

A - COMPONENTS INSIDE CAB
B - COMPONENTS ON RELAY PANEL

IDENT.	SCHEMATIC COMPONENTS	LOCATION	IDENT.	SCHEMATIC COMPONENTS	LOCATION	
1	Alarm-Backup	E-8	12	Starter	B-2	
Α	Alarm-Fault (EMS)	E-6	13	Switch-Backup Alarm	E-6	
2	Alternator	C-1	Α	Switch-Blower Motor Speed	B-4	
3	Batteries	F-4	14	Switch-Disconnect	F-4	
В	Breaker-Alternator	E-6	Α	Switch-Dome Lamp	B-6	
В	Breaker-Blower Motor	F-5	15	Switch-Engine Coolant Temperature (EMS)	C-2	
Α	EMS Panel	D-4	16	Switch-Engine Coolant Temperature (S.Aid)	D-2	
Α	Gauge-Engine Coolant Temperature	B-4	17	Switch-Engine Oil Pressure (EMS)	C-2	
Α	Gauge-Hydraulic Oil Temperature	B-4	18	Switch-Engine Oil Pressure (Serv. Meter)	D-2	
Α	Gauge-Power Train Oil Temperature	B-4	Α	Switch-Flood Lamp	C-5	
4	Horns-Forward	F-1	19	Switch-Forward Horn	B-5	
Α	Meter-Service	B-5	20	Switch-Fuel Pressure (EMS)	C-2	
Α	Motor-Blower	C-3	21	Switch-Hydraulic Oil Temperature (EMS)	A-5	
Α	Motor-Blower	B-3	Α	Switch-Key Start	C-5	
5	Motor-Washer	A-7	22	Switch-Neutral Start	C-8	
Α	Motor-Wiper (Front)	C-3	23	Switch-Power Train Filter (Diff. Pressure)	A-6	
Α	Motor-Wiper (Left)	E-6	24	Switch-Power Train Oil Temperature (EMS)	C-2	
Α	Motor-Wiper (Rear)	C-7	25	Switch-Power Train Oil Temperature (Filter)	C-2	
Α	Motor-Wiper (Right)	B-5	26	Switch-Refrigerant Pressure (A/C)	F-2	
В	Relay-Main Power	F-7	Α	Switch-Running Lamp	C-5	
В	Relay-Start	F-5	Α	Switch-Selector (A/C)	B-4	
Α	Resistor-Blower Motor Speed	B-3	Α	Switch-Start Aid	D-5	
6	Resistor-Starter to Diag. Conn.	B-2	Α	Switch-Test (EMS)	D-5	
7	Sender-Engine Coolant Temperature	C-2	Α	Switch-Thermostat (A/C)	C-4	
8	Sender-Hydraulic Oil Temperature	A-5	Α	Switch-Wiper (Front)	B-6	
9	Sender-Power Train Oil Temperature	C-2	Α	Switch-Wiper (Left)	B-6	
10	Solenoid-A/C Clutch	C-2	Α	Switch-Wiper (Rear)	B-7	
11	Solenoid-Start Aid	F-2	Α	Switch-Wiper (Right)	B-6	

OR A	ND COMPONENT	LOCATIO	NS
			HARNESS AN

CONNECTORS	IDENT.	HARNESS AND/OR COMPONENTS	SCHEMATIC LOCATION	CONNECTORS	IDENT.	HARNESS AND/OR COMPONENTS	SCHEMATIC LOCATION
20 CONTACTS	0	A-6T4544 Diagnostic Connector	F-6	7 CONTACTS	6	A-6T4544 B-6T6074	E-3
	2	A-6T4544 Operator Monitor(EMS)	D-4	7 CONTACTS	0	A-6T4544 B-6T6074	D-3
10 CONTACTS	3	G-7T9222 H-7T9218	C-6		8	A-6T4544 C-7T8326	D-5
9 CONTACTS	4	A-6T4544 C-7T8326	D-5	4 CONTACTO	9	A-6T4544 E-6T4545	A-5
8 CONTACTS	6	G-7T9222 H-7T9218	C-7	4 CONTACTS		A-6T4544 M-3T7147	C-4
					0	A-6T4544 N-6T5457	C-3

SWITCH SPECIFICATIONS								
PART NO.	FUNCTION	ACTUATE	DEACTUATE	NORMAL CONDITION				
9G1300	HYDRAULIC OIL TEMP. (EMS)	110.0 ± 2.8°C (230 ± 5°F)	101.7°C min. (215 ± 5°F min.)	N.C.				
9G3341 POWER TRAIN OIL TEMP. (FILTER) 7N9785 ENGINE COOLANT TEMP. (EMS)		51.7 ± 2.8°C (125 ± 5°F)	43.3°C min. (110°F min.)	N.C.				
		107.2 ± 2.8°C (225 ± 5°F)	91°C min. (196°F min.)					
8N1693 ENGINE COOLANT TEMP. (START AID)		MP. (START AID) $37.8 \pm 2.8^{\circ}$ C 26.7° C min. $(100 \pm 5^{\circ}$ F) $(80^{\circ}$ F min.)						
3T5825 POWER TRAIN OIL TEMP. (EMS)		129.4 ± 2.8°C (265 ± 5°F)	118.3°C min. (245°F min.)	N.C.				
3T6962	FUEL PRESSURE (EMS)	93.0 ± 20.8 kPa (13.5 ± 3.0 psi)	68.9 ± 20.8 kPa (10.0 ± 3.0 psi)	N.C.				
7T0988	ENGINE OIL PRESSURE (EMS) ENGINE OIL PRESSURE (S. METER)	62.0 ± 20.8 kPa (9.0 ± 3.0 psi)	37.9 ± 20.8 kPa (5.0 ± 3.0 psi)	N.O.				

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

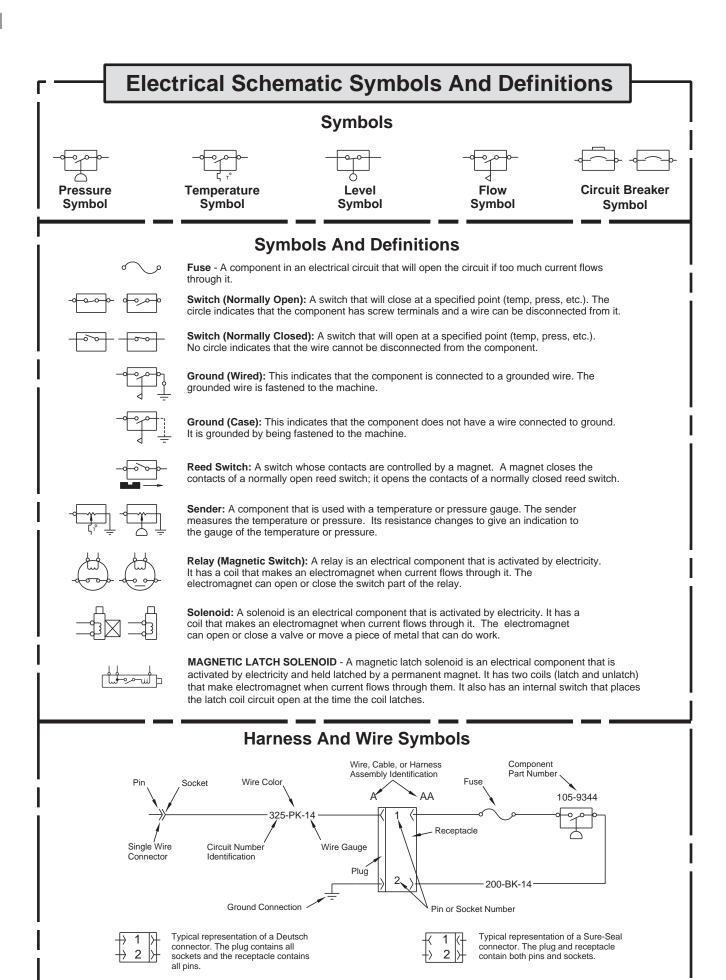
CATERPILLAR®

SENR4182 December 1985

Schematic

D7H Track-Type Tractor Electrical System

2SB1-3999 4FG1-3999 4AB1-3999 77Z1-3999 5WB1-3999 79Z1-3999 5BF1-3999 80Z1-3999 2RG1-3999 82Z1-3999 3XG1-3999



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CIRCUIT NUMBER	COLOR	POWER DISTRIBUTION CIRCUITS	CIRCUIT NUMBER	COLOR	MACHINE BASIC CIRCUITS (Cont.)	CIRCUIT NUMBER	COLOR	MONITORING CIRCUITS (Cont.)	CIRCUIT NUMBER	COLOR	CONTORL CIRCUITS (Cont.)
101	RD	BATTERY	313	GY	STARTER NO. 2 TO	449	BU	SPEEDOMETER SENDER (SIGNAL)	709	OR	TRANSMISSION PICKUP POWER
102	BU	HEAD LAMP			DIAGNOSTIC/RESISTOR TO	450	YL	TACHOMETER SENDER (+)	710	GN	TRANSMISSION SPEED PICKUP SIGNA
103	YL	DOME/DASH LAMP/PARK, TAIL LAMP	044	DU	DIAGNOSTIC	451	BR	TACHOMETER SENDER (-)	711	BR WH	TRANSMISSION LEVER CODE 1
105 106	BR WH	KEY SWITCH MAIN POWER RELAY/INPUT	314 321	PU BR	STARTER RELAY NO. 2 OUTPUT BACKUP ALARM/LAMP	452 453	PU PK	TORQUE CONVERTER SECONDARY STEERING FAULT LAMP	712 713	OR	TRANSMISSION LEVER CODE 2 TRANSMISSION LEVER CODE 3
107	WH	ENGINE SHUT DOWN	322	GY	WARNING HORN (FORWARD)	454	GN	RETARDER INDICATOR LAMP	714	YL	TRANSMISSION LEVER CODE 4
108	BU	MISC WIPER, DOME LAMP, CIGAR	323	WH	FUEL TRANSFER PUMP POWER	455	YL	CONVERTER TEMP SWITCH TO TIME	715	GN	TRANSMISSION LEVER CODE 5
.00		LIGHTER	324	BU	DIFFERENTIAL LOCKUP SOLENOID	400		DELAY	716	BU	TRANSMISSION LEVER CODE 6
109	OR	ALTERNATOR	325	PK	FUEL PUMP RELAY OIL PRESS.		400		720	PU	TRANSMISSION BRAKE SWITCH
110	GN	WINDSHIELD WIPER SWITCH (RIGHT)	0.00000		SWITCH			ESSORY CIRCUITS	721	BR	TRANSMISSION GEAR CODE 1
111	YL	WINDSHIELD WIPER SWITCH (LEFT)	326	PU	KEY SWITCH "C" TERMINAL	500	BR	WINDSHIELD WIPER - FRONT (PARK)	722	WH	TRANSMISSION GEAR CODE 2
112	PU	MAIN POWER RELAY/OUTPUT	327 328	PK RD	SHUTDOWN SOLENOID SHUTDOWN MODULE "OFF"	501	GN OR	WINDSHIELD WIPER - FRONT (LOW) WINDSHIELD WIPER - FRONT (HIGH)	723 724	OR YL	TRANSMISSION GEAR CODE 3
113 114	OR GN	OPERATOR MONITOR PANEL WARNING HORN (FORWARD)	328			502 503	BR	WINDSHIELD WIPER - PRONT (HIGH) WINDSHIELD WIPER - REAR (PARK)	725	GN	TRANSMISSION GEAR CODE 4 TRANSMISSION GEAR CODE 5
115	PK	FLOOD LAMP (FRONT)		MON	TORING CIRCUITS	504	YL	WINDSHIELD WIPER - REAR (LOW)	726	BU	TRANSMISSION GEAR CODE 6
116	BR	FLOOD LAMP (REAR)	400	GN	SERVICEMETER SWITCH	505	BU	WINDSHIELD WIPER - REAR (HIGH)	727	GN	STEERING MOTOR RELAY
117	YL	FLOOD LAMP (SIDE)	403	GN	ALTERNATOR (R) TERMINAL	506	PU	WINDSHIELD WASHER FRONT	728	BU	SUPPLEMENTAL STEERING CONTRO
118	GY	WINDSHIELD WIPER SWITCH (FRONT)	404	YL	OPERATOR MON PANEL HYDRAULIC	507	WH	WINDSHIELD WASHER REAR			SWITCH
119	PK	WINDSHIELD WIPER SWITCH (REAR)	405	GY	OIL TEMP OPERATOR MON PANEL OIL	510	YL	WINDSHIELD WASHER-PRIMER	733	BR	SWITCHING GEAR CODE 1 FRONT
120	YL	CONVERTER (24 V to 12 V)	405	GT	PRESSURE	513	OR	AIR CONDITIONER COMPRESSOR	734	WH	SWITCHING GEAR CODE 2 FRONT
121	YL	BACKUP ALARM/LAMP/TRAVEL ALARM TIMER	406	PU	OPERATOR MON PANEL COOLANT	514	PU	AIR CONDITIONER CONDENSOR MOTOR	735 736	OR YL	SWITCHING GEAR CODE 3 FRONT SWITCHING GEAR CODE 4 FRONT
122	BU	AIR DRYER	,,,,		TEMPERATURE	515	GY	BLOWER MOTOR (HIGH)	737	GN	SWITCHING GEAR CODE 5 FRONT
123	WH	GAGES (SERVICEMETER, TORQUE	407	PK	OPERATOR MON PANEL	516	GN	BLOWER MOTOR (MEDIUM)	738	BR	SWITCHING GEAR CODE 1 REAR
		CONV SOLENOID)	-9/3/00		CONV/RETARDER OIL TEMP	517	BU	BLOWER MOTOR (LOW)	739	WH	SWITCHING GEAR CODE 2 REAR
124	GN	AIR CONDITIONER	408	WH	OPERATOR MON PANEL BRAKE	519	PK	THERMOSTAT TO DRYER PRESSURE	740	OR	SWITCHING GEAR CODE 3 REAR
125	OR	FUEL TRANSFER PUMP			PRESS. (AIR)		4.4710	SWITCH	741	YL	SWITCHING GEAR CODE 4 REAR
126	PK	TRANSMISSION CONTROL	409	OR	OPERATOR MON PANEL NEUTRAL	520	WH	OPERATOR AIR CONDITIONER SWITCH	742	GN	SWITCHING GEAR CODE 5 REAR
127	OR	CAB FLOOD LAMP	410	WH	OPERATOR MON PANEL FAULT ALARM			TO THERMOSTAT	743	PU	SWITCHING NEUTRAL/RUN SWITCH
128 129	PK BU	KICKOUT SOLENOID SWITCH CIGAR LIGHTER	411	PK	OPERATOR MON PANEL MASTER	521 522	YL WH	AIR COND SW TO REGT SW	744 745	BU GY	SWITCHING UP SOLENOID SWITCHING DOWN SOLENOID
130	GN	STOP LAMP	411	FIX	FAULT LAMP	523	BR	AIR COND COMPR TO THERMO SW WINDSHIELD WIPER-LEFT (PARK)	745	PK	SWITCHING DOWN SOLENOID SWITCHING SYNCHRONIZE SOLENO
131	BR	FIRE CONTROL-OPERATOR WARNING	412	BU	OPERATOR MON PANEL COOLANT	524	BU	WINDSHIELD WIPER-LEFT (LOW)	747	WH	SWITCHING STRUCTHORIZE SOLERO SWITCHING NO SYNCHRONIZE
132	PK	ANTISPIN CONTROL			FLOW	525	GY	WINDSHIELD WIPER-LEFT (HIGH)			SOLENOID
133	OR	PROGRAMMED ELECTRONIC ENG	413	BR	OPERATOR MON PANEL FUEL	526	YL	WINDSHIELD WIPER-RIGHT (PARK)	756	WH	TRANSMISSION LOCKUP CLUTCH
0000	00000	CONT SOLENOID	9		PRESSURE	527	GN	WINDSHIELD WIPER-RIGHT (LOW)			SOLENOID
134	PK	PROGRAMMED ELECTRONIC ENG	414	PK	OPERATOR MON PANEL LOW FUEL	528	PK	WINDSHIELD WIPER-RIGHT (HIGH)	761	GY	LIFT KICKOUT SOLENOID SWITCH
703		CONT LOGIC	415	GN	OPERATOR MON PANEL TEST SWITCH	529	WH	WINDSHIELD WASHER-LEFT	762	YL	BUCKET POSITIONER SOLENOID
136	GN	SUPPLEMENTAL STEERING	416 417	OR GY	SECONDARY STEERING SWITCH PRIMARY STEERING SWITCH	530	OR	WINDSHIELD WASHER-RIGHT	222	5	SWITCH SOLUTION OF THE PROPERTY OF THE PROPERT
137 138	RD GN	STEERING MOTOR INDICATOR AUTOMATIC LUBE PUMP (TRUCK)	418	YL	OPERATOR MON PANEL OIL	531 532	WH WH	FIRE WARNING HORN FIRE WARNING LAMP	763 764	BU PU	TORQUE CONVERTER SOLENOID SUPPLEMENTAL STEERING CONTRO
141	PK	AUXILIARY HEATER	410	, _	PRESSURE (HIGH SETTING)	533	RD	HEAT SENSOR/TEST SWITCH	764	PU	SWITCH (MOTOR GRADER)
171			419	YL	OPERATOR MON PANEL PARKING	534	WH	HEAT SENSOR/TEST SWITCH	765	OR	APRON SOLENOID (SCRAPER)
	GR	DUND CIRCUITS			BRAKE	535	BU	TRAVEL ALARM TIMER PRESS SWITCH	767	WH	ANTISPIN PICKUP POWER
200	BK	MAIN CHASSIS	420	OR	OPERATOR MON PANEL FUEL	536	OR	TRAVEL ALARM TIMER MANUAL	768	OR	ANTISPIN PICKUP TRANSMISSION
201	BK	OPERATOR MONITOR PANEL		D	FILTER/LOW ACCUM PRESS.	1200000	0.000	OVERRIDE	769	BU	ANTISPIN PICKUP LEFT
202	BK	TRANSMISSION CONTROL	421	BU	OPERATOR MON PANEL FAULT LAMP	537	GR	TURN SIGNAL SWITCH TO FLASHER	770	GN	ANTISPIN PICKUP RIGHT
203 204	BK BK	CHASSIS DIAGNOSTIC OPERATOR MONITOR PANEL	422	YL	(SCRAPER) OPERATOR MON WARNING HORN	538 539	BR BU	HAZARD INDICATOR	771	PU BR	ANTISPIN SERVICE BRAKE SWITCH ANTISPIN RETARDER SWITCH
204	DIX	(SCRAPER)	422		(SCRAPER)	539	ВО	TURN SIGNAL INDICATOR BASIC/RIGHT	772 773	GY	ANTISPIN RETARDER SWITCH
205	BK	INSTRUMENT	423	GY	OPERATOR MON PANEL TEST SWITCH	540	WH	TURN SIGNAL INDICATOR LEFT	774	YL	ANTISPIN SOLENOID - LEFT
206	BK	BATTERY SIDE OF DISCONNECT	i) istemen		(SCRAPER)				775	BR	ANTISPIN SOLENOID - RIGHT
207	BK	STARTER DIAGNOSITC	424	GY	OPERATOR MON PANEL POWER			HTING CIRCUITS			
212	BK	ANTISPIN CODING PIN 16	405	DI	TRAIN TEMPERATURE	600	BR	DASH BASIC			
213	BK	ANTISPIN CODING PIN 17	425	PK	OPERATOR MON PANEL POWER TRAIN OIL LEVEL	601	GY	DASH HIGH			
214 215	BK BK	ANTISPIN CODING PIN 18 ANTISPIN CODING PIN 19	426	BR	OPERATOR MON PANEL POWER	602 603	WH PK	DOME			Y
216	BK	ANTISPIN CODING PIN 19 ANTISPIN CODING PIN 20	420	DIN	TRAIN OIL FILTER	604	OR	ROTARY BEACON STOP			
217	BK	TRANSMISSION CODING PIN 17	427	GN	OPERATOR MON PANEL POWER	605	YL	TURN LEFT			
218	BK	TRANSMISSION CODING PIN 18	10000	1571E	TRAIN OIL FILTER JUMPER	606	GY	TURN RIGHT			
219	BK	TRANSMISSION CODING PIN 19	428	OR	OPERATOR MON PANEL	607	PK	FLOOD FRONT			
226	BK	OPERATOR MON PANEL SET POINT	1200	100	TRANSMISSION OIL TEMP	608	GN	FLOOD REAR			
		SELECT	429	YL	OPERATOR MON PANEL BRAKE OIL	609	YL	FLOOD SIDE			
227	BK	TRANSMISSION CODING PIN 37	404	CN	TEMPERATURE	610	OR	HEAD LAMP BASIC			
231	BK	TRANSMISSION SW	431	GN	OPERATOR MON PANEL LOW TRANSFER PUMP PRESS.	611	PU	HEAD LAMP HIGH			
236 241	BK BK	TRANSMISSION CODING PIN 36 OPERATOR MON PANEL TIME	432	PK	OPERATOR MON PANEL BRAKE	612 613	GY PK	BACKUP LICENSE PLATE			
271	DI.	DELAY PIN 3	402	110	PRESSURE (OIL)	614	PU	PARK/TAIL/DASH			
242	BK	OPERATOR MON PANEL TIME	433	BU	OPERATOR MON PANEL BRAKE	615	YL	CAB FLOOD/ROPS			
		DELAY PIN 4			PRESS. (OIL) JUMPER	616	BU	BUCKET FLOOD			1
243	BK	OPERATOR MON PANEL TIME	434	BU	OPERATOR MON PANEL POWER	617	BR	TAIL/POSITION LAMP-LEFT (ROADING			
	i iii.	DELAY PIN 5		0.842	TRAIN TEMP JUMPER		2000	PACKAGE)			
244	BK	OPERATOR MON PANEL TIME	435	YL	OPERATOR MON PANEL POWER	618	YL	TAIL/POSITION LAMP-RIGHT (ROADING			
		DELAY PIN 6	400	05	TRAIN TEMP JUMPER			PACKAGE)			
	MACHI	NE BASIC CIRCUITS	436	OR	OPERATOR MON PANEL POWER	619	GR	HEAD LAMP LOW			
301	BU	STARTER NO. 1 SOLENOID	437	BR	TRAIN OIL FILTER JUMPER OPERATOR MON PANEL FUEL LEVEL	622 623	PU BU	FLOODLAMP 3 WAY SWITCH JUMPER FLOODLAMP 3 WAY SWITCH JUMPER			
	50	TO RESISTOR	401	U,	TO FUEL FILTER JUMPER	624	YL YL	FLOODLAMP 3 WAY SWITCH JUMPER FLOODLAMP BOWL			
302	OR	STARTER NO. 1 TO	438	YL	OPERATOR MON PANEL COOLANT	625	BK	COURTESY LAMP			
107.737		DIAGNOSTIC/RESISTOR TO		A	TEMP JUMPER	020					
0000	(SERVE)	DIAGNOSTIC	440	BR	AIR PRESS. GAGE		COI	NTROL CIRCUITS			
304	WH	STARTER RELAY NO. 1 OUTPUT	441	OR	ENGINE COOLANT TEMP GAGE	702	OR	TRANSMISSION BRAKE SWITCH			
306	GN	STARTER RELAY COIL/NEUTRAL	442	GY	HYDRAULIC SYSTEM TEMP GAGE		2.5	JUMPER			
		START SWITCH	443	YL	POWER TRAIN TEMP GAGE	703	BU	TRANSMISSION UP SOLENOID			
00-	YL	MAIN POWER RELAY COIL	444	BU	CONV/RETARDER OIL TEMP GAGE	704	GY	TRANSMISSION DOWN SOLENOID			
308	DU				(TRACTOR)	705	PK	TRANSMISSION LOCKUP CLUTCH SOL		1	
310	PU	ETHER SWITCH TO ETHER SOLENOID	445	CNI		700	5.55				
	PU WH	ETHER SOLENOID TO TEMPERATURE	445	GN	CONV/RETARDER OIL TEMP GAGE	7	2000	BASIC			
310			445 446	GN PU		706 707	BR PU				

SENK4182 16 Page, (Dimensions: 34 inches x 24 inches) _