

# 1985 BMW 735i Electrical Troubleshooting Manual

BMW of North America, Inc. Montvale, New Jersey

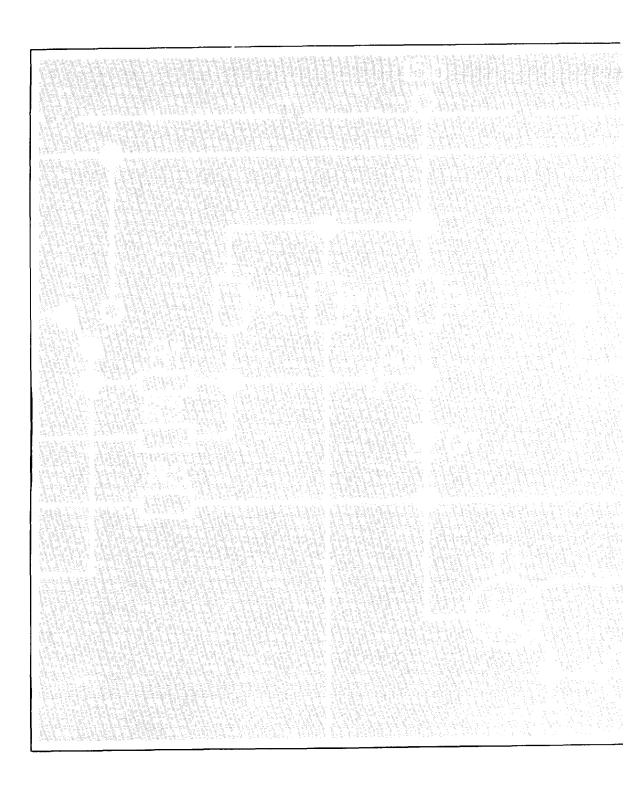
#### **FOREWORD**

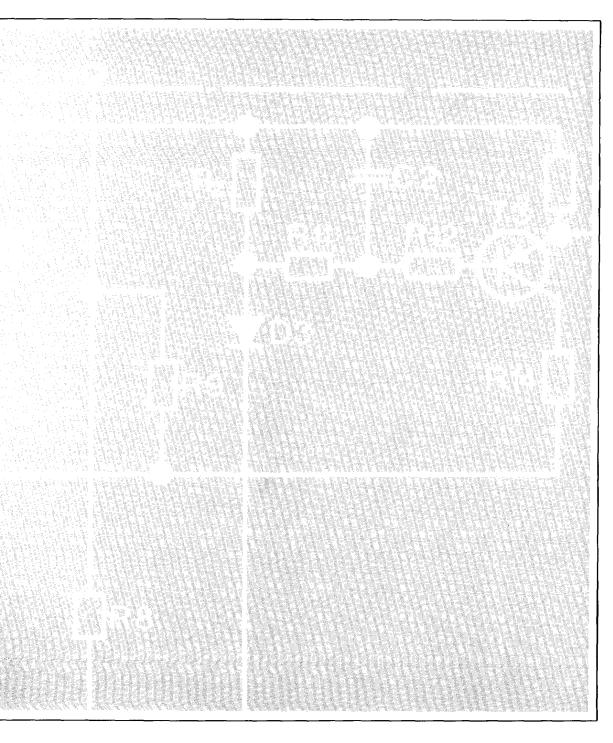
In the interests of continuing technical development work we reserve the right to modify designs and equipment.

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1985 BMW 735i 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.

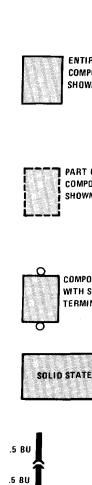
Within the schematic, all switches and sensors are shown "at rest," as though the Ignition Switch were off. For identification, component names are underlined and placed next to or above each component. Notes are included, describing how switches and other components work.

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.

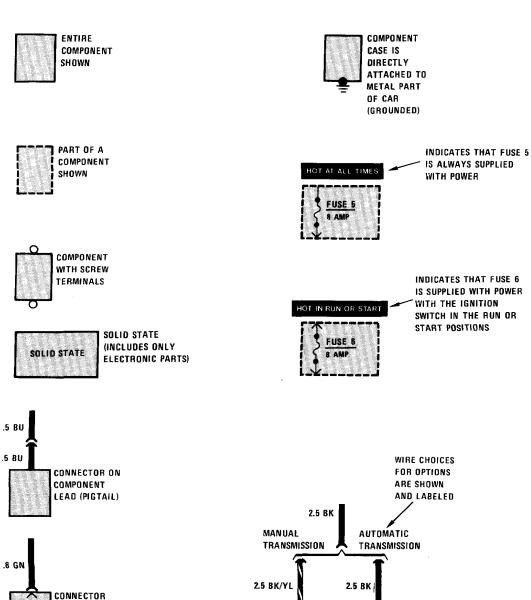
All wiring between components is shown exactly as it exists in the vehicle; however, the wiring is not drawn to scale. To aid in understanding electrical operation, wiring inside complicated components has been simplified. The "Solid State" label designates electronic components.

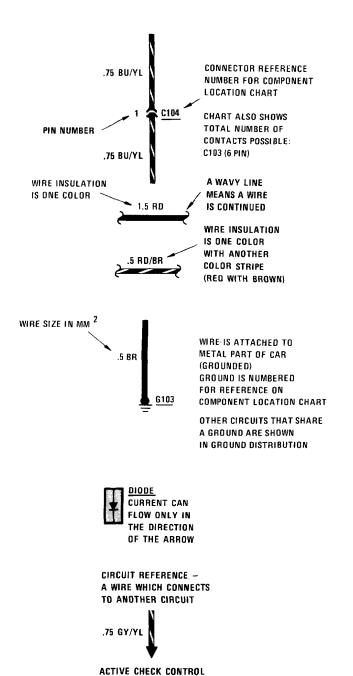
WIRE SIZE CONVERSION C	
METRIC	AWG
(CROSSECTIONAL AREA	(AMERICAN
IN MM²)	WIRE GAUGE)
.5	20
.75	18
1	16
1.5	14
2	14
2.5	12
4	10
6	8
8	8
16	4
20	4
25	2
32	2

WIRE INS	CULATION
ABBREVIATIONS	COLOR
BK BR PL GN BU VI YK PK	BLACK BROWN RED YELLOW GREEN BLUE VIOLET GRAY WHITE PINK



ATTACHED TO COMPONENT





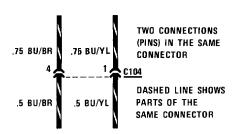


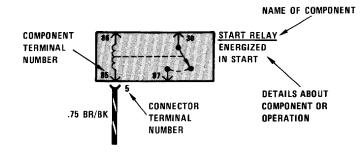
ONE POLE, TWO POSITION SWITCH

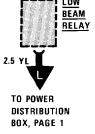


SWITCHES THAT MOVE TOGETHER

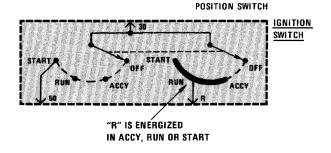
DASHED LINE SHOWS A MECHANICAL CONNECTION BETWEEN SWITCHES







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

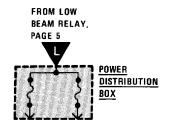


**RELAY SHOWN** 

ACROSS COIL

WITH RESISTOR

TWO POLE, FOUR

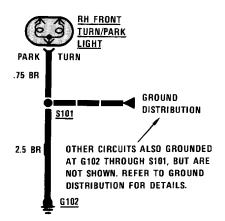




WHEN COIL IS ENERGIZED, SWITCH IS PULLED CLOSED



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

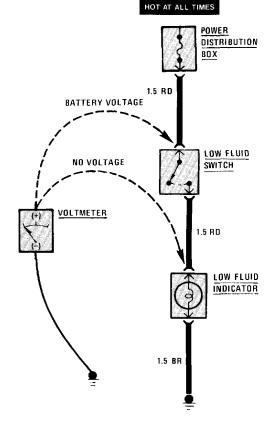
Isolating the problem (Step 3 of TROUBLESHOOTING PROCEDURES) requires the use of a voltmeter and/or ohmmeter. A voltmeter measures voltage at selected points in a circuit. An ohmmeter measures a circuit's resistance to current flow. It has an internal battery that provides current to the circuit under 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.

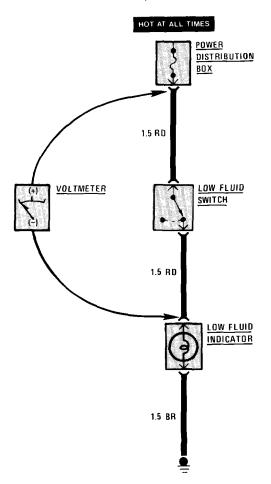


Voltage Test

#### 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.

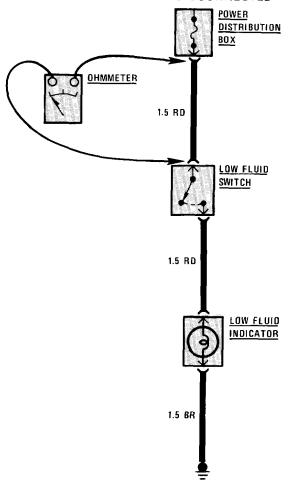


Voltage Drop Test

#### 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

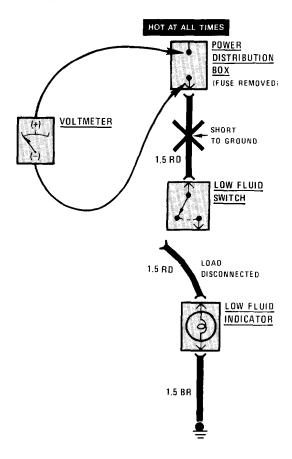


Continuity Test

#### 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.



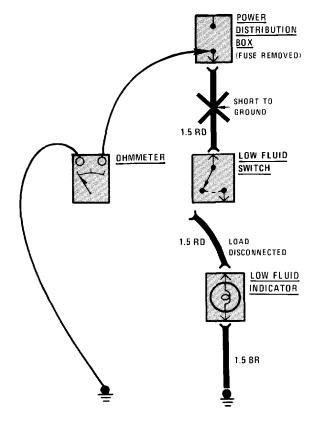
Short Test Using Voltmeter

#### 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



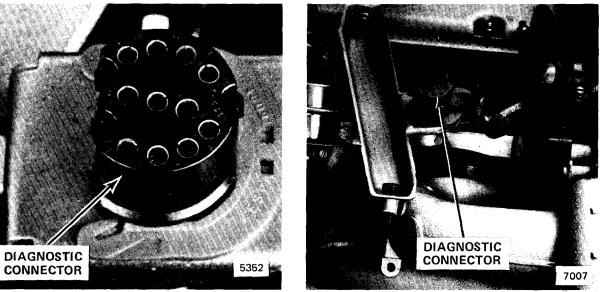
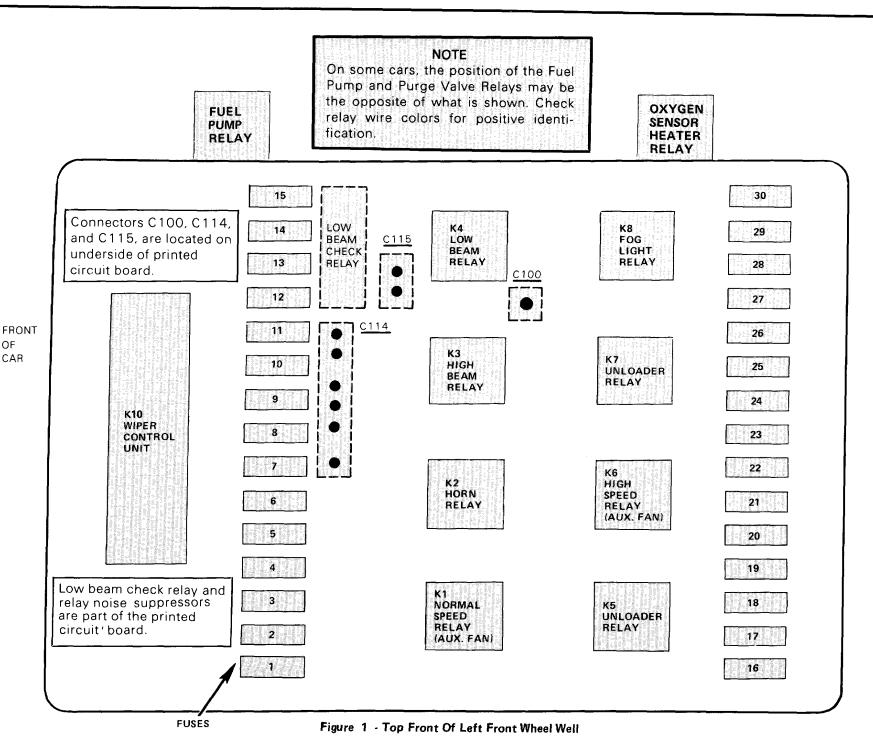


Figure 1 - Top Front of Engine

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.
7	.5	WT/BU	Service Interval Indicator, Service Interval Processor
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	ВК	Ignition, Ignition Coil.
14	2.5	RD	Charge System, Alternator.
15	1.5	GN/YL,	Fuel Control, Oxygen Sensor Heater Relay.



FUSE NO.	SIZE/ COLOR	CIRCUIT PROTECTED
1	15A (LT BU)	Headlights (also fuses 2, 13, 14).
2	15A (LT BU)	Headlights (also fuses 1, 13, 14).
3	15A (LT BU)	Auxiliary Fan (also fuses 16, 18).
4	15A (LT BU)	Lights: Turn/Hazard Warning (also fuse 24).
5	25A (WT)	Wiper/Washer, Windshield Washer Jet Heater.
6	7.5A (BR)	Active Check Control (also fuse 10, 12, 21, 22, 23); Stoplights/Cruise Control (also fuse 17).
7	15A (LT BU)	Horn.
8		Not Used.
9	7.5A (BR)	Back Up Lights; Fuel Control.
10	7.5A (BR)	Active Check Control (also fuses 6, 12, 21, 22, 23); Brake Lining Warning; On-Board Computer (also fuse 12, 21, 27); Seatbelt Warning; Service Interval Indicator (also fuse 21); Speedometer/Gauges/Warning Indicators.
11	15A (LT BU)	Fuel Delivery.
12	7.5A (BR)	Active Check Control (also fuses 6, 10, 21, 22, 23); On-Board Computer (also fuses 10, 21, 27); Radio (also fuses 12, 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 GRN)	Auxiliary Fan/Vacuum Pump (also fuses 3, 18); Heating/Air Conditioning.
17	15A (LT BU)	Heater/Air Conditioning; Interior Lights (also fuse 21); Power Mirrors; Power Windows (also fuse 26); Seatbelt Warning (also fuse 10, 21); Stoplights/Cruise Control (also fuse 6); Windshield Washer Jet Heaters.

FUSE NO.	SIZE/ COLOR	CIRCUIT PROTECTED
18	30A (LT GRN)	Auxiliary Fan.
19	30A (LT GN)	Sunroof.
20	30A (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; Glove Box Light; Interior Lights (also fuse 17); On-Board Computer (also fuses 10, 12, 27); Radio (also fuse 12); Service Interval Indicator (also fuse 10); Trunk Lights.
22	7.5A (BR)	Active Check Control (also fuses 6, 10, 12, 21, 23); Lights: Front Park/Tail.
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); Lights: Visor/Dash; Lights: Rear Marker/License
24	15A (LT BU)	Lights: Turn/Hazard Warning (also fuse 4).
25		Not Used.
26	30A (LT GN)	Power Seats; Power Windows (also fuse 17).
27	30A (LT GN)	Central Locking; Heated Door Lock On-Board Computer (also fuses 10, 12, 21).
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	25A	Power Windows

# BLANK

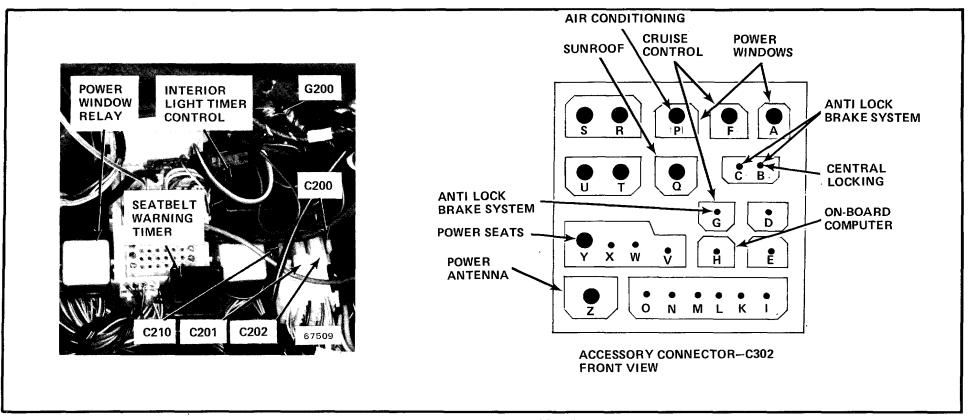
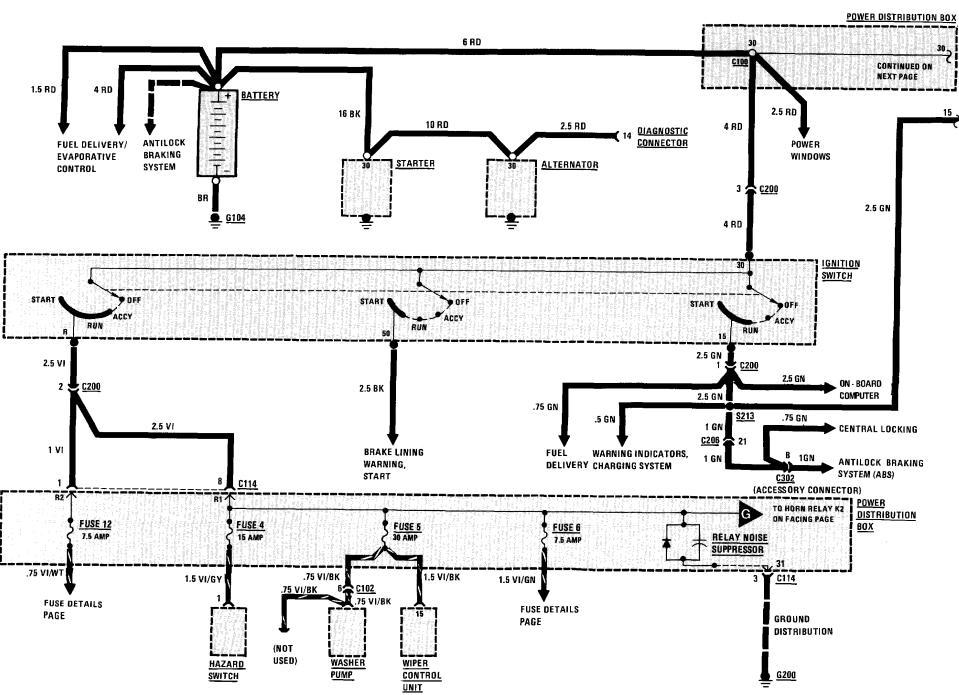
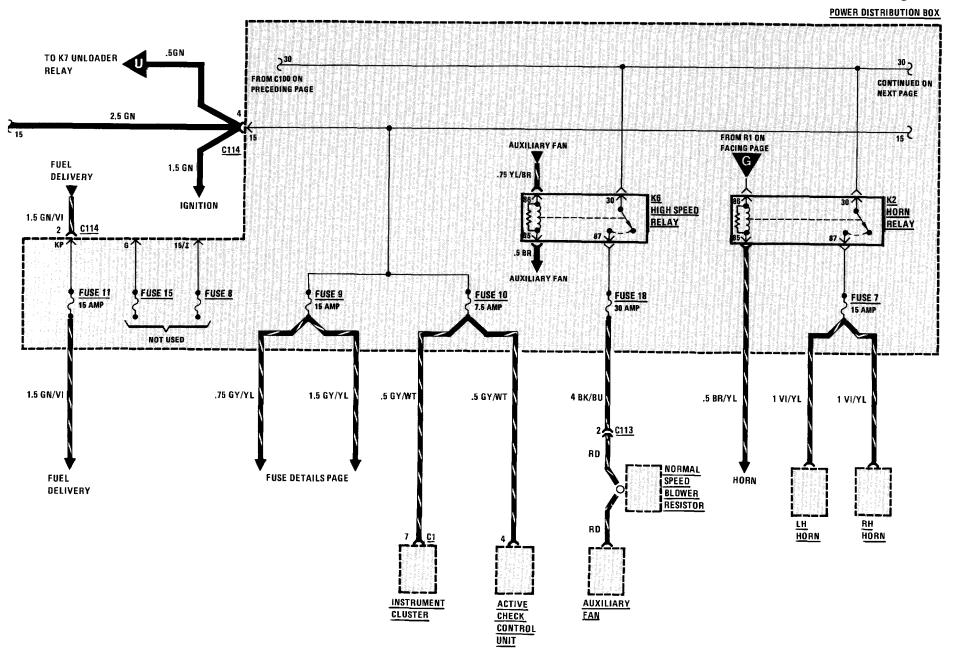
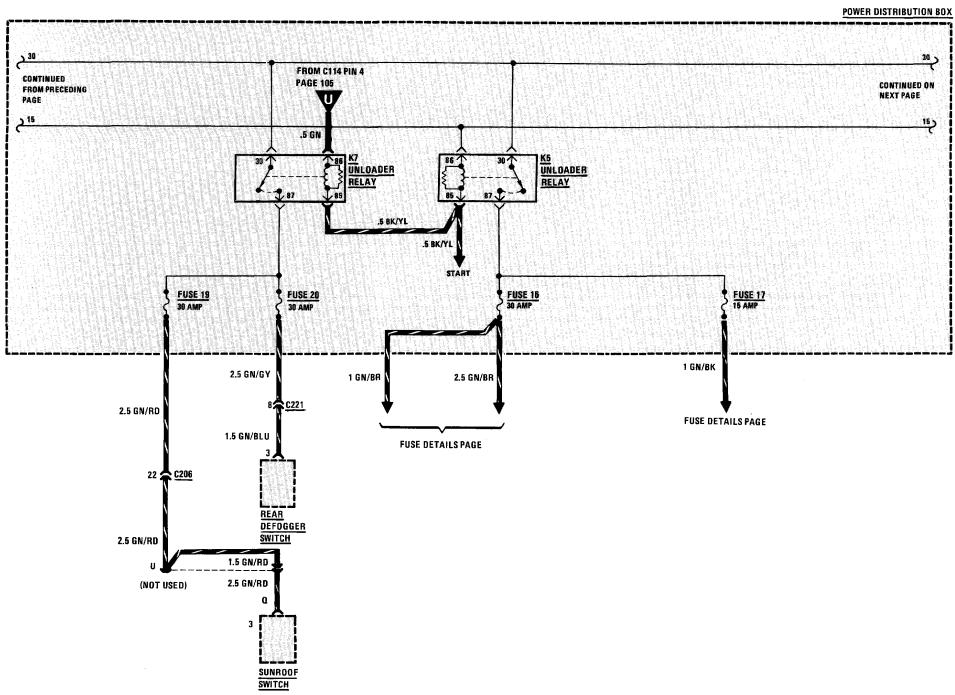
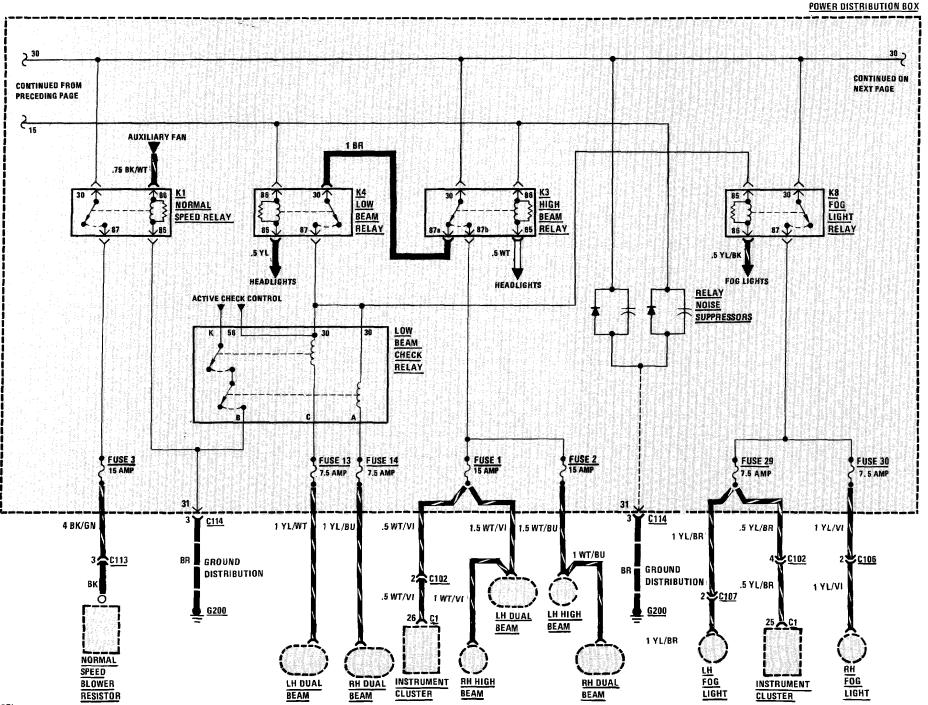


Figure 1 - Under Left Side Of Dash

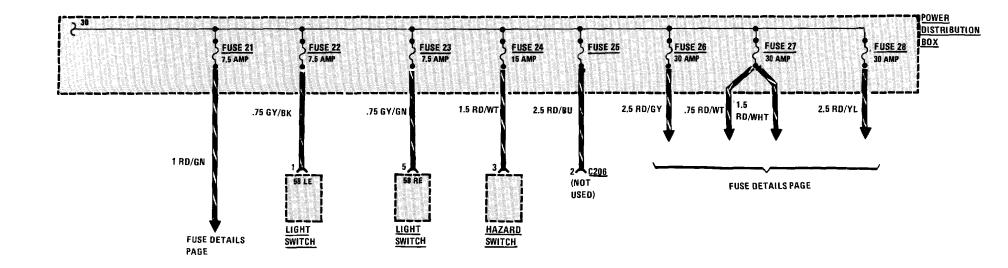


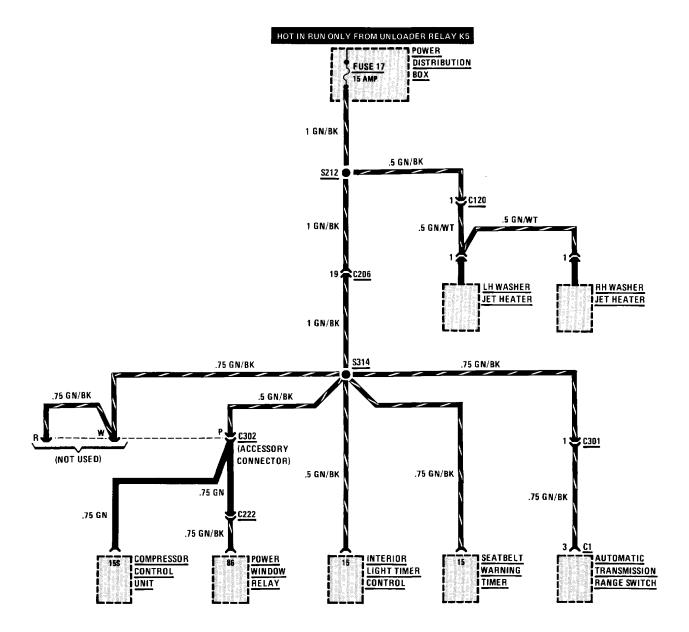


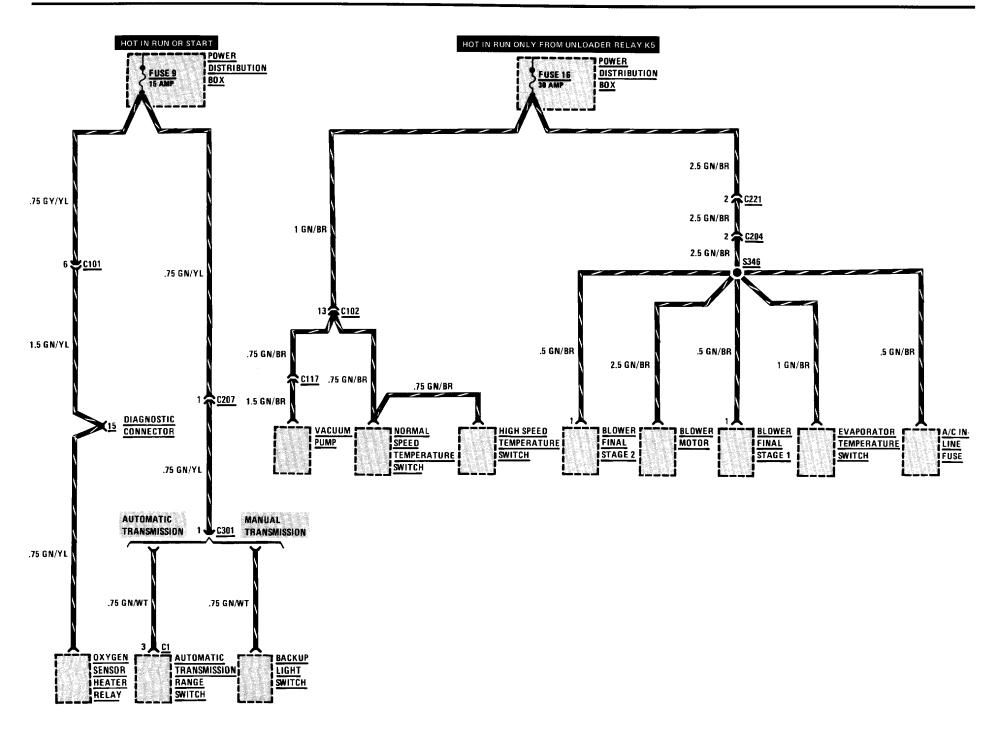


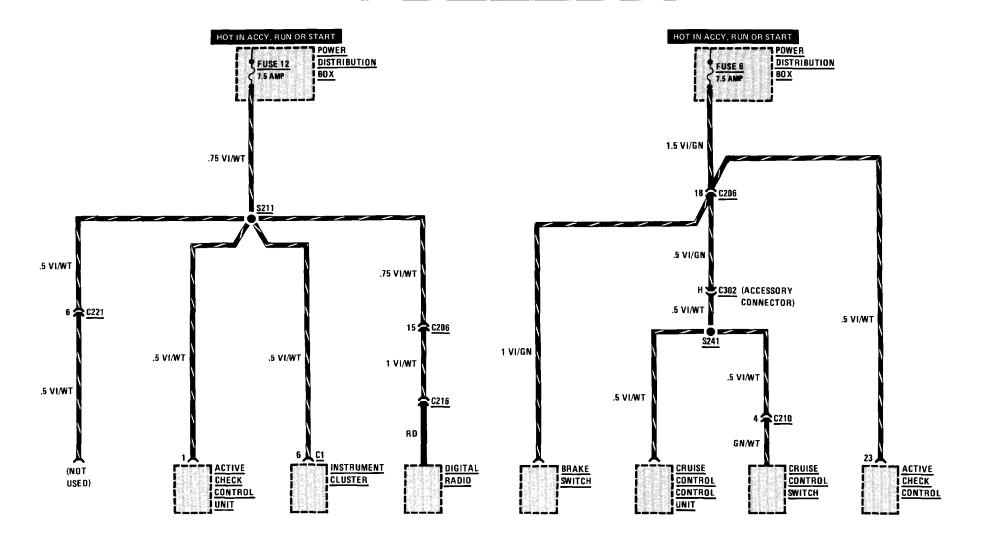


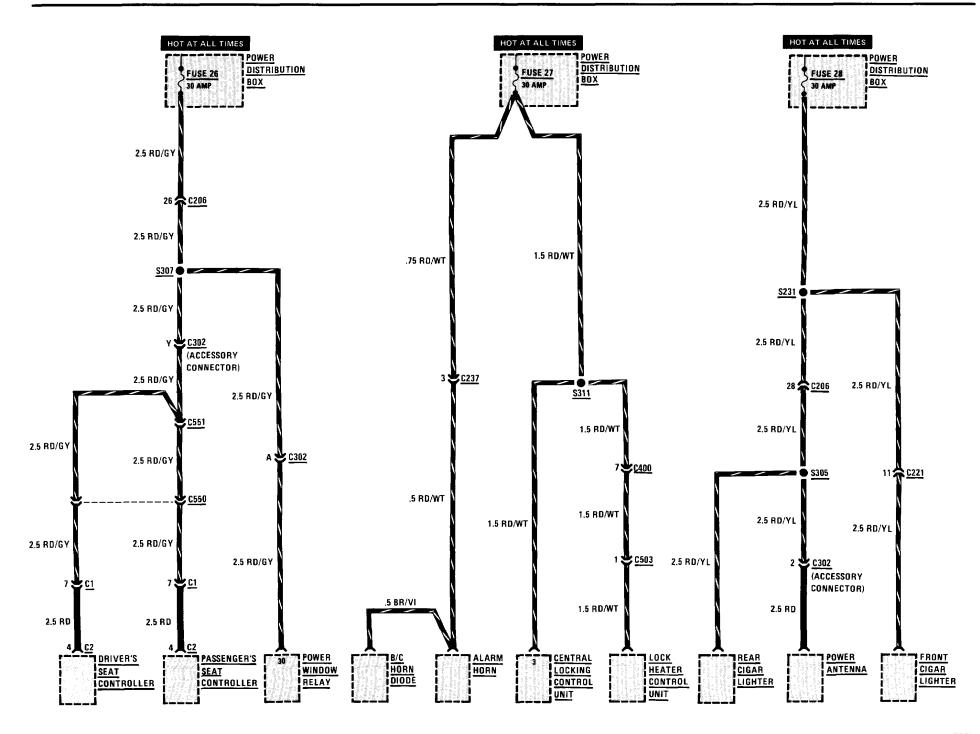
# 108 POWER DISTRIBUTION

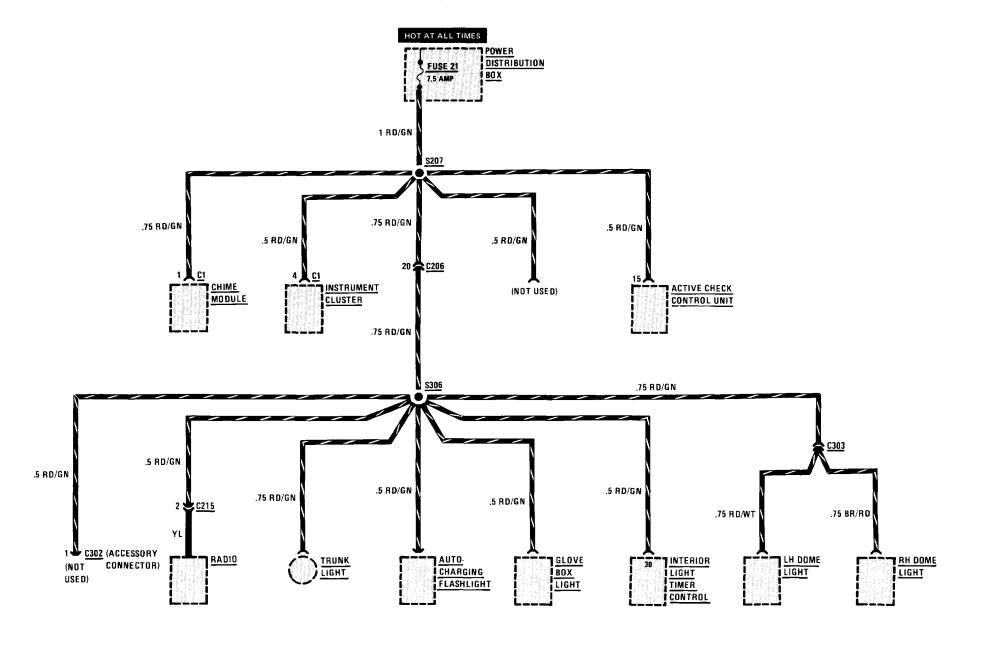


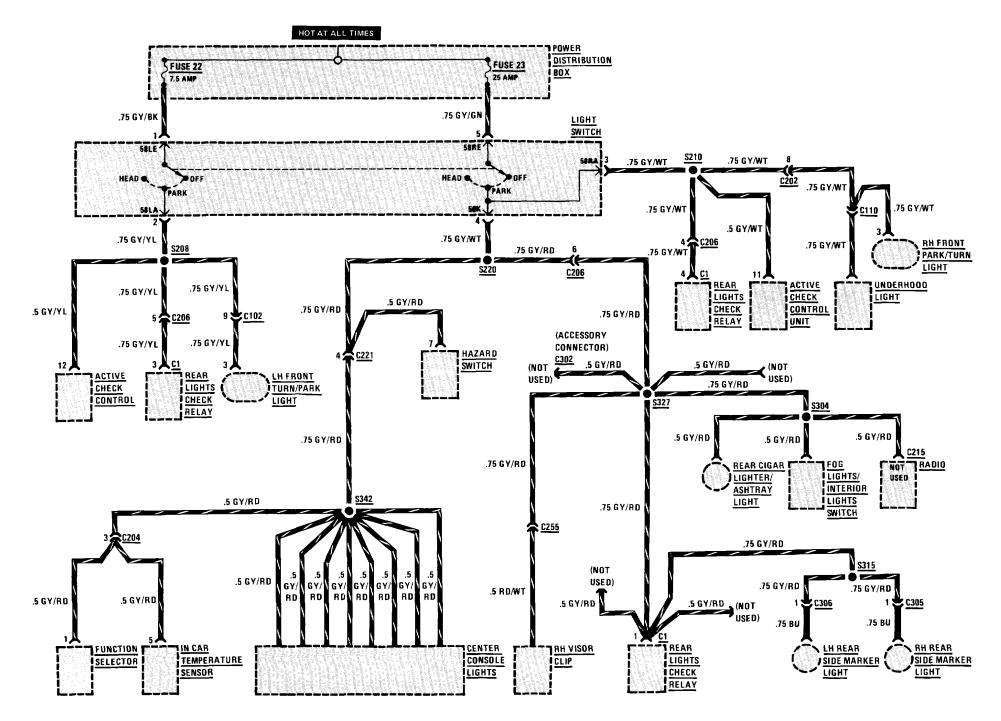


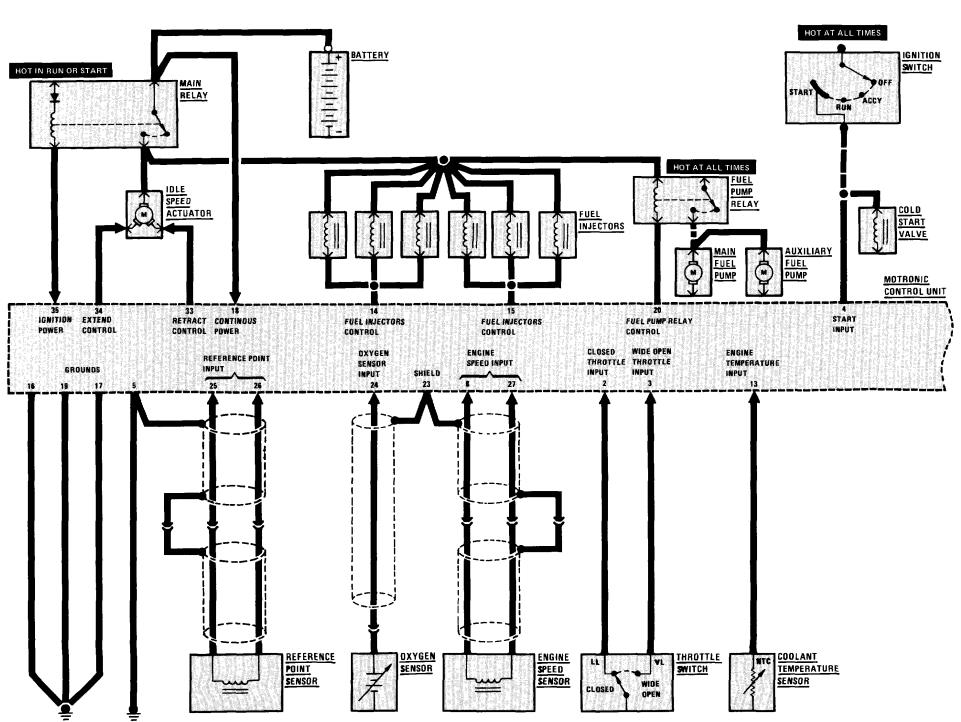


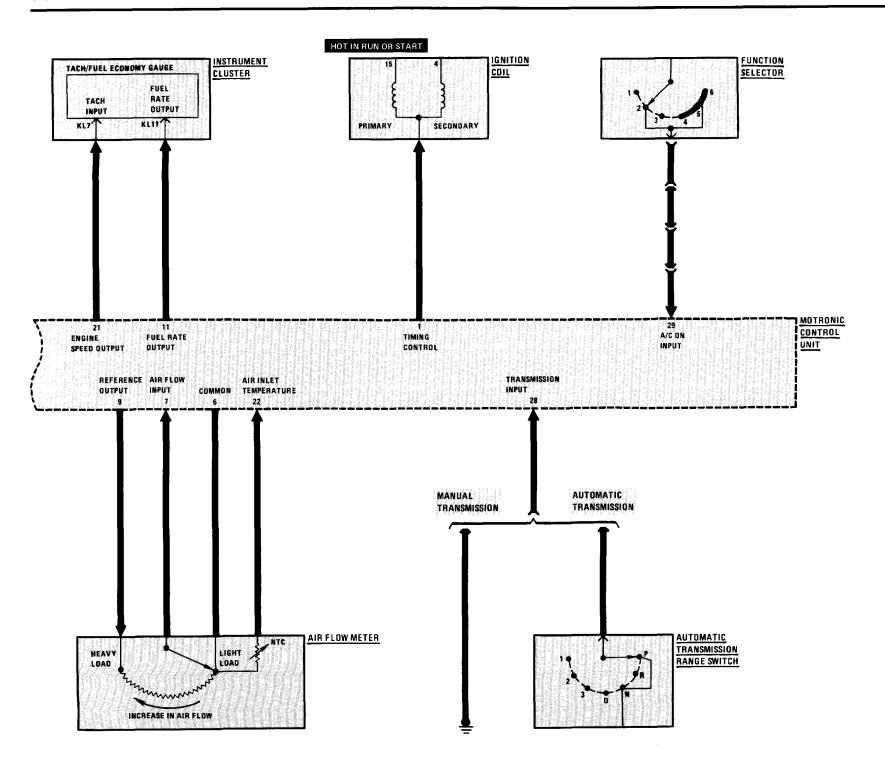


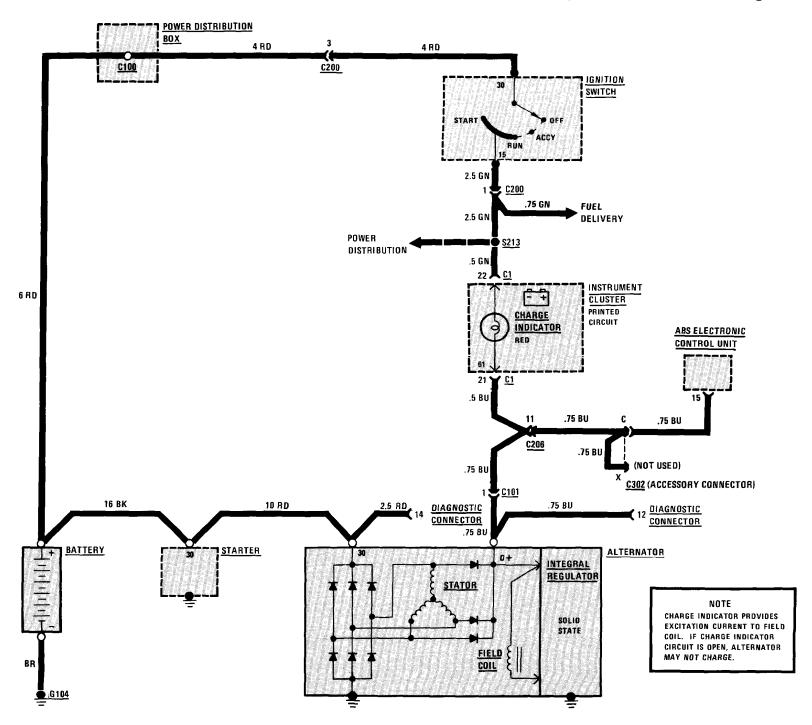


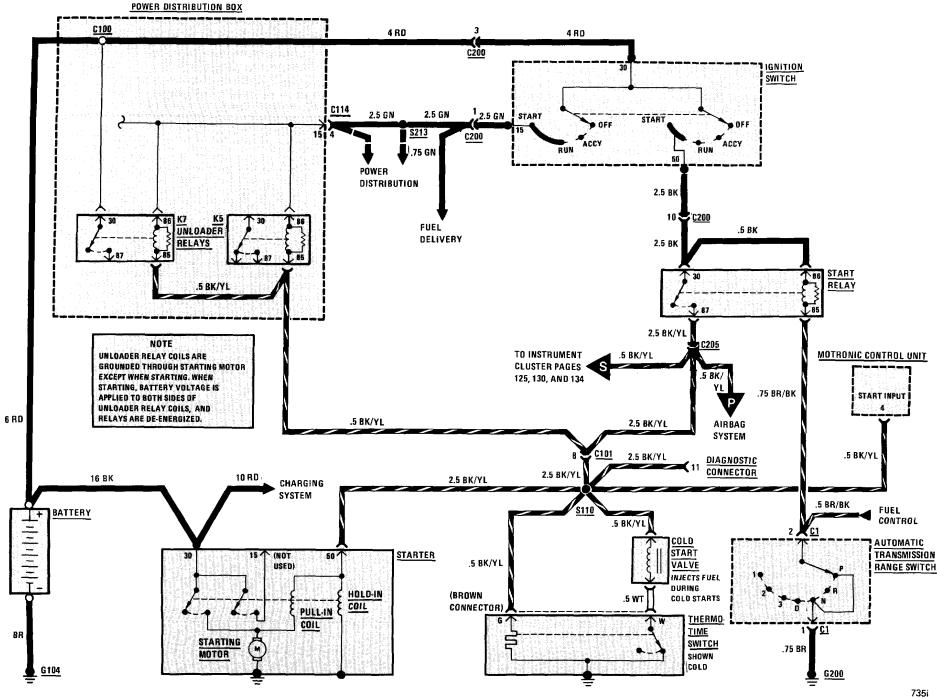


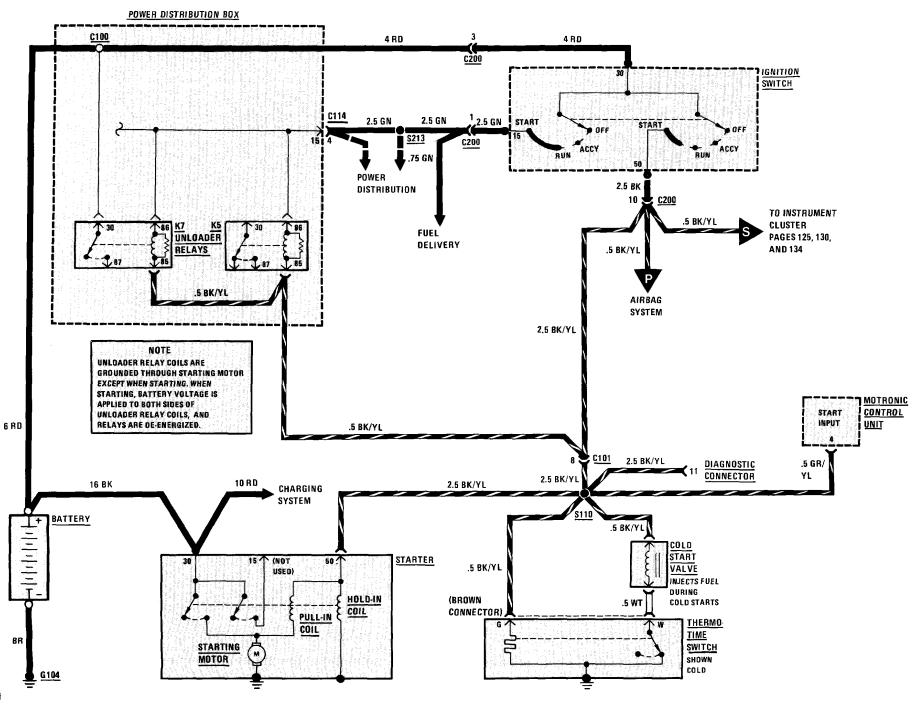


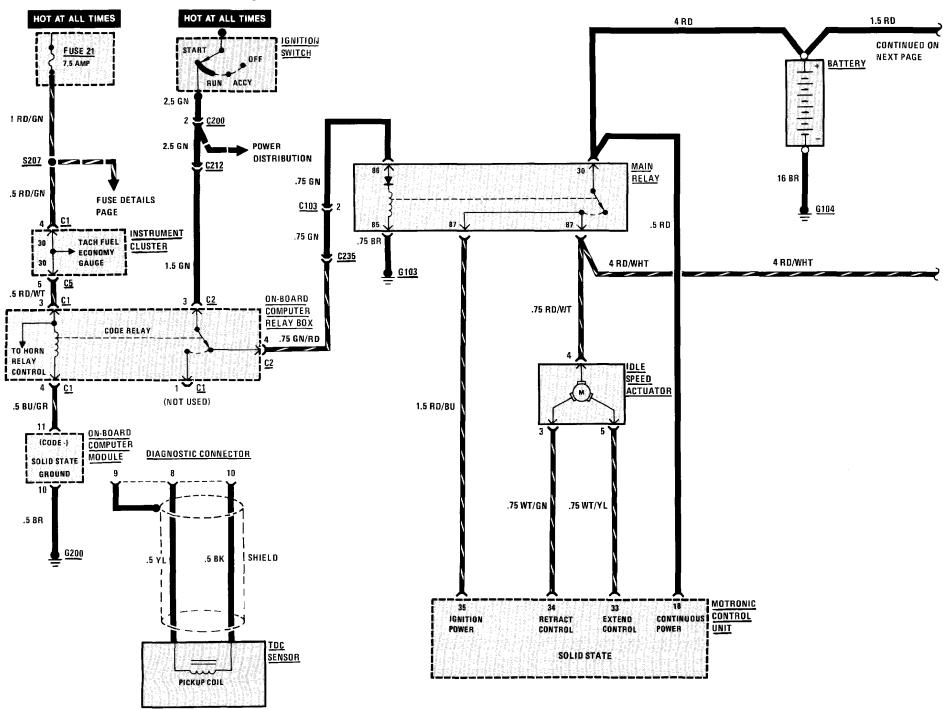


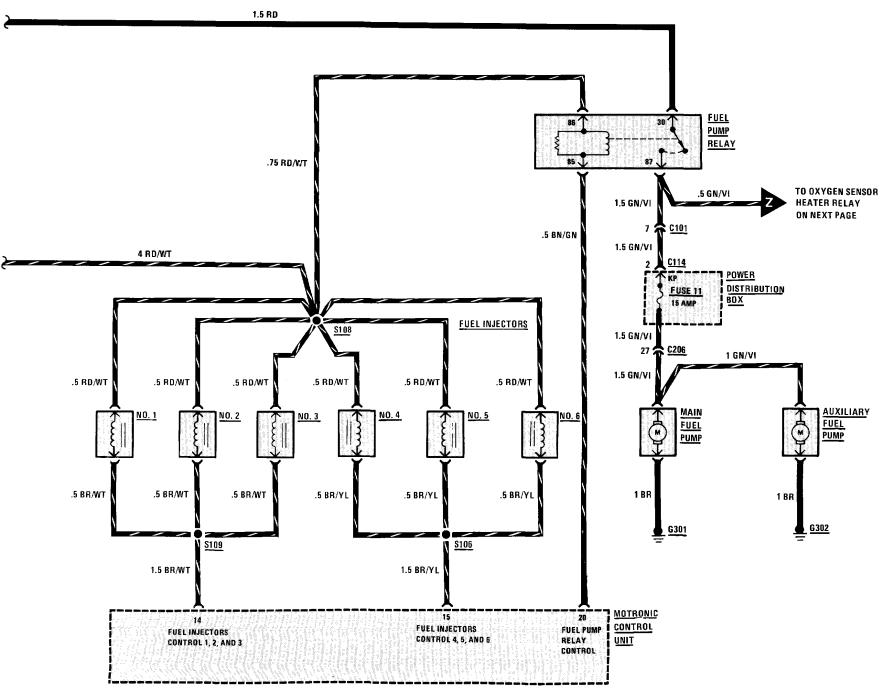


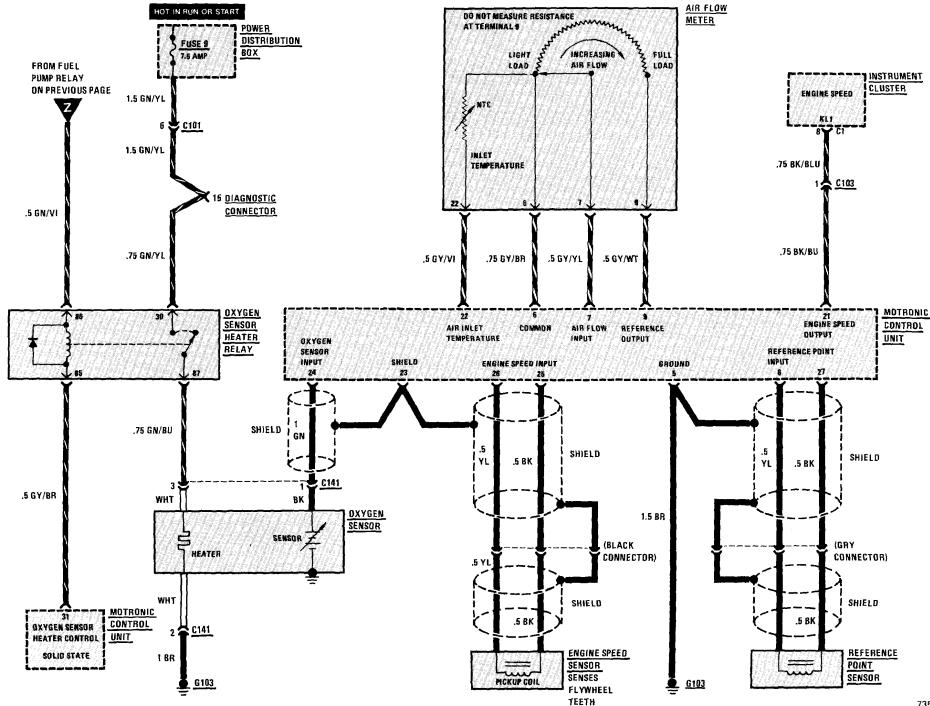


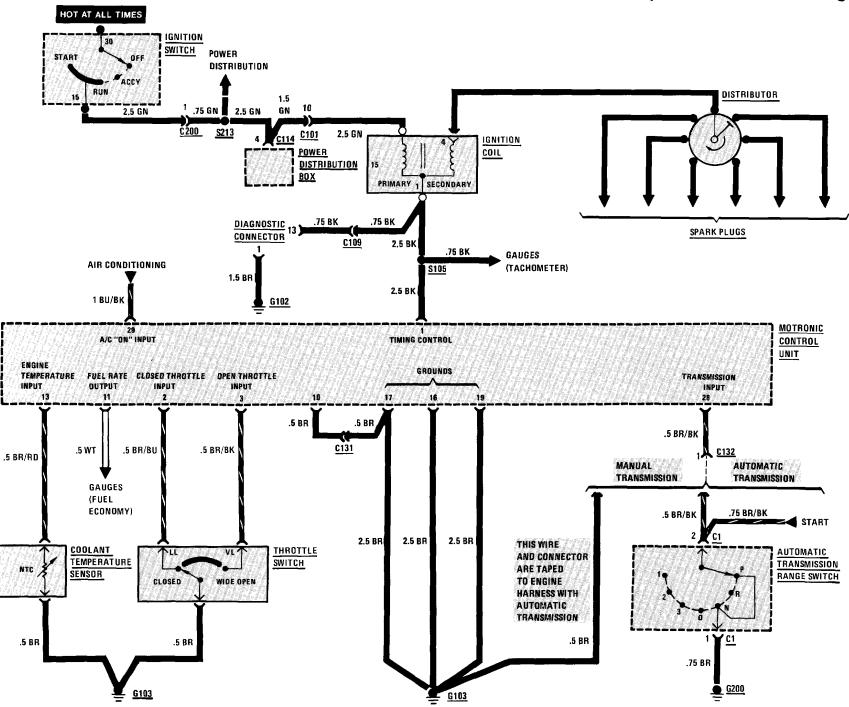


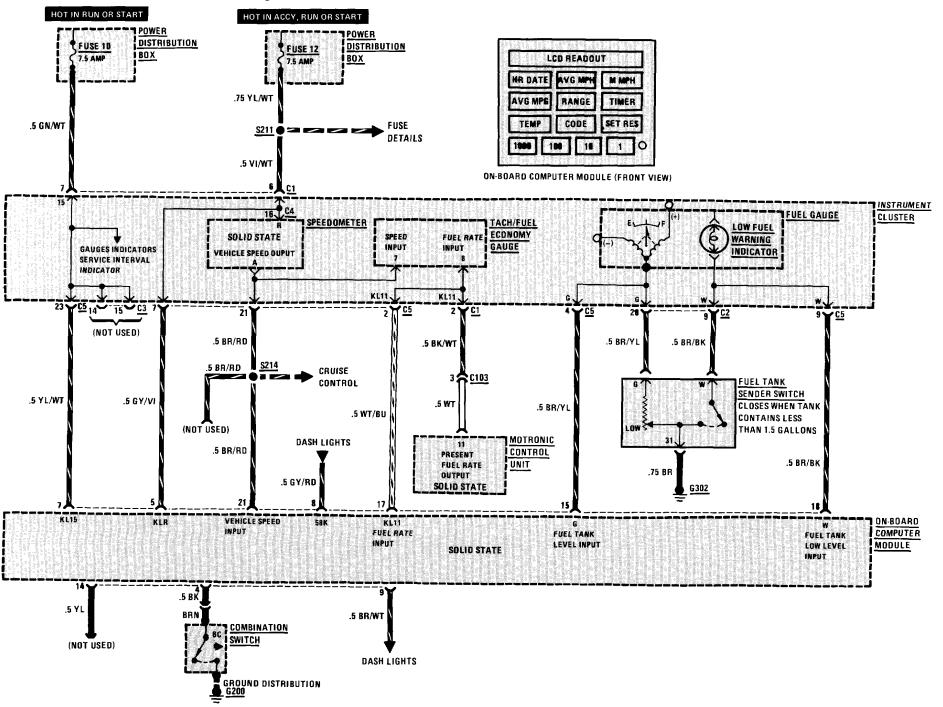


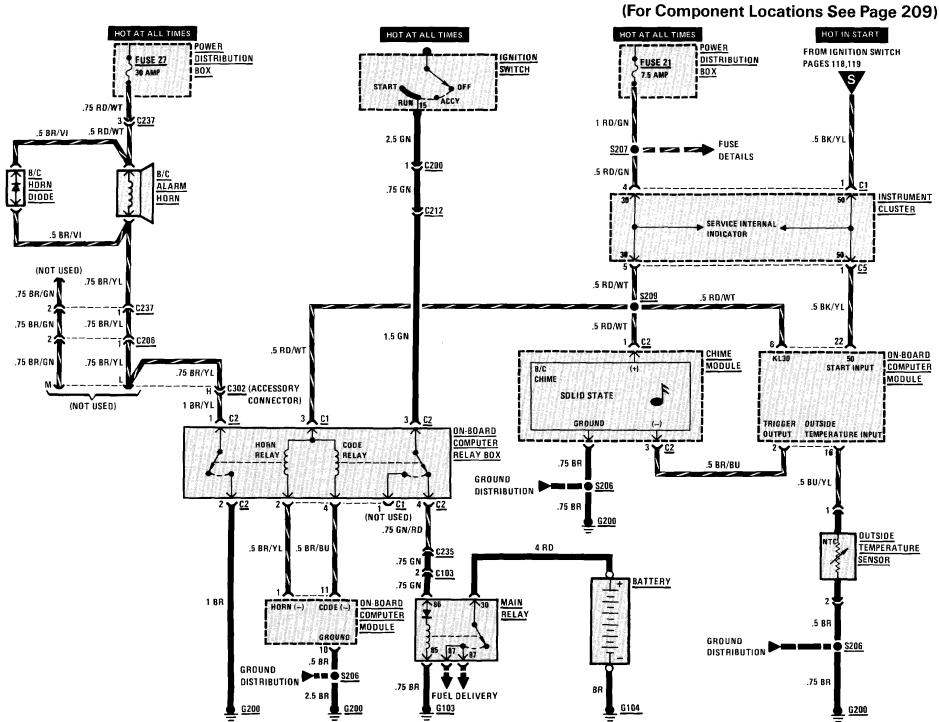




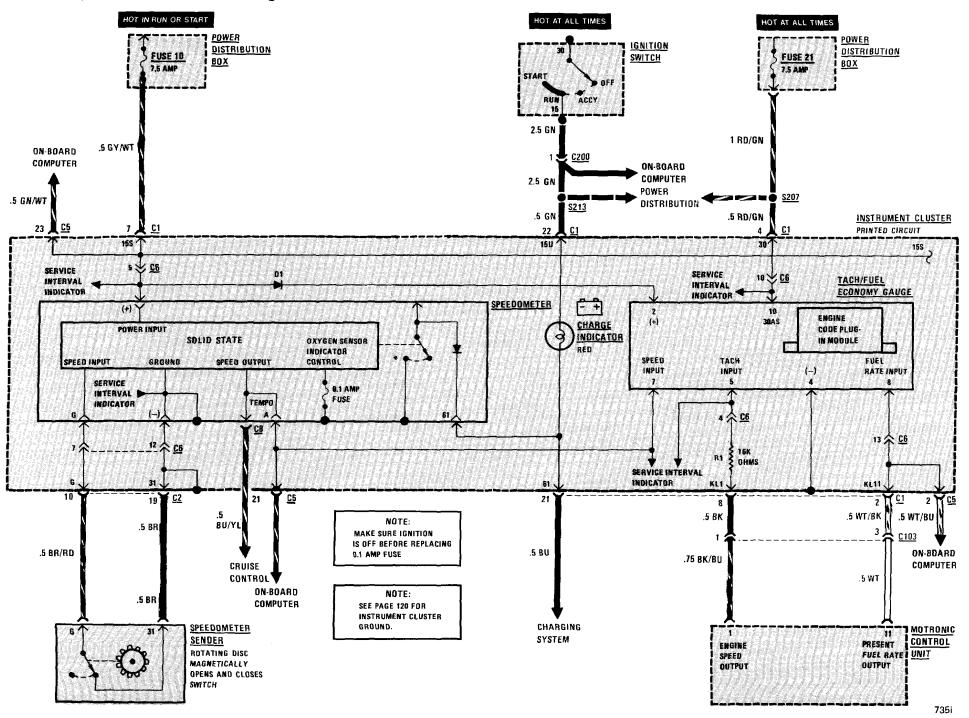




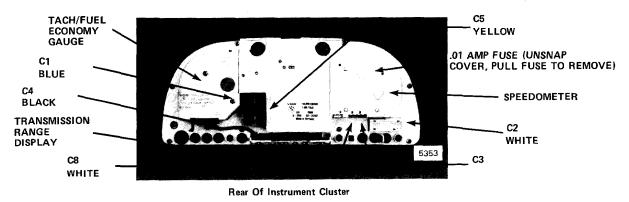


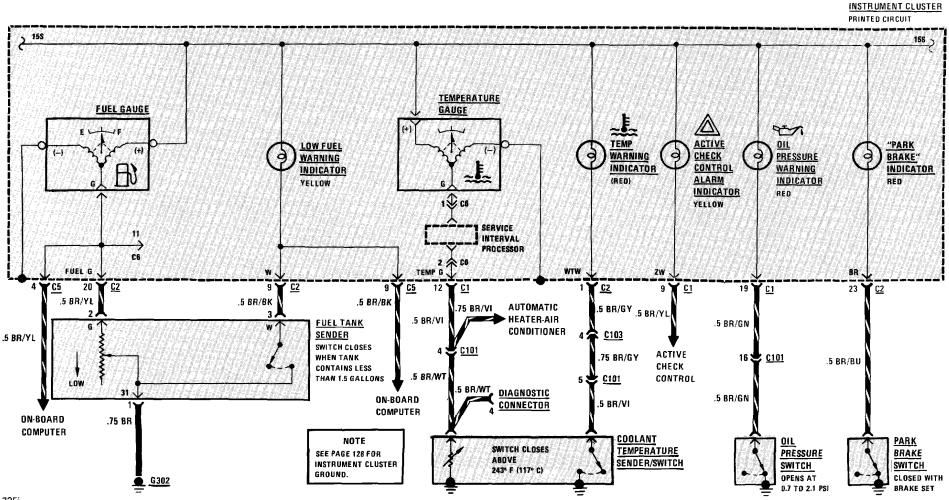


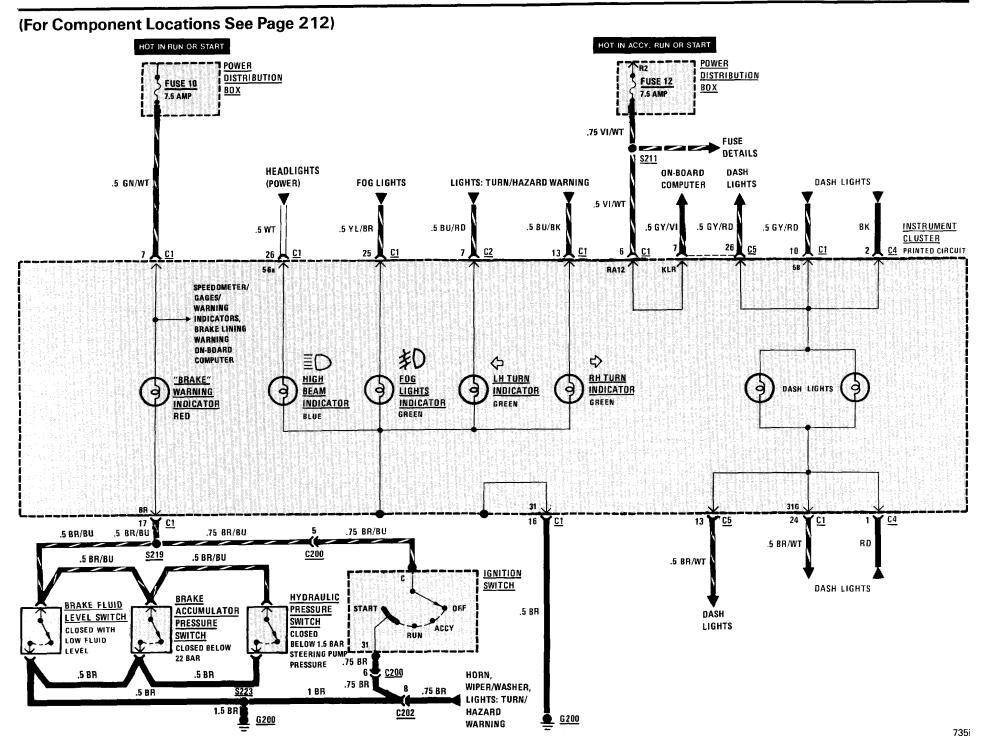
## (For Component Locations See Page 212)

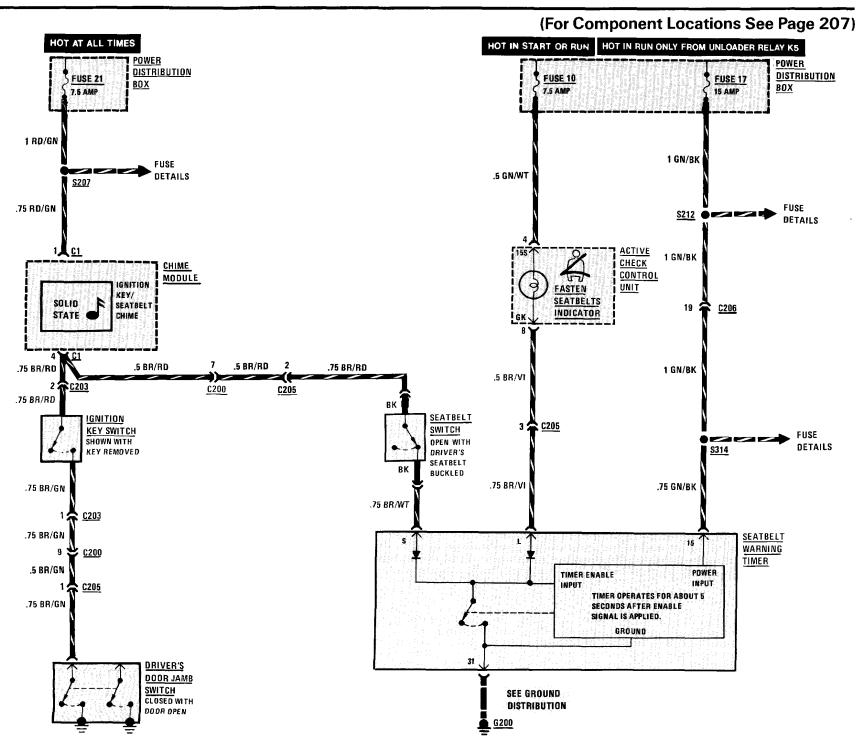


## (For Component Locations See Page 212)

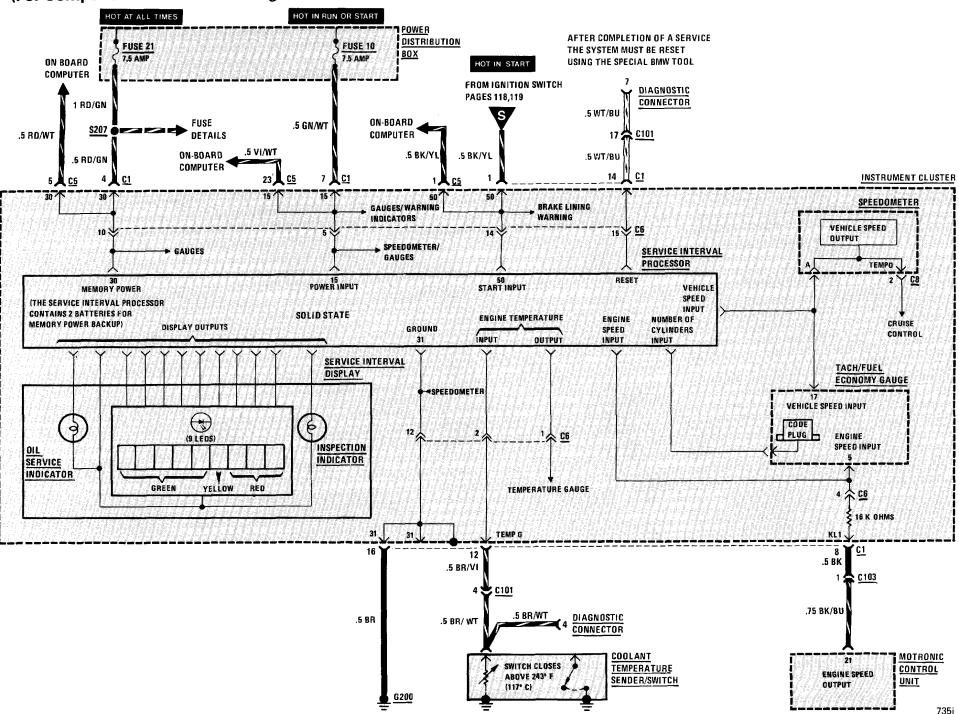








## (For Component Locations See Page 211)



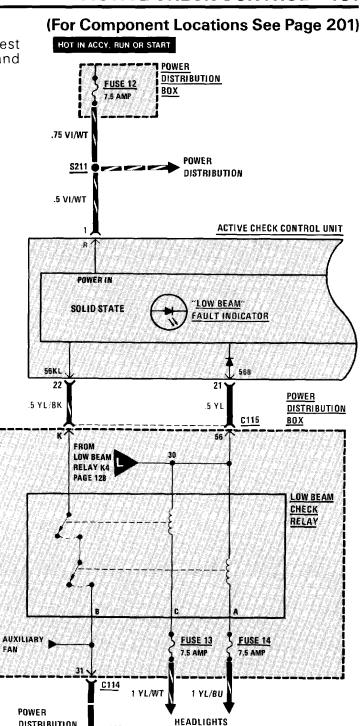
## **ACTIVE CHECK CONTROL**

- 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.



DISTRIBUTION

G200

#### 132 ACTIVE CHECK CONTROL (For Component Locations See Page 201) HOT IN ACCY. RUN OR START HOT AT ALL TIMES HOT AT ALL TIMES POWER DISTRIBUTION DISTRIBUTION FUSE 6 FUSE 22 BOX FUSE 23 7.5 AMP BOX 7.5 AMP 7.5 AMP .75 GY/BK .75 GY/GN 58LE 58RE SWITCH 1.5 GN/VI HEAD 58K 4 .75 GY/RD **S220** .75 GY/RD .5 GN/VI PARK 58LA . 58RA ACTIVE .75 GY/YL .5 GY/YL LIGHTS: .5 GY/WT .75 GY/WT .75 GY/WT **C206** CHECK FRONT PARK/ ACTIVE CHECK LIGHT SWITCH **ACTIVE CHECK** C206 CONTROL 18 🐙 .75 S210 **UNDERHOOD** CONTROL UNIT CONTROL UNIT **DETAILS** UNIT 23 GY/ 54Si YL **₽** 581. 58R 😩 58R .75 LIGHTS: BRAKE RESET LIGHT SWITCH ON GY/RD LIGHT SWITCH ON FRONT PARK INPUT "LICENSE BRAKE "REAR LIGHTS" SOLID SOLID SOLID PLATE." LIGHTS" FAULT STATE STATE STATE FAULT FAULT 1 VI/GN INDICATOR INDICATOR INDICATOR LIGHTS ON LIGHTS ON .75 GY/YL KKL 54KL 58KL 26 BRAKE .5 YL/RD LIGHT SWITCH .5 GY/BU .75 GY/WT S327 .5 GY/VI SWITCH .5 GN/BK DETAILS C206 14 4 📥 <u>c206</u> 134 16 🚓 <u>C206</u> .75 GY/RD .5 YL/RD .5 YL/RD LIGHT SWITCH .75 GY/YL .75 GN/BK ..5 GY/BU .75 GY/WT .75 GY/VI 1 YL/RD DETAILS CRUISE 1 C1 CONTROL <u>C1</u> 3 ] <u>C1</u> <u>C2</u> 3 , REAR 58KL KKL 54KL 58L 58R LIGHTS CHECK RELAY

KAR.

.75 GY/RD 1.75 GY/RD

LIGHTS: LICENSE

KAL

54L

1 GN/YL

1 GN/BU

STOP LIGHTS

58R1

.75 GY/BK

<u>C1</u>

LIGHTŠ: TAIL

58L1

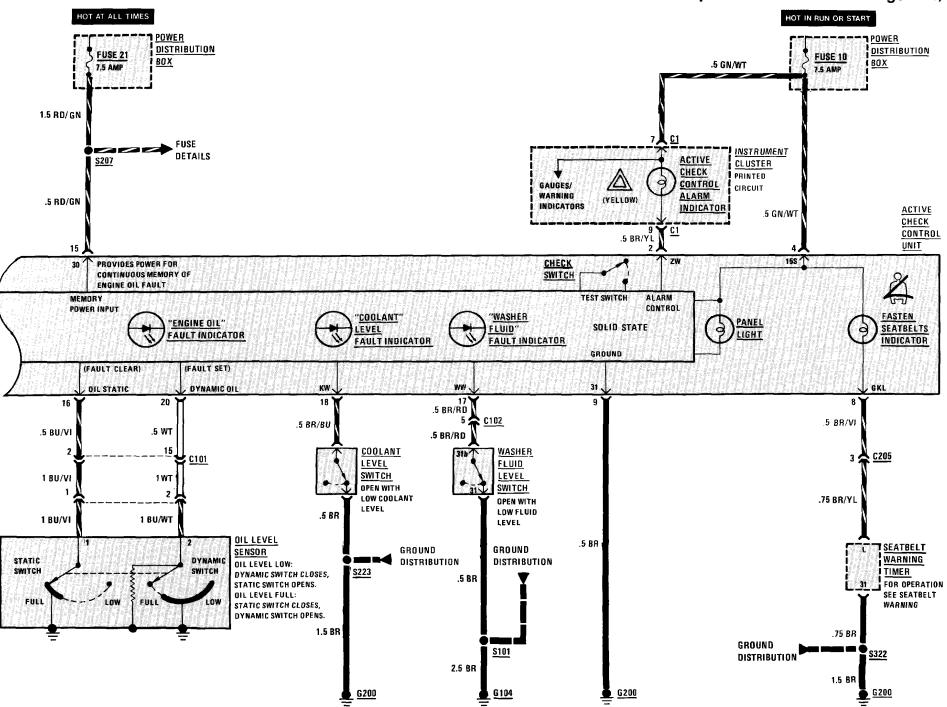
LIGHTS: TAIL

.75 GY/BU

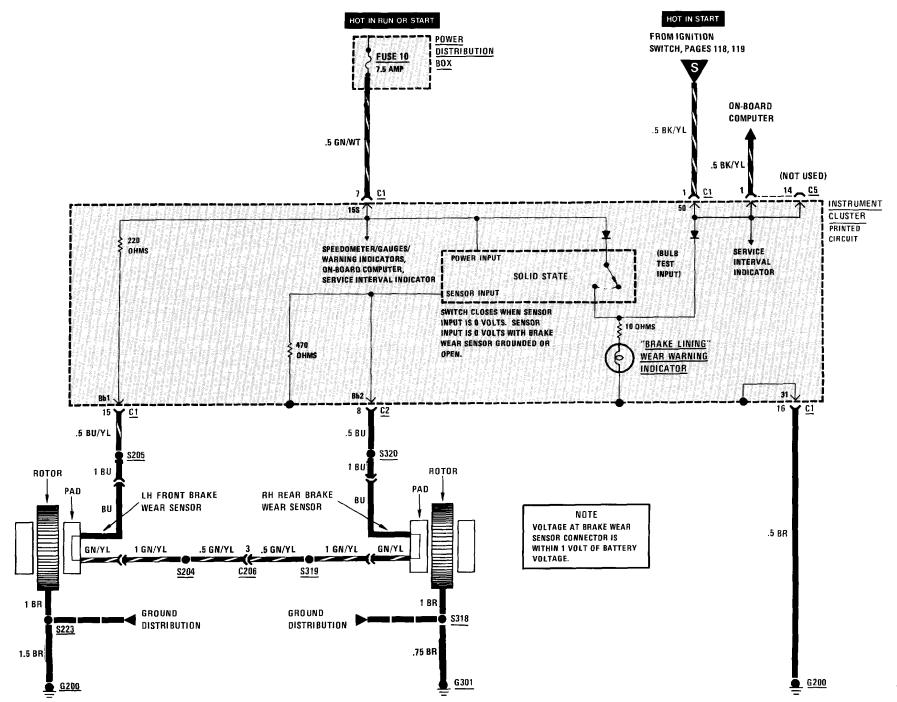
735i

.75 BR

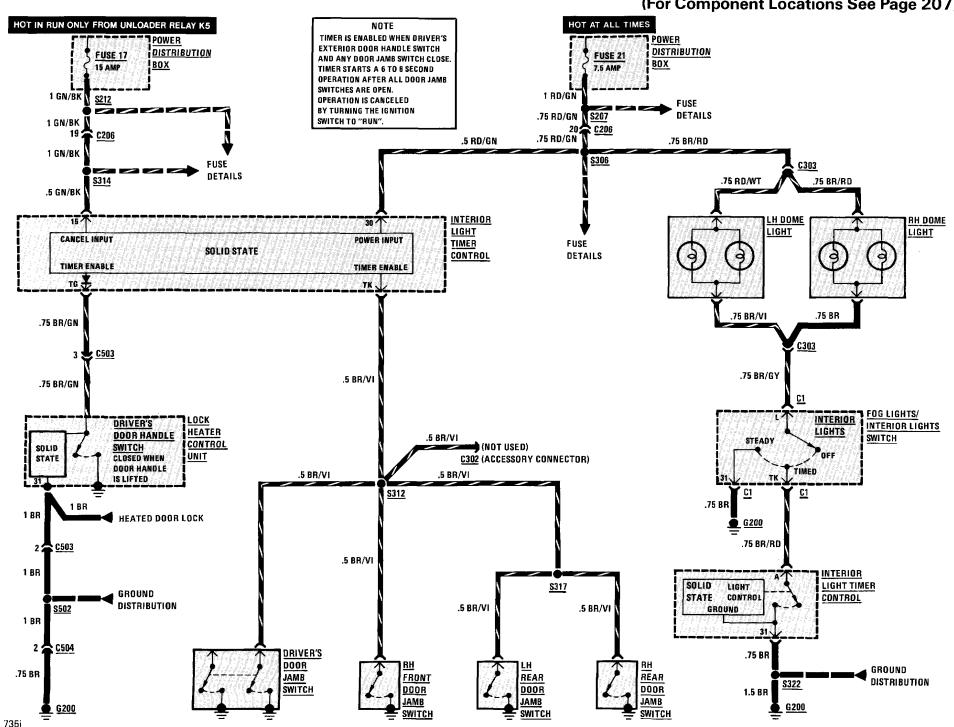
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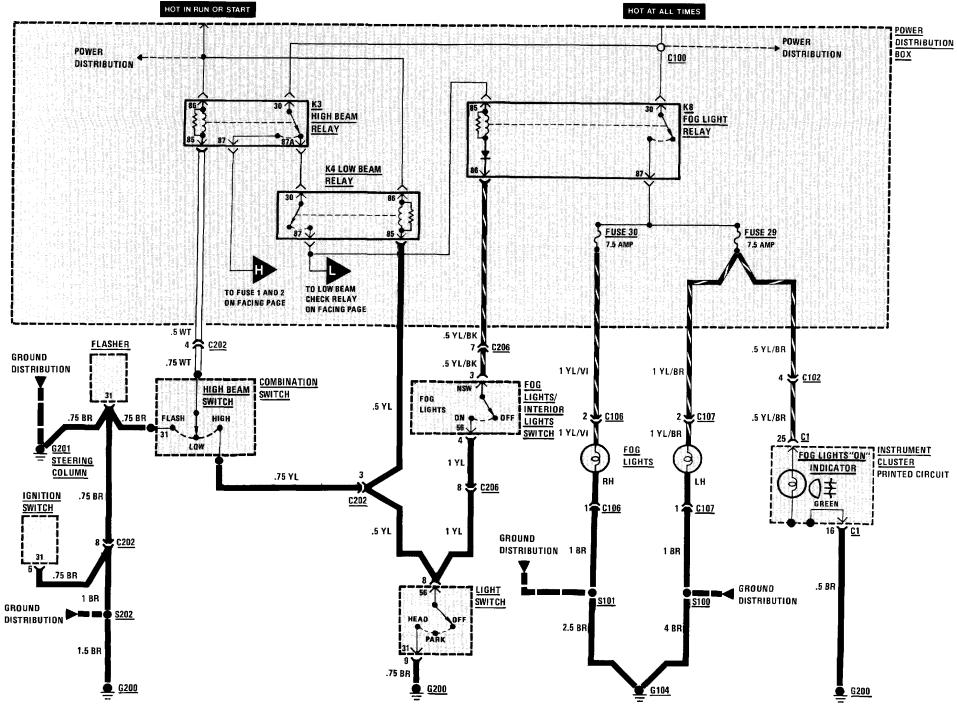
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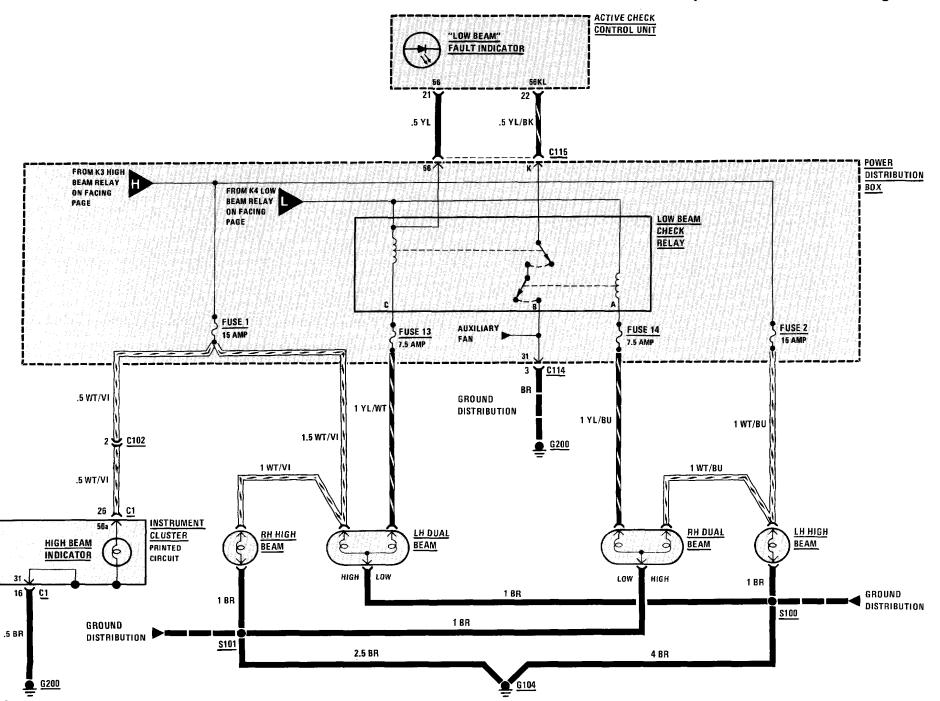
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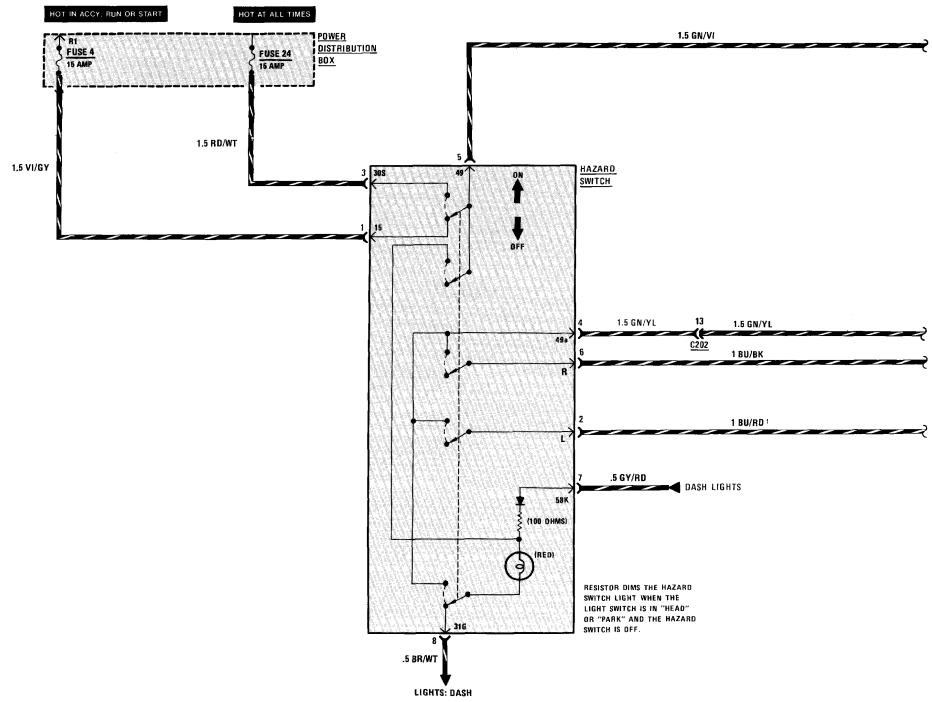
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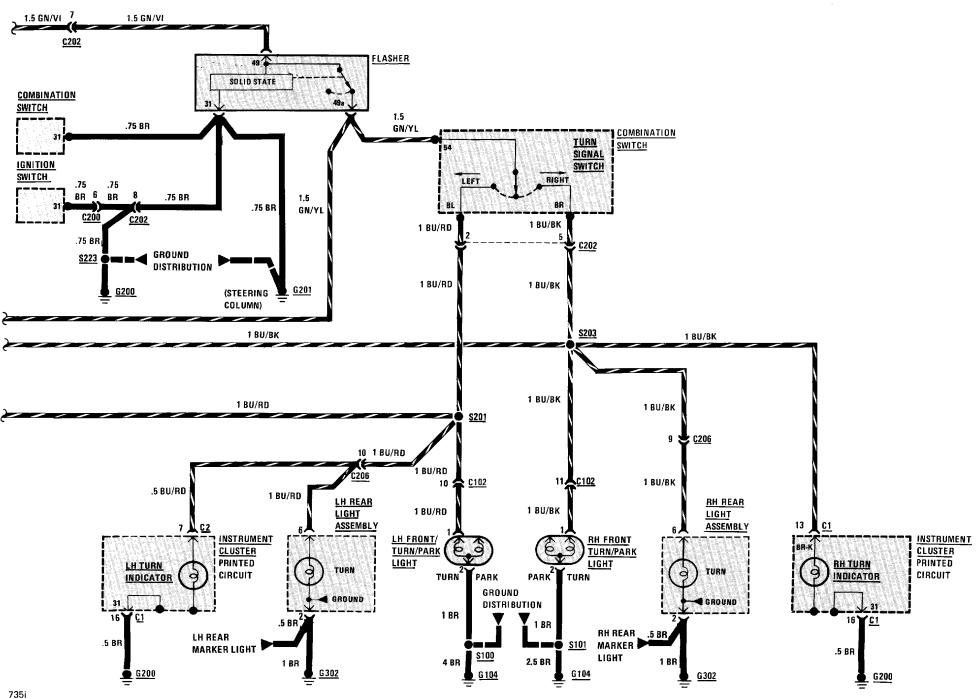
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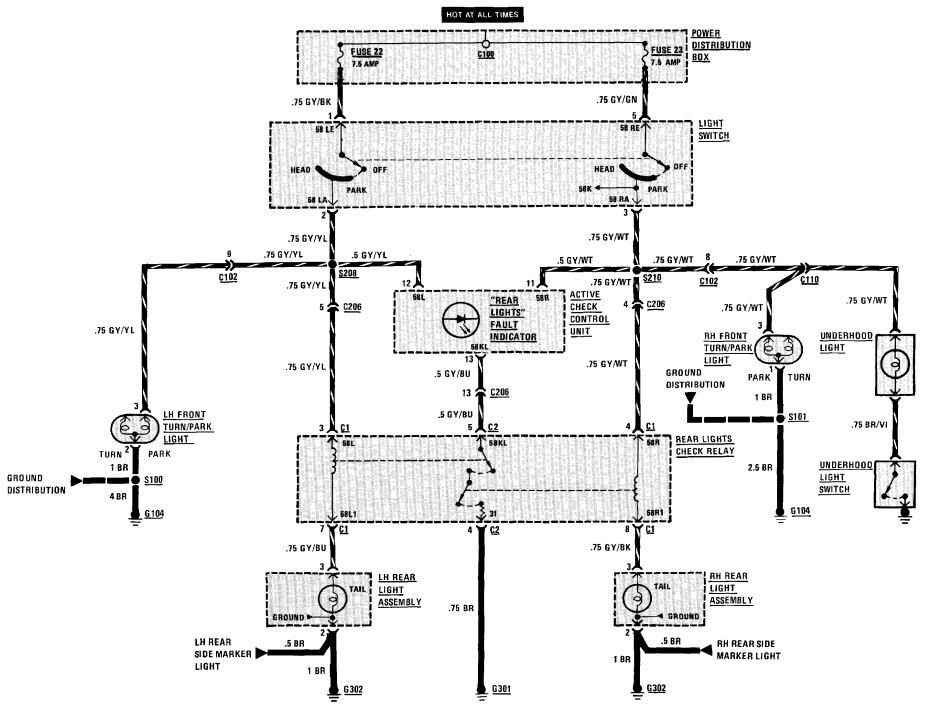
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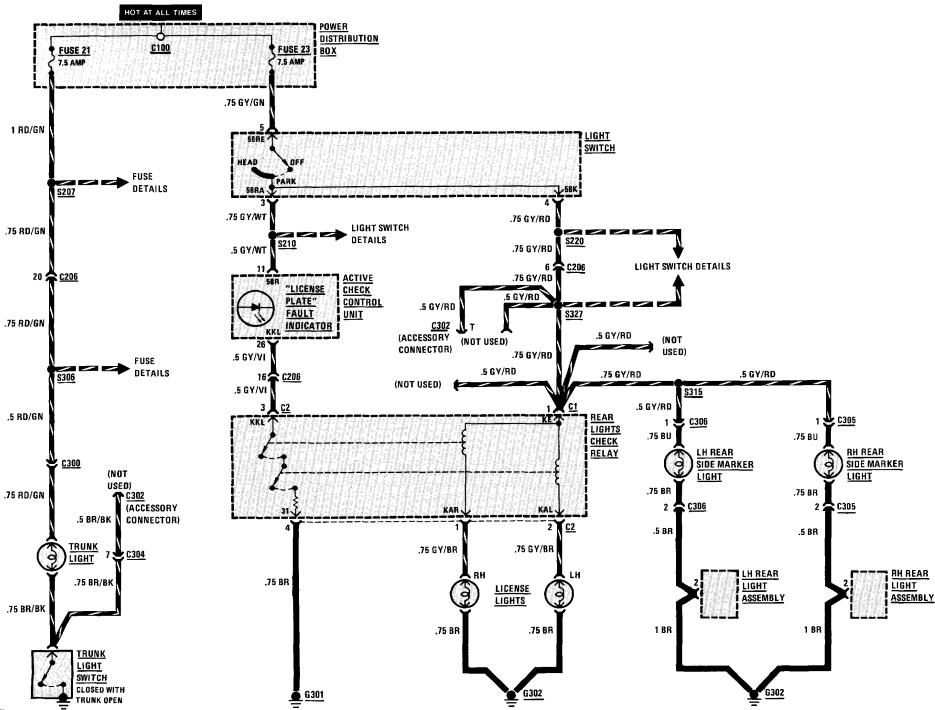
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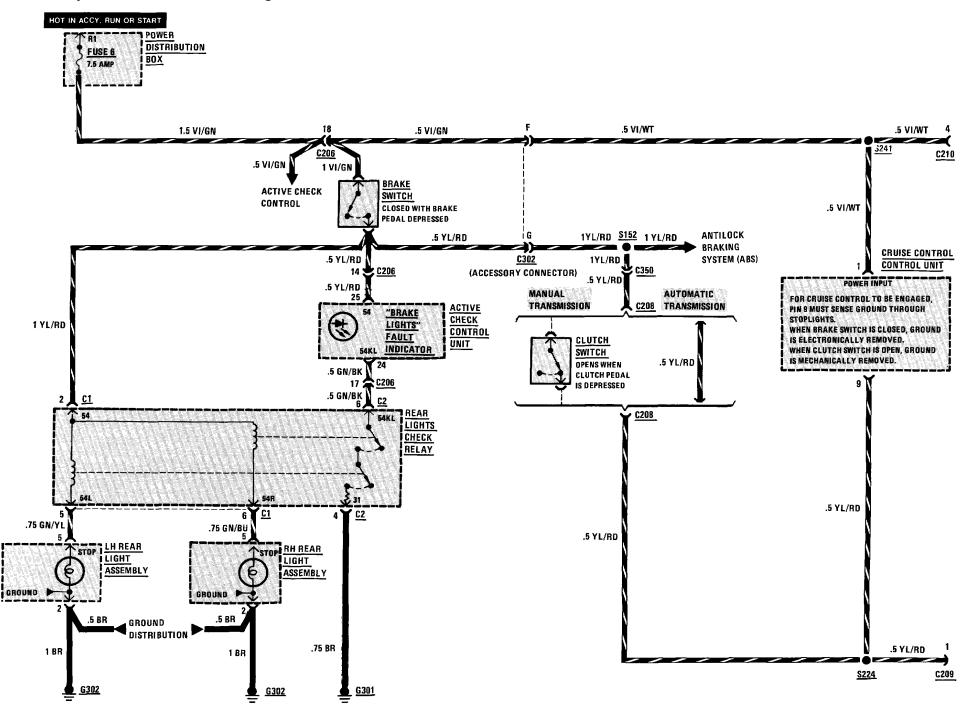
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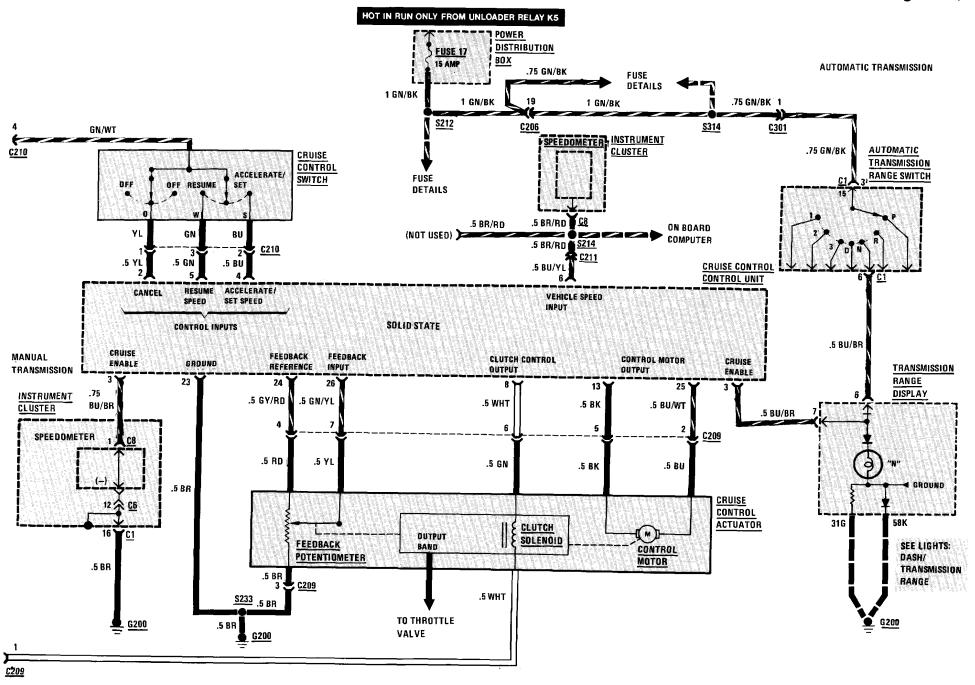
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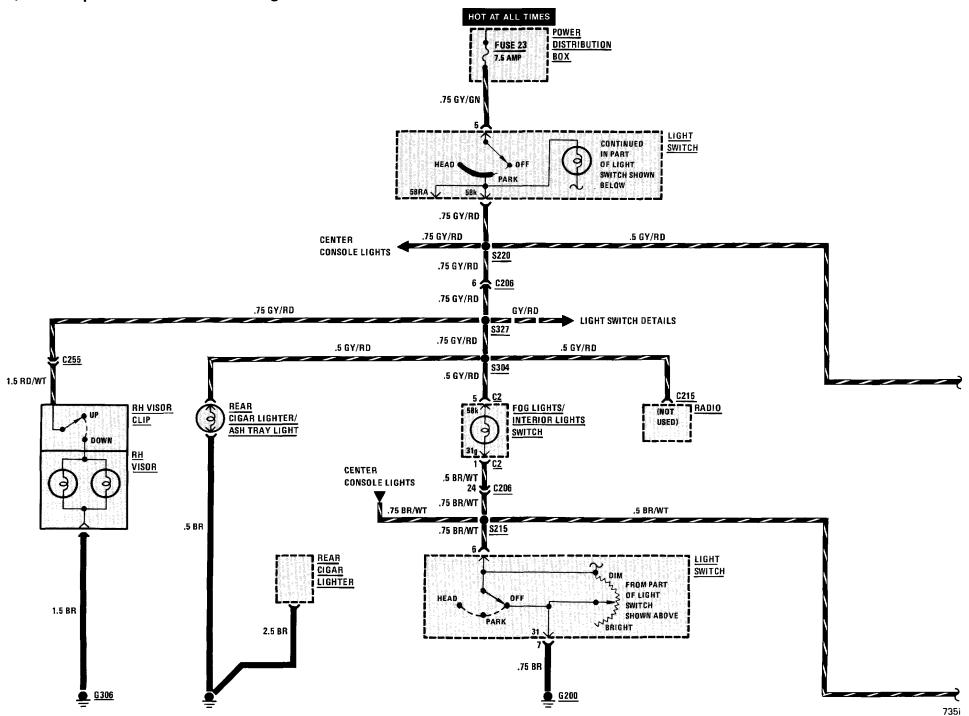
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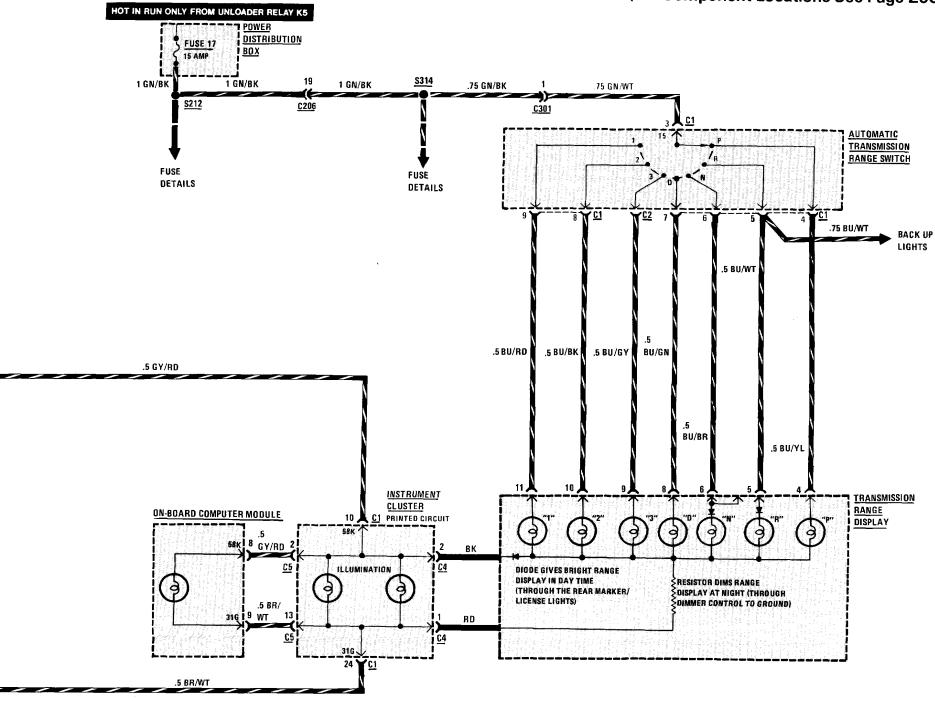
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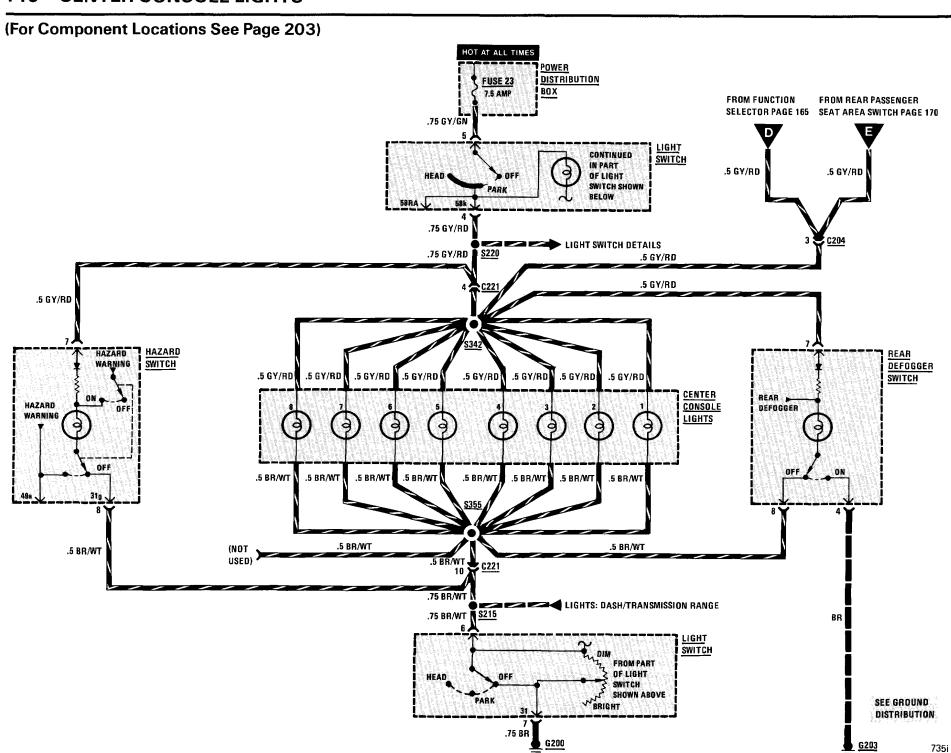


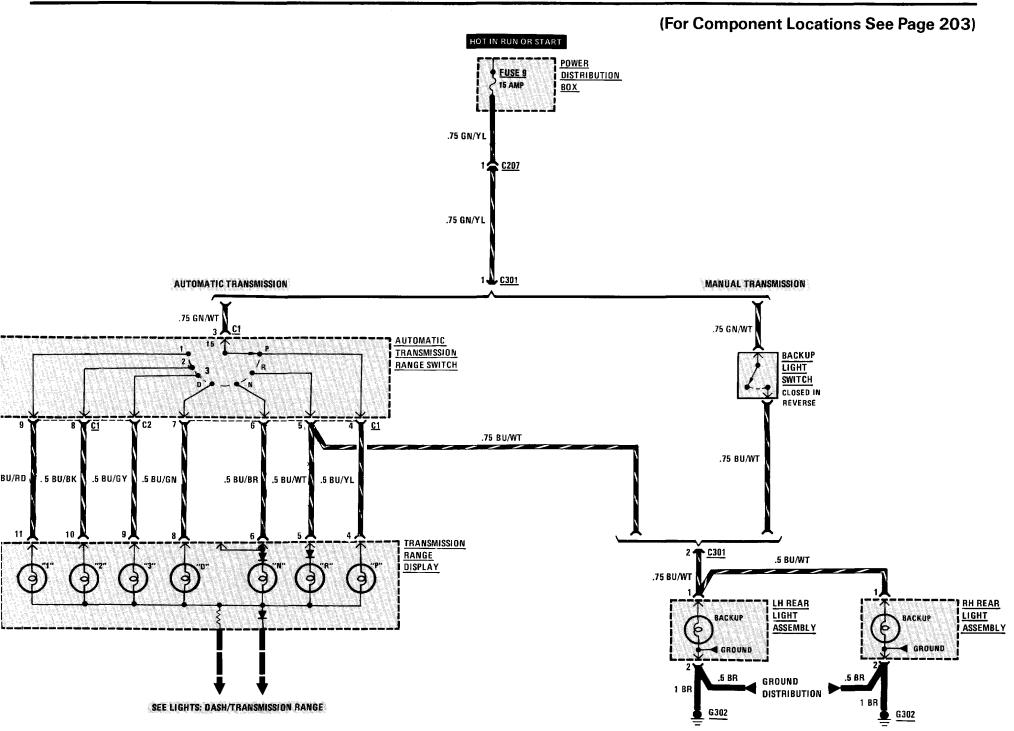
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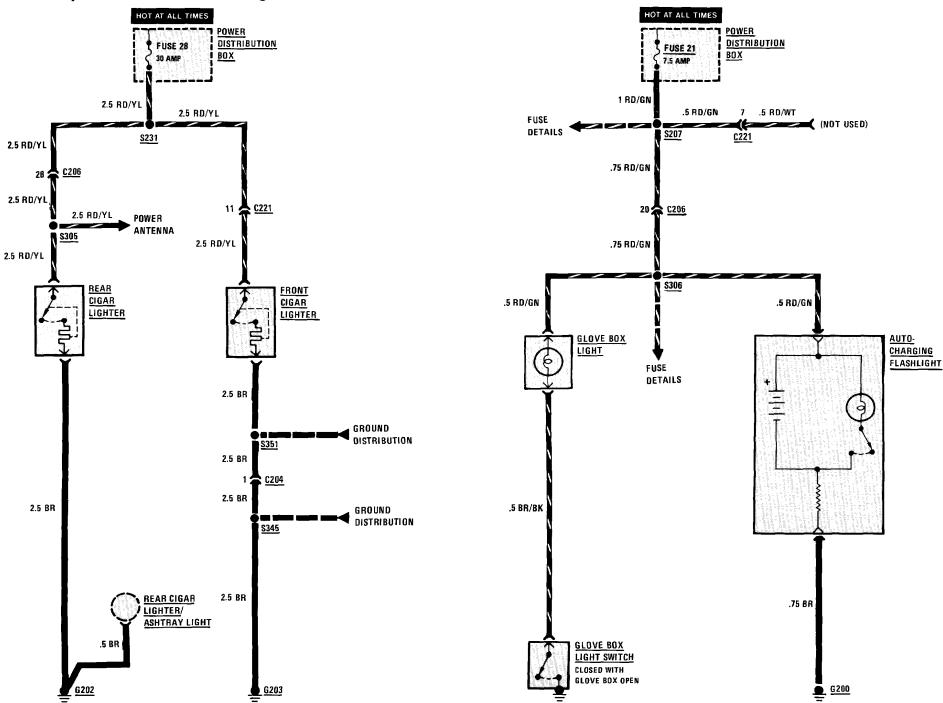
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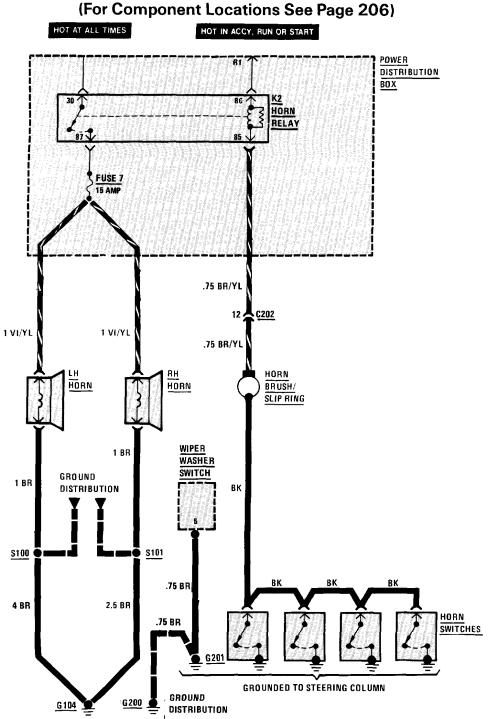






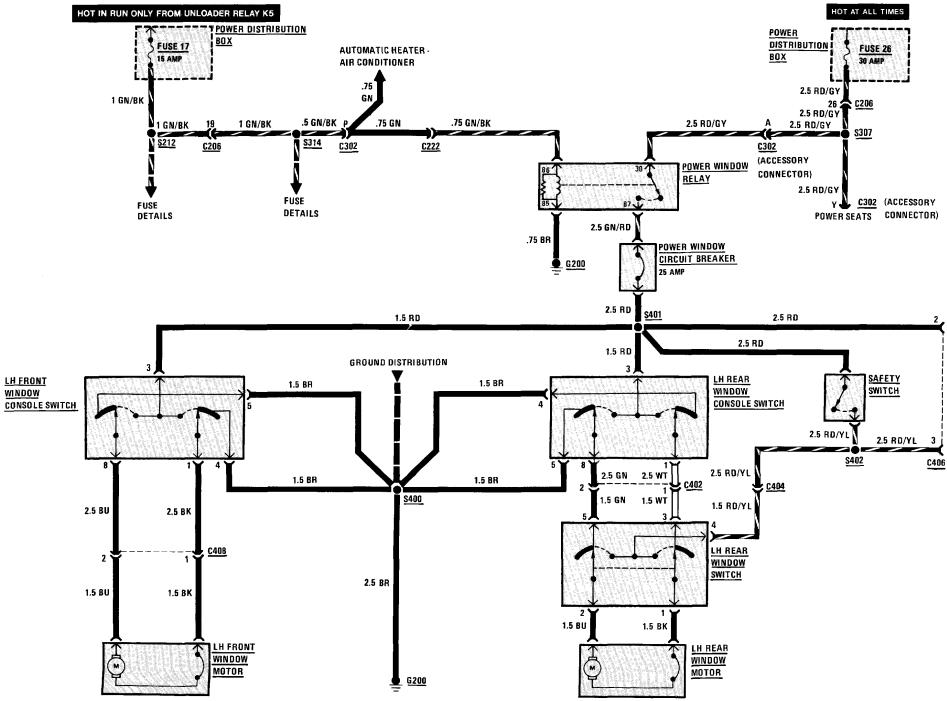
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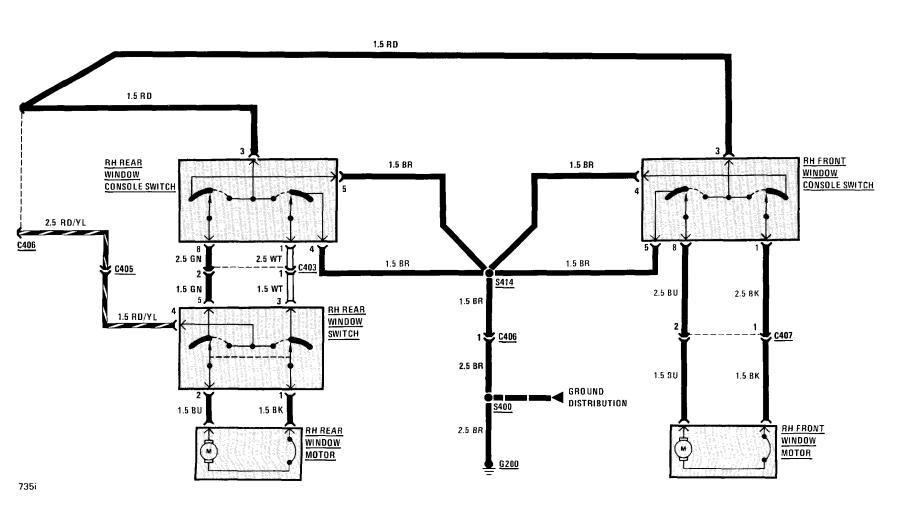


#### (For Component Locations See Page 206) HOT AT ALL TIMES POWER DISTRIBUTION BOX 1.5 RD/WT 23 🕿 C206 1.5 RD/WT 1.5 RD/WT CENTRAL LOCKING 1.5 RD/WT 7 🕏 <u>C400</u> INTERIOR LIGHTS 1.5 RD/WT .75 BR/GN C503 .75 BR/GN 1.5 RD/WT LOCK HEATER CONTROL UNIT WHEN THE DRIVER'S EXTERIOR POWER INPUT HEATER DOOR HANDLE SWITCH IS SWITCH DRIVER'S CLOSED THE HEATER SWITCH CONTROL SOLID STATE CLOSES FOR: EXTERIOR INPUT 31 SECONDS AT 5" F ( 15" C) DOOR GROUND 17 SECONDS AT 32° F ( 0° C) HANDLE 5.5 SECONDS AT 77° F ( 25° C) SWITCH CLOSED WITH DOOR HANDLE LIFTED 1 RD/YL C560 1 BR LOCK HEATER C503 1 BR 1 BR GROUND S502 1 BR DISTRIBUTION C560 1 BR 2 🕿 C504 .75 BR G200

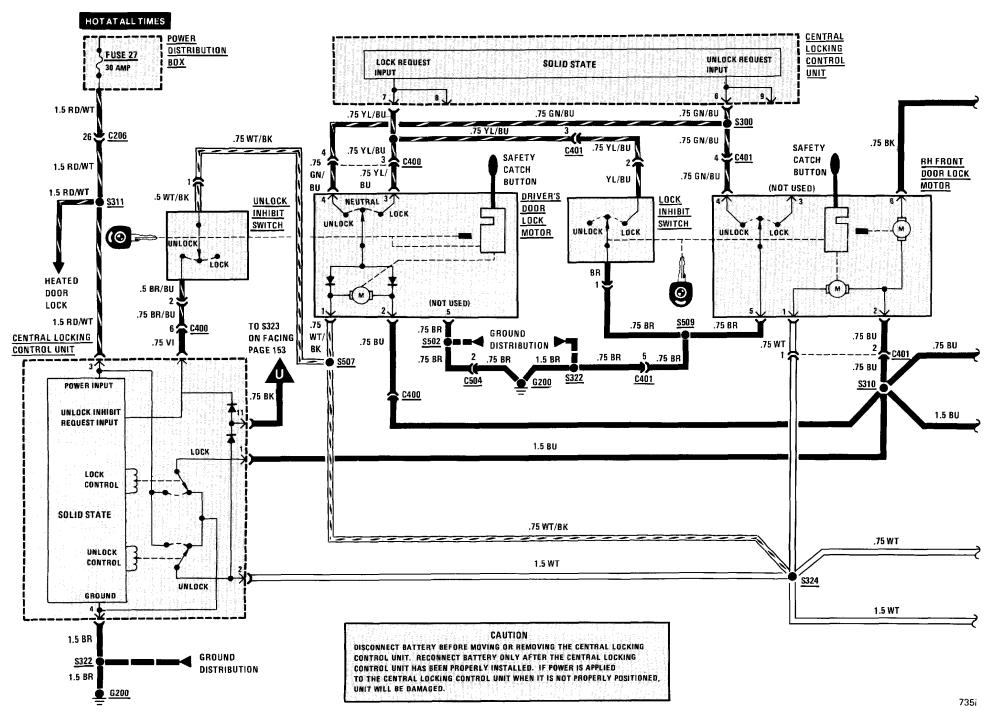
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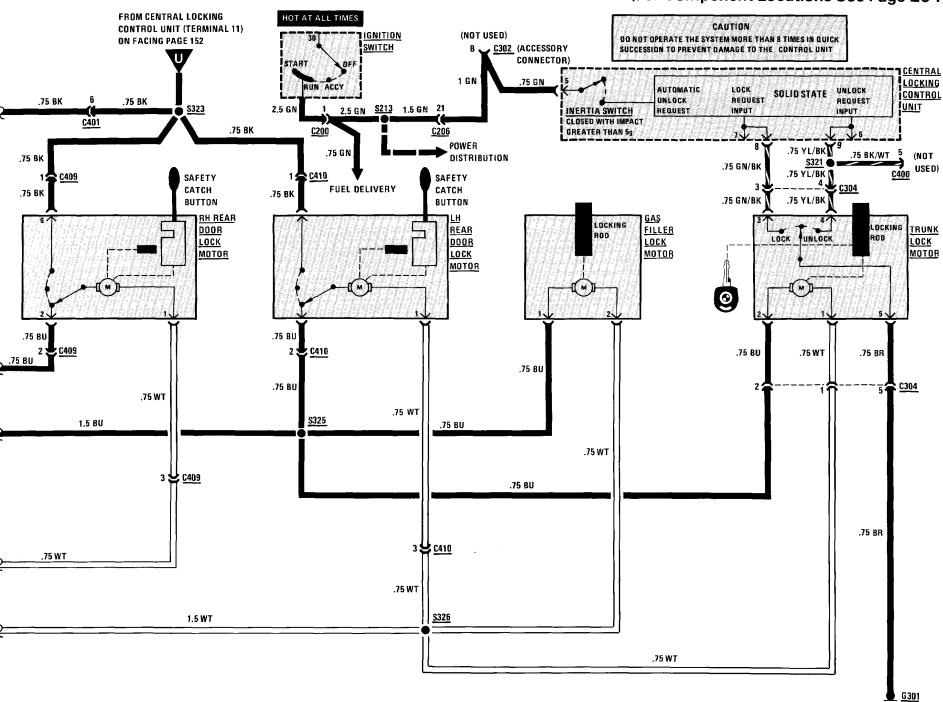
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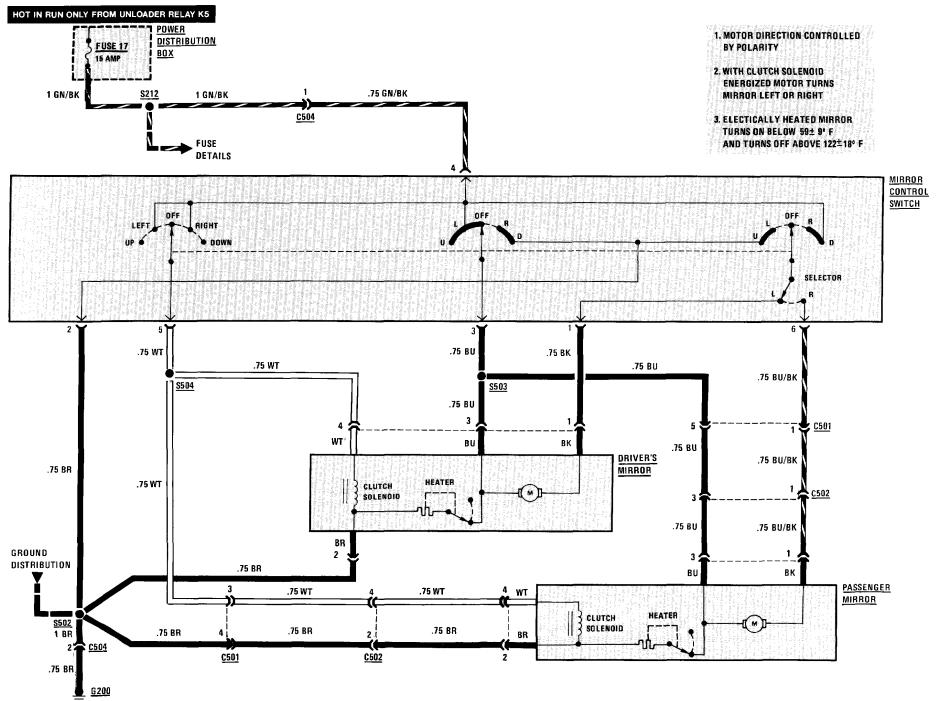
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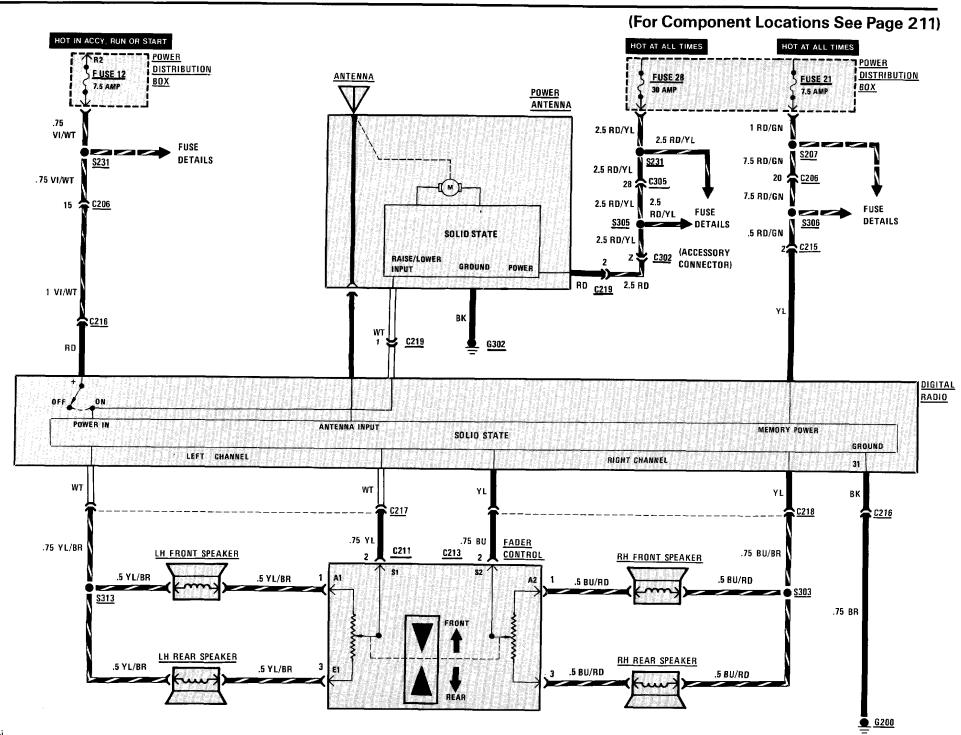


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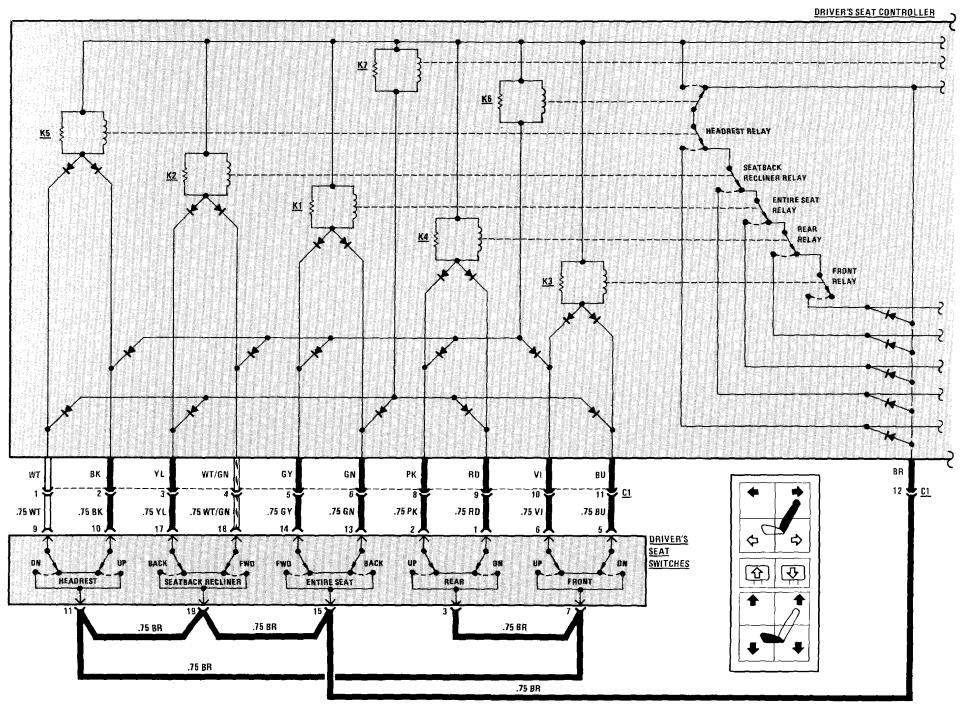


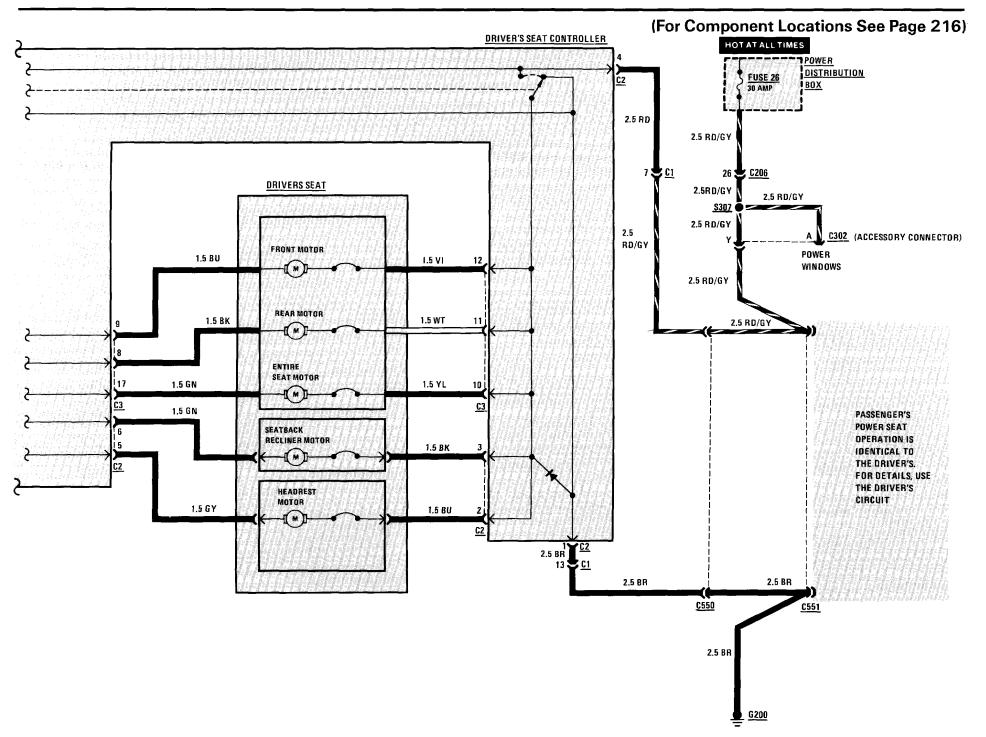
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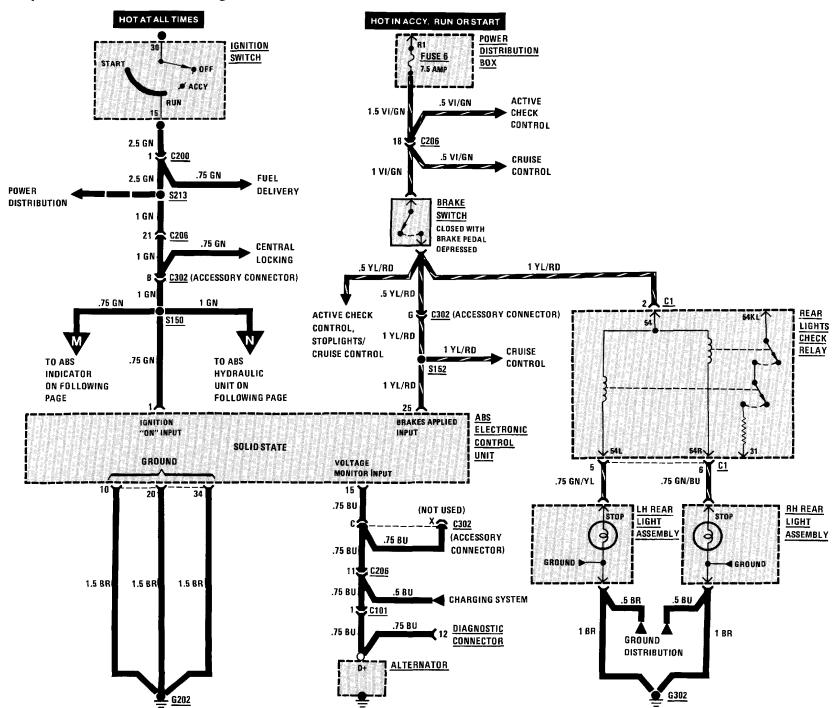


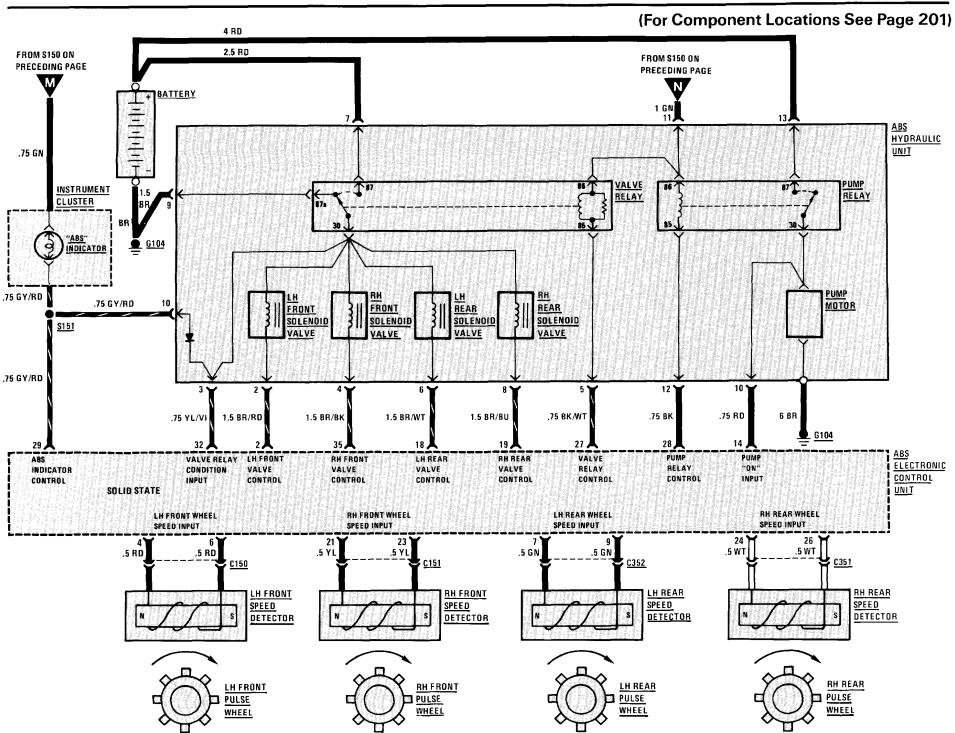
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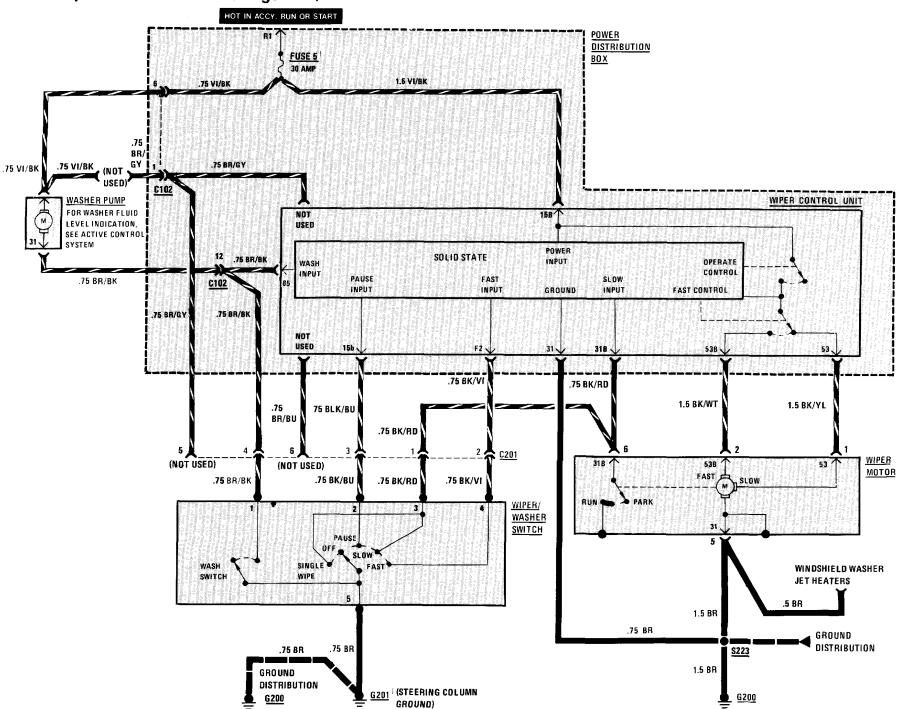


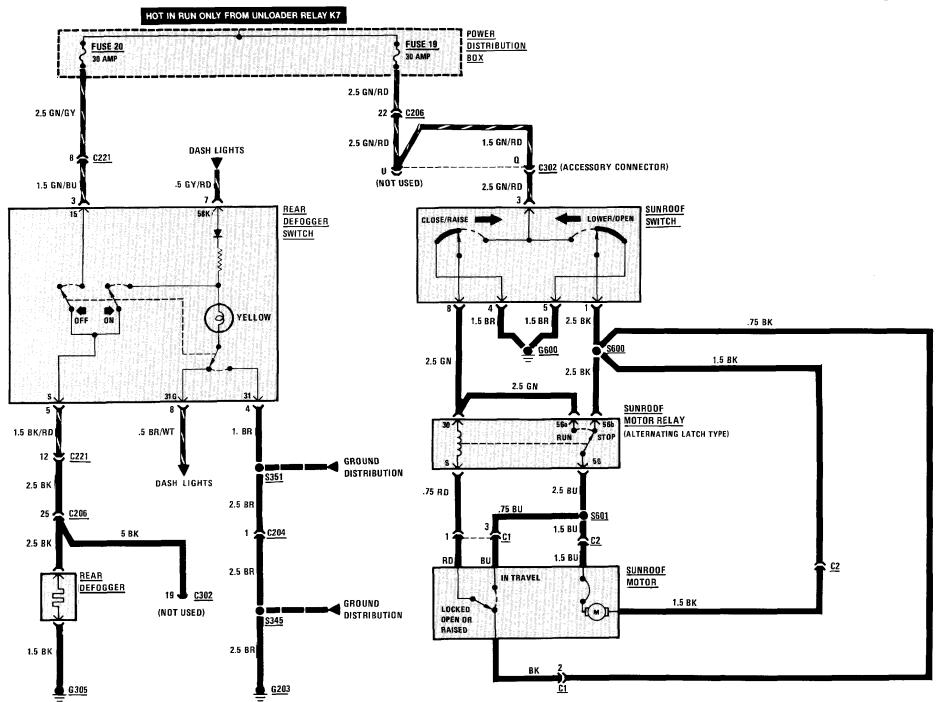
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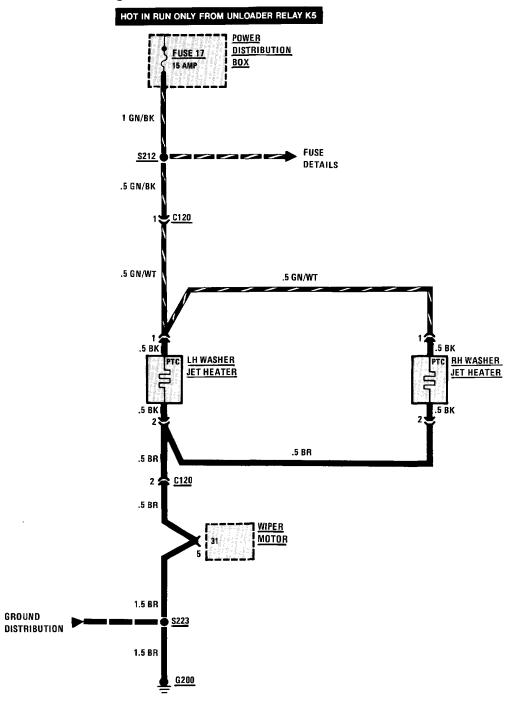


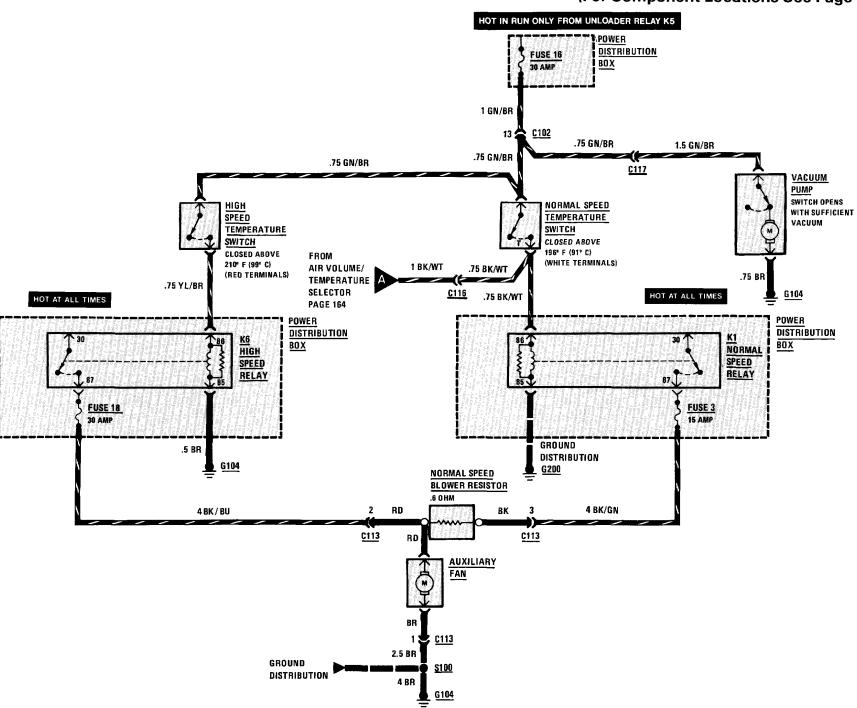


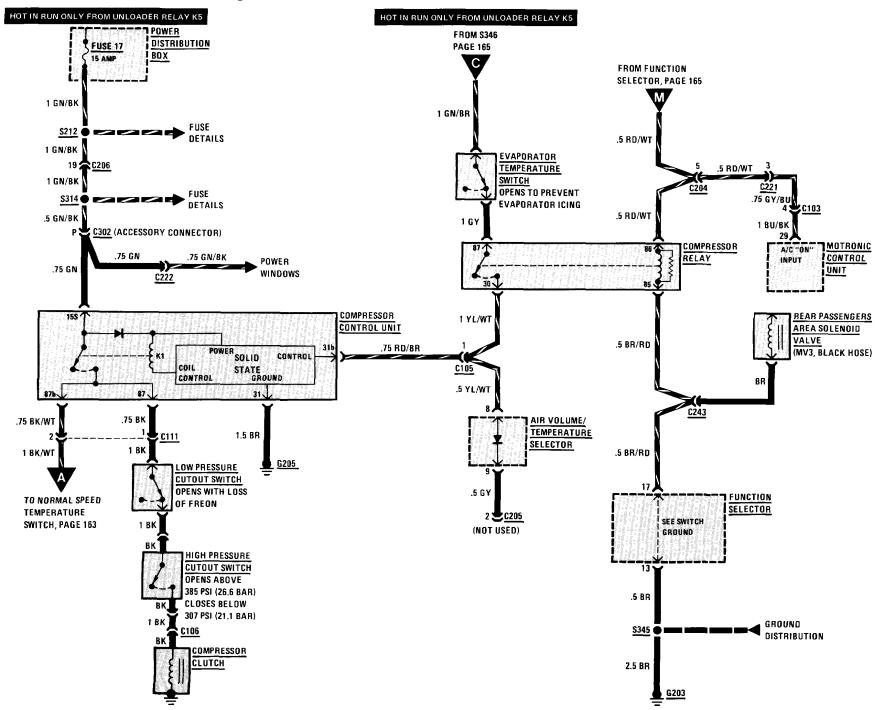
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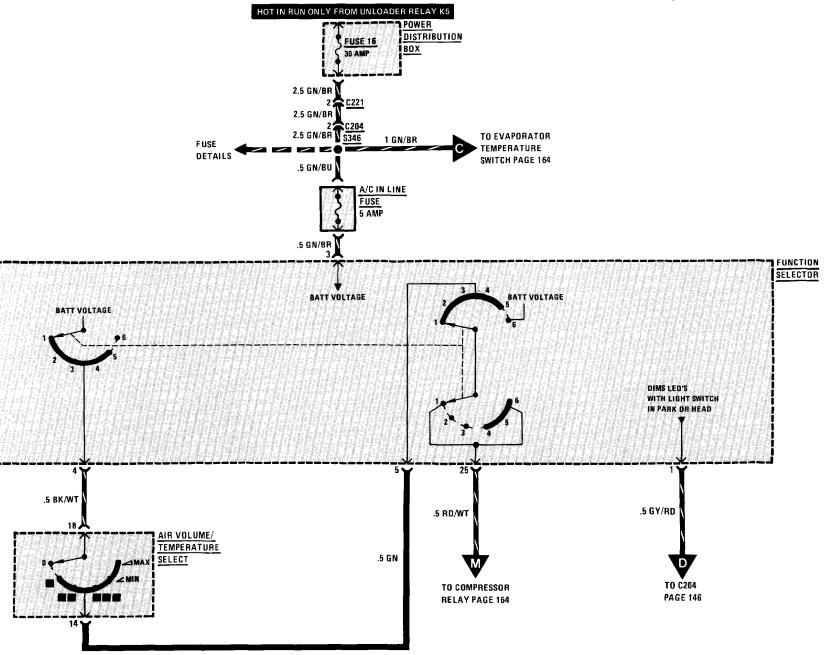


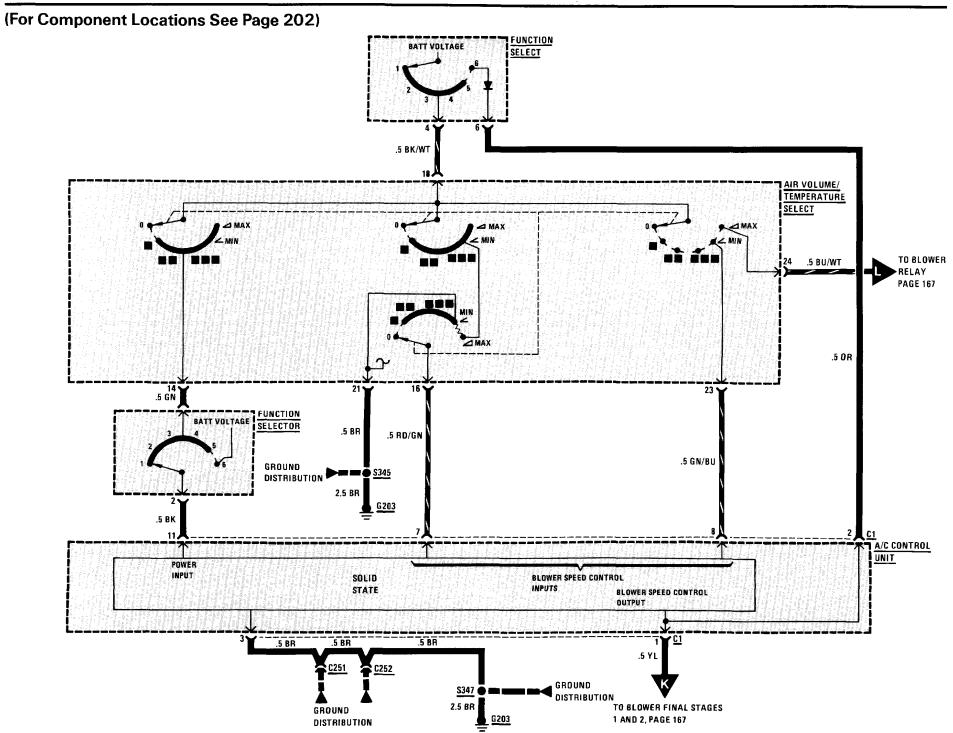




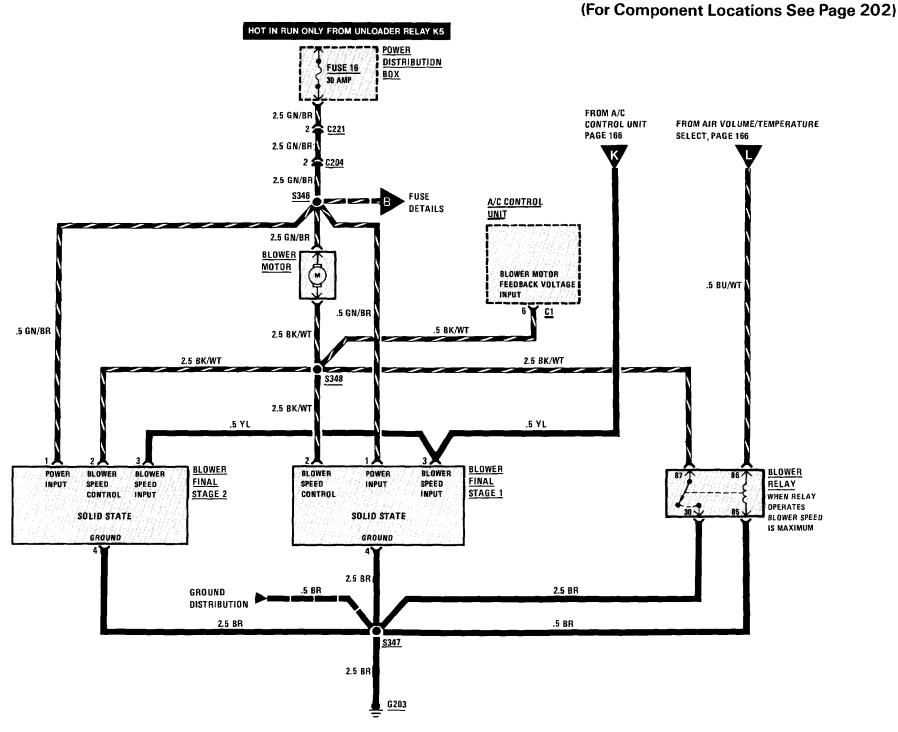




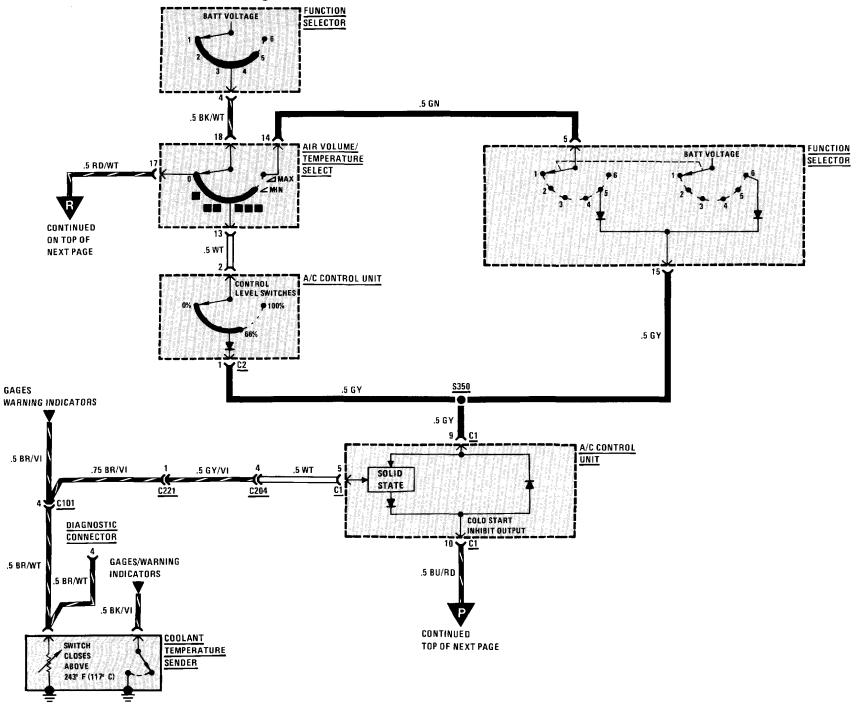


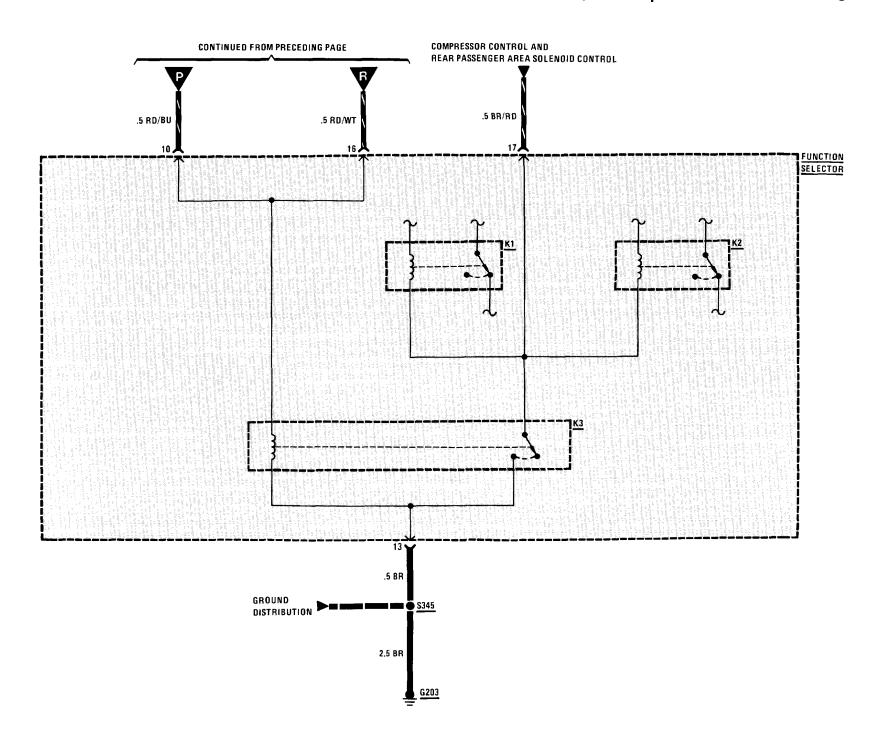


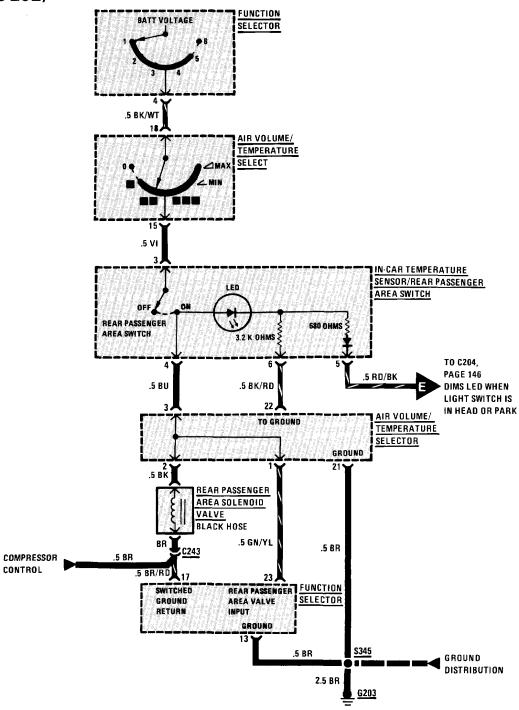
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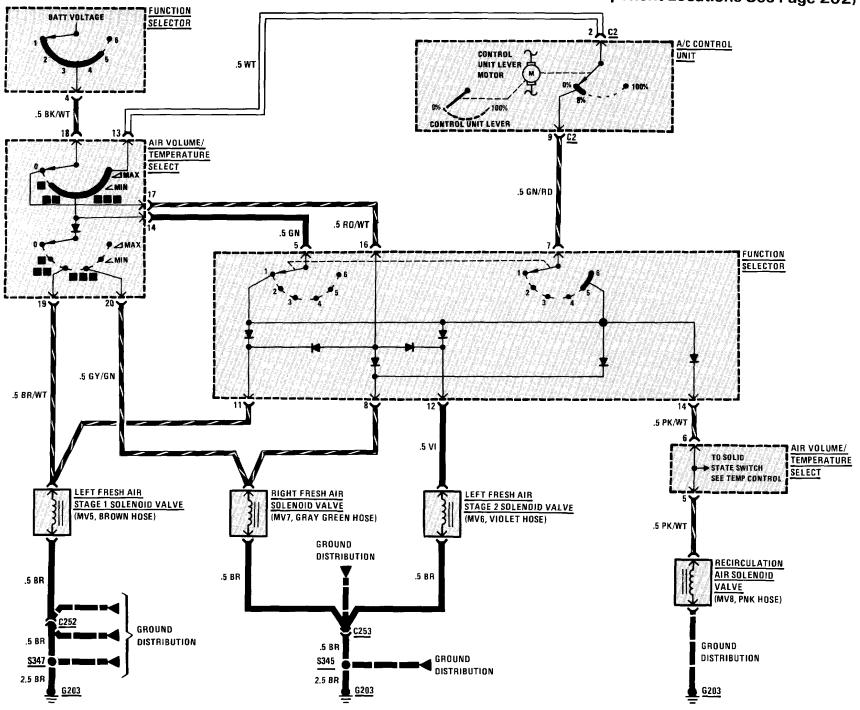


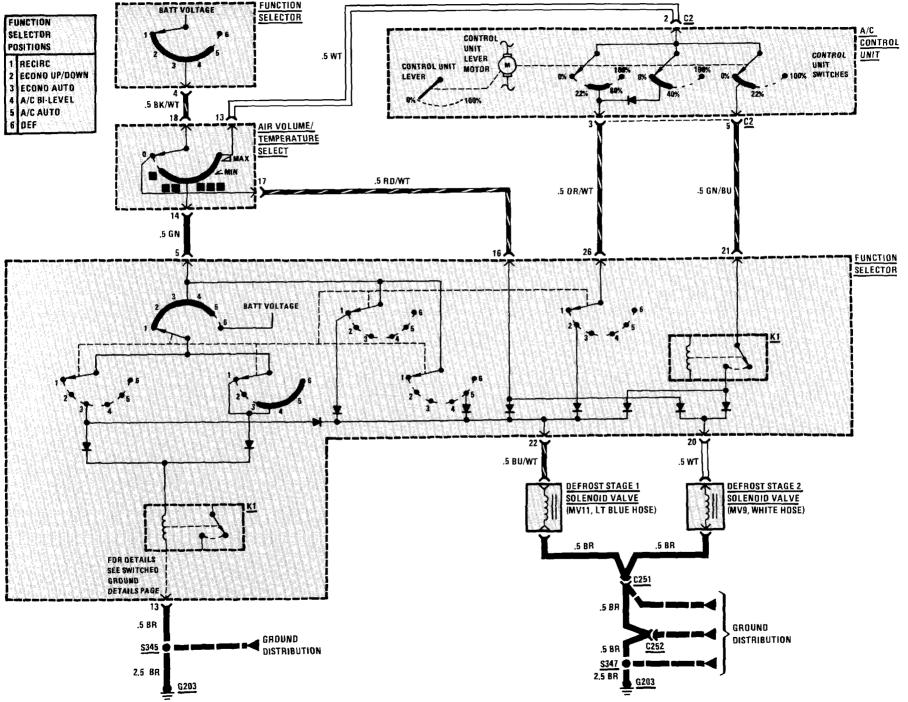
# (For Component Locations See Page 202) BATT VOLTAGE

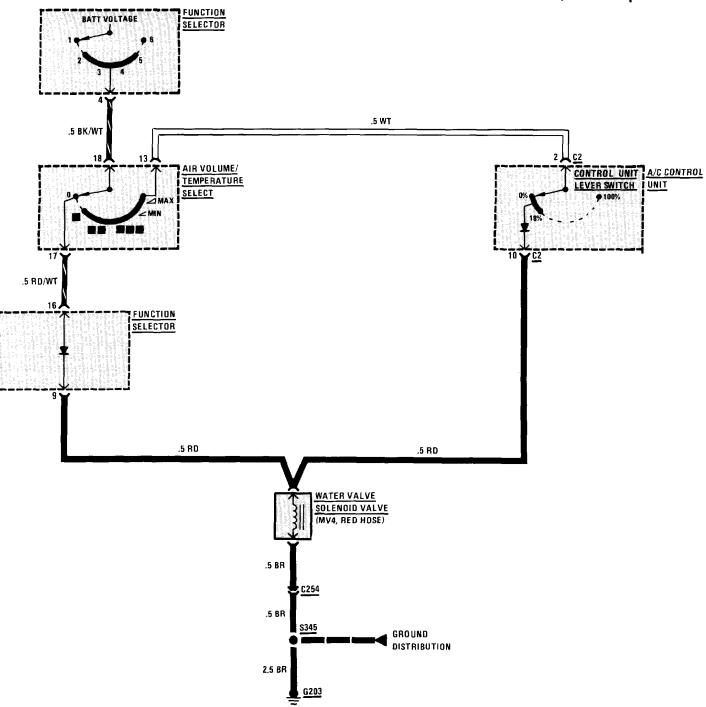


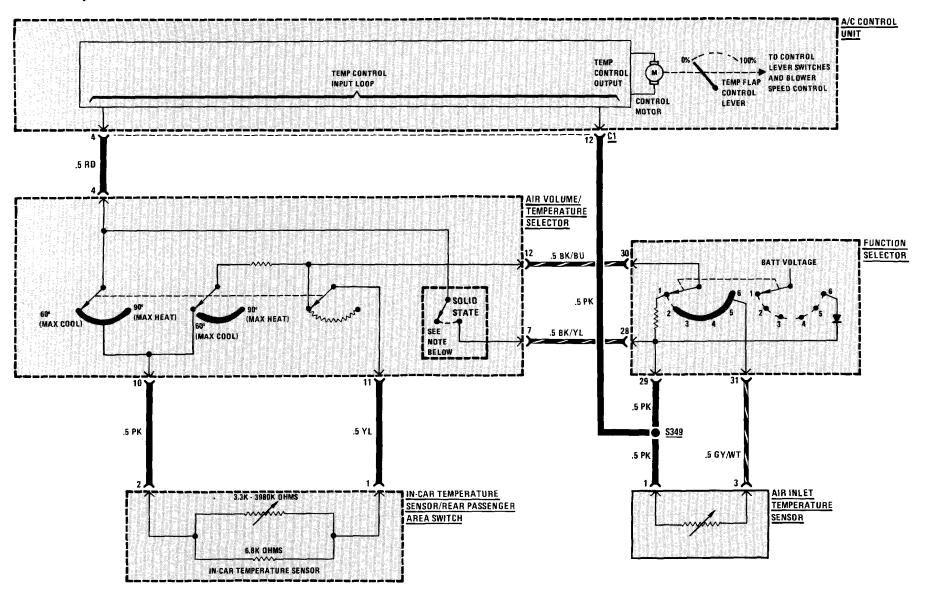




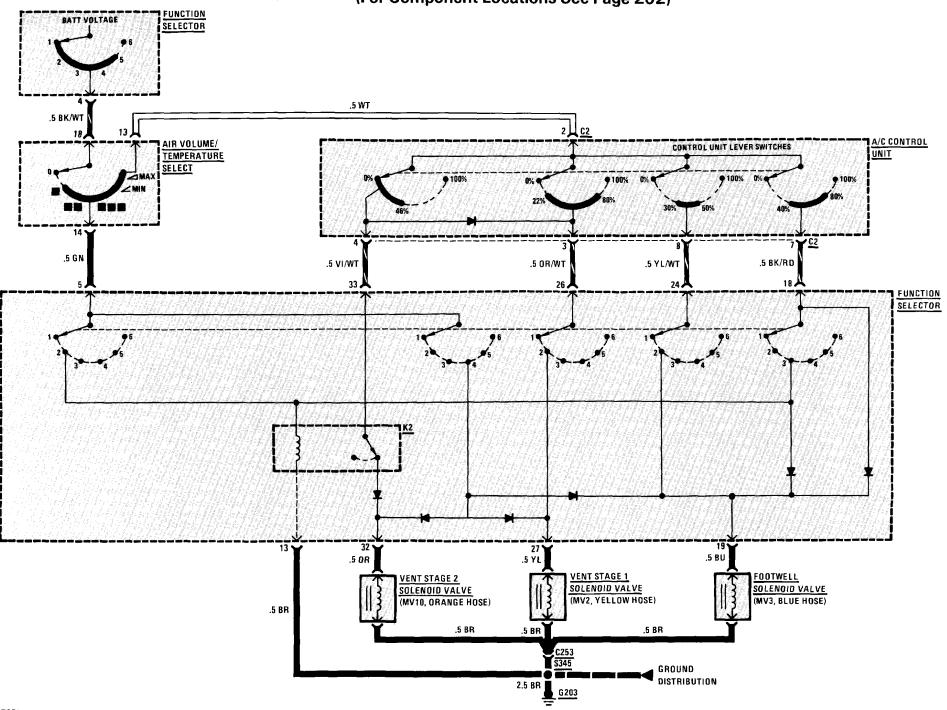


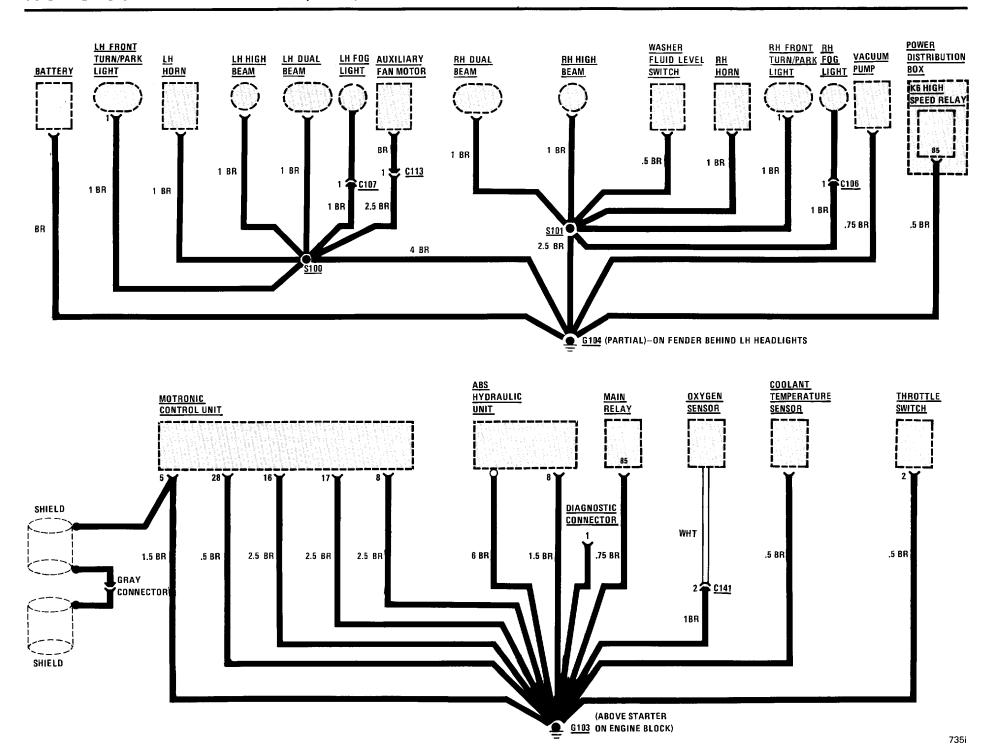


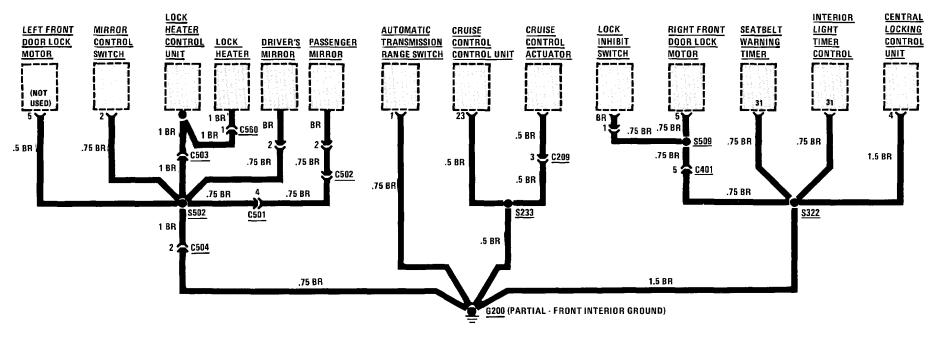


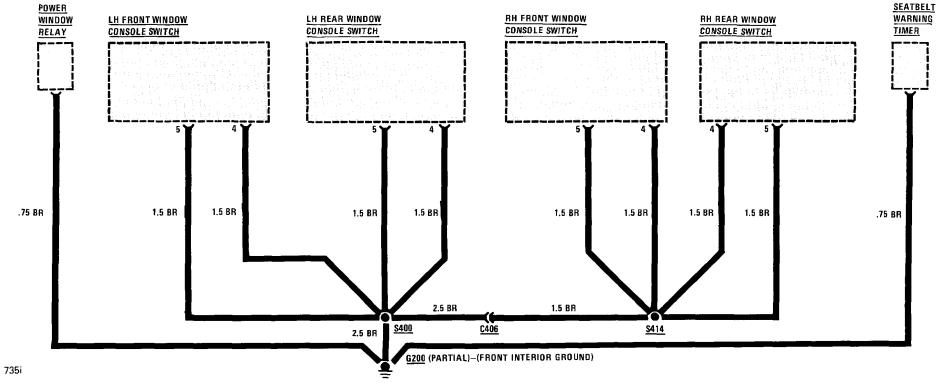


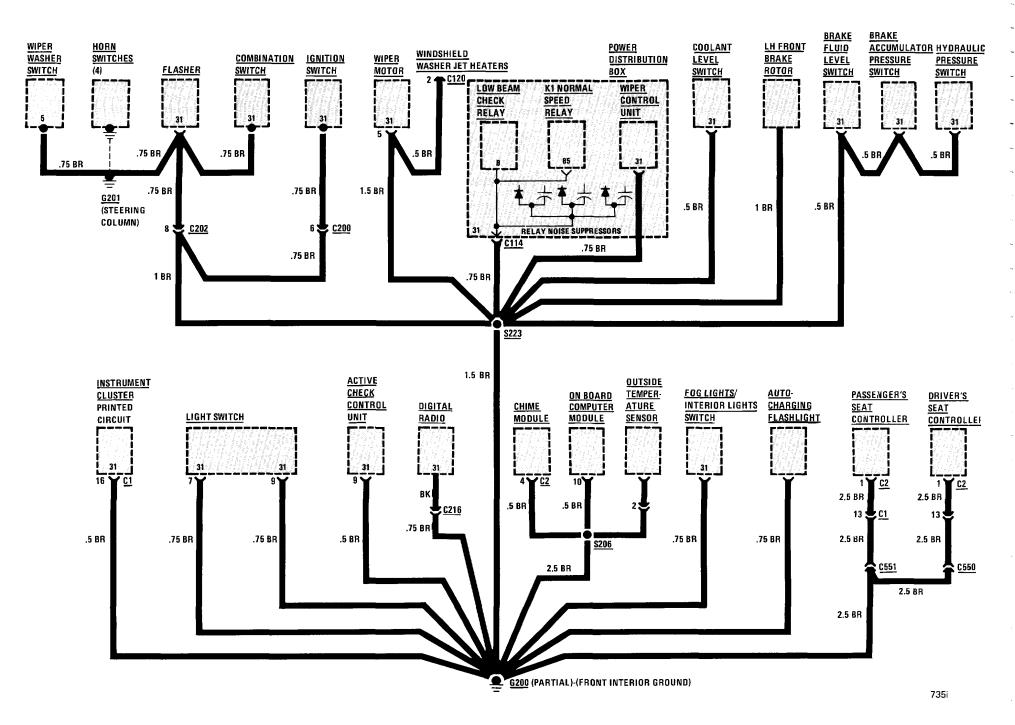
NOTE: SOLID STATE
SWITCH IS CLOSED WHEN
FUNCTION SELECT IS IN
RECIRCO
OR DEFO

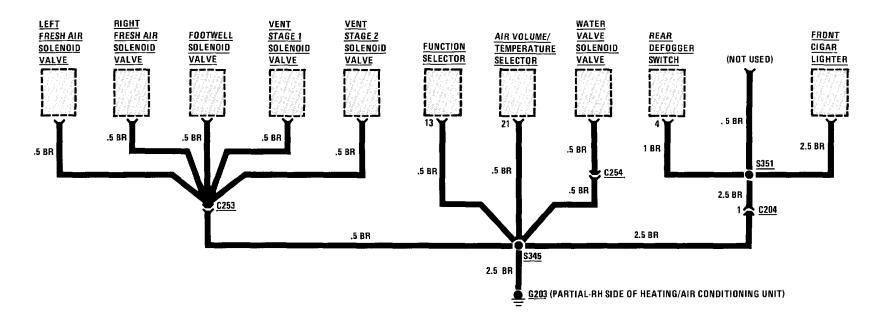


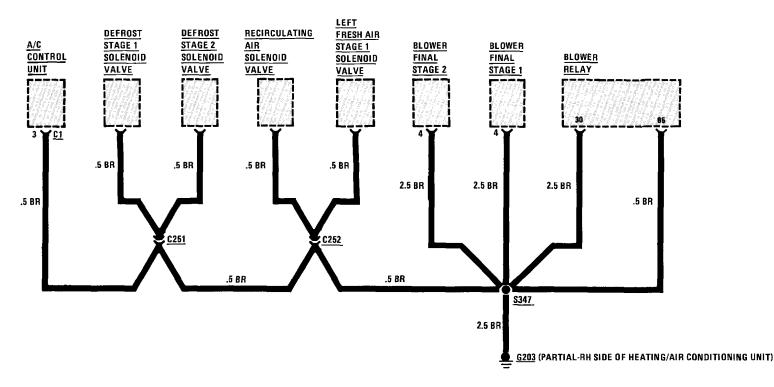


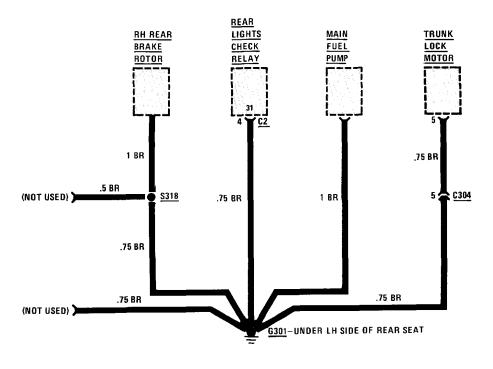


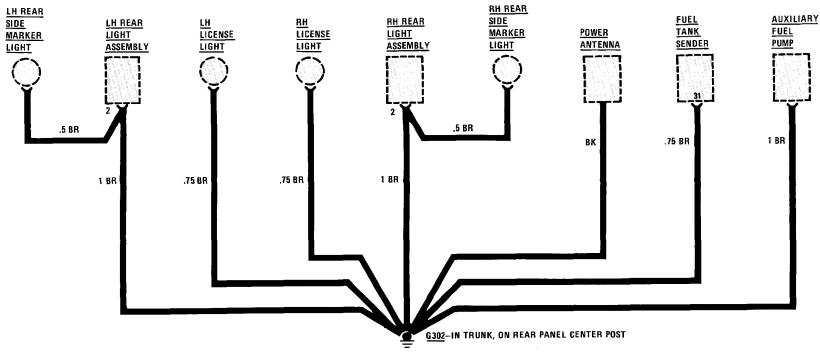






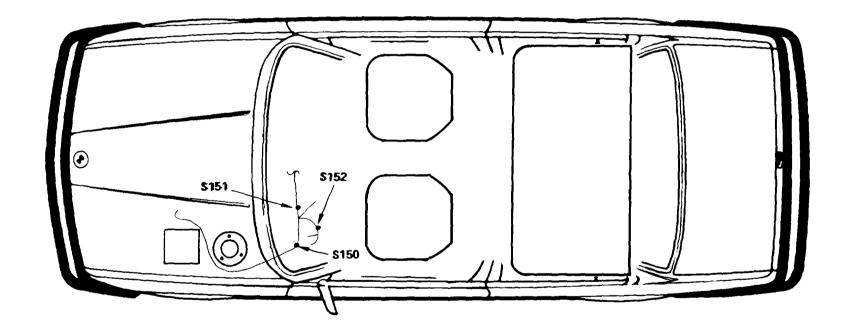


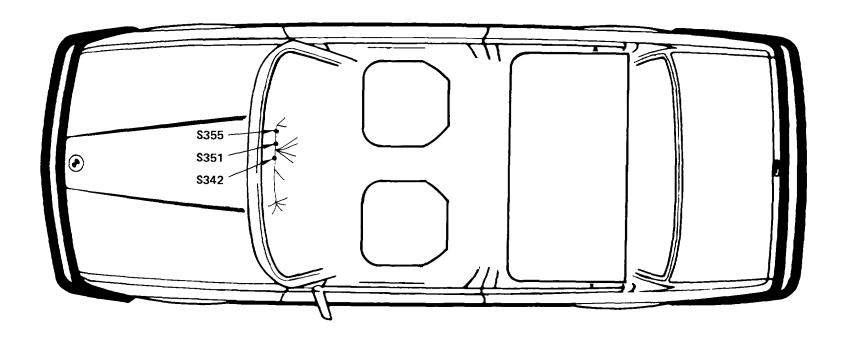


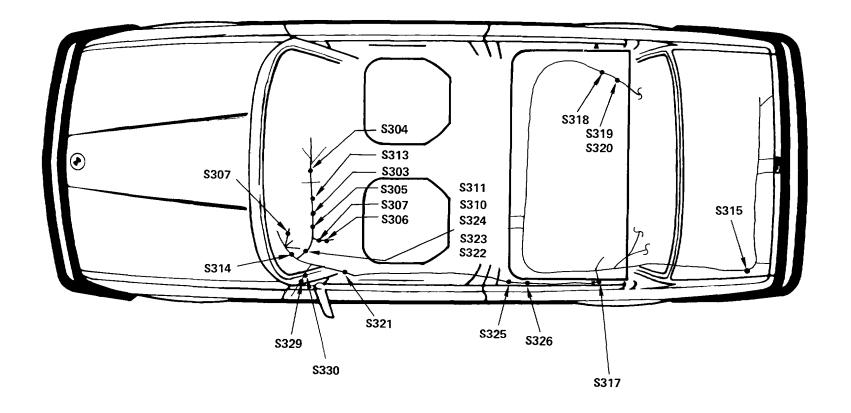


This index contains all the splices in the car, what harness each one is in, and the page that the splices appear on. The drawings after the index show how the harness is routed through the car and where the splices are located on the harness.

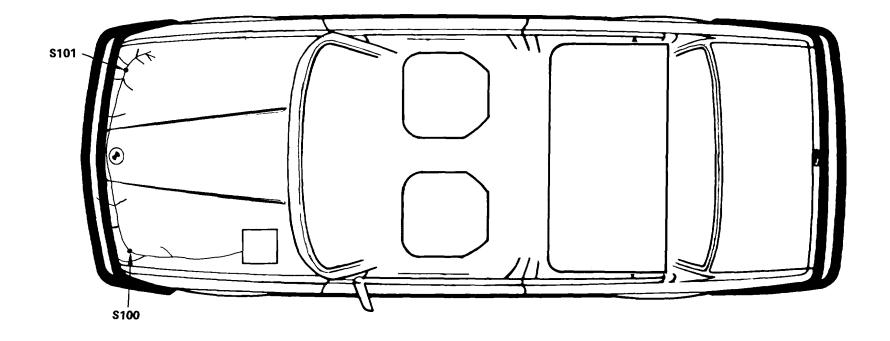
SPLICE	HARNESS	PAGE NUMBER	SPLICE	HARNESS	PAGE NUMBER	SPLICE	HARNESS	PAGE NUMBER
S100	FRONT	185	S231	MIDDLE	186	S329	REAR	184
S101	FRONT	185	\$233	CRUISE		S330	REAR	184
S106	ENGINE	187	•===	CONTROL	NOT	S342	A/C	183
S108	ENGINE	187			SHOWN	S351	A/C	183
S109	ENGINE	187	S241	CRUISE		S355	A/C	183
S110	ENGINE	187		CONTROL	NOT	S400	POWER	
S150	ABS	182			SHOWN		WDO	NOT
S151	ABS	182	\$303	REAR	184			SHOWN
S152	ABS	182	\$304	REAR	184	S401	POWER	
S201	MIDDLE	186	S305	REAR	184		WDO	NOT
S203	MIDDLE	186	S306	REAR	184			SHOWN
S204	MIDDLE	186	S307	REAR	184	S402	POWER	
S205	MIDDLE	186	S310	REAR	184		WDO	NOT
S206	B/C	NOT	S311	REAR	184			SHOWN
		SHOWN	S312	REAR	NOT	S414	POWER	
S207	MIDDLE	186			SHOWN		WDO	NOT
S208	MIDDLE	186	S313	REAR	184			SHOWN
S209	B/C	NOT	S314	REAR	184	S502	DOOR	NOT
		SHOWN	\$315	REAR	184			SHOWN
S210	MIDDLE	186	\$317	REAR	184	S503	DOOR	NOT
S211	MIDDLE	186	S318	REAR	184			SHOWN
S212	MIDDLE	186	S319	REAR	184	S504	DOOR	NOT
S213	MIDDLE	186	S320	REAR	184			SHOWN
S214	B/C	NOT	S321	REAR	184	S507	DOOR	NOT
		SHOWN	S322	REAR	184			SHOWN
S215	MIDDLE	186	S323	REAR	184	S510	DOOR	NOT
S219	MIDDLE	186	S324	REAR	184			SHOWN
S220	MIDDLE	186	S325	REAR	184	S600	SUNROOF	NOT
S223	MIDDLE	186	S326	REAR	184			SHOWN
S224	CRUISE		S327	REAR	NOT	S601	SUNROOF	NOT
	CONTROL	NOT			SHOWN			SHOWN
		SHOWN						

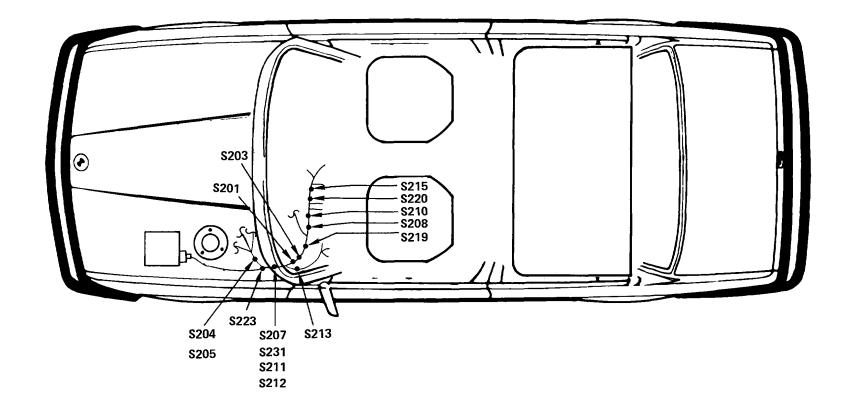


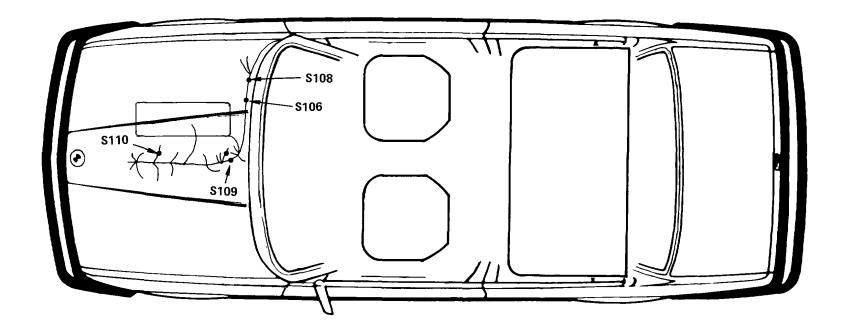












ACTIVE CHECK CON	TROL	FIGURE
Active Check Control Unit		216-3
Brake Switch	Above brake pedal	
Coolant Level Switch	Top left side of coolant reservoir	209-1
Oil Level Sensor	Bottom of engine oil pan	
Power Distribution Box	Top front of left front wheel well	201-1
Rear Lights Check Relay	Under left side of rear seat	207-2
Seatbelt Warning Timer	On right side of body electrical connector	210-1
Washer Fluid Level Switch	Ahead of right front wheel well, in reservoir	216-2
C101 (17 pin)	On rear of power distribution box	
C102 (13 pin)	In power distribution box	
C205 (4 pin)	Under LH dash, on body electrical bracket	215-1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
G104 (Main Body Ground)	On power distribution box bracket	201-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1
G301 (Rear Interior Ground)	Under left side of rear seat	207-2

### ANTI LOCK BRAKE SYSTEM (ABS)

ABS Electronic Control Unit	RH side of dash above glove box	
ABS Hydraulic Unit	LH side of engine compartment, near battery	
Brake Switch	Above brake pedal	
Ignition Switch	Upper part of steering column	
Power Distribution Box	Top front of left front wheel well	201-1
Rear Lights Check Relay	Under left side of rear seat	207 2
Speed Detector	Behind each wheel in wheel hub	
C101 (17 pin)	On rear of power distribution box	
C150 (1 pin)	On front dash behind LH front shock tower	
C151 (1 pin)	On front of dash behind RH front shock tower	
C200 (10 pin)	Under dash on left side of steering column	203 1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
C302 (Accessory Connector)	Under LH dash, on body electrical bracket	
C351 (1 pin)	Under RH side of rear seat	
C352 (1 pin)	Under LH side of rear seat	
G 104 (Main Body Ground)	On power distribution box bracket	2011
G202	Center console	
G302 (Trunk Ground)	In trunk, on rear panel center support	208 1

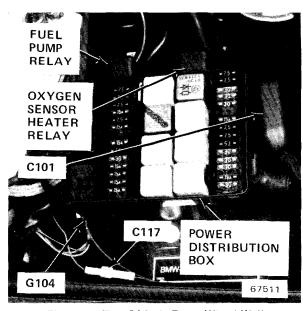


Figure 1 - Top Of Left Front Wheel Well

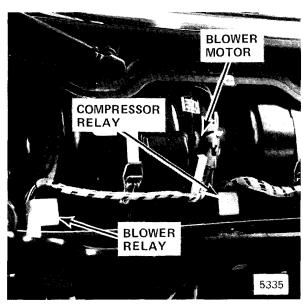
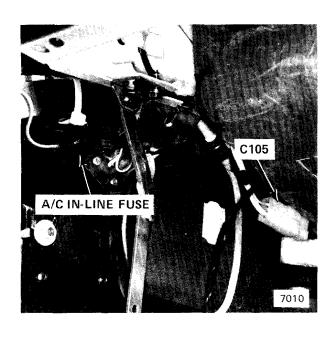
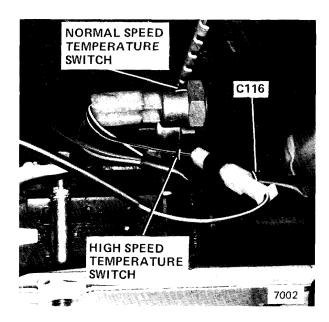


Figure 2 - Under Center Of Front Air Intake Cowl

AUTOMATIC HEATER	-AIR CONDITIONER	FIGURE
A/C In-Line Fuse	Left side of evaporator housing Below dash, right of console Under center of fresh air intake cowl In right blower fan housing In left blower fan housing. Under center of fresh air intake cowl Under center of fresh air intake cowl Under center of fresh air intake cowl	202-1 213-5 204-1 204-1 201-2 201-2
Switch	Front of engine, on thermostat housing  Left side of evaporator housing  Left side of evaporator housing	211-2
Evaporator Temp. Switch Footwell Solenoid Valve		
High Pressure Cut-Out Switch In-Car Temp. Sen./Rear Pass.	On receiver-dryer, below washer reservoir	209-2
Area	Center of dash, in console	205-2
Low Pressure Cutout Switch Power Distribution Box Rear Pass. Area Solenoid Valve Recirculating Air Solenoid Valve RH Fresh Air Solenoid Valve Vent Stage 1 Solenoid Valve Vent Stage 2 Solenoid Valve Water Valve Solenoid Valve	On receiver-dryer, below washer reservoir  Top front of left front wheel well  Behind center console  Left side of evaporator housing  Behind center console  Behind center console  Behind center console  Right side of evaporator housing	
C105 (2 pin)	Behind center console Behind center console Behind center console	209-2 214-6





AUXILIARY FAN/VAC	CUUM PUMP	FIGURE
	Lower right side of radiator (red terminals)	202-2
Switch	Lower right side of radiator (white terminals)	
C116 (1 pin)	Near lower right side of radiator	201-1 201-1
BACKUP LIGHTS		
Auto. Trans. Range Switch  Backup Light Switch  Power Distribution Box  C207 (2 pin)  C301 (2 pin)	On left side of manual transmission  Top front of left front wheel well  Under LH side of dash near body electrical bracket In center console, ahead of shift lever	201-1
G302 (Trunk Ground)	In trunk, on rear panel center support	208-1
BRAKE LINING WARN	IING	
C206 (29 pin)	Top front of left front wheel well  Under LH dash, on body electrical bracket  On dash frame, left of steering column  Under left side of rear seat	215-1 203-1
CENTER CONSOLE LI	GHTS	
C204 (6 pin)	Top front of left front wheel well  Behind center console  Below dash, right of console  On dash frame, left of steering column  On BH side of heater/air conditioning unit	214-6 214-6

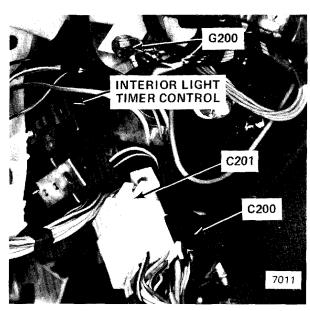


Figure 1 - Behind Dash, Left Of Steering Column

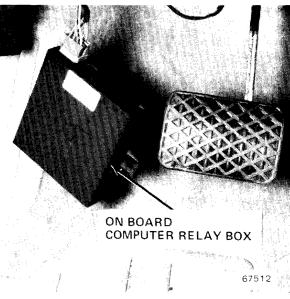
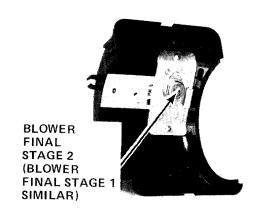


Figure 2 - Right Of Brake Pedal, Below Dash

<b>CENTRAL LOCKING</b>		FIGURE
Door Lock Motors		
Ignition Switch	In trunk, behind left rear wheel well	214-5
		201-1
C200 (10 pin)	Under dash, on left side of steering column Under LH dash, on body electrical bracket Under LH dash, on body electrical bracket	215-1
C304 (7 pin)	Ahead of left trunk hinge	
C401 (7 pin)	Under right side of dash, right of glove box	214-2
C504 (2 pin)	Under dash, above trunk release lever On dash frame, left of steering column Under left side of rear seat	203-1
CHARGING SYSTEM		
ABS Electronic Control Unit  Diagnostic Connector  Igntion Switch	RH side of dash above glove box  Top middle of engine	101-1
Power Distribution Box	Top front of left front wheel well	201-1
C200 (10 pin)	Under dash, on left side of steering column Under LH dash, on body electrical bracket	215-1
· ·	Under LH dash, on body electrical bracket On power distribution box bracket	
CIGAR LIGHTER/GLO AUTO-CHARGING FLA		
Power Distribution Box	Under right side of dash, above glove box  Top front of left front wheel well  Behind center console  Under LH dash, on body electrical bracket  Below dash, right of console	214-6 <b>215</b> -1
	On dash frame, left of steering column	203-1

G203 ...... On RH side of heater/air conditioning unit



5327

Figure 1 - Removed Left Blower Fan Housing Cover

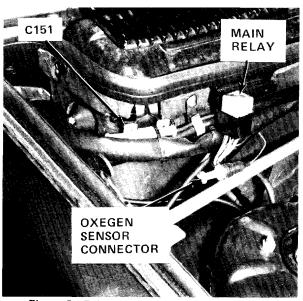


Figure 2 - Behind Right Front Shock Tower

FUEL CONTROL		FIGURE
Air Flow Meter	Top right of engine  Top middle of engine  On transmission bell housing	206-2 101-1
Motronic Control Unit	Behind right front speaker	211-1 204-2
Power Distribution Box	Top front of left front wheel well On transmission bell housing. On rear of power distribution box Behind right front speaker	201-1 206-2
C141 (3 pin)	Behind RH front shock tower Top rear of engine On power distribution box bracket	206-2
FUEL DELIVERY/FUEL C	ONTROL/IDLE SPEED CONTROL	
Diagnostic Connector  Fuel Pump Relay  Idle Speed Actuator  Ignition Switch	Rear middle of engine compartment Upper part of steering column	101-1
Main Fuel Pump	Under car, ahead of left rear axle Behind right front shock tower Behind right front speaker Mounted under LH side of dash	
Power Distribution Box TDC Sensor C101 (17 pin)	Top front of left front wheel well	201-1

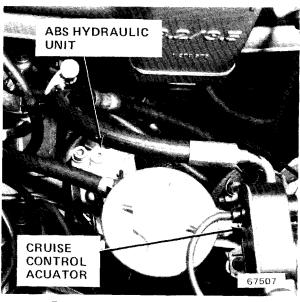
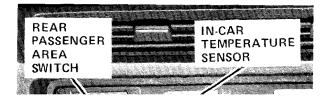


Figure 1 - Behind RH Side Of Battery



HEADLIGHTS (CONTROL)	POWER)/FOG LIGHTS (CONTROL/POWER) I	FIGUR
	Upper left side of steering column	
	Upper left side of steering column On dash, to right of steering column	206-1
Ignition Switch	Upper part of steering column	
Power Distribution Box	Top front of left front wheel well	201-1
C102 (13 pin)	In power distribution box	
C106 (2 pin)	Taped to harness behind RH headlights	
C107 (2 pin)	Taped to harness, left of battery	
C202 (13 pin)	Under dash, on left side of steering column	210-1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
G104 (Main Body Ground)	On power distribution box bracket	201-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1
	Upper left side of steering column	

## **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	207-1
Power Distribution Box	Top front of left front wheel well	201-1
C202 (13 pin)	Under dash, on left side of steering column	210-1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
C400 (7 pin)	Under LH dash, near body electrical bracket	
C503 (8 pin)	In driver's door	
C504 (2 pin)	Under dash, above trunk release lever	215-1
C560 (2 pin)	In driver's door	
G104 (Main Body Ground)	On power distribution box bracket	201-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1
G201 (Column Ground)	Upper left side of steering column	206-1

### IGNITION/FUEL CONTROL

Automatic Transmission Switch Coolant Temperature Sensor	On left side of shift lever Front of engine, top of thermostat housing	
Diagnostic Connector	Top middle of engine	101-1
	On right fender, behind headlights	
Ignition Switch	Upper part of steering column	
Motronic Control Unit	Behind right front speaker	211-1
Power Distribution Box	Top front of left front wheel well	201-1

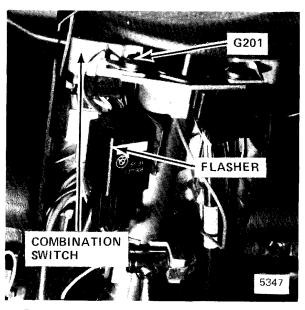


Figure 1 - Upper Underside Of Steering Column

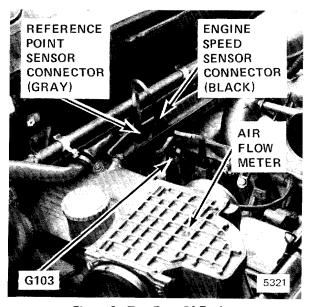


Figure 2 - Top Rear Of Engine

(continued)	FI	GURE
C101 (17 pin)	Top LH side of engine, below throttle body On rear of power distribution box Taped to harness, near ignition coil Behind right front speaker, near Motronic control unit Behind right front speaker, near Motronic control unit Under dash, on left side of steering column Top rear of engine	
3		200 2

### IGNITION KEY WARNING/SEATBELT WARNING

Chime Module	Top center of dash, under grìll	
Ignition Key Switch	In upper part of steering column	
Power Distribution Box	Top front of left front wheel well	201-1
Seatbelt Switch	In driver's seatbelt buckle	
Seatbelt Warning Timer	On right side of body electrical connector	210-1
C200 (10 pin)	Under dash, on left side of steering column	203-1
C203 (2 pin)	Upper left side of steering column	
C205 (4 pin)	Under LH dash, on body electrical bracket	155-1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1

### **INTERIOR LIGHTS**

Fog Lights/Interior Lights Switch	On dash, to right of steering column	
Interior Light Timer Control	On right side of body electrical connector	203-1
Lock Heater Control Unit	In left front door	207-1
Power Distribution Box	Top front of left front wheel well	201-1
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
C302 (Accessory Connector)	Under LH dash, on body electrical bracket	155-1
C303 (2 pin)	In headliner, above LH dome light	
C503 (8 pin)	In driver's door	
C504 (2 pin)	Under dash, above trunk release lever	215-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1

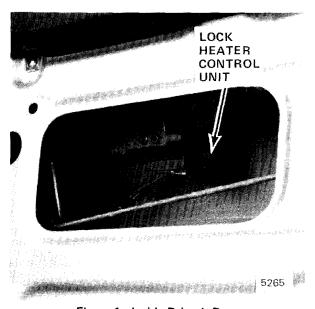


Figure 1 - Inside Driver's Door

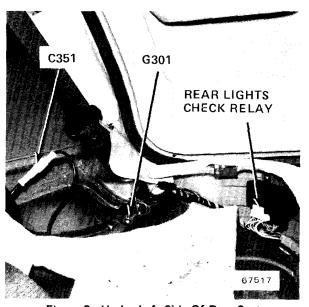


Figure 2 - Under Left Side Of Rear Seat

LIGHTS: FRONT PARI	//TAIL/UNDERHOOD	FIGURE
LIGHTS. PRONT PARI	(/ IAIL/ UNDERHOUD	ridune
Rear Lights Check Relay	·	
C206 (29 pin)	Under LH dash, on body electrical bracket On power distribution box bracket Under left side of rear seat	201-1 207-2
LIGHTS: REAR MARKER	/LICENSE/TRUNK	
	Top front of left front wheel well	
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1

# G302

Figure 1 - Left Rear Left Side Of Trunk

## LIGHTS: RH VISOR/DASH/TRANSMISSION RANGE

Auto. Trans. Range Switch		
Fog Lights/Interior Lights Switch	On dash, to right of steering column	
Power Distribution Box	Top front of left front wheel well 20	1-1
C206 (29 pin)	Under LH dash, on body electrical bracket 21	5-1
C255 (1 pin)	Under right side of dash, right of glove box 21	4-2
C301 (2 pin)	In center console, ahead of shift lever	
C305 (2 pin)'	Near left tail light assembly	
C306 (2 pin)	Near right tail light assembly	
G200 (Front Interior Ground)	On dash frame, left of steering column 20	3-1
G202	Center console	
G306	Top of right A pillar	



Figure 2 - Behind Left Front Speaker

LIGHTS: TURN/HAZA	RD WARNING	FIGURE
Combination Switch	Upper left side of steering column  Upper left side of steering column  Upper part of steering column	. 206-1 . 206-1
C102 (13 pin)	Top front of left front wheel well	
C202 (13 pin)	Under dash, on left side of steering column	210-1 215-1 201-1 203-1 206-1

### **ON-BOARD COMPUTER**

Top center of dash, under grill	
	214-4
Upper part of steering column	
Behind right front shock tower	204-2
Behind right front speaker	211-1
Under RH side of coolant reservoir	
Under RH side of coolant reservoir	
Under left side of dash	
Under front bumper, left side	
Top front of left front wheel well	201-1
Behind right front speaker	211-1
Under dash, on left side of steering column	203-1
Under LH dash, on body electrical bracket	215⊣1
Under left side of dash, near steering column	
Under left side of dash, near steering column	
Behind brake fluid reservoir	
Under LH dash, on body electrical bracket	
Top rear of engine	206-2
On power distribution box bracket	201-1
On dash frame, left of steering column	203-1
In trunk, on rear panel center support	
	Behind right front shock tower Behind right front speaker Under RH side of coolant reservoir Under RH side of coolant reservoir Under left side of dash Under front bumper, left side Top front of left front wheel well Behind right front speaker Under dash, on left side of steering column Under LH dash, on body electrical bracket Under left side of dash, near steering column Under left side of dash, near steering column Under left side of dash, near steering column Under LH dash, on body electrical bracket Top rear of engine On power distribution box bracket On dash frame, left of steering column

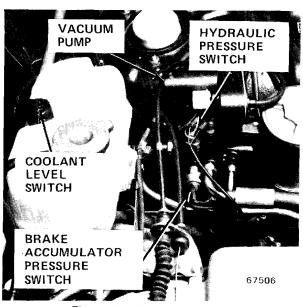


Figure 1 - Left Rear Of Engine Compartment

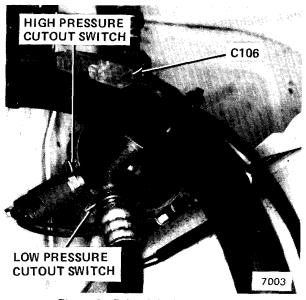


Figure 2 - Behind Right Headlights

POWER DISTRIBUTIO	N	FIGURE
Diagnostic Connector	Top middle of engine	101-1
_	Top front of left front wheel well	201-1
C206 (29 pin)	Under dash, on left side of steering column Under LH dash, on body electrical bracket Below dash, right of console Under LH dash, on body electrical bracket On power distribution box bracket On dash frame, left of steering column	215-1 214-6 155-1 201-1

### **POWER MIRRORS**

Power	Distribution Box	Top front of left front wheel well	201-1
C206	(29 pin)	Under LH dash, on body electrical bracket	215-1
C501	(5 pin)	Under dash, left of steering column	155-1
C502	(5 pin)	Under right side of dash, right of glove box	214-2
		Under dash, above trunk release lever	
G200	(Front Interior Ground)	On dash frame, left of steering column	203-1

## POWER SEATS (See page 216)

### **POWER WINDOWS**

Power Distribution Box	Top front of left front wheel well	201-1
Power Window Circuit Breaker	On LH under dash cover	
Power Window Relay	Under LH dash, above trunk release lever	216-1
Window Motors	In each door	
C206 (29 pin)	Under LH dash, on body electrical bracket	215-1
C222 (1 pin)	Under LH side of dash near accessory connector	
C302 (Accessory Connector)	Under LH dash, on body electrical bracket	155-1
C402 (2 pin)	In left center pillar	
C403 (2 pin)	In right center pillar	
C404 (1 pin)	In left center pillar	
C405 (1 pin)	In right center pillar	
C406 (3 pin)	Behind center console	
C407 (2 pin)	Under right side of dash, right of glove box	214-2
C408 (2 pin)	To left of body electrical bracket	155-1
G200 (Front Interior Ground)	On dash frame, left of steering column	203-1

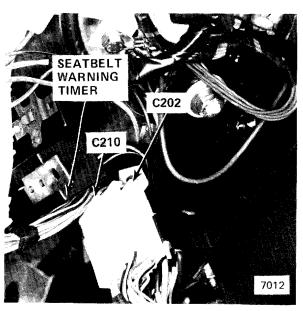


Figure 1 - Behind Dash, Left Of Steering Column

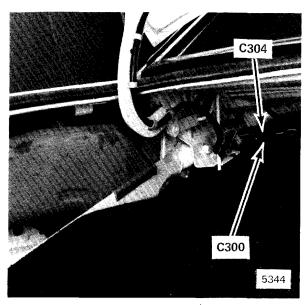


Figure 2 - Left Trunk Hinge

RADIO/POWER ANTE	ENNA	FIGURE
Power Distribution Box	Behind radio Behind radio	201-1 215-1 216-3 155-1 203-1
REAR DEFOGGER/SU		
Sunroof Motor	Top front of left front wheel well	216-4 214-6 215-1 214-6
SERVICE INTERVAL I	NDICATOR	
Diagnostic Connector  Motronic Control Unit  Power Distribution Box  C101 (17 pin)  C103 (6 pin)	Front of engine, on thermostat housing Top middle of engine.  Behind right front speaker Top front of left front wheel well On rear of power distribution box Behind right front speaker On dash frame, left of steering column	101-1 211-1 201-1 211-1

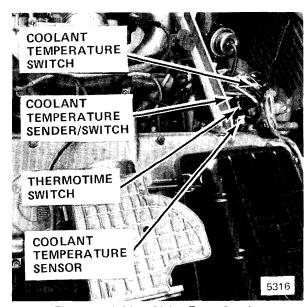


Figure 1 - Behind Right Front Speaker

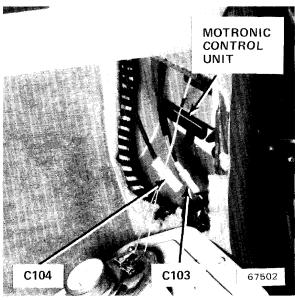


Figure 2 - Top Front Of Engine

SPEEDOMETER/GAU	GES/WARNING INDICATORS	FIGURE
	Right of left front shock tower	209-1
•	Front of engine, on thermostat housing	211-2
	Top middle of engine	
	Top left side of fuel tank, under trunk	
Hydraulic Pressure Switch Ignition Switch	Right of left front shock tower	209-1
Motronic Control Unit	Behind right front speaker	211-1
Oil Pressure Switch	Left rear end of cylinder head	
Parking Brake Switch	In shift console, at base of parking brake	
	Top front of left front wheel well	201-1
Speedometer Sender		
• • • • • • • • • • • • • • • • • • • •	On rear of power distribution box	
	Behind right front speaker	
	Under dash, on left side of steering column	
	Under dash, on left side of steering column	
	On dash frame, left of steering column	
G302 (Trunk Ground)	In trunk, on rear panel center support	208-1

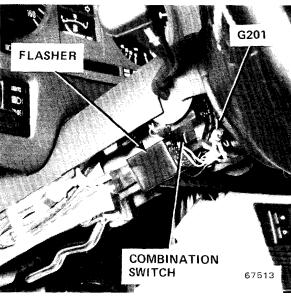


Figure 1 - Upper Underside Of Steering Column

### **START**

Auto. Trans. Range Switch Cold Start Valve		
	Top middle of engine	101-1
Motronic Control Unit	Behind right front speaker	-
	Top front of left front wheel well	201-1
Starter	Lower rear left side of engine	
	Front of engine, top of thermostat housing  On rear of power distribution box	211-2
C200 (10 pin)	Under dash, on left side of steering column On power distribution box bracket On dash frame, left of steering column	201-1

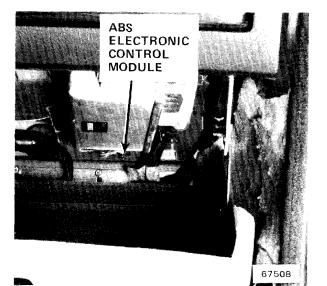


Figure 2 -Below Glove Box Compartment



Figure 1 - Left Of Instrument Panel

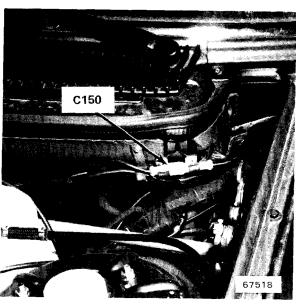


Figure 3 - Left Side Of Cowl



Figure 5 - Under Center Of Fresh Air Intake Cowl

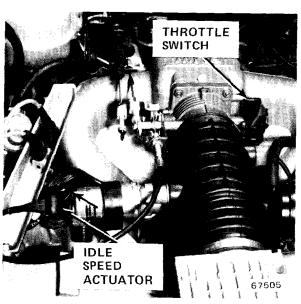


Figure 2 - Top Center Of Engine



Figure 4 - Ahead Of Coolant Reservoir

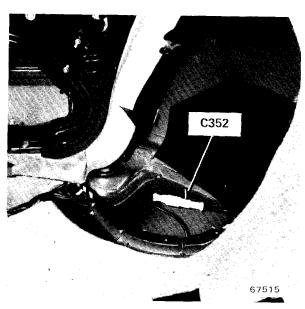


Figure 6 - Under Rear Seat, Right Side

### 214 COMPONENT LOCATIONS

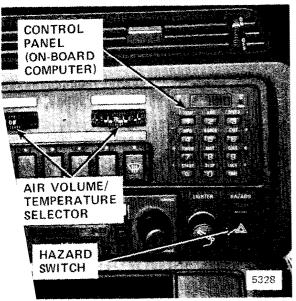


Figure 1- Center Of Dash

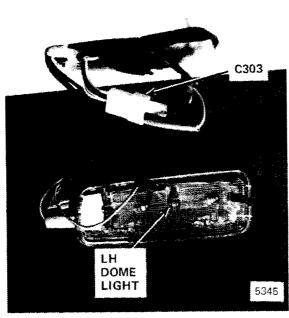


Figure 3 - Header, Above Left B Pillar

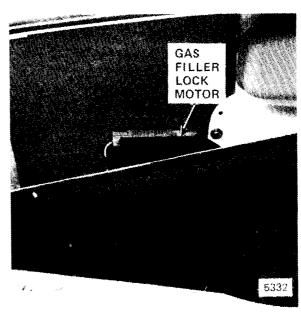
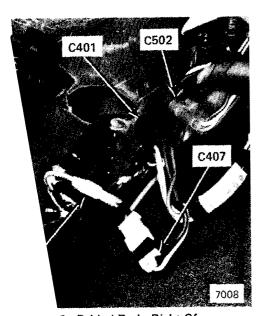


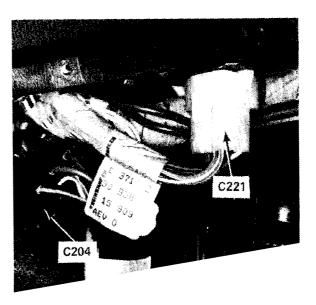
Figure 5 - Behind Left Rear Wheel Well



2 - Behind Dash, Right Of Glove Box



Figure 4 - Bottom 1



STOPLIGHTS/CRUISE	CONTROL	FIGURE
Auto. Trans. Range Switch Brake Switch Clutch Switch Cruise Control Actuator. Cruise Control Control Unit Power Distribution Box Rear Lights Check Relay C206 (29 pin) C208 (2 pin) C209 (7 pin) C210 (4 pin) C211 (1 pin) C301 (2 pin) C302 (Accessory Connector) C350. G200 (Front Interior Ground) G301 (Rear Interior Ground) G302 (Trunk Ground)	On left side of shift lever Above brake pedal Above clutch pedal Right of power distribution box Behind left front speaker Top front of left front wheel well Under left side of rear seat Under LH dash, on body electrical bracket Above accelerator pedal Under dash, above left front speaker Under dash, on left side of steering column In gear selector console In center console, ahead of shift lever Under LH dash, on body electrical bracket At connector bracket under LH side of dash On dash frame, left of steering column Under left side of rear seat In trunk, on rear panel center support	208-2 201-1 207-2 215-1 210-1 155-1 203-1 207-2
WINDSHIELD WASHER J	ET HEATERS	
Power Distribution Box	Top front of left front wheel well	215-1 215-1
WIPER/WASHER		
Power Distribution Box Washer Pump Wiper Motor C102 (13 pin)	Top front of left front wheel well	216-2
G201 (6 pin)	Under dash, on left side of steering column  On dash frame, left of steering column	

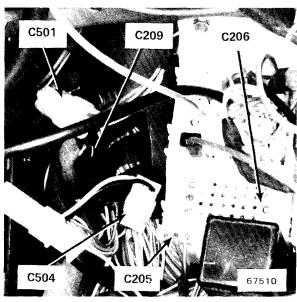


Figure 1 - Behind Dash Above Left Front Speaker

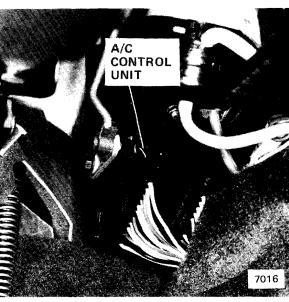


Figure 2 - Behind Left Side Of Console

POWER SEATS		FIGURE
	Under passenger's seat, on frame Under LH dash, on body electrical bracket Under LH dash, on body electrical bracket Under center console	<b>215</b> -1 155-1
	On dash frame, left of steering column	203-1

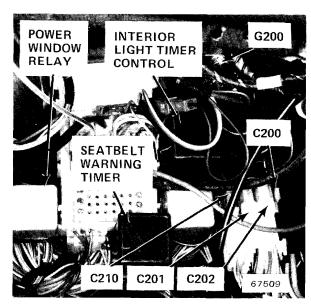


Figure 1 - Behind, Left Of Steering Column

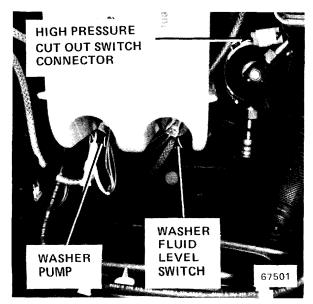


Figure 2 - Ahead Of Right Hand Front Wheel Well, In Reservoir

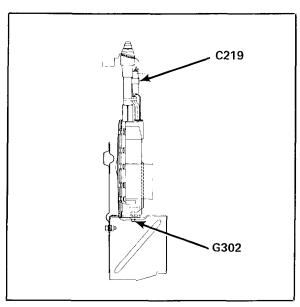


Figure 3 - In The Trunk

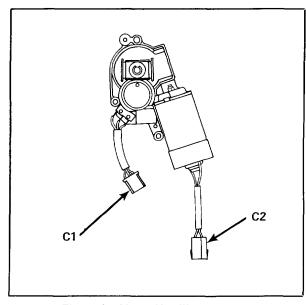
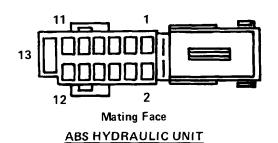
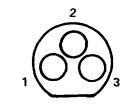
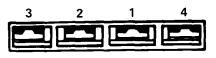


Figure 4 - Above Headliner, Above Rear View Mirror





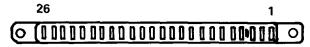
Wiring Face
AIR INLET TEMPERATURE SENSOR



Wiring Face
BLOWER FINAL STAGE



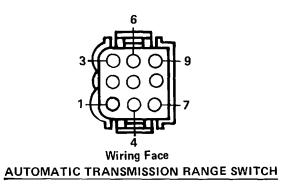
Wiring Face
A/C CONTROL UNIT (C1)

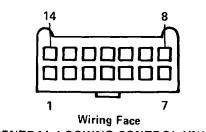


Wiring Face
<u>AIR VOLUME/TEMPERATURE SELECTOR</u>

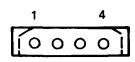


Wiring Face
A/C CONTROL UNIT (C2)

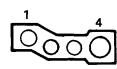




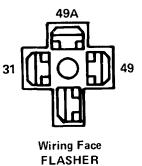
CENTRAL LOCKING CONTROL UNIT

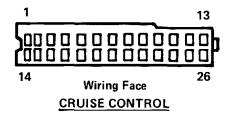


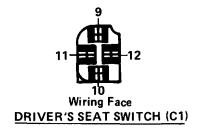
Wiring Face
CHIME MODULE (C1)

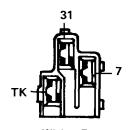


Wiring Face
DRIVER'S SEAT CONTROLLER (C2)

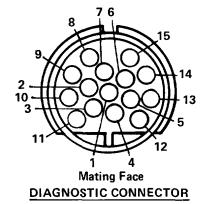


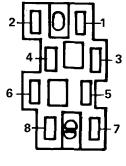






Wiring Face
FOG LIGHTS/INTERNAL LIGHTS
SWITCH (C1)

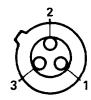




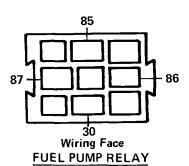
Mating Face FADER CONTROL



Wiring Face
FOG LIGHTS/ INTERIOR
LIGHTS SWITCH (C2)



Wiring Face FRONT TURN PARK LIGHT

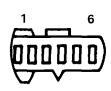


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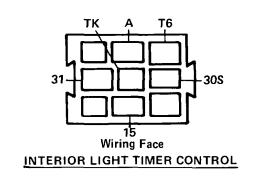
Wiring Face FUEL TANK SENDER

# 

Wiring Face FUNCTION SELECTOR

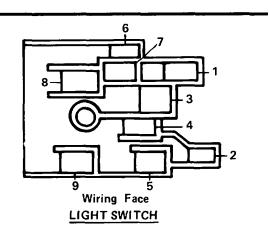


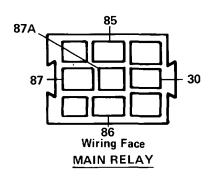
Wiring Face
GAS FILLER LOCK MOTOR

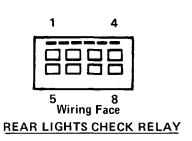


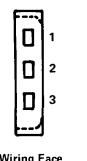


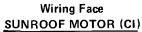
Wiring Face
IN CAR TEMPERATURE SENSOR/REAR
PASSENGER AREA SWITCH

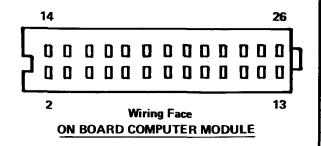


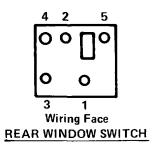


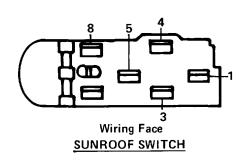


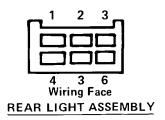


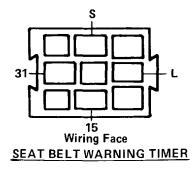


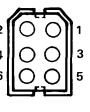




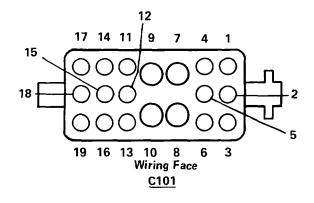


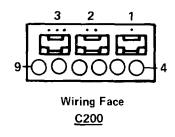


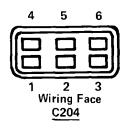




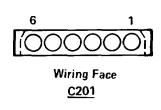
Wiring Face
WIPER MOTOR

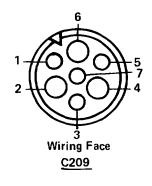






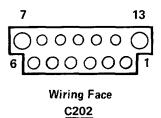


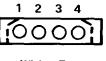




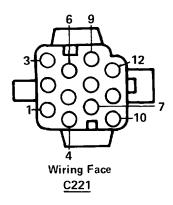


Wiring Face C114

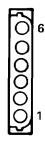




Wiring Face C210











Wiring Face C409



Wiring Face C237

