

HARNESS CONNECTOR AND COMPONENT LOCATIONS

## A-COMPONENTS INSIDE CAB B-COMPONENTS ON RELAY PANEL

9 Sender-Engine Coolant Temperature

11 Sender-Power Train Oil Temperature

10 Sender-Hydraulic Oil Temperature

12 Solenoid-Air Conditioner Clutch

13 Solenoid-Engine Shutdown

Solenoid-Nitrogen ActuatorSolenoid-Ripper Pin Puller

16 Solenoid-Start Aid

IDENT.	SCHEMATIC COMPONENTS	LOCATION	IDENT.	SCHEMATIC COMPONENTS	LOCATION	
1	Alarm-Backup	F-9	17	Starter	F-2	
Α	Alarm-Fault (EMS)	D-8	18	Switch-Agent (Fire Suppression-Pressure)	A-9	
Α	Alarm-Fire	C-9	19	Switch-Agent (Fire Suppression-Pressure)	A-9	
2	Alternator	E-2	20	Switch-Backup Alarm	E-7	
3	Batteries	A-3	Α	Switch-Blower Speed (A/C)	E-8	
4	Batteries	F-3	21	Switch-Brake	E-7	
В	Breaker-Alternator	C-6	22	Switch-Disconnect	F-3	
В	Breaker-Blower Motor	C-6	Α	Switch-Dome Lamp	B-8	
В	Breaker-Fire Suppression	C-6	Α	Switch-EMS Test	D-6	
В	Breaker-Key Start Switch	B-6	23	Switch-Engine Coolant Flow (EMS)	C-1	
В	Breaker-Running Lamp	C-6	24	Switch-Engine Coolant Temperature (EMS)	C-1	
5	Control-Fire Suppression	A-8	25	Switch-Engine Coolant Temperature (S.Aid)	E-3	
Α	EMS Panel	F-5	26	Switch-Engine Oil Pressure (EMS)	E-1	
Α	Gauge-Engine Coolant Temperature	B-5	27	Switch-Engine Oil Pressure (S. Meter)	E-1	
Α	Gauge-Hydraulic Oil Temperature	B-5	28	Switch-Fire Detection (Temperature)	C-2	
Α	Gauge-Power Train Oil Temperature	B-5	29	Switch-Fire Detection (Temperature)	C-3	
6	Horns-Forward	F-1	30	Switch-Forward Horn	C-8	
Α	Meter-Service	B-5	31	Switch-Fuel Pressure (EMS)	F-9	
Α	Monitor-Fire Suppression	E-7	32	Switch-Hydraulic Oil Temperature (EMS)	A-9	
Α	Motor-Blower	F-8	Α	Switch-Key Start	B-6	
Α	Motor-Blower	F-7	33	Switch-Nitrogen Actuator (Pressure)	A-9	
7	Motor-Washer	E-9	34	Switch-Nitrogen Actuator (Pressure)	C-9	
Α	Motor-Wiper (Front)	D-7	35	Switch-Power Train Filter (Diff. Press.)	E-9	
Α	Motor-Wiper (Left)	E-7	36	Switch-Power Train Oil Temperature (EMS)	D-3	
Α	Motor-Wiper (Rear)	D-9	37	Switch-Power Train Oil Temperature (Filter)	E-9	
Α	Motor-Wiper (Right)	B-6	38	Switch-Pressure (Fire Suppres. Discharge)	A-6	
В	Relay-Main Power	B-4	Α	Switch-Rear Flood Lamp	D-6	
В	Relay-Start	B-4	39	Switch-Refrigerant Pressure (A/C)	F-3	
Α	Resistor-Blower Motor Speed	F-8	Α	Switch-Ripper Pin Puller	C-8	
8	Resistor-Starter to Diag. Connector	F-2	Α	Switch-Running Lamp	E-6	
_						

E-1 A Switch-Selector (A/C)

D-3 A Switch-Start Aid

B-9 A Switch-Side Flood Lamp

E-9 A Switch-Thermostat (A/C)
D-1 A Switch-Wiper (Front)

C-9 A Switch-Wiper (Left)
D-9 A Switch-Wiper (Rear)

F-3 A Switch-Wiper (Right)

CONNECTORS	IDENT.	HARNESS AND/OR COMPONENTS	SCHEMATIC
25 CONTACTS	0	B-9W1791 D-7T5466	E-4
	2	D-7T5466 Diagnostic Connector	F-6
20 CONTACTS	3	D-7T5466 Operator Monitor (EMS)	F-5
	4	G-7T8629 Fire Suppression Control	A-8
15 CONTACTS	6	D-7T5466 H-9W0697	F-4
10 CONTACTO	6	A-6T8263 B-9W1791	E-2
10 CONTACTS	0	P-7T9222 Q-7T9218	C-7
8 CONTACTS	8	P-7T9222 Q-7T9218	C-7
	9	G-7T8629 R-7T5569	A-8
7 CONTACTS	1	R-7T5569 Fire Suppression Monitor	E-7
	0	G-7T8629 Fire Detection Switch	C-3
6 CONTACTS	Ð	G-7T8629 Y-7T5570	A-3
	<b>B</b>	Y-7T5570 Fire Detection Switch	C-2
	1	B-9W1791 H-9W0697	F-3
E CONTACTO	<b>(</b>	B-9W1791 N-7T6349	A-7
5 CONTACTS	<b>(</b>	G-7T8629 GG-7T5568	B-8
	0	J-7T8208 K-7T6055	F-8
	13	B-9W1791 G-7T8629	D-3
4 CONTACTS	1	D-7T5466 F-3T7147	C-6
	20	G-7T8629 Discharge Switch	A-6
		H-9W0697 J-718208	F-7
	22	W-7T7628 Ripper Pin Puller Solenoid	D-9

PART NO.	FUNCTION	ACTUATE	DEACTUATE	NORMAL CONDITION	
3T9342	Fire Supp. Agent (Pressure)	2270 kPa Max. (328.0 psi Max.)	1655 ± 138 kPa (240.5 ± 20.0 psi)	N.O. N.O.	
6T9315	Coolant Flow	$37 \pm 3 \text{ g}$ (1.3 ± 0.1 oz)	31 g Min. (1.1 oz Min.)		
7N9785	Engine Coolant Temp. (EMS)	107.2 ± 2.8°C (225 ± 5°F)	91°C MIN (196°F MIN)	N.C.	
8N1693	Engine Coolant Temp. (Start Aid)	37.8 ± 2.8°C (100 ± 5°F)	26.7°C MIN (80°F MIN)	N.C.	
6T4949	Engine Oil Pressure (EMS) Engine Oil Pressure (S.Meter)	93 ± 21 kPa (13.5 ± 3.0 psi)	69 ± 21 kPa (10.0 ± 3.0 psi)	N.O.	
7T4785	Fire Suppression Temperature	193 ± 8°C (380 ± 15°F)	-	N.O.	
3T6962	Fuel Pressure (EMS)	93 ± 21 kPa (13.5 ± 3.0 psi)	69 ± 21 kPa (10.0 ± 3.0 psi)	N.C.	
9G1300	Hydraulic Oil Temp. (EMS)	110.0 ± 2.8°C (230 ± 5°F)	101.7°C MIN (215°F MIN)	N.C.	
6T6085	Fire Supp. Nitrogen Actuator (Press.)	1930 ± 138 kPa (279.5 ± 20.0 psi)	1655 ± 138 kPa (240.5 ± 20.0 psi)	N.O.	
7N9560	Power Train Oil Temperature (EMS)	129.4 ± 2.8°C (265 ± 5°F)	118.3°C Min. (245°F)	N.C.	
9G3341	Power Train Oil Temp. (Filter) (EMS)	51.7 ± 2.8°C (125 ± 5°F)	43°C MIN (110°F MIN)	N.C.	
7T4371	Fire Suppression Discharge Pressure	93 ± 21 kPa (13.5 ± 3.0 psi)	69 ± 21 kPa (10.0 ± 3.0 psi)	N.O.	

N.O. = NORMALLY OPEN N.C. = NORMALLY CLOSED

**CATERPILLAR®** 

Schematic

## D8L TRACTOR Electrical System

7JC1-UP 53Y3485-UP

E-8

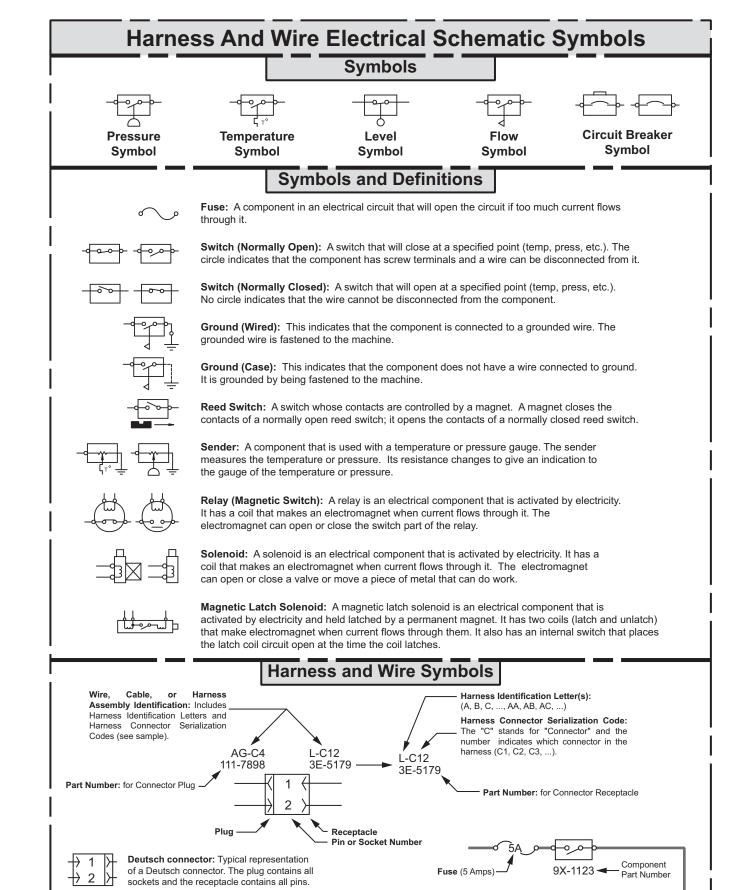
D-6

B-6

F-7

C-8

C-9 C-8



Harness identification code:

Printed in U.S.A.

This example indicates wire group 325, wire 135 in harness "AG".

Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug and receptacle contain both pins and sockets.

©2012 Caterpillar All Rights Reserved

IRCUIT UMBER	COLOR	POWER DISTRIBUTION CIRCUITS	CIRCUIT NUMBER	COLOR	MACHINE BASIC CIRCUITS (Cont.)	CIRCUIT NUMBER	COLOR	ACCESSORY CIRCUITS	CIRCUIT NUMBER	COLOR	CONTROL CIRCUITS (Cont.)
101 102	RD BU	BATTERY HEAD LAMP	314 321	PU BR	STARTER RELAY NO. 2 OUTPUT BACKUP ALARM/LAMP	500 501	BR GN	WINDSHIELD WIPER - FRONT (PARK) WINDSHIELD WIPER - FRONT (LOW)	721 722	BR WH	TRANSMISSION GEAR CODE 1 TRANSMISSION GEAR CODE 2
103	YL	DOME/DASH LAMP/PARK, TAIL LAMP	322	GY	WARNING HORN (FORWARD)	502	OR	WINDSHIELD WIPER - FRONT (HIGH)	723	OR	TRANSMISSION GEAR CODE 3
105 106	BR WH	KEY SWITCH MAIN POWER RELAY/INPUT	323 324	WH BU	FUEL TRANSFER PUMP POWER DIFFERENTIAL LOCKUP SOLENOID	503 504	BR YL	WINDSHIELD WIPER - REAR (PARK) WINDSHIELD WIPER - REAR (LOW)	724 725	YL GN	TRANSMISSION GEAR CODE 4 TRANSMISSION GEAR CODE 5
107	WH	ENGINE SHUT DOWN	325	PK	FUEL PUMP RELAY OIL PRESS.	505	BU	WINDSHIELD WIPER - REAR (HIGH)	726	BU	TRANSMISSION GEAR CODE 6
108	BU	MISC WIPER, DOME LAMP, CIGAR LIGHTER	326	PU	SWITCH KEY SWITCH "C" TERMINAL	506 507	PU WH	WINDSHIELD WASHER FRONT WINDSHIELD WASHER REAR	727 728	GN BU	STEERING MOTOR RELAY SUPPLEMENTAL STEERING
109	OR	ALTERNATOR	327	PK	SHUTDOWN SOLENOID	510	YL	WINDSHIELD WASHER-PRIMER	533	53-5	CONTROL SWITCH
110 111	GN YL	WINDSHIELD WIPER SWITCH (RIGHT) WINDSHIELD WIPER SWITCH (LEFT)	328	OR	SHUTDOWN MODULE "OFF"	513 514	OR PU	AIR CONDITIONER COMPRESSOR AIR CONDITIONER CONDENSOR	733 734	BR WH	SWITCHING GEAR CODE 1 FRONT SWITCHING GEAR CODE 2 FRONT
112	PU	MAIN POWER RELAY/OUTPUT			NITORING CIRCUITS	120		MOTOR	735	OR	SWITCHING GEAR CODE 3 FRONT
113 114	OR GN	OPERATOR MONITOR PANEL WARNING HORN (FORWARD)	400 403	GN GN	SERVICEMETER SWITCH ALTERNATOR (R) TERMINAL	515 516	GY GN	BLOWER MOTOR (HIGH) BLOWER MOTOR (MEDIUM)	736 737	YL GN	SWITCHING GEAR CODE 4 FRONT SWITCHING GEAR CODE 5 FRONT
115	PK	FLOOD LAMP (FRONT)	404	YL	OPERATOR MON PANEL HYDRAULIC	517	BU	BLOWER MOTOR (LOW)	738	BR	SWITCHING GEAR CODE 1 REAR
116 117	BR YL	FLOOD LAMP (REAR) FLOOD LAMP (SIDE)	405	GY	OIL TEMP OPERATOR MON PANEL OIL	519	PK	THERMOSTAT TO DRYER PRESSURE SWITCH	739 740	WH OR	SWITCHING GEAR CODE 2 REAR SWITCHING GEAR CODE 3 REAR
118	GY	WINDSHIELD WIPER SWITCH	200	200	PRESSURE	520	WH	OPERATOR AIR CONDITIONER	741	YL	SWITCHING GEAR CODE 4 REAR
119	PK	(FRONT) WINDSHIELD WIPER SWITCH (REAR)	406	PU	OPERATOR MON PANEL COOLANT TEMPERATURE	521	YL	SWITCH TO THERMOSTAT AIR COND SW TO RFGT SW	742 743	GN PU	SWITCHING GEAR CODE 5 REAR SWITCHING NEUTRAL/RUN SWITC
120	YL	CONVERTER (24 V to 12 V)	407	PK	OPERATOR MON PANEL	522	WH	AIR COND COMPR TO THERMO SW	744	BU	SWITCHING UP SOLENOID
121	YL	BACKUP ALARM/LAMP/TRAVEL ALARM TIMER	408	WH	CONV/RETARDER OIL TEMP OPERATOR MON PANEL BRAKE	523 524	BR BU	WINDSHIELD WIPER-LEFT (PARK) WINDSHIELD WIPER-LEFT (LOW)	745 746	GY PK	SWITCHING DOWN SOLENOID SWITCHING SYNCHRONIZE
122 123	BU WH	AIR DRYER	M000000	000000	PRESS. (AIR)	525	GY	WINDSHIELD WIPER-LEFT (HIGH)	V/67/63	2000	SOLENOID
123	10890 1	GAGES (SERVICEMETER, TORQUE CONV SOLENOID)	409 410	OR WH	OPERATOR MON PANEL NEUTRAL OPERATOR MON PANEL FAULT	526 527	YL GN	WINDSHIELD WIPER-RIGHT (PARK) WINDSHIELD WIPER-RIGHT (LOW)	747	WH	SWITCHING NO SYNCHRONIZE SOLENOID
124 125	GN OR	AIR CONDITIONER FUEL TRANSFER PUMP	5250	525,023	ALARM	528	PK	WINDSHIELD WIPER-RIGHT (HIGH)	756	WH	TRANSMISSION LOCKUP CLUTCH
126	PK	TRANSMISSION CONTROL	411	PK	OPERATOR MON PANEL MASTER FAULT LAMP	529 530	WH OR	WINDSHIELD WASHER-LEFT WINDSHIELD WASHER-RIGHT	761	GY	SOLENOID LIFT KICKOUT SOLENOID SWITCH
127 128	OR PK	CAB FLOOD LAMP KICKOUT SOLENOID SWITCH	412	BU	OPERATOR MON PANEL COOLANT	531	WH	FIRE WARNING HORN FIRE WARNING LAMP	762	YL	BUCKET POSITIONER SOLENOID
129	BU	CIGAR LIGHTER	413	BR	FLOW OPERATOR MON PANEL FUEL	532 533	WH RD	HEAT SENSOR/TEST SWITCH	763	BU	SWITCH TORQUE CONVERTER SOLENOID
130 131	GN BR	STOP LAMP FIRE CONTROL-OPERATOR	1310-657	250000	PRESSURE	534	WH	HEAT SENSOR/TEST SWITCH	764	PU	SUPPLEMENTAL STEERING
States Allounes	765500	WARNING	414 415	PK GN	OPERATOR MON PANEL LOW FUEL OPERATOR MON PANEL TEST	535	BU	TRAVEL ALARM TIMER PRESS SWITCH	130-300-6	130-00	CONTROL SWITCH (MOTOR GRADER)
132 133	PK OR	ANTISPIN CONTROL PROGRAMMED ELECTRONIC ENG	DOVE	OB	SWITCH	536	OR	TRAVEL ALARM TIMER MANUAL	765 767	OR WH	APRON SOLENOID (SCRAPER)
	60.6	CONT SOLENOID	416 417	OR GY	SECONDARY STEERING SWITCH PRIMARY STEERING SWITCH	537	GR	OVERRIDE TURN SIGNAL SWITCH TO FLASHER	768	OR	ANTISPIN PICKUP POWER ANTISPIN PICKUP TRANSMISSION
134	PK	PROGRAMMED ELECTRONIC ENG CONT LOGIC	418	YL	OPERATOR MON PANEL OIL	538	BR	HAZARD INDICATOR	769	BU	ANTISPIN PICKUP LEFT
136	GN	SUPPLEMENTAL STEERING	419	YL	PRESSURE (HIGH SETTING) OPERATOR MON PANEL PARKING	539	BU	TURN SIGNAL INDICATOR BASIC/RIGHT	770 771	GN PU	ANTISPIN PICKUP RIGHT ANTISPIN SERVICE BRAKE SWITCH
137 138	RD GN	STEERING MOTOR INDICATOR AUTOMATIC LUBE PUMP (TRUCK)	400	00000	BRAKE	540 553	WH	TURN SIGNAL INDICATOR LEFT PITCH SOLEOID TO TRIGGER	772 773	BR GY	ANTISPIN RETARDER SWITCH
141	PK	AUXILIARY HEATER	420	OR	OPERATOR MON PANEL FUEL FILTER/LOW ACCUM PRESS.	555	YL	SWDUAL TILT	774	YL	ANTISPIN SERVOVALVE ANTISPIN SOLENOID - LEFT
	G	ROUND CIRCUITS	421	BU	OPERATÓR MON PANEL FAULT LAMP (SCRAPER)	554	PK	MOMENTARY SW. TO SINGLE TILT SOLDUAL TILT	775 779	BR WH	ANTISPIN SOLENOID - RIGHT COUPLER DISENGAGE SOLENOID
200	BK	MAIN CHASSIS	422	YL	OPERATOR MON WARNING HORN		- 11	GHTING CIRCUITS	780	PU	COUPLER ENGAGE SOLENOID
201 202	BK BK	OPERATOR MONITOR PANEL TRANSMISSION CONTROL	423	GY	(SCRAPER) OPERATOR MON PANEL TEST	600	BR	DASH BASIC	803 805	BU PK	AUTO FIRE SYSTEM SWITCH POWE AUTO FIRE BRAKE SWITCH
203	BK	CHASSIS DIAGNOSTIC	10766 00000	Vectors Managers	SWITCH (SCRAPER)	601	GY	DASH HIGH	807	BR	AUTO FIRE NITROGEN SWITCH
204	BK	OPERATOR MONITOR PANEL (SCRAPER)	424	GY	OPERATOR MON PANEL POWER TRAIN TEMPERATURE	602 603	WH PK	DOME ROTARY BEACON	808 809	PU GN	AUTO FIRE NITROGEN SWITCH AUTO FIRE SYSTEM WARNING CKT
205	BK BK	INSTRUMENT	425	PK	OPERATOR MON PANEL POWER	604	OR	STOP	810	BY	AUTO FIRE SYSTEM FAILURE CKT.
206 207	BK	BATTERY SIDE OF DISCONNECT STARTER DIAGNOSITC	426	BR	TRAIN OIL LEVEL OPERATOR MON PANEL POWER	605 606	YL GY	TURN LEFT TURN RIGHT	811 812	GY GN	FIRE TEST CKT. FIRE NITROGEN ACTUATION SOL.
209 212	BK BK	FIRE SUPPRESSION SYSTEM ANTISPIN CODING PIN 16	427	GN	TRAIN OIL FILTER	607	PK	FLOOD FRONT	813 816	PK BR	AGENT CYLINDER SW. (2) AUTO FIRE ALARM
213	BK	ANTISPIN CODING PIN 17	421	GIN	OPERATOR MON PANEL POWER TRAIN OIL FILTER JUMPER	608 609	GN YL	FLOOD REAR FLOOD SIDE	010	DN	AUTO FIRE ALARM
214 215	BK BK	ANTISPIN CODING PIN 18 ANTISPIN CODING PIN 19	428	OR	OPERATOR MON PANEL TRANSMISSION OIL TEMP	610 611	OR PU	HEAD LAMP BASIC HEAD LAMP HIGH			
216	BK	ANTISPIN CODING PIN 20	429	YL	OPERATOR MON PANEL BRAKE OIL	612	GY	BACKUP		***	
217 218	BK BK	TRANSMISSION CODING PIN 17 TRANSMISSION CODING PIN 18	431	GN	TEMPERATURE OPERATOR MON PANEL LOW	613 614	PK PU	LICENSE PLATE PARK/TAIL/DASH			
219	BK	TRANSMISSION CODING PIN 19	222	100000	TRANSFER PUMP PRESS.	615	YL	CAB FLOOD/ROPS			
226	BK	OPERATOR MON PANEL SET POINT SELECT	432	PK	OPERATOR MON PANEL BRAKE PRESSURE (OIL)	616 617	BU BR	BUCKET FLOOD TAIL/POSITION LAMP-LEFT			
227	BK BK	TRANSMISSION CODING PIN 37	433	BU	OPERATOR MON PANEL BRAKE	20000	1000	(ROADING PACKAGE)			
231	BK	TRANSMISSION SW TRANSMISSION CODING PIN 36	434	BU	PRESS. (OIL) JUMPER OPERATOR MON PANEL POWER	618	YL	TAIL/POSITION LAMP-RIGHT (ROADING PACKAGE)			
241	ВК	OPERATOR MON PANEL TIME DELAY PIN 3			TRAIN TEMP JUMPER	619	GR	HÈAD LAMP LOW			
242	вк	OPERATOR MON PANEL TIME	435	YL	OPERATOR MON PANEL POWER TRAIN TEMP JUMPER	622	PU	FLOODLAMP 3 WAY SWITCH JUMPER			
243	вк	DELAY PIN 4 OPERATOR MON PANEL TIME	436	OR	OPERATOR MON PANEL POWER	623	BU	FLOODLAMP 3 WAY SWITCH			
**************************************	525440	DELAY PIN 5	437	BR	TRAIN OIL FILTER JUMPER OPERATOR MON PANEL FUEL LEVEL	624	YL	JUMPER FLOODLAMP BOWL			
244	BK	OPERATOR MON PANEL TIME DELAY PIN 6	438	YL	TO FUEL FILTER JUMPER OPERATOR MON PANEL COOLANT	625	BK	COURTESY LAMP			
	MACH	INE BASIC CIRCUITS			TEMP JUMPER		CC	ONTROL CIRCUITS			
801	BU	STARTER NO. 1 SOLENOID TO	440 441	BR OR	AIR PRESS. GAGE ENGINE COOLANT TEMP GAGE	702	OR	TRANSMISSION BRAKE SWITCH JUMPER			
30E177	22200	RESISTOR	442	GY	HYDRAULIC SYSTEM TEMP GAGE	703	BU	TRANSMISSION UP SOLENOID			
302	OR	STARTER NO. 1 TO DIAGNOSTIC/RESISTOR TO	443 444	YL BU	POWER TRAIN TEMP GAGE CONV/RETARDER OIL TEMP GAGE	704 705	GY PK	TRANSMISSION DOWN SOLENOID TRANSMISSION LOCKUP CLUTCH			
	N	DIAGNOSTIC	8000	3220	(TRÁCTOR)			SOL BASIC			
04	WH GN	STARTER RELAY NO. 1 OUTPUT STARTER RELAY COIL/NEUTRAL	445	GN	CONV/RETARDER OIL TEMP GAGE (SCRAPER)	706 707	BR PU	TRANSMISSION RETARDER SWITCH TRANSMISSION BED RAISE SWITCH			
		START SWITCH	446	PU	BRAKE OIL TEMPERATURE GAGE	708	YL	TRANSMISSION HOLD SWITCH			
108	YL PU	MAIN POWER RELAY COIL ETHER SWITCH TO ETHER	447 449	PK BU	FUEL LEVEL GAGE SPEEDOMETER SENDER (SIGNAL)	709 710	OR GN	TRANSMISSION PICKUP POWER TRANSMISSION SPEED PICKUP			
50.9	/E/S	SOLENOID	450	YL	TACHOMETER SENDER (+)	55.0483	ASSAULT III	SIGNAL			
11	WH	ETHER SOLENOID TO TEMPERATURE SWITCH	451 452	BR PU	TACHOMETER SENDER (-) TORQUE CONVERTER	711 712	BR WH	TRANSMISSION LEVER CODE 1 TRANSMISSION LEVER CODE 2			
312	PK	STARTER NO. 2 SOLENOID TO	453	PK	SECONDARY STEERING FAULT	713	OR	TRANSMISSION LEVER CODE 3			
313	GY	RESISTOR STARTER NO. 2 TO	454	GN	RETARDER INDICATOR LAMP	714 715	YL GN	TRANSMISSION LEVER CODE 4 TRANSMISSION LEVER CODE 5			
- 1		DIAGNOSTIC/RESISTOR TO	455	YL	CONVERTER TEMP SWITCH TO TIME	716	BU	TRANSMISSION LEVER CODE 6			

SENR3279-01

June-2012

