

Schematic

D7G2 XL Track Type Tractor Electrical System

7MB5000-UP
C7G1000-UP

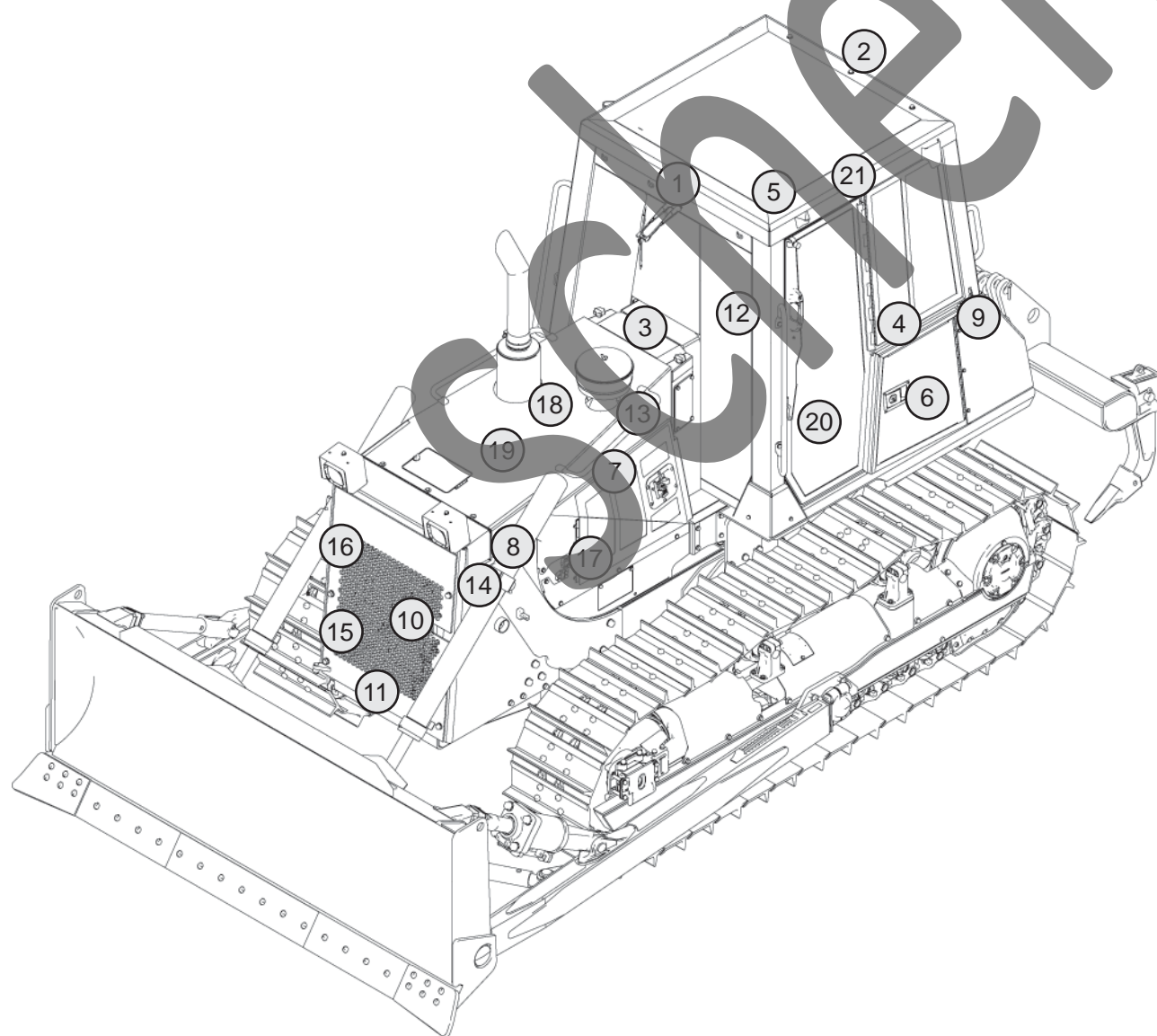
Wire Description			
Wire Number	Wire Color	Description	Description
Power Circuits			
101	OR	Bat (+) (Not Application Specific)	
102	RD	Hd Lmp	
105	BR	Key Switch	
108	BU	Wiper Motor	
109	OR	Alternator Output (+) Terminal	
112	PU	Main Power Relay Output	
114	GN	Warning Horn (Forward)	
115	RD	Alternator Breaker	
116	BR	Rear Lamp	
121	YL	Back Alarm To Lamp	
123	WH	Gauges	
124	GN	A/C Blower	
125	OR	Gauge Lamp	
139	OR	Charging Relay	
158	BR	A/C Condenser #2	
159	BU	A/C Condenser #1	
Ground Circuits			
200	BK	Main Chassis	
201	BK	Operator Monitor Return	
227	BR	Condenser Relay To Condenser Motor	
Basic Machine Circuits			
304	WH	Starter Relay No. 1 Output	
305	GN	Starter Relay Coil To Neutral Start Switch	
307	OR	Key Switch To Neutral Start Switch	
308	YL	Main Power Relay Coil	
310	PU	Start Aid Sol To Start Aid Solenoid	
311	WH	Start Aid Sol To Temp Switch	
321	BR	Backup Alarm Lamp Travel Alarm	
322	GY	Warning Horn (Forward)	

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Backup (ATCH)	G-8	9	Relay - Main	H-9	C
Alarm - Fault	F-9	A	Relay - Start	I-9	C
Alternator	F-3	10	Resistor - Cab Blower Motor	D-5	A
Battery 1 & 2	B-3	11	Sender - Coolant Temperature	F-3	19
Block Fuse	I-12	6	Sender - Fuel Level	C-7	12
Breaker - Alternator	H-9	C	Sender - Torque Converter Oil Temperature	E-4	10
Diode - A/C (ATCH)	E-1	13	Service Meter	F-9	A
Gage - Coolant Temperature	E-8	A	Solenoid - A/C Clutch (ATCH)	E-1	14
Gage - Fuel Level	D-9	A	Solenoid - Start Aid (ATCH)	F-2	15
Gage - Torque Converter Temperature	E-9	A	Suppressor - Arc (Left)	F-8	A
Horn - Forward (High)	G-1	16	Suppressor - Arc (Right)	F-8	A
Horn - Forward (Low)	G-1	16	Switch - Backup Alarm (ATCH)	G-8	20
Motor - Cab Blower #1	D-4	A	Switch - Blower	D-8	A
Motor - Cab Blower #2	D-4	A	Switch - Disconnect	B-3	6
Motor - Condenser #1	B-9	2	Switch - Engine Oil Pressure	G-2	17
Motor - Condenser #2	B-9	2	Switch - Forward Horn	B-5	B
Motor - Front Washer Pump	C-7	12	Switch - Front Wiper	E-11	21
Motor - Front Wiper	E-11	1	Switch - Key Start	D-8	A
Motor - Rear Washer Pump	C-7	12	Switch - Lamp	E-9	A
Motor - Rear Wiper	D-11	2	Switch - Neutral Start	G-8	4
Motor - Starter	B-4	18	Switch - Rear Wiper	E-11	21
Relay - Charging	H-7	C	Switch - Refrigerant (ATCH)	E-1	13
Relay - Condenser #1	C-9	2	Switch - Start Aid (ATCH)	E-9	A
Relay - Condenser #2	B-9	2	Switch - Start Aid Temperature (ATCH)	F-2	15
Relay - Engine Pressure	I-7	C	Switch - Thermostat	D-5	A

Machine locations are repeated for components located close together.
A = Located inside of instrument panel.
B = Located inside of right console.
C = Located inside of fuse box.

Connector Location		
Connector Number	Schematic Location	Machine Location
CONN 1	D-12	1
CONN 2	E-8	3
CONN 3	B-8	2
CONN 4	B-6	5
CONN 5	B-7	2
CONN 6	C-7	2
CONN 7	G-7	4
CONN 8	I-6	6
CONN 9	I-6	6
CONN 10	H-6	6
CONN 11	H-6	6
CONN 12	H-6	6
CONN 13	F-6	3
CONN 14	E-6	3
CONN 15	D-6	3
CONN 16	F-4	7
CONN 17	F-4	7
CONN 18	F-4	7
CONN 19	F-4	7
CONN 20	E-4	7
CONN 21	E-4	7
CONN 22	G-3	8

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.



Related Electrical Service Manuals	
Title	Form Number
Alternator: 185-5294	SENR4130
Electric Starting Motor: 6V-5207	SENR3581
Electric Starting Motor: 6V-5023	SENR3536
Electric Starting Motor: 6V-5226	SENR4975
Electronic Monitoring System:	SENR2945

Resistor, Sender and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms) ¹
9G-1950	Resistor: Cab Blower Motor	Overall 2.0 ± 0.1 Tap 1.0 ± 0.05
106-5122	Solenoid: A/C Clutch (ATCH)	12.8 ± 0.6
157-8838	Sender: Fuel Level	Full: 25-29 Empty: 238-255
6N-5926	Sender: Coolant Temperature	524-586 @ 115.6 °C (240.1 °F) 5905-7264 @ 54.4 °C (129.9 °F)
3E-6332	Solenoid: Start Aid (ATCH)	6
3E-7259	Sender: Torque Converter Oil	5806-7264 @ 54.4 °C (129.9 °F) 1159-11281 @ 115.6 °C (240.1 °F)

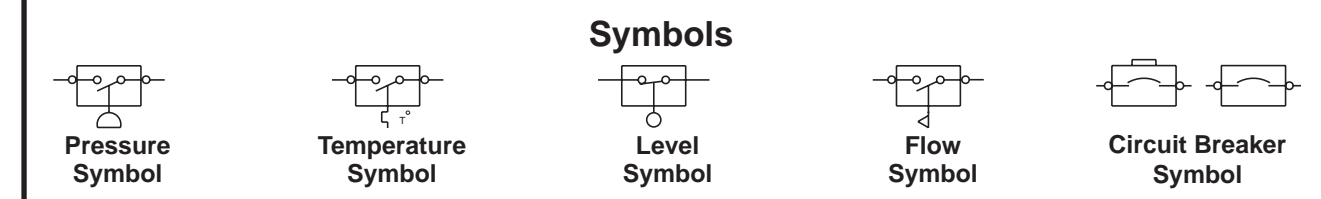
¹ At room temperature unless otherwise noted.

Off Machine Switch Specification				
Part No.	Function	Actuate	Deactuate	Contact Position
3E-4464	Thermostat	-1.1 ± 0.8°C (30 ± 1.4°F)	2.2 ± 0.8°C (36 ± 1.4°F)	Normally Closed
3E-6425	Start Aid Temperature	38 ± 3°C (100 ± 5°F)	27°C MIN (81°F MIN)	Normally Closed
107-0613	Engine Oil Pressure	62.0 ± 21.0 kPa (9.0 ± 3.0 psi)	38.0 ± 21.0 kPa (10.0 ± 3.0 psi)	Normally Closed
114-5333	A/C Refrigerant Pressure	275 to 1750 kPa ¹ (39.9 to 253.8 psi)	-	Normally Open ²

¹ With increasing pressure the closed condition can be maintained up to 2800 kpa (405 psi), with decreasing pressure the closed condition can be maintained down to 170 kpa (25psi).

² Contact position at the contacts of the harness connector.

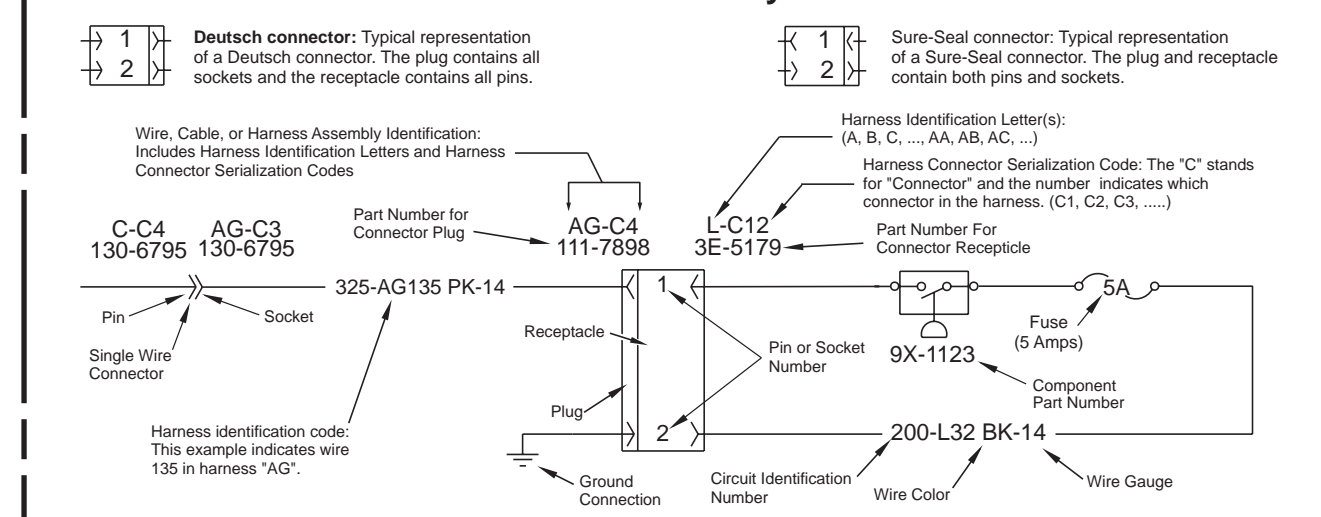
Harness And Wire Electrical Schematic Symbols



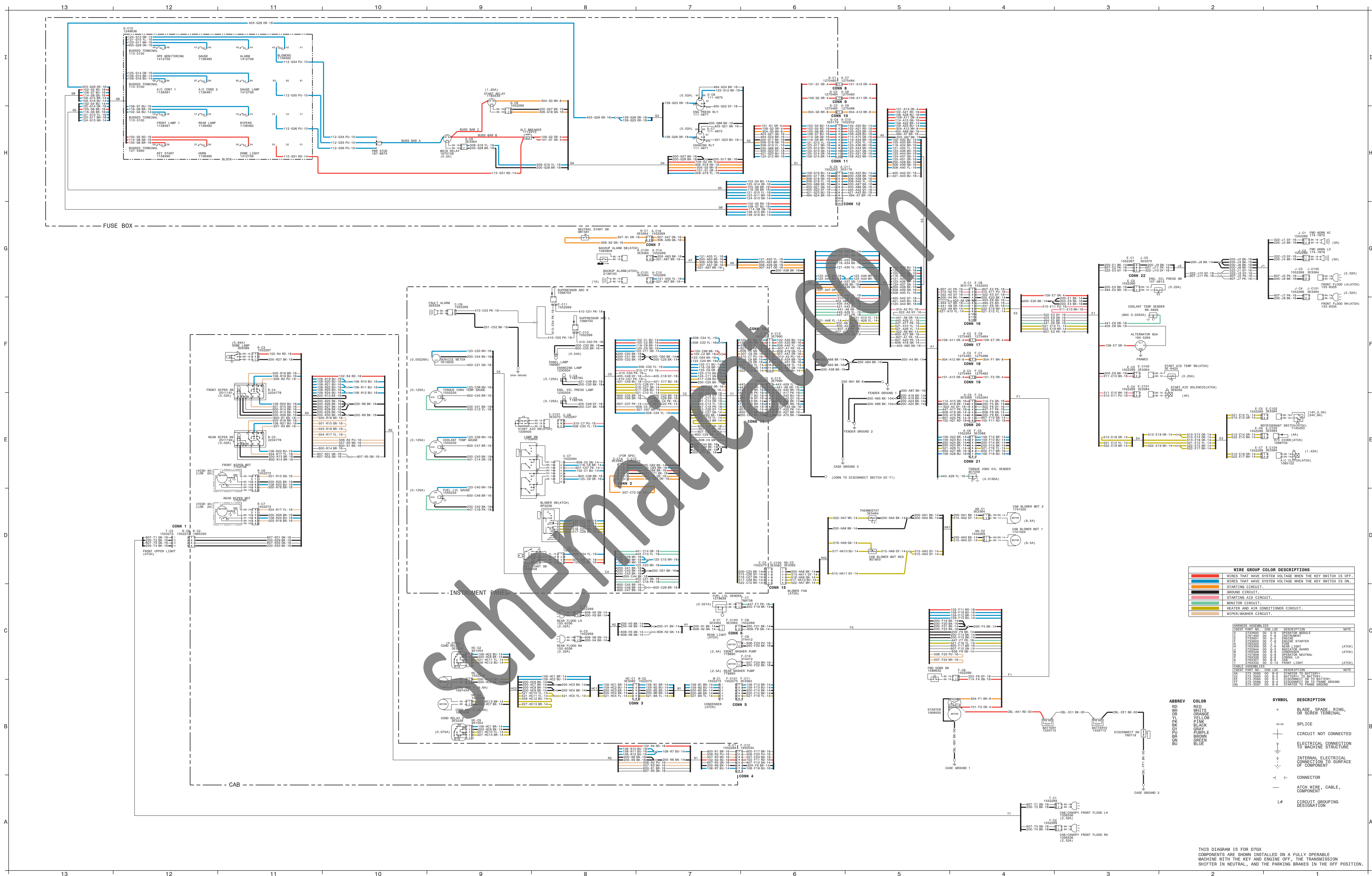
Symbols And Definitions

- 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 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



KENR6359-01
16 Page, (Dimensions 34 inches x 24 inches)



WIRE GROUP COLOR DESCRIPTIONS

Red	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF.
Blue	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON.
Black	GROUND CIRCUIT.
Green	STARTING AID CIRCUIT.
Yellow	MONITOR CIRCUIT.
Purple	HEATER AND AIR CONDITIONER CIRCUIT.
White	WATER/WASHER CIRCUIT.

WASHER ASSEMBLY

LOC	LOC	DESCRIPTION	NOTE
1	2761400	00 P-8	INSTANTANEOUS
2	2761400	00 P-8	INSTANTANEOUS
3	2761400	00 P-8	INSTANTANEOUS
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100	2761400	00 P-8	INSTANTANEOUS

ABBREV COLOR SYMBOL DESCRIPTION

ABBREV	COLOR	SYMBOL	DESCRIPTION
RD	RED	○	BLADE, SPARE, RING, OR SHEET TERMINAL
OR	ORANGE	○	SPICE
YL	YELLOW	○	CIRCUIT NOT CONNECTED
PK	PINK	○	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
BLK	BLACK	○	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
GRY	GRAY	○	CONNECTOR
PUR	PURPLE	○	ATCH WIRE, CABLE, COMPONENT
BRO	BROWN	○	
BRN	BROWN	○	
BLU	BLUE	○	
LF		○	CIRCUIT GROUPING DESIGNATOR

THIS DIAGRAM IS FOR D70X COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERABLE MACHINE WITH THE KEY AND ENGINE OFF. THE TRANSMISSION SHIFTER IS NEUTRAL, AND THE PARKING BRAKES IN THE OFF POSITION.