RELATED SERVICE MANUALS					
Title	Form No.				
Actual Gear Indicator	SENR4252				
Alternator: Delco Remy Bosch Nippondenso	SENR7507 SENR2082 SENR4130				
Automatic Electronic Traction Aid	SENR2986				
Electronic Monitoring System	SENR2945				
Electronic Neutral Start Control	SENR3889				
Operator's Station & Electrical System	SENR2946				
Power Train (Electrical System)	SENR3018				
Starting And Charging Systems	SENR2947				
Starting Motor; Delco Remy 50-MT	SENR3860				

Component	Part No.	Resistance (Ohms) 1	
Resistor - Blower Speed	9G1950	Overall 2.0 ± .1; Tap 1.0 ± .05	
Resistor - Starter/Diagnostic Conn	6T2217	150 ± 7.5	
Solenoid - 4 Way	9G9988	24.9	
Solenoids - Down Shift, Up Shift, Lockup	6T9290	26.0 ± .2 3.70 ± .37	
Solenoid - Engine Shutdown	9X1413		
Solenoid - Proportional	3T0062	16.0	
Solenoid - Start Aid	7N7259	6.0	

Part No.	Function	Actuate	Deactuate	Normal Condition
2M9346	Stop Lamp Press (Module) 45 kPa MAX (6.5 psi MAX)		5 kPa MIN (0.5 psi MIN)	N.O.
3L6306	Service Brake Press (Trans) Service Brake Press (Tractn)	55.2 ± 13.8 kPa (8 ± 2 psi)	-	N.C.
3T3195	Parking Brake Press (EMS) Secondary Brake Press	656 ± 35 kPa (95 ± 5 psi)	552 ± 35 kPa (80 ± 5 psi)	N.O.
3T9343	Transmission Filter Press (EMS)	210 ± 70 kPa (30 ± 10 ps)	-	N.O.
4D4785	Brake Retarder Press	27.6 ± 3.4 kPa (4.0 ± .5 ps)	=	N.O.
6T7663	Eng Oil Press	93 ± 21 kPa (13.5 ± 3.0 psi)	69 ± 21 kPa (10.0 ± 3.0 psi)	N.O.
7N7854	Brake Oil Temp (EMS) Converter/Retarder Temp (EMS)	123.89 ± 2.78°C (255 ± 9°F)	112.78°C MIN (235°F MIN)	N.C.
7N9785	Eng Coolant Temp (EMS)	107.2 ± 2.8°C (225 ± 5°F)	91.0°C MIN (196°F MIN)	N.C.
8N1693	Eng Coolant Temp (Start Aid)	37.8 ± 2.8°C (100 ± 5°F)	26.7°C MIN (80°F MIN)	N.C.
8T9792	Brake System Air Press (EMS)	517 ± 35 kPa (75 ± 5 psi)	448 ± 35 kPa (65 ± 5 psl)	•
9G3341	Transmission Oil Temp (EMS)	51.7 ± 2.8°C (125 ± 5°F)	43.0°C MIN (110°F MIN)	N.C.
9W3187	Fuel Pressure (EMS)	93 ± 21 kPa (13.5 ± 3.0 psi)	69 ± 21 kPa (10.0 ± 3.0 psi)	N.C.
9X1159	Supplemental Steering Flow	4 grams (.14 oz)	1.5 grams (.05 oz)	N.O.

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

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Wire	Wire		Wire	Wire	
Number	Color	Description	Number	Color	Description
		Power Distribution Circuits		u	Monitoring Circuits (Cont'd.)
101	RD	BAT	470	PU	CANE SW NEUT
102	BU	HD LMP	472	OR	PARKING BRAKE SW TO OVERS
103 105	YL BR	AUX CKT KEY SW	481	GN	CONVERTER TEMP SW TO BRAN
105	WH	ENG SHUT – DOWN FIRE SUPPR			Accessory Circuits
109	OR	ALT OUTPUT (+) TERM.	513	OR	A/C COMPRESSOR/REFRIGERAM
112	PU	MAIN POWER RELAY OUTPUT	515	GY	BLOWER MOTOR (HI)
113	OR	OPR MON PANEL VMIS B+ SWITCHED	516	GN	BLOWER MOTOR (MEDIUM)
121 122	YL	BACKUP ALARM TO LAMP	517	BU	BLOWER MOTOR (LO)
122	BU WH	AUX CKT AUX CKT	521 522	YL WH	A/C SW TO REFRIGERANT SW A/C CLUTCH TO THERMOSTAT S
124	GN	A/C	537	GN	TURN SIGNAL SW TO FLASHER
126	PK	XMSN CONT	539	BU	TURN SIGNAL INDICATOR BASIC
132	PK	AETA CONT	540	WH	TURN SIGNAL INDICATOR LEFT
136	GN	SUPPL STER			Lighting Circuits
137 138	OR GN	SUPPL STER MOTOR FUSE AUTO LUBE PUMP TO PAYLOAD MON	602	WH	DOME LAMP
139	OR	AUX CKT	604	OR	STOP LAMP
173	YL	AUX CKT	605	YL	TURN LAMP - LEFT
192	GN	SUPPL STER BKR TO RELAY	606	GY	TURN LAMP - RIGHT
		Ground Circuits	610	OR	HEAD LAMP BASIC
200	PV	MAIN CHASSIS	611	PU	HEAD LAMP HI
200 201	BK BK	OPR MON PANEL VMIS CMS	614 619	PU GN	PARK/TAIL/DASH LAMP HEAD LAMP LO
202	BK	XMSN CONT	639	WH	LEFT HAND STOP/TAIL LAMP
203	BK	CHASSIS DIAGNOSTIC	640	GN	RIGHT HAND STOP/TAIL LAMP
207	BK	STARTER DIAGNOSTIC		-	Control Circuits
209	BK	FIRE SUPPR GROUND			1
212 213	BK BK	AETA CODING PIN 16 AETA CODING PIN 17	700 703	PK BU	AETA TEST SW
216	BK	AETA CODING PIN 17 AETA CODING PIN 20	703	GY	XMSN UP SOL XMSN DOWN SOL
217	BK	XMSN CODING PIN 17	705	PK	XMSN LOCKUP CLUTCH SOL BA
218	BK	XMSN CODING PIN-18	706	BR	XMSN RETARDER SW
219	BK	XMSN CODING PIN 19	707	PU	XMSN BED RAISE SW
227	BK BK	XMSN CODING PIN 37 XMSN SW	709	OR	SENSOR POWER SUPPLY
231 237	BK	KBI ETHER CONT GROUND	710	GN BR	XMSN SPEED PICKUP SIGNAL XMSN LEVER CODE 1
201	Bit		712	WH	XMSN LEVER CODE 2
		Basic Machine Circuits	713	OR	XMSN LEVER CODE 3
302	OR	STARTER NO. 1 RESISTOR TO DIAGNOSTIC	714	YL	XMSN LEVER CODE 4
304	WH	STARTER RELAY NO. 1 OUTPUT	715	GN	XMSN LEVER CODE 5
306	GN	STARTER RELAY COIL TO NEUT START SW OR KEY SW	716	BU PU	XMSN LEVER CODE 6 XMSN BRAKE SW
307	OR	KEY SW TO NEUT START SW OR VMIS SENSOR	721	BR	XMSN GEAR CODE 1
		MODULE	722	WH	XMSN GEAR CODE 2
308	YL	MAIN POWER RELAY COIL	723	OR	XMSN GEAR CODE 3
310	PU	START AID SW TO START AID SOL	724	YL	XMSN GEAR CODE 4
311 313	WH GY	START AID SOL TO TEMP SW STARTER NO. 2 RESISTOR TO DIAGNOSTIC	725	GN BU	XMSN GEAR CODE 5 XMSN GEAR CODE 6
314	PU	STARTER RELAY NO. 2 OUTPUT	727	GN	SUPPL STER MOTOR RELAY
321	BR	BCKP ALARM LAMP TRAVEL ALARM	728	BU	SUPPL STER CONT SW
326	PU	KEY SW "C" TERM.	733	BR	SWITCHING GEAR CODE 1 FROM
327	PK	SHUTDOWN SOL	734	WH	SWITCHING GEAR CODE 2 FROM
		Monitoring Circuits	735	OR	SWITCHING GEAR CODE 3 FROM
403	GN	ALTERNATOR (R) TERM.	736	YL GN	SWITCHING GEAR CODE 4 FROM SWITCHING GEAR CODE 5 FROM
405	GY	OPR MON OIL PRESS. (LO SETTING)	767	WH	AETA PICKUP POWER
406	PU	OPR MON COOLANT TEMP	768	OR	AETA PICKUP XMSN
407	PK	OPR MON CONVERTER/RETARDER OIL TEMP	769	BU	WHEEL SPEED PICKUP LEFT
408	WH	OPR MON SYSTEM AIR PRESS.	770	GN	WHEEL SPEED PICKUP RIGHT
409	OR	OPR MON NEUT	772	BR	AETA RETARDER SW
410 411	WH PK	OPR MON FAULT ALARM OPR MON MASTER FAULT LAMP	773	GY YL	AETA SERVOVALVE AETA SOL – LEFT
412	BU	OPR MON COOLANT FLOW	775	BR	AETA SOL - RIGHT
413	BR	OPR MON FUEL PRESS.	777	PU	BRAKE RELEASE MOTOR
415	GN	OPR MON TEST SW	794	YL	PAYLOAD MON XMSN SPEED
417	GY	PRIMARY STER SW	891	BU	NEUT START CONT TO PAYLOA
419	YL	OPR MON PARKING BRAKE	918	OR	ENG OVERSPEED LIGHT AND HO
426 437	BR BR	OPR MON POWER TRAIN OIL FILTER OPR MON FUEL LEVEL TO FUEL FILTER JUMPER	919	GN	ENG OVERSPEED TEST SW BRAKE RETRACT SW TO RELAY
437	OR	ENG COOLANT TEMP GAGE	930 943	BR	TEHC SWING- JOY 2
446	PU	BRAKE OIL TEMP GAGE	B943	PK	START AID CONT LAMP 1 OUTP
449	BU	SPDOM SENDER (SIGNAL NO. 1)	B946	OR	START AID CONT MANUAL INPU
450	YL	TACH SENDER (+)	B954	YL	START AID CONT TEST SW INPL
450					
450 454 462	GN YL	RETARDER INDICATOR LAMP SUPPL STER MOTOR INDICATOR	B998	BU	START AID CONT LAMP 2 OUTP

Vehicle

Location

1 Alarm – Backup

Compone

C	MPONENT LO	CATION CH	IART		
	Schematic Location	Vehicle Location	Component	Schematic Location	CATERPILLAR®
	B-15	14	Resistor – Starter/Diagnostic Conn	A-6	
	C-2	23	Sender – Brake Oil Temp (Gauge)	A-9	
	A-3	21	Sender - Coolant Temp (Gauge)	A-3	
	A-7	24	Sender – Transmission Speed	A-13	
	D-5	25	Sender – Wheel Speed (RH)	B-15	
	C-5	26	Sender – Wheel Speed (LH)	A-15	
	C-5	27	Solenoid - 4 Way	A-14	
	C-60	3	Solenoid – Air Conditioner Clutch	A-3	
	D-6	28	Solenoid – Down Shift	A-13	
	D-5	29	Solenoid – Engine Shutdown	A-3	
	D-6	16	Solenoid – Lockup	A-13	
	C-5	27	Solenoid - Proportional	A-14	
	D-5	30	Solenoid - Start Aid	A-5	
	C-3	28	Solenoid – Up Shift	A-14	

1	Alarm – Backup	B-15	14	Resistor – Starter/Diagnostic Conn	A-6
2	Alarm - Fault (EMS)	C-2	23	Sender – Brake Oil Temp (Gauge)	A-9
3	Alternator	A-3	21	Sender – Coolant Temp (Gauge)	A-3
4	Batteries	A-7	24	Sender – Transmission Speed	A-13
А	Breaker – Air Conditioner	D-5	25	Sender – Wheel Speed (RH)	B-15
А	Breaker – Alternator	C-5	26	Sender – Wheel Speed (LH)	A-15
А	Breaker – Brake Retract	C-5	27	Solenoid - 4 Way	A-14
A	Breaker – Dome/Stop Lamp	C-60	3	Solenoid – Air Conditioner Clutch	A-3
A	Breaker – Engine Shutdown/FS	D-6	28	Solenoid – Down Shift	A-13
A	Breaker – Headlamp	D-5	29	Solenoid – Engine Shutdown	A-3
A	Breaker – Key	D-6	16	Solenoid – Lockup	A-13
A	Breaker – Supplemental Steering	C-5	27	Solenoid - Proportional	A-14
A	Breaker – Turn Lamp	D-5	30	Solenoid – Start Aid	A-5
5	Control – Engine Shutdown	C-3	28	Solenoid - Up Shift	A-14
6	Control – Neutral/Start	F-15	A	Speedometer	F-2
7	Control – Supplemental Steering	E-1	31	Switch – Backup Alarm	D-11
, 8B	Control – Traction Aid	D-15	20	Switch – Blower	E-11
9B	Control – Transmission	D-13	32	Switch – Body Raise (Trans)	D-13
10B	Diagnostic Connector	D-12		Switch – Brake Master Cylinder	
11B	Distributor – Transmission	E-15	33	Overstroke	A-10
		A-8	23	Switch – Brake Oil Temp (EMS)	A-9
12	Dryer – Air	E-5	34B	Switch – Brake Retarder Press	F-15
A	Flasher		A	Switch – Brake Retract	D-3
A	Fuse Block	D-6	35B	Switch – Brake System Air Press (EMS)	C-15
A	Gauge – Air Press	D-3	36	Switch – Converter/Retarder Temp (EMS)	A-8
A	Gauge – Brake Oil Temp	F-2	4	Switch – Disconnect	A-6
A	Gauge – Coolant Temp	F-3	37	Switch - Engine Coolant Flow (EMS)	A-3
13	Ground – Cab/Frame	C-11	3	Switch – Engine Coolant Temp (EMS)	B-3
3	Ground – Engine Block (Alternator)	A-3	38	Switch – Engine Coolant Temp (Start Aid)	A-5
14	Ground – Engine Block (Starter)	A-6	39	Switch - Engine Oil Press	A-3
14	Ground – Frame	B-9	40	Switch – Fuel Press (EMS)	B-3
15B	Ground – Cab	E-12	40	Switch – Head Lamp Dimmer	D-4
14	Ground – Frame (Starter)	A-6	A	Switch - Key Start	E-3
16	Ground – Frame (Supplemental Steering)	A-7		Switch – Operator Monitor Test	D-3
А	Indicator – Actual Gear	D-10	A		C-15
А	Lamp – Brake Retarder	F-2	34B	Switch – Parking Brake Press (EMS) Switch – Refrigerant Press (AC)	B-7
А	Lamp – Engine Overspeed Warning (Not	F-2	5		
	Used)	5.0	A	Switch – Running Lamp	E-3
A	Lamp – Master Fault (EMS)	F-2	34B	Switch – Secondary Brake Press (Trans)	E-15
A	Lamp – Supplemental Steering	E-2	34B	Switch – Service Brake Press (Tractn)	E-15
17B	Meter – Service	E-13	34B	Switch – Service Brake Press (Trans)	E-15
18	Module – Stop/Tail Lamp	B-14	31	Switch – Shift Lever	D-11
A	Monitor – Operator (EMS)	D-1	A	Switch – Start Aid	D-3
19	Motor – Brake Retract	A-11	34B	Switch – Stop Lamp Press (Module)	F-15
14	Motor – Starting	A-6	Α	Switch – Supplemental Steering	E-3
16	Motor – Supplemental Steering	A-7	42	Switch – Supplemental Steering Flow	A-8
20	Motors – Blower	E-10	20	Switch – Thermostat	E-11
21	Pickup – Engine Speed (Tach)	A-4	A	Switch – Traction Aid Test	D-3
14	Receptacle – Aux Start	A-5	31	Switch - Transmission	A-13
А	Relay – Brake Retract	C-6	43	Switch - Transmission Filter Press (EMS)	A-9
А	Relay – Main Power	D-6	43	Switch - Transmission Oil Temp (EMS)	A-9
14	Relay – Starter	A-6	A	Switch – Turn Signal	D-5
22	Relay – Supplemental Steering Motor	A-7	44	Tachograph	F-12
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A = Components in dash. B = Components in rear compartment (area B).

Schematic

768C Trac Electrical	
768C TRACTOR	769C TRUCK
2X368-2X370	1X5474-1X6000

Vehicle Connectors Location

9в

37 Contacts +

25 Contacts 1C

20 Contacts 3C

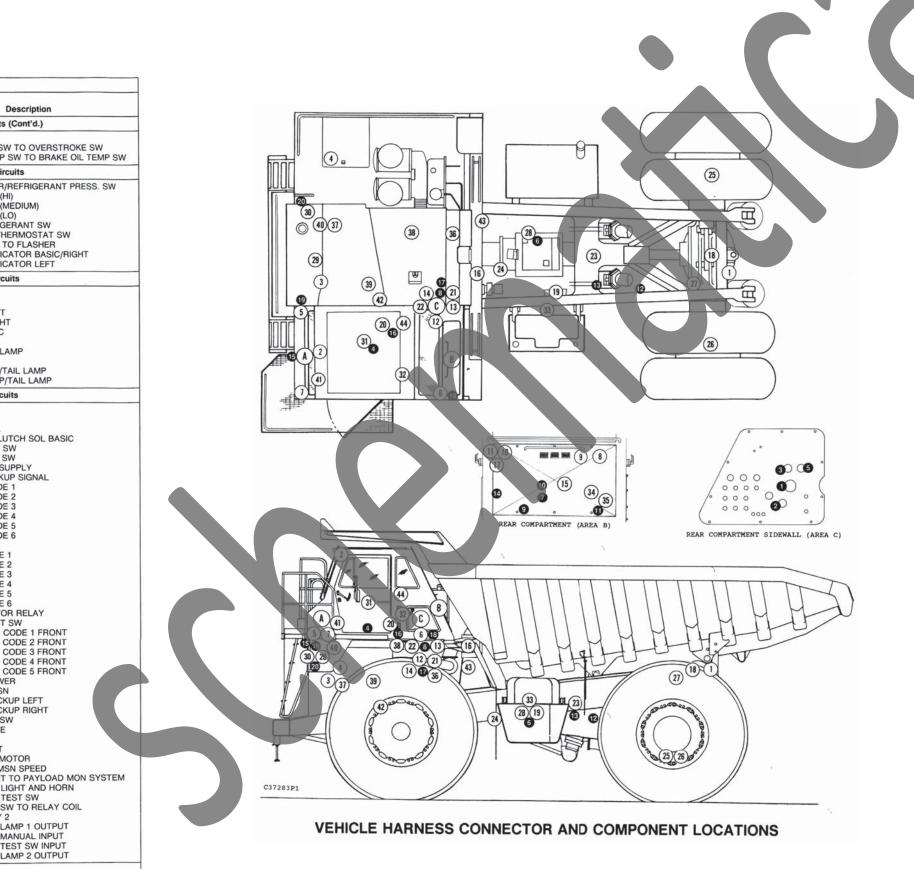
14 Contacts

10 Contacts #

9 Contacts

8 Contacts

F – 8X1250 A P - 8W8484

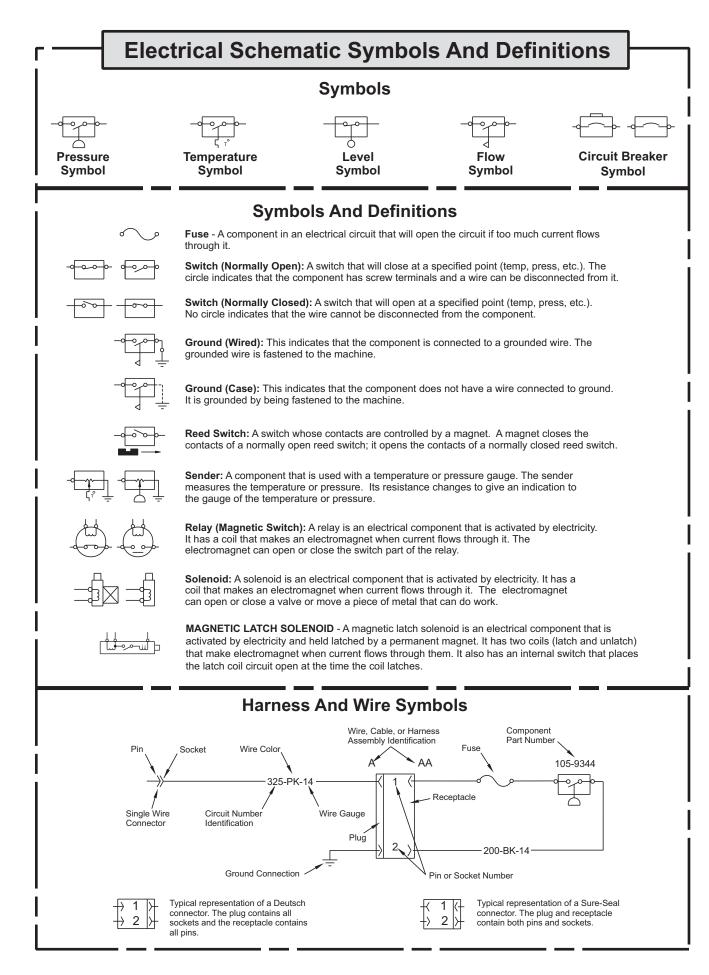


Vehicle locations are repeated for connectors located close together. * = Connector is located at the component. A = Connectors in dash. B = Connectors in rear compartment (area B).C = Connectors on rear compartment sidewall (area C).

A Q - 8W9497

& 769C Truck stem





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SENR4793

January 1991

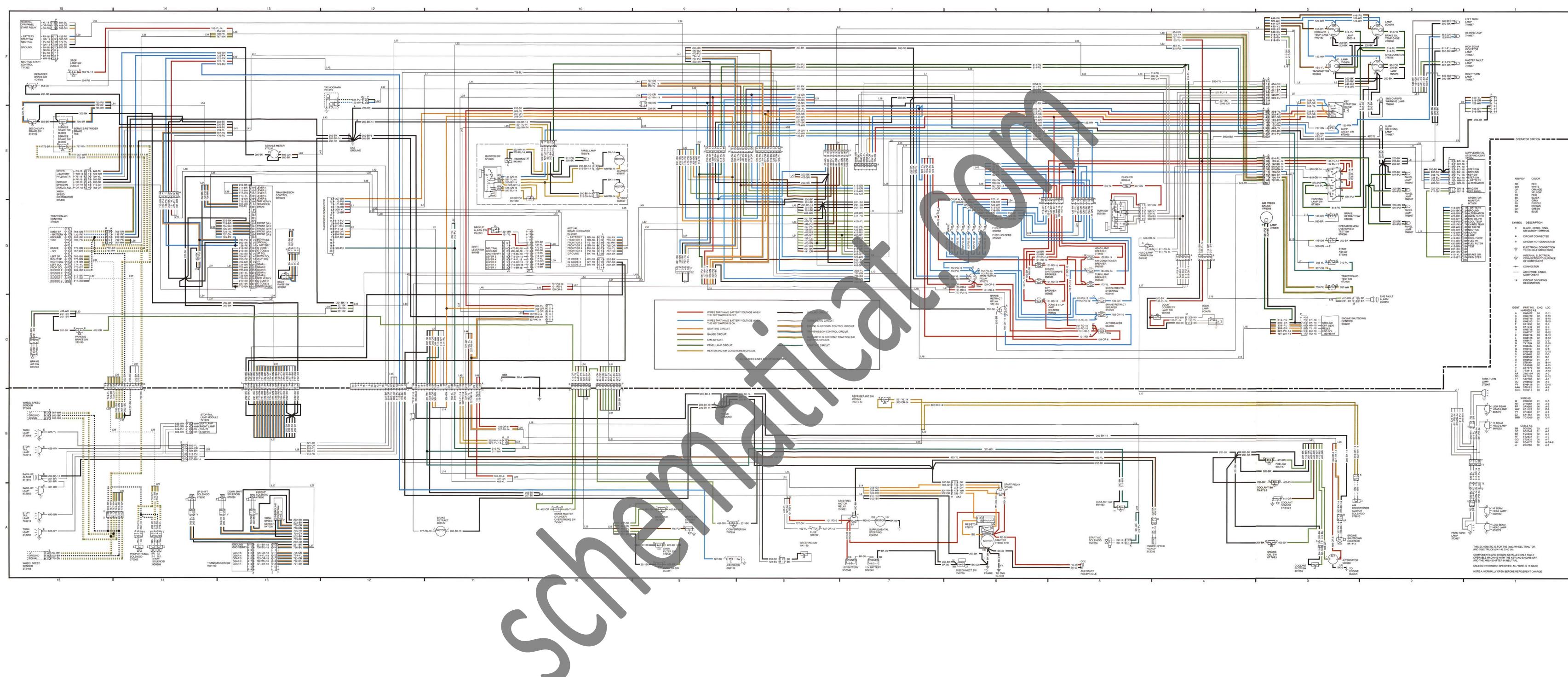
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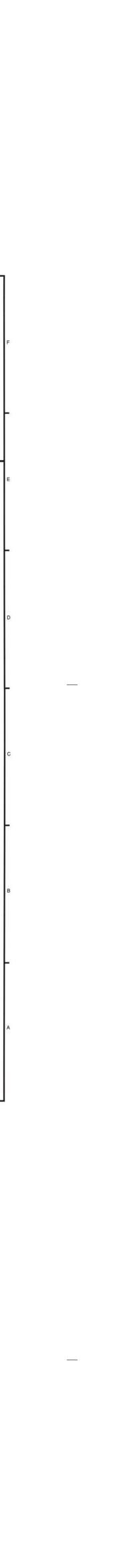
Vehicle .ocation	Harness And/Or Components	Schematic Location	Connectors	Vehicle Location	Harness And/Or Components	Schematic Location
*	L – 8W8416 Transmission Control	D-13		Øв	A – 8W9452 P – 8W8484	E-9
1 C	A – 8W9452 H – 8W8719	C-11		Фв	A – 8W9452 L 8W8416	E-14
2 C	A – 8W9452 J – 8W9717	C-12	7 Contacts	*	A – 8W9452 Transmission Speed Distributor	E-15
*	A – 8W9452 Diagnostic Connector	D-12	7 Contacts	8	D – 8W9719 P – 8W8484	C-10
B C	L – 8W8416 Y – 8W9655	C-13		A	L – 8W8416 Actual Gear Indicator	D-10
*	P – 8W8484 Operator Monitor	D-2		*	P – 8W8484 Engine Shutdown Control	C-3
*	R – 8W9498 Traction Aid	D-15		D B	A – 8W9452 Not Used	C-10
4	L – 8W8416 VV – 8W6419	D-10	6 Contacts	A	A – 8W9452 S – 6G9462	D-5
6 C	R – 8W9498 V – 5T5040	C-14		Ð	E – 8W8313	B-14
А	A – 8W9452 G – 8X1249	E-3		A	J – 8W9717 P – 8W8484	F-1
А	A – 8W9452 G – 8X1249	E-3		ß	Not Used V - 5T5040	A-14
*	VV – 8W6419 Shift Lever Switch	D-11		(4 B	X – 5T4988 A – 8W9452	D-4
6	Y – 8W9655 Z – 7T3418	A-13		G	M – 8W8471 A – 8W9452	D-4
*	Z – 7T3418 Transmission Switch	A-13		Шв	T – 8W9502 A – 8W9452	D-15
₽в	A – 8W9452 P – 8W8484	E-8	5 Contacts	G	R – 8W9498 A – 8W9452	E-10
А	A – 8W9452 G – 8X1249	F-3		0	N – 7X1784 H – 8W8719	A-6
А	F – 8X1250 P – 8W8484	E-7			AAA – 5T9182 P – 8W8484	
8	P – 8W8484 C – 8W9720	C-10		ß	ZZ – 8X1482 E – 8W8313	D-9
*	P – 8W8484 Supplemental Steering	E-2		*	Stop/Tail Lamp Module L – 8W8416	D-10
*	Control P – 8W8484	F-15		A *	Actual Gear Indicator L - 8W8416	D-10
A	Neutral/Start Control A – 8W9452		4 Contacts		Body Raise Switch T – 8W9502	
	Q – 8W9497 A – 8W9452	D-5		œ	TT – 5T2700	B-1
A	Q - 8W9497	D-5		20	TT – 5T2700 U – 8W9503	A-1
9 B	A – 8W9452 Not Used	E-7		*	V – 5T5040 4 Way Solenoid	A-14
ØВ	A – 8W9452 P – 8W8484	E-8				



0 Page, Color, (Dimensions: 39 inches x 28 inches)

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