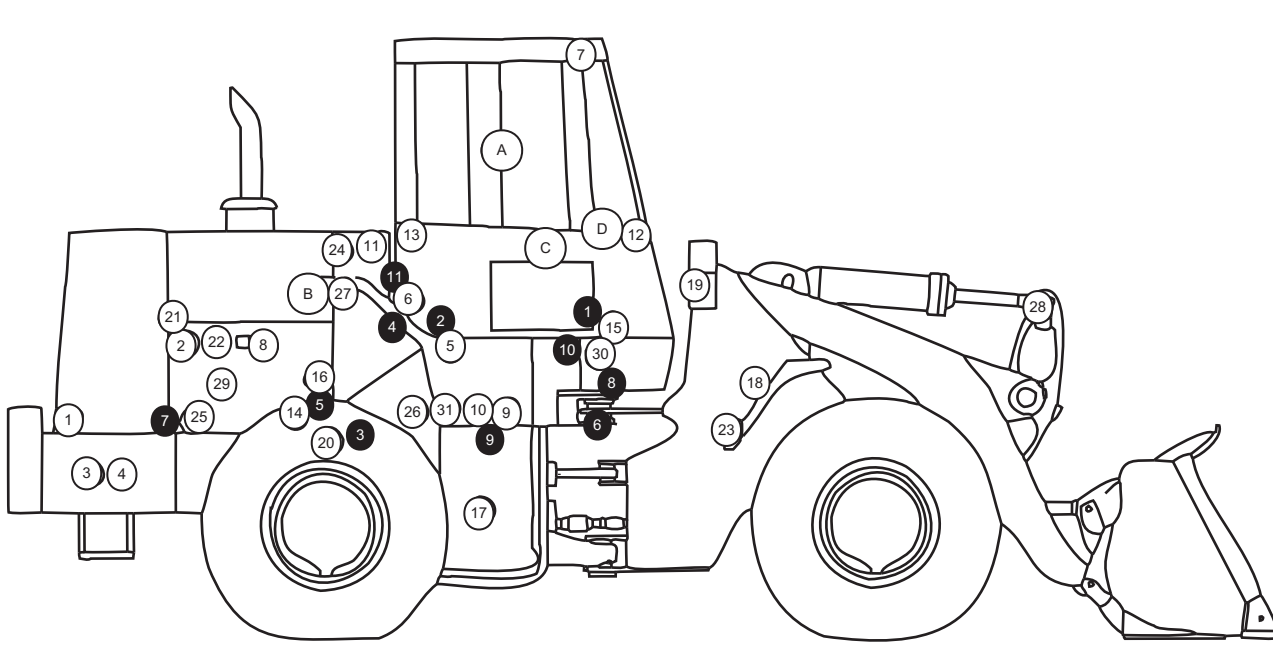
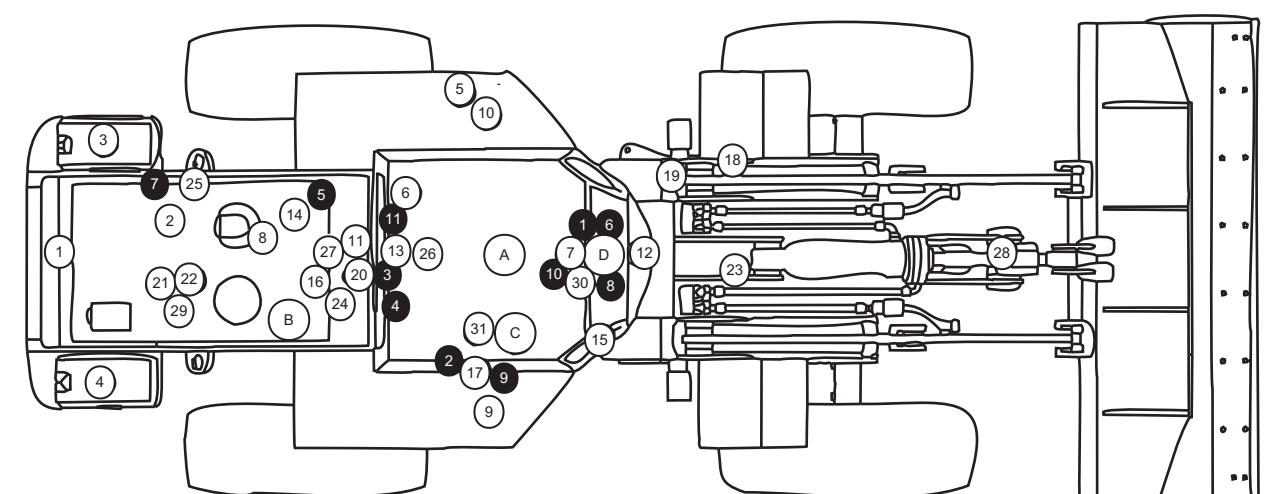


Harness Connector Location Chart			
Connector	Machine Location	Harness And/or Component	Schematic Location
4/5 Contacts	●	F-106-7777	B-5
		F-106-7777	B-5
		F-106-7779	D-12
24 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5
20 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5
14 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5
12 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5
10 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5
8 Contacts	●	A-107-0550	B-5
		F-106-7779	B-5
		F-106-7779	B-5

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS

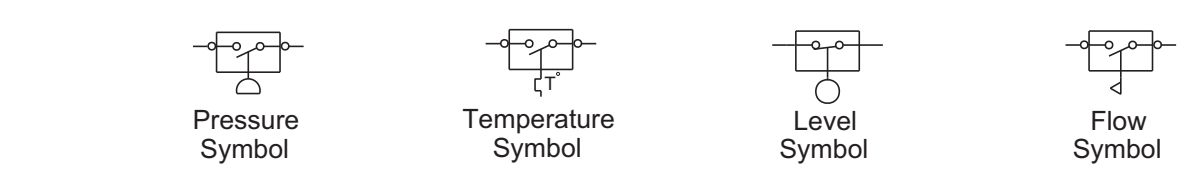


Wire Description			
Wire Number	Wire Color	Description	Wire Number
101	RD	BA	8414
102	BU	HELAMP	8415
103	YL	ALUXKT	8416
105	BR	KEY SW	8417
106	WH	AUX CKT	
107	WH	ENG SHUTDOWN	500
108	BU	ALUXKT	501
109	OR	ALT OUTPUT (+) TERM.	502
112	PU	MAIN POWER RELAY OUTPUT	503
113	OR	OPR MON PANEL	504
144	OR	ALUXKT	505
116	BR	ALUXKT	506
118	GY	ALUXKT	507
120	YL	ALUXKT	508
121	YL	BACKUP ALARM TO LAMP	509
124	OR	AUX	511
126	PK	XMSN CONT	512
127	OR	ALUXKT	513
128	PK	ALUXKT	515
129	BU	ALUXKT	516
130	GN	ALUXKT	517
135	BU	ALUXKT	521
138	GN	AUTO LUBE PUMP TO PAYLOAD MON	522
144	OR	ALUXKT	537
164	WH	HYDRO CONT TO WTL POWERTRAIN CTRL	538
177	OR	MAIN BKR	
Ground Circuits			
200	BK	MAIN CHASSIS	603
201	BK	OPR MON PANEL CMS	604
202	BK	XMSN CONT	605
203	BK	CHASSIS DIAGNOSTIC	606
206	BK	BAT SIDE OF DISCONNECT	610
207	BK	STARTER DIAGNOSTIC	611
228	BK	FUEL LEVEL SENDER	614
242	BK	PAYLOAD MON - CUSTOMER GROUND	615
251	BK	PAYLOAD MON - SYSTEM GROUND	617
270	BK	CMS IDENT CODE 0	619
271	BK	CMS IDENT CODE 1	
272	BK	CMS IDENT CODE 2	
273	BK	CMS IDENT CODE 3	710
274	BK	CMS IDENT CODE 4	751
275	BK	CMS IDENT CODE 5	752
280	BK	XMSN CONT IDENT CODE 4	754
281	BK	XMSN CONT IDENT CODE 5	755
290	BK	CMS SERVICE - SERVICE COAN	761
291	BK	CMS CLEAR - SERVICE CONN	762
292	BK	CMS USAMETRIC UNITS	795
4221	BK	TRANS CONTROL - OPTIONS CODE 0	A719
4222	BK	TRANS CONTROL - OPTIONS CODE 1	D735
4232	BK	TRANS CONTROL - OPTIONS CODE 2	D743
Basic Machine Circuits			
301	BU	STARTER NO. 1 SOL	E701
302	OR	STARTER NO. 1 RESISTOR TO DIAGNOSTIC	E702
304	WH	STARTER RELAY NO. 1 OUTPUT	E704
306	GN	STARTER RELAY COIL TO NEUT START SW	E709
307	OR	KEY SW TO NEUT START SW	E80
308	YL	MAIN POWER RELAY COIL	E83
310	PU	START AID SW TO START AID SOL	E84
311	WH	START AID SOL TO TEMP SW	E85
321	BR	BOOP ALARM	900
322	GY	WARNING HORN (FORWARD)	901
326	PU	KEY SW 'C' TERM.	910
334	BU	START AID SOL #2	921
Monitoring Circuits			
403	GN	ALTERNATOR (R) TERM.	923
406	GY	OPR MON OIL PRESS. (LO SETTING)	924
409	OR	OPR MON NEUT	925
410	WH	OPR MON FAULT ALARM	926
411	PK	OPR MON MASTER FAULT LAMP	944
416	OR	SUPPLIER SW	945
417	GY	PRIMARY STER SW	965
419	YL	OPR MON PARKING BRAKE	966
420	YL	OPR MON BRAKE OIL TEMP	968
423	PK	OPR MON BRAKE PRESS. (OR)	969
426	YL	LAMP INDICATOR	970
441	OR	ENG COOLANT TEMP GAGE	971
442	GY	HYD SYSTEM TEMP GAGE	972
443	YL	POWER TRAIN TEMP GAGE	973
447	PK	FUEL LEVEL GAGE	974
450	YL	TACH SENDER (+)	975
469	GN	FUEL LEVEL SENDER B+	976
496	WH	OPR MON PANEL HYD OIL LEVEL	977
A401	YL	ELECTRICAL SYSTEM NO 1 VOLTAGE	978
8412	YL	WTL PMS LIFT POS SENSOR	8999
8413	PU	WTL PMS LIFT CYL PRESS. SENSOR	



SENR6676-02
October 2010

Electrical Schematic Symbols And Definitions



Normally open switch that will close with an increase of a specific condition (temp-press-etc.).

Normally open switch that is closed due to an applied condition, and will open again with a specific decrease in that condition.

Normally closed switch that will open with an increase of a specific condition.

Normally closed switch that is open due to an applied condition, and will close again with a specific decrease in that condition.

The circle indicates that the component has screw terminals and a wire can be disconnected from it.

No circle indicates that the wire cannot be disconnected from the component.

This indicates that the component has a wire connected to it that is connected to ground.

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

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FMI No.	Failure Mode Identifiers (FMI) 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.

Component Identifiers (CID) List		
CID No.	Component	Machine Location
Computerized Monitoring System (MID No. 26)		
96	Fuel Level Sensor	D-4
100	Engine Oil Pressure Sensor	D-15
168	Electrical System Voltage	E-13
177	Power Train Oil Pressure Sensor	F-14
248	CAT Data Link	F-14
270	Harness Code	C-15
271	Action Alarm	C-10
324	Breaker - Blower Motors (1 SA)	C-15
325	Breaker - Main (BKA)	C-15
600	Hydraulic Oil Temperature Sensor	C-15
601	Breaker - Running Lamp (1 SA)	C-10
627	Secondary Brake Pressure Switch	D-1
Electronic Transmission Control (MID No. 81)		
190	Electronic System Voltage	E-12
362	Engine Speed Sensor	F-12
248	CAT Data Link	D-3
362	Rise Control Solenoid	D-4, E-4
368	Auto/Manual Switch	C-6
617	Air Inlet Heater Relay	C-15
621	Down Shift Switch	F-13
631	Solenoid 1 (Reverse)	D-2
632	Solenoid 2 (Forward)	B-1
633	Solenoid 3 (Gear 4)	B-1
634	Solenoid 4 (Gear 3)	D-2
635	Solenoid 5 (Gear 2)	D-2
636	Solenoid 6 (Gear 1)	D-2
650	Harness Code	F-4
668	Shift Handle	F-4
671	Transmission Speed Sensor	F-4
680	Ride Control Switch	F-4
685	Service Information Code	E-11
687	Options Identification Code	E-4
688	Dual Horsepower Solenoid	B-13

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm (CMS)	D-4	A	Sensor - Trans Oil Temp	B-14	20
Alarm - Backup	D-15	1	Sensor - Trans Speed	C-13	26
Alternator	E-13	2	Shifter - Transmission	F-3	A
Battery	F-14	3	Solenoid - A/C Clutch	A-15	21
Breaker - Alternator (BA)	C-15	B	Solenoid - Dual Horsepower	B-15	22
Breaker - Blower Motors (1 SA)	C-10	B	Solenoid - Engine Shutdown	B-15	22
Breaker - Main (BKA)	C-15	B	Solenoid - Float Detect	B-6	C
Breaker - Running Lamp (1 SA)	C-15	B	Solenoid - Lift Detect	B-6	C
Breaker - Seat Air Comp (1 SA)	C-10	C	Solenoid - Idle Control Valve	B-1	23
Buffer - Fuel Level	D-1	5	Solenoid - Start Aid	A-14	24
Control - Transmission	E-12	6	Solenoid - Tilt Detect	B-6	C
Control - Payload Measurement (ECM)	F-12	6	Solenoids - (8) Trans Valves	C-11, C-12	28
Display - Payload Operator	D-3	7	Switch - A/C Heater	C-5	D
Flasher	D-4, E-4	A	Switch - Air Inlet Heater	E-6	C
Fuses (10A)	C-6	C	Switch - Auto Brake Control	E-7	C
Heater Air Inlet	C-15	B	Switch - Battery Disconnect	F-14	25
Horn - Forward (High Tone)	D-2	9	Switch - Beacon	D-10	C
Horn - Forward (Low Tone)	B-1	10	Switch - Blower Motor	D-4	D
Lamp - Action	D-4	D	Switch - Brake Oil Pressure	A-13	27
Lamp - Auto Ride Control	F-4	0	Switch - Bucket Positioner	A-1, E-1	28
Lamp - Neutralizer Overrides	F-4	0	Switch - Engine Coolant Temp (SI Act)	E-13	2
Lamp - Ride Control	F-4	0	Switch - Dimmer	C-1	A
Lamp - Transmission Auto-Mode	F-4	0	Switch - Engine Oil Pressure	A-15	29
Master - Service	E-11	C	Switch - Flood Lamp	E-11	C
Master - Computerized System (CMS)	E-4	D	Switch - Front Intermittent Wiper	E-8	C
Motor - Front Washer	B-13	11	Switch - Horn	C-4	A
Motor - Front Wiper	B-3	12	Switch - Hydraulic Oil Level	A-3	17
Motor - Rear Washer	B-14	11	Switch - Key Start	E-9	C
Motor - Rear Wiper	F-14	13	Switch - Lift Positioner	A-2	19
Motor - Starter	F-14	14	Switch - Park Brake Pressure	A-14	27
Motors - Blower	C-3	15	Switch - Payload Measurement Reweigh	E-7	C
Relay - Air Inlet Heater	F-13	8	Switch - Payload Measurement Score	E-7	C
Relay - Main	C-15	B	Switch - Refrigerant	A-15	21
Relay - Start	C-15	B	Switch - Running Lamp	E-10	C
Resistor - Blower Motor Speed	C-3	15	Switch - Start Aid	E-8	C
Resistor - Starter/Diagnostic	F-13	14	Switch - Stoplamp	C-1	30
Resistor - System Voltage (CMS)	C-14	8	Switch - Supplemental Steering Flow	B-14	31
Sender - Fuel Level	D-1	5	Switch - Trans Auto/Manual	D-11	C
Sensor - Coolant Temp	E-4	2	Switch - Trans Downshift	B-6	C
Sensor - Engine Speed	C-13	16	Switch - Trans Downshift SW 1	B-6	C
Sensor - Hydraulic	A-3	17	Switch - Trans Neutralizer Overrides	E-6	C
Sensor - Lift Cyl Pressure	A-2, D-1	18	Switch - Turn Signal	D-6	A
Sensor - Lift Position	A-2	19	Switches - Primary Steering Flow	B-14	31

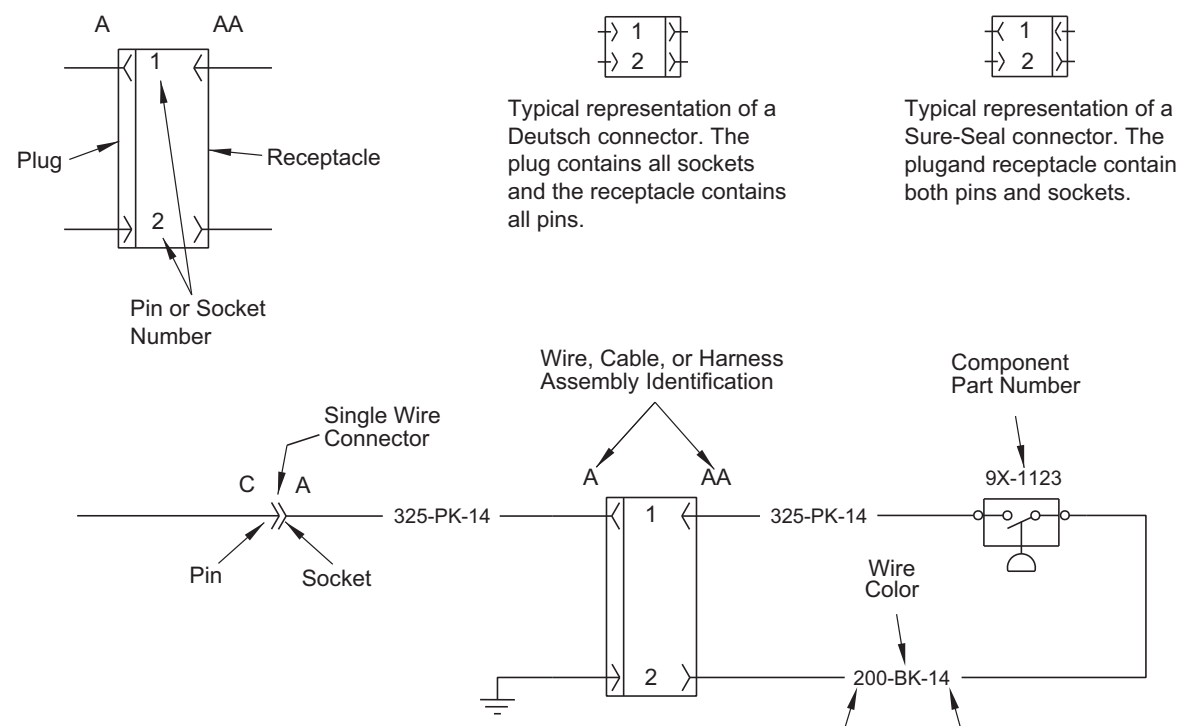
Related Electrical Service Manuals	
Title	Form Number
Alternator (100-2647)	
Consult No. 100-8645	SEN14130
Consult No. 100-5046	SEN2082
Computerized Monitoring System (CMS)	SEN26247
Electronic Transmission Control	SEN95022
Payload Measurement System (PMS)	SEN39307
Starting and Charging Systems	SEN2947
Starting Motor (8X-6995)	
Consult No. 8E-2298	SEN3581
Consult No. 8C-4773	SEN3939

Module Identifiers (MID)	
MID No.	Module
26	Computerized Monitoring System (CMS)
81	Electronic Transmission Control

Off Machine Switch Specification			
Part No.	Function	Actuate	Deactuate
8C-3069	Engine Coolant Temp (SI Act)	37.8 ± 2.8°C (100.0 ± 5.0°F)	26.7°C MIN (81.0°F MIN)
9W-2653	Park Brake Pressure	8270.0 kPa MAX (1200.0 psi MAX)	6890.0 ± 345.0 kPa (1000.0 ± 50.0 psi)
9X-1159	Steering (Primary & Supplemental) Flow	4.00 Grams (0.14 oz)	1.50 Grams (0.05 oz)
9X-4276	Engine Oil Pressure	93.0 ± 2.0 kPa (13.5 ± 0.3 psi)	69.0 ± 2.1 kPa (10.0 ± 0.3 psi)
9X-9643	Brake Oil Pressure	10700.0 kPa MAX (1552.0 psi MAX)	8960.0 ± 345.0 kPa (1300.0 ± 50.0 psi)
	AC High/Low Pressure	-	0 to 450 kPa MAX (0 to 65 psi MAX)
	Spec For Increasing Pressure	450 to 2400 ± 140 kPa (65 to 350 ± 20 psi)	greater than 2400 ± 140 kPa (greater than 350 ± 20 psi)
	Spec For Decreasing Pressure	greater than 1700 ± 205 kPa (250 ± 30 to 30 ± 7 psi)	205 ± 50 to 0 kPa (30 ± 7 to 0 psi)

Resistor, Sender and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms)
9G-1950	Resistor - Blower Speed	Overall 2.00 ± .10 (Tap 1.00 ± .05)
6T-2217	Resistor - Starter/Diagnostic Conn	150.0 ± 7.5
102-0247	Solenoid - A/C Clutch	14.4 ± 0.6
9X-6800	Solenoid - Dual Horsepower	21.7 ± 2.2
8C-3663	Solenoid - Engine Shutdown	1.55 ± 0.15
6T-5859	Solenoid - Ride Control	33.7 ± 1.0
9G-4365	Solenoid - Start Aid	6.0
3E-3748	Solenoids - Transmission	8.5

Harness And Wire Electrical Schematic Symbols



Electrical Schematic Symbols And Definitions

- FUSE** - A component in an electrical circuit that will open the circuit if too much current flows through it.
- 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.
- CIRCUIT BREAKER (CB)** - A component in an electrical circuit that will open the circuit if too much current flows through it. This does not destroy the circuit breaker and it can be reset to become part of the circuit again.
- 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 latch 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

