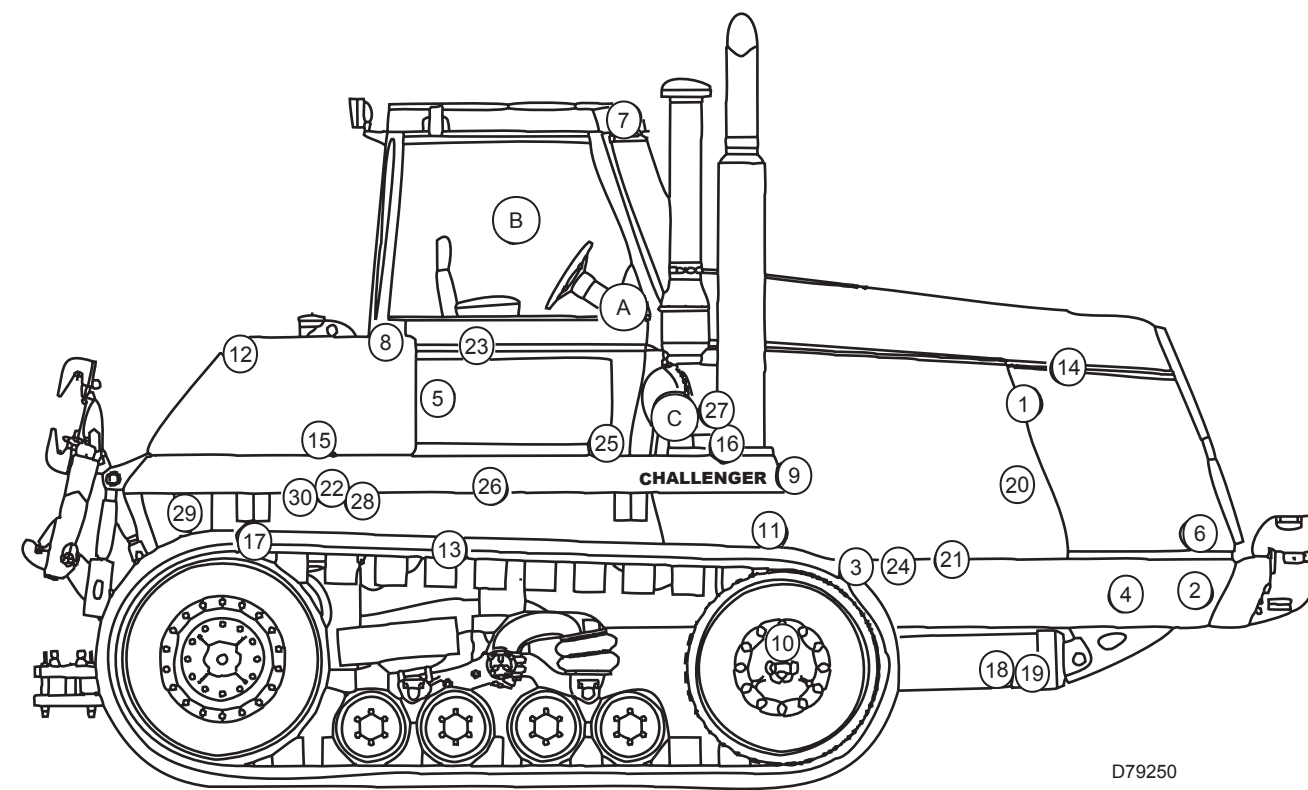
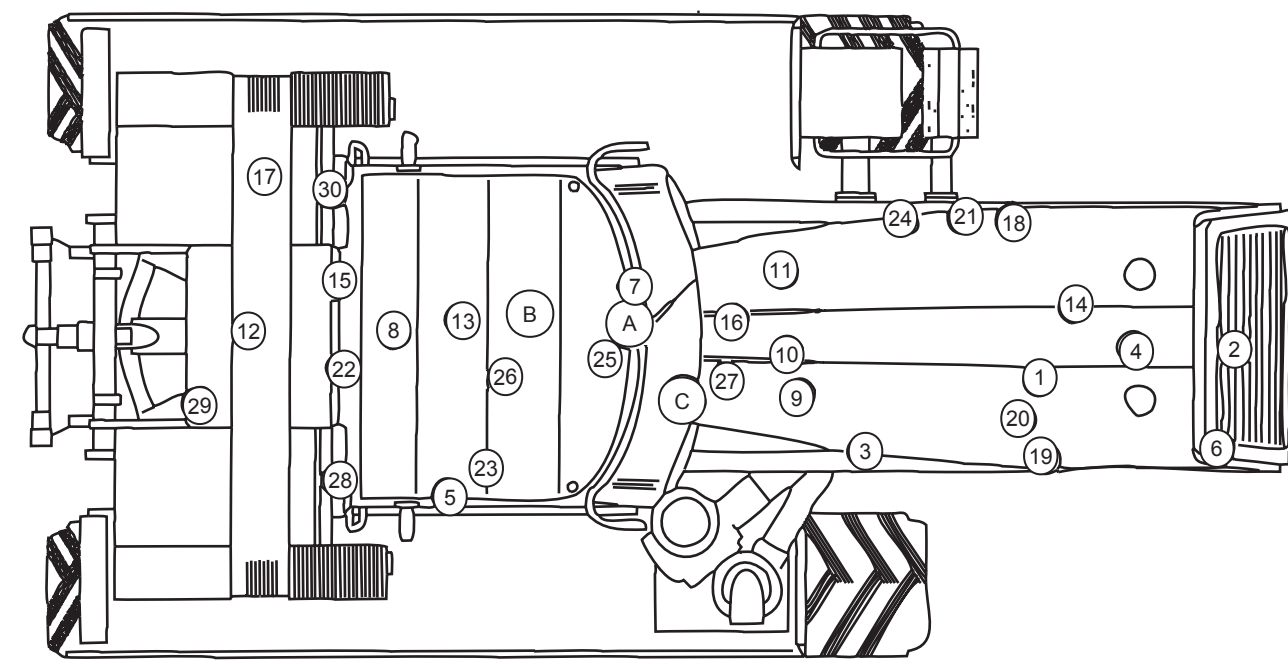


Component Location Chart					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alternator	B-2	1	Relay - Main Power	B-3	3
Batteries	B-2	2	Relay - Rear Flood Lamp	H-7	A'
Breaker - Alternator (150A)	B-2	3	Relay - Right Turn	H-5	A'
Breaker - Key (20A)	I-6	A	Relay - Start	A-2	3
Breaker - Main (80A)	B-3	3	Relay - Trailer Left Turn	H-5	A'
Breaker - Power Plug (30A)	G-6	A	Relay - Trailer Right Turn	H-5	A'
Breaker - Running Lamp (20A)	G-6	A	Relays - Front Wiper	G-7	A'
Breaker - Tail Lamp (10A)	G-6	A	Resistor - Blower Motor Speed	B-4	C
Buffer - Belt Tension	E-2	4	Resistor - Flasher Load	G-5	A'
Control - Draft	C-10	5	Sender - Engine Oil Press	H-1	11
Flasher	H-5	A'	Sender - Fuel Level	G-12	12
Fuses	F-5	A'	Sender - Transmission Speed	A-6	13
Fuses	H-6	A'	Sender/Switch - Coolant Temp	H-1	14
Fuses	I-6	A'	Sender/Switch - Hydraulic Oil Temp	G-12	15
Gauge - Coolant Temp	F-9	A	Sensor - Engine Speed	H-1	16
Gauge - Fuel Level	E-9	A	Sensor - Gov Control Position	B-8	B
Gauge - Hydraulic Oil Temp	E-9	A	Sensor - Hitch Handle Position	C-10	5
Gauge - Oil Press	F-9	A	Sensor - Hitch Position	B-12	17
Ground - Engine	D-2	9	Sensor - LH Belt Tension Press	I-1	18
Ground - Frame	B-2	1	Sensor - RH Belt Tension Press	B-2	19
Ground - Frame	D-3	9	Solenoid - A/C Clutch	G-1	20
Horn - Alarm	F-5	A	Solenoid - Hitch	A-12	17
Horn - Forward Warning	B-1	6	Solenoid - Start Aid	G-1	21
Meter - Speed/Tach/Hour	F-9	A	Suppressor - Arc	G-1	20
Monitor - Electronic Control Gp	D-7	A	Switch - A/C	B-9	A
Monitor - Performance	I-11	A	Switch - A/C Pressure	G-1	14
Motor - Blower	B-4	C	Switch - Blower Motor	B-9	A
Motor - Front Wiper	E-4	7	Switch - Differential Lube Press	A-7	22
Motor - Rear Wiper	F-11	8	Switch - Draft On/Off/Set	B-10	23
Motor - Starting	D-3	9	Switch - Eng Coolant Temp (St Aid)	G-2	14
Radar (Perf Mon)	A-5	10	Switch - Engine Diagnostic	D-5	A'
Radio	D-4	B	Switch - Front Flood	G-9	A
Relay - Belt Tension	I-7	A'	Switch - Front Wiper	C-7	A
Relay - Horn	H-7	A'	Switch - H-lookup	B-11	23
Relay - Front Flood Lamp	H-7	A'	Switch - Hydraulic Filter Flow	I-1	24
Relay - Lamp Test	I-7	A'	Switch - Key Start	D-6	B
Relay - Left Turn	H-5	A'	Switch - Neutral Start	B-8	23

Machine locations are repeated for components located close together. B = Components located in operator's compartment.
A = Components located in the dash. C = Components located on the firewall.
A' = Components located under right side of dash. C' = Components located on the left side of the machine.
A'' = Components located under left side of dash.

Machine Harness Connector and Component Locations



D79250



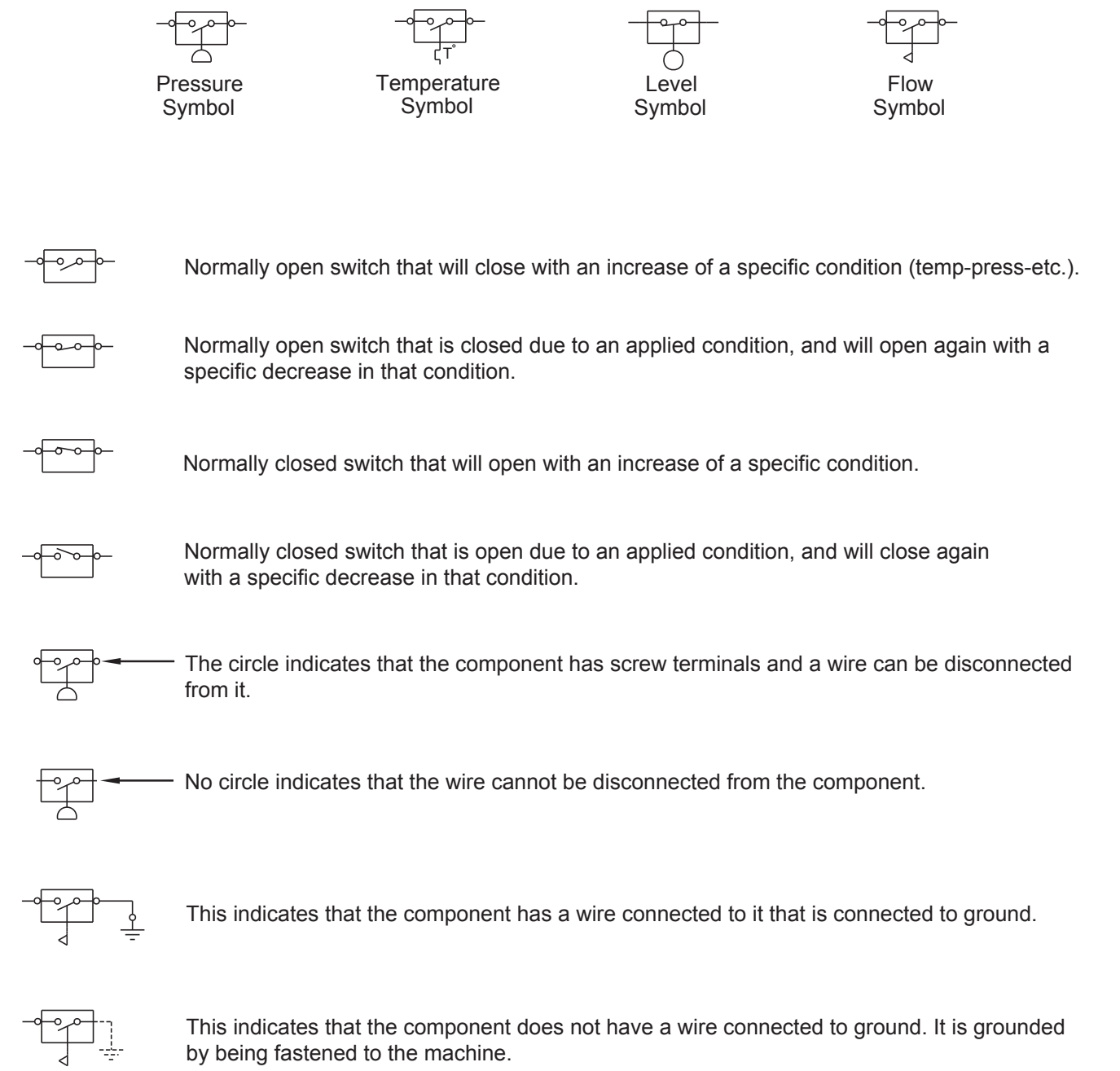
SENR 8318-01
November 1996

Schematic

Challenger 65D Agricultural Tractor Electrical System

2ZJ1965-UP

Electrical Schematic Symbols And Definitions



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Resistor, Sender and Solenoid Specifications		
Component	Part No.	Resistance (Ohms) ¹
Resistor - Blower Speed	77-3828	Overall 1.0 ± 0.1 Tap 0.5 ± 0.05
Resistor - Flasher Load	3E-0108	8.0 ± 0.4
Solenoid - A/C Clutch	3E-1907	3.5 ± 1.5
Solenoid - Hitch	100-3915	6.2
Solenoid - Start Aid	3E-6331	1.5

¹ At room temperature unless otherwise noted.

Connector Location ¹		
Connector Number	Schematic Location	Machine Location
CONN 1	D-1	27
CONN 2	C-2	4
CONN 3	G-2	27
CONN 4	F-3	4
CONN 5	H-4	A'
CONN 6	I-4	A'
CONN 7	B-4	A'
CONN 8	B-5	A
CONN 9	B-5	A
CONN 10	G-8	A
CONN 11	F-8	A
CONN 12	G-10	B
CONN 13	G-10	B
Harness Code Plug	C-10	5
CONN 14	A-11	17
CONN 15	A-12	28
CONN 16	C-12	29
Trailer Connector	D-11	29
CONN 17	D-11	29
CONN 18	G-12	22
CONN 19	I-12	30

¹ The connectors shown in this chart are for harness to harness connectors with a minimum of four contacts and other special connectors. Connectors that join a harness to a component are generally located at or near the component. See the Component Location Chart.

Related Service Manuals		
Title	Form No.	
Alternator (21 SW) 125-9597 Consist No. 9x-9096	SENR4757	
Machine Monitor	SENR5273	
Machine Performance Panel	SENR5329	
Starting Motor (42-MT) 3E-7863 Consist No. 3E-7864	SENR3581	

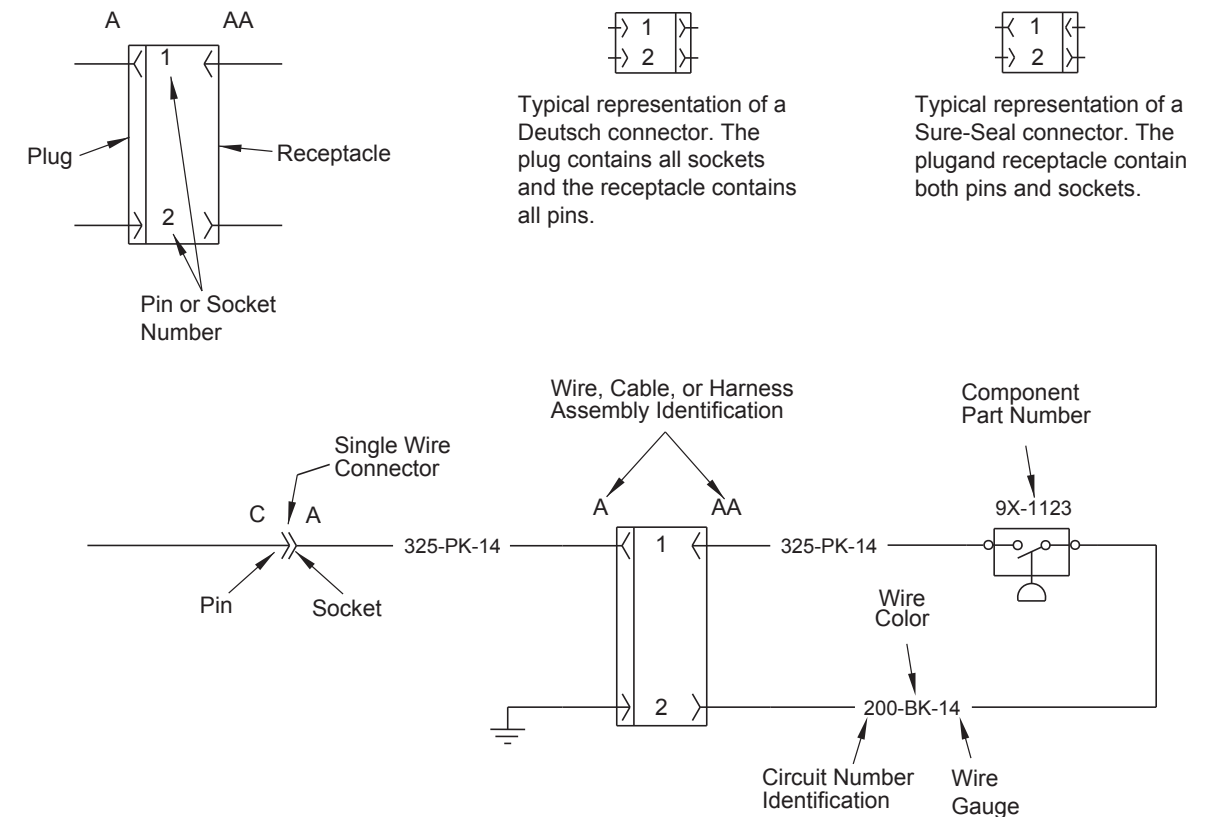
Off Machine Switch Specification				
Part No.	Function	Actuate	Deactuate	Contact Position
3E-6425	Coolant Temp (St Aid)	38.0 ± 3.0°C (100.0 ± 5.0°F)	27.0°C MIN (81.0°F MIN)	Normally Closed
3E-7504	Trans Oil Temperature	107.0 ± 3.0°C (225.0 ± 5.0°F)	88.0°C MIN (200.0°F MIN)	Normally Open
3E-7674	Differential Lube Pressure	90.0 kPa MAX (13.0 psi Max)	35.0 ± 3.0 kPa (5.0 ± 3.0 psi)	A-B, Normally Open
101-3780	Engine Oil Pressure	80.0 kPa MAX (12.0 psi MAX)	38.0 ± 10.0 kPa (6.0 ± 1.5 psi)	Normally Closed
114-5333	Refrigerant Pressure (AC)	175 to 1750 kPa 1 (40 to 255 psi)	-	Normally Open ²

¹ A hysteresis band exists: 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).

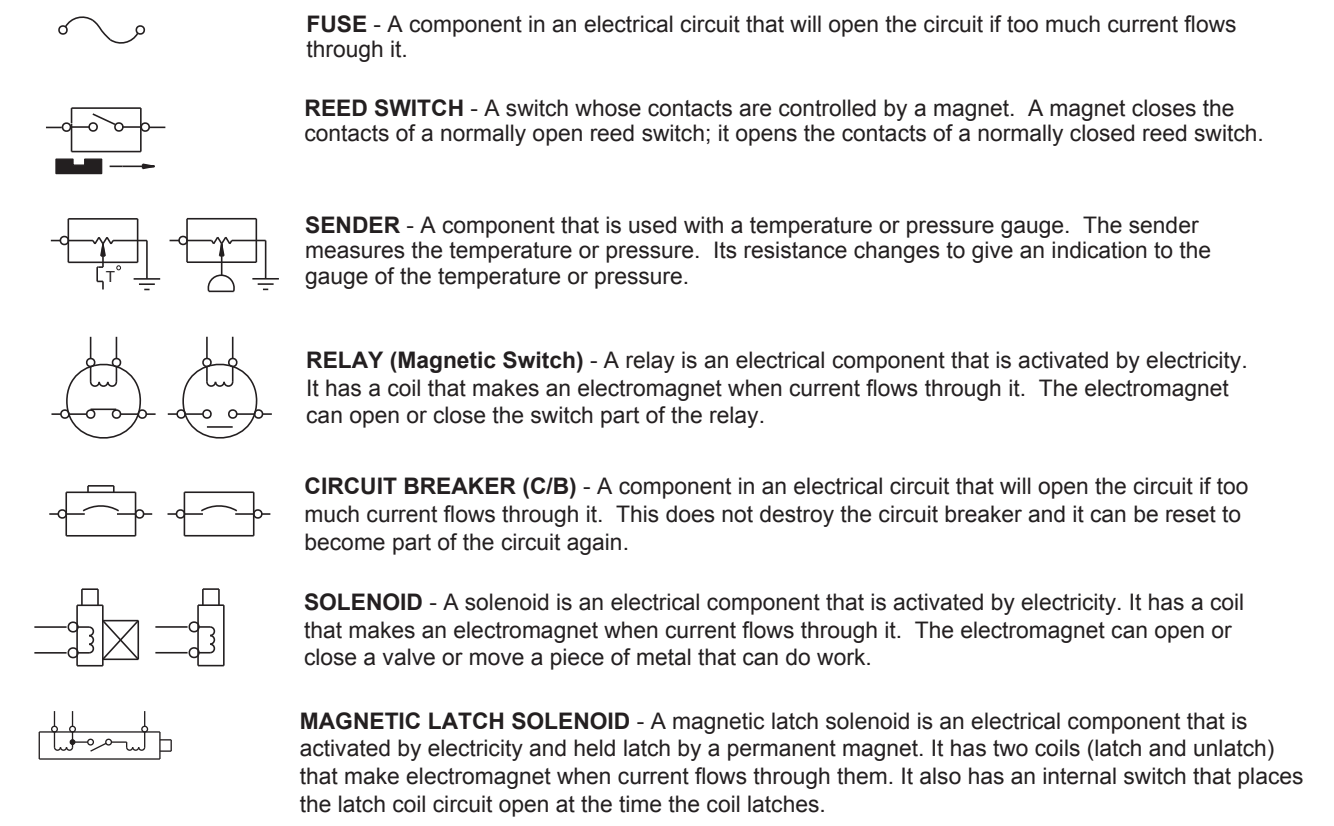
² Contact position at the contacts of the harness connector.

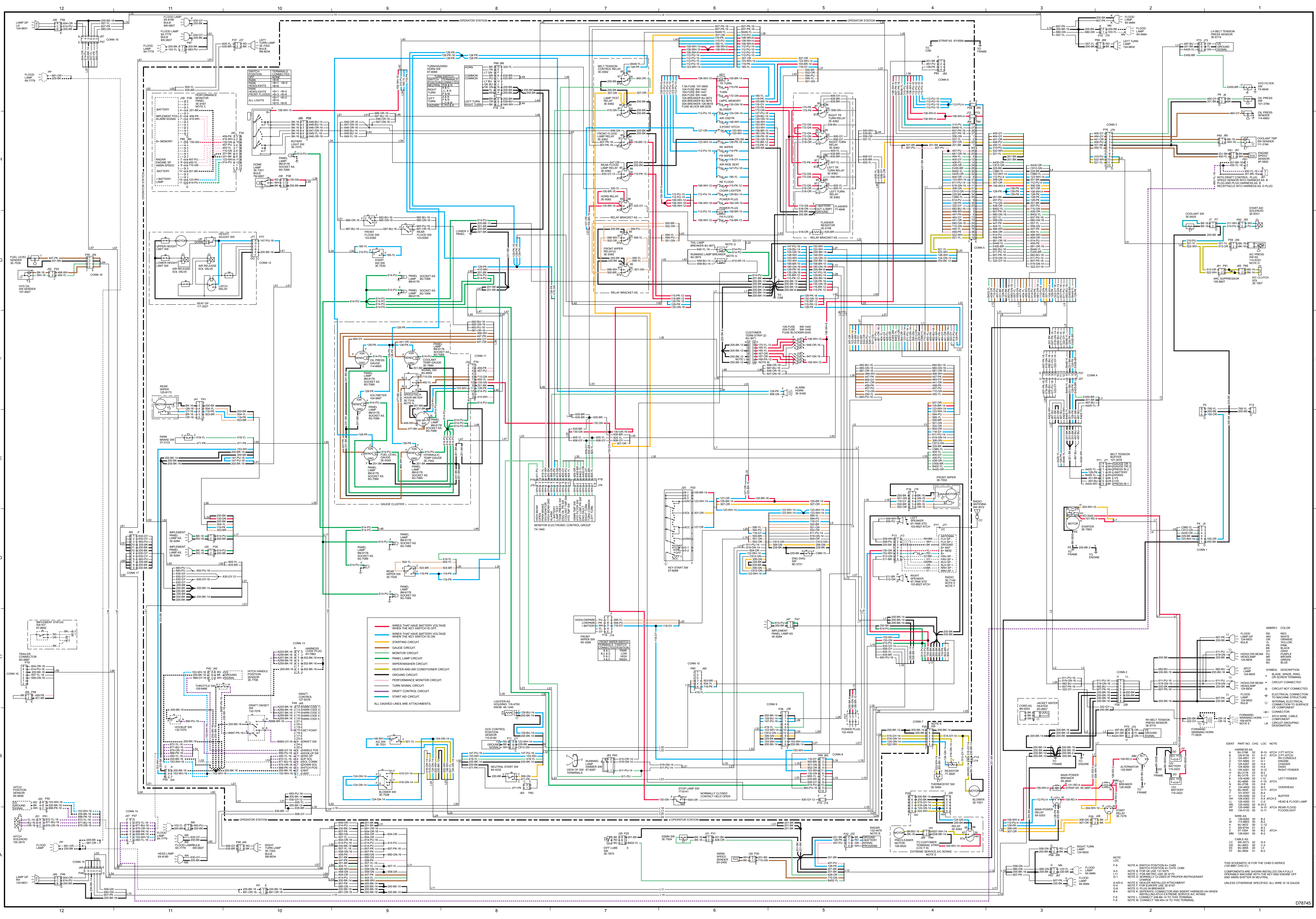
Wire Description Chart					
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Distribution Circuits					
101	RD	Battery (+)	A424	WH	Press. Transducer 1 Signal
103	YL	Aux Ckt	A425	YL	Press. Transducer 2 Signal
105	BR	Key Sw	A430	OR	BU Cool Fault Output
106	WH	Aux Ckt	B402	YL	Indicator Lamp Diff Lube Press
109	RD	Alt Output (+) Term.	B449	YL	Belt Tension Buffer Box to Relay
112	PU	Main Power Rly Output	E-455	BR	Hydraulic Oil Filter
Accessory Circuits					
115	PK	Aux Ckt	500	BR	Wiper - Front (Park)
116	BR	Aux Ckt	501	GN	Wiper - Front (Lo)
118	GY	Aux Ckt	502	OR	Wiper - Front (Hi)
119	PK	Aux Ckt	503	BR	Wiper - Rear (Park)
123	WH	Aux Ckt	504	YL	Wiper - Rear (Lo)
124	GN	A/C	508	PU	Radio Speaker - Left
127	OR	Aux Ckt	509	WH	Radio Speaker - Left (Common)
128	PK	Aux Ckt	511	BR	Radio Speaker - Right
129	BU	Aux Ckt	512	GN	Radio Speaker - Right (Common)
130	GN	Aux Ckt	513	OR	A/C Compressor/Refrigerant Press Sw
147	PU	Aux Ckt	515	GY	Blower Motor (Hi)
148	WH	Aux Ckt	516	GN	Blower Motor (Medium)
150	OR	Aux Ckt	518	OR	Hazard Flasher to Sw
153	WH	3 Point Hitch Ctrl	521	YL	A/C Sw to Refrigerant Sw
158	BR	Aux Ckt	522	WH	A/C Clutch to Thermostat Sw
165	YL	Aux Ckt	539	BU	Turn Signal Indicator Base Right
167	OR	Aux Ckt	540	WH	Turn Signal Indicator Left
169	PK	Aux Ckt	557	YL	Trailer Connector (Left Turn/Hazard)
169	WH	Aux Ckt	558	GN	Trailer Connector (Right Turn/Hazard)
170	YL	Aux Ckt	568	GN	Warning Buzzer to Diodes
172	GN	Aux Ckt	584	PU	Front Wiper Sw
175	PK	Aux Ckt	595	YL	Front Wiper Sw
180	GN	Aux Ckt	596	WH	Front Wiper Sw
185	YL	Aux Ckt	A557	WH	Precleaner Blower +B
Ground Circuits					
200	BK	Main Chassis			
201	BK	Operator Monitor Panel			
202	BK	Transmission Control			
229	BK	Battery (-)			
A208	BK	Pre Cleaner Gnd			
A220	BK	Draft Ctrl Ident Code 0			
A256	BK	Draft Ctrl Ident Code 1			
A257	BK	Draft Ctrl Ident Code 2			
A258	BK	Draft Ctrl Ident Code 3			
A259	BK	Draft Ctrl Ident Code 4			
Basic Machine Circuits					
304	WH	Starter Rly No. 1 Output	604	OR	Stop Lamp
305	GN	Starter Rly Coil	605	YL	Turn Lamp - Left
307	OR	Key Sw to Neutral Start Sw	606	GY	Turn Lamp - Right
310	PU	Start Aid Sw to Start Aid Sol	607	PK	Flood Lamp - Front
311	WH	Start Aid Sol to Temp Sw	610	OR	Head Lamp Basic
323	YL	Horn Sw to Sol Sw	611	PU	Head Lamp Hi
322	GY	Warning Horn (Forward)	614	PU	Park Tail/Dash Lamp
Monitoring Circuits					
404	YL	Oil Coolant Temp Gauge	619	GN	Head Lamp Lo
405	GY	Oil Coolant Temp Gauge	630	GY	Flood Lamp Rear
406	PU	Oil Coolant Temp Gauge	635	BR	Playard Min Red Lamp
415	GN	Oil Coolant Temp Gauge	646	GN	Light Sw to Front Flood Relay
419	YL	Oil Coolant Temp Gauge	648	OR	Light Sw to Front Flood Relay
428	OR	Oil Coolant Temp Gauge	647	OR	Light Sw to Rear Flood Relay
447	PK	Fuel Level Gauge	648	BU	Light Sw to Headlamp Breaker
449	WH	Speedometer Sender (Signal No. 1)	649	YL	Light Sw to Park Tail Lamp Breaker
450	YL	Speedometer Sender (Signal No. 2)	680	GN	Flood Lamp Front
457	PU	Oil Coolant Temp Gauge	681	OR	Flood Lamp Rear
459	PK	Oil Coolant Temp Gauge	682	BU	Spot Lamp Front
464	GY	Oil Coolant Temp Gauge	683	PU	Flood Lamp Rear
465	OR	Oil Coolant Temp Gauge	686	OR	Fuse to Hitch Front Lamp Sw
466	WH	Oil Coolant Temp Gauge	687	BU	Fuse to Hitch Rear Lamp Sw
471	PK	Transmission Neutral to Parking Brake			
477	BK	Speedometer Sender (Signal No. 2)			
497	BU	Sensor Power			
Control Circuits					
710	GN	XMSN Speed Pickup Signal	795	YL	Aux Ckt
795	YL	Aux Ckt	870	OR	3 Point Hitch Cont - Down Sol
808	PK	3 Point Hitch Cont - Hitch Position	871	BU	3 Point Hitch Cont - Sol Common
817	YL	3 Point Hitch Cont - Up Sol	872	YL	3 Point Hitch Cont - Up Sol
838	PK	3 Point Hitch Cont - Hitch Position	889	GY	3 Point Hitch Cont - Handle Position
890	PU	3 Point Hitch Cont - Hookup Sw	890	PU	3 Point Hitch Cont - Hookup Sw
895	GY	3 Point Hitch Control - Draft Off/On	896	GY	3 Point Hitch Control - Draft Off/On
896	BR	3 Point Hitch Control - Set Point	899	PK	3 PT Hitch Draft Switch to Throttle Switch
897	PK	3 PT Hitch Draft Switch to Throttle Switch	912	GN	Throttle Position
912	GN	Throttle Position	936	YL	Diagnostic Enable

Harness And Wire Electrical Schematic Symbols



Electrical Schematic Symbols And Definitions





- WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS ON
 - WIRES THAT HAVE BATTERY VOLTAGE WHEN THE KEY SWITCH IS OFF
 - STARTING CIRCUIT
 - GAUGE CIRCUIT
 - MONITOR CIRCUIT
 - PANEL LAMP CIRCUIT
 - WATER WASHER CIRCUIT
 - HEATER AND AIR CONDITIONER CIRCUIT
 - PERFORMANCE MONITOR CIRCUIT
 - TURN SIGNAL CIRCUIT
 - BRAKE CONTROL CIRCUIT
 - START AID CIRCUIT
- ALL DASHED LINES ARE ATTACHMENTS

WIRE NO.	WIRE COLOR	SYMBOL	DESCRIPTION
100-001	RED	B	BATTERY
100-002	RED	B	BATTERY
100-003	RED	B	BATTERY
100-004	RED	B	BATTERY
100-005	RED	B	BATTERY
100-006	RED	B	BATTERY
100-007	RED	B	BATTERY
100-008	RED	B	BATTERY
100-009	RED	B	BATTERY
100-010	RED	B	BATTERY
100-011	RED	B	BATTERY
100-012	RED	B	BATTERY
100-013	RED	B	BATTERY
100-014	RED	B	BATTERY
100-015	RED	B	BATTERY
100-016	RED	B	BATTERY
100-017	RED	B	BATTERY
100-018	RED	B	BATTERY
100-019	RED	B	BATTERY
100-020	RED	B	BATTERY
100-021	RED	B	BATTERY
100-022	RED	B	BATTERY
100-023	RED	B	BATTERY
100-024	RED	B	BATTERY
100-025	RED	B	BATTERY
100-026	RED	B	BATTERY
100-027	RED	B	BATTERY
100-028	RED	B	BATTERY
100-029	RED	B	BATTERY
100-030	RED	B	BATTERY
100-031	RED	B	BATTERY
100-032	RED	B	BATTERY
100-033	RED	B	BATTERY
100-034	RED	B	BATTERY
100-035	RED	B	BATTERY
100-036	RED	B	BATTERY
100-037	RED	B	BATTERY
100-038	RED	B	BATTERY
100-039	RED	B	BATTERY
100-040	RED	B	BATTERY
100-041	RED	B	BATTERY
100-042	RED	B	BATTERY
100-043	RED	B	BATTERY
100-044	RED	B	BATTERY
100-045	RED	B	BATTERY
100-046	RED	B	BATTERY
100-047	RED	B	BATTERY
100-048	RED	B	BATTERY
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100-062	RED	B	BATTERY
100-063	RED	B	BATTERY
100-064	RED	B	BATTERY
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100-066	RED	B	BATTERY
100-067	RED	B	BATTERY
100-068	RED	B	BATTERY
100-069	RED	B	BATTERY
100-070	RED	B	BATTERY
100-071	RED	B	BATTERY
100-072	RED	B	BATTERY
100-073	RED	B	BATTERY
100-074	RED	B	BATTERY
100-075	RED	B	BATTERY
100-076	RED	B	BATTERY
100-077	RED	B	BATTERY
100-078	RED	B	BATTERY
100-079	RED	B	BATTERY
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100-081	RED	B	BATTERY
100-082	RED	B	BATTERY
100-083	RED	B	BATTERY
100-084	RED	B	BATTERY
100-085	RED	B	BATTERY
100-086	RED	B	BATTERY
100-087	RED	B	BATTERY
100-088	RED	B	BATTERY
100-089	RED	B	BATTERY
100-090	RED	B	BATTERY
100-091	RED	B	BATTERY
100-092	RED	B	BATTERY
100-093	RED	B	BATTERY
100-094	RED	B	BATTERY
100-095	RED	B	BATTERY
100-096	RED	B	BATTERY
100-097	RED	B	BATTERY
100-098	RED	B	BATTERY
100-099	RED	B	BATTERY
100-100	RED	B	BATTERY

WIRE NO.	WIRE COLOR	SYMBOL	DESCRIPTION
100-101	RED	B	BATTERY
100-102	RED	B	BATTERY
100-103	RED	B	BATTERY
100-104	RED	B	BATTERY
100-105	RED	B	BATTERY
100-106	RED	B	BATTERY
100-107	RED	B	BATTERY
100-108	RED	B	BATTERY
100-109	RED	B	BATTERY
100-110	RED	B	BATTERY
100-111	RED	B	BATTERY
100-112	RED	B	BATTERY
100-113	RED	B	BATTERY
100-114	RED	B	BATTERY
100-115	RED	B	BATTERY
100-116	RED	B	BATTERY
100-117	RED	B	BATTERY
100-118	RED	B	BATTERY
100-119	RED	B	BATTERY
100-120	RED	B	BATTERY
100-121	RED	B	BATTERY
100-122	RED	B	BATTERY
100-123	RED	B	BATTERY
100-124	RED	B	BATTERY
100-125	RED	B	BATTERY
100-126	RED	B	BATTERY
100-127	RED	B	BATTERY
100-128	RED	B	BATTERY
100-129	RED	B	BATTERY
100-130	RED	B	BATTERY
100-131	RED	B	BATTERY
100-132	RED	B	BATTERY
100-133	RED	B	BATTERY
100-134	RED	B	BATTERY
100-135	RED	B	BATTERY
100-136	RED	B	BATTERY
100-137	RED	B	BATTERY
100-138	RED	B	BATTERY
100-139	RED	B	BATTERY
100-140	RED	B	BATTERY
100-141	RED	B	BATTERY
100-142	RED	B	BATTERY
100-143	RED	B	BATTERY
100-144	RED	B	BATTERY
100-145	RED	B	BATTERY
100-146	RED	B	BATTERY
100-147	RED	B	BATTERY
100-148	RED	B	BATTERY
100-149	RED	B	BATTERY
100-150	RED	B	BATTERY

THIS SCHEMATIC IS FOR THE CHIEF-D-SERIES (LITERATURE) ONLY.

COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERATIONAL MACHINE WITH THE KEY AND ENGINE OFF AND AMM SHIFTER IN NEUTRAL.

NOTE: 1. WIRE COLORS ARE SHOWN IN THE WIRE COLOR COLUMN.

NOTE: 2. WIRE GAUGE IS SHOWN IN THE WIRE GAUGE COLUMN.

NOTE: 3. WIRE IDENTIFICATION IS SHOWN IN THE WIRE IDENTIFICATION COLUMN.

NOTE: 4. WIRE DESCRIPTION IS SHOWN IN THE WIRE DESCRIPTION COLUMN.

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