

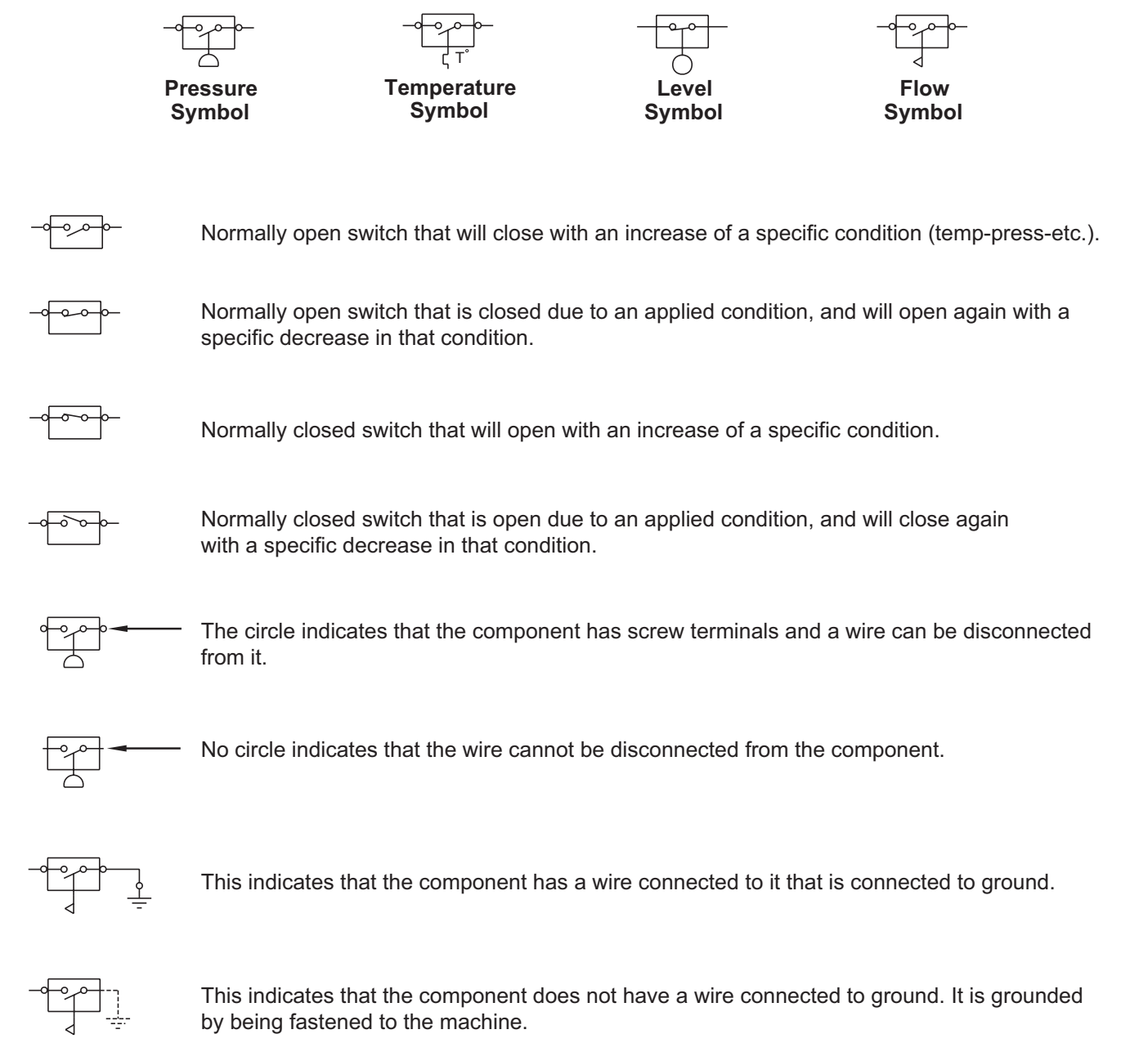
Machine Harness Connector And Component Locations

Schematic

302.5 Mini-Hydraulic Excavator Electrical System

4AZ1-5768

Electrical Schematic Symbols And Definitions



© 2004 Caterpillar
All Rights Reserved

Printed in U.S.A.

Wire Description			Wire Description		
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Distribution Circuits			Monitoring Circuits		
101	RD	Bat (+)	405	GY	Oil Press Low Lamp
103	YL	Lamp Rly Coil	430	BU	Air Cleaner Lamp
104	YL	Console Lamp Pwr	441	OR	Eng Temp Gage
105	RD	Key Sw Pwr	447	PK	Fuel Level Gage
109	RD	Alt Out Positive	C444	YL	Alt Indicator Lamp
112	PU	Main Pwr Rly Out	Accessory Circuits		
114	RD	Fwd Horn Pwr	500	BR	Wiper Front Park
117	RD	Main Breaker Pwr	501	GN	Wiper Front Low
118	GY	Wiper/Washer Pwr	506	PU	Washer Motor
119	PK	Fuel Shutoff Pwr	508	PU	Radio Speaker L+
122	RD	Dome Lamp Pwr	509	WH	Radio Speaker L-
125	OR	Boom Lower Pwr	A584	BU	Interlock Sw
130	GN	Heater Pwr	Lighting Circuits		
131	BR	Solenoid Pwr	603	PK	Beacon
135	BU	Radio Pwr	607	PK	Flood Lamps
144	GN	Beacon Pwr	Control Circuits		
Ground Circuits			E783	WH	Boom Lower
200	BK	Main Chassis	H792	BR	Dash/Flood Lamp Sw
Basic Machine Circuits			877	YL	Glow Plugs
304	WH	Starter Relay Out	E953	GY	Speed Select Sw
306	GN	Start Rly Coil	G981	PU	Travel Alarm Disable
307	OR	Start Disable Rly	L987	WH	Start Aid Rly Coil
308	YL	Main Pwr Rly Coil	M927	GN	Hyd Disable Sol
321	BR	Travel Alarm	P977	PK	Hyd Dis Rly Coil
322	GY	Fwd Horn			

Connector Location ¹		
Connector Number	Schematic Location	Machine Location
CONN 1	E-8	2
CONN 2	B-7 / F-3	A
CONN 3	C-7	B
CONN 4	C-7	B
CONN 5	C-7	B
CONN 6	D-7	B
CONN 7	B-5	11
CONN 8	D-2	19
CONN 9	D-2	18
CONN 10	D-2	18

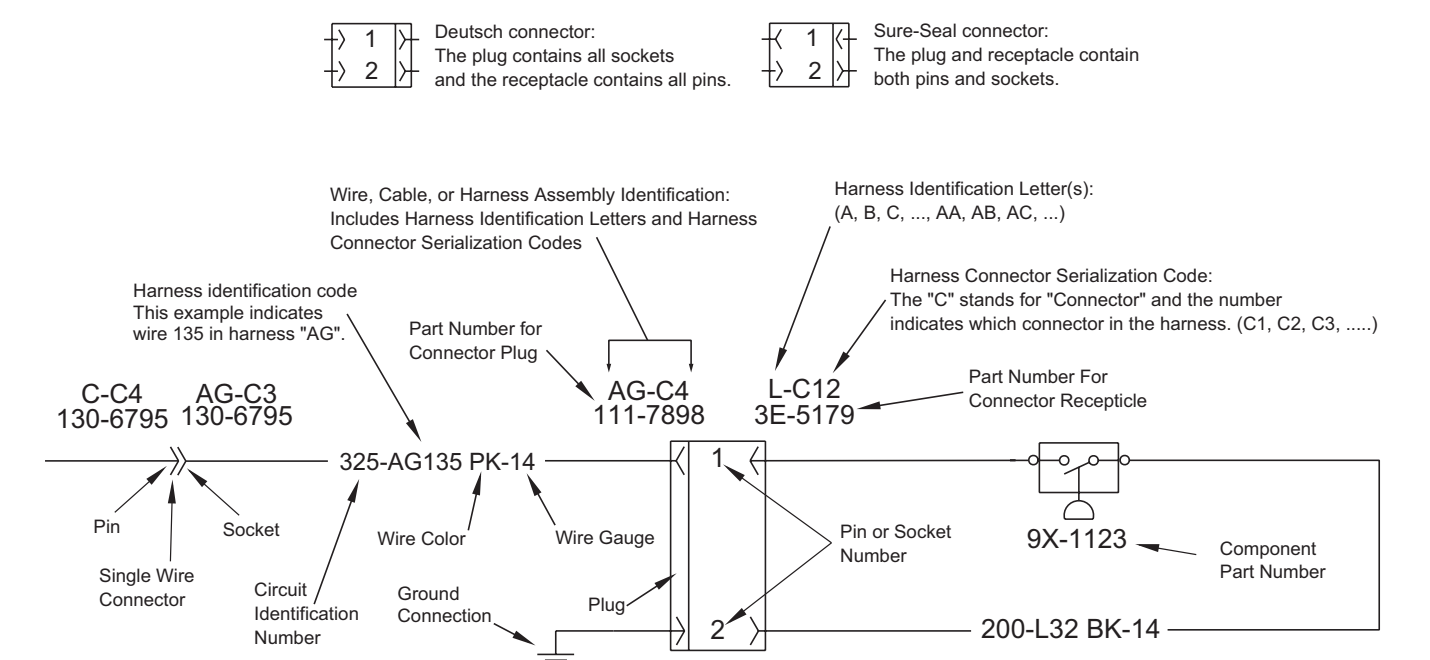
¹The connectors shown in this chart are harness to harness and special use connectors. Connectors which join a harness to a component are generally located at or near the component. See the component location chart.

Related Electrical Service Manuals	
Title	Form Number
Testing and Adjusting	REN2848

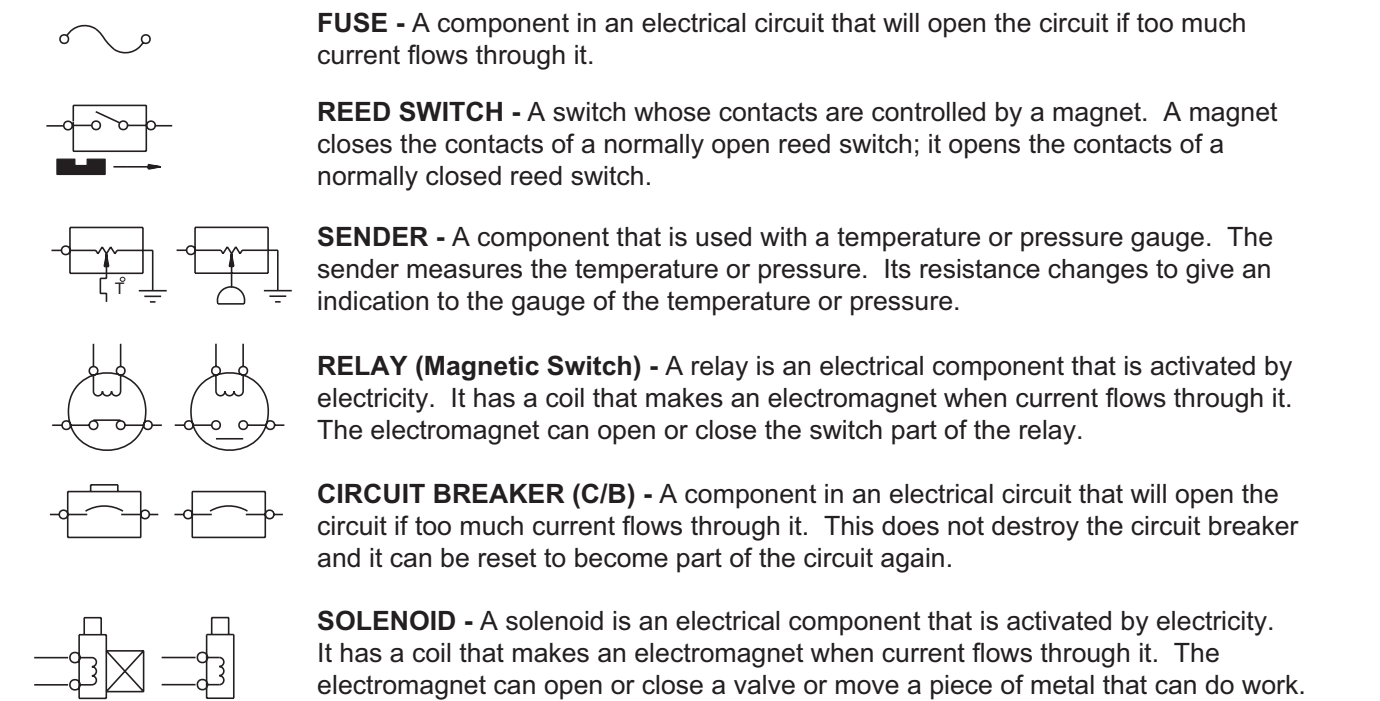
Component Location			Component Location		
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Travel	B-5	8	Relay - Start	C-9	8
Alternator	D-9	2	Relay - Start Aid	C-9	8
Alternator Breaker	D-9	8	Relay - Start Disable	C-7	5
Assembly - Heater Blower	C-3	3	Sender - Coolant Temperature	D-9	2
Battery	B-9	4	Sender - Fuel Level	E-6	13
Breaker - Lighting	D-4	5	Solenoid - Boom Lower	B-5	11
Breaker - Main	D-3	5	Solenoid - Fuel Shutoff	E-9	7
Engine GND Strap-Rear Frame GND	B-8	6	Solenoid - Hydraulic Disable	B-8	9
Fuses	D-3,4,5	5	Solenoid - Speed Select	B-8	9
Glow Plugs	C-9	7	Switch - Air Inlet Pressure	E-9	9
Ground - Front Frame	A-9	4	Switch - Beacon	E-3	B
Ground 2 - Front Frame	B-8	4	Switch - Dash & Flood Lamp	C-4	A
Horn	E-6	1	Switch - Horn	C-4	A
Motor - Starter	C-9	12	Switch - Interlock	B-2	10
Motor - Washer	E-9	9	Switch - Key Start	C-4	A
Motor - Wiper	B-2	10	Switch - LH Console	D-4	16
Relay - Boom Lower	B-5	5	Switch - Oil Pressure	E-9	7
Relay - Hydraulic Disable	C-7	5	Switch - RH Console	C-4	17
Relay - Lamp	C-7	5	Switch - Speed Select	D-2	14
Relay - Main Power	D-3	5	Switch - Travel	D-2	19
			Switch - Wiper/Washer	E-4	B
			Switch 2 - Travel	D-2	19

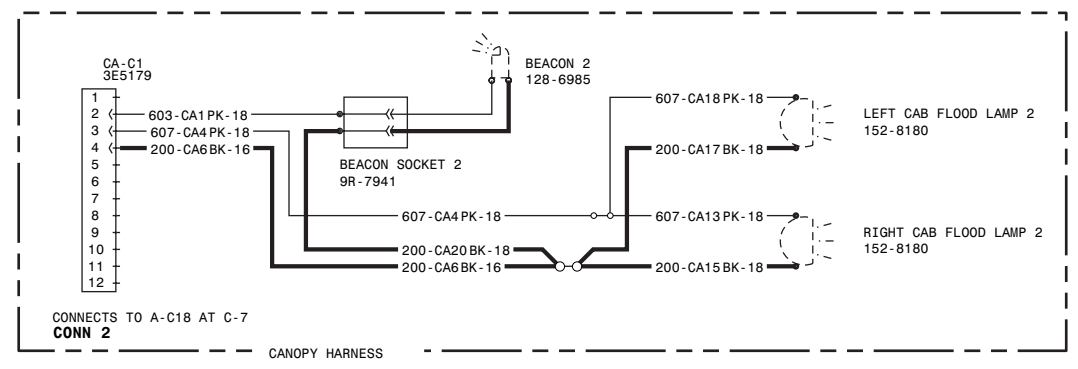
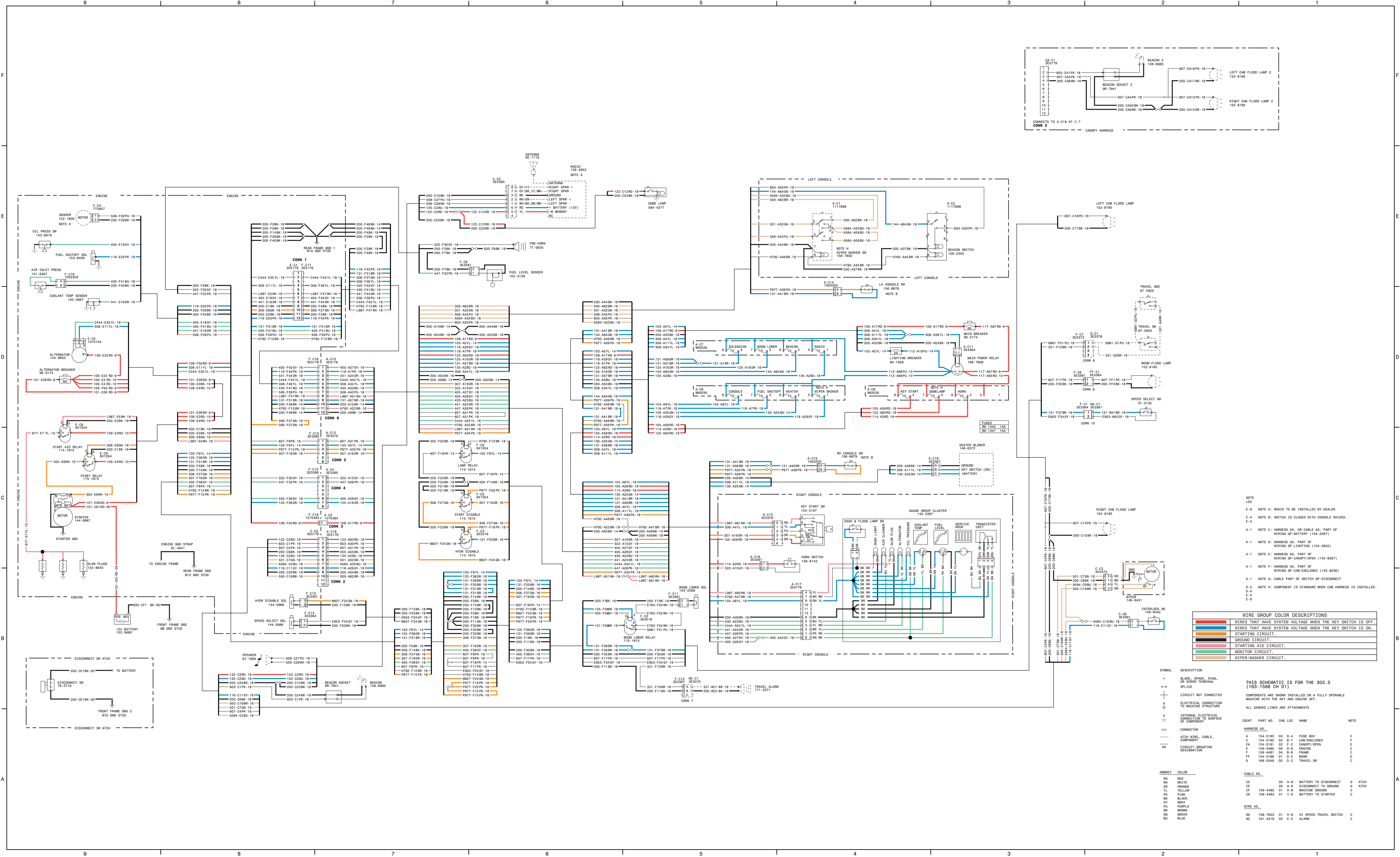
Machine locations are repeated for components located close together.
A = Located in or on right console.
B = Located in or on left console.

Harness And Wire Electrical Schematic Symbols



Electrical Schematic Symbols And Definitions





- NOTE**
- E-6 NOTE A: RADIO TO BE INSTALLED BY DEALER
 - C-4 NOTE B: SWITCH IS CLOSED WITH CONSOLE RAISED.
 - E-4
 - A-1 NOTE C: WIRELESS AS. OR CABLE AS. PART OF WIRING GP-BATTERY (154-2597)
 - A-1 NOTE D: WIRELESS AS. PART OF WIRING GP-LIGHTING (154-2652)
 - A-1 NOTE E: WIRELESS AS. PART OF WIRING GP-CANOPY/OPEN (145-8267)
 - A-1 NOTE F: WIRELESS AS. PART OF WIRING GP-CAN-ENCLOSED (145-8236)
 - D-4
 - E-4
 - E-9

WIRE GROUP COLOR DESCRIPTIONS

RED	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF.
ORANGE	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON.
YELLOW	STARTING CIRCUIT.
GREEN	GROUND CIRCUIT.
BLACK	STARTING AID CIRCUIT.
PINK	MONITOR CIRCUIT.
BLUE	WIPER/WASHER CIRCUIT.

THIS SCHEMATIC IS FOR THE 302.5 (163-1568 CH 01)

COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERABLE MACHINE WITH THE KEY AND ENGINE OFF.

ALL DASHED LINES ARE ATTACHMENTS.

IDENT	PART NO.	CHK LOC	NAME	NOTE
HARNESSES AS...				
+	A	154-3190	03 D-4 FUSE BOX	C
+	C	154-3190	03 B-7 CAB-ENCLOSED	F
+	CA	154-3191	02 F-2 CANOPY/OPEN	C
+	CF	159-4483	01 I-B BATTERY TO STARTER	C
+	F	159-4481	04 B-6 FRAME	C
+	FE	154-3198	01 D-2 BOW	C
+	FF	169-5349	00 D-2 TRAVEL SW	C
WIRE AS...				
+	WA	158-7833	01 H-8 HI SPEED TRAVEL SWITCH	C
+	WB	161-4319	00 E-5 ALARM	C

ABBREVIATION

RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BLK	BLACK
GR	GRAY
PUR	PURPLE
BRN	BROWN
GN	GREEN
BLU	BLUE