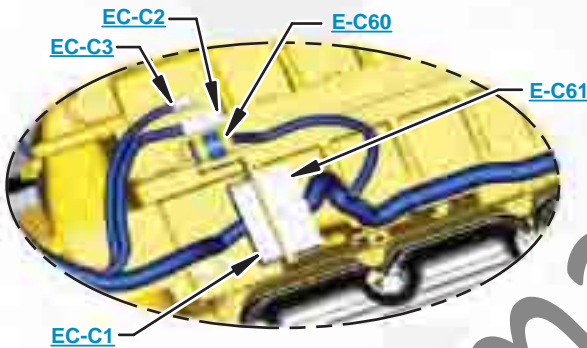


This document is best viewed at a screen resolution of 1024 X 768.

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"



Schematic

D9R Tractor with 3408E Engine Electrical System

MACHINE:
7TL852-UP

MACHINE:
8BL1053-UP

ENGINE:
99C1-UP

COMPONENT LOCATION

Page 1 of 2



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Action Lamp - Rear Master	E-12	B	Sensor - Engine Oil Pressure	D-2	22
Alarm - Action	D-12	2	Sensor - Engine Oil Temp	D-2	41
Alarm - Backup	I-11	1	Sensor - Fan Speed	E-1	23
Alternator	H-2	3	Sensor - Fuel Temperature	E-2	42
Aux Start Receptacle	H-4	5	Sensor - Hydraulic Oil Temp	A-12	25
Battery	B-4	6	Sensor - Powertrain Oil Temp	C-4	24
Battery	H-4	6	Sensor - Primary Speed Timing	E-2	41
Breaker - Alternator	F-11	7	Sensor - Rail Pressure	E-2	41
Breaker - Blower	E-9	7	Sensor - Timing Calibration	C-4	26
Breaker - ECB	E-9	7	Sensor - Turbo Inlet Pressure	C-4	27
Breaker - Engine	F-10	7	Sensor - Turbo Outlet Pressure	D-2	43
Breaker - Floods (Front)	E-10	7	Solenoid - AC Clutch	G-3	28
Breaker - Implement	E-9	7	Solenoid - Dual Tilt	G-1	29
Breaker - Key	E-10	7	Solenoid - Fan Valve	E-1	30
Breaker - Main	F-11	7	Solenoid - Flexaire Fan Actuator	G-2	44
Breaker - Power Outlet	F-10	7	Solenoid - Injector 1,3,5,7	F-3	31
Breaker - Remote Condensor	F-9	7	Solenoid - Injector 2,4,6,8	E-3	31
Caterpillar Monitoring System	C-10	A	Solenoid - Quick Drop Valve	F-1	32
Control- Engine	C-2	8	Solenoid - Rail Pres Control Valve	E-2	41
Control - Flexaire Fan	H-8	42	Solenoid - Ripper Pin	B-12	33
Control - Prelube Timer	G-4	9	Solenoid - Start Aid	D-5	17
Converter - 24V to 12V	F-12	B	Solenoid - Winch	D-11	45
Decelerator Pedal	C-9	10	Starter - #1/Prelube	I-3	34
Dimmer	D-10	A	Starter - Motor	B-5	34
Diode - AC Clutch	G-3	11	Suppressor - Arc #1	A-12	33
Display - Flexaire Fan	H-6	A	Suppressor - Arc #2	A-12	33
Fan - Defrost (Front)	F-7	13	Suppressor - Arc (A/C) #3	G-2	4
Fan - Defrost (Rear)	B-12	13	Suppressor - Arc (A/C) #4	G-1	4
Fuses	F-10	7	Switch - AC Binary	G-3	28
Gauge Cluster	D-11	A	Switch - Accessory	B-9	A
Horn - Hi	F-1	12	Switch - Blower	I-10	A
Horn - Lo	F-1	12	Switch - Clutch Brake Backup Alarm	G-10	C
Key Switch	C-9	A	Switch - Clutch Brake Neutral Start	G-10	C
Lamp - Master Action	D-10	A	Switch - Coolant Flow	E-2	20
Motor - Blower	I-11	13	Switch - Diff Steer Backup Alarm	G-10	C
Motor - Condensor #1	B-12	14	Switch - Diff Steer Neutral Start	H-10	C
Motor - Condensor #2	B-12	14	Switch - Disconnect	H-5	35

Machine location are repeated for components located close together

A = Operator Compartment - Front Dash
 B = Operator Compartment - Right Console
 C = Operator Compartment - Left Console

D = Operator Compartment - Overhead Console
 E = Operator Compartment

COMPONENT LOCATION

Page 2 of 2



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Motor - Washer (Front)	I-12	15	Switch - Fan Coolant Temp	F-2	46
Motor - Washer (Left)	I-12	15	Switch - Flood (Front)	D-9	A
Motor - Washer (Rear)	I-12	15	Switch - Flood (Rear)	C-9	A
Motor - Washer (Right)	I-12	15	Switch - Flood (Side)	C-9	A
Motor - Wiper (Front)	A-5	C	Switch - Horn	D-12	B
Motor - Wiper (Left)	A-6	C	Switch - Hydraulic Filter Bypass	E-1	36
Motor - Wiper (Rear)	B-10	C	Switch - Hydraulic Filter Temp	E-1	36
Motor - Wiper (Right)	A-6	C	Switch - Operator	B-9	A
Power Outlet Socket	D-12	B	Switch - Pitch Control	E-11	B
Power Post	F-10	B	Switch - Prelube Oil Pressure	G-4	37
Radio 12V	B-6	D	Switch - PTO Filter	I-11	38
Radio 24V	B-7	D	Switch - PTO Filter Temp	I-12	38
Relay - AC Interface	D-5	16	Switch - Quick Drop	C-12	39
Relay - Condensor	B-11	14	Switch - Ripper Pin Puller	C-12	B
Relay - Main	E-11	7	Switch - Single/Dual Tilt	E-11	B
Relay - Start #1	E-11	7	Switch - Start Aid	B-9	A
Relay - Start #2	E-11	7	Switch - Throttle	E-12	B
Relay -Start Aid	D-5	17	Switch - Wiper (Front)	A-10	A
Resistor - Blower	I-11	13	Switch-Wiper (Left)	A-10	A
Resistor - Starter	B-5	19	Switch - Wiper (Rear)	A-10	A
Resistor - Starter (Prelube)	I-3	18	Switch - Wiper (Right)	A-10	A
Seat	F-12	2	Tachmeter	D-11	A
Sensor - Atmospheric Pressure	D-2	4	Ultrasonic Fuel Level	H-12	40
Sensor - Backup Speed Timing	D-2	41	Winch Joystick	D-11	B
Sensor - Coolant Temp	D-2	21			

Machine location are repeated for components located close together

A = Operator Compartment - Front Dash

D = Operator Compartment - Overhead Console

B = Operator Compartment - Right Console

E = Operator Compartment

C = Operator Compartment - Left Console

CONNECTOR LOCATION



Connector Number	Schematic Location	Machine Location
CONN 1	B-11	14
CONN 2	C-11	14
CONN 3	C-11	16
CONN 4	D-12	B
CONN 5	E-12	B
CONN 6	G-12	47
CONN 7	G-12	47
CONN 8	H-12	48
CONN 9	H-12	48
CONN 10 Datalink Service Connector	F-11	A
CONN 11 Monitor Service Connector	F-11	A
CONN 12	I-10	49
CONN 13	I-9	49
CONN 14	A-9	E
CONN 15	A-9	E
CONN 16	B-9	A
CONN 17 Code Plug	C-10	A
CONN 18	K-9	6
CONN 19	A-8	A
CONN 20	B-8	A
CONN 21	B-8	A
CONN 22	F-6	50
CONN 23 CAES/METS Power and Datalink	G-5	A
CONN 24 Remote Cal	G-5	42
CONN 25	A-7	E
CONN 26	C-6	51
CONN 27	D-6	50
CONN 28	D-6	50
CONN 29	D-6	50
CONN 30	D-6	50
CONN 31	E-6	50
CONN 32	E-6	50
CONN 33	E-6	50
CONN 34	E-6	50
CONN 35	F-6	50
CONN 36	G-6	50
CONN 37	H-6	50
CONN 38 Diagnostic Connector	H-6	50
CONN 39 CB Radio	B-6	A
CONN 40	C-5	18
CONN 41	D-5	16
CONN 42	E-5	52
CONN 43	G-5	9
CONN 44	B-3	11
CONN 45	E-4	53
CONN 46	G-4	9
CONN 47	G-4	9
CONN 48	E-2	41
CONN 49	F-2	54
CONN 50	G-2	28
CONN 51	G-2	28
CONN 52	B-2	55
CONN 53	D-8	50

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.



Component Identifiers (CID) List	
CID No.	Component
Caterpillar Monitoring System MID 30	
096	Fuel Level Sensor
110	Engine Coolant Temperature Sensor
177	Torque Converter Oil Temperature Sensor
248	Data Link
263	8 Volt Sensor Power Supply
271	Action Alarm
324	Action Lamp
600	Hydraulic Oil Temperature Sensor
601	Brake Air Pressure
819	Display Data Link
821	9 Volt Display Power Supply
830	Brake Oil Temperature
Engine Control 36	
001	Cylinder 1 Injector Solenoid
002	Cylinder 2 Injector Solenoid
003	Cylinder 3 Injector Solenoid
004	Cylinder 4 Injector Solenoid
005	Cylinder 5 Injector Solenoid
006	Cylinder 6 Injector Solenoid
007	Cylinder 7 Injector Solenoid
008	Cylinder 8 Injector Solenoid
042	Rail Control Valve
091	Throttle Switch
094	Filtered Fuel Pressure
100	Filtered Oil Pressure
100	Crankcase Pressure
161	Timing Calibration
164	Rail Pressure
168	Electrical System Voltage
174	Fuel Temperature
175	Engine Oil Temperature
199	Primary Engine RPM Sensor
248	CAT Data Link
253	Personality Module Mismatch
254	ECM Failure
261	Timing Calibration
262	Analog Sensor Power Supply
263	Digital Sensor Power Supply
264	Shutdown Inputs Are Incorrect
266	Crank WIO Injector Inputs
267	Remote Shutdown
268	System Parameter Fault
273	Turbo Outlet Pressure
274	Atmospheric Pressure
275	Turbo Inlet Pressure
276	Turbo Inlet Pressure
277	Timing Calibration Sensor
289	Unfiltered Fuel Pressure
291	Engine Fan Valve
338	Prelube Relay
342	Secondary Engine RPM Signal
444	Starting Motor Relay
542	Unfiltered Oil Pressure
544	Engine Fan Speed
545	StartAid Relay
650	Harness Code
827	Turbo Turbine Inlet Exhaust Temp
828	Turbo Turbine Inlet Exhaust Temp



Monitoring System Mode	
Mode Of Operation	Mode Number
Normal	0
Harness Code	1
Numeric Readout	2
Service	3
Tattletale (Log)	4
Units	5

Failure Mode Identifiers (FMI) List	
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.

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WIRE DESCRIPTION

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Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Circuits			Accessory Circuits (Continued)		
101	RD	Battery (+)	522	WH	A/C Clutch to Thermostat Switch
102	RD	Front Flood Power	523	BR	Wiper - Left (Park)
105	RD	Key Switch Power	524	BU	Wiper - Left (Low)
108	BU	Wiper Motor Power	525	GY	Wiper - Left (HI)
109	OR	Alt Output (+) Terminal	526	YL	Wiper - Right (Park)
112	PU	Main Power Relay Output	527	GN	Wiper - Right (Low)
113	OR	Monitor Panel Power	528	PK	Wiper - Right (HI)
114	RD	Warning Horn Power	529	WH	Washer Left
116	BR	Rear Flood Power	530	OR	Washer Right
124	GN	A/C and Blower Power	553	YL	Pitch Solenoid to Trigger Switch - Dual Tilt
125	OR	Side Flood Power	554	PK	Momentary Switch to Single Tilt Solenoid - Dual Tilt
130	GN	Auxiliary Power	592	BU	DC/DC Converter Output
131	RD	CAES/METS Power	593	GN	Condensor Fan Relay to Motors
133	OR	Auxiliary Power	A513	PK	DC/DC Converter Memory Output
134	YL	Auxiliary Power	Lighting Circuits		
135	RD	Auxiliary Power	600	BR	Dash Lamp Basic
140	BU	Powertrain Control Power	608	GN	Flood Lamp - Rear
150	RD	Engine Control Power	609	YL	Flood Lamp - Side
158	BR	Remote A/C Condenser Power	610	OR	Flood Lamp - Front
174	PK	Accessory Power	630	GY	Flood Lamp - Rear Ripper
176	OR	Seat Power	633	BU	Accessory Power
177	OR	Main Breaker Power	661	GN	Tachometer Lamp - EMS-II
184	BU	Attachment Power	662	YL	Speedometer Lamp - EMS-II
186	RD	Power Outlet Power	663	GN	Gage Lamps - EMS-II
197	GN	Implement Control Power	Control Circuits		
198	RD	Secondary Brake Power	779	WH	Ripper Pin Engage Solenoid
Ground Circuits			780	PU	Ripper Pin Disengage Solenoid
200	BK	Main Chassis Ground	A700	OR	Engine Control Digital Sensor Power (+8V)
201	BK	Operator Monitor Return	A701	GY	Injector #1
203	BK	Chassis Ground Diagnostic	A702	PU	Injector #2
207	BK	Starter Ground Diagnostic	A703	BR	Injector #3
229	BK	Engine Control Ground	A704	GN	Injector #4
270	BK	EMS-II Ident Code 0	A705	BU	Injector #5
271	BK	EMS-II Ident Code 1	A706	GY	Injector #6
272	BK	EMS-II Ident Code 2	A707	PU	Injector #7
273	BK	EMS-II Ident Code 3	A708	BR	Injector #8
274	BK	EMS-II Ident Code 4	A746	PK	Turbo Outlet Pressure
275	BK	EMS-II Ident Code 5	A747	GY	Atmospheric Pressure
290	BK	EMS-II Service	A751	YL	Fuel Temperature
291	BK	EMS-II Clear	E707	GN	Display +V
A234	BK	J1939 Shield Ground	E708	PK	SPI Clock
Basic Machine Circuits			E735	PU	EMS-II Operator Switch
301	BU	Starter No.1 Solenoid	E793	BU	ATA Datalink-
302	OR	Starter No.1 Resistor to Diagnostic	E794	YL	ATA Datalink +
304	WH	Starter Relay No.1 Output	E795	YL	Crankcase Press
306	GN	Starter Relay Coil to Neutral Start SW or Key SW	E796	GN	Oil Pressure (Unfiltered)
307	OR	Key Switch to Neutral Start Switch	E797	WH	Rail Pressure Control Valve Return
308	YL	Main Power Relay Coil	E798	PK	Rail Pressure Control Valve
310	PU	Start Aid Switch to Start Aid Solenoid	E799	BR	Solenoid Return
311	WH	Start Aid Solenoid to Temp Switch	F700	BU	Demand Fan Actuator
312	PK	Starter No.2 Solenoid to Resistor	F701	BR	Unused
313	GY	Starter No.2 Resistor to Diagnostic	F702	GN	Decelerator Pedal
314	PU	Starter Relay No.2 Output	F703	GY	Fan Speed
321	BR	Backup Alarm	F704	OR	Unused
322	GY	Warning Horn (Forward)	F705	PK	Unused
337	WH	Prelube Pushbutton Switch to Prelube Timer	F706	PU	Unused

WIRE DESCRIPTION

Page 2 of 2



Wire Description					
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Monitoring Circuits			Accessory Circuits (Continued)		
403	GN	Alternator (R) Term.	F707	WH	Unused
405	GY	Engine Oil Pressure	F708	YL	Unused
410	WH	Fault Alarm	F709	BU	Unused
411	PK	Master Fault Lamp	F710	BR	Start Aid Relay
412	BU	Engine Coolant Flow	F711	GN	Unused
420	OR	Fuel Filter Differential Pressure	F712	GY	Unused
426	BR	Powertrain Oil Filter Differential Pressure	F713	OR	Unused
441	OR	Engine Coolant Temperature	F714	PK	Turbo Inlet Pressure
442	GY	Hydraulic Oil Temperature	F715	PU	Throttle Switch (Low Idle)
443	YL	Powertrain Oil Temperature	F716	WH	Throttle Switch (Low Idle Parity)
447	PK	Fuel Level	F717	YL	Throttle Switch (High Idle)
450	YL	Engine Speed	F718	BU	Throttle Switch (High Idle Parity)
499	GY	Hydraulic Oil Filter Differential Pressure	F719	BR	Crank w/o Inject (N.O.)
A447	PK	Engine Oil Prelube Pressure Switch	F720	GN	Crank w/o Inject (N.C.)
C413	YL	SPI Data	F721	GY	Start Aid Switch
C414	BU	SPI Load	F722	OR	Demand Fan A/C Status
Accessory Circuits			F723	PK	TDC Probe +
500	BR	Wiper - Front (Park)	F724	PU	TDC Probe -
501	GN	Wiper - Front (Low)	F725	WH	Unused
502	OR	Wiper - Front (Hi)	F726	YL	Injector Common 1 & 3
503	BR	Wiper - Rear (Park)	F727	BU	Injector Common 2 & 4
504	YL	Wiper - Rear (Low)	F728	BR	Injector Common 5 & 7
505	BU	Wiper - Rear (Hi)	F729	GN	Injector Common 6 & 8
506	PU	Washer - Front	F732	PK	Backup Camshaft Speed/Timing
507	WH	Washer - Rear	F737	YL	Unused
508	PU	Radio Speaker - Left	F797	BU	EMS-II Sensor Power (+8V)
509	WH	Radio Speaker - Left (Common)	G703	GN	Quick Drop Valve
511	BR	Radio Speaker - Right	892	BR	CAT Data Link (-)
512	GN	Radio Speaker - Right (Common)	893	GN	CAT Data Link (+)
513	OR	A/C Compressor/Refrigerant Pressure Switch	993	BR	Engine Control Analog Sensor Common
515	GY	Blower Motor (Hi)	994	GY	Engine Control Oil Pressure (Filtered)
516	GN	Blower Motor (Medium)	995	BU	Engine Control Coolant Temperature
517	BU	Blower Motor (Low)	996	GN	Engine Speed/Timing Sensor Power
521	YL	A/C Switch to Refrigerant Switch	997	OR	Engine Control Analog Sensor Power (+ 5V)
			998	BR	Engine Digital Sensor Return
			999	WH	Engine Primary Camshaft Speed/Timing

Resistor, Sender and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms) ¹
9G-1950	Resistor - Blower Motor Speed	Overall 2.0 ± .1; Tap 1.0 ± .05
3E-7842	Resistor - Starter/Diagnostic/Prelube	150 ± 7.5
3E-9205	Solenoid - Dual Tilt	24.90 ± 0.4
109-3032	Solenoid - Quick Drop Valve	34.3 ± 1.7
107-0677	Solenoid - Rail Pressure Control Valve	10.1
3E-8575	Solenoid - Ripper Pin Puller	24.90 ± 0.4
3E-6333	Solenoid - Start Aid	6.00
130-9876	Solenoids - Injector	2.1 ± 0.2

¹ At room temperature unless otherwise noted.

Related Electrical Service Manuals	
Title	Form Number
Alternator 9X-7803	SENR7508
Caterpillar Monitoring System	SENR6717
Engine Control	SENR1037
Starting And Charging Systems	SENR2947
Starting Motor 6V-0889 and 123-8689	SENR3860
Starting Motor 6V-0928	SENR3851

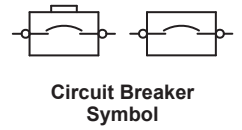
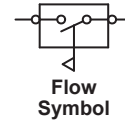
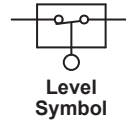
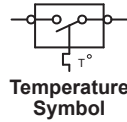
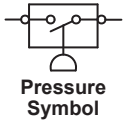
Off-Machine Switch Specification			
Part No.	Function	Actuate	Deactuate
3E-6428	Coolant Flow (CMS)	362 ± 29mN (45.6 mm ID point) (1.3 ± .1 oz, 1.8 in ID point)	303mN MIN (1.1oz MIN)
3E-9350	PTO Filter Temperature	52 ± 3°C (125.6 ± 5.4°F)	43°C MIN (109.4°F MIN)
9X-7781	Hydraulic Oil Filter Bypass	210 ± 70kPa (30 ± 10psi)	—
105-9152	Prelube Oil Pressure	30 ± 7kPa (4.3 ± 1.0psi)	30 ± 7kPa (4.3 ± 1.0psi)
114-5333	AC Pressure Switch	Low	275 kPa Max (39.8 psi)
		High	2800 ± 140 kPa (406.1 ± 20.3 psi)
124-8274	Hydraulic Oil Filter Temp	25 ± 3°C (77 ± 5.4°F)	15°C MIN (59°F MIN)

HARNESS and WIRE

Electrical Schematic Symbols



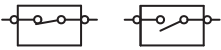
Symbols



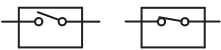
Symbols and Definitions



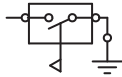
Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.



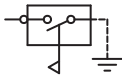
Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.



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.



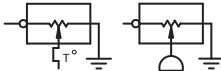
Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.



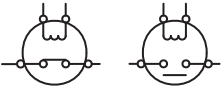
Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.



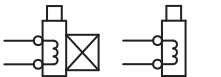
Reed Switch: A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.



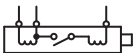
Sender: A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.



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 the switch part of the relay.



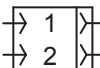
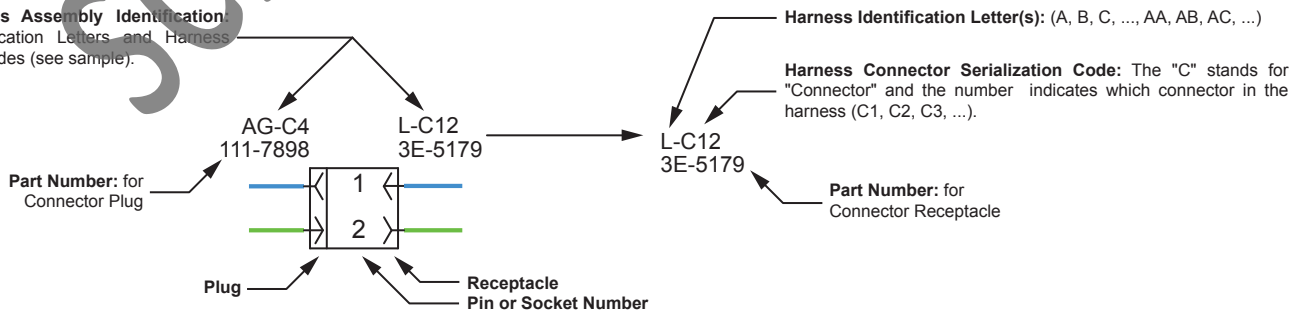
Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.



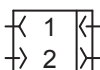
Magnetic Latch Solenoid: A magnetic latch solenoid is an electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

Harness and Wire Symbols

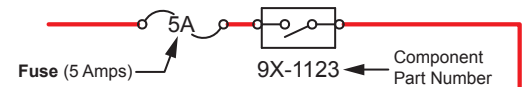
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).



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.



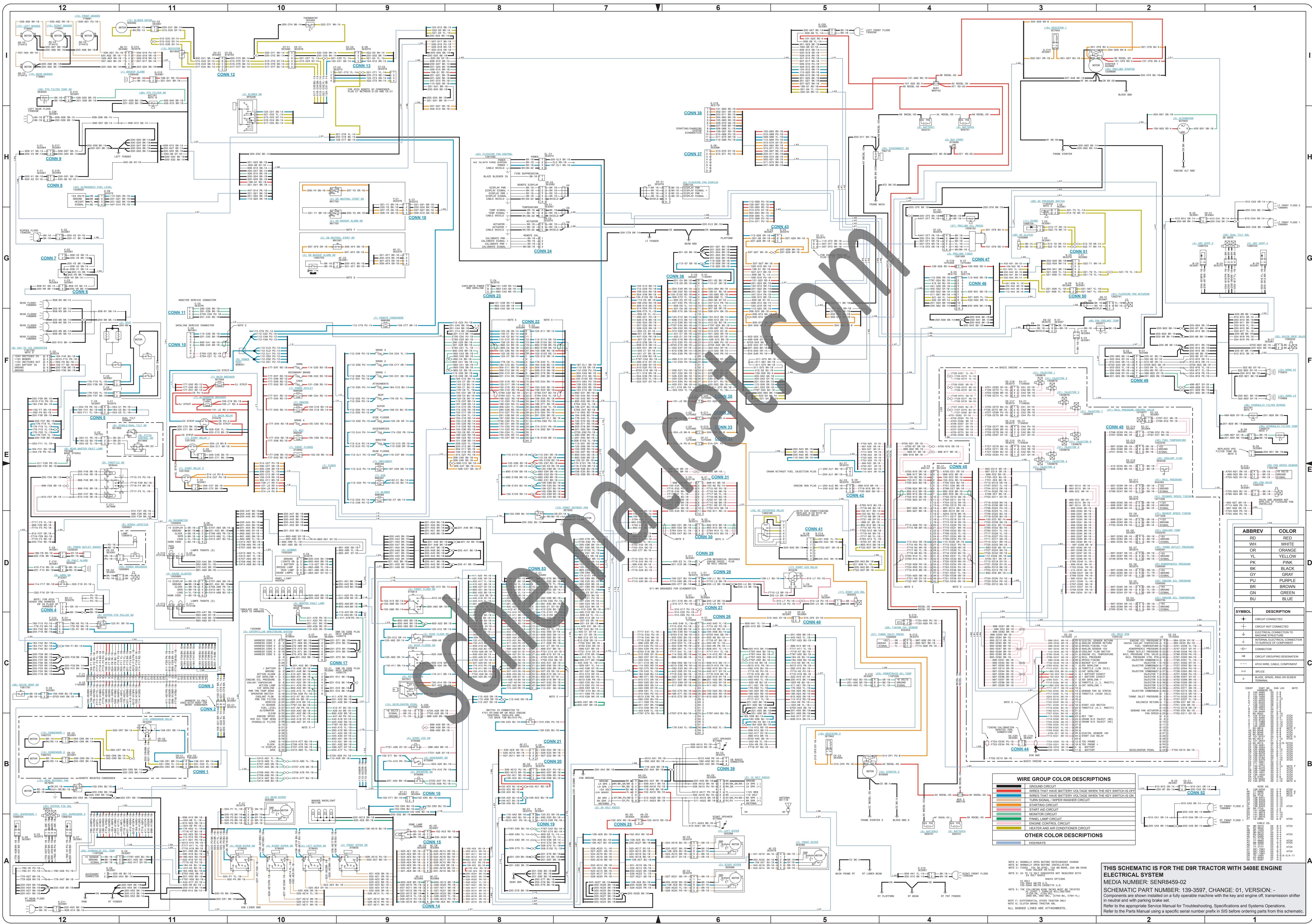
Harness identification code: This example indicates wire group 325, wire 135 in harness "AG".

325-AG135

PK-14

Wire Gauge

Wire Color



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

SYMBOL	DESCRIPTION
(+)	CIRCUIT POWERED
(-)	CIRCUIT NOT POWERED
(---)	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
(---)	CONNECTION TO COMPONENT
(---)	CONNECTION OF COMPONENT
(---)	CIRCUIT GROUNDING DISPOSITION
(---)	ATTACHMENT CABLE CONNECTION
(---)	BRACE
(---)	BLACK STRIKE RING OR SCREW

WIRE GROUP COLOR DESCRIPTIONS	
(Red)	GROUND CIRCUIT
(Orange)	WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS OFF
(Yellow)	WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS ON
(Green)	TURN SIGNAL / WIPER WASHER CIRCUIT
(Blue)	START AIR CIRCUIT
(Purple)	STARTING CIRCUIT
(Pink)	MONITOR CIRCUIT
(Black)	ENGINE CONTROL CIRCUIT
(Brown)	HEATING AND CONDITIONING CIRCUIT

OTHER COLOR DESCRIPTIONS	
(Blue)	HIGHWAYS

THIS SCHEMATIC IS FOR THE D9R TRACTOR WITH 3408E ENGINE
ELECTRICAL SYSTEM
 MEDIA NUMBER: SEMR459-02
 SCHEMATIC PART NUMBER: 139-3597, CHANGE: 01, VERSION: 1
 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.
 Refer to the Parts Manual using a specific serial number prefix in SIS before ordering parts from this schematic.
 ALL DASHED LINES ARE ATTACHMENTS.

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS

