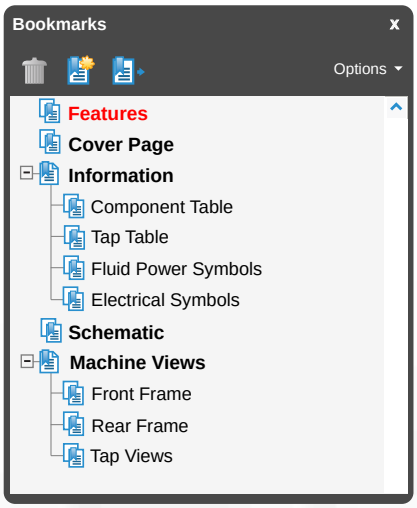
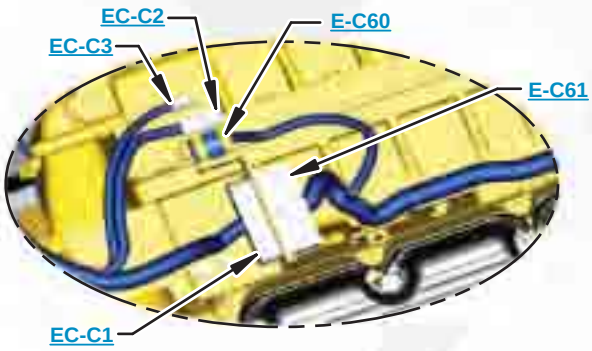
INTERACTIVE SCHEMATIC



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”**

CATERPILLAR®

RENR6419-05
January 2010

Schematic

Skid Steer Loaders:
216B, 216B2, 226B, 226B2, 232B, 232B2, 236B, 236B2, 242B, 242B2, 246B, 248B, 252B, 252B2, 262B, 268B

Multi Terrain Loaders:
247B, 247B2, 257B, 257B2, 267B, 277B, 287B

Electrical System

216B: RLL1-6799	**232B2: SCH2475-2824**	**246B: PAT1-UP**	**252B2: SCP4600-5409**	**268B: LBA1-UP**
216B2: RLL6800-7699	**236B: HEN1-6749**	**247B: MTL1-5074**	**257B: SLK1-7299**	**277B: MDH1-UP**
226B: MJH1-10574	**236B2: HEN6750-8069**	**247B2: MTL5075-5699**	**257B2: SLK7300-8299**	**287B: ZSA1-UP**
226B2: MJH10575-12174	**242B: BXM1-4224**	**248B: SCL1-UP**	**262B: PDT1-UP**	
232B: SCH1-2474	**242B2: BXM4225-4774**	**252B: SCP1-4599**	**267B: CYC1-UP**	

Volume 1 of 2: Engine & Chassis
Volume 2 of 2: Cab

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COMPONENT LOCATION
Volume 1 of 2 - ENGINE & CHASSIS

Component	Schematic Location	Machine Location
Alarm - Backup	C-14	16
Alternator (A)	C-8	14
Alternator (B)	I-10	33
Battery (A)	A-8	11
Battery (B)	G-11	13
Breaker - Main (A)	B-9	45
Breaker - Main (B)	H-12	45
Breaker - Roading (A)	B-9	45
Breaker - Roading (B)	G-12	44
Coil - Ferrite Asy.	C-2	19
Control - Auxiliary Hydraulic Control	F-1	47
Control - Operator Interlock	H-1	48
Diode - Block (A)	B-8	15
Diode - Fuel Pump (Arc Suppression)	D-15	11
Fuses - Block 1	G-5	6
Fuses - Block 2 (Work Tools)	G-8	6
Glow Plugs (A)	A-7	15
Glow Plugs (B)	G-10	15
Ground - Engine Stud (A)	B-7	49
Ground - Engine Stud (B)	H-10	49
Ground - Lower Frame	I-15	21
Ground - Lower Platform	D-4	39
Ground - Upper Frame	I-15	21
Ground - Upper Frame Stud (A)	C-12	51
Ground - Upper Frame Stud (B)	F-15	11
Handle - 1 SW - LH	I-1	20
Handle - 2 SW - LH	H-2	20
Handle - 2 SW - RH	D-1	19
Handle - 2 SW - RH	D-2	19
Handle - 3 SW / Roller - RH	D-2	19
Handle - 5 SW - LH	I-2	20
Horn - Forward (A)	F-12	51
Horn - Forward (B)	H-15	52
Lamp - License	C-15	16
Lamp - Signal Group	C-15	16
Lamp - Stop/Tail - LH Attachment	C-14	18
Lamp - Stop/Tail - RH Attachment	B-14	17
Motor - Fuel Prime Pump (B)	E-15	11
Motor - Starter (A)	A-9	10
Motor - Starter (B)	G-12	50
Motor - Water Pump	I-8	25
Relay - (C-) Fuse Block 2	H-8	6
Relay - (C+) Fuse Block 2	H-8	6
Relay - (C+/C-) Fuse Block 2	H-8	6
Relay - (C1) Fuse Block 2	G-8	6
Relay - (C2) Fuse Block 2	G-8	6
Relay - Boost Flow (A)	E-6	6
Relay - Cold Start (A)	D-8	45
Relay - Cold Start (B)	I-10	45
Relay - Fuel Pump	D-15	11
Relay - Lockout (248,268,Boost Flow)	B-6	7
Relay - Main Power A (A)	E-12	44
Relay - Main Power A (B)	G-15	44
Relay - Main Power B (A)	E-12	45
Relay - Main Power B (B)	G-15	44
Relay - Main Power C (A)	E-12	45
Relay - Main Power C (B)	G-15	44
Relay - Main Power D (A)	D-12	45
Relay - Main Power D (B)	G-15	44
Relay - Start (A)	D-8	45
Relay - Start (B)	I-10	45
Resistor - DMML Alternator (A)	C-7	14
Sender - Fuel Level (A)	F-12	12
Sender - Fuel Level (B)	H-15	46
Socket - Power +12 Volts	F-5	6
Solenoid - (C-) High Flow (A)	E-5	8
Solenoid - (C-) High Flow (B)	D-5	8
Solenoid - (C+) High Flow (A)	E-5	8
Solenoid - (C+) High Flow (B)	D-5	8
Solenoid - A1	E-7	8
Solenoid - A2	E-7	8
Solenoid - Boost Flow (A)	E-5	8
Solenoid - Cold Start Pump (B)	G-10	14
Solenoid - Continuous Flow (A)	D-5	8
Solenoid - Continuous Flow (B)	C-5	8
Solenoid - Detent Valve (248,268, High Flow)	D-5	19
Solenoid - Fuel Shutdown (A)	B-8	33
Solenoid - Fuel Shutdown (B)	H-10	14
Solenoid - Impl Pilot (248,268,High Flow)	A-5	19
Solenoid - Implement Pilot	C-2	19
Solenoid - Parking Brake	D-4	39
Solenoid - Quick Coupler (A)	B-12	11
Solenoid - Quick Coupler (B)	E-15	53
Solenoid - Transmission	H-3	20
Solenoid - Two Speed (B)	E-5	39
Solenoid - Valve Grp DVTR ARC MTL (B) 248 High Flow	F-15	52
Solenoid - Valve Grp DVTR XR XRMTL (A)	B-12	52
Solenoid - Valve Grp DVTR XR XRMTL (B) 268 High Flow	F-15	52
Stud - Power (A)	C-9	45
Stud - Power (B)	H-12	44
Switch - Air Filter Indicator (A)	B-12	45
Switch - Air Filter Indicator (B)	E-15	44
Switch - Backup Pressure	H-3	20
Switch - Cold Start Thermo Temp (B)	G-10	14
Switch - Engine Coolant Temperature (A)	B-8	14
Switch - Engine Coolant Temperature (B)	H-10	33
Switch - Engine Oil Pressure (A)	B-8	33
Switch - Engine Oil Pressure (B)	H-10	14
Switch - High Flow (248,268)	A-4	19
Switch - Hydraulic Filter Bypass (A)	D-12	13
Switch - Hydraulic Filter Bypass (B)	F-15	54
Switch - Hydraulic Oil Temp (A)	F-12	51
Switch - Hydraulic Oil Temp (B)	H-15	51

(A) = 216B / 226 / 232 / 242 / 247 / 257

(B) = 236B / 246 / 248 / 252 / 262 / 267 / 268 / 277 / 287

COMPONENT LOCATION
Volume 2 of 2 - CAB

Component	Schematic Location	Machine Location
Action Lamp Group - LH (COSA)	F-13	1
Action Lamp Group - LH (NACD)	E-9	1
Action Lamp Group - RH (COSA)	E-13	2
Action Lamp Group - RH (NACD)	F-9	2
Beacon And Beacon Socket (COSA)	D-13	36
Beacon And Beacon Socket (NACD)	D-9	36
Bottle - Washer	I-7	43
Coil - Ferrite Asy. (MSS)	G-3	21
Coil - MSS Exciter (COSA)	F-13	1
Coil - MSS Exciter (NACD)	F-9	1
Control - Machine Security System	H-1	21
Diode - Valve Group Remote Control	E-1	56
Flasher (COSA)	F-15	34
Ground - Cab (COSA)	H-15	34
Ground - Cab (NACD)	H-11	34
Hour Meter (COSA)	G-13	1
Hour Meter (NACD)	G-9	1
Indicator - Fuel Level (COSA)	E-13	2
Indicator - Fuel Level (NACD)	E-9	2
Lamp - Dome (COSA)	E-13	2
Lamp - Dome (NACD)	E-9	2
Lamp - Flood - LH (COSA)	I-12	1
Lamp - Flood - LH (NACD)	I-8	1
Lamp - Flood - RH (COSA)	B-12	2
Lamp - Flood - RH (NACD)	B-8	2
Lamp - Head Turn - LH (Atch)	I-1	1
Lamp - Head Turn - RH (Atch)	I-1	2
Lamp - Rear Flood - LH (COSA)	I-15	3
Lamp - Rear Flood - LH (NACD)	I-11	3
Lamp - Rear Flood - RH (COSA)	E-15	4
Lamp - Rear Flood - RH (NACD)	E-11	4
Motor - Condenser Fan 1 & 2	D-4	23
Motor - Dbl Blower (Heater)	G-6	20
Motor - Dbl Blower (HVAC)	E-6	20
Motor - Front Wiper	I-5	27
Relay - Compressor HVAC	E-6	20
Relay - Condenser Fan	E-6	20
Relay - Key Switch (Heater)	G-6	20
Relay - Key Switch (HVAC)	F-6	20
Relay - Stop Lamp	H-4	55
Solenoid - HVAC Compressor Clutch	E-4	9
Solenoid - Valve Gp RC1	E-1	56
Solenoid - Valve Gp RC2	E-1	56
Switch - Armrest (COSA)	C-15	24
Switch - Armrest (NACD)	C-11	24
Switch - Auto Leveler (COSA)	H-12	1
Switch - Auto Leveler (NACD)	H-8	1
Switch - AUX Hydraulic Mode (COSA)	F-12	1
Switch - AUX Hydraulic Mode (NACD)	F-8	1
Switch - AUX Pressure Release (COSA)	H-12	1
Switch - AUX Pressure Release (NACD)	H-8	1
Switch - Beacon (COSA)	E-12	2
Switch - Cold Start (COSA)	G-12	1
Switch - Cold Start (NACD)	G-8	1
Switch - Fan On/Off/On (Heater)	G-7	20
Switch - Fan On/Off/On (HVAC)	E-7	20
Switch - Front Working Lamp (COSA)	C-12	2
Switch - Front Working Lamp (NACD)	C-8	2
Switch - Hazard (COSA)	E-12	2
Switch - HVAC Refrigerant Pressure	E-4	43
Switch - Hydraulic Lockout (COSA)	E-12	2
Switch - Hydraulic Lockout (Door)	H-5	57
Switch - Hydraulic Lockout (NACD)	D-8	2
Switch - Hydraulic Quick Coupler (COSA)	G-12	1
Switch - Hydraulic Quick Coupler (NACD)	G-8	1
Switch - Key Start (COSA)	F-13	1
Switch - Key Start (NACD)	F-9	1
Switch - Mode Off/On (HVAC)	D-7	20
Switch - Parking Brake (COSA)	F-12	1
Switch - Parking Brake (NACD)	F-8	1
Switch - Rear Working Lamp (COSA)	C-12	2
Switch - Rear Working Lamp (NACD)	C-8	2
Switch - Roading Lamps (COSA)	D-12	2
Switch - Seat (COSA)	C-15	22
Switch - Seat (NACD)	C-11	22
Switch - Stop Pressure 1	G-4	55
Switch - Stop Pressure 2	G-4	55
Switch - Tool Power (COSA)	H-12	1
Switch - Tool Power (NACD)	H-8	1
Switch - Turn Signal (COSA)	D-12	2
Switch - Wiper / Washer	I-5	27
Thermostat (HVAC)	E-7	20

CONNECTOR LOCATION
Volume 1 of 2 - ENGINE & CHASSIS

Connector Number	Schematic Location	Machine Location
CONN 1	B-12, E-14	56
CONN 2	B-14, B-15	18
CONN 3	C-14	13
CONN 4	C-12, C-14	52
CONN 5	B-12, D-14	46
CONN 6	H-14	55
CONN 7	H-14	34
CONN 8	B-10, D-13	34
CONN 9	C-10, E-13	34
CONN 10	E-13	34
CONN 11	C-10, F-13	51
CONN 12	D-10, F-13	51
CONN 13	E-10, G-13	51
CONN 14	E-10, G-13	51
CONN 15	E-10, H-13	51
CONN 16	H-9, I-13	12
CONN 17	F-12	44
CONN 18	F-12	51
CONN 19	I-12	45
CONN 20	F-10	51
CONN 21	C-9	51
CONN 22	G-9	13
CONN 23	I-9	14
CONN 24	C-8	13
CONN 25	I-8	7
CONN 26 TOOL	I-7	40
CONN 27	A-6, D-4	7
CONN 28	B-6, D-6	7
CONN 29	D-6	39
CONN 30	D-6, E-6	6
CONN 31 SERVICE	F-5	19
CONN 32	B-5	19
CONN 33	B-4, D-2	19

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 - CAB

Connector Number	Schematic Location	Machine Location
CONN 4	I-3, I-4	13
CONN 5	G-5	55
CONN 8	G-3	34
CONN 9	F-15	34
CONN 11	G-15, G-11	34
CONN 12	H-15, H-11	34
CONN 20	G-6, F-6	42
CONN 24	E-3	13
CONN 34	H-15, H-11, H-3	34
CONN 35	I-7, I-8, I-13	1
CONN 36	I-3	13
CONN 37	I-6	43
CONN 38	E-4	9

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.

CID / MID / FMI
Volume 1 of 2 - ENGINE & CHASSIS

Component Identifiers (CID[1]) Module Identifier (MID[2])	
Auxiliary Hydraulic Control (MID No. 106)	
CID	**Component**
0070	Parking Brake Switch
0168	Voltage Fault
0598	Two Speed Motor Solenoid
1180	Auxiliary Hydraulic Solenoid #1
1181	Auxiliary Hydraulic Solenoid #2
1184	Auxiliary Hydraulic Solenoid Supply
1187	Continuous Flow Switch
1188	Operator Interlock Override Switch
1189	Auxiliary Hydraulics Lever
1190	Arm Bar / Seat Switch
1694	Two Speed Motor Solenoid Supply
1695	Two Speed Switch
1931	High Pressure / High Flow Solenoid
1935	Auxiliary Hydraulic Flow Selector Switch
1939	Auxiliary Hydraulic High Flow Supply
1940	Auxiliary Hydraulic High Flow Diverter Solenoid
1942	High Pressure Tool Detection Switch

[1] The CID is a diagnostic code that indicates which circuit is faulty.

[2] The MID is a diagnostic code that indicates which electronic control module

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.

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

CID / MID / FMI
Volume 2 of 2 - CAB

Component Identifiers (CID[1]) Module Identifier (MID[2]) Auxiliary Hydraulic Control (MID No. 106)	
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[1]The FMI is a diagnostic code that indicates what type of failure has occurred.

SPECIFICATIONS AND RELATED MANUALS
Volume 1 of 2 - ENGINE & CHASSIS

Engine & Platform Off Machine Switch Specification				
Part No.	**Function**	**Actuate**	**Deactuate**	**Contact Position**
134-0404	Hydraulic Filter Bypass Switch	275.8 to 303.4 kPa (40 to 44 psi)	206.8 kPa MIN (30 psi MIN)	Normally Open
192-0836	Backup Pressure Switch	517.0 + 41.4, - 68.9 kPa (75.0 + 6.0, -10.0 psi)	386.1 + 41.4, - 68.9 kPa (56.0 + 6.0, -10.0 psi)	Normally Open
224-0744	High Flow Pressure Switch	375.9 + 37.9, - 58.6 kPa (54.5 + 5.5, -8.5 psi)	263 kPa MIN (38.1 psi MIN)	Normally Closed
236-1872	Hydraulic Oil Temperature Switch	102 ± 3°C (215.6 ± 5.4°F)	90°C MIN (194°F MIN)	Normally Open

Engine & Platform Resistor, Sender and Solenoid Specifications			
Part No.	**Component Description**		**Resistance (Ohms)[1]**
233-7128	Solenoid:	Quick Coupler	6.36 ± 0.4
172-0970	Solenoid:	Detent Valve	9.4
185-4254	Solenoid:	A1 & A2 Continuous Flow (High Flow XPS)	2.2 ± 0.2
195-9700	Solenoid:	C+ & C- (High Flow XPS) Implement Pilot Parking Brake Transmission	10 ± 0.5
216-0610	Solenoid:	Two Speed	2.2 ± 0.2
224-7782	Sender:	Fuel (287 / 267)	Empty: 240 - 245 Full: 28 - 33
224-8545	Sender:	Fuel (267 / 277)	Empty: 240 - 245 Full: 28 - 33
231-2105	Sender:	Fuel (216B / 226 / 232B / 242)	Empty: 240 - 250 Full: 28 - 33
231-2106	Sender:	Fuel (247 / 257)	Empty: 240 - 250 Full: 28 - 33
224-8544	Sender:	Fuel (236 / 246 / 252 / 262 / 248 / 268)	Empty: 240 - 250 Full: 28 - 33
238-9397	Resistor:	DMML ALT	120.0 ± 6.0

[1] At room temperature unless otherwise noted.

Related Electrical Service Manuals		
Title		**Form Number**
K3A Alternator:	239-0772	SENR5841
R2.7KW Electric Starting Motor:	143-0539	SENR3828
Auxiliary Hydraulic Control system:		RENR2893
Operator Interlock Control:		RENR2864

SPECIFICATIONS AND RELATED MANUALS
Volume 2 of 2 - CAB

Attachment & Cab Off Machine Switch Specification				
Part No.	**Function**	**Actuate**	**Deactuate**	**Contact Position**
184-1564	Stop Pressure 1 & 2	375.9 +37.9, -58.6 kPa (54.5 + 5.5, -8.5 psi)	263 kPa (38.2 psi)	Normally Closed[2]
236-6923	A/C Refrigerant Pressure	275 to 1750 kPa[1] (40 to 255 psi)	- - - -	Normally Open[2]

[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.

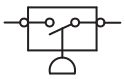
Resistor, Sender and Solenoid Specifications		
Part No.	**Component Description**	**Resistance (Ohms)[1]**
212-3350	Solenoid: Remote Control 1	3.2 ± 0.22
215-3272	Solenoid: Remote Control 2	4.0 ± 0.28
231-6287	Solenoid: A/C Compressor	10.5

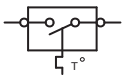
[1] At room temperature unless otherwise noted.

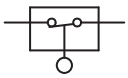
Related Electrical Service Manuals	
Title	**Form Number**
K3A Alternator: 239-0772	SENR5841
R2.7KW Electric Starting Motor: 143-0539	SENR3828
Auxiliary Hydraulic Control system:	RENR2893
Operator Interlock Control:	RENR2864

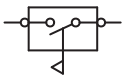
HARNESS and WIRE
Electrical Schematic Symbols

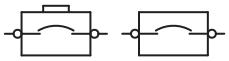
Symbols


Pressure Symbol


Temperature Symbol

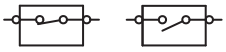

Level Symbol

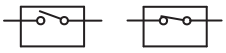

Flow Symbol

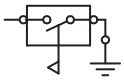

Circuit Breaker Symbol

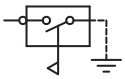
Symbols and Definitions

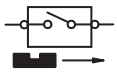

Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.

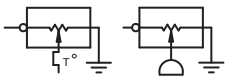

Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.

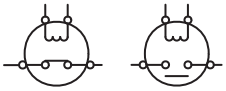

Switch (Normally Closed): A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the component.

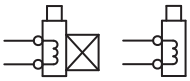

Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.

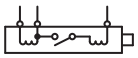

Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.


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.

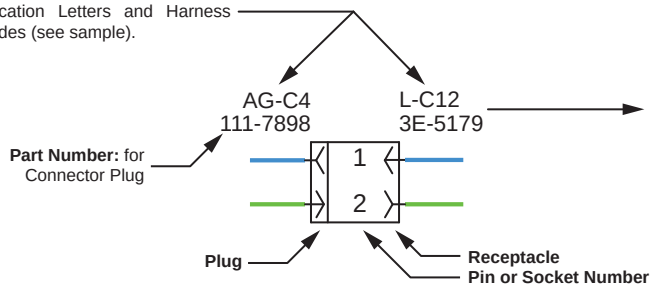

Relay (Magnetic Switch): A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.

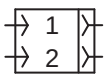

Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.


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.

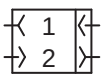
Harness and Wire Symbols

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

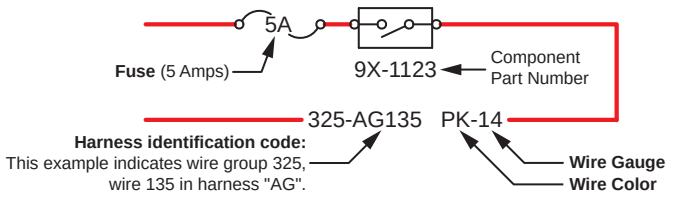




Deutsch connector: Typical representation of a Deutsch connector. The plug contains all sockets and the receptacle contains all pins.



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



PLATFORM AND ENGINE FOR MODELS 236, 246, 248, 252, 262, 267, 268, 277, 287

WORK TOOL ATTACHMENT HARNESSES

LOWER PLATFORM

PLATFORM AND ENGINE FOR MODELS 216, 226, 232, 242, 247, 257

TWO-SPEED SOL (ATCH) FOR MODELS 236, 246, 252, 262, 248, 268

HIGH FLOW (ATCH) FOR MODELS 226, 242, 257

HIGH FLOW XPS (ATCH) FOR MODELS 248, 268

RH POD HARNESS ATCH FOR MODELS 248, 268 AND HIGH FLOW MODELS 226, 242, 257, 287

RR DOOR EXT HARN (ITALY ONLY) (ATCH)

REAR DOOR

WIRE GROUP COLOR DESCRIPTIONS	
	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF.
	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON.
	STARTING CIRCUIT.
	GROUND CIRCUIT.
	STARTING AID CIRCUIT.
	MONITOR CIRCUIT.
	AUX. HYDRAULIC CONTROL CIRCUIT.
	IMPLEMENT CONTROL CIRCUIT.
	MACHINE SECURITY CONTROL CIRCUIT.
	OPERATOR INTERLOCK CONTROL CIRCUIT.
	HEATER AND AIR CONDITIONER CIRCUIT.
	TURN SIGNAL/WIPER/WASHER CIRCUIT.

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

SYMBOL	DESCRIPTION
	BLADE, SPADE, RING, OR SCREW TERMINAL
	SPLICE
	CIRCUIT NOT CONNECTED
	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
	CONNECTOR
	ATCH WIRE, CABLE & COMPONENT
	CIRCUIT GROUPING DESIGNATION

LOCATION	NOTE
WIRING	NOTE A: WIRE PAIRS TO BE TWISTED TOGETHER AT LEAST ONE TURN PER INCH (2 cm)
WIRING	NOTE B: ASSEMBLE TERMINALS TO FIT ID
SH 1-5, C-12	NOTE C: FOR ENGINE JUMP ATCH HARN CLOSED: CONN A-12 TO F-12 OPEN: F-11 AND A-12 TO A-11
SH 2-5, C-12	NOTE D: IF HEAD ALIGN ATCH HARN CLOSED: CONN B-12 TO C-1 AND SPKC TO SPKC-1
SH 1-C-4	NOTE E: FOR ENGINE JUMP ATCH HARNESS WITH ALIGNED ATCH HARN JUMPER
SH 1-2, F-12	NOTE F: ATCH RELEASE, ENGINE OPERATION WARNED: ONLY ON 247, 257 JIB MACHINES
SH 1-2, D-5	NOTE G: TURN RELAY ATCH REMOVE CONN PK (A) FROM CAV. AND TURN CONNECT PU (A) FR CAV TO PU (A)
SH 1-A-1	NOTE H: JUMPER #1 REQUIRED FOR USE WITH ATCH HARN. FOR HIGH FLOW OPTION MACHINES REMOVE JUMPER #1 AND CONNECT PK/LGN TO PK/LGN AT CONN 30
SH 1-B-4	NOTE J: CUT PINK 1 OUT TWO SPEED SOLENOID FOR 226 WITH MODELS 236, 246, 252, 262, 247, 257, 267, 277, 287
SH 2-H-11	NOTE M: CUT 152 FOR 226 WITH DARE MACHINES ONLY
SH 1-D-12	NOTE N: REMOVE JUMPER WHEN USING ATCH HARN ON SWITCH
SH 1-D-12	NOTE P: JUMPER #2 REQUIRED FOR USE WITH TWO SPEED ATCH
SH 2-D-4	NOTE R: HARNESS SUPPLIED WITH AIR CONDITIONING UNIT
SH 2-H-6	NOTE S: HARNESS SUPPLIED WITH HEATER UNIT
SH 1-E-8	NOTE T: ASSEMBLE TERMINALS INTO CONNECTOR CAVITY 3 OR 4 AS REQUIRED (225), DURING MACHINE ASSEMBLY

TWO ENGINES STATIC E SERIES
SAE J1939 AND VOLT SYSTEM LOGGING — ENGINES ONLY

TWO ENGINES STATIC F(G) (ELECTRONIC MODELS)

2 NR SLEEVE - 2 NR SLEEVE - 252B SLEEVE - 242B SLEEVE 2 NR SLEEVE STEER LEADER
2 NR SLEEVE - 277B SLEEVE (MULTI TERMINAL LEADER)
2 NR SLEEVE - 247B SLEEVE - 268B SLEEVE - 252B SLEEVE - 268B SLEEVE STEER LEADER
2 NR SLEEVE - 257B SLEEVE - 287B SLEEVE - 252B SLEEVE - 287B SLEEVE STEER LEADER

CONFIGURATE ARE SHOWN INSTALLED IN A FULLY OPERABLE MACHINE WITH THE KEY ANCHORAGE OFF AND THE TRANSMISSION SHIFTER IN NEUTRAL AND DOOR OPEN.

ASSY	PART NO.	CAVS	WIRES	DESCRIPTION
C	216-4752	07	SHQ 14-15	CAB - DARE ONLY
CN	233-7599	04	SHQ 14-15	CAB - NACO ONLY
F	372-5626	02	SH 2-C-2	DEMAND FAN
G	372-5627	02	SH 2-C-2	DEMAND FAN
J	233-5624	01	SHQ C-7	DUAL CONT - DELP ALM
JN	233-5625	01	SHQ C-7	DUAL CONT - LAMP ISO
JC	233-5626	01	SHQ C-7	DUAL CONT - SOL MAY PLT 1
JB	233-5627	01	SHQ C-7	DUAL CONT - SOL MAY PLT 2
JP	233-5628	01	SHQ C-7	DUAL CONT - WORK LAMP (PRO-C)
H	216-4733	04	SHQ 17-13	REAR DOOR
N	216-4725	04	SHQ 17	WORK TOOLS - MI
P	216-4726	04	SHQ 17	WORK TOOLS - MI
Q	216-4704	04	SHQ 14-8	JOYSTICK - RIGHT
T	216-4709	02	SHQ 7-1	MACHINE SECURITY SYSTEM
U	221-3076	04	SHQ 14-8	WIPER / WASHER
V	221-3877	05	SHQ 14-7	WIPER / WASHER AUX
W	221-3878	05	SHQ 14-7	WIPER / WASHER
AC	221-3879	04	SHQ 13-5	AIR CONDITIONING
AJ	202-2168	01	SHQ 2-4	AC COMPRESSOR JUMPER
AK	216-4727	04	SHQ 13-5	AIR CONDITIONING
AT	216-4727	03	SHQ 13-5	ROADING LAMP EXTENSION
KB	216-4726	06	SHQ 14-2	ROADING LAMP (RIGHT SIDE) AR
KB	233-7598	02	SHQ 14-2	ROADING LAMP (RIGHT SIDE) AR/C
LJ	186-8259	01	SH 1-4-L	LH REAR LAMP EXTENSION
LK	216-4728	01	SH 1-4-L	LH REAR LAMP
RH	213-8234	01	SHQ 3-1	REAR DOOR
RJ	183-7117	02	SH 8-13	RR DOOR EXT (ITALY ONLY)
RK	183-7118	02	SH 8-13	RR DOOR EXT - PLATFORM
-	233-6457	04	SH 2-F-6	AIR CONDITIONING
-	216-6848	06	SH 2-GF-6	AIR CONDITIONING UNIT
-	266-2528	05	SHQ 13-5	DOOR (DEFAULT) WITH CHOICE (SEVEN) WIRING
-	269-2858	03	SHQ 13-5	DOOR (DEFAULT) WITH CHOICE (SEVEN) WIRING
A	233-8852	04	SHT F-1	ENGINE
B	233-8853	04	SHT F-1	ENGINE PLATFORM
EC	216-2728	02	SHT C-8	FUEL LEVEL JUMPER
FL	233-8857	01	SHT D-6	HIGH FLOW XPS
				HARNESS TO: 216, 233, 261, 262
A	233-8852	04	SHT F-1	LOWER PLATFORM
B	233-8853	04	SHT F-1	LOWER PLATFORM
EC	216-2728	02	SHT C-8	JUMPER #1 (ALTERNATE) DIODE
FM	233-8855	02	SHT D-6	HIGH FLOW
FL	261-1124	01	SHT D-6	HIGH FLOW PLATFORM
				WIRES ONLY
WA	233-8913	01	SHT B-16, F-1	LIGHTING BREAKER JUMPER
WC	245-1913	01	SHT B-12	QUICK JUMPER
WC	245-1911	02	SHT B-15	QUICK JUMPER
PW	233-8914	01	SHT D-6	HIGH FLOW XPS OPTION STUD
-	133-9951	04	SHT B-16	HIGH FLOW JUMPER
-	133-9951	04	SHT D-13	TWO SPEED JUMPER
-	233-8914	01	SHT D-6	HIGH FLOW
-	370-0323	04	SH 2-C-5	WIRE #1
-	165-9161	01	SH 2-C-5	WIRE #2
-	165-9162	01	SH 2-C-5	WIRE #3
-	134-2486	01	SH 2-C-5	SLEE SWITCH
				CABLE #1
CA	225-7501	01	SHT A-9, G-11	MACHINE GROUND
CC	142-7913	02	SHT G-11	BATTERY POS TO STARTER (BETA MACH)
CC	225-7504	01	SHT G-4	BATTERY POS TO STARTER (ALPHA MACH)
				CABLE #2
-	306-4963	01	SHT C-19	UPPER FRAME GND TO LOWER FRAME GND
-	70-1585	01	SHT B-7	ENG TO PANEL HSG TO GND
-	70-1586	00	SHQ 14-15	ENG TO PANEL HSG TO ENG GND
-	70-1585	01	SHQ 14-15	HYD TANK TO CAB GND
-	70-1585	01	SHQ 14-11	HYD TANK TO CAB GND

WIRE GROUP COLOR DESCRIPTIONS	
(red)	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF.
(blue)	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON.
(orange)	STARTING CIRCUIT.
(black)	GROUND CIRCUIT.
(pink)	STARTING AID CIRCUIT.
(green)	MONITOR CIRCUIT.
(purple)	AUX. HYDRAULIC CONTROL CIRCUIT.
(light orange)	IMPLEMENT CONTROL CIRCUIT.
(gray)	MACHINE SECURITY CONTROL CIRCUIT.
(light blue)	OPERATOR INTERLOCK CONTROL CIRCUIT.
(yellow-green)	HEATER AND AIR CONDITIONER CIRCUIT.
(tan)	TURN SIGNAL/WIPER/WASHER CIRCUIT.

SYMBOL	DESCRIPTION
●	BLADE, SPADE, RING, OR SCREW TERMINAL
○-○	SPLICE
+	CIRCUIT NOT CONNECTED
⏚	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
(dashed ground)	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
→)—	CONNECTOR
——	ATCH WIRE, CABLE & COMPONENT
H#	CIRCUIT GROUPING DESIGNATION

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

THIS DIAGRAM IS FOR THE B SERIES SKID STEER AND MULTI-TERRAIN LOADERS 216-6423 CHG 02

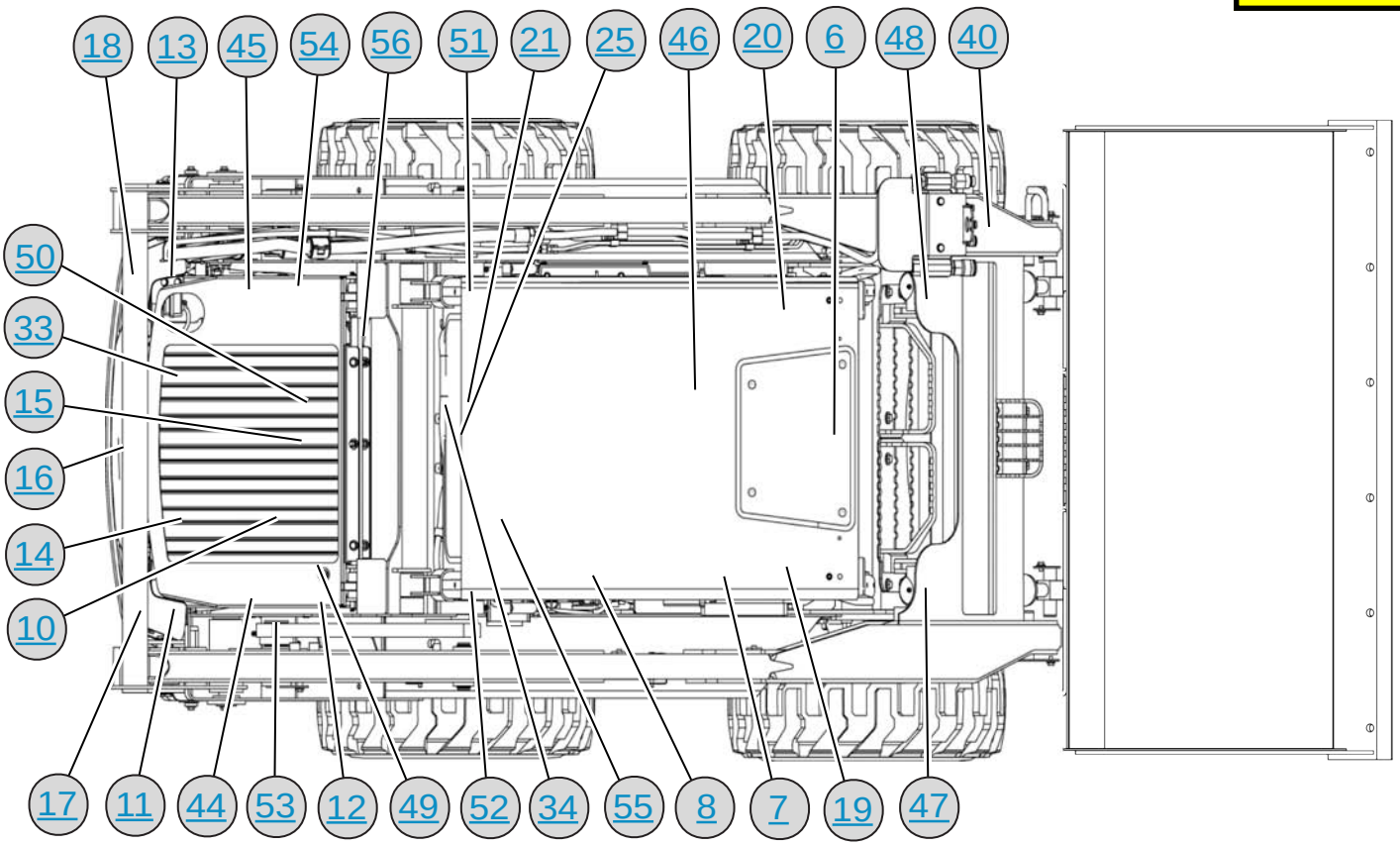
THIS DIAGRAM IS FOR THE FOLLOWING MODELS:

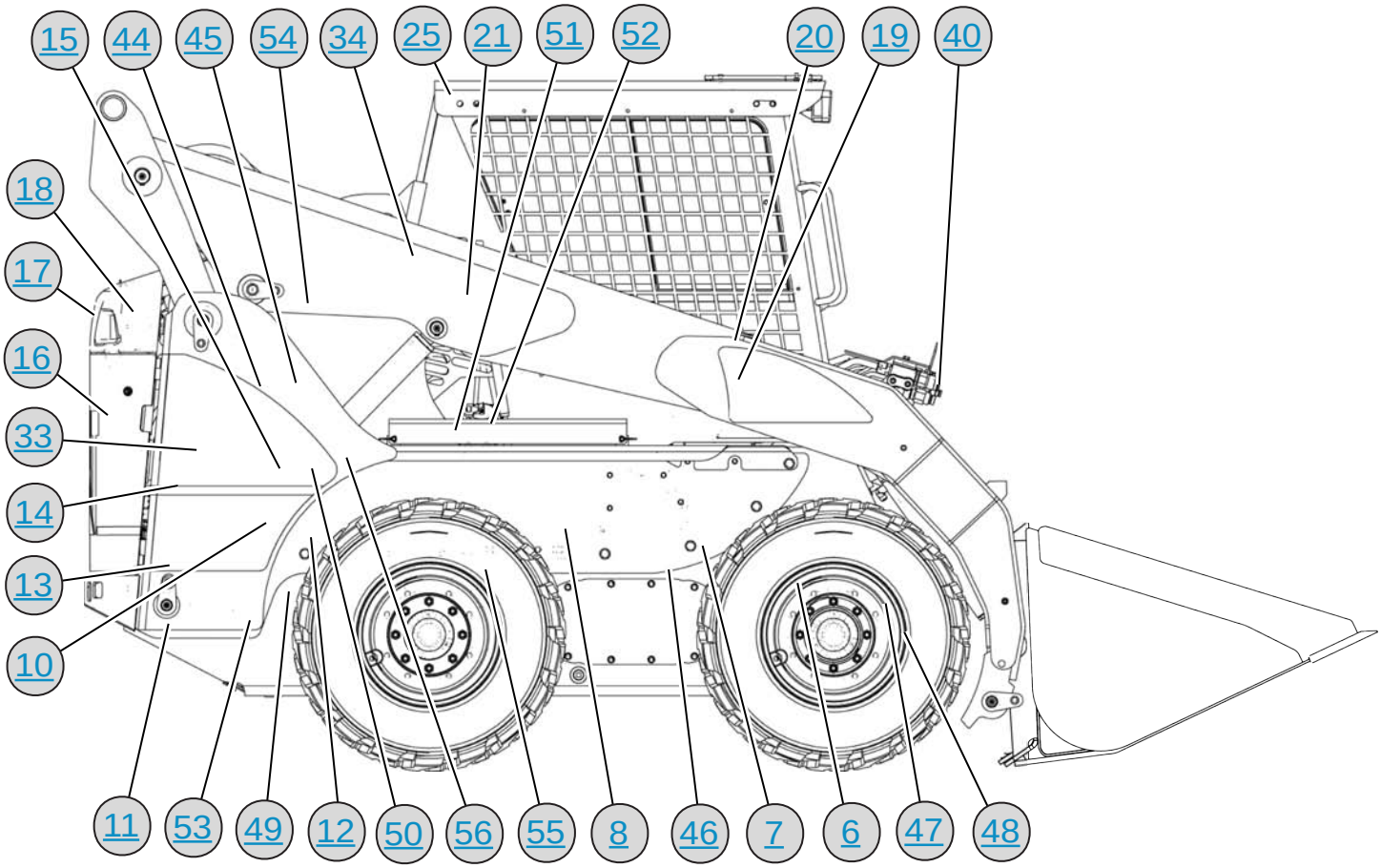
216B (SL029) - 226B (SL016) - 232B (SL030) - 242B (SL019) [SKID STEER LOADER]
247B (SL022) - 257B (SL023) [MULTI-TERRAIN LOADER]
236B (SL017) - 246B (SL018) - 248B (SL027) - 252B (SL020) - 262B (SL021) - 268B (SL028) [SKID STEER LOADER]
267B (SL024) - 277B (SL025) - 287B (SL026) [MULTI-TERRAIN LOADER]

COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERABLE MACHINE WITH THE KEY AND ENGINE OFF AND THE TRANSMISSION SHIFTER IN NEUTRAL AND DOOR OPEN.

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS 1

VIEW ALL CALLOUTS





MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS 2

VIEW ALL CALLOUTS