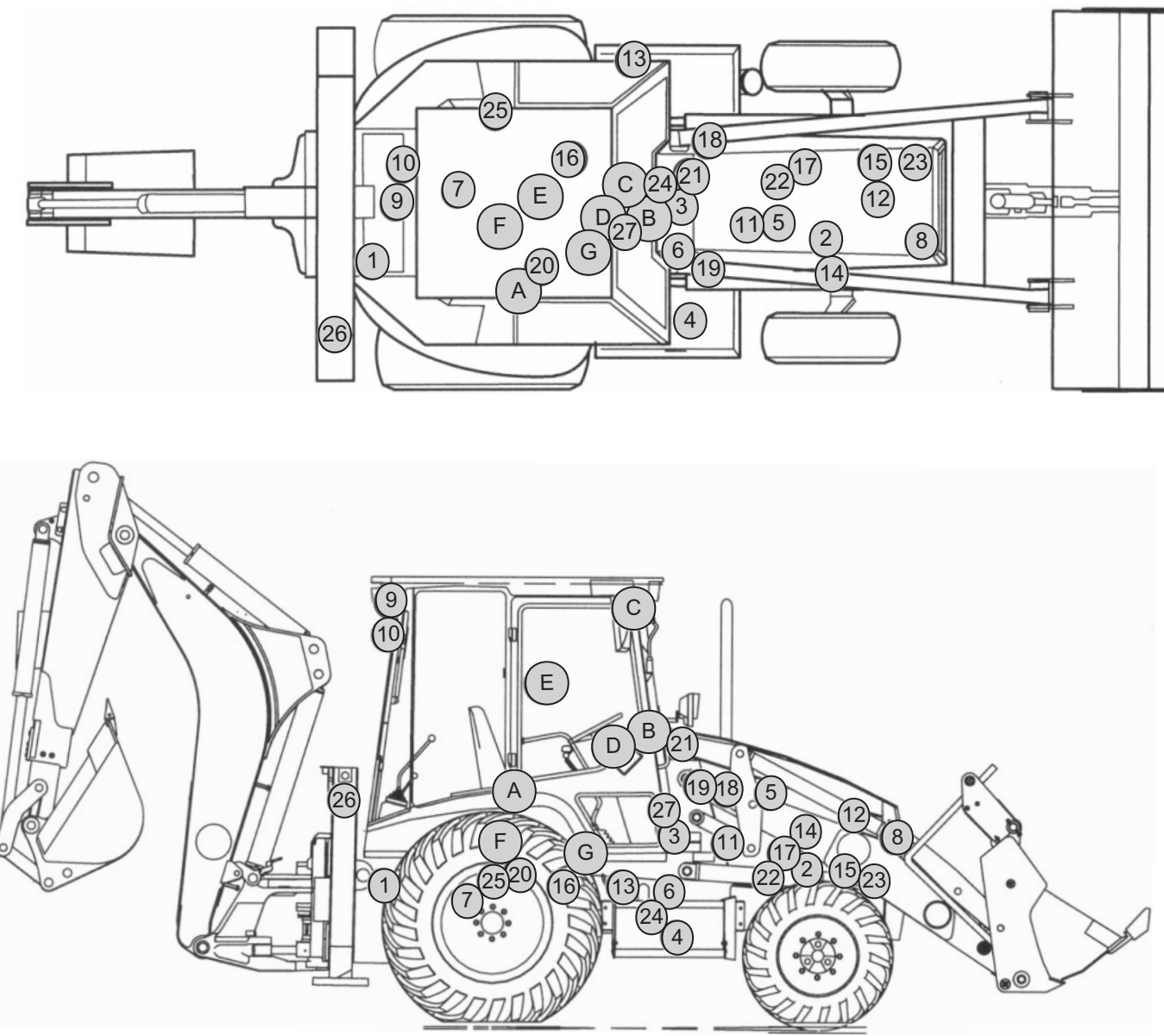


Connector Location		
Connector Number	Schematic Location	Machine Location
CONN 1	J-18	9
CONN 2	J-17	7
CONN 3	L-17	A
CONN 4	L-17	A
CONN 5	L-15	A
CONN 6 Code	L-15	A
CONN 7	B-14	A
CONN 8	B-14, L-10	A
CONN 9	C-14	A
CONN 10	C-14	A
CONN 11	C-14	A
CONN 12	L-15	G
CONN 13	K-14	25
CONN 14	K-14	25
CONN 15	L-15	4
CONN 16	C-13	C
CONN 17	D-13, K-2	C
CONN 18	J-13	3
CONN 19	J-13	3
CONN 20	D-11	3
CONN 21	D-11	3
CONN 22	B-10, K-2	C
CONN 23	D-10	3
CONN 24	D-10	3
CONN 25	H-8	A
CONN 29	F-7	B
CONN 30	F-7	B
CONN 31	F-7	B
CONN 32	I-7	1
CONN 33	J-7	3
CONN 34	K-7	3
CONN 35	K-7	3
CONN 36	K-7	3
CONN 37	D-5, L-6	6
CONN 38	D-5, L-6	6
CONN 39	C-5, L-6	6
CONN 40	B-5	6
CONN 41	B-5	6
CONN 42	K-5	3
CONN 43	K-5	3
CONN 44	B-5	6
CONN 45	G-1	8
CONN 46	G-1	8
CONN 47	J-13	3
CONN 48	L-14	A
CONN 49	H-11	25
CONN 50	H-11	25
CONN 51	F-7	B
CONN 52	C-4	3
CONN 53	E-8	3
CONN 54	E-5	3

The 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.

Component Identifiers (CID) For Shift Lever Control	
CID No.	Description
CID 168	Electrical System
CID 668	Transmission Shift Lever

* The CID is a diagnostic code that indicates which component is faulty.



Machine Harness Connector And Component Locations

Related Electrical Service Manuals	
Title	Form Number
Power Shift Transmission Control	SEN1274
Starter: 143-0539	SEN3828

Component Location			Component Location		
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Backup	D-18	B	Solenoid - First and Second Gear	H-5	G
Alarm - Lightbar Action	D-16, F-5	B	Solenoid - Front Drive	L-5	G
Alarm - Stabilizer Leg	F-17	B	Solenoid - FWD-REV Valve Group	F-4	G
Alternator	E-3	2	Solenoid - Group A	L-12	G
Battery 1	C-3	4	Solenoid - Group B	L-12	G
Battery 2	D-3	4	Solenoid - Hydraulic Shutoff	A-18	1
Breaker - Running Lamp	F-10	A	Solenoid - Left Loader Lock	L-7	18
Coil - Thermostat	J-4, E-3	5	Solenoid - Left Steer	L-9	7
Control - Powershift	L-12	4	Solenoid - Lock	L-8	7
Control - Shuttle	K-12	B	Solenoid - Reverse	L-12	G
Flasher	F-10	B	Solenoid - Ride Control	H-9	G
Fuses	E-11, 11	D	Solenoid - Right Loader Lock	L-7	18
Fuses	E-10	C	Solenoid - Right Steer	L-9	7
Fuses	E-14	C	Solenoid - Shutoff	L-9	7
Gauge - AWS Position	K-1, 3	C	Solenoid - Side Shift Lock	B-18	1
Gauge - Converter Temperature	L-15	B	Starter	D-3	11
Gauge - Fuel Level	A-16	A	Switch - Air Conditioner Blower	K-16	A
Gauge - Tachometer	B-16	A	Switch - All Wheel Drive	E-4	B
Ground - Cab, Frame, Engine	C-3	4	Switch - Aux Rear Flood	H-14	C
Ground - Engine	B-3	4	Switch - Aux Coupler	D-8	B
Ground - Headliner	B-12	C	Switch - AWS Mode Select	L-5	B
Ground - Platform	A-14	7	Switch - AWS Pressure	K-8	20
Heater - Engine Block	G-7	2	Switch - Backhoe Shutoff	D-17	A
Horn - Forward	B-3	8	Switch - Beacon	E-12	C
Horn - Leg Slab	I-15	B	Switch - Brake A	D-9	27
Horn - Rear	D-18	1	Switch - Brake Fluid Level	C-4	21
Lamp - Indicator	L-5	B	Switch - Cold Start Temperature	H-4	12
LED - Service	L-14	A	Switch - Coolant	H-4, F-3	12
Meter - Service	D-14	A	Switch - Coupler	D-5	B
Motor - Blower	K-18	9	Switch - Coupler Detent	A-15	A
Motor - Fan Assembly	E-17	3	Switch - Dip Beam	F-8	B
Motor - Front Washer	C-3	21	Switch - Engine Oil Pressure	H-5, F-3	22
Motor - Front Wiper	G-5	C	Switch - Fog Lamp	K-17	A
Motor - Heater Blower	F-16	A	Switch - Front Floods	K-17	C
Motor - Rear Washer	C-3	21	Switch - Front Roading	G-12	C
Motor - Rear Wiper	E-17	10	Switch - Front Wiper	E-12	C
Motor - Seal Compressor	F-16	F	Switch - Hazard	H-4	B
Power Fort	D-14	A	Switch - Head Flood Aitch	H-14	C
Relay - Accessory 2	E-10	D	Switch - Head To Flood Lamp	F-12	C
Relay - Air Conditioner	G-9	B	Switch - Heater	A-14	B
Relay - Cab	E-9	D	Switch - Horn	C-5	B
Relay - Left Steer	K-4	B	Switch - Key Start	D-14	B
Relay - Loader Lock	19	A	Switch - Loader Float	D-7	B
Relay - Loader Lock	19	A	Switch - Loader Rod End Pressure	E-5	B
Relay - Main	F-9	D	Switch - Loader Xmsn Neutralizer	D-5	E
Relay - Parking Brake	K-15	A	Switch - OROPS Beacon	K-15	C
Relay - Power Seat	A-15	F	Switch - OROPS Front Roading	L-1	C
Relay - Ride Control	G-11, G-6	E	Switch - OROPS Head To Floods	K-1	C
Relay - Right Steer	K-4	B	Switch - OROPS Rear Floods	K-1	C
Relay - Seal	A-15	F	Switch - OROPS Front Roading	L-1	C
Relay - Shutoff	J-4	D	Switch - OROPS Head To Floods	K-1	C
Relay - Stabilizer Leg	H-14	E	Switch - OROPS Rear Floods	K-1	C
Relay - Start	E-9	D	Switch - Overdrive Disable	J-11	B
Resistor	H-15	3	Switch - Parking Brake	B-8	A
Resistor - Air Conditioning	K-17	A	Switch - Press Loader	G-8	G
Resistor - Heater	E-16	A	Switch - Rear Floods	F-12	C
Sender - Converter Temperature	L-5, G-4	6	Switch - Rear Horn	A-17	A
Sender - Coolant	H-14	E	Switch - Rear Steer	K-7	E
Sender - Fuel Level	H-5, G-4	13	Switch - Rear Wiper	D-13	C
Sender - Rear Steer Position	J-9	7	Switch - Return to Dig	L-18	23
Sensor - Return to Dig	L-18	14	Switch - Return to Dig	L-18	13
Sensor - Speed	I-12	G	Switch - Ride Control	H-11, L-6	E
Solenoid - Air Conditioner Clutch	J-17	15	Switch - Ride Control	H-9	E
Solenoid - Aux. Detent	A-5	16	Switch - Side Shift	D-18	A
Solenoid - Bucket Position	A-4	18	Switch - Stabilizer Leg	B-18	26
Solenoid - Circle Steer	L-9	7	Switch - Start Aid	D-15	A
Solenoid - Cold Start Advance	H-4	12	Switch - Thermostat	K-18	B
Solenoid - Engine Shutdown	G-3	17	Switch - Turn Signal	F-8	B
			Switch - Washers	C-13	C
			Switch - Xmsn Neutralizer	H-4	E
			Switch - Xmsn Neutralizer Lock	D-8	B

Machine locations are repeated for components located close together.

A = Operator Compartment - Right Console
 B = Operator Compartment - Front Console
 C = Operator Compartment - Overhead Console
 D = Operator Compartment - Steering Column Top Panel
 E = Operator Compartment
 F = Inside Seat Assembly
 G = Under Cab Floorplate

Wire Description			Wire Description		
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
107	RD	Bat (+)	522	WH	ACC Clutch To Thermostat SW
108	RD	Radio Lamp Pwr	526	WH	Head SW To Turn SW
104	YL	Acc Rly Output	537	GN	Turn Signal SW To Flasher
106	RD	Key Sp Pwr	552	WH	Four Wheel Drive Sol
110	RD	Horn Pwr	569	GN	Park Brake Alarm Sol
111	YL	Acc Bat Pwr	571	OR	Powershift - Ride Control Relay
112	PU	Main Power Rly Output	576	BU	Washer - Air
113	OR	Cdr Main Power Pwr	619	GN	Headlamp low
115	RD	Key Start Pwr	628	RD	Radio Switch Jumper
116	BR	Std Rear Flood Pwr	C259	YL	Rear Wiper Switch Jumper
117	YL	Aux Rear Flood Pwr	C263	OR	Power Seat Relay Control
118	GY	Front Wiper Pwr	C264	YL	Power Seat Sol
119	PK	Rear Wiper Pwr	C265	GN	Power Seat Heater
121	BR	Light Alarm Pwr	C266	RD	Light Alarm Pwr
122	BU	Heater Pwr	602	RD	Gonna Lamp Pwr
123	WH	XMSN Ctr Pwr	603	PK	Rotary Beacon
124	GN	Head Lamp	614	PU	Head Lamp H
128	PK	Bucket Position Pwr	605	YL	Turn Lamp - Left
130	GN	Radio Pwr	606	GY	Lum Lamp - Right
136	GN	Suppl Steer Pwr	607	PK	Flood Lamp - Front
140	BR	AWD Pwr	608	GN	Head Lamp Basic
143	BR	AWD Pwr	610	OR	Head Lamp Basic
144	GN	Beacon Pwr	611	PU	Head Lamp H
157	YL	Aux Front Flood Pwr	614	PU	Head Lamp H
161	RD	Flasher Pwr	617	BR	Tail Position Lamp - Left
170	RD	Radio Memory Pwr	618	YL	Tail Position Lamp - Right
184	GN	Cab Bat Pwr	620	WH	Flood Lamp - Front (Attach)
197	OR	Cab Relay Output	627	YL	Flood Lamp
198	PK	Acc Relay Output	630	GY	Flood Lamp Rear (Attach)
		Ground Circuits	634	WH	Head Lamp SW To Work/Head Lamp Jumper
200	BR	Head Chassis			Ground Circuits
201	BR	Operator Monitor return	710	GN	XMSN Speed Pickup Signal
202	BR	XMSN Ctr Gnd	789	BL	XMSN Shift Sol 1st and 2nd Gear
217	BR	Start relay return	754	BU	XMSN Shift Sol 3rd Gear
218	BR	Drop valve relay return	755	OR	XMSN Shift Sol 4th Gear
260	BR	Loader Lock Gnd	762	YL	Bucket Position Sol
270	BR	Loader Lock Gnd	766	GN	XMSN Disconnect SW
272	BR	Pin/Shift Ctr Ham Code 0	770	WH	Coupler Engage Sol
277	BR	Pin/Shift Ctr Ham Code 1	C720	BU	XMSN Neutral Lock Sol
278	BR	Pin/Shift Ctr Ham Code 2	E701	PK	Ride Control
279	BR	Pin/Shift Ctr Ham Code 3	E702	OR	Ride Control SW
280	BR	Pin/Shift Ctr Ham Code 4	E764	OR	AWIS Circle Start Lock Sol
281	BR	Pin/Shift Ctr Ham Code 5	F738	WH	Loader Rod End Pressure SW
		Basic Machine Circuits	F748	WH	Powershift - Ride Control Manual
303	BR	Key SW ACC Position	F758	BR	Park Brake SW To Relay
304	WH	Start Relay Output	G726	GY	AWIS Shut Off Sol
306	GN	Starter Relay Coil	G742	GN	AWIS Relay Coil to Diode
307	OR	Key Sw Start Position	G743	OR	AWIS Relay Coil to Diode
308	YL	Key Sw Run Position	G789	BR	AWIS Mode SW To Press SW
310	PU	Start Aid Sol	G789	OR	AWIS Mode SW To Rear Steer SW Pwr
321	BR	Backup Alarm	G789	YL	AWIS Mode SW To Rear Steer SW Gnd
322	GY	Forward Lamp	G787	BU	AWIS Right Steer Relay Gnd
334	BR	Cold Start Adv Sol	H767	BR	AWIS Circle Start Relay Gnd
367	BR	Rear Horn	H768	BR	AWIS Circle Start Lock Sol Gnd
		Monitoring Circuits	H769	BR	AWIS Right Steer Sol Gnd
400	GY	Cdr Main On Press - Low Settings	H771	BR	AWIS Shut Off Sol Gnd
410	YL	Cdr Main Parking Brake	H772	YL	Backhoe Shutoff Sol
429	YL	Cdr Main Parking Brake	F871	PU	AWIS Left Steer Sol
441	OR	Eng Locatd Temp Gage	F872	BU	AWIS Right Steer Sol
443	OR	Eng Locatd Temp Gage	F873	GY	Coupler Engage Sol to Diode As
447	PK	Fuel Level Gage	F874	PK	AWIS Left Steer Relay Ctr
450	YL	Fast Steer	H777	WH	AWIS Right Steer Relay Ctr
453	BR	Cdr Main Brake 3rd Level	922	BR	Solenoid Ctr
		Accessory Circuits	923	GY	REV Sol Rtn
500	BR	Wiper - Front (Low)	944	OR	Gas Link - (CAT)
501	GN	Wiper - Front (Low)	945	BR	Gas Link - (CAT)
502	OR	Wiper - Front (High)	976	WH	Powershift - Sol Return
504	YL	Wiper - Rear (Low)	991	WH	XMSN Neut SW
505	BU	Wiper - Rear (Low)	C020	GY	Coupler Indicator - Powershift
506	PU	Washer - Front	C093	WH	Shuttle Ctr Pwr
508	OR	Washer - Rear	L388	OR	AWIS Mode SW To Rear Steer SW Pwr
508	PU	Radio Speaker - Left	L399	GN	Aux Hyd Sol C
509	WH	Radio Speaker - Left (Common)	M013	PU	Diode to AWIS Indicator Lamp
511	OR	Radio Speaker - Right	M069	BU	Radio Switch Interconnect
512	GN	Radio Speaker - Right (Common)	N004	PU	Forward High Solenoid
513	OR	Acc Compressor/Regulator Pressure SW	N005	OR	Forward Low Solenoid
515	GY	Blower Motor (Hi)	N007	GN	Reverse Low Solenoid
516	GN	Blower Motor (Medium)	P009	PK	Autoshift Diagon
517	BU	Blower Motor (Low)	R077	BU	Stabilizer Sol Pwr
520	WH	Cdr Acc SW To Thermostat/Fuse	R078	YL	Shuttle control jumper
521	YL	Acc SW To Refrigerant SW			

Failure Mode Identifiers (FMI)	
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.
14	Parameter failures.
15	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Condition not met.
20	Parameter failures.

The FMI is a diagnostic code that indicates what type of failure has occurred.

Off Machine Switch Specification				
Part No.	Function	Actuate	Deactuate	Contact Position
6T-2665	Engine Coolant Temperature	107.2 ± 2.8°C (225 ± 5°F)	93°C MIN (199°F MIN)	Normally Open
9X-5446	Thermostat	+1.1 ± 0.8°C (36 ± 1.4°F)	2.2 ± 0.8°C (36 ± 1.4°F) Closed	Closed
114-5333	Refrigerant Pressure	275 to 1750 kPa ¹ (40 to 255 psi)	—	Normally ² Open
128-5091	AWIS Pressure	551 kPa (80.9 psi)	344 kPa ± 20 kPa (49.9 psi ± 2.9 psi)	A-C Normally Closed A-B Normally Open

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 (25 psi).

² Contact position at the contacts of the harness connector.

³ With the dial in the WARM position the deactuation is 16.9 ± 2.6°C (62.4 ± 4.7°F). The switch is open in the OFF position.

Resistor, Sender, and Solenoid Specifications			
Part No.	Component	Resistance (Ohms) ¹	
3E-1808	Solenoid - A/C Clutch	17.8 ± 0.6	
3E-5194	Solenoid - Rev	100 ± 5%	
3E-5194	Solenoid - 5 Open Circuit	—	
3E-8620	Solenoid - Aux Dent	32.1	
3E-8620	Solenoid 6 Open Circuit	—	
37	683-05 Parking Brake Alarm Relay Open Circuit	—	
41	641-06 Solenoid 1 Short to Ground	—	
42	642-06 Solenoid 2 Short to Ground	10.5	
43	643-06 Solenoid 3 Short to Ground	—	
44	644-06 Solenoid 4 Short to Ground	—	
45	645-06 Solenoid 5 Short to Ground	—	
46	646-06 Solenoid 6 Short to Ground	—	
47	683-06 Parking Brake Alarm Relay Short to Ground	—	
51	641-03 Solenoid 1 Short to Battery	—	
52	642-03 Solenoid 2 Short to Battery	—	
53	643-03 Solenoid 3 Short to Battery	—	
54	644-03 Solenoid 4 Short to Battery	—	
55	645-03 Solenoid 5 Short to Battery	—	
56	646-03 Solenoid 6 Short to Battery	—	
57	683-03 Parking Brake Alarm Relay Short to Battery	—	

