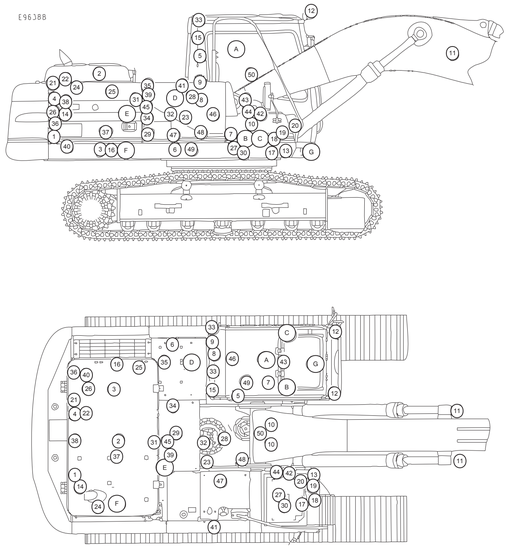
Wire Description		
Wire Number	**Wire Color**	**Description**
Power Distribution Circuits		
101	RD	Bat (+) (Not Application Specific)
103	RD	Dome Lamp Ckt
105	RD	Key Start Sw
107	RD	Eng Shut - Down Fire Suppr
109	RD	Alt Output (+) Term
111	RD	Engine Pump Control Ckt
112	PU	Main Power Rly Output
113	OR	Opr Mon Panel VMIS B+ Switched
114	RD	Warning Horn (Forward)
115	PK	Cab / Chassis Ckt
118	GY	Washer / Wiper Ckt
120	YL	Converter Ckt
124	GN	A/C / Heater Ckt
129	BU	Cigar Lighter Ckt
135	BU	12V 5A Output Ckt
140	BU	Lubricator Ckt
147	PU	Fine Swing / Flow Control Ckt
149	PU	Boom Lamp Ckt
150	RD	Bat (+)
151	GN	Hyd Lock / Neutral Start Ckt
152	BU	Lower Washer / Wiper Ckt
154	RD	Neutral Start / Neutral Start Ckt
168	RD	Refueling Pump Ckt
172	RD	Engine Governor
175	RD	Fan Ckt
176	YL	Aux Ckt
177	RD	Main Brkr
180	GN	Aux Ckt
185	YL	Backup Ckt
189	RD	Hyd Lock Ckt
191	WH	Power Window Ckt
196	BU	Insp. Lamp Ckt
Ground Circuits		
200	BK	Main Chassis
201	BK	Operator Monitor Return
235	BK	Electronic Pump Ctrl Gnd
Basic Machine Circuits		
304	WH	Starter Relay No. 1 Output
306	GN	Starter Relay Coil To Neut Start SW Or
307	OR	Key Start SW To Neutral Start SW Or
308	YL	Main Power Relay Coil
309	GY	Alternator Regulator Term.
310	PU	Start Aid SW To Start Aid Sol
320	OR	Horn Relay Coil To SW
321	BR	Backup Alarm Lamp Travel Alarm
322	GY	Warning Horn (Forward)
323	WH	Fuel Pump Power
325	PK	Fuel Pump Relay Cut-Out
326	PU	Key Start SW "C" Term.
330	YL	Neutral Start Relay Coil
329	YL	Fuel Pump To SW
365	YL	Fuel Pump Relay To Switch
Monitoring Circuits		
403	GN	Alternator (R) Term.
405	GY	Opr Mon Oil Press. (Low Setting)
412	BU	Opr Mon Cool Flow/Ds2 App Spec(Pin 26)HEUI-ADEMI
430	BU	Opr Mon Air Filter
487	OR	Hyd Oil Flow SW
491	PK	VMIS Hyd Oil Temp Sensor
492	GY	VMIS Coolant Temp Sensor Signal
495	GN	VMIS Fuel Level Signal
496	WH	Opr Mon Panel Hyd Oil Level
Accessory Circuits		
501	GN	Wiper - Front (Low)
506	PU	Washer - Front
508	PU	Radio Speaker - Left
509	WH	Radio Speaker - Left (Common)
511	BR	Radio Speaker - Right
512	GN	Radio Speaker - Right (Common)
513	OR	A/C Compressor/Refrigerant Pressure SW
519	PK	Thermostat To Refrigerant Press. SW
530	OR	Washer Right
575	YL	Wiper - Aux (Park)
576	PK	Turn Signal SW To Flasher

Wire Description		
Wire Number	**Wire Color**	**Description**
Lighting Circuits		
578	BU	Washer - Aux
586	BR	Aux Hyd - Close
590	GY	Wiper SW To Intermittent Module
592	BU	DC/DC Converter Power Output
A513	RD	DC/DC Converter Memory Output
A537	PK	Seat Heater (Resistive Element In Cushion)
A579	OR	Wiper Motor +
A580	BR	Wiper Motor -
A581	GN	Wiper Motor Raise
A582	PU	Wiper Motor Stop
A583	YL	Power Window Interlock To Wiper Cont
A584	BU	Front Window Limit SW To Wiper Cont
A586	OR	Wiper SW To Wiper Cont
A587	YL	Power Window Cont To Safety Sol Relay
A588	GN	Safety Sol Relay To Sol
A589	OR	Power Window Up
A590	BU	Power Window Down
A591	PU	Rear Window Limit SW
C468	BU	Engine Oil Level
C537	GN	Turn Signal SW To Flasher
C538	OR	Hazard Indicator
607	PK	Flood Lamp - Front
615	YL	Cab Flood Lamp/Rops
616	BU	Bucket Flood Lamp/Boom Flood Lamp
Control Circuits		
763	BU	Torque Converter SW
786	GN	Eng Speed Cont - Hi Press SW
788	YL	Eng Speed (+)
791	PK	Eng Speed Cont - Lo Sol
A718	PU	Start Aid Coolant Sensor Signal
A755	PK	Throttle SW #1
A756	BU	Throttle SW #2
A757	GY	Throttle SW #3
A758	BR	Throttle SW #4
A761	PU	Electronic Pump Cont Throttle Ground
A762	PU	Electronic Pump Cont Eng Speed Ground
A768	BU	Pump Control Valve #1 (+)
A769	GY	Pump Control Valve #2 (-)
A770	PK	Electronic Pump Control Bypass SW To Resistor
A771	PU	Float SW
877	YL	Glow Plug Magnetic SW To Glow Plug
950	BR	Right Console Compactor SW To Relay/Diode
951	PK	Right Cont Handle SW To Relay/Diode
954	GN	Right Console Eng Throttle SW To Relay/Diode
F771	OR	Backup SW
F772	WH	Backup SW
F773	OR	Governor Accel
F774	WH	Governor Decel
G973	OR	Boom Raise Press SW to Crush Press SW
G974	WH	Crush Sol to Demolition Relay
G975	YL	Crush Press SW to Demolition Relay
J703	PK	Alt Pulse Sig To Anti-Start Relay (was D746 PK)
K904	GN	Pump Discharge - Signal
K905	RD	Pump Discharge - +B
K906	GN	SW To SW (Generic)
K907	BU	XMSN Cont Fwd SW To Gnd
K909	BU	XMSN Cont Rev SW To Gnd
K911	PK	XMSN Cont Speed 2 SW To Gnd
K912	GN	XMSN Cont Speed 3 SW To Gnd
K915	GN	XMSN Cont Speed 4 SW To Gnd
K997	BU	XMSN Cont Neut SW To Gnd
L908	OR	XMSN Cont Pk Brk Lever SW To Gnd
L909	BU	Impl Cont SW To Gnd N.O.
L968	OR	Impl Cont SW To Gnd N.C.
L969	WH	XMSN Cont Speed 1 SW To Gnd
L970	GY	Injector Diode To Injector 14
L971	GN	Impl Cont Lift Proportional Sol
L972	BU	Impl Cont Lower Proportional Sol
L973	GN	Impl Cont Sol Return
L974	GN	Impl Cont Pilot Press Sol
L975	OK	Serial Data (Transmit)
L976	GN	Serial Data (Receive)
L977	YL	XMSN Shift Sol No. 5 or 4
L978	GY	XMSN Shift Sol No. 6

Component Location					
Component	**Schematic Location**	**Machine Location**	**Component**	**Schematic Location**	**Machine Location**
Actuator - Engine Gov	A-9	1	Sender - Hydraulic Oil Temp	A-5	E
Air Inlet Heater	C-8	2	Sensor - A/C Photo	F-1	A
Alarm - ATCH Travel	G-9	3	Sensor - Air Inlet Heater Coolant Temp	C-9	21
Alternator	B-8	4	Sensor - Fuel Level	A-5	23
Antenna ATCH	C-6	5	Sensor - Pump Discharge Press	B-8	24
Assembly - Terminal Block	F-8	D	Socket 12V	H-6	A
Batteries - 12VDC	I-8,H-8	6	Solenoid - A/C Clutch	C-9	26
Breaker - Alternator	I-8	D	Solenoid - ATCH Crush	D-8	31
Breaker - Main	I-8	D	Solenoid - ATCH Flow Control	D-7	29
Cable - ATCH Antenna	G-6, I-3	5	Solenoid - Fine Swing	E-7	28
Control - ATCH Power Window	C-6	15	Solenoid - Hydraulic Lock	I-1	G
Control - Engine/Pump	F-2	7	Solenoid - Level Finish	A-7	F
Controller - Wiper/Washer	E-1	A	Solenoid - Swing Brake	E-7	32
Converter - Voltage	H-6	9	Solenoid - Travel Speed	A-7	F
Converter ATCH	I-3	8	Solenoid - Trenching	A-7	F
Dial - Engine Speed	E-3	B	Switch - A/C Panel	H-5	C
Diode	A-3	18	Switch - Air Cleaner Flow	H-9	35
Diode - Main Relay	H-7	D	Switch - ATCH Refueling Start	A-4	42
Fuses	I-4,5,6	C	Switch - ATCH Refueling Stop	A-4	44
Heater - ATCH Seat with Seat Heater	F-4	43	Switch - ATCH Fine Swing Control	D-4	B
Horn	A-2	10	Switch - ATCH Hammer	H-1	G
Lamp - Cab	G-1	12	Switch - ATCH Heater Panel	H-5	C
Lamp - Chassis	A-2	13	Switch - ATCH Lower Washer	D-3	B
Lighter	E-1	A	Switch - ATCH Lower Wiper	D-3	B
Meter - Service	F-1	A	Switch - ATCH Power Window limit	B-6	A
Monitor	F-1	A	Switch - ATCH Refueling	A-4	41
Motor - ATCH Lower Washer	I-9	D	Switch - ATCH Seat Heater	D-4	B
Motor - ATCH Lower Wiper	H-1	G	Switch - Aux Hydraulic Pressure	H-1	G
Motor - Starter	A-9	14	Switch - Boom Raise Pressure	D-8,D-7	34
Motor - Washer	I-9	D	Switch - Control Pressure	H-1	G
Motor - Wiper	E-1	A	Switch - Coolant Level	H-9	36
Pickup - Engine Speed	B-9	29	Switch - Crush Pressure #1	H-1	G
Pump - ATCH Auto Lubrication	H-9	16	Switch - Crush Pressure #2	G-1	G
Pump - ATCH Refueling	A-2	17	Switch - Engine Oil Press	B-9	38
Radio - ATCH 12VDC	I-3	C	Switch - Flow Control Pressure	H-1	G
Relay - ATCH Flow Control	E-7	D	Switch - Horn	I-1	C
Relay - ATCH Refueling Power	A-3	18	Switch - Hydraulic Control	D-4	C
Relay - ATCH Refueling Start	A-3	19	Switch - Hydraulic Oil Filter	A-5	E
Relay - ATCH Refueling Stop	A-3	20	Switch - Hydraulic Oil Level	A-5	E
Relay - Boom Lamp	I-7	D	Switch - Implement Pressure	D-8	39
Relay - Cab/Chassis Lamp	I-7	D	Switch - Key	F-2	B
Relay - Demolition	E-8	D	Switch - Neutral Start Limit	I-1	C
Relay - Fan	I-8	D	Switch - One Touch Low Idle	F-2	B
Relay - Heater	F-7	D	Switch - Power Window Limit	D-3	A
Relay - Horn	I-7	D	Switch - Travel Pressure	D-8	45
Relay - Hydraulic Lock Solenoid	I-7	D	Switch - Window Limit	D-1	A
Relay - Main	G-7	D	Switch Panel	F-2	B
Relay - Neutral Start	F-7	D	Switch- Refrigerants Low Pressure	I-9	40
Relay - Start	F-8	D	Unit - A/C, Heater	H-6	21
Relay - Start Cont	E-8	D	Unit - ATCH Heater	H-5	46
Relay - Timer	E-7	D	Unit - Heater Control	I-7	D
Resistor - Backup	I-7	D	Valve Proportional Reducing	A-7	F
Sender - Coolant Temperature	B-8, B-9	22			

Machine locations are repeated for components located close together.
A Located in the cab.
B Located in the lefthand console.
C Located in the righthand console.
D Located on or near relay panel.
E Located on or near hydraulic oil tank.
F Located on or near pilot manifold.
G Located on or near bottom platform.



Machine Harness Connector And Component Locations

Resistor, Sender and Solenoid Specifications		
Part No.	**Component Description**	**Resistance (Ohms)[1]**
102-8016	Resistor: Backup	47.0 ± 2.35
107-7056	Solenoid: Fine Swing	34.0 ± 0.5
111-9916	Solenoid: Engine/Pump Control	11.7 ±1.2
121-1490	Solenoid: Level Finish Trenching	32±3.2
121-1491	Solenoid: Hydraulic Lock Swing Brake Travel Speed	32±3.2
122-4459	Solenoid: Flow Control	34.3 ± 1.7

[1] At room temperature.

Off Machine Switch Specification				
Part No.	**Function**	**Actuate**	**Deactuate**	**Contact Position**
106-0179	Travel Pressure Implement Pressure	1520 ± 98 kPa 220.5 ± 14 psi	1127 kPa Min 163.5 psi	Normally Open
106-0180	Boom Raise Pressure	2640 ± 196 kPa 383.8 ± 28.4 psi	2156 ± 196 kPa 312 ± 28.4 psi	Normally Open
106-0181	Flow Control Pressure Aux. Hydraulic Pressure Hammer Pressure	490 ± 49 kPa 71 ± 7.1 psi	290 kPa 42 psi	Normally Open
113-344	Refrigerant High/ Low Pressure	196 ± 1340 kPa 28.4 ± 455.4 psi	-	Normally Open

CATERPILLAR®

SENR9258-02
November 1999

Schematic

320B Excavators
Electrical Systems

320B:
AED1-UP
3MR1-UP
4MR1-UP
4NR1-UP
5BR1-UP
6CR1-UP
9KR1-UP
1CS1-UP
8ES1-UP
9CS1-UP
4XW1-UP
5GW1-UP
2WZ1-UP

Connector Location		
Connector Number	**Schematic Location**	**Machine Location**
CONN 1	A-9	1
CONN 2	F-9	D
CONN 3	F-9	14
CONN 4	G-9	D
CONN 5	G-9	D
CONN 6	H-8	D
CONN 7	G-8	A
CONN 8	G-8	A
CONN 9	G-9	A
CONN 10	G-6	G
CONN 11	C-6	A
CONN 12	C-6	A
CONN 13	C-5	A
CONN 14	C-5	A
CONN 15	F-5	A
CONN 16	F-5	G
CONN 17	F-5	A
CONN 18	F-5	G
CONN 19	F-4	G
CONN 20	F-4	G
CONN 21	H-5	G
CONN 22	H-5	G
CONN 23	H-4	G
CONN 24	H-4	G
CONN 25	H-4	G
CONN 26	H-4	G
CONN 27	B-4	23
CONN 28	A-4	42
CONN 29	A-4	20
CONN 30	B-3	47
CONN 31	B-3	48
CONN 32	C-2	49
CONN 33	C-2	G
CONN 34	C-2	G
CONN 35	C-2	G
CONN 36	B-2	D
CONN 37	E-8	D
CONN 38	E-8	D

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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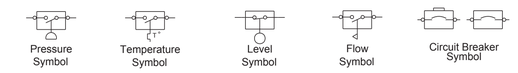
Electrical Schematic Symbols And Definitions



Normally open switch that will close with an increase of a specific condition (temp-press-etc.).
The circle indicates that the component has screw terminals and a wire can be disconnected from it.

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

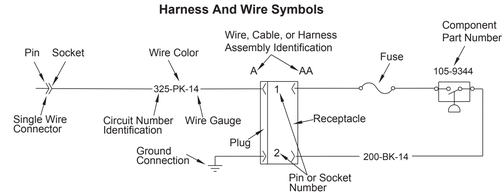
Reed Switch - A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.

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.

Harness And Wire Symbols

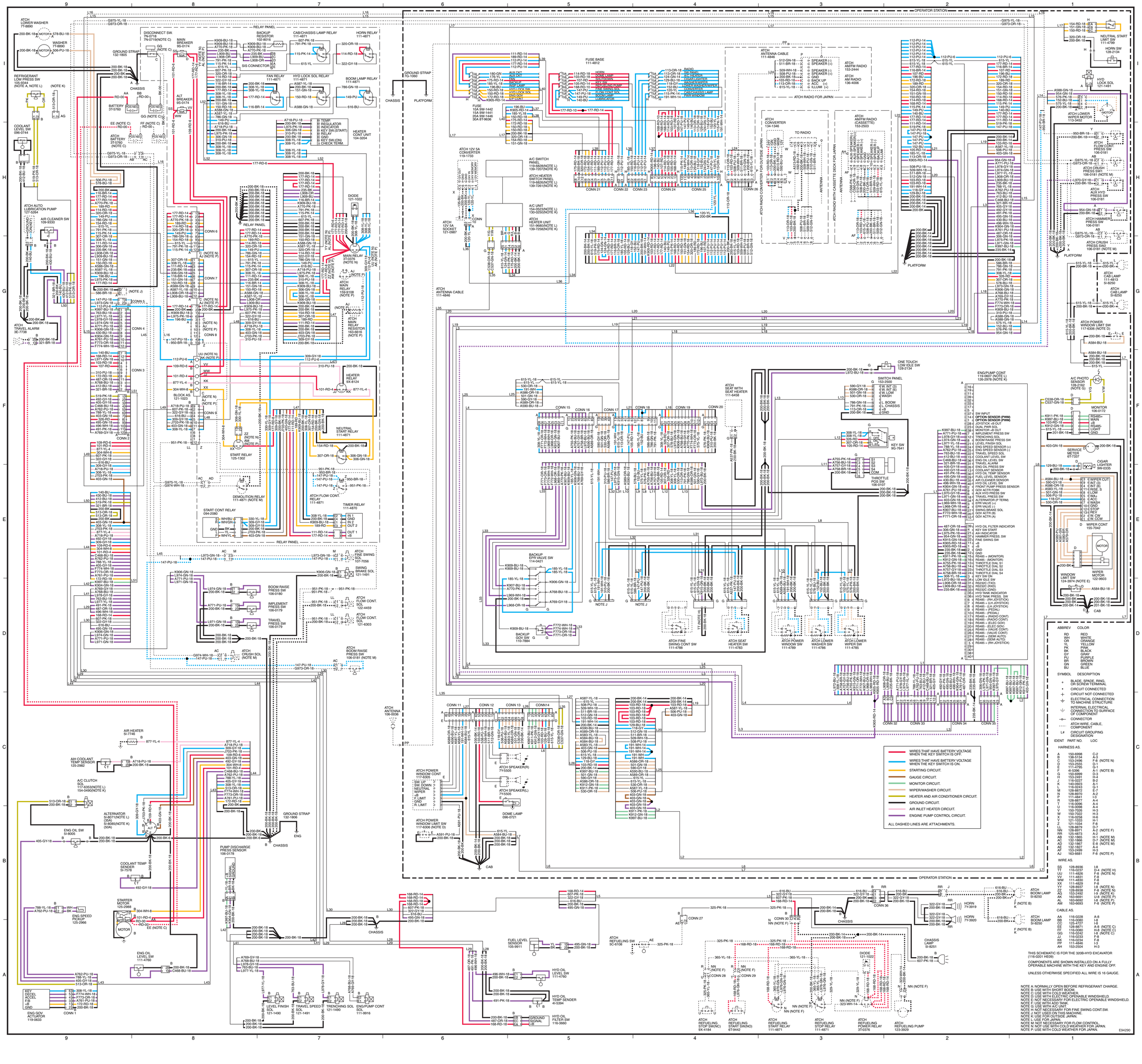


Typical representation of a Deutsch connector. The plug contains all sockets and the receptacle contains all pins.

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

Real Time Error Codes	
Code	**Description Of Problems**
1301	Engine oil pressure too low
3102	Engine coolant temperature is too high
1303	Hydraulic oil temperature is too high
1304	Air filter is clogged
1305	Battery voltage is not normal
2201	Governor actuator feedback sensor circuit is open or shorted battery voltage
2202	Governor actuator feedback sensor is shorted to body ground
2301	Governor actuator feedback signal is not stable
2302	Governor actuator feedback signal deviates
2303	Governor actuator does not move
2304	Calibration data error
3201	Monitor RAM is not normal
4101	Electric power supply to the controller is too much(43 volts)
4102	Over-current in proportional reducing valve
4103	Proportional reducing valve circuit is open
4105	Over-current in digital output (trenching solenoid)
4106	Over-current in digital output (fine control solenoid)
4107	Over-current in digital output (Travel speed change solenoid)
4108	Over-current in digital output (travel alarm)
410A	Over-current in digital output (swing brake solenoid)
4201	Engine speed is not normal
4202	Engine coolant temperature sensor is shorted to body ground
4203	Hydraulic oil temperature sensor is shorted to body ground
4204	PWM sensor of pump delivery pressure is open in circuit
4207	PWM sensor of pump delivery pressure is open in circuit
420A	Fuel sensor is shorted to ground
420B	Fuel sensor is open or shorted to battery voltage
420C	Electric power supply is too low (below 23 volts)
420D	Electric power supply is too high (above 32 volts)
420E	Engine speed dial is not one of the specified 10
4301	Data mismatch 1 between alternator and speed sensor (alternator is abnormal)
4302	Data mismatch 2 between alternator and speed sensor (speed sensor is abnormal)
4303	Engine stalls
A201	Monitor communication is not normal
A202	Monitor takes to much time to respond to controller's signal
A203	Communication is abnormal in controller

Related Electrical Service Manuals	
Title	**Form Number**
Engine/Pump Control	SENR9291
Starting and Charging	RENR1007


OPERATOR STATION
RELAY PANEL
CHASSIS
PLATFORM
ATCH LOWER WASHER 7T-8890
WASHER 7T-8890
REFRIGERANT LOW PRESS SW 105-9344 (NOTE A, NOTE L)
COOLANT LEVEL SW 096-0744
ATCH AUTO LUBRICATION PUMP 127-5264
AIR CLEANER SW 109-9330
ATCH TRAVEL ALARM 3E-7738
DISCONNECT SW. 7N-0718 7N-0719(NOTE C)
MAIN BREAKER 9S-0174
GROUND STRAP 132-1805
BATTERY 3T-5760
ATCH BATTERY 3T-5760 (NOTE C)
ALT BREAKER 9S-0174
BACKUP RESISTOR 102-8016
SIS CONNECTOR
CAB/CHASSIS LAMP RELAY 111-4871
HORN RELAY 111-4871
FAN RELAY 111-4871
HYD LOCK SOL RELAY 111-4871
BOOM LAMP RELAY 111-4871
FUSE 10A SW-1442 15A SW-1441 20A SW-1446 30A 8T-9636
TEMP. REGULATOR INDICATOR KEY SW.(START) RELAY GND KEY SW.(ON) CHECK TERM.
HEATER CONT UNIT 104-3204
DIODE 121-1022
MAIN RELAY 3T-0376 (NOTE N)
ATCH MAIN RELAY 159-9108 (NOTE P)
ATCH MAIN RELAY RESISTOR 163-6616 (NOTE P)
HEATER RELAY 9X-8124
BLOCK AS. 121-1023
START RELAY 125-1302
NEUTRAL START RELAY 111-4871
DEMOLITION RELAY 111-4871 (NOTE M)
START CONT RELAY 094-2080
ATCH FLOW CONT. RELAY 111-4871
TIMER RELAY 111-4870
ATCH FINE SWING SOL 107-7056
SWING BRAKE SOL 121-1491
ATCH FLOW CONT. SOL 122-4459
ATCH FLOW CONT. SOL 121-6303
BOOM RAISE PRESS SW 106-0180
IMPLEMENT PRESS SW 106-0179
TRAVEL PRESS SW 106-0179
ATCH CRUSH SOL (NOTE M)
ATCH BOOM RAISE PRESS SW 106-0181 (NOTE M)
ATCH ANTENNA 106-0036
AIR HEATER 5I-7746
AIH COOLANT TEMP SENSOR 125-2982
A/C CLUTCH SOL 117-6353(NOTE L) 154-0469(NOTE K)
ALTERNATOR 5I-8071(NOTE L) (35A) 5I-8065(NOTE K) (50A)
ENG OIL SW 5I-8005
COOLANT TEMP SENDER 5I-7578
STARTER MOTOR 125-2988
ENG SPEED PICKUP 125-2966
ENG OIL LEVEL SW 111-4760
PUMP DISCHARGE PRESS SENSOR 106-0178
GROUND STRAP 132-1806
ENG
KEY DECEL ACCEL F/B +B GND
ENG GOV ACTUATOR 119-0633
CONN 1
LEVEL FINISH SOL 121-1490
TRAVEL SPEED SOL 121-1491
TRENCHING SOL 121-1490
ENG/PUMP CONT SOL 111-9916
HYD OIL FILTER SW 116-3660
HYD OIL TEMP SENDER 4I-5394
HYD OIL LEVEL SW 111-4760
FUEL LEVEL SENSOR 105-9911
ATCH REFUELING SW 5C-6108
ATCH REFUELING STOP SW(NC) 9X-4184
ATCH REFUELING START SW(NO) 6T-9442
ATCH REFUELING START RELAY 111-4871
ATCH REFUELING STOP RELAY 111-4871
ATCH REFUELING POWER RELAY 3T-0376
ATCH REFUELING PUMP 123-3929
FUSE BASE 111-4812
ATCH ANTENNA CABLE 111-4846
ATCH AM/FM RADIO 153-2444
ATCH AM RADIO 136-4006
ATCH RADIO FOR JAPAN
ATCH CONVERTER 134-1346
TO RADIO
ATCH AM/FM RADIO (CASSETTE) 153-2503
ATCH RADIO WITH CASSETTE DECK FOR JAPAN
ATCH RADIO CONVERTER FOR OUTSIDE JAPAN
ATCH 12V 5A CONVERTER 119-1733
ATCH 12V 5A SOCKET 121-0987
A/C SWITCH PANEL 119-6828(NOTE L) 139-7207(NOTE K)
ATCH HEATER SWITCH PANEL 119-6826(NOTE L) 139-7261(NOTE K)
A/C UNIT 154-0523(NOTE L) 130-0250(NOTE K)
ATCH HEATER UNIT 151-9680(NOTE L) 139-7258(NOTE K)
ATCH SEAT WITH SEAT HEATER 111-6458
SWITCH PANEL 153-2500
ONE TOUCH LOW IDLE SW 128-2134
ENG/PUMP CONT 119-0607 (NOTE L) 126-2978 (NOTE K)
THROTTLE POS SW 106-0107
KEY SW 9S-7641
ATCH SWING BRAKE SOL 121-1491
ATCH FINE SWING CONT SW 111-4788
ATCH SEAT HEATER SW 111-4783
ATCH POWER WINDOW SW 111-4789
ATCH LOWER WASHER SW 111-4786
ATCH LOWER WIPER SW 111-4785
ATCH POWER WINDOW CONT 117-6305
ATCH POWER WINDOW LIMIT SW 117-6306 (NOTE D)
ATCH SPEAKER(R) 7Y-5505
ATCH SPEAKER(L) 7Y-5505
DOME LAMP 096-0721
ATCH CAB LAMP 5I-8213 5I-8250
ATCH LAMP 5I-8250
ATCH HAMMER PRESS SW 106-0181
ATCH CRUSH PRESS SW1 106-0181 (NOTE M)
ATCH CRUSH PRESS SW2 106-0181 (NOTE M)
ATCH FLOW CONT PRESS SW 106-0181
ATCH AUX HYD PRESS SW 106-0181
ATCH LOWER WIPER MOTOR 113-3452
NEUTRAL START LIMIT SW 111-4799
HORN SW 128-2134
HYD LOCK SOL 121-1491
A/C PHOTO SENSOR 128-2162 (NOTE G)
MONITOR 106-0172
SERVICE METER 6T-7327
CIGAR LIGHTER 9W-0335
WIPER CONT 155-7042
WIPER MOTOR 129-9603
WINDOW LIMIT SW 124-3974 (NOTE E)
CAB
WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS OFF.
WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS ON.
STARTING CIRCUIT.
GAUGE CIRCUIT.
MONITOR CIRCUIT.
WIPER/WASHER CIRCUIT.
HEATER AND AIR CONDITIONER CIRCUIT.
GROUND CIRCUIT.
AIR INLET HEATER CIRCUIT.
ENGINE PUMP CONTROL CIRCUIT.
ALL DASHED LINES ARE ATTACHMENTS.
ABBREV COLOR
RD RED
WH WHITE
OR ORANGE
YL YELLOW
PK PINK
BK BLACK
GY GRAY
PU PURPLE
BR BROWN
GN GREEN
BU BLUE
SYMBOL DESCRIPTION
BLADE, SPADE, RING, OR SCREW TERMINAL
CIRCUIT CONNECTED
CIRCUIT NOT CONNECTED
ELECTRICAL CONNECTION TO MACHINE STRUCTURE
INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
CONNECTOR
ATCH WIRE, CABLE, COMPONENT
L# CIRCUIT GROUPING DESIGNATION
IDENT PART NO. LOC
HARNESS AS.
A 150-6998 C-2
B 138-5134 A-3
C 153-2496 F-8 (NOTE N)
D 153-2555 G-1
E 111-4795 G-1
F 4I-5396 A-1 (NOTE B)
G 150-6999 D-3
H 153-2491 H-4
J 116-0227 B-2
K 140-0923 G-1
L 116-0243 G-1
M 128-8872 E-7
N 128-8970 A-2
P 111-4841 F-3
R 128-8877 A-4
T 116-0096 A-4
U 116-0098 A-4
V 150-7026 H-3
W 150-7022 H-3
X 116-0258 H-6
Y 121-1033 H-1
Z 121-1034 F-8
LL 128-8879 D-7
NN 128-8971 A-2 (NOTE F)
RR 125-4873 A-2
AB 132-1865 H-1 (NOTE M)
AC 132-1866 D-7 (NOTE M)
AD 132-1867 E-8 (NOTE M)
AE 132-1827 A-4
AF 153-2499 H-3
AJ 153-6681 F-8 (NOTE P)
WIRE AS.
SS 128-8936 I-8
TT 116-0237 D-4 (NOTE H)
UU 111-4826 F-8 (NOTE N)
VV 111-4831 F-8
WW 111-4830 F-8
XX 111-4829 F-8
YY 128-8937 I-8 (NOTE N)
ZZ 128-8938 F-8 (NOTE N)
GG 153-2492 I-8 (NOTE K)
AK 163-6691 U-8 (NOTE P)
AL 163-6692 I-8 (NOTE P)
AM 153-6693 F-8 (NOTE P)
CABLE AS.
AA 116-0226 A-8
BB 116-0080 I-8
CC 125-4727 I-8
DD 128-8871 A-8 (NOTE C)
EE 116-0080 H-8 (NOTE C)
FF 116-0242 I-8 (NOTE C)
JJ 116-0233 F-8
KK 116-0234 F-8
PP 111-4846 I-3
AH 153-2504
THIS SCHEMATIC IS FOR THE 320B-HYD EXCAVATOR (116-0201 HE09)
COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERABLE MACHINE WITH THE KEY AND ENGINE OFF.
UNLESS OTHERWISE SPECIFIED ALL WIRE IS 16 GAUGE.
NOTE A: NORMALLY OPEN BEFORE REFRIGERANT CHARGE.
NOTE B: USE WITH SHORT BOOM.
NOTE C: USE WITH COLD WEATHER.
NOTE D: USE WITH ELECTRIC OPENABLE WINDSHIELD.
NOTE E: NOT NECESSARY FOR ELECTRIC OPENABLE WINDSHIELD.
NOTE F: USE WITH ADD TANK.
NOTE G: USE WITH A/C UNIT.
NOTE H: NOT NECESSARY FOR FINE SWING CONT.SW.
NOTE J: NOT USED ON THIS MACHINE.
NOTE K: USE FOR OUTSIDE JAPAN.
NOTE L: USE FOR JAPAN.
NOTE M: NOT NECESSARY FOR FLOW CONTROL.
NOTE N: NOT USE WITH COLD WEATHER FOR JAPAN.
NOTE P: USE WITH COLD WEATHER FOR JAPAN.
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