMPARTMENT

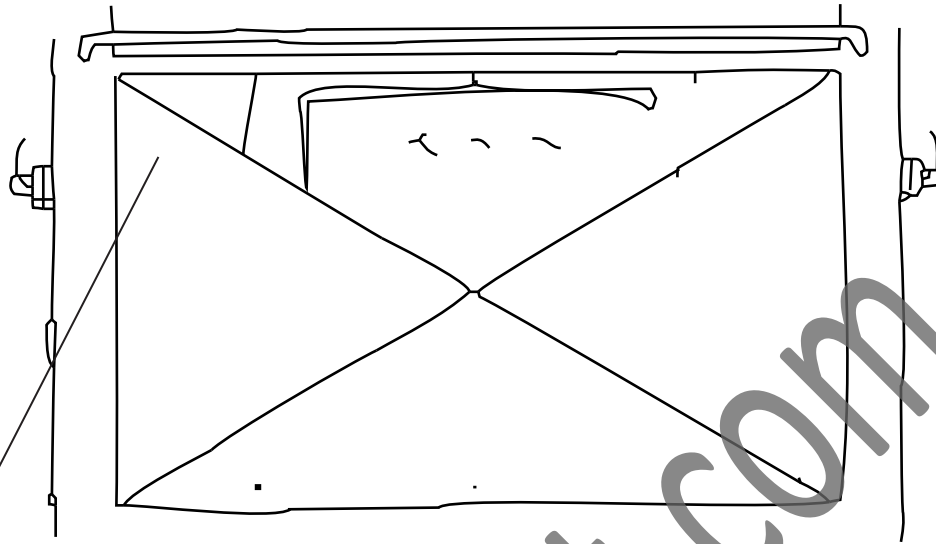


RIGHT SIDE WALL OF REAR COMPARTMENT

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS - BATTERY AND FUSE BLOCK WIRING

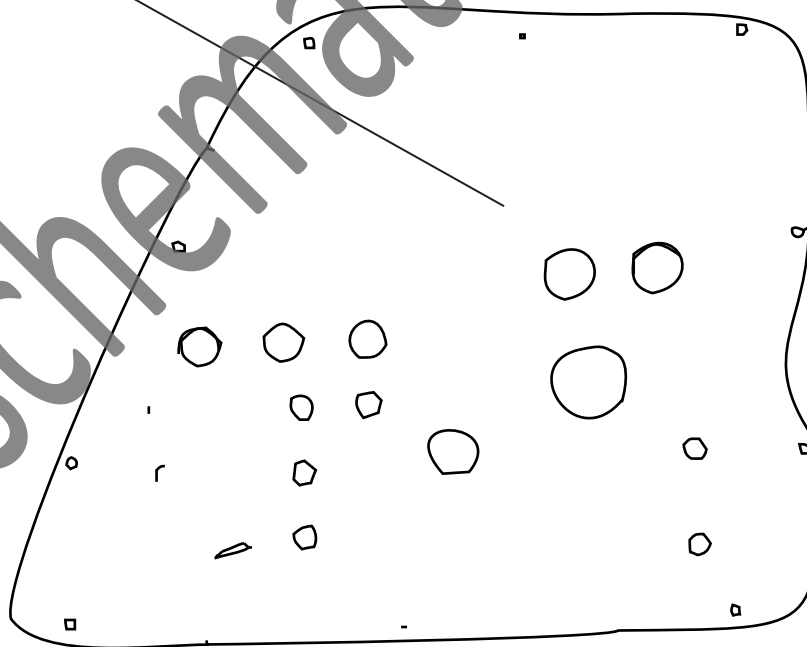


REAR COMPARTMENT - BATTERY AND FUSE BLOCK WIRING



14

REAR COMPARTMENT



RIGHT SIDE WALL OF
REAR COMPARTMENT