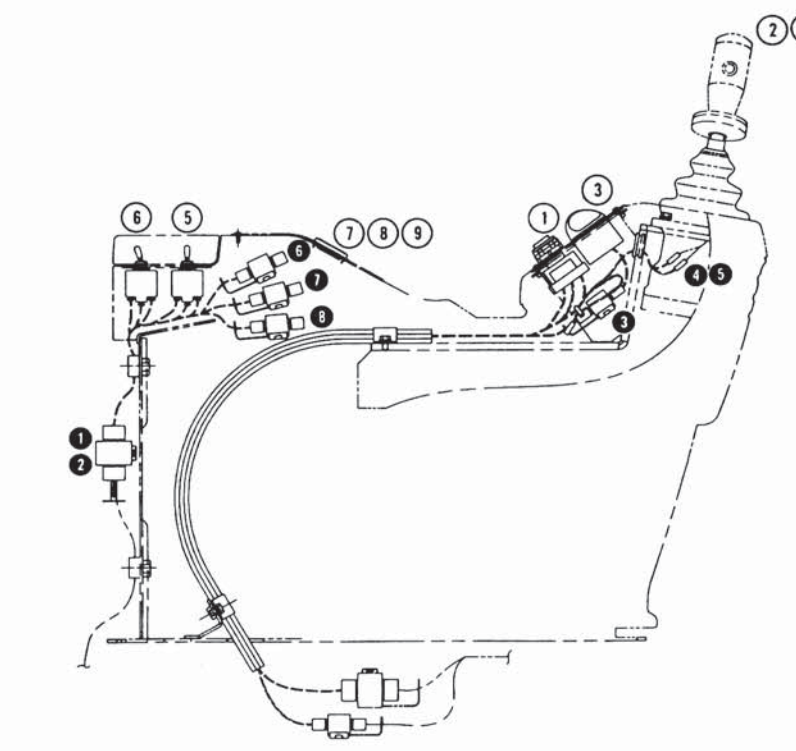
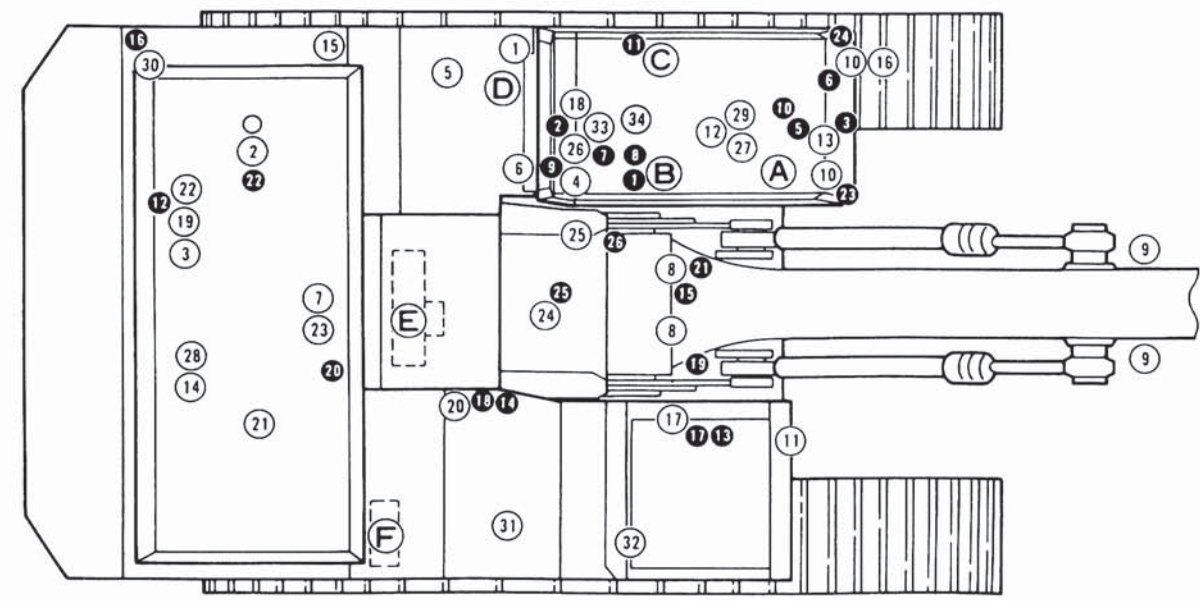
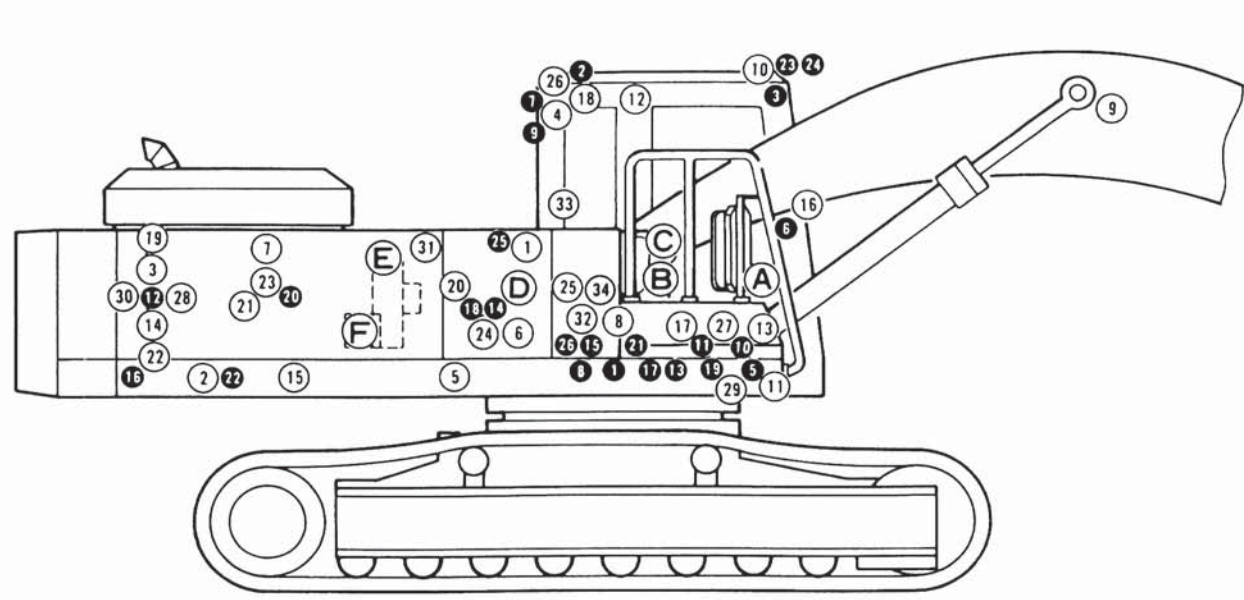


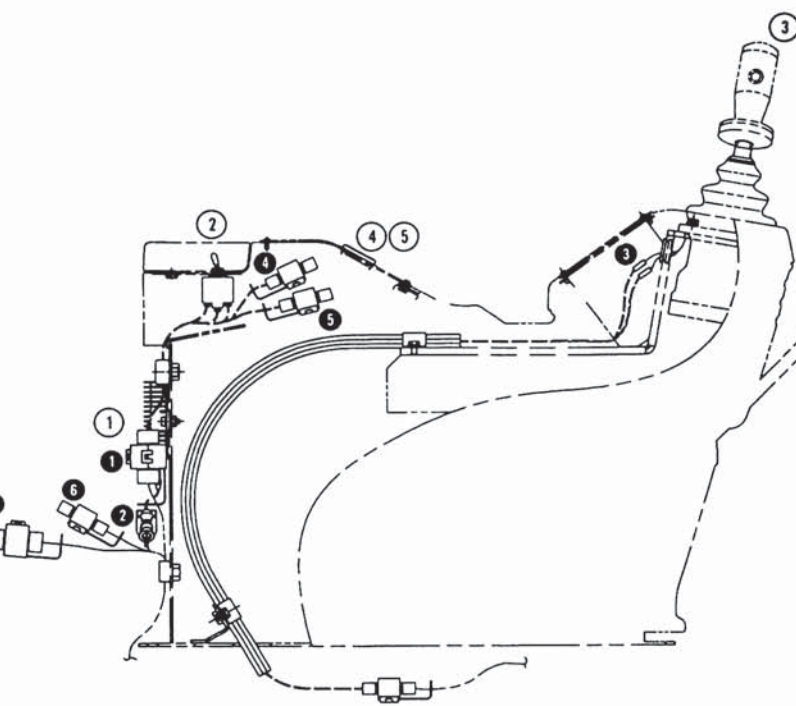
AREA A



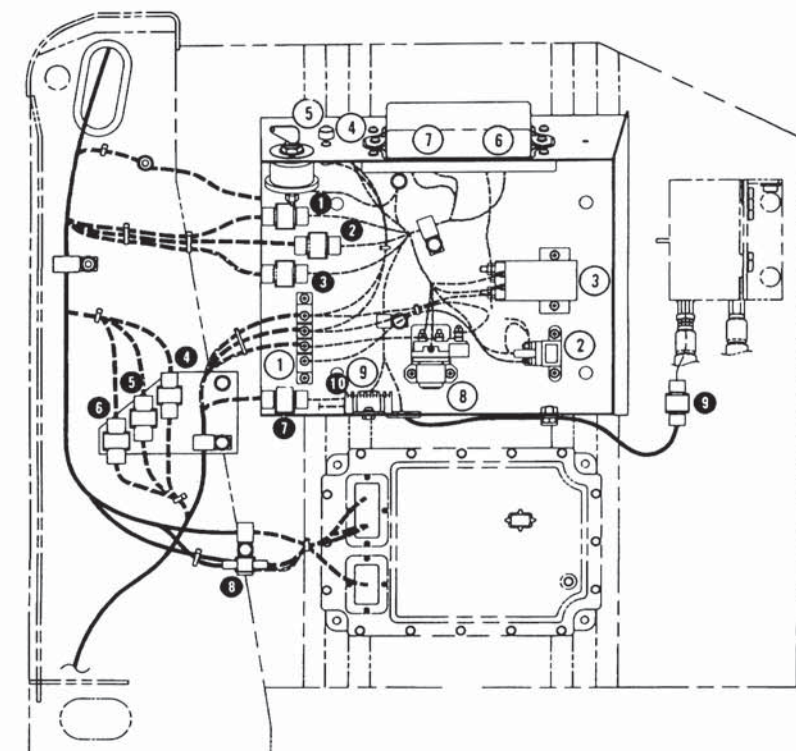
AREA B



HARNESS CONNECTOR AND COMPONENT LOCATIONS



AREA C



AREA D

COMPONENT LOCATION CHART					
Vehicle Location	Components	Schematic Location	Vehicle Location	Components	Schematic Location
1	Actuator - Governor	C-7	19	Sensor - Engine Coolant Temperature	B-12
3A	Alarm - Action	D-2	20	Sensor - Fuel Level	A-5
2	Alarm - Travel	E-12	3F	Sensor - Hydraulic Oil Temperature	A-8
3	Alternator	C-12	21	Sensor - Speed	B-11
4	Antenna	C-6	22	Solenoid - Air Conditioner Compress Clutch	C-12
5	Battery	E-10	6F	Solenoid - Creeper Speed Control	B-9
1D	Block - Terminal	D-9	7F	Solenoid - Creeper Speed Control	B-9
4D	Breaker	D-8	23	Solenoid - Engine Stop	B-11
6	Controller	B-7	24	Solenoid - Fine Swing	B-4
3B	Dial - Engine Speed	C-2	25	Solenoid - Hammer Control	B-4
6D	Fuse - Block	F,7,F-8,F-9	4F	Solenoid - Level	A-9
7	Heater - Air	C-11	1F	Solenoid - Travel Speed	B-9
34	Heater - Seat	E-4	2F	Solenoid - Trenching	A-9
8	Horn	A-2, B-2	26	Speaker	B-6
9	Lamp - Boom	A-2, B-2	27	Switch - Aux Hydraulic Press	E-2
10	Lamp - Cab	E-1, F-1	3E	Switch - Boom Raise Press	B-10
11	Lamp - Chassis	A-2	5C	Switch - Creeper Speed Control	F-3
12	Lamp - Dome	C-6	5D	Switch - Disconnect	D-9
1A	Lighter - Cigar	E-3	28	Switch - Engine Oil Press	B-12
2A	Meter - Service	E-2	4B	Switch - Fine Swing Control	C-3
4A	Monitor	E-2	6B	Switch - Governor Backup	B-5
13	Motor - Lower Wiper	F-2	9B	Switch - Hammer Control	C-3
14	Motor - Starter	B-12	4C	Switch - Heater	F-3
15	Motor - Washer	E-12	3C	Switch - Horn	F-3
16	Motor - Wiper	F-2	1E	Switch - Implement Swing Press	B-10
17	Pump - Refueling	A-3	2B	Switch - Low Idle	D-3
18	Radio	C-6	7B	Switch - Lower Washer	B-3
7D	Relay - Boom Lamp	E-8	8B	Switch - Lower Wiper	C-3
7D	Relay - Chassis/Cab Lamp	E-8	29	Switch - Neutral Start	F-2
7D	Relay - Fine Swing	E-9	2C	Switch - Pump Backup	F-4
8D	Relay - Heater	D-7	3D	Switch - Refrigerant Low Press	F-12
7D	Relay - Horn	E-7	31	Switch - Refueling	A-5
3D	Relay - Main	D-7	32	Switch - Refueling Pump	A-3
7D	Relay - Refueling Pump	E-7	5B	Switch - Speed Change	B-4
9D	Relay - Safety	E-8	1B	Switch - Starter	C-2
2D	Relay - Starter	B-12	2E	Switch - Travel Press	B-10
7D	Relay - Washer	E-8	33	Unit - Air Conditioner	E-6
7D	Relay - Wiper	E-9	5F	Valve - Proportional Reducing	A-9
1C	Resistor - Backup	E-5			

Area A = Components in monitor panel.

Area B = Components in operator's R.H. console.

Area C = Components in operator's L.H. console.

Area D = Components in relay panel.

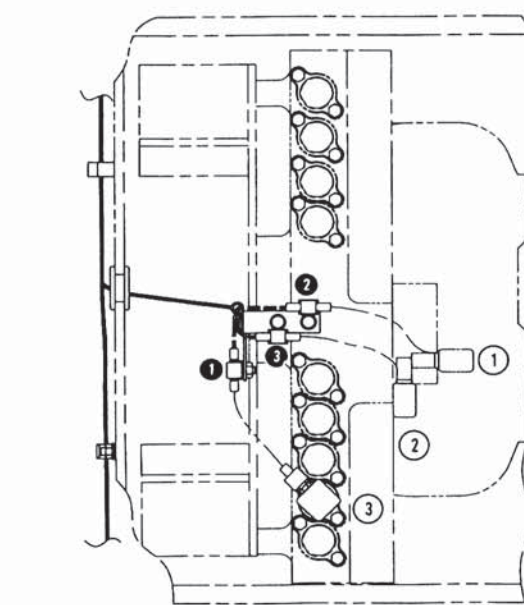
Area E = Components near main control valve.

Area F = Components near pilot oil manifold.

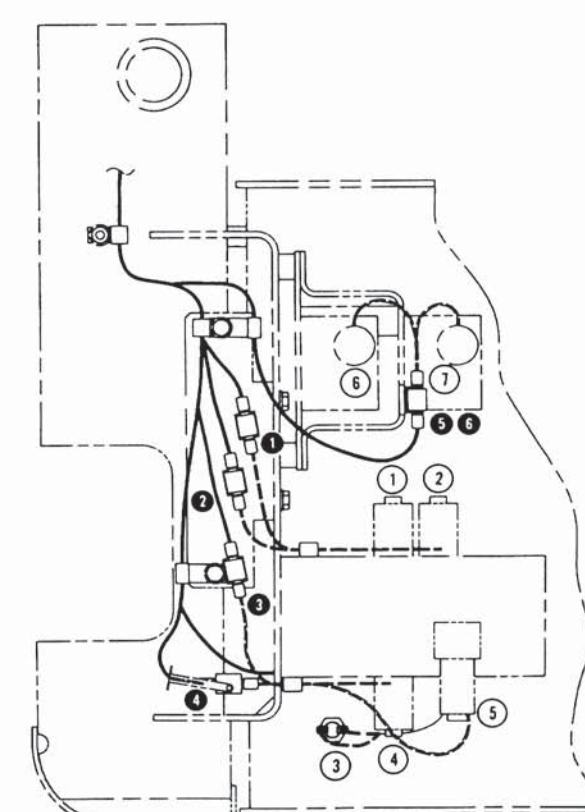
HARNESS CONNECTOR LOCATION CHART							
Connectors	Connector No. And Vehicle Location	Harness And/or Components	Schematic Location	Connectors	Connector No. And Vehicle Location	Harness And/or Components	Schematic Location
40 Contacts	CONN1	A - 51 - 8326	B-7	CONN32	D - 51 - 8217	Wiper Motor	F-2
24 Contacts	CONN2	A - 51 - 8326	A-7	CONN30	E - 7Y - 3898	Monitor	E-2
	CONN9	A - 51 - 8326	D-10	CONN12	F - 51 - 8216		C-6
	CONN8	A - 51 - 8326	E-10	CONN25	R - 7Y - 8139		D-3
	CONN13	A - 51 - 8326	C-5	CONN21	J - 7Y - 3921	Lower Wiper Switch	C-3
	CONN3	A - 51 - 8326	E-9	CONN43	R - 7Y - 8139	Speaker	B-6
	CONN5	A - 51 - 8326	F-9	CONN29	A - 51 - 8326	Aux Hydraulic Press Switch	E-2
	CONN6	A - 51 - 8326	F-9	CONN16	A - 51 - 8326	Backup Resistor	E-5
10 Contacts	CONN24	A - 51 - 8326	D-3	CONN23	A - 51 - 8326		F-3
	CONN18	A - 51 - 8326	D-4	CONN40	B - 51 - 8325	Air Conditioner Compress Clutch Solenoid	C-12
	CONN17	A - 51 - 8326	E-5	CONN50	B - 51 - 8325	Boom Raise Press Switch	B-10
	CONN4	B - 51 - 8325	D-9	CONN34	B - 51 - 8325		A-3
	CONN57	R - 7Y - 8139	C-6	CONN49	B - 51 - 8325	Fuel Level Sensor	A-5
9 Contacts	CONN14	A - 51 - 8326	C-5	CONN52	B - 51 - 8325	Implement Swing Press Switch	B-10
7 Contacts	CONN10	A - 51 - 8326	D-10	CONN53	B - 51 - 8325	Level Solenoid	A-9
	CONN11	B - 51 - 8325	E-8	CONN38	B - 51 - 8325		B-2
6 Contacts	CONN28	D - 51 - 8217	E-2	CONN56	B - 51 - 8325	Proportional Reducing Valve	A-9
	CONN15	A - 51 - 8326	E-6	CONN39	B - 51 - 8325	Refrigerant Low Press Switch	F-12
	CONN19	A - 51 - 8326	D-5	CONN41	B - 51 - 8325	Refueling Pump	A-3
	CONN44	G - 51 - 8236	C-8	CONN48	B - 51 - 8325		A-3
	CONN27	H - 51 - 8235	C-2	CONN47	B - 51 - 8325		B-3
	CONN15	A - 51 - 8326	D-6	CONN42	B - 51 - 8325	Speed Sensor	B-11
	CONN58	A - 51 - 8326	C-8	CONN7	B - 51 - 8325		B-3
4 Contacts	CONN33	A - 51 - 8326	F-2	CONN6	B - 51 - 8325	Travel Alarm	B-12

HARNESS CONNECTOR LOCATION CHART							
Connectors	Connector No. And Vehicle Location	Harness And/or Components	Schematic Location	Connectors	Connector No. And Vehicle Location	Harness And/or Components	Schematic Location
	CONN51	B - 51 - 8325	B-10	CONN77	T - 51 - 8234	Hammer Control Solenoid	B-4
	CONN55	B - 51 - 8325	B-9	CONN60	B - 51 - 8325	Creeper Speed Cont Sol	B-9
	CONN54	B - 51 - 8325	B-9	CONN59	B - 51 - 8325	Creeper Speed Cont Sol	B-9
	CONN31	E - 7Y - 3898	D-2	CONN62	A - 51 - 8325	Seat Heater	E-4
2 Contacts	CONN36	F - 51 - 8245	E-1	CONN63	L - 51 - 8235	Seat Heater SW	F-3
	CONN35	F - 51 - 8245	F-1	CONN64	L - 51 - 8325	Creeper Speed Cont SW	F-3
	CONN22	J - 7Y - 3921	C-3	CONN26	H - 51 - 8235	Fine Swing Control Switch	C-3
	CONN45	M - 7Y - 3921	B-3	CONN26	H - 51 - 8235	Low Idle Switch	D-3
	CONN46	M - 7Y - 3921	B-4	CONN59	K - 7Y - 3868	Horn Switch	F-3

- A = Connector at the bottom of the operator's console.
- B = Connector in operator's R.H. console.
- C = Connector in operator's L.H. console.
- D = Connector in relay panel.
- E = Connector near main control valve.
- F = Connector near pilot oil manifold.
- * = Connector is located at the component.



AREA E



AREA F

CATERPILLAR®

SEN6015-02
May 2011

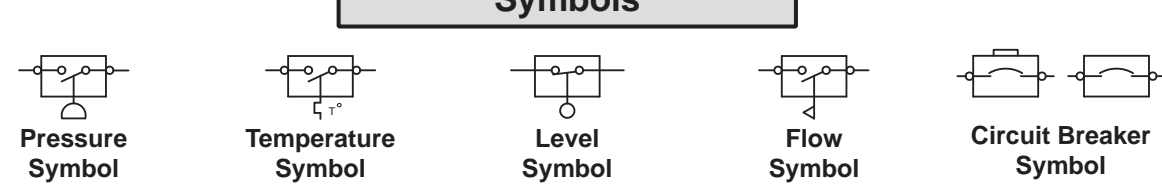
Schematic

320 and 320L Excavator Electrical System

320:
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2DL1-213
8LK1-1275

320L:
1KL1-441
9KK1-1358

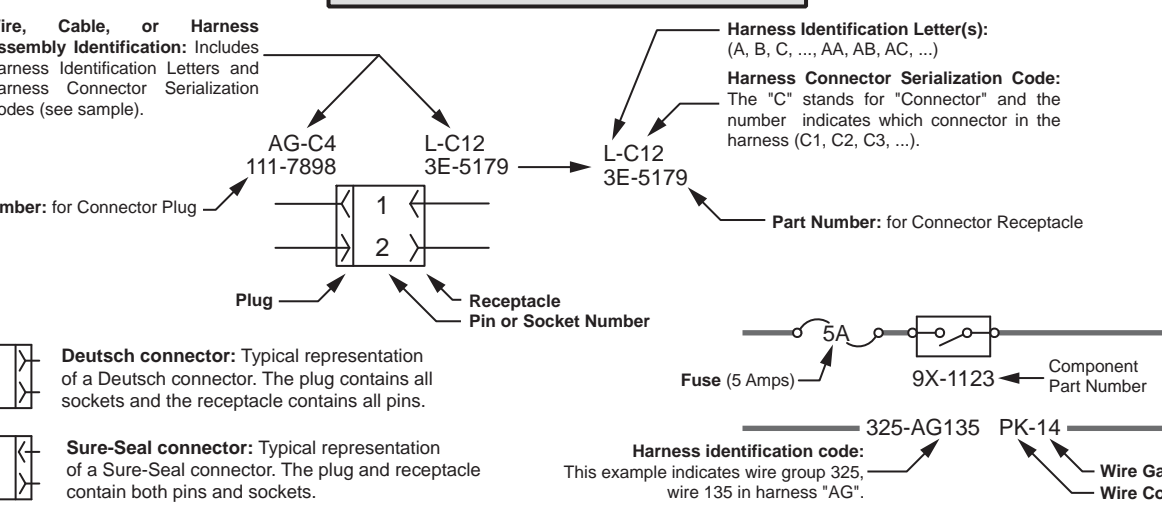
Harness And Wire Electrical Schematic Symbols



Symbols and Definitions

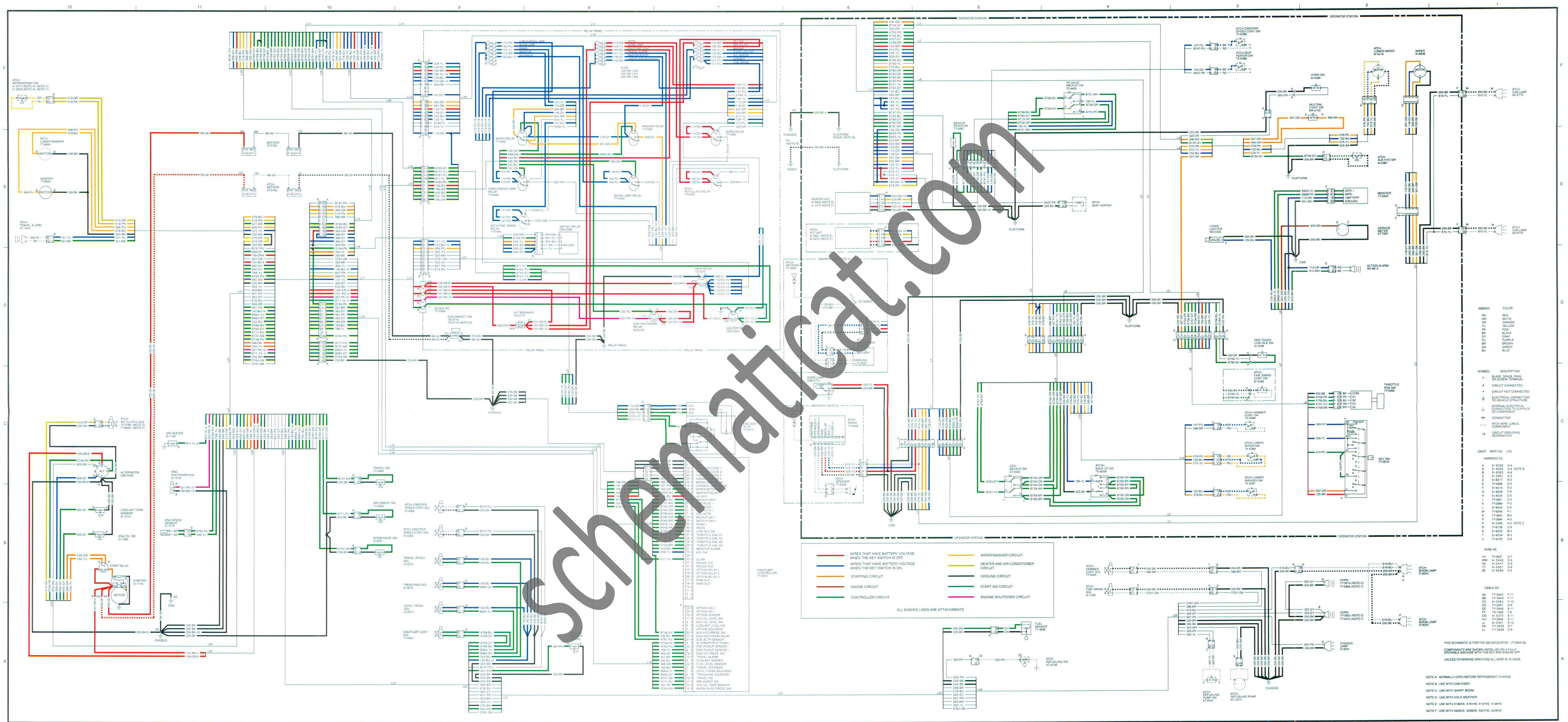
- Fuse:** A component in an electrical circuit that will open the circuit if too much current flows through it.
- Switch (Normally Open):** A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from 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 a valve or move a piece of metal that can do work.
- 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



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THIS SCHEMATIC IS FOR THE 320 EXCAVATOR ELECTRICAL SYSTEM
MEDIA NUMBER: SEN6015-02
SCHEMATIC PART NUMBER: 7Y-3905, CHANGE: 02, VERSION: HE
 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.