

1985 BMW 635CSi Electrical Troubleshooting Manual

BMW of North America, Inc. Montvale, New Jersey

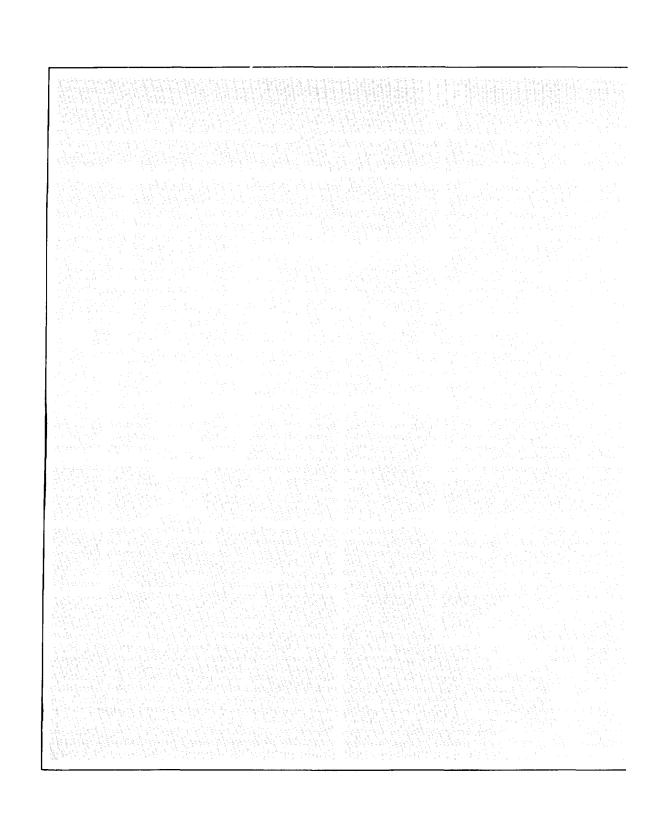
FOREWORD

In the interests of continuing technical development work we reserve the right to modify designs and equipment.

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1985
BMW 635CSi
Electrical
Troubleshooting
Manual

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The purpose of this manual is to show electrical schematics in a manner that makes electrical troubleshooting easier. Electrical components which work together are shown together on one schematic. The Wiper-Washer schematic, for example, shows all of the electrical components in one diagram. At the top of the page is the fuse (positive) that powers the circuit. The flow of current is shown through all wires, connectors, switches, and motors to ground (negative) at the bottom of the page.

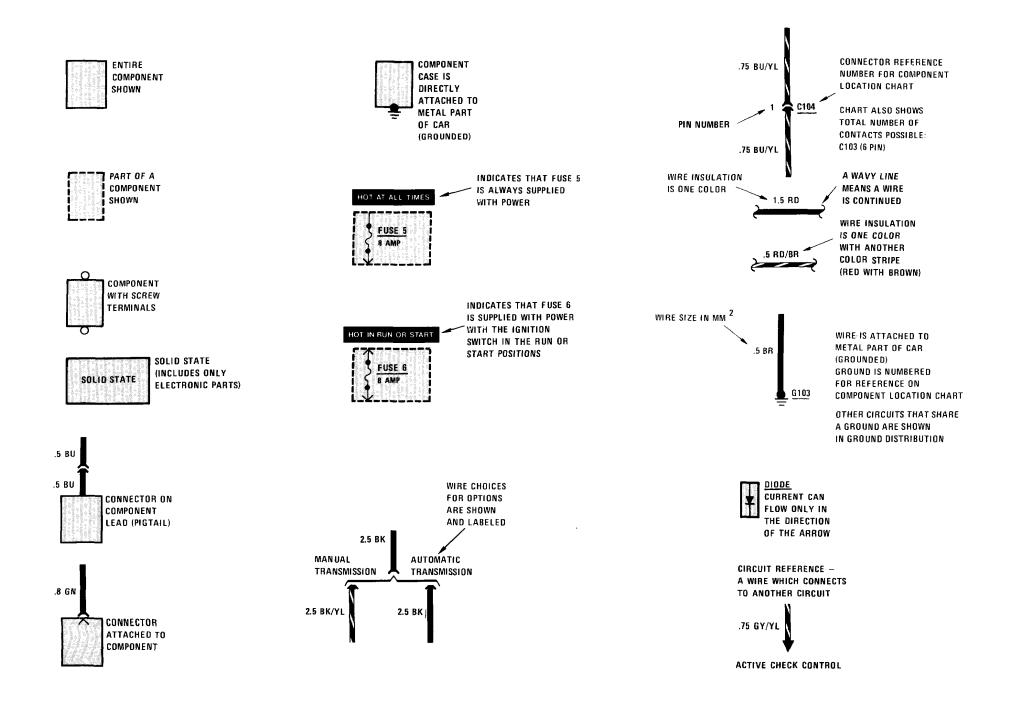
Within the schematic, all switches and sensors are shown "at rest," as though the Ignition Switch were off. For identification, component names are underlined and placed next to or above each component. Notes are included, describing how switches and other components work.

The power distribution schematic shows the current feed through all the connections from the Battery and Alternator to each fuse and the Ignition and Light Switches. If the Power Distribution schematic is combined with any other circuit schematic, a complete picture is made of how that circuit works. The Ground Distribution schematics show how several circuits are connected to common grounds.

All wiring between components is shown exactly as it exists in the vehicle; however, the wiring is not drawn to scale. To aid in understanding electrical operation, wiring inside complicated components has been simplified. The "Solid State" label designates electronic components.

WIRE SIZE CONVERSION CHART			
METRIC	AWG		
(CROSSECTIONAL AREA	(AMERICAN		
IN MM²)	WIRE GAUGE)		
.5	20		
.75	18		
1	16		
1.5	14		
2	14		
2.5	12		
4	10		
6	8		
8	8		
16	4		
20	4		
25	2		
32	2		

WIRE INSULATION			
ABBREVIATIONS	COLOR		
BK BR RD YLN BU VI YT PK	BLACK BROWN RED YELLOW GREEN BLUE VIOLET GRAY WHITE PINK		



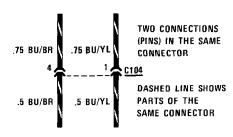


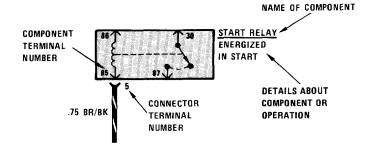
ONE POLE, TWO POSITION SWITCH

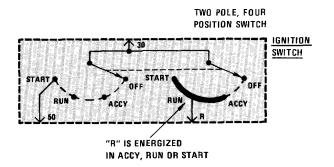


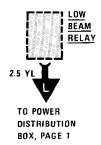
SWITCHES THAT MOVE TOGETHER

DASHED LINE SHOWS A MECHANICAL CONNECTION BETWEEN SWITCHES

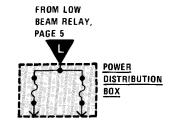


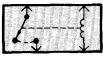






CURRENT PATH IS CONTINUED AS LABELED. THE ARROW SHOWS DIRECTION OF CURRENT FLOW AND IS REPEATED WHERE CURRENT PATH CONTINUES.

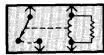




WITH NO CURRENT FLOWING THROUGH COIL

RELAY SHOWN

WHEN COIL IS **ENERGIZED, SWITCH** IS PULLED CLOSED

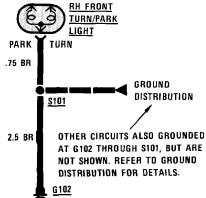


RELAY SHOWN

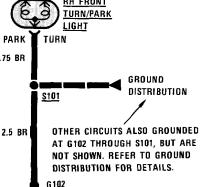
WITH RESISTOR

ACROSS COIL

RESISTOR ACROSS COIL IS FOR NOISE SUPPRESSION







TROUBLESHOOTING PROCEDURE

1. Verify the Problem

Operate the problem circuit to check the accuracy of the complaint. Note the symptoms of the inoperative circuit.

2. Analyze the Problem

Refer to the schematic of the problem circuit in the ETM. Determine how the circuit is supposed to work by tracing the current path(s) from the power feed through the circuit components to ground. Then based on the symptoms you noted in step 1 and your understanding of circuit operation, identify one or more possible causes of the problem.

3. Isolate the Problem

Make circuit tests to prove or disprove the preliminary diagnosis made in step 2. Keep in mind that a logical simple procedure is the key to efficient troubleshooting. Test for the most likely cause of failure first. Try to make tests at points which are easily accessible.

4. Repair the Problem

Once the specific problem is identified, make the repair using the proper tools and safe procedures.

5. Check the Problem

Operate the circuit to check for satisfactory circuit operation. Good repair practice calls for rechecking all circuits you have worked on.

TROUBLESHOOTING TOOLS

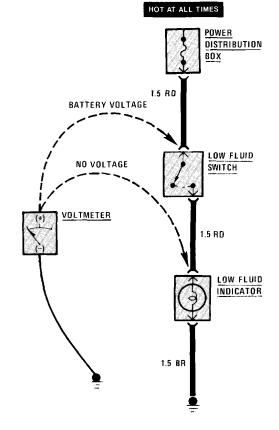
Isolating the problem (Step 3 of TROUBLESHOOTING PROCEDURES) requires the use of a voltmeter and/or ohmmeter. A voltmeter measures voltage at selected points in a circuit. An ohmmeter measures a circuit's resistance to current flow. It has an internal battery that provides current to the circuit under test. Disconnect the car battery when using an ohmmeter because the battery voltage will cause the ohmmeter to give false readings. Also, do not use an ohmmeter on solid-state components. The voltage that the ohmmeter applies to the circuit could damage these components.

TROUBLESHOOTING TESTS

Voltage Test

This test measures voltage in a circuit. By taking measurements at several points (terminals or connectors) along the circuit, you can isolate the problem.

To take a voltage measurement, connect the negative lead of the voltmeter to the battery's negative terminal or other known good ground. Then connect the positive lead of the voltmeter to the point you want to test. The voltmeter will measure the voltage present at that point in the circuit.



Voltage Test

Voltage Drop Test

Wires, connectors, and switches are designed to conduct current with a minimum loss of voltage. A voltage drop of more than one volt indicates a problem.

To test for voltage drop, connect the voltmeter leads to connectors at either end of the circuit's suspected problem area. The positive lead should be connected to the connector closest to the power source. The voltmeter will show the voltage drop between these two points.

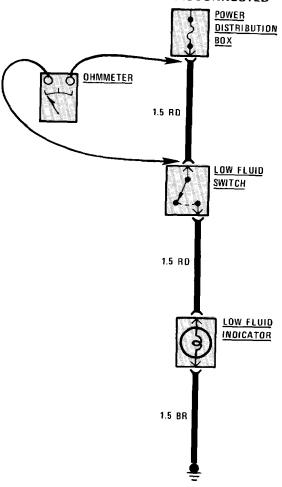
HOT AT ALL TIMES DISTRIBUTION 1.5 RD VOLTMETER LOW FLUID SWITCH 1.5 RD LOW FLUID INDICATOR 1.5 BR

Voltage Drop Test

Continuity Test

To perform a continuity test, first disconnect the car battery. Then adjust the ohmmeter to read zero while holding the leads together. Connect the ohmmeter leads to connector or terminals at either end of the circuit's suspected problem area. The ohmmeter will show the resistance across that part of the circuit.

BATTERY DISCONNECTED

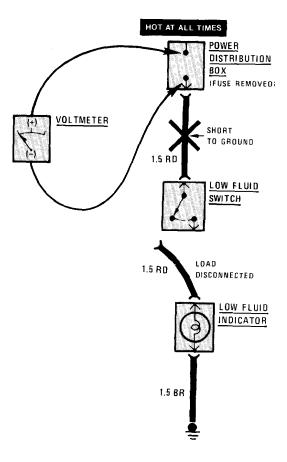


Continuity Test

Short Test Using Voltmeter

Remove the blown fuse and disconnect the load. Connect the voltmeter leads to the fuse terminals. The positive lead should be connected to the terminal closest to the power source.

Starting near the POWER DISTRIBUTION BOX, move the wire harness back and forth and watch the voltmeter reading. If the voltmeter registers a reading, there is a short to ground in the wiring. Somewhere in the area of the harness being moved, the wire insulation is worn away and the circuit is grounding.



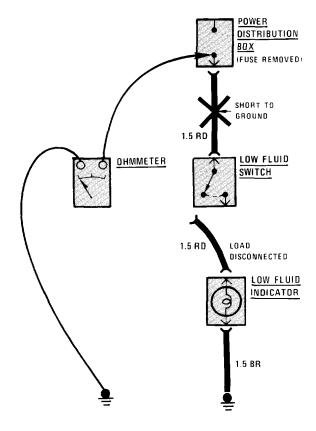
Short Test Using Voltmeter

Short Test Using Ohmmeter

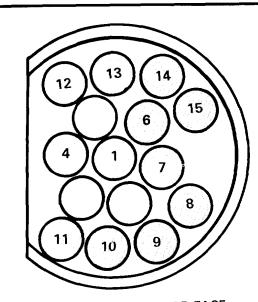
Disconnect the battery. Adjust the ohmmeter to read zero while holding the leads together. Remove the blown fuse and disconnect the load. Connect one lead of the ohmmeter to the fuse terminal that is closest to the load. Connect the other lead to a known good ground.

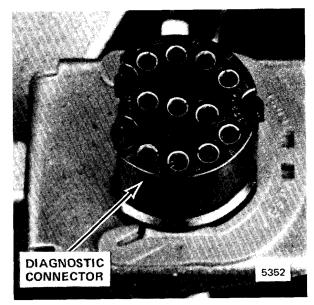
Starting near the POWER DISTRIBUTION BOX, move the wire harness back and forth and watch the ohmmeter reading. Low or no resistance indicates a short to ground in the wiring. Infinitely high resistance indicates no short.

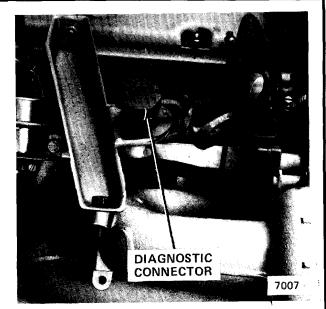
BATTERY DISCONNECTED



Short Test Using Ohmmeter



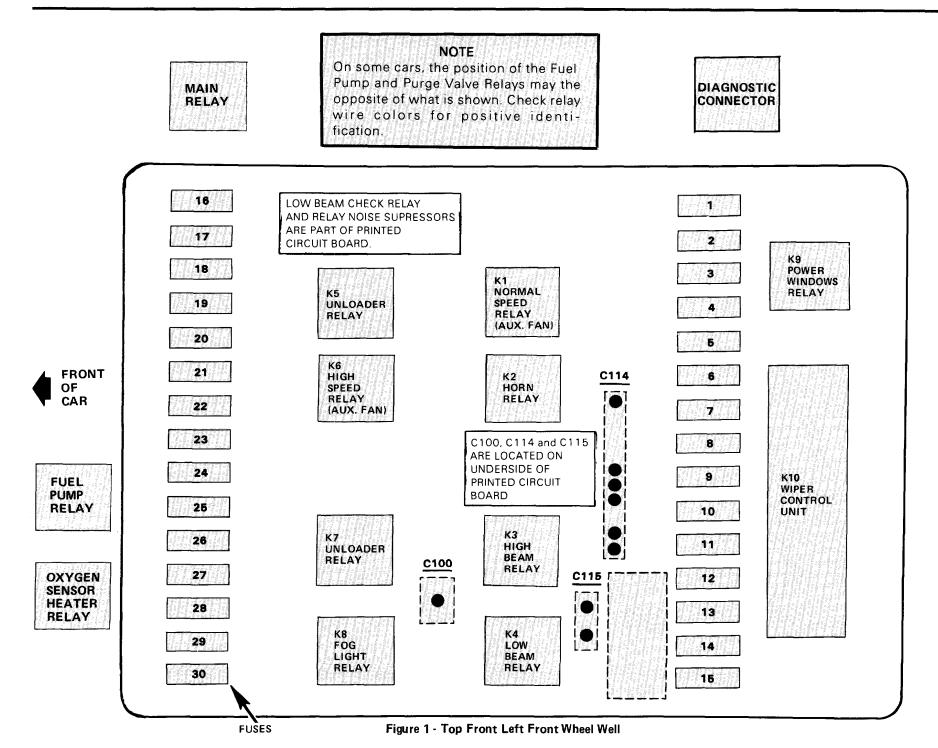




DIAGNOSTIC CONNECTOR FACE

Figure 1 - On Power Distribution Box

PIN	WIRE SIZE	WIRE COLOR	CIRCUIT AND COMPONENT CONNECTED
1	1.5	BR	Ground Distribution, G103
4	.5	BR/WT	Gauges/Warning Indicators, Coolant Temperature Sender.
6	.5	WT/BK	Not Used (Wiring Shown On Charging System)
7	.5	WT/BU	Service Interval Indicator, Service Interval Processor (Reset).
8	.5	YL	Ignition, TDC Sensor.
9		SHIELD	Ignition, TDC Sensor.
10	.5	ВК	Ignition, TDC Sensor.
11	2.5	BK/YL	Start, Start Signal.
12	.75	BU	Charge System, Alternator.
13	.75	GN	Ignition, Ignition Coil.
14	2.5	RD	Charge System, Alternator.
15	11.51	GN/YL	Oxygen Sensor, Oxygen Sensor Heater Relay.



FUSE NO.	SIZE/ COLOR	CIRCUIT PROTECTED	
1	7.5A (BR)	Headlights (also fuses 2, 13, 14).	
2	7.5A (BR)	Headlights (also fuses 1, 13, 14).	
3	30A (LT GN)	Auxiliary Fan.	
4	15A (LT BU)	Lights: Turn/Hazard Warning (also fuse 24).	
5	30A (LT GN)	Wiper/Washer, Windshield Washer Jet Heater.	
6	7.5A (BR)	Active Check Control (also fuse 10, 12, 21, 22, 23); Cruise Control (also fuse 17); Stoplights.	
7	15A (LT BU)	Horn.	
8		Not Used.	
9	7.5A (BR)	Idle Speed Control (also fuse 17); Back Up Lights.	
10	7.5A (BR)	Active Check Control (also fuses 6, 12, 21, 22, 23); On-Board Computer (also fuses 12, 21, 27); Speedometer/Gauges/Warning Indicators (also fuse 21); Brake Lining Warning; Service Interval Indicator (also fuse 21); Seatbelt Warning; Auxiliary Fan.	
11	15A (LT BU)	Fuel Delivery.	
12	7.5A (BR)	Active Check Control (also fuse 6, 10, 21, 22, 23); On-Board Computer (also fuses 10, 21, 27); Radio (also fuses 21, 28. Radio In-Line Fuse); Warning Indicators.	
13	7.5A (BR)	Headlights (also fuses 1, 2, 14)	
14	7.5A (BR)	Headlights (also fuses 1, 2, 13).	
15		Not Used.	
16	30A (LT GN)	Heating/Air Conditioning.	
17	30A (LT GN)	Auxiliary Fan: Back Up Lights; Cruise Control (also fuse 6); Lights: Dash/ Transmission Range (also fuse 23); Heater/Air Conditioning; Interior Lights (also fuse 21); Power Mirrors; Seatbelt Warning.	
18	30A (LT GN)	Auxiliary Fan.	
19	30A (LT GN)	Sunroof.	

FUSE NO.	SIZE/ COLOR	CIRCUIT PROTECTED
20	30 (LT GN)	Rear Defogger (also fuse 23).
21	7.5A (BR)	Active Check Control (also fuses 6, 10, 12, 22, 23); Auto-Charging Flashlight; Gauges (also fuse 12); Glove Box Light; Interior Lights (also fuse 17); On-Board Computer (also fuses 12, 27); Radio (also fuses 12, 28. Radio In-Line Fuse); Service Interval Indicator (also fuse 10); Trunk Light.
22	7.5A (BR)	Active Check Control (also fuses 6, 10, 12, 21, 23); Lights: Front Park/Rail (also fuse 20).
23	7 5A (BR)	Active Check Control (also fuses 6, 10, 12, 21, 22); Rear Defogger (also fuse 20); Lights: Front Park/Tail/Underhood (also fuse 22); Heater/Air Conditioning; Lights: Dash/Transmission Range/RH Visor (also fuse 17) Lights: Rear Marker/License.
24	15A (LT BU)	Lights: Turn/Hazard Warning (also fuse 4).
25	25 A (WT)	Not Used
26	30A (LT GN)	Power Seats
27	30A (LT GN)	Central Locking; Heated Door Lock; On-Board Computer (also fuses 10, 21, 22).
28	30A (LT GN)	Cigar Lighter; Power Antenna (also fuses 12, 21. Radio In-Line Fuse).
29	7.5A (BR)	Fog Lights (also fuse 30).
30	7.5A (BR)	Fog Lights (also fuse 29).
Power Window Circuit Breaker	25	Power Windows.

BLANK

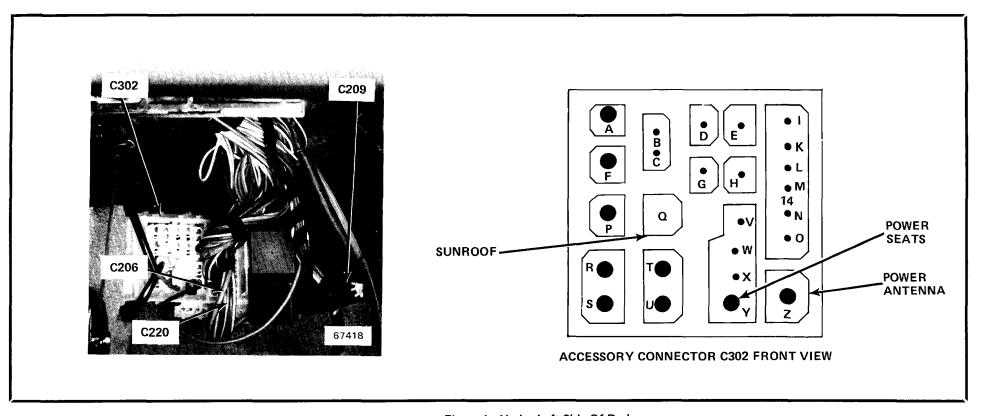
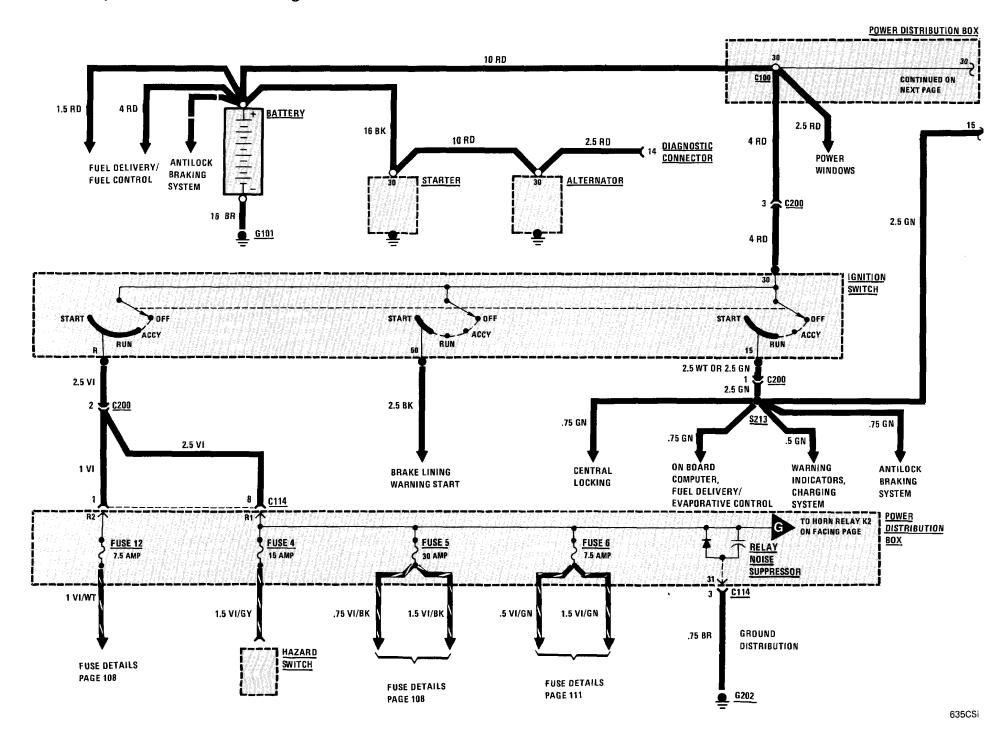
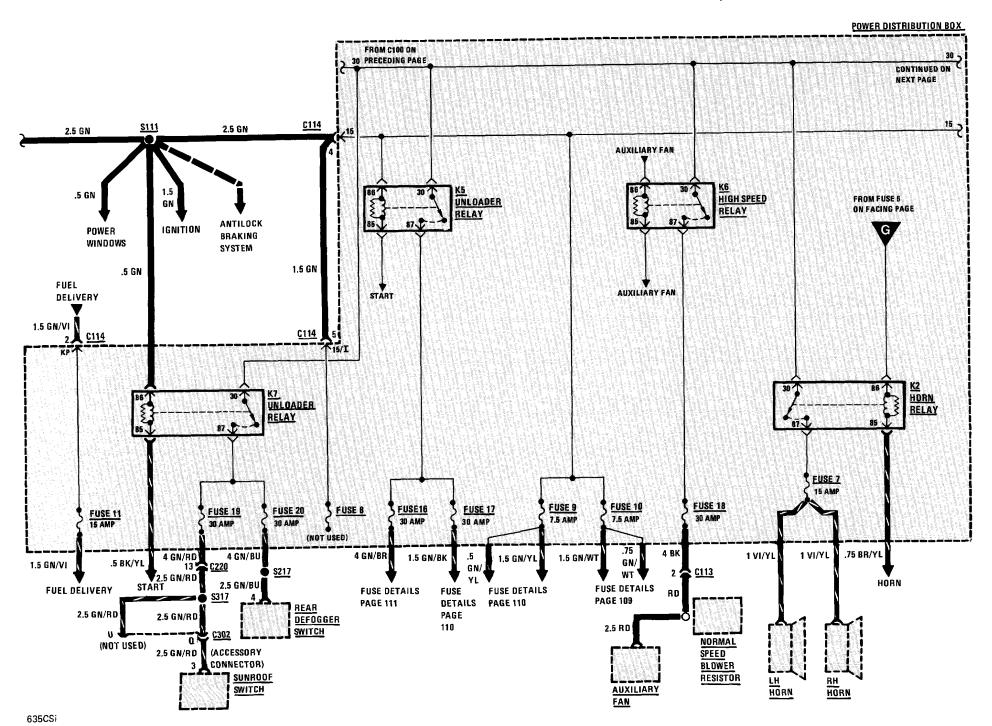
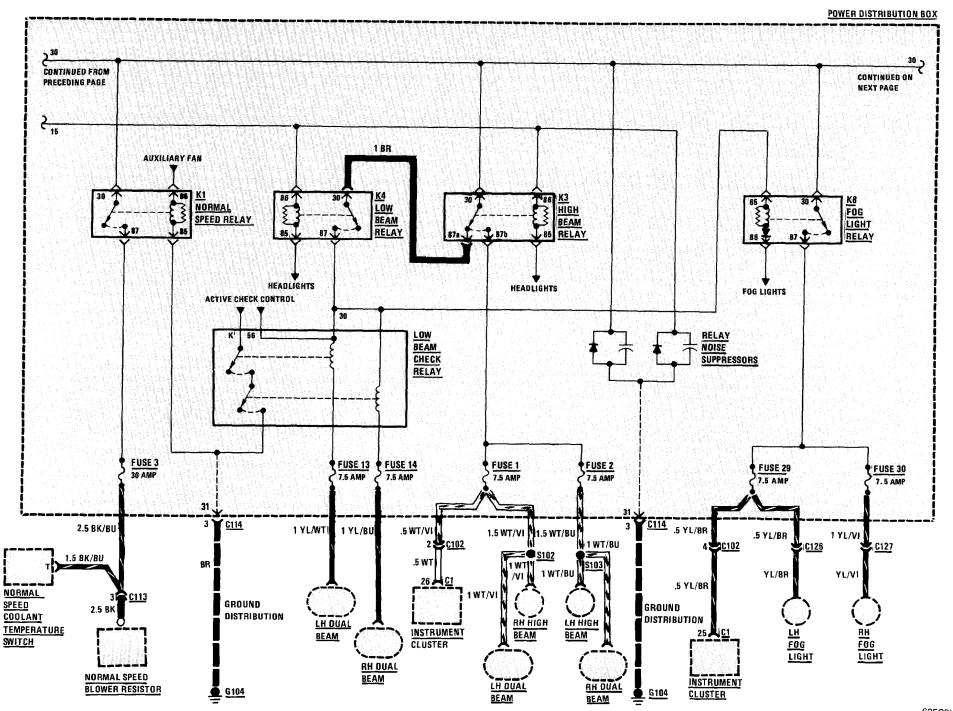


Figure 1 - Under Left Side Of Dash

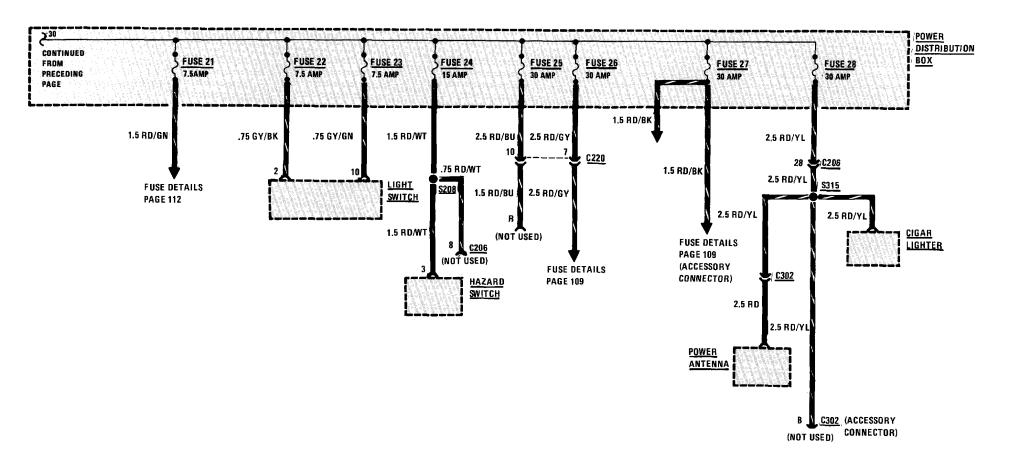
104 POWER DISTRIBUTION

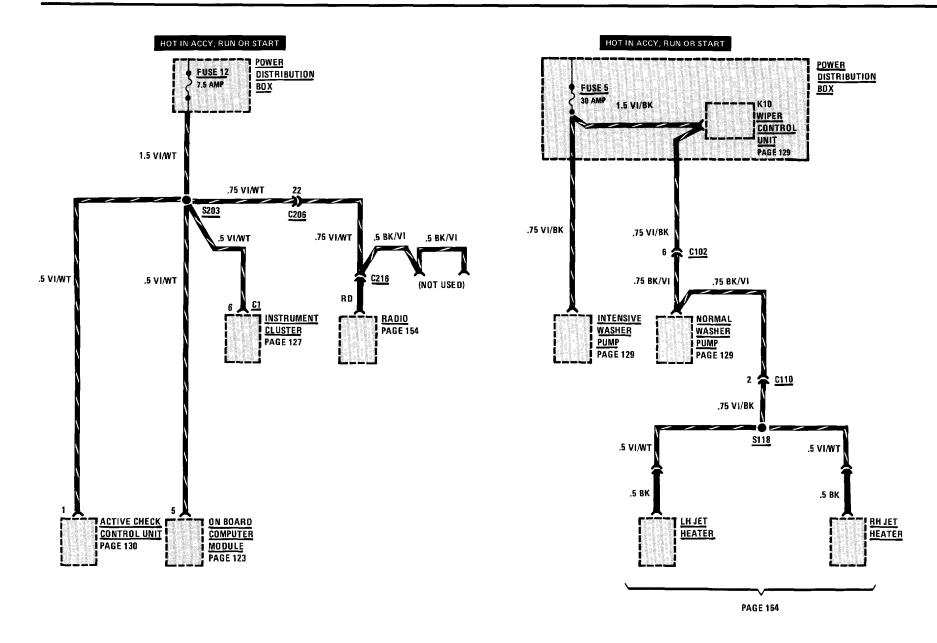


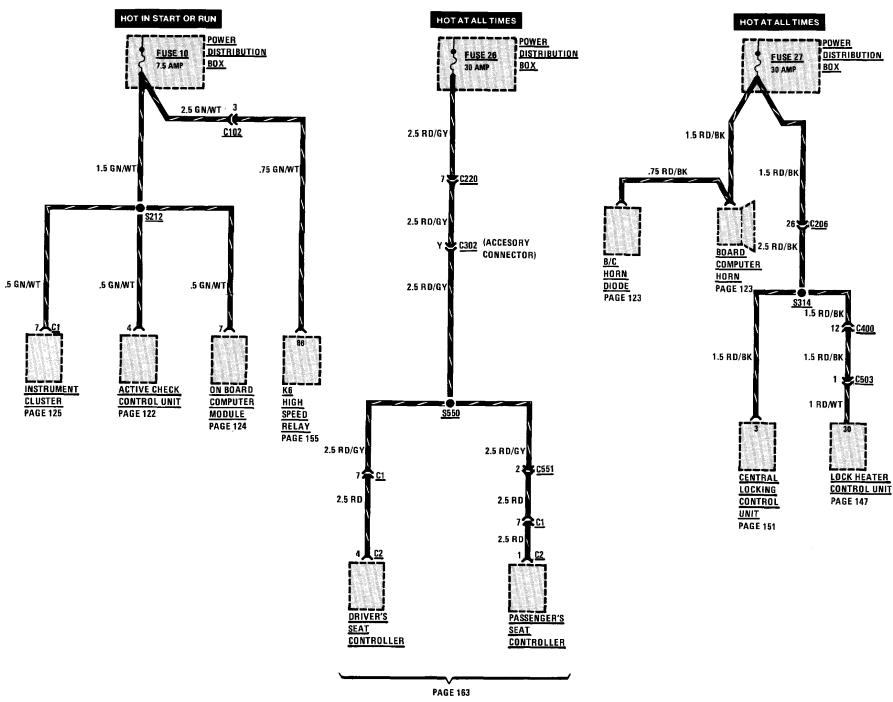


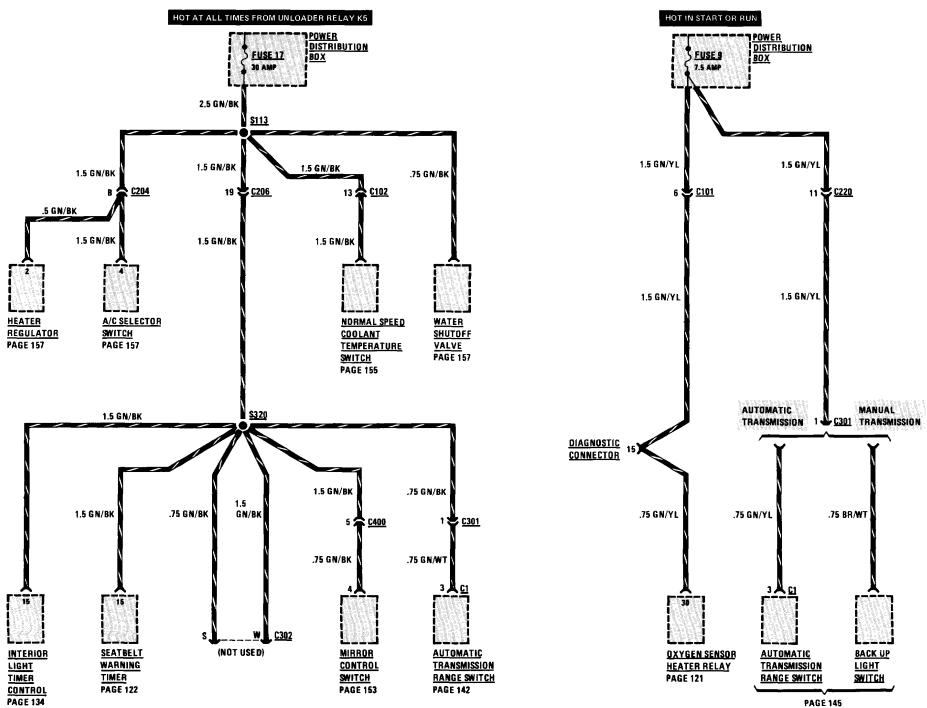


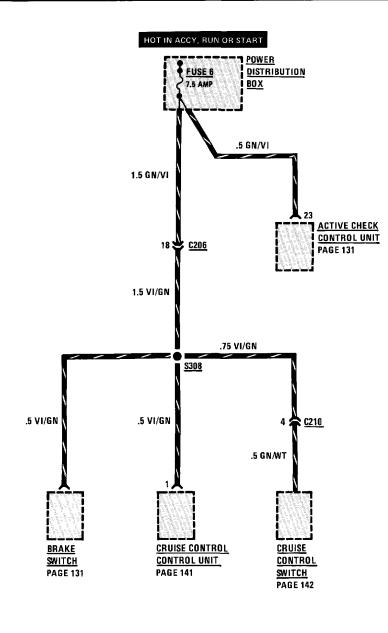
POWER DISTRIBUTION 107

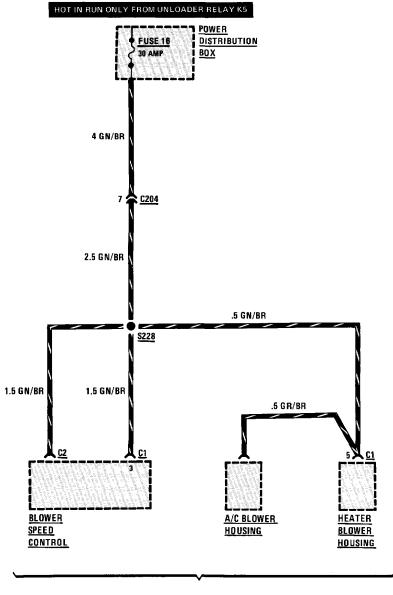


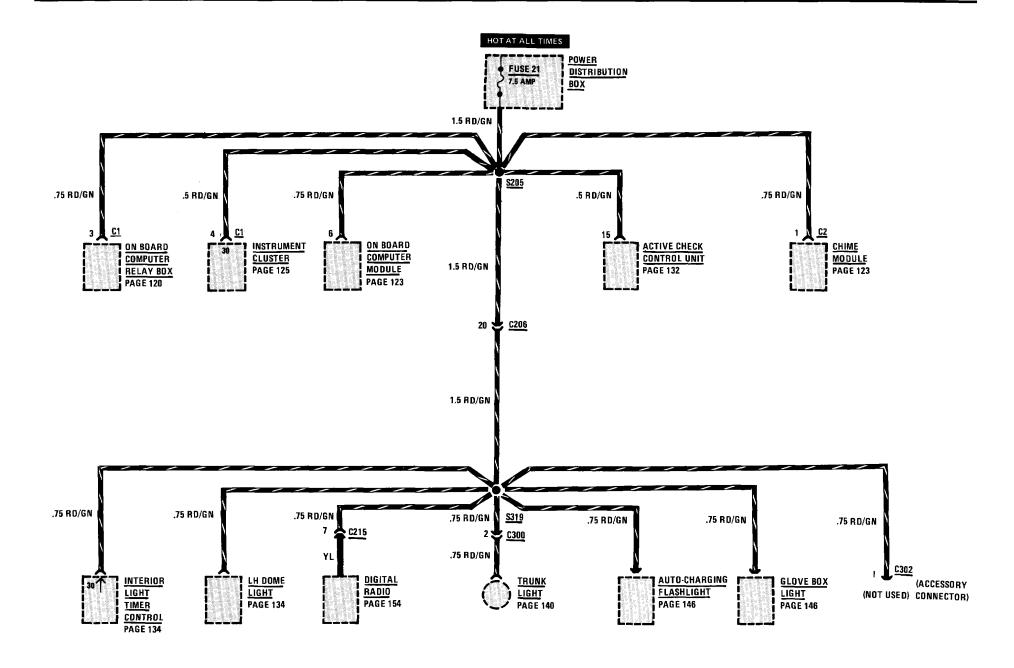


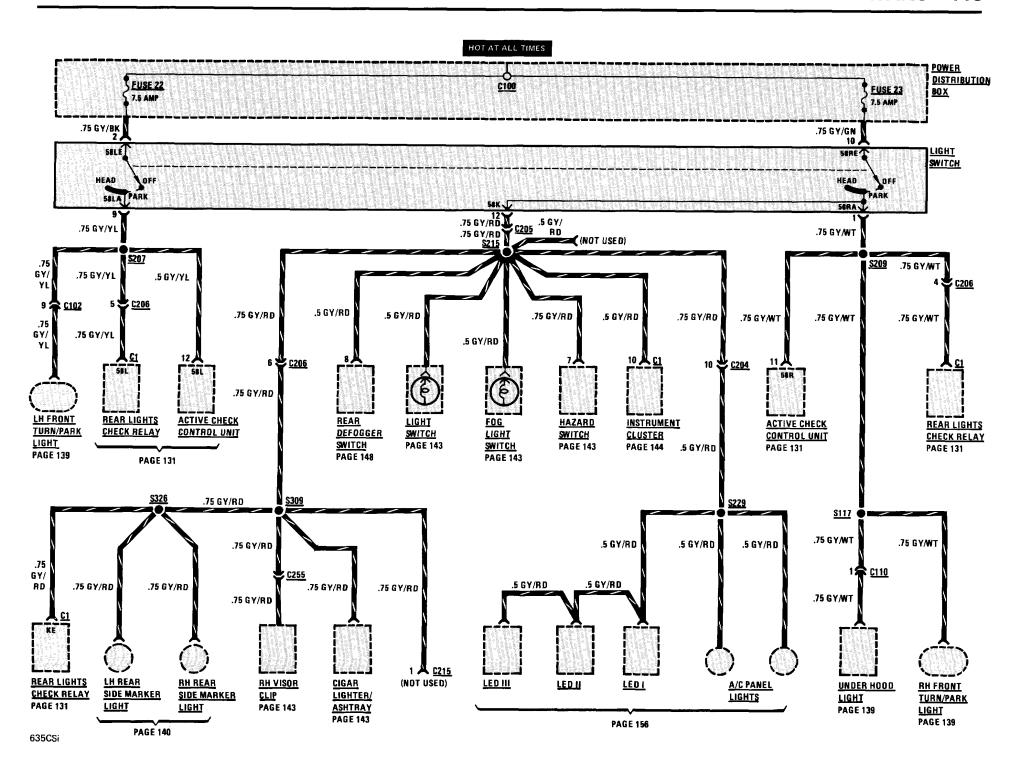


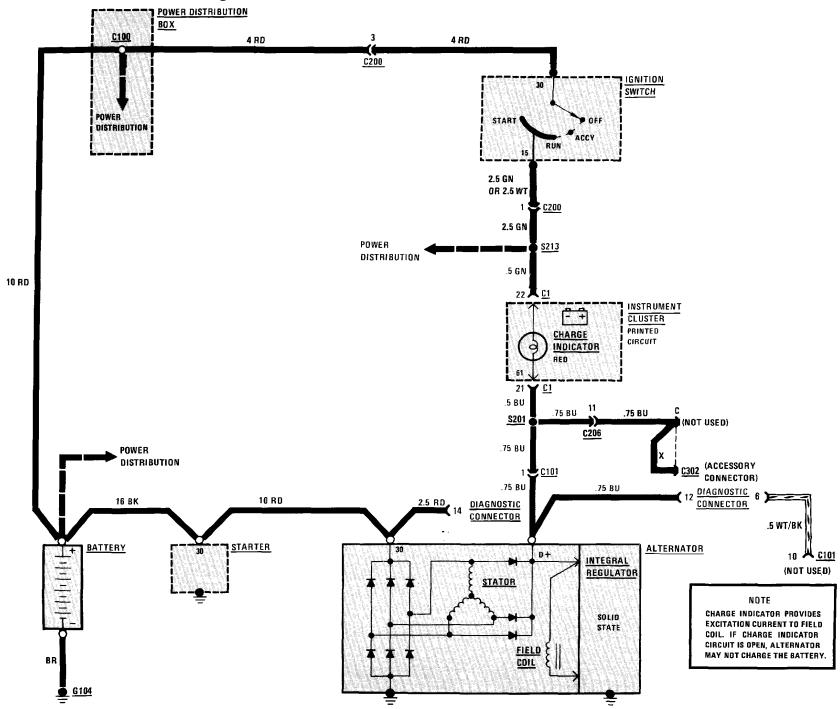


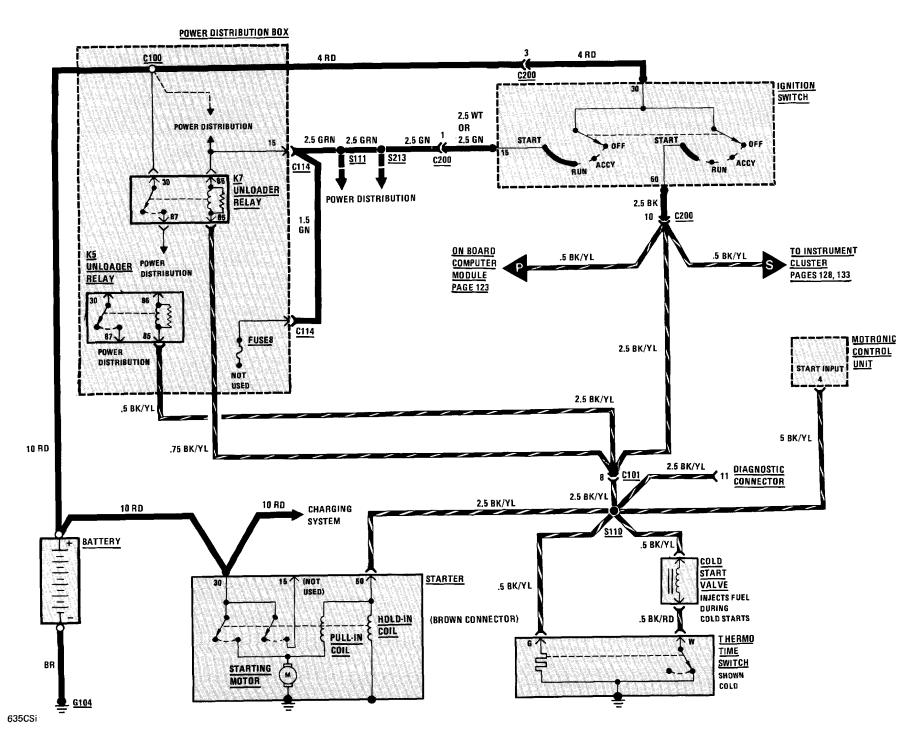


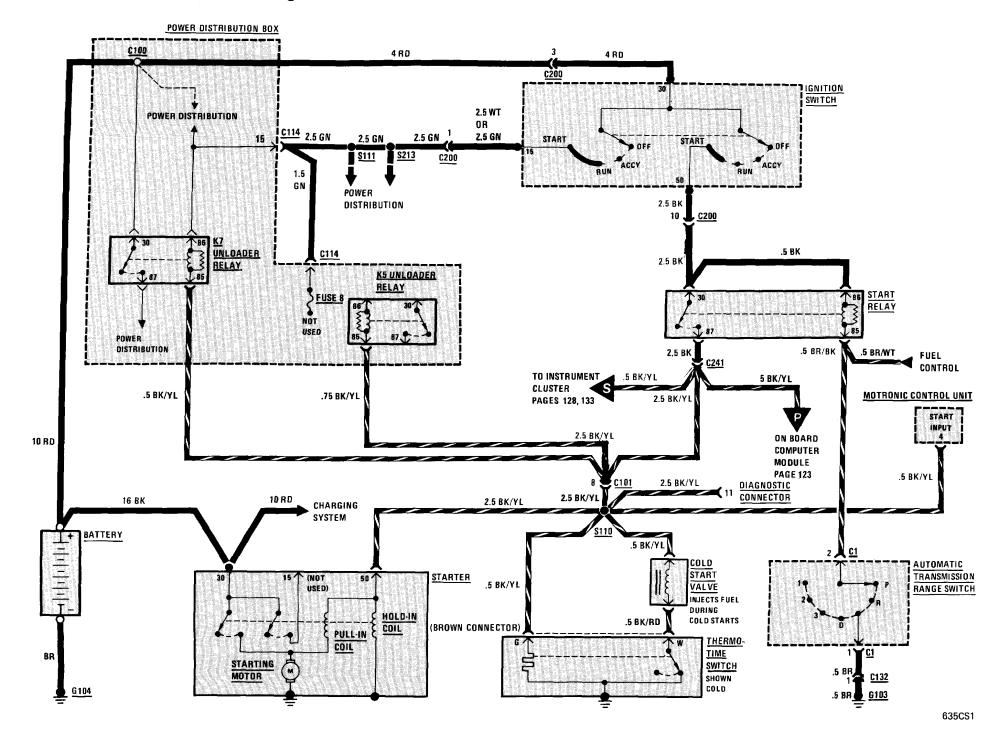


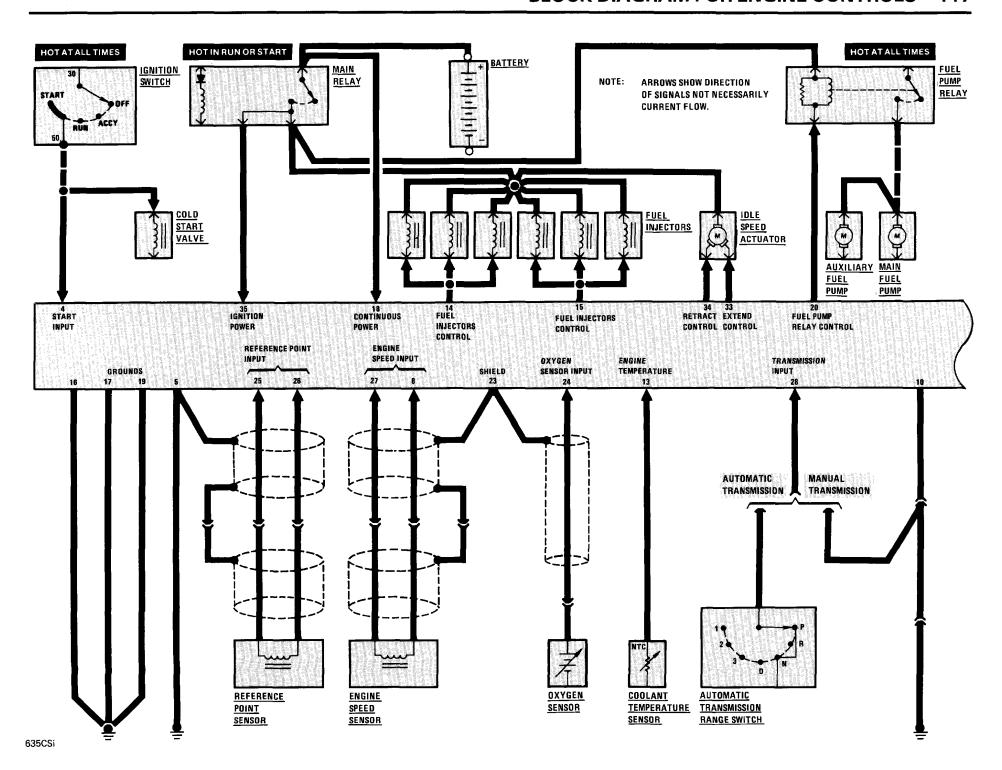


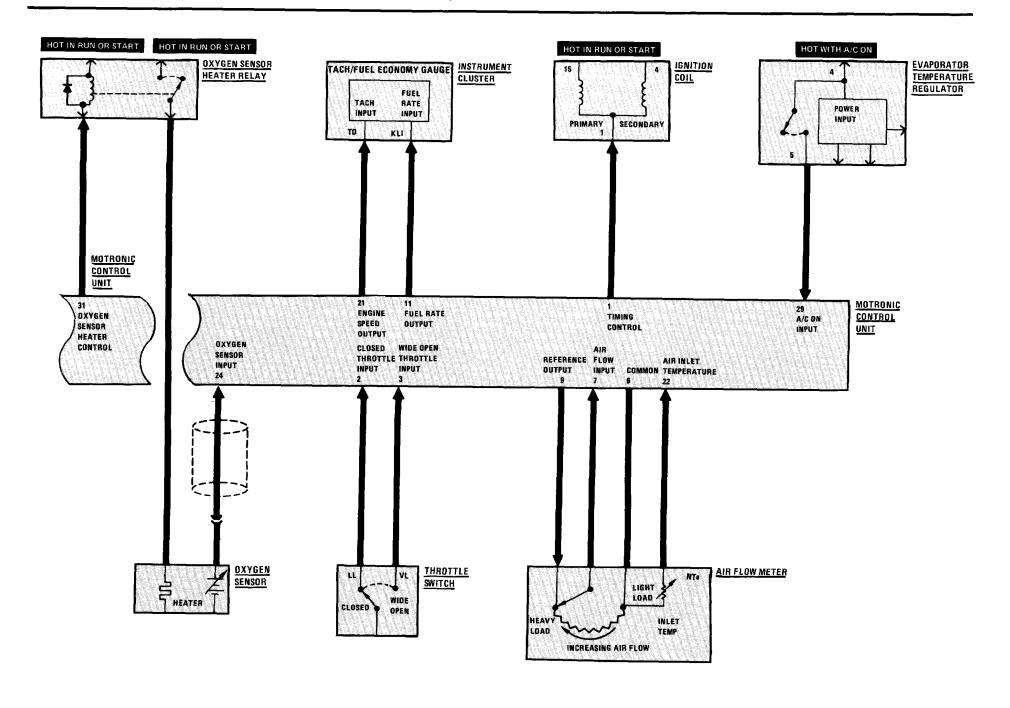


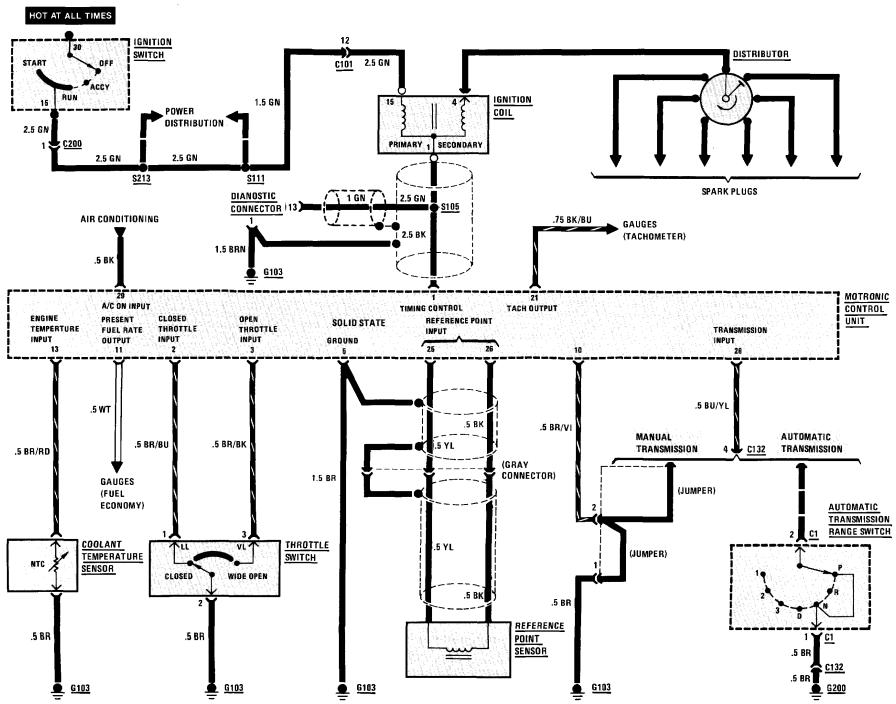


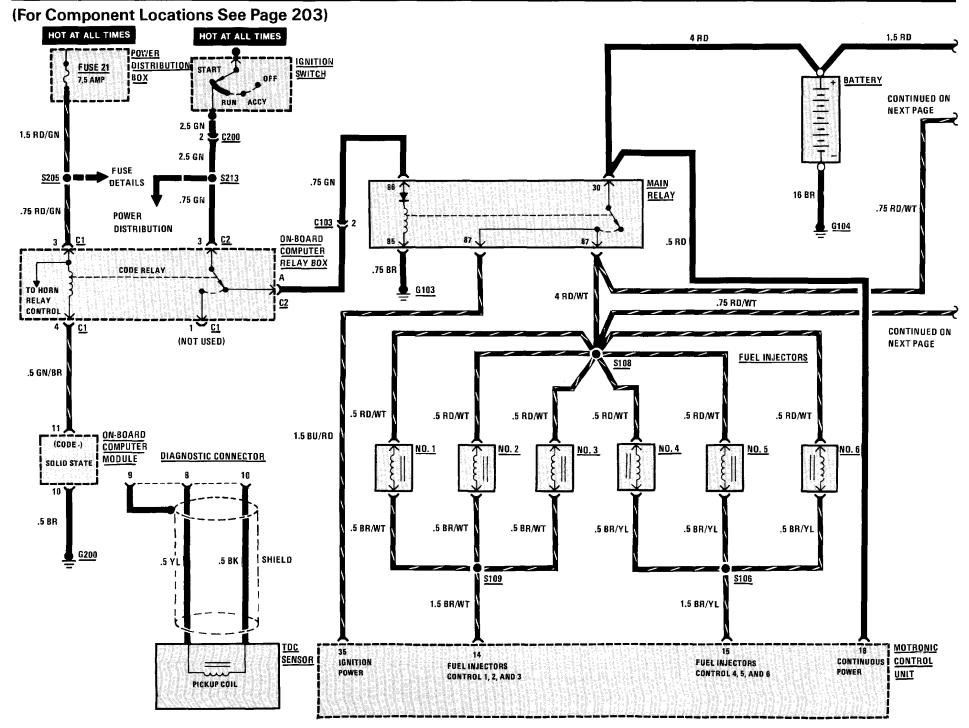


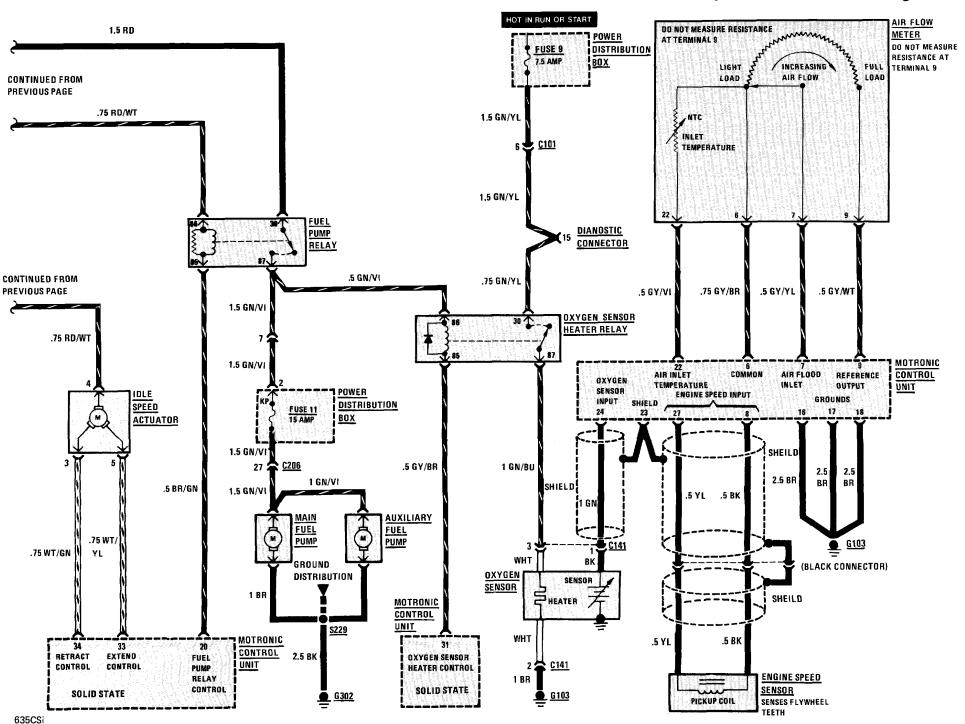


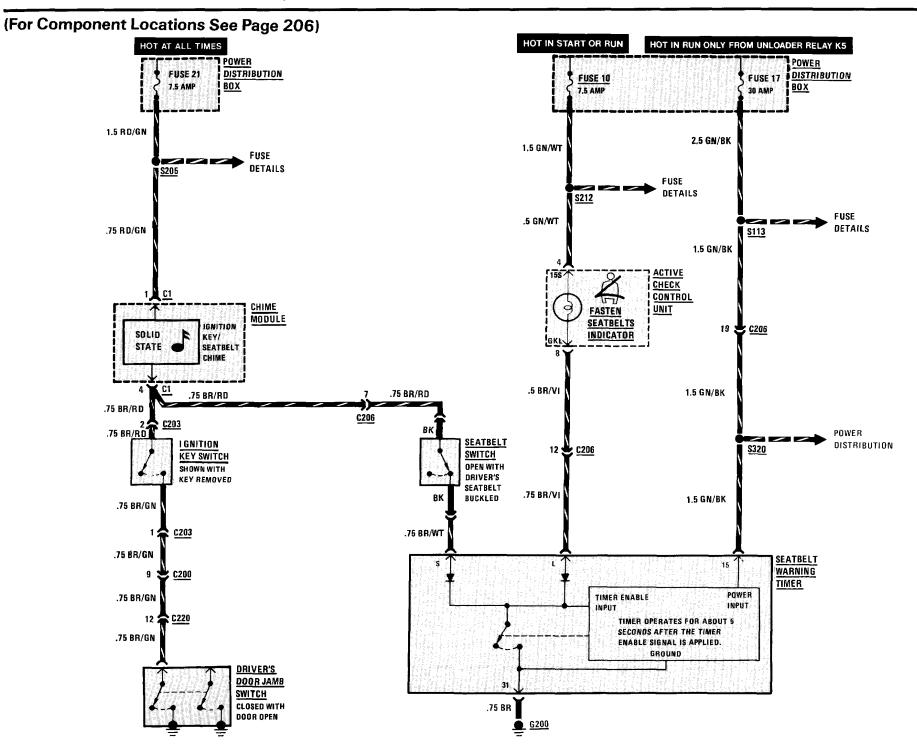


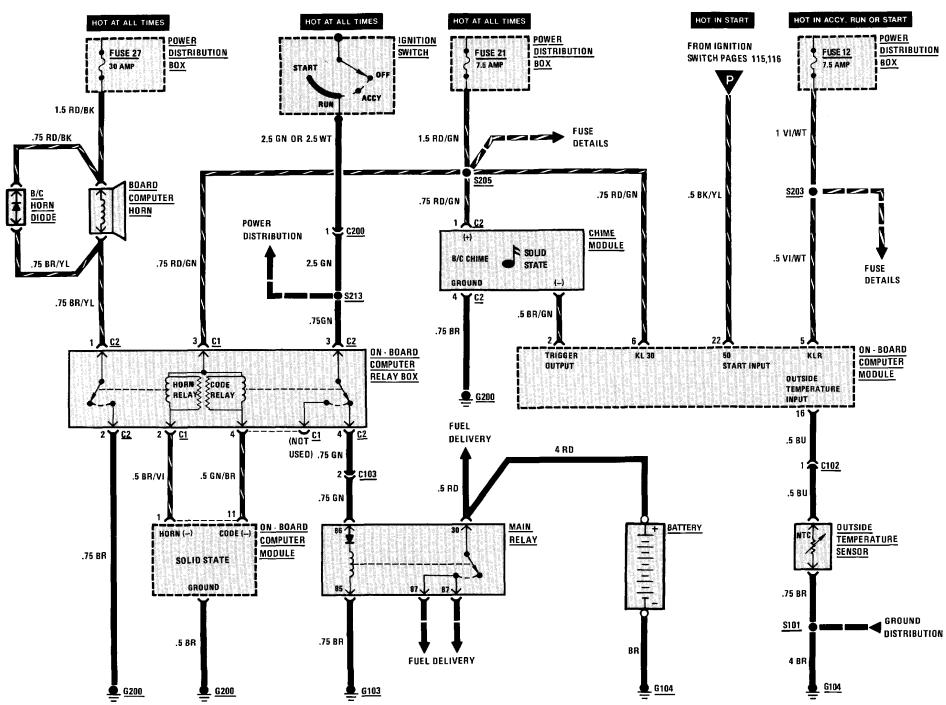


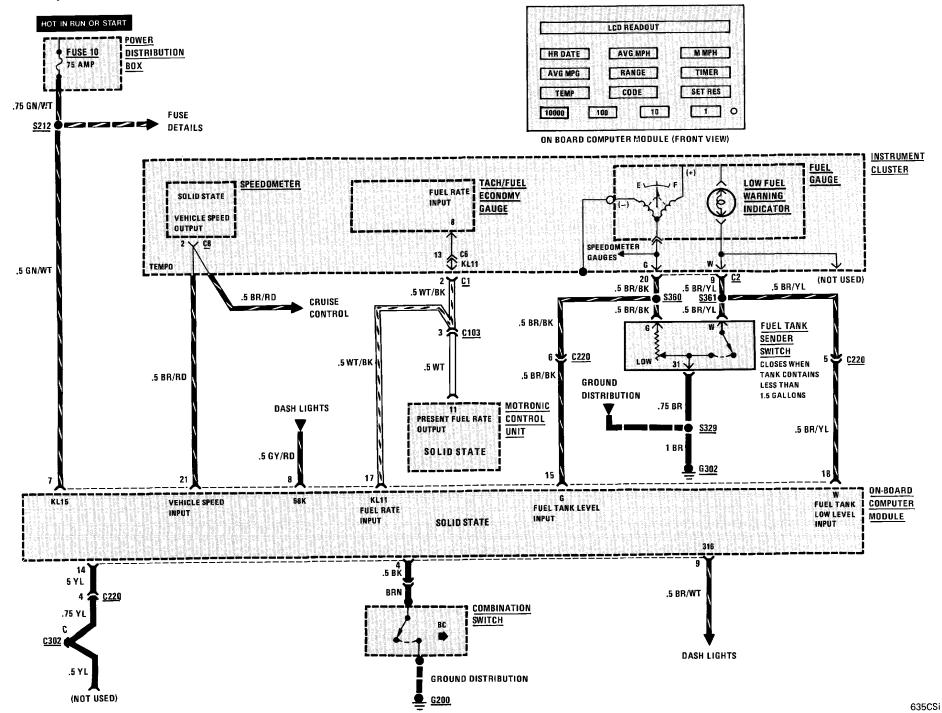


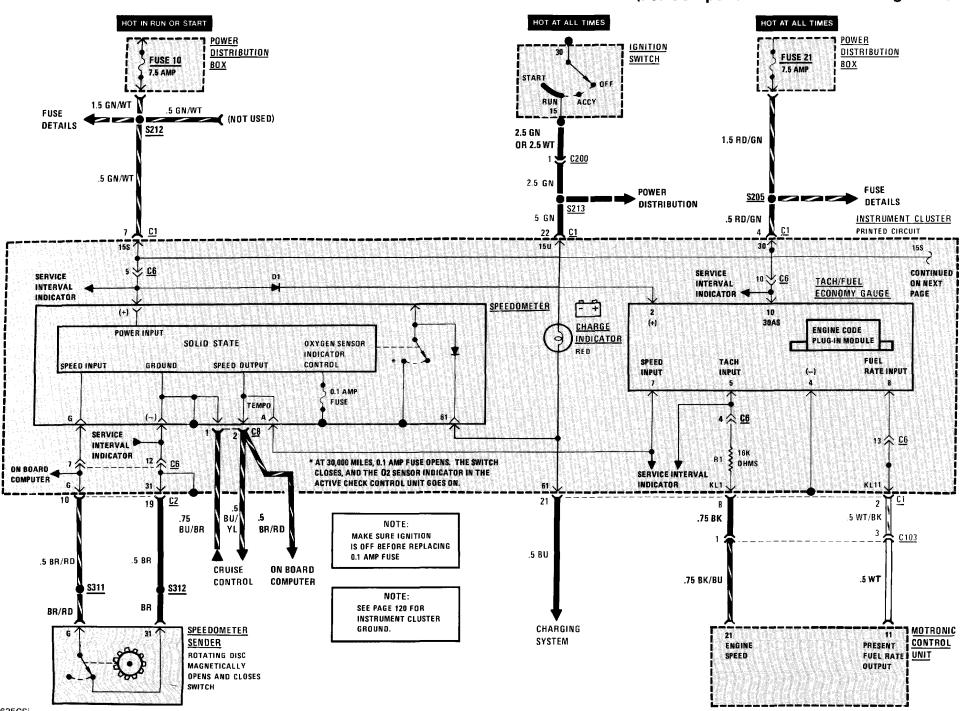




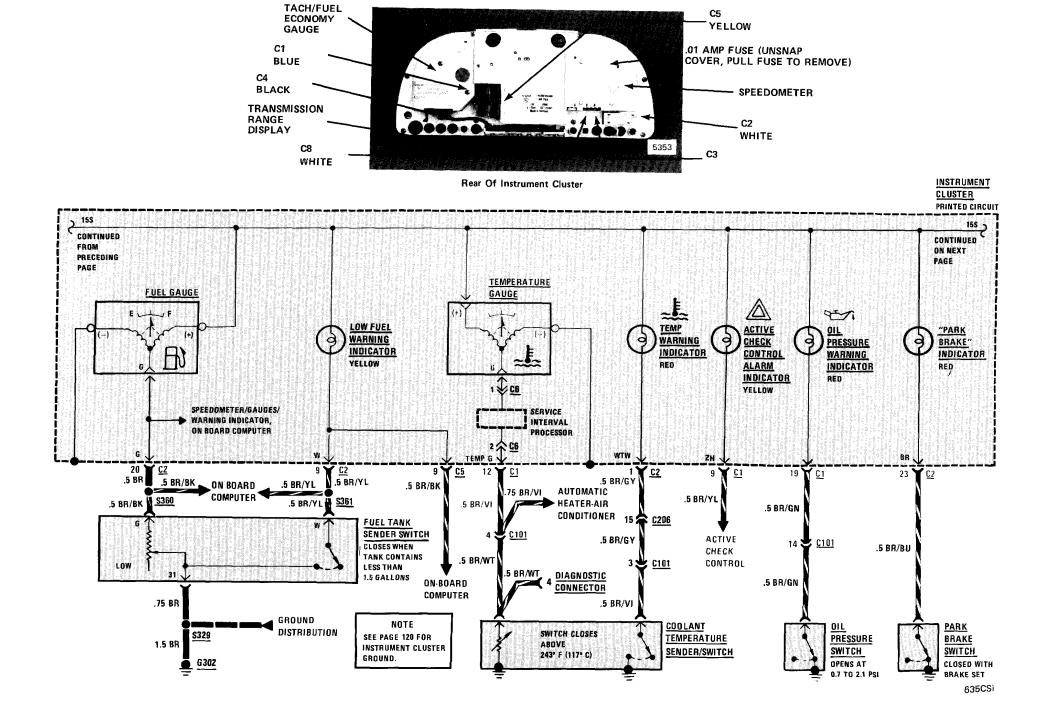


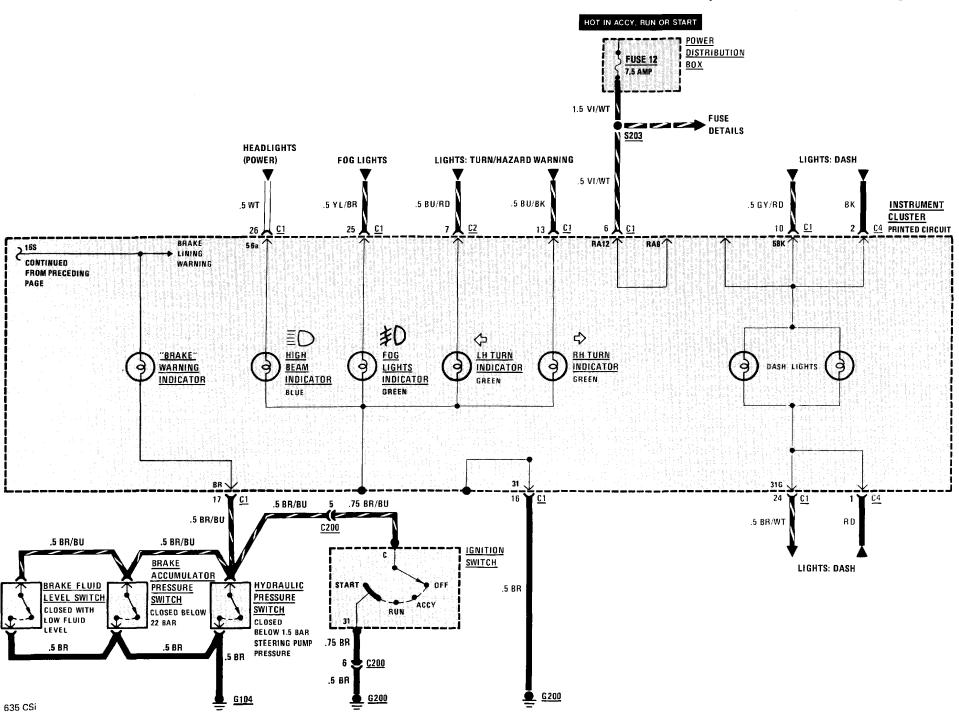


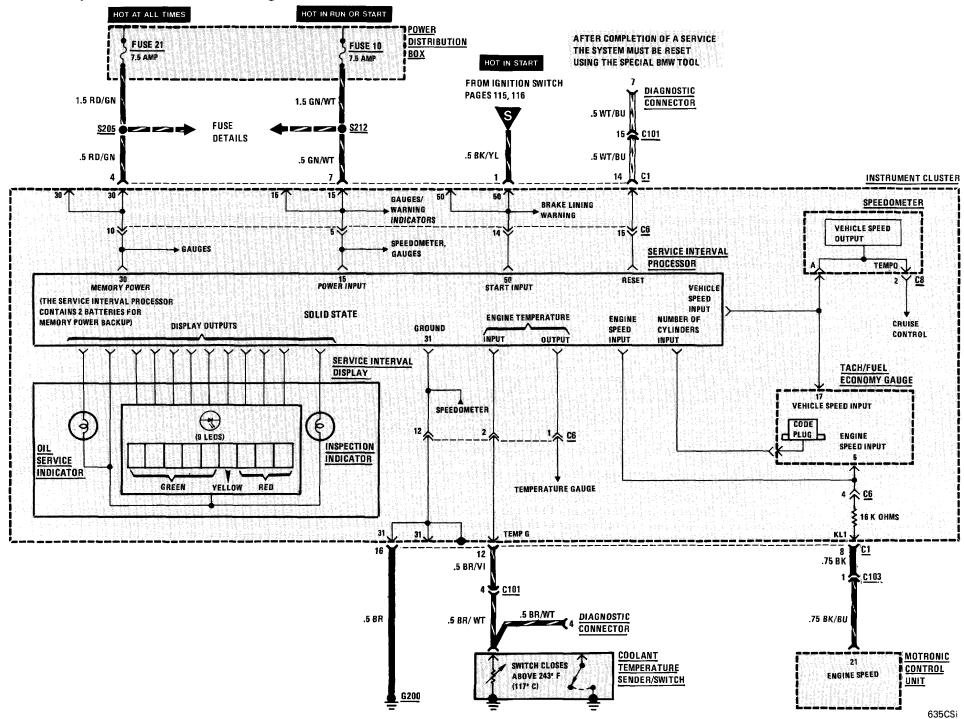


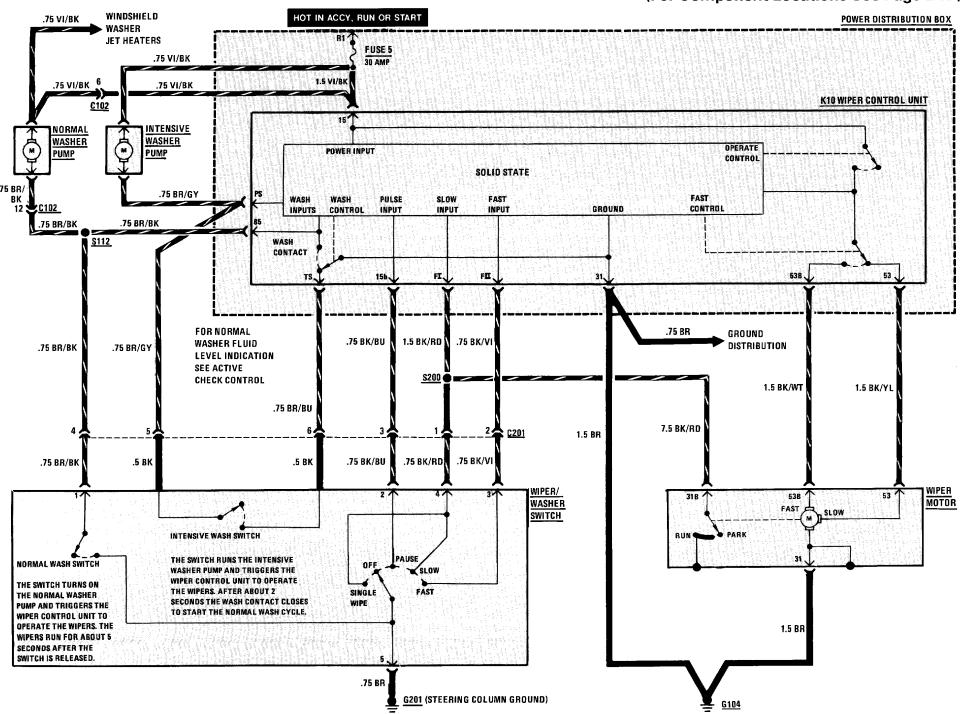


126 GAUGES/WARNING INDICATORS









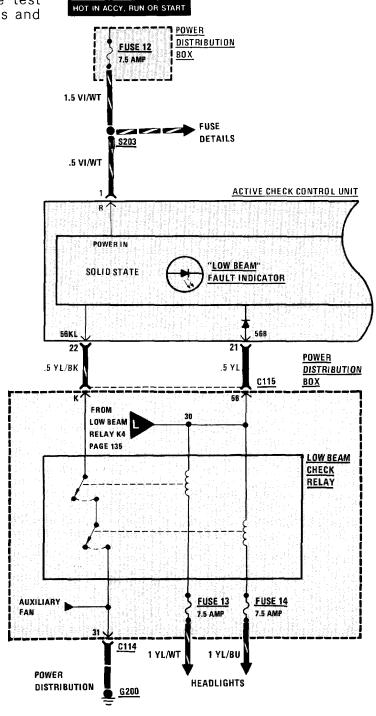
ACTIVE CHECK CONTROL

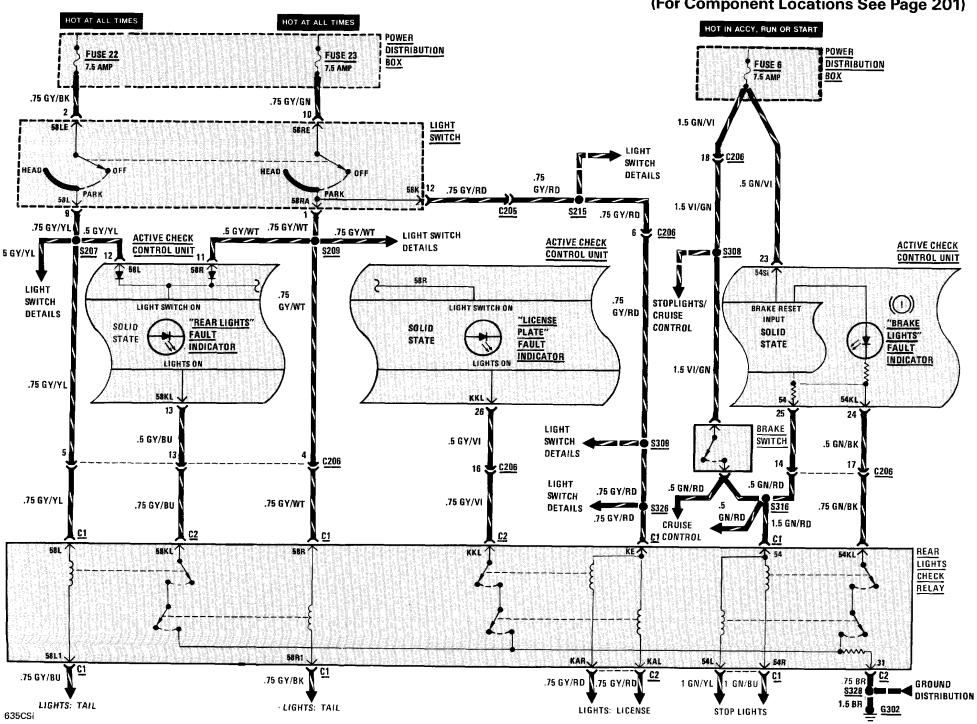
- 1. When the Ignition Switch is initially placed in "Run," the Active Check Control Arm Indicator flashes, and the Active Check Control Unit Brake Light LED and panel light illuminate for test purposes. Depressing the brake pedal clears the display.
- 2. When the Ignition Switch is placed in "Run," fault monitoring begins. To monitor the low beams, rear lights, or license lights, those circuits must be on. The brake lights are monitored only while the brake pedal is depressed.
- 3. When a fault occurs, the alarm indicator flashes, the appropriate LED fault indicator lights, and the panel light goes on for five seconds. Depressing the test button will clear the alarm indicator, but the LED fault indicator remains on.

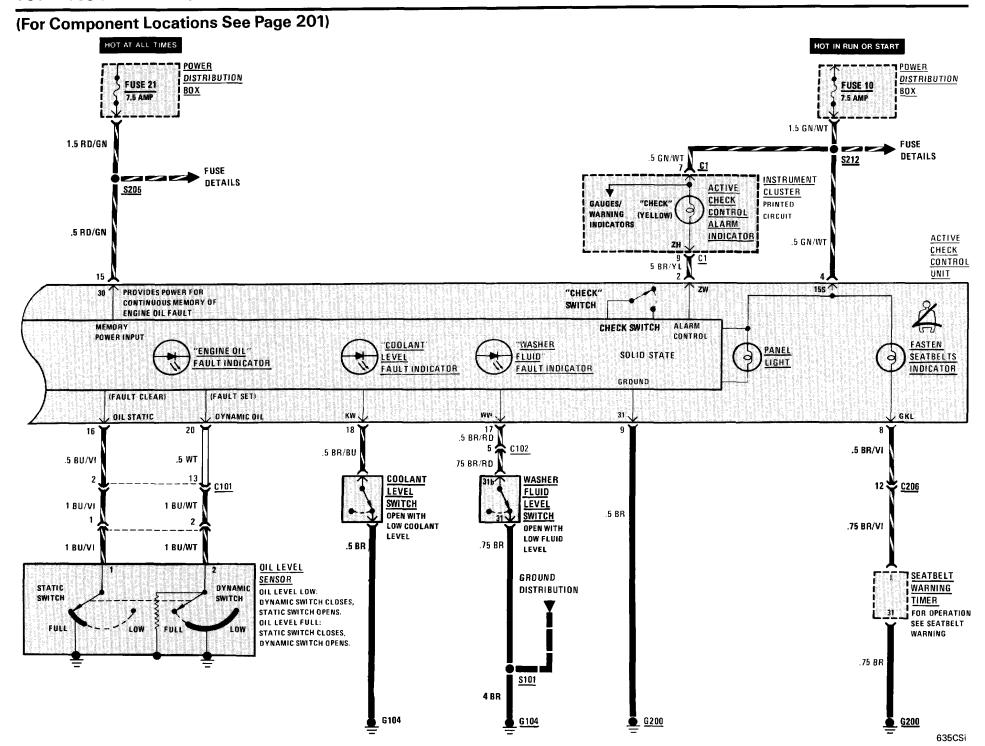


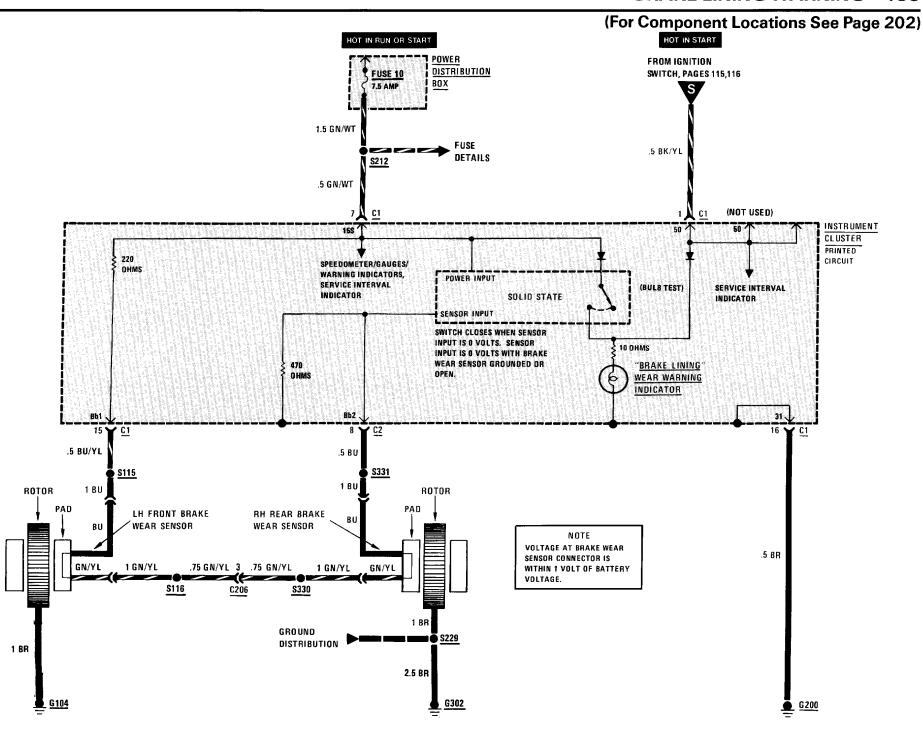
Figure 1 - Active Check Control Unit (Dash, Left Of Steering Column)

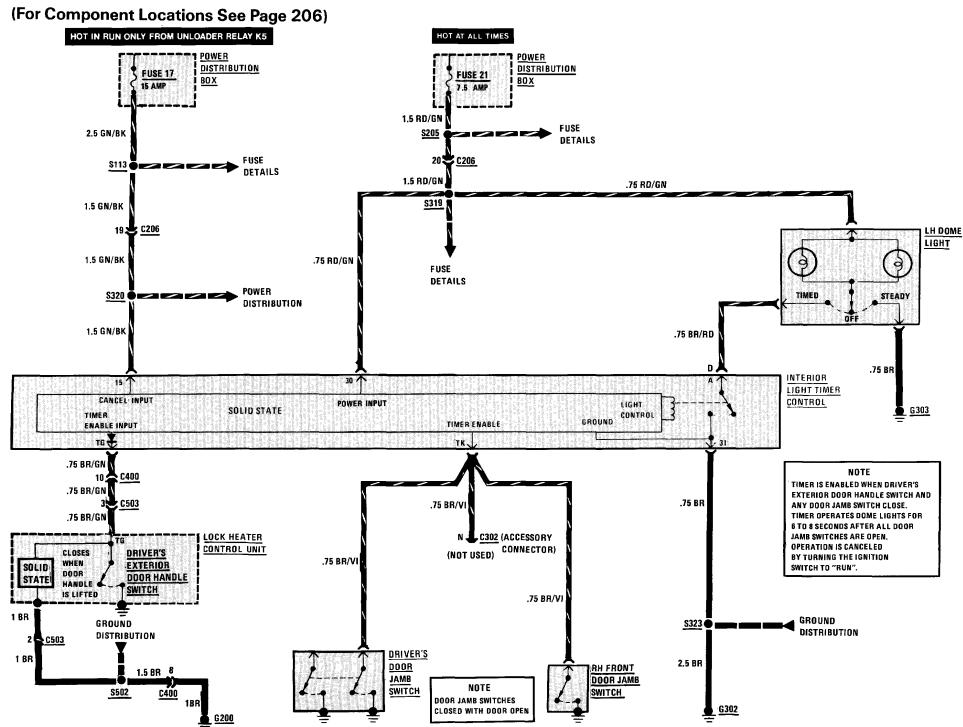
4. To test the unit, depress the test button. The LED fault indicators and the panel lights should go on.

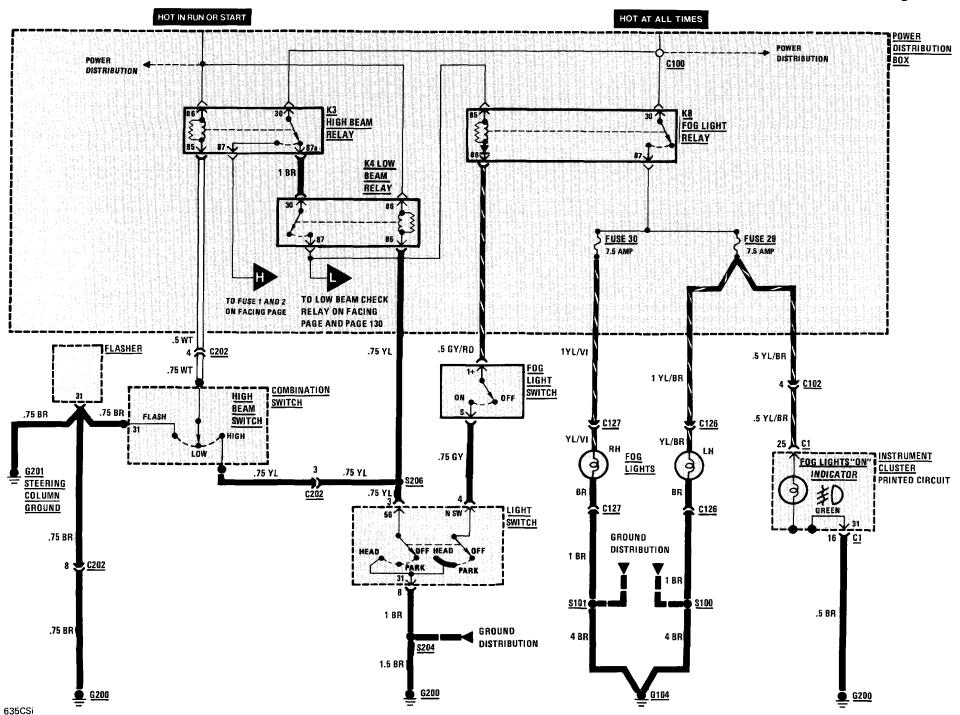


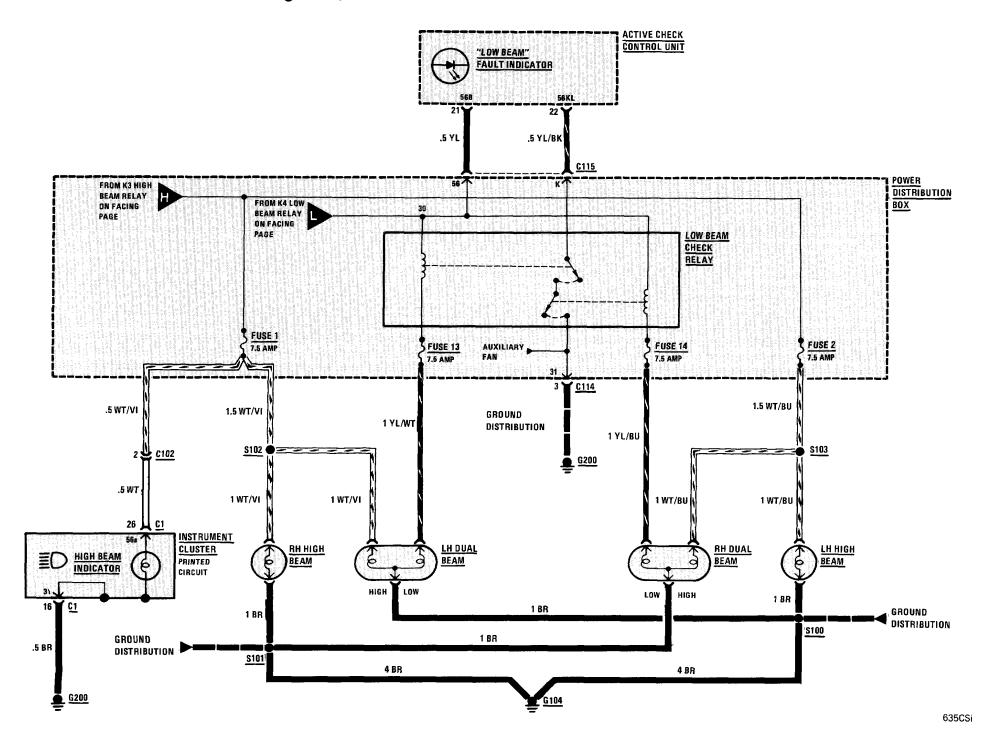


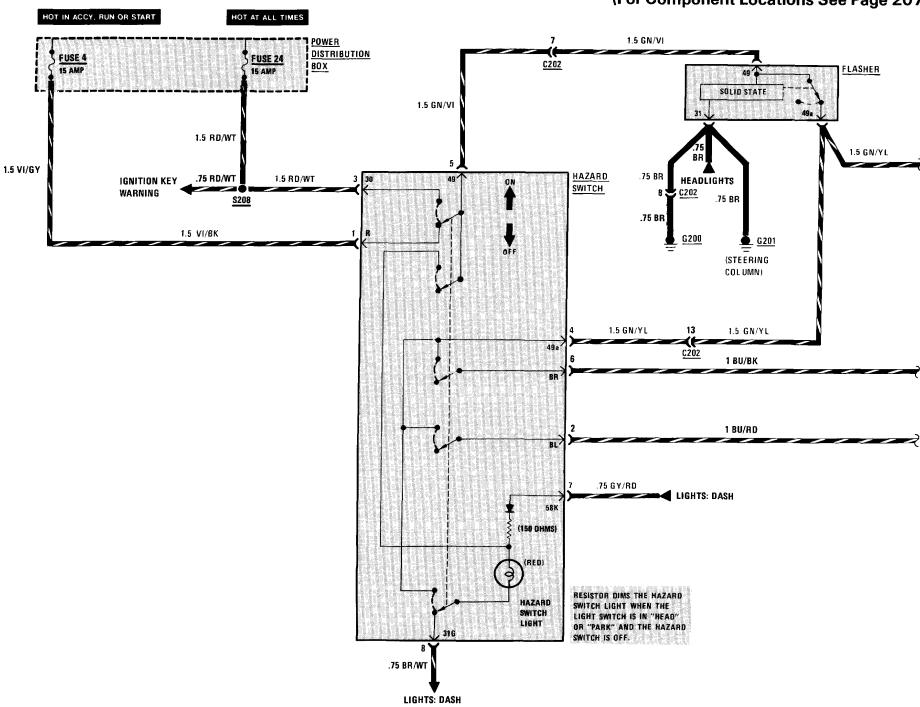


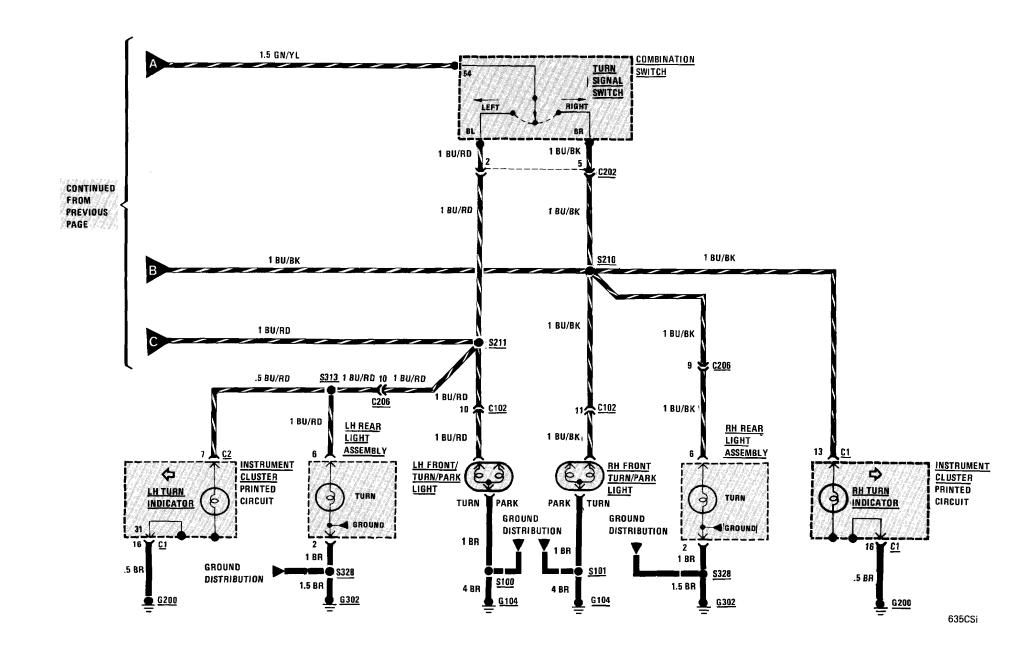


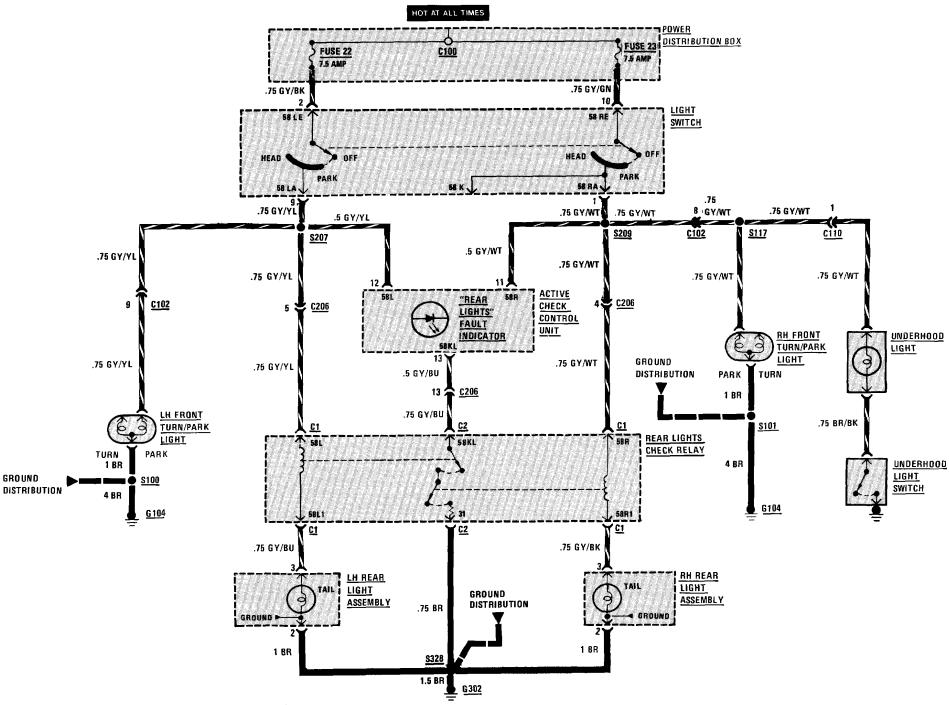




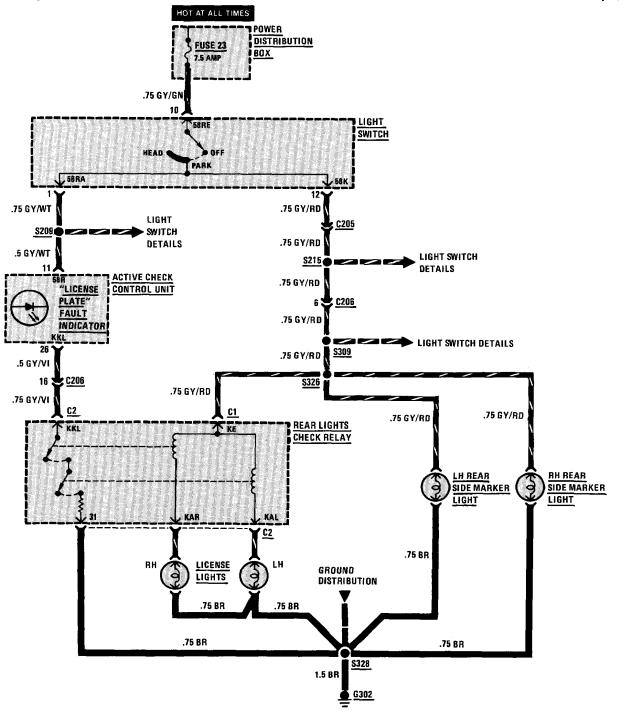


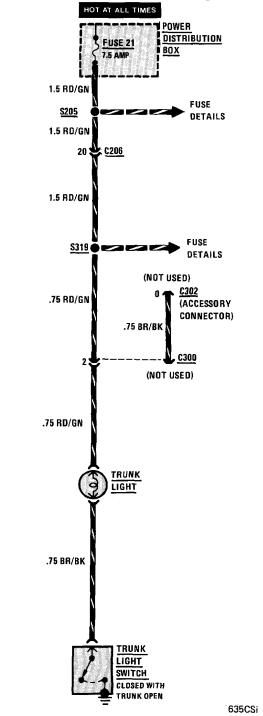


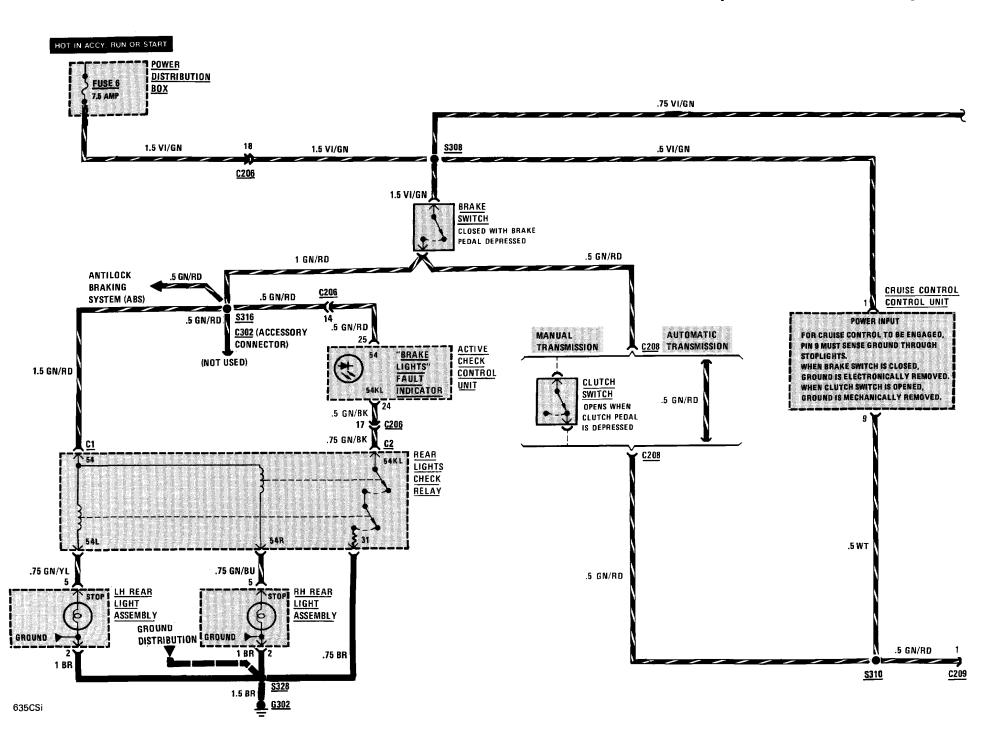


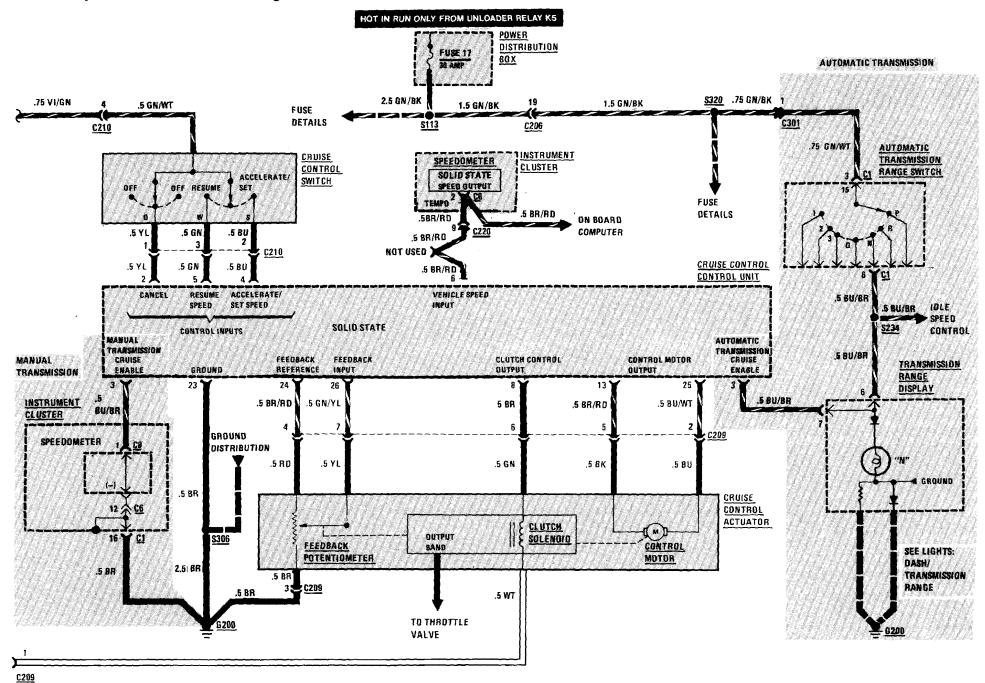


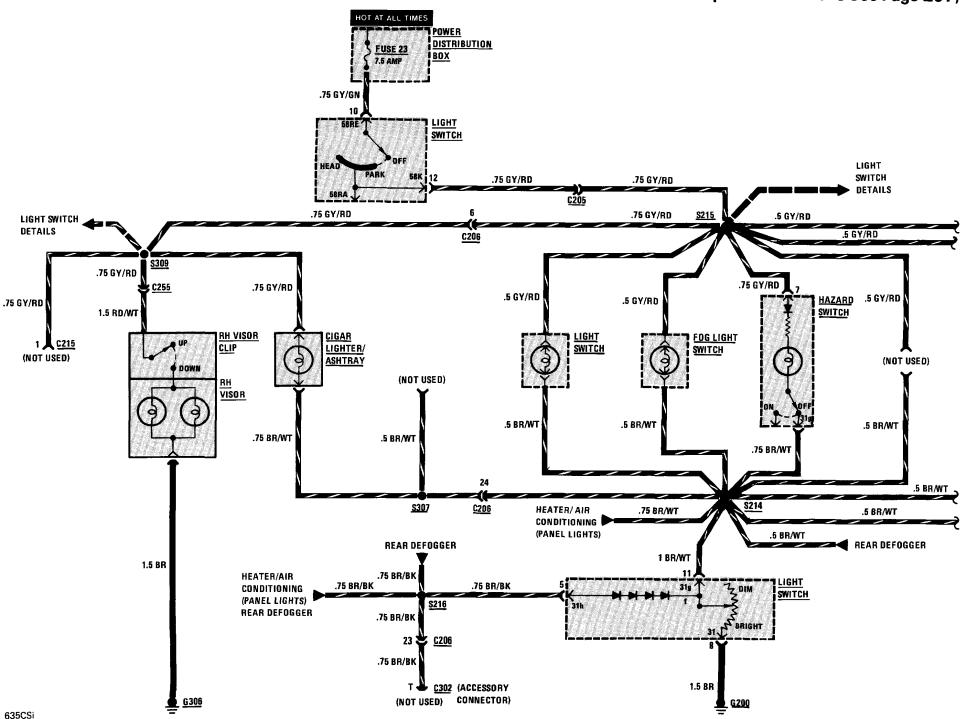
(For Component Locations See Page 207)









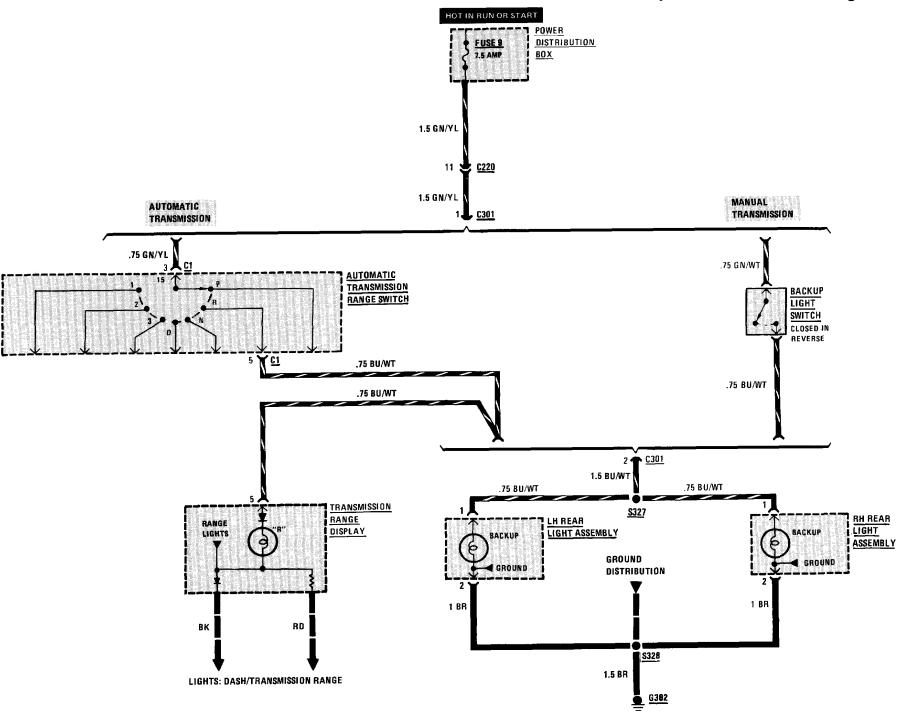


144 LIGHTS: DASH/TRANSMISSION RANGE

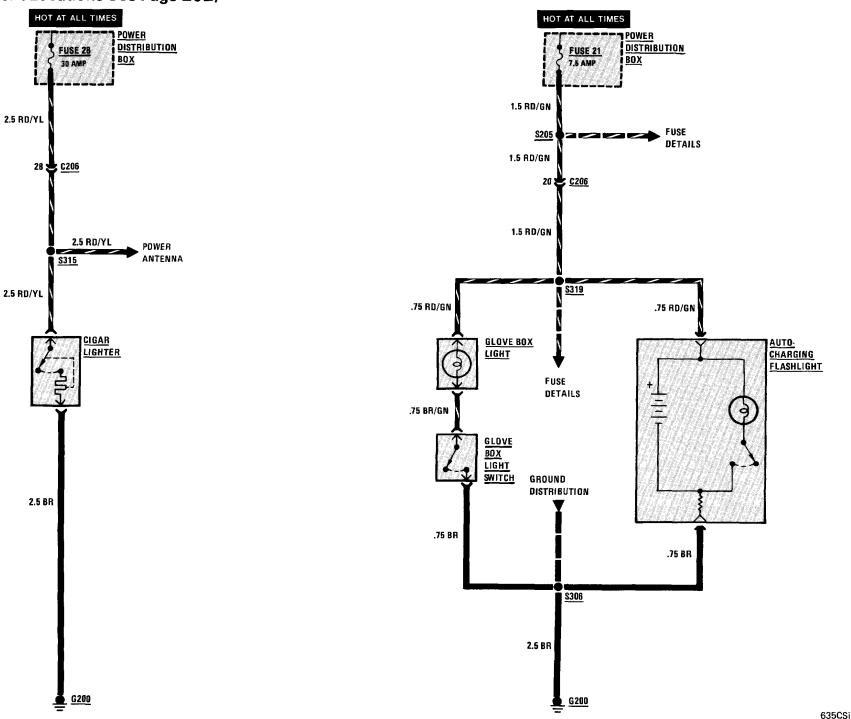
.5BR/WT

(For Component Locations See Page 207) HOT IN RUN ONLY FROM UNLOADER RELAY K5 DISTRIBUTION BOX \$113 1.5 GN/BK 19 1 GN/BK \$320 .75 GN/BK .75 GN/BK 2.5 GN/BK <u>C206</u> C301 AUTOMATIC FUSE TRANSMISSION DETAILS RANGE SWITCH .5 GY/RD Y CI CZ .5 GY/RD SEE BACKUP .5 BU/BK .5 BU/GY .5 BU/ .5 BU/ .5 BU/ LIGHTS .75 BU/ INSTRUMENT TRANSMISSION CLUSTER PRINTED CIRCUIT RANGE DISPLAY 58K ON BOARD BK COMPUTER MODULE ILLUMINATION DIODE GIVES BRIGHT RANGE DISPLAY IN DAY TIME THROUGH RESISTOR DIMS RANGE THE REAR MARKER/LICENSE LIGHTS DISPLAY AT NIGHT (THROUGH DIMMER TO GROUND) 31G RD .5 BR/WT

24 **Y**C1

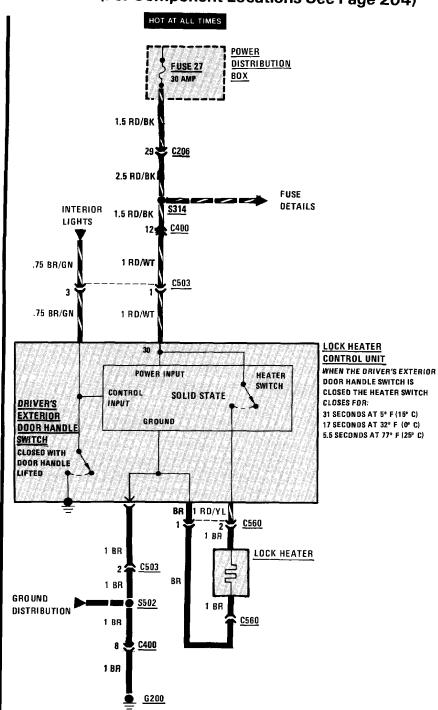


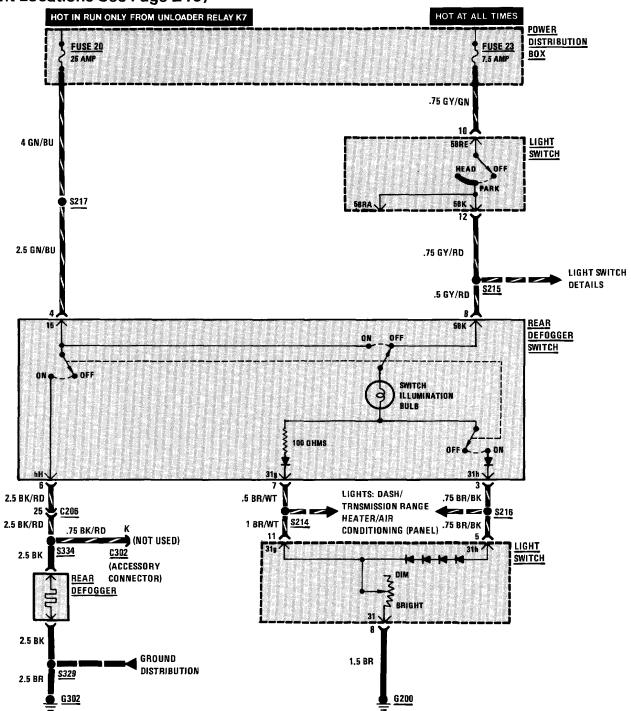
146 CIGAR LIGHTER/GLOVE BOX LIGHT/AUTO-CHARGING FLASHLIGHT



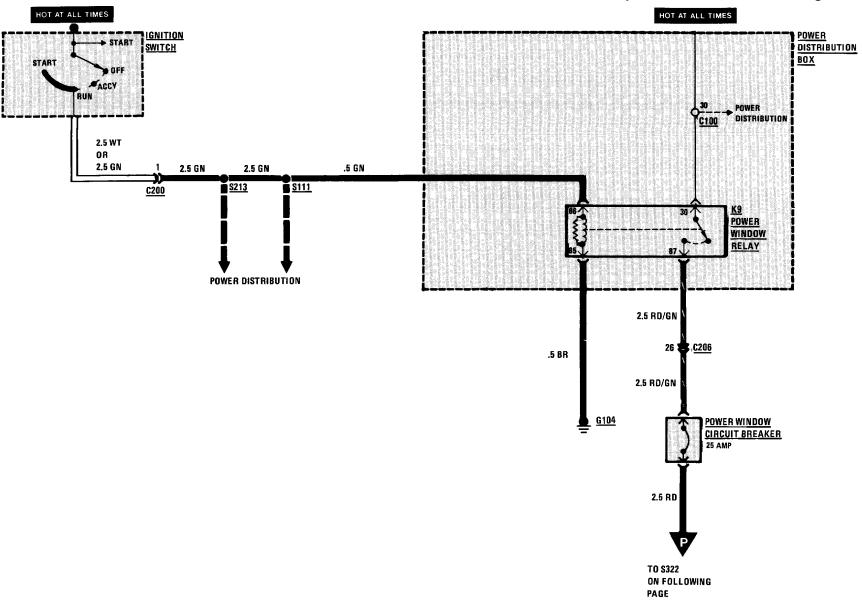
(For Component Locations See Page 204)

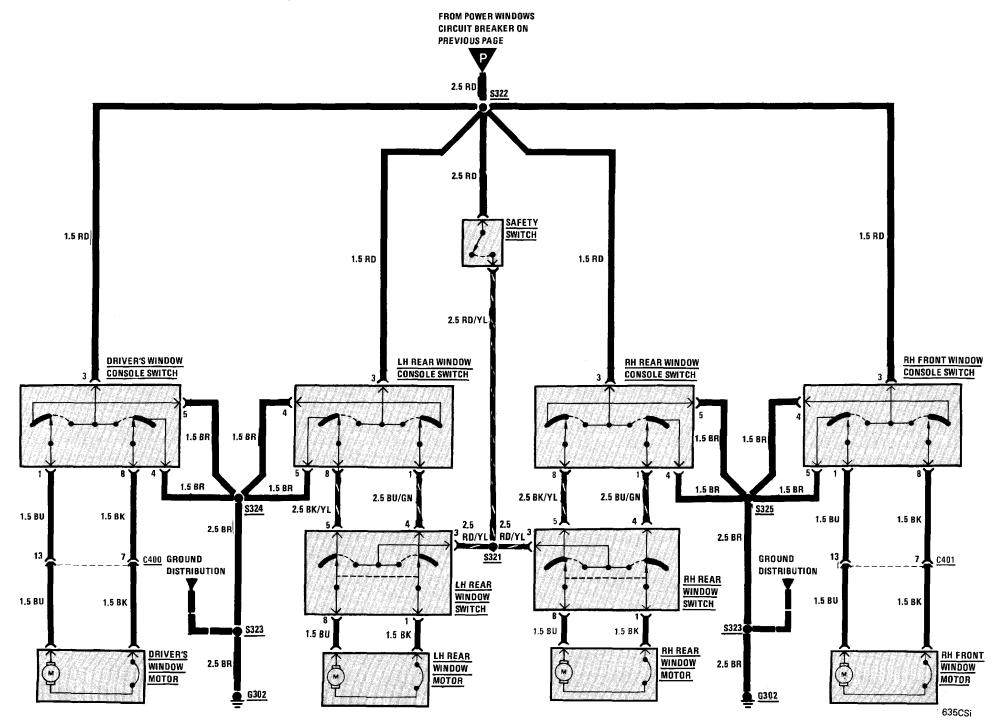
HOT IN RUN OR START HOT IN ACCY, RUN OR START **POWER** DISTRIBUTION BOX FUSE 7 15 AMP .75 BR/YL 12 <u>C202</u> 1 VI YL 1 VI/YL .75 BR/YL HORN HORN HORN BRUSH SLIP RING 1 BR GROUND 1 BR DISTRIBUTION ВК \$100 S101 4 BR 4 BR HORN SWITCHES (GROUNDED TO STEERING COLUMN) <u>**G200**</u>

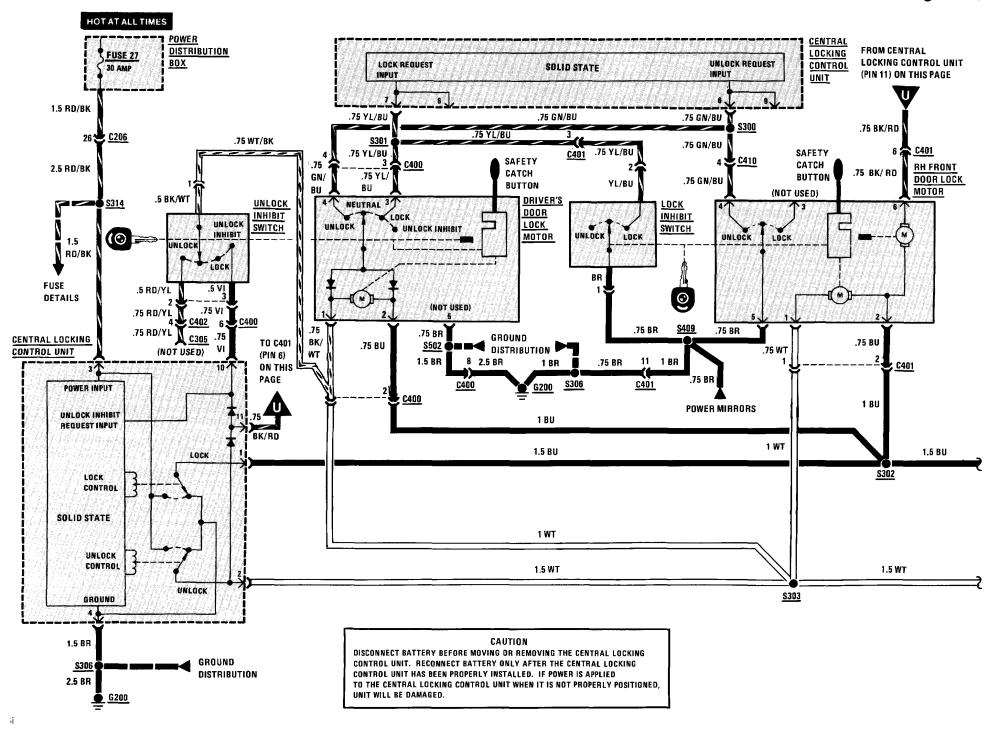


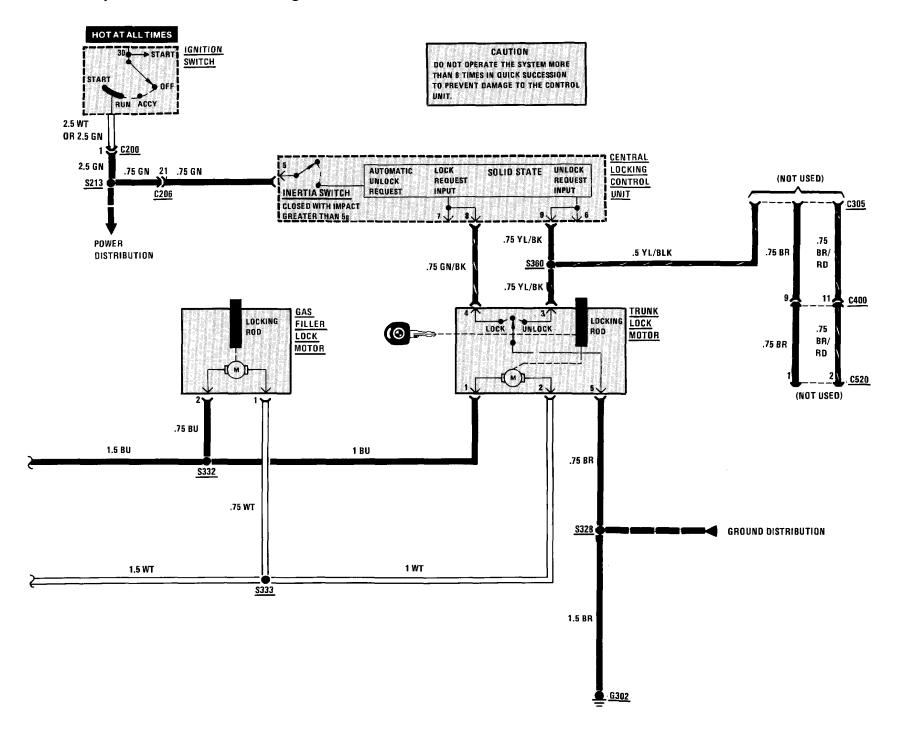


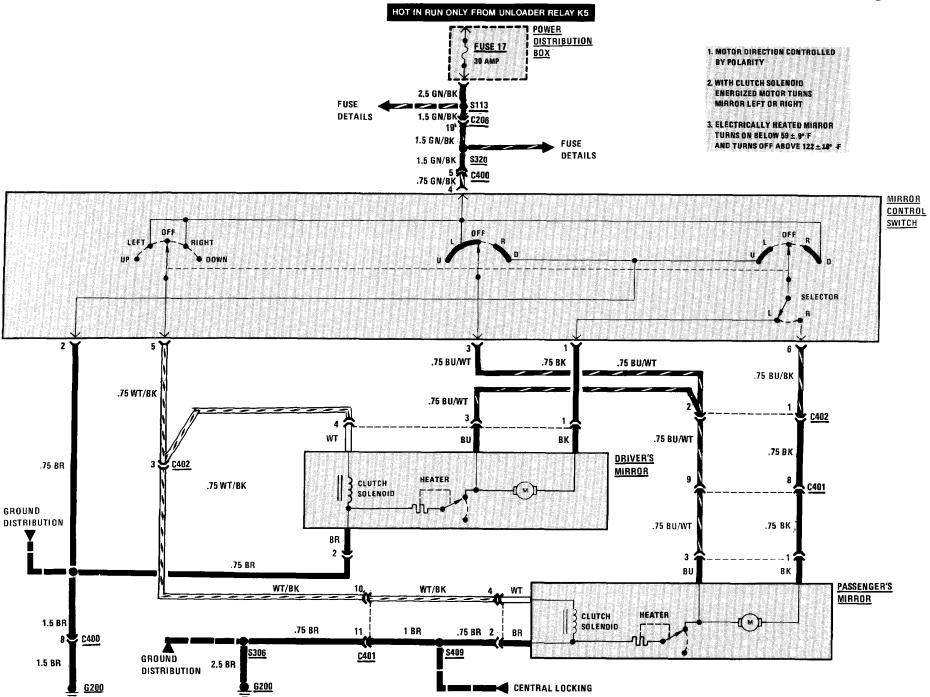
POWER WINDOWS 149

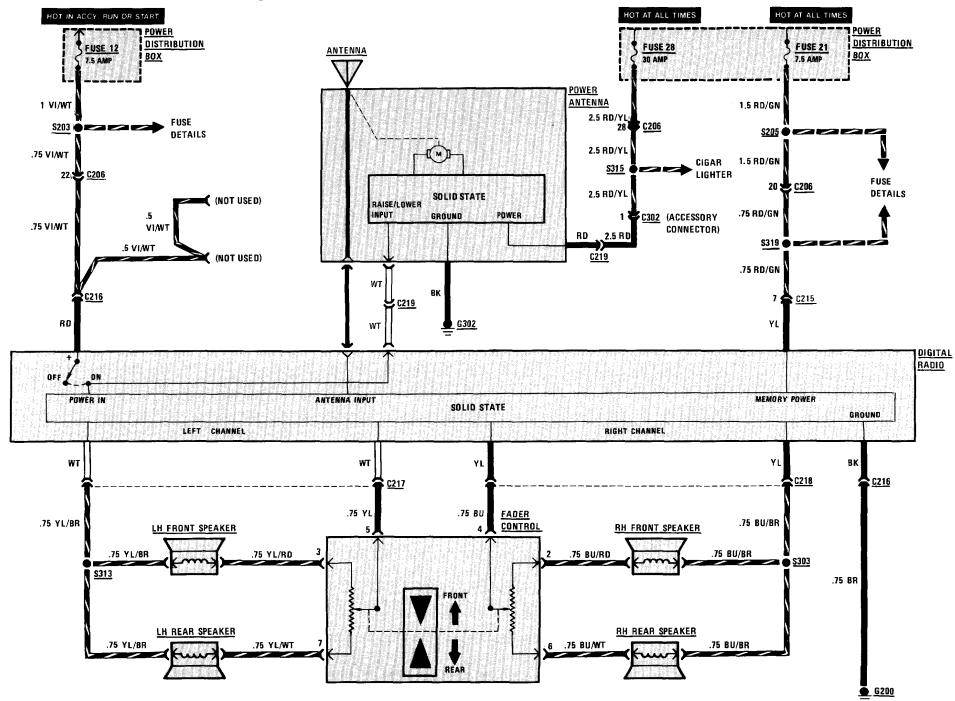


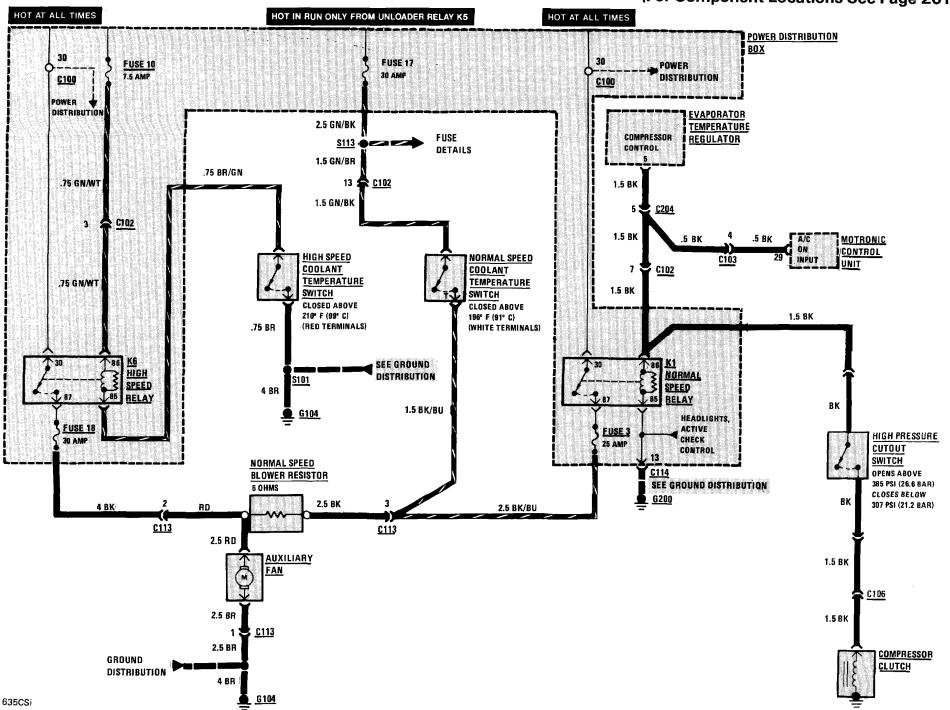


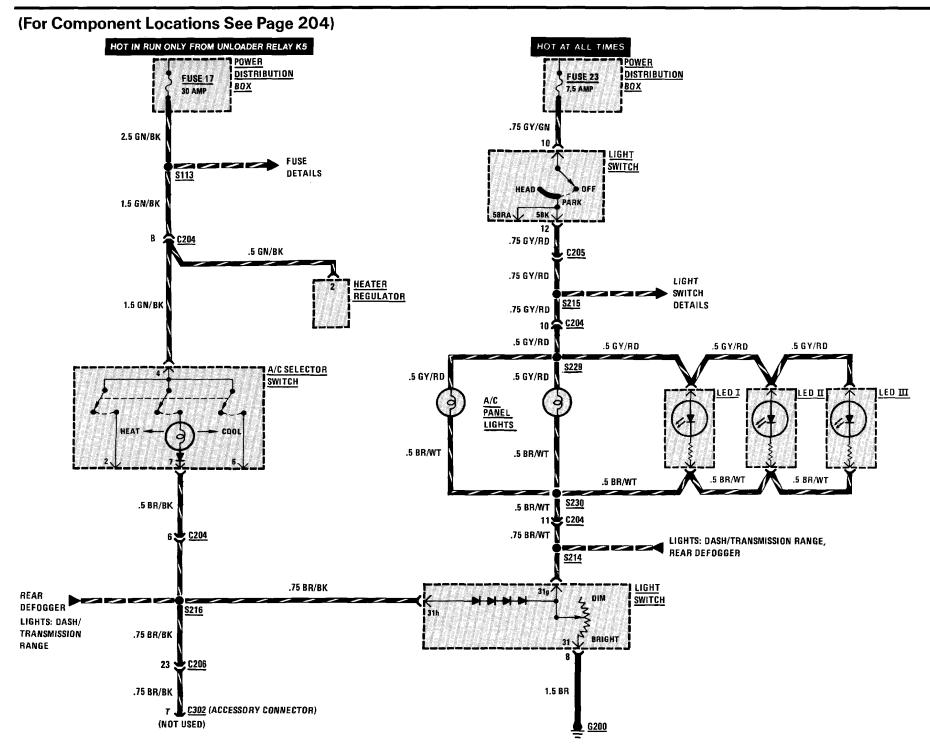


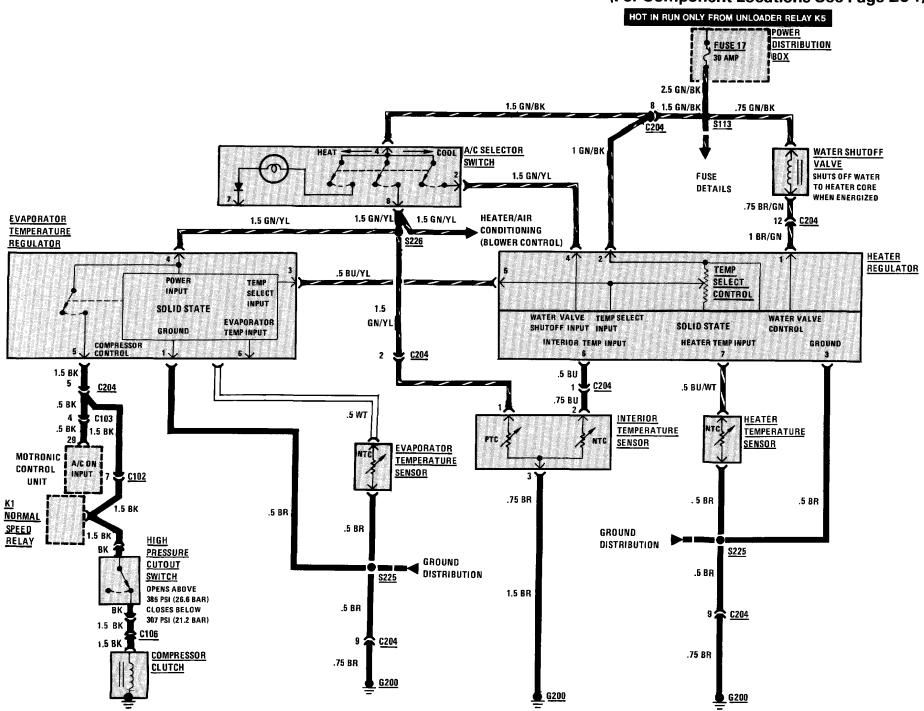


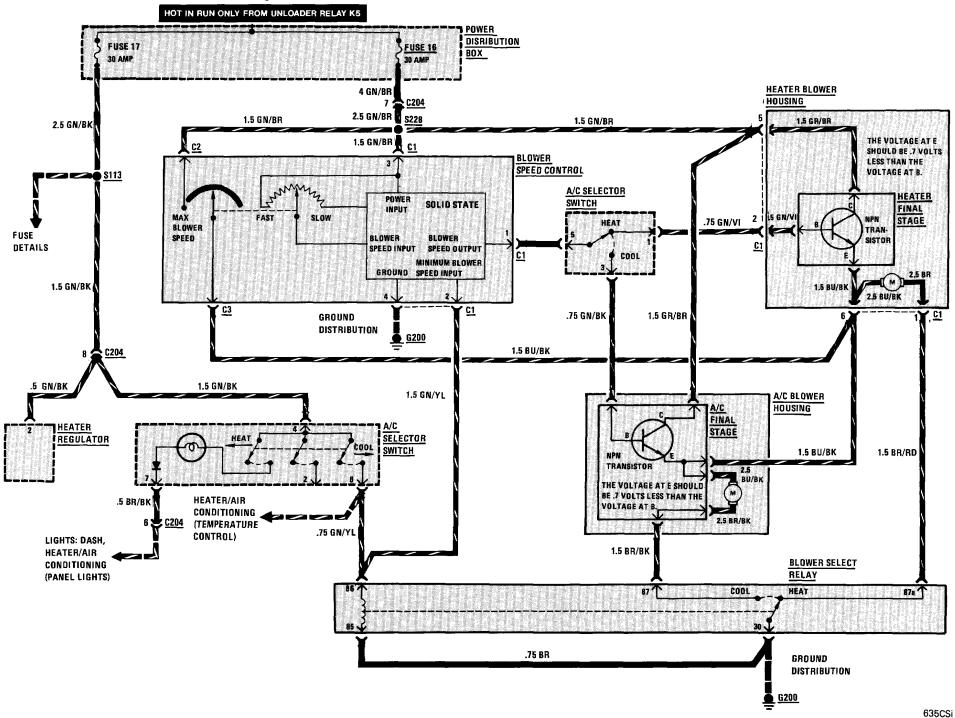


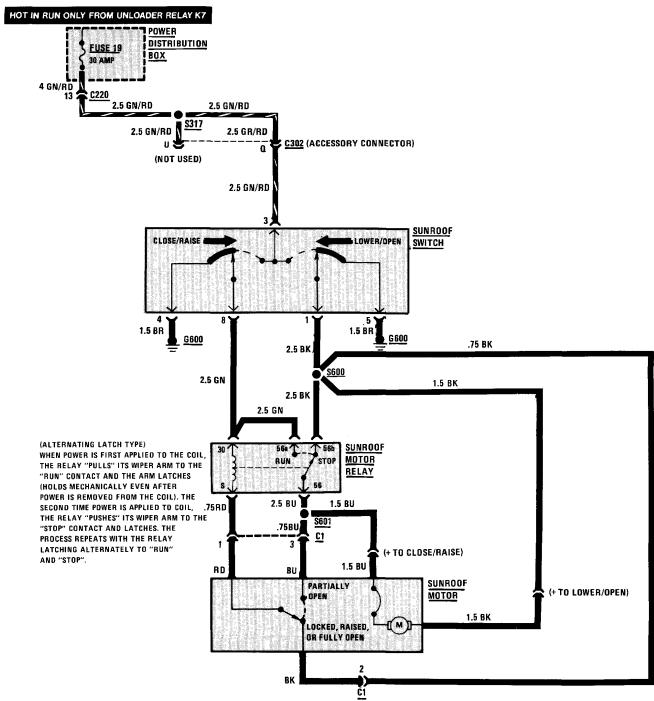


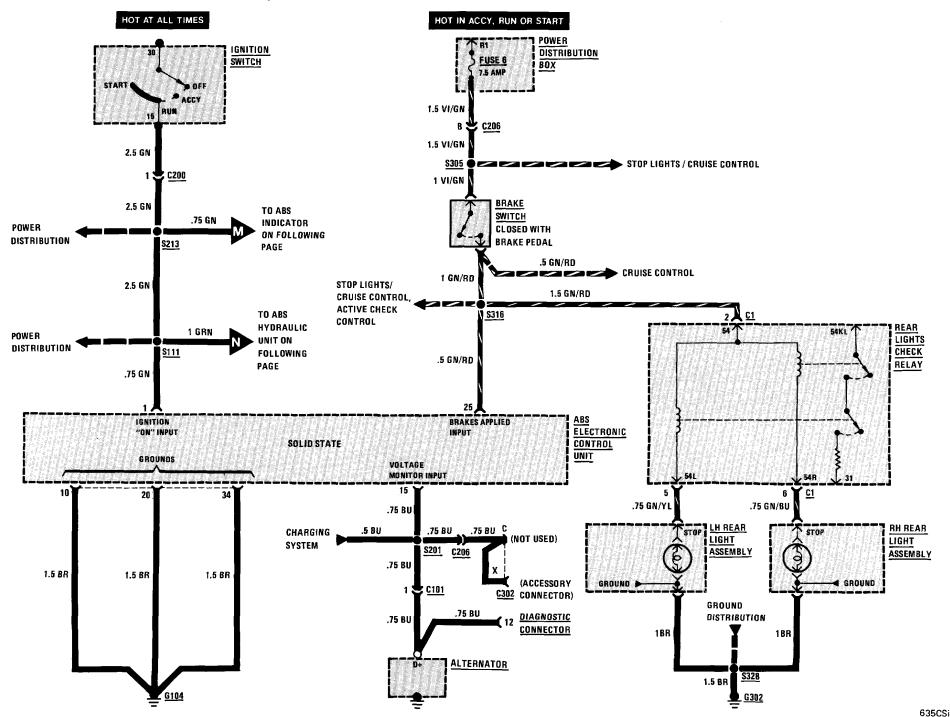


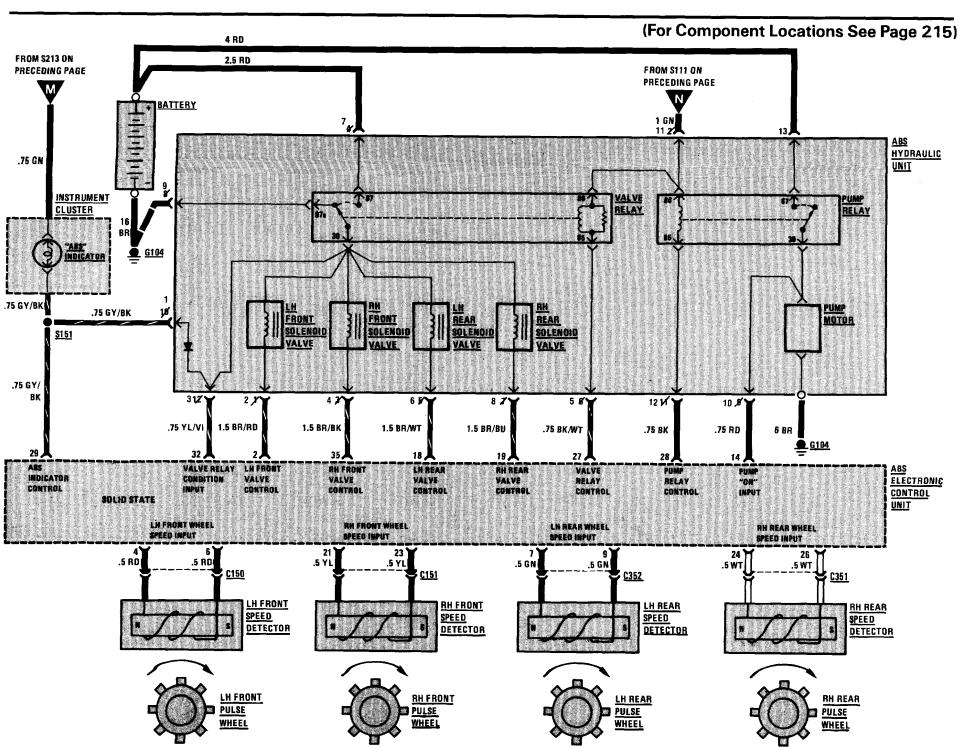




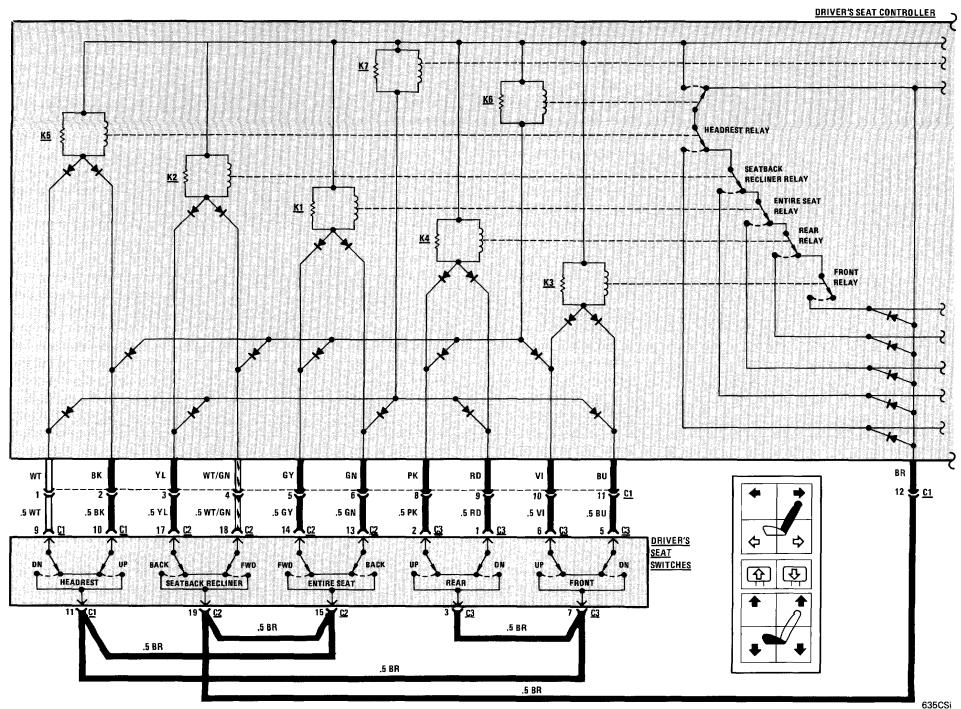




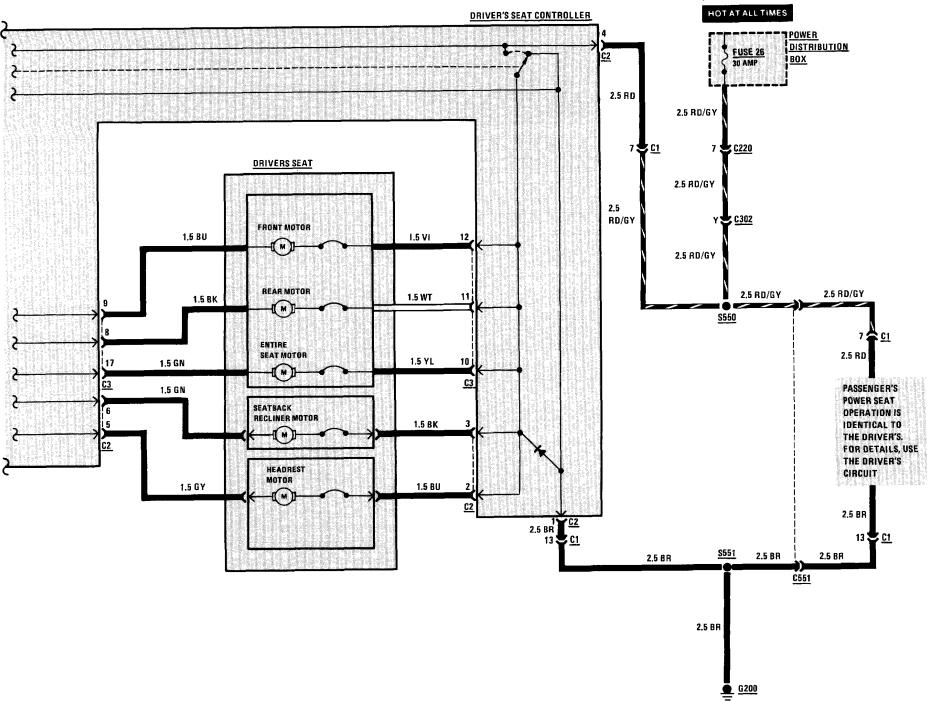




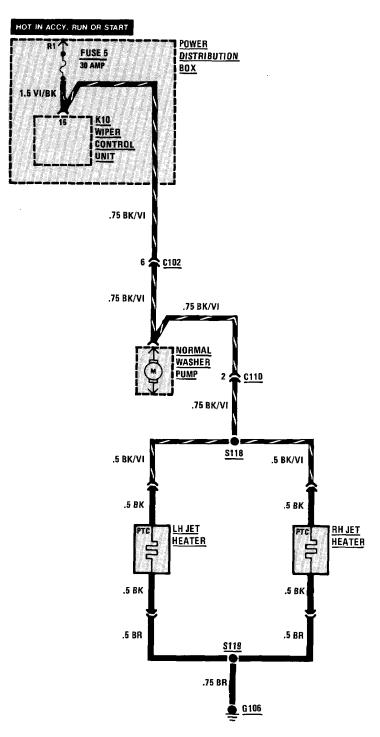
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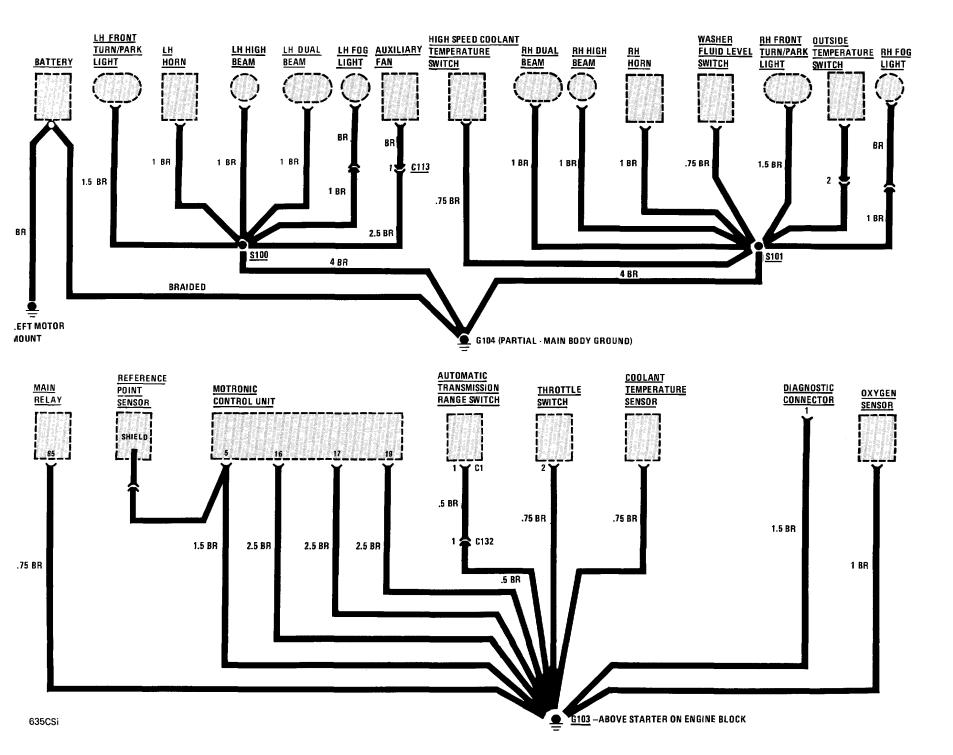


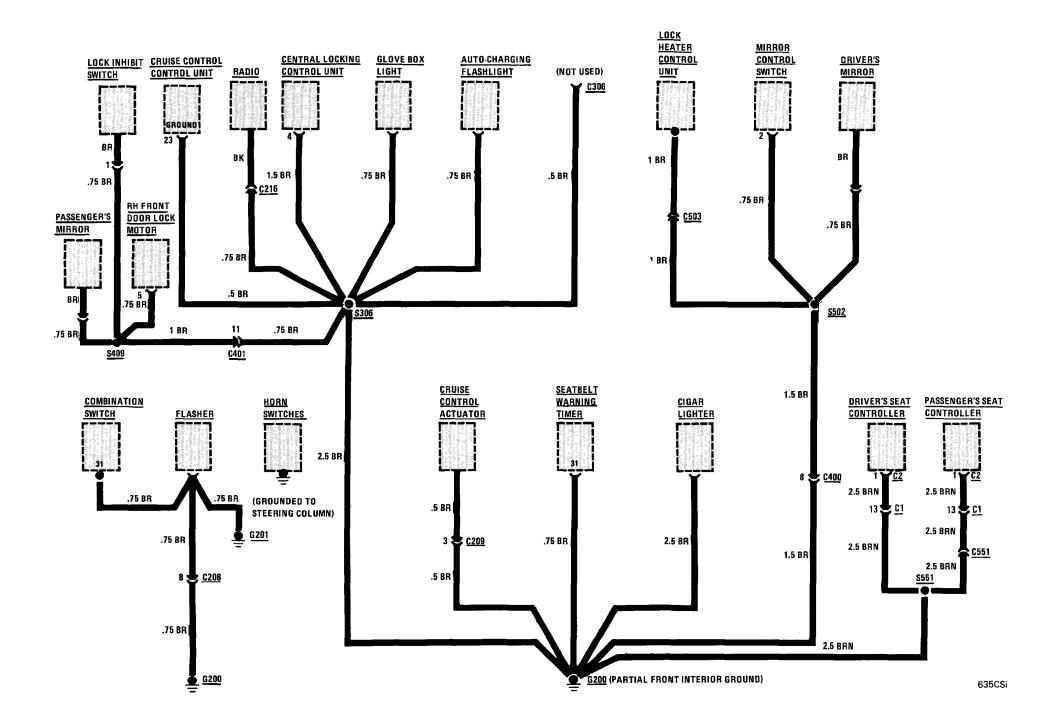
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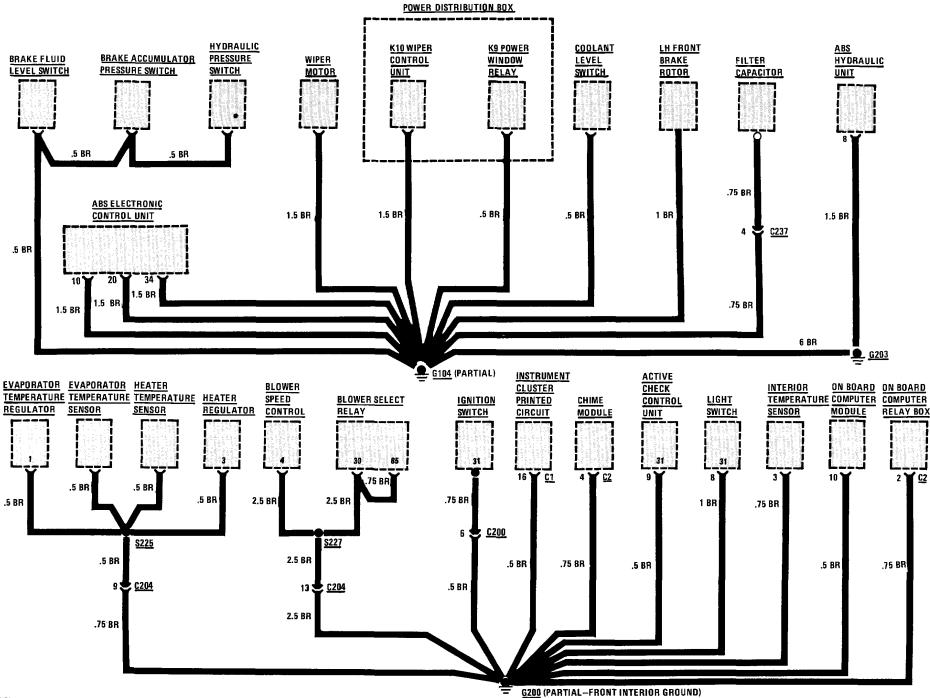


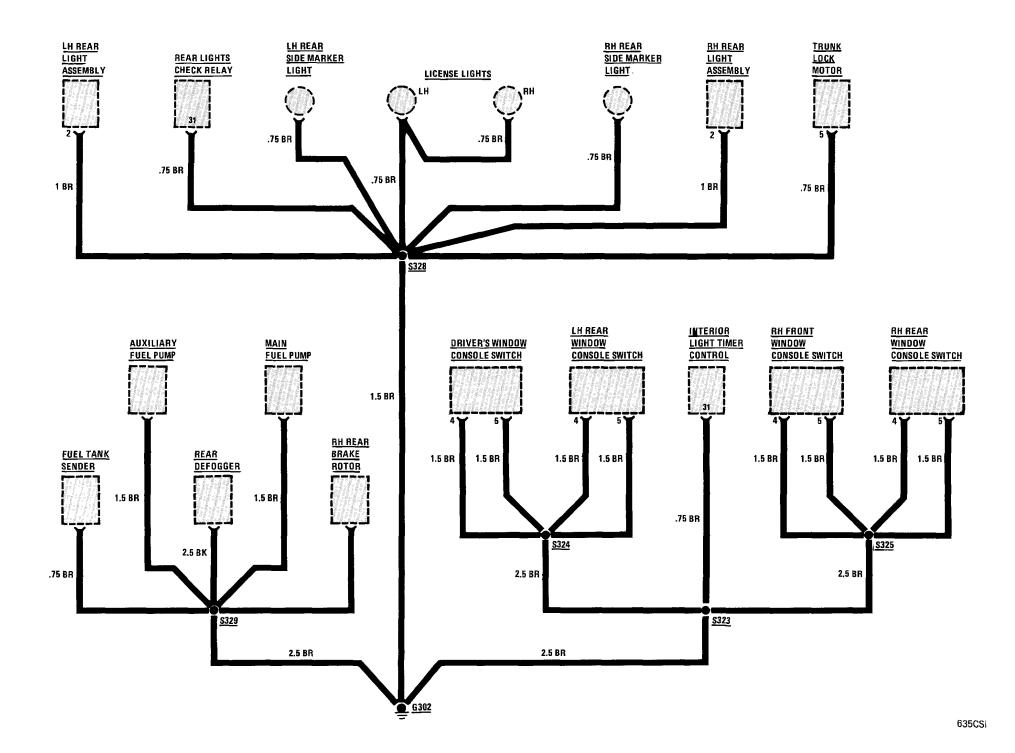
(For Component Locations See Page 212)





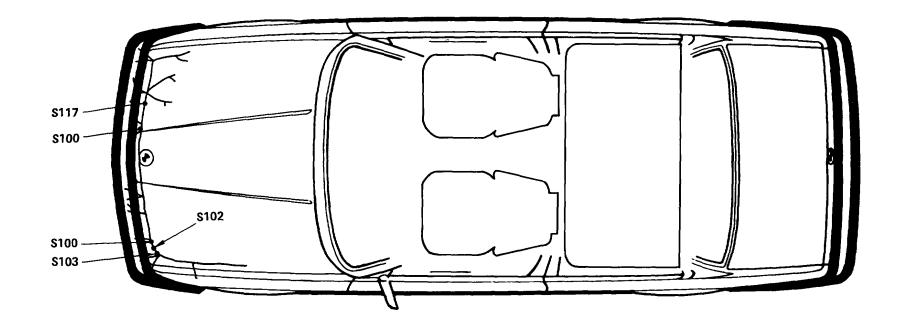


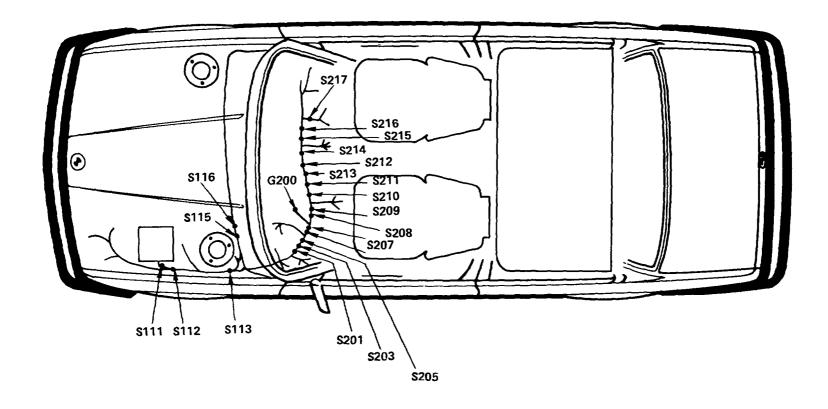


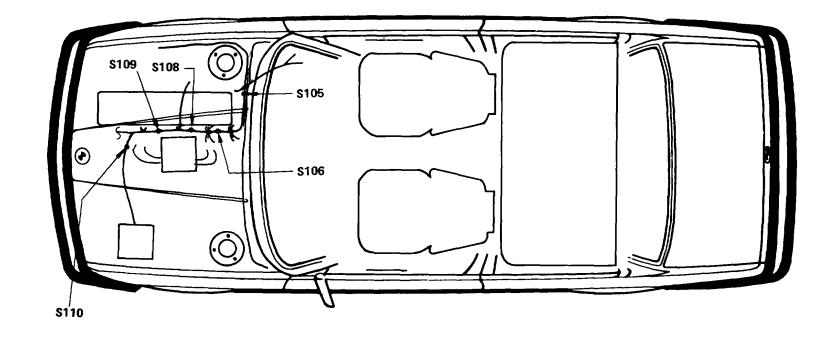


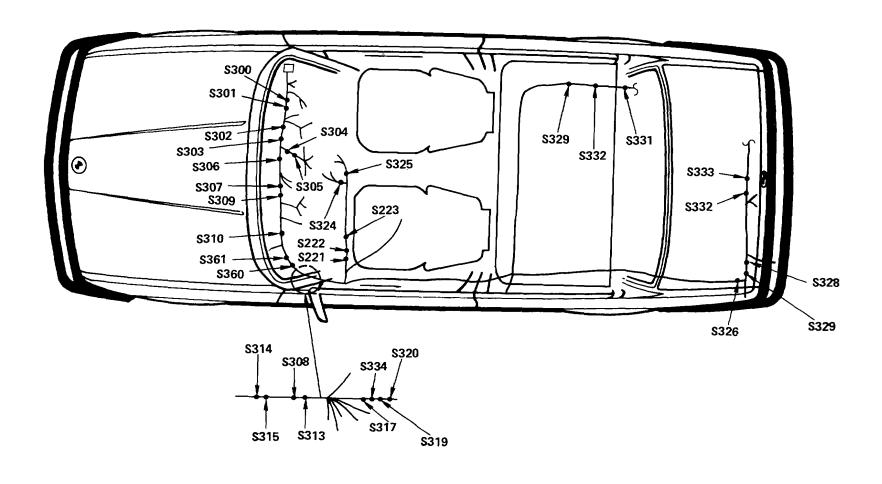
This index contains all the splices in the car, what harness each one is in, and the page that the splices appear on. The drawings after the index show how the harness is routed through the car and where the splices are located on the harness.

SPLICE	HARNESS	PAGE NUMBER	SPLICE	HARNESS	PAGE NUMBER	SPLICE	HARNESS	PAGE NUMBER
S100	FRONT	170	S213	MIDDLE	171	S316	REAR	NOT
S101	FRONT	170	S214	MIDDLE	171			SHOWN
S102	FRONT	170	S215	MIDDLE	171	S317	REAR	173
S103	FRONT	170	S216	MIDDLE	171	S319	REAR	173
S105	ENGINE	172	S217	MIDDLE	171	S320	REAR	173
S106	ENGINE	172	S221	REAR	173	S324	REAR	173
S108	ENGINE	172	S222	REAR	173	S325	REAR	173
S109	ENGINE	172	S223	REAR	173	S326	REAR	173
S110	ENGINE	172	S225	A/C	NOT	S327	REAR	NOT
S111	MIDDLE	171			SHOWN			SHOWN
S112	MIDDLE	171	S226	A/C	NOT	S328	REAR	173
S113	MIDDLE	171			SHOWN	S329	REAR	173
S115	MIDDLE	171	S227	A/C	NOT	S330	REAR	NOT
S116	MIDDLE	171			SHOWN			SHOWN
S117	FRONT	170	S228	A/C	NOT	S331	REAR	173
S118	WASHER				SHOWN	S332	REAR	173
	JETS	NOT	S229	A/C	NOT	S333	REAR	173
		SHOWN			SHOWN	\$334	REAR	173
S119	WASHER		S230	A/C	NOT	S360	REAR	173
	JETS	NOT			SHOWN	S361	REAR	173
		SHOWN	S300	REAR	173	S409	DOOR	NOT
S151	MIDDLE	NOT	S301	REAR	173			SHOWN
		SHOWN	S302	REAR	173	S502	DOOR	NOT
S200	MIDDLE	171	S303	REAR	173			SHOWN
S201	MIDDLE	171	S304	REAR	173	S550	POWER	
S203	MIDDLE	171	S305	REAR	173		SEATS	NOT
S205	MIDDLE	171	S306	REAR	173			SHOWN
S206	MIDDLE	171	S307	REAR	173	S551	POWER	
S207	MIDDLE	171	S308	REAR	173		SEATS	NOT
S208	MIDDLE	171	S309	REAR	173			SHOWN
S209	MIDDLE	171	S310	REAR	173	S600	SUNROOF	NOT
S210	MIDDLE	171	S313	REAR	173			SHOWN
S211	MIDDLE	171	S314	REAR	173	S601	SUNROOF	NOT
S212	MIDDLE	171	S315	REAR	173			SHOWN









ACTIVE CHECK CON	TROL	FIGURE
Brake Switch	Above brake pedal	. 213-5
Coolant Level Switch Oil Level Sensor	Top of coolant reservoir	. 202-1
Power Distribution Box	· · · · · · · · · · · · · · · · · · ·	204-1
Rear Lights Check Relay		
Seatbelt Warning Timer	Under LH dash, on body electrical bracket	. 214-3
Washer Fluid Level Switch	Ahead of right front wheel well, in reservoir	
C101 (17 pin)	On right side of power distribution box	, 201-2
C205 (1 pin)	Under LH dash, on body electrical bracket	157 1
G104 (Main Body Ground)	Left fender, behind headlights	
G200 (Front Interior Ground)	•	
	Under left rear seat	
AUXILIARY FAN		
	Under right side of dash above glove box	
· · · · · · · · · · · · · · · · · · ·	On left side of heater-A/C unit	
High Speed Coolant Temp.	On receiver-dryer	
	Upper right side of radiator (red terminal)	208-1
Motronic Control Unit Normal Speed Blower Resistor. Normal Speed Cool. Temp.	Under right side of dash above glove box Ahead of radiator, on auxiliary fan shield	
Switch	Upper right side of radiator (white terminal)	208-1
Power Distribution Box C102 (12 pin)	Top front of left front wheel well	
C103 (4 pin)	Under right side of dash above glove box	
	Left side of auxiliary fan shield	
C204 (13 pin)		
	Left fender, behind headlights	. 201-1
G200 (Front Interior Ground)		
Motronic Control Unit	Under right side of dash above glove box	
BACKUP LIGHTS		
Auto. Trans. Range Switch		
	On left side of manual transmission	
	Top front of left front wheel well	204-1
C220 (13 pin)	Under LH dash on body electrical bracket	
U3U1 (2 pin)	In center console, ahead of shift lever	

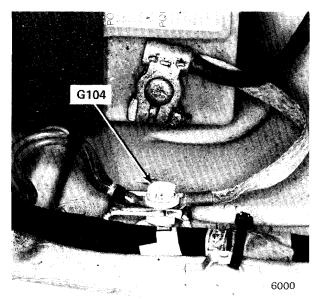


Figure 1 - Inner Fender, Left Of Battery

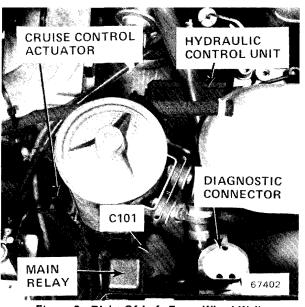


Figure 2 - Right Of Left Front Wheel Well

BRAKE LINING WARNING	FIGURE
Power Distribution Box Top front of left front wheel well C206 (29 pin) Under LH dash, on body electrical brack G200 (Front Interior Ground) On dash frame, left of steering column G302 (Rear Interior Ground) Under left rear seat	ket 157-1 203-2
CENTRAL LOCKING	
Central Locking Control Unit Under dash, left of top of glove box Door Lock Motors In each door Gas Filler Lock Motor In trunk, behind right rear wheel well.	
Ignition Switch	204-1
Unlock Inhibit Switch In driver's door at lock cylinder C200 (10 pin) Under LH dash, on LH side of steering C206 (29 pin) Under LH dash, on body electrical brace C305 (4 pin) Under left side of dash	
C400 (13 pin)	206-1
G200 (Front Interior Ground) On dash frame, left of steering column G302 (Rear Interior Ground) Under left rear seat	
CHARGING SYSTEM	
Diagnostic Connector Top middle of engine Ignition Switch	101-1
Power Distribution Box Top front of left front wheel well Starter Lower rear left side of engine	204-1
C101 (17 pin)	column 214-1 ket 157-1 ket 157-1
CIGAR LIGHTER/GLOVE BOX LIGHT/AUTO-	
CHARGING FLASHLIGHT Power Distribution Box Top front of left front wheel well C206 (29 pin) Under LH dash, on body electrical brack G200 (Front Interior Ground) On dash frame, left of steering column.	ket 157-1

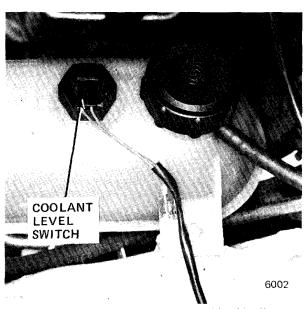


Figure 1 - Right Of Left Front Wheel Well

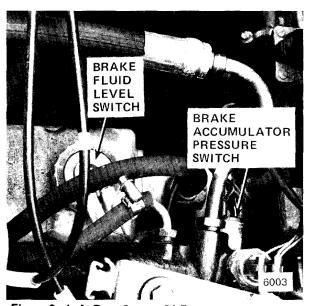


Figure 2 - Left Rear Corner Of Engine Compartment

FUEL CONTROL/IGNITION	ON (SEE PAGE 205)	FIGURE
Air Flow Meter	Top right side of engine	205-1
Diagnostic Connector Engine Speed Sensor	On power distribution box On transmission bell housing	101-1
Fuel Pump Relay	On right side of power distribution box Top right side of engine Under car, ahead of left rear axle	204-1
Main Relay	On right side of power distribution box	102-1
Motronic Control Unit On-Board Computer Relay Box	Under right side of dash glove box	211-2 211-2
Oxygen Sensor	Rear of engine, in exhaust manifold	204-2
Power Distribution Box TDC Sensor	Top front of left front wheel well	204-1
C101 (17 pin)	On right side of power distribution box	
C103 (4 pin)	Under right side of dash, above glove box	
C200 (10 pin)		214-1
C206 (29 pin)	Under LH dash, on body electrical bracket	157-1
	Top rear of engine	205-1
G200 (Front Interior Ground)	Left fender, behind headlights On dash frame, left of steering column	201-1
G302 (rear Interior Ground)	Under left rear seat	212-2

HEADLIGHTS (CONTROL/POWER)/FOG LIGHTS (CONTROL/POWER)

Combination Switch	On LH side of steering column	
Flasher	Upper left side of steering column	
Power Distribution Box	Top front of left front wheel well	204-1
C102 (12 pin)		
C126 (2 pin)	Behind left side of front spoiler	
C127 (2 pin)	Behind right side of front spoiler	
C202 (13 pin)	Under LH dash, on LH side of steering column	214-1
	Left fender, behind headlights	
	On dash frame, left of steering column	
	Unper left side of steering column	



Figure 1 - Left Rear Corner Of Engine Compartment



Figure 2 - Under Dash, Left Of Steering Column

HEATER/AIR CONDIT	IONING	FIGURE
	Under dash, left of glove box	
Heater Temperature Sensor High Pressure Cut-out Switch Interior Temperature Sensor Motronic Control Unit	Behind temperature select control On left side of heater-A/C unit	207-2 213-4 211-2
Water Shutoff Valve	Center rear of engine compartment	203-1
C106 (1 pin)	Behind right headlights	209-1
C302 (Accessory Connector)	Under LH dash, on body electrical bracket Under LH dash, on body electrical bracket On dash frame, left of steering column	157-1

HORN/HEATED DOOR LOCK

Horn Brush/Slip Ring	Under hub of steering wheel	
Horn Switches	Under hub of steering wheel	
Lock Heater	In left front door	
Lock Heater Control Unit	In left front door	
Power Distribution Box	Top front of left front wheel well	204-1
	Under LH dash, on LH side of steering column	
C400 (13 pin)	Under dash, above trunk release lever	214-4
C503 (8 pin)	In driver's door	
C560 (2 pin)	In driver's door	
G104 (Main Body Ground)	Left fender, behind headlights	201-1
	On dash frame, left of steering column	
	Upper left side of steering column	

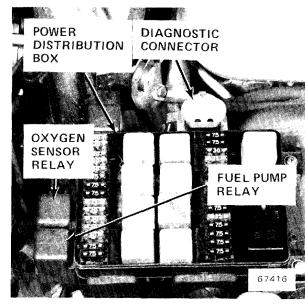


Figure 1 - Top Of Left Front Wheel Well

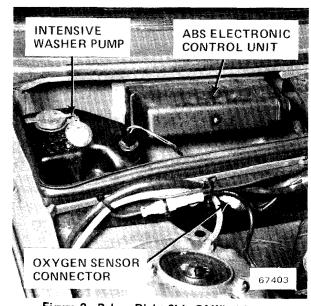


Figure 2 - Below Right Side Of Windshield

FUEL CONTROL/IGNITION	DN FIGURE
Auto. Trans. Range Switch	On left side of shift lever
Coolant Temperature Sensor	Front of engine, top of thermostat housing 213-3
Diagnostic Connector	Top middle of engine
e e e e e e e e e e e e e e e e e e e	On right wheel well, behind headlights 207-1
Ignition Switch	In upper part of steering column
Motronic Control Unit	Under right side of dash, above glove box 211-2
Reference Point Sensor	On transmission bell housing 205-1
Throttle Switch	Top LH side of engine, below throttle body 214-3
C101 (17 pin)	On right side of power distribution box 201-2
C132 (4 pin)	Under right side of dash, above glove box
C200 (10 pin)	Under LH dash, on LH side of steering column 214-1
G200 (Front Interior Ground)	On dash frame, left of steering column

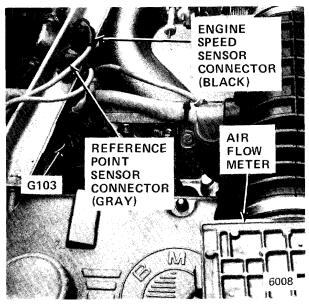


Figure 1 - Top Rear Of Engine

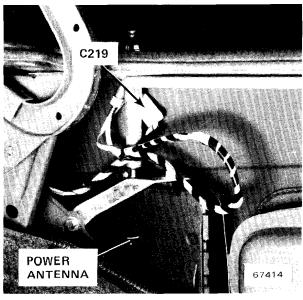


Figure 2 - Right Side Of Trunk

Ignition Key Switch In upper part of steering column Power Distribution Box Top front of left front wheel well	NITION KEY WARI	NING/SEATBELT WARNING	FIGURE
C200 (10 pin)	ver Distribution Boxtbelt Switch	. Top front of left front wheel well	. 204-1
C220 (13 pin) Under LH dash, on body electrical bracket 157-	00 (10 pin)	. Under LH dash, on LH side of steering column	. 214-1
		·	
INTERIOR LIGHTS	TERIOR LIGHTS		
Interior Light Timer Control Under LH dash, on body electrical bracket			
Lock Heater Control Unit In left front door Power Distribution Box Top front of left front wheel well			204-1
·			
C302 (Accessory Connector) Under LH dash, on body electrical bracket 157-1		Under LH dash, on body electrical bracket	157-1
C400 (13 pin)			214-4
G200 (Front Interior Ground) On dash frame, left of steering column 203-2			
G302 (Rear Interior Ground) Under left rear seat			212-2
LIGHTS: FRONT PARK/TAIL/UNDERHOOD	HTS: FRONT PAR	K/TAIL/UNDERHOOD	
Power Distribution Box Top front of left front wheel well	er Distribution Box	Top front of left front wheel well	204-1
Rear Lights Check Relay In trunk, left of rear panel center support 210-2	-		210-2
Underhood Light Switch Left of right hood hinge C102 (12 pin) In power distribution box	2 (12 pin)	In power distribution box	
C110 (2 pin) Ahead of right headlights cover			457.4
C206 (29 pin)			
G302 (Rear Interior Ground) Under left rear seat			

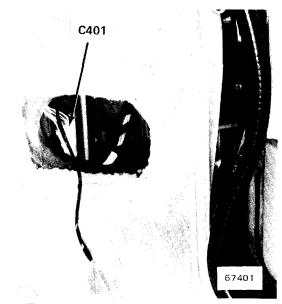


Figure 1 - Behind Right Front Speaker

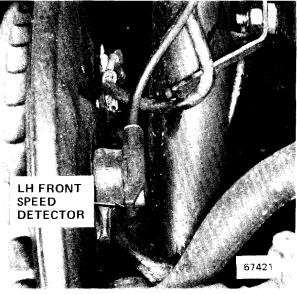


Figure 2 - Behind Left Front Wheel

RE
-1 -2
-1 -1 -1
_
-1
- 1
- 1 - 1
-2
-2
- 1
- 1
- 1
- I - 2

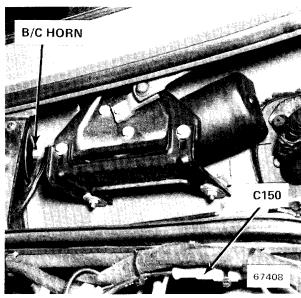


Figure 1 - Under Left Side Of Windshield

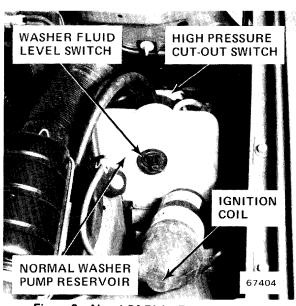


Figure 2 - Ahead Of Right Front Wheel Well

ON-BOARD COMPUTI	≣R	FIGURE
Alarm Horn Diode	Near alarm horn Under left side of fresh air intake coil	
Chime Module	Under dash, left of top of glove box	213-3
-	In upper part of steering column On right side of power distribution box	201-2
Motronic Control Unit Onboard Computer Relay Box	Under right side of dash above glove box Under LH side of dash	
Outside Temperature Sensor		
Power Distribution Box C102 (12 pin)	Top front of left front wheel well	204-1
	Under right side of dash, above glove box	212-1
• •	Under LH dash, on LH side of steering column Under LH dash, on body electrical bracket	214-1
·	Under LH dash, on body electrical bracket	
	Top rear of engine	
· · · · · · · · · · · · · · · · · · ·	Left fender, behind headlights	
	On dash frame, left of steering column	
G302 (Rear Interior Ground)	Under left rear seat	212-2
POWER DISTRIBUTIO	N	
Diagnostic Connector	Top middle of engine	101-1

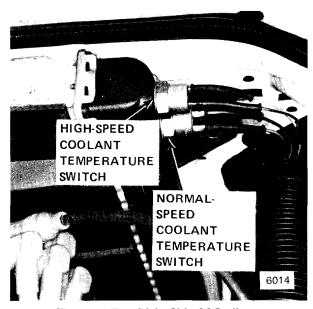


Figure 1 - Top Right Side Of Radiator

Diagnostic Connector	Top middle of engine	101-1
Power Distribution Box	Top front of left front wheel well	204-1
Starter	Lower rear left side of engine	
C102 (12 pin)	In power distribution box	
C113 (3 pin)	Left side of auxiliary fan shield	
C126 (2 pin)	Behind left side of front spoiler	
C127 (2 pin)	Behind right side of front spoiler	
C200 (10 pin)	Under LH dash, on LH side of steering column	214-1
C206 (29 pin)	Under LH dash, on body electrical bracket	157-1
C220 (13 pin)	Under LH dash, on body electrical bracket	157-1
C302 (Accessory Connector)	Under LH dash, on body electrical bracket	157-1
G104 (Main Body Ground)	Left fender, behind headlights	201-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-2

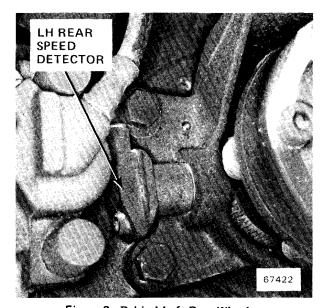


Figure 2 - Behind Left Rear Wheel

POWER MIRRORS		FIGURE
Power Distribution Box	Top front of left front wheel well	204-1
	Under LH dash, on body electrical bracket	
C400 (13 pin)	Under dash, above trunk release lever	214-4
C401 (13 pin)	Right of glove box, above speaker grill	206-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-2

POWER SEATS (SEE PAGE 215) POWER WINDOWS

Ignition Switch	In upper part of steering column	
Power Distribution Box	Top front of left front wheel well	204-1
Power Window Circuit Breaker	On LH under dash cover	
Window Motors	Behind paneling, below window	
C200 (10 pin)	Under LH dash, on LH side of steering column	214-1
C206 (29 pin)	Under LH dash, on body electrical bracket	157-1
C400 (13 pin)	Under dash, above trunk release lever	214-4
C401 (13 pin)	Right of glove box, above speaker grill	206-1
G302 (Rear Interior Ground)	Under left rear seat	212-2

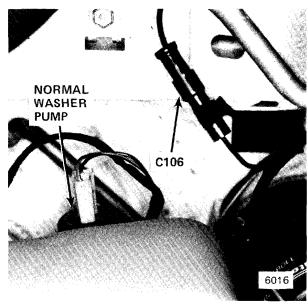


Figure 1 - Ahead Of Right Front Wheel Well

RADIO/POWER ANTENNA

C206 (29 pin)	Behind radio Behind radio	
C218 (2 pin)		
C219 (2 pin)		
C302 (Accessory Connector)	Under LH dash, on body electrical bracket	157-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-2
G302 (Rear Interior Ground)	Under left rear seat	212-2



Figure 2 - Top Of Right Front Wheel Well

REAR DEFOGGER	F	FIGURE
C206 (29 pin)	Top front of left front wheel well	157-1 157-1 203-2
SERVICE INTERVAL I	NDICATOR	
Diagnostic Connector Motronic Control Unit Power Distribution Box C101 (17 pin) C103 (4 pin)	On right side of power distribution box	101-1 211-2 204-1 201-2 211-2
SPEEDOMETER/GAU	GES/WARNING INDICATORS	
	Right of left front shock tower	
Sender/Switch	Front of engine, on thermostat housing	
Hydraulic Pressure Switch Ignition Switch Oil Pressure Switch Park Brake Switch	Right of left front shock tower	203-1
Power Distribution Box	Top front of left front wheel well	204-1
C101 (17 pin)	On right side of power distribution box	211-2 214-1 157-1
G302 (Rear Interior Ground)	Under left rear seat	

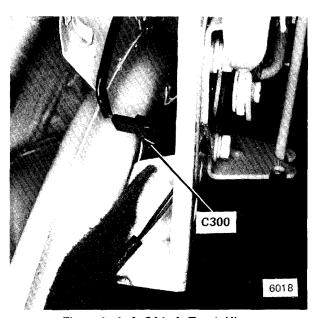


Figure 1 - Left Of Left Trunk Hinge

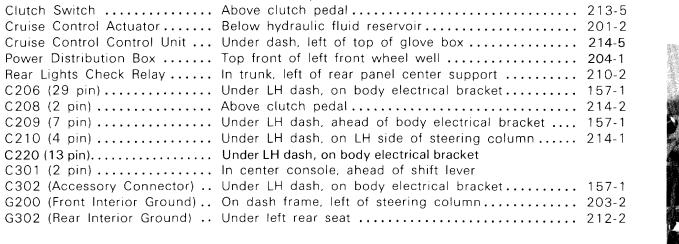


Figure 2 - Rear Panel Of Trunk

START		FIGURE
Auto. Trans. Range Switch	On left side of shift lever	
Cold Start Valve	Between intake ports 3 and 4	
Diagnostic Connector	Top middle of engine	101-1
Ignition Switch	In upper part of steering column,	
Motronic Control Unit	Under right side of dash above glove box	211-2
	Top front of left front wheel well	204-1
	Under LH dash, on body electrical bracket	
Starter	5	
	Front of engine, top of thermostat housing	
	On right side of power distribution box	
	Under LH dash, on LH side of steering column	214-1
•	Under LH dash, near body electrical bracket	
	Left fender, behind headlights	
G200 (Front Interior Ground)	On dash frame, left of steering column	203-2
STOPLIGHTS/CRUISE	CONTROL	
Auto. Trans. Range Switch	On left side of shift lever	
	Above brake pedal	213-5
Clutch Switch	Above clutch pedal	213-5
Cruise Control Actuator	Below hydraulic fluid reservoir	201-2
Cruise Control Control Unit	Under dash, left of top of glove box	214-5



Figure 1 - Rear Of Right Rear Wheel Well



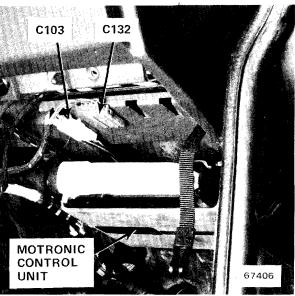


Figure 2 - Behind Dash, Above Glove Box

212 COMPONENT LOCATIONS

SUNROOF		FIGURE
Sunroof Motor	Top front of left front wheel well	204-1
C220 (13 pin)	Under LH dash, on body electrical bracket Under LH dash, on body electrical bracket Above headliner, above rear view mirror	
WINDSHIELD WASHE	R JET HEATERS	
Power Distribution Box C102 (12 pin) C110 (2 pin)	Bottom of normal washer pump reservoir	

WIPER/WASHER HEATED JETS

Intensive Washer Pump	Behind right front shock tower	204-2
Normal Washer Pump	Bottom of normal washer pump reservoir	209-1
Power Distribution Box	Top front of left front wheel well	209-1
Wiper Motor	Under left side fresh air intake cowl	
C102 (12pin)	In power distribution box	
C201 (6 pin)	Under LH dash, on LH side of steering column	214-1
G201 (Column Ground)	Upper left side of steering column	

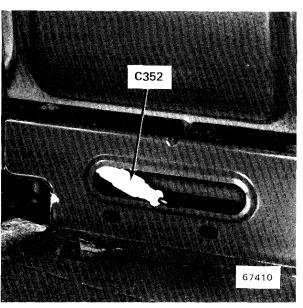


Figure 1 - LH Front Of Trunk

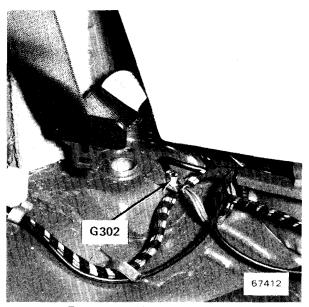


Figure 2 - Under Left Rear Seat

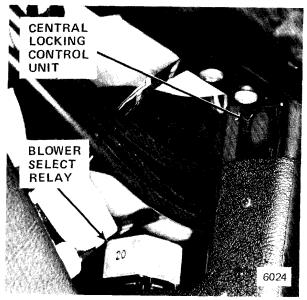


Figure 1 - Behind Dash, Left Of Glove Box

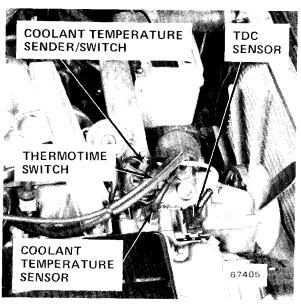


Figure 3 - Top Front Of Engine

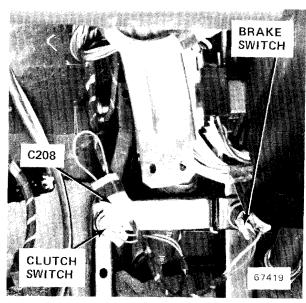


Figure 5 - Driver's Footwell, Above Brake Pedal

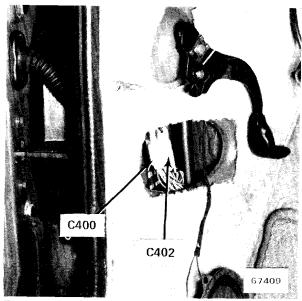


Figure 2 - Behind Dash, Above Left Side Of Glove Box

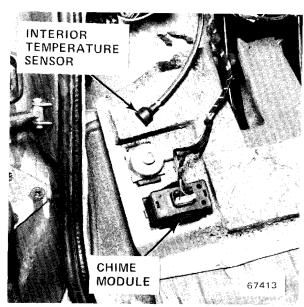


Figure 4 - Behind Dash, Left Of Steering Column



Figure 6 - Behind Left Side Of Console

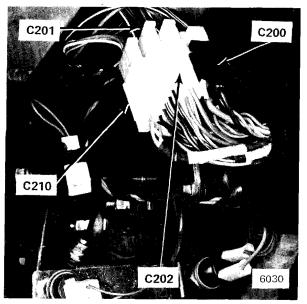


Figure 1 - Driver's Footwell, Above Brake Pedal



Figure 3 - Top Center Of Engine

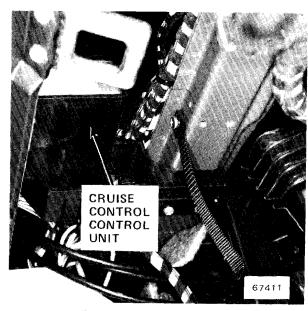


Figure 5 - Below Glove Box



Figure 2 - Driver's Footwell, Above Brake Pedal

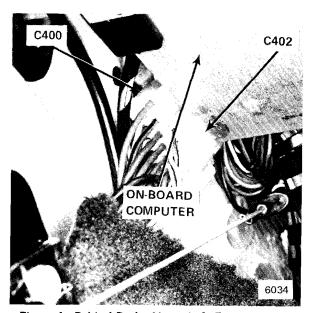
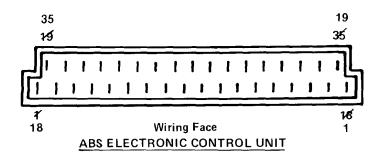
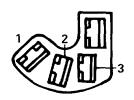


Figure 4 - Behind Dash, Above Left Front Speaker

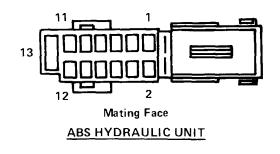
POWER SEATS	ı	FIGURE
Driver's Seat Controller Passenger's Seat Controller	 Under passenger's seat, on frame Under LH dash on body electrical bracket Under LH dash on body electrical bracket Under center console 	157-1 157-1 203-2
ANTILOCK BRAKING SY	STEM (ABS)	
Brake Switch	Above brake pedal Below right side of windshield Right of left front wheel well	213-5
Rear Lights Check Relay	In trunk left of rear panel center support	210-2
Diagnostic Connector	On power distribution box	101-1
C200 (10 pin)	Under LH dash on LH side of steering column	214-1
C206 (29 pin)	Under LH dash on body electrical bracket	157-1
C302 (Accessory Connector)	Under LH dash on body electrical bracket On right side of power distribution box	201-2
C101 (17 pin)	Behind LH front shock tower	
C150 (2 pin)	Behind RH front shock tower	
C351 (2 pin)	RH front of trunk	
C352 (2 pin)	LH front of trunk	
G302 (Rear Interior Ground)	Under left rear seat	212-2

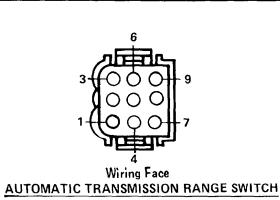
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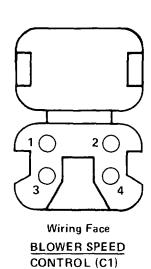


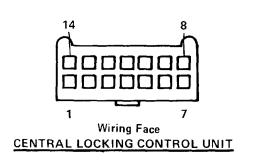


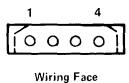
Wiring Face
BLOWER SPEED SWITCH (CI)

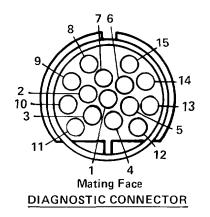


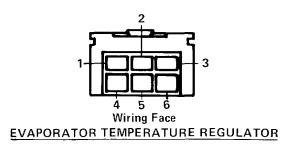






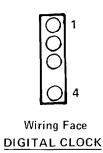


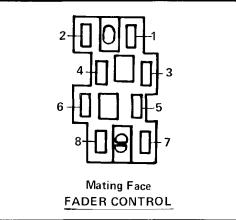






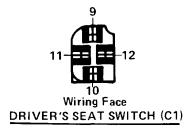
Wiring Face
FOG LIGHTS/ INTERIOR
LIGHTS SWITCH (C2)

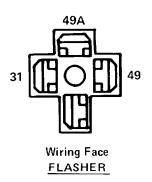


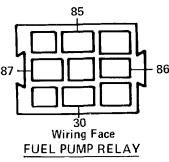






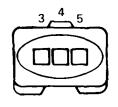




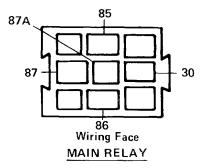


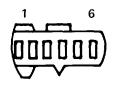


Wiring Face **FUEL TANK SENDER**

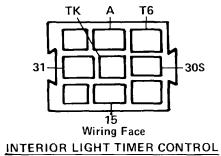


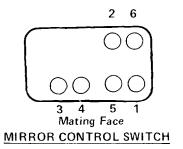
Wiring Face **IDLE SPEED ACTUATOR**

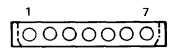




Wiring Face GAS FILLER LOCK MOTOR



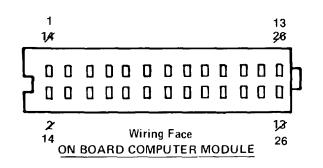


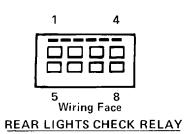


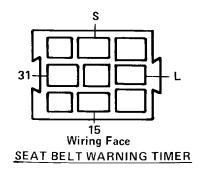
Wiring Face **HEATER REGULATOR**

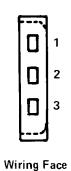


Wiring Face INTERIOR TEMPERATURE SENSOR

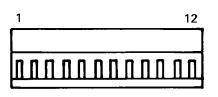




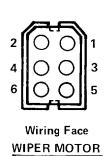


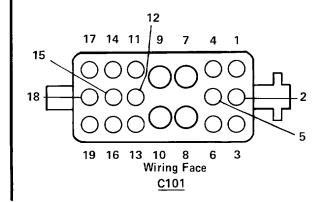


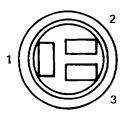
SUNROOF MOTOR (CI)



Wiring Face
TRANSMISSION RANGE DISPLAY



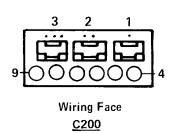


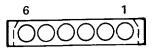


Wiring Face C113

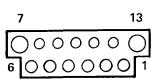


Wiring Face C114

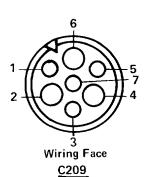


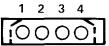


Wiring Face C201



Wiring Face C202





Wiring Face <u>C210</u>