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**1988**

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**BMW M3**

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**Electrical**

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**Troubleshooting**

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**Manual**

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BMW of North America, Inc.  
Montvale, New Jersey

## FOREWORD

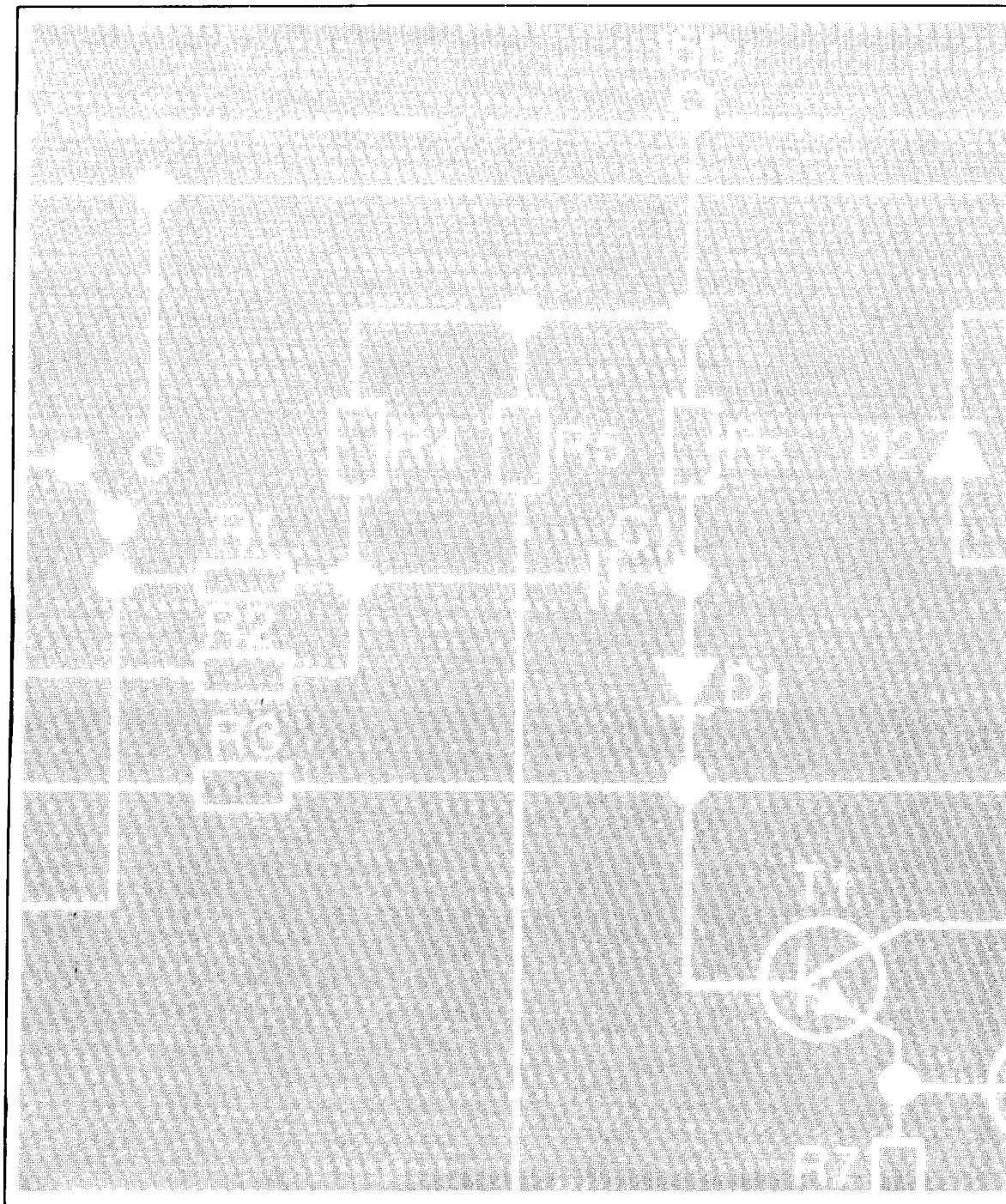
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Electrical  
Troubleshooting  
Manual**

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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 (CROSSECTIONAL AREA IN MM <sup>2</sup> )	AWG (AMERICAN 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	BLACK
BR	BROWN
RD	RED
YL	YELLOW
GN	GREEN
BU	BLUE
VI	VIOLET
GY	GRAY
WT	WHITE
PK	PINK

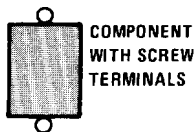
# 4 SYMBOLS



ENTIRE COMPONENT SHOWN



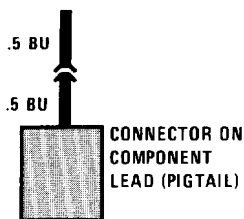
PART OF A COMPONENT SHOWN



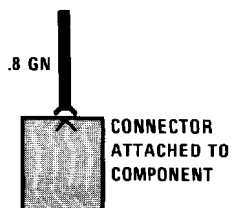
COMPONENT WITH SCREW TERMINALS



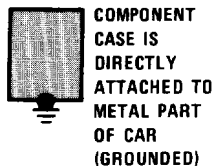
SOLID STATE (INCLUDES ONLY ELECTRONIC PARTS)



CONNECTOR ON COMPONENT LEAD (PIGTAIL)



CONNECTOR ATTACHED TO COMPONENT

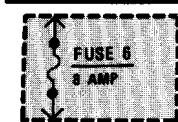


COMPONENT CASE IS DIRECTLY ATTACHED TO METAL PART OF CAR (GROUNDED)



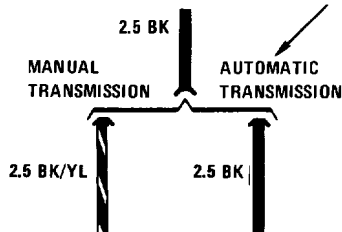
HOT AT ALL TIMES

INDICATES THAT FUSE 5 IS ALWAYS SUPPLIED WITH POWER

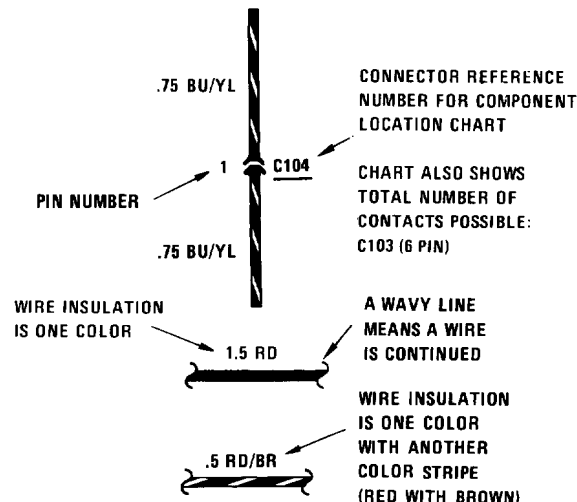


HOT IN RUN OR START

INDICATES THAT FUSE 6 IS SUPPLIED WITH POWER WITH THE IGNITION SWITCH IN THE RUN OR START POSITIONS



WIRE CHOICES FOR OPTIONS ARE SHOWN AND LABELED



PIN NUMBER

CONNECTOR REFERENCE NUMBER FOR COMPONENT LOCATION CHART

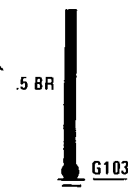
CHART ALSO SHOWS TOTAL NUMBER OF CONTACTS POSSIBLE: C103 (6 PIN)

WIRE INSULATION IS ONE COLOR

A WAVY LINE MEANS A WIRE IS CONTINUED

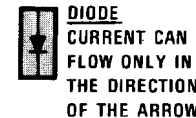
WIRE INSULATION IS ONE COLOR WITH ANOTHER COLOR STRIPE (RED WITH BROWN)

WIRE SIZE IN MM<sup>2</sup>



WIRE IS ATTACHED TO METAL PART OF CAR (GROUNDED) GROUND IS NUMBERED FOR REFERENCE ON COMPONENT LOCATION CHART

OTHER CIRCUITS THAT SHARE A GROUND ARE SHOWN IN GROUND DISTRIBUTION

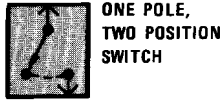


DIODE CURRENT CAN FLOW ONLY IN THE DIRECTION OF THE ARROW

CIRCUIT REFERENCE - A WIRE WHICH CONNECTS TO ANOTHER CIRCUIT



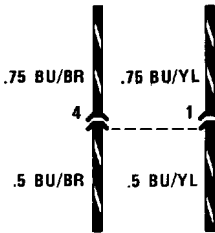
ACTIVE CHECK CONTROL



**ONE POLE,  
TWO POSITION  
SWITCH**



**SWITCHES THAT  
MOVE TOGETHER**  
  
DASHED LINE SHOWS  
A MECHANICAL  
CONNECTION  
BETWEEN SWITCHES



**TWO CONNECTIONS  
(PINS) IN THE SAME  
CONNECTOR**  
  
DASHED LINE SHOWS  
PARTS OF THE  
SAME CONNECTOR



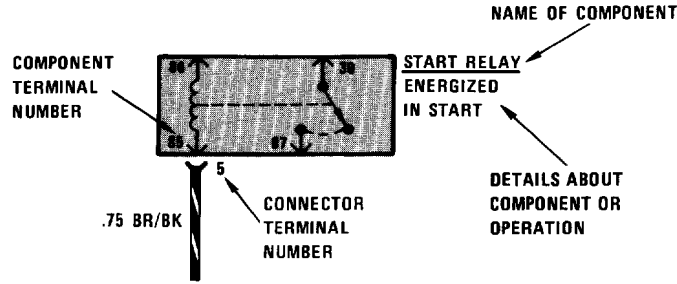
**WHEN COIL IS  
ENERGIZED, SWITCH  
IS PULLED CLOSED**

**RELAY SHOWN  
WITH NO  
CURRENT  
FLOWING  
THROUGH  
COIL**



**RELAY SHOWN  
WITH RESISTOR  
ACROSS COIL**  
  
RESISTOR ACROSS COIL  
IS FOR NOISE  
SUPPRESSION

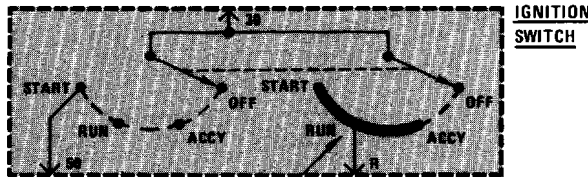
**RELAY SHOWN  
WITH RESISTOR  
ACROSS COIL**



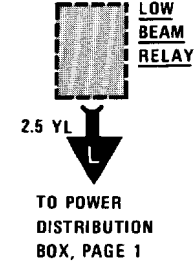
**START RELAY  
ENERGIZED  
IN START**

**DETAILS ABOUT  
COMPONENT OR  
OPERATION**

**TWO POLE, FOUR  
POSITION SWITCH**



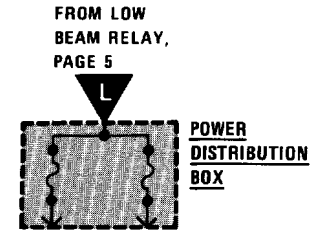
**"R" IS ENERGIZED  
IN ACCY, RUN OR START**



**LOW  
BEAM  
RELAY**

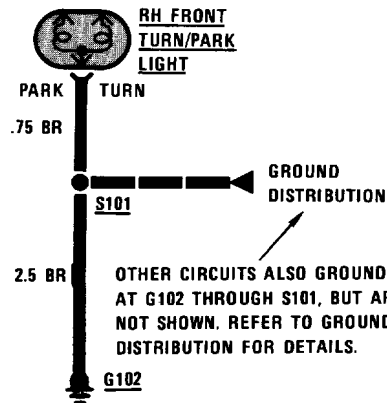
**2.5 YL**  
  
**TO POWER  
DISTRIBUTION  
BOX, PAGE 1**

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



**FROM LOW  
BEAM RELAY,  
PAGE 5**

**POWER  
DISTRIBUTION  
BOX**



**.75 BR**  
  
**2.5 BR**

**RH FRONT  
TURN/PARK  
LIGHT**

**GROUND  
DISTRIBUTION**

**OTHER CIRCUITS ALSO GROUNDED  
AT G102 THROUGH S101, BUT ARE  
NOT SHOWN. REFER TO GROUND  
DISTRIBUTION FOR DETAILS.**



**LIGHT  
EMITTING  
DIODE**

## 6 SYSTEMATIC TROUBLESHOOTING

### 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

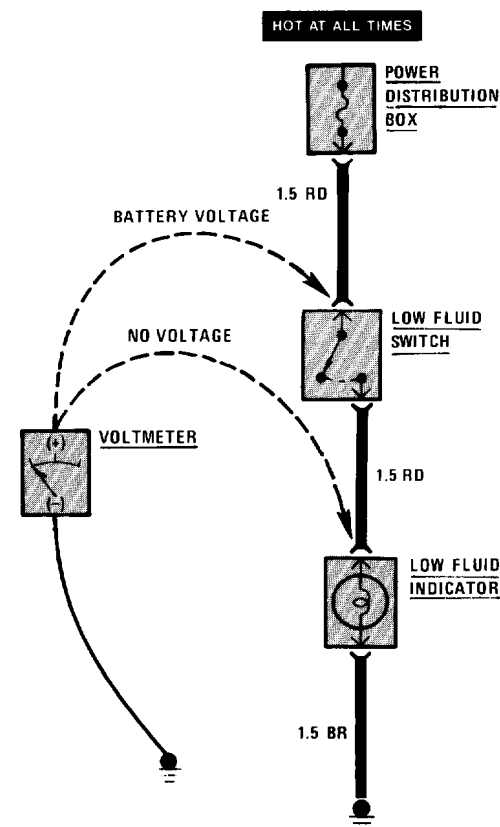
Isolating the problem (Step 3 of TROUBLESHOOTING PROCEDURES) requires the use of a **voltmeter** and/or **ohmmeter**. A voltmeter measures voltage at selected points in a circuit. An ohmmeter measures a circuit's resistance to current flow. It has an internal battery that provides current to the circuit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



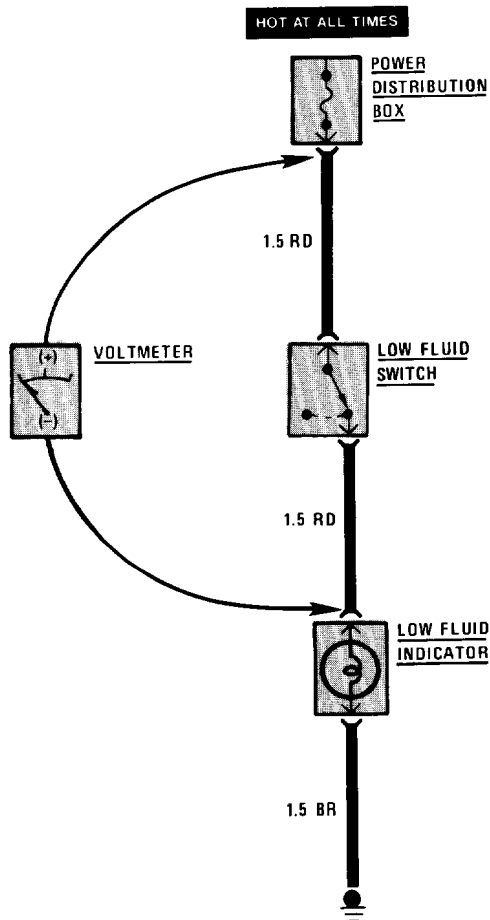
Voltage Test



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.

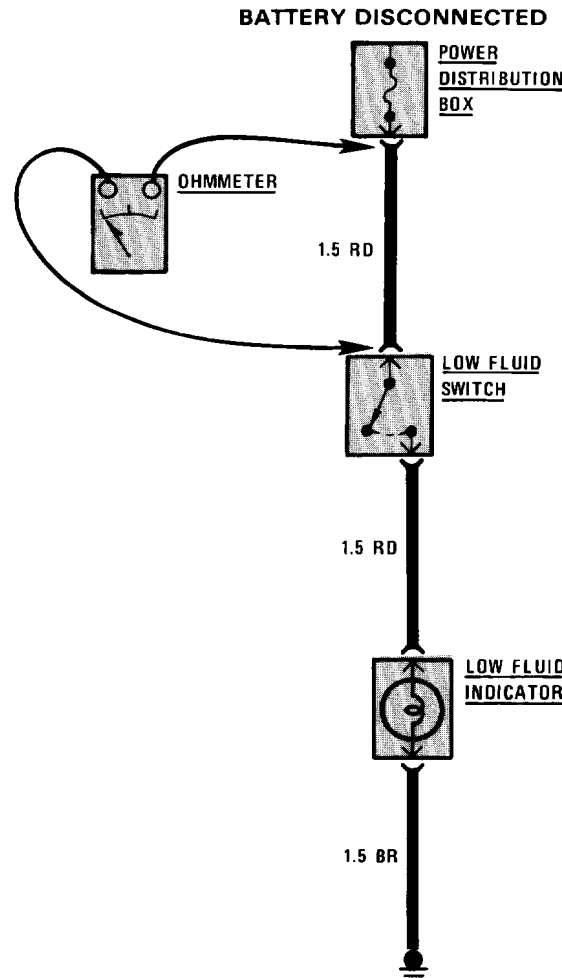
To test for voltage drop, connect the voltmeter leads to connectors at either end of the circuit's suspected problem area. The positive lead should be connected to the connector closest to the power source. The voltmeter will show the voltage drop between these two points.



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.

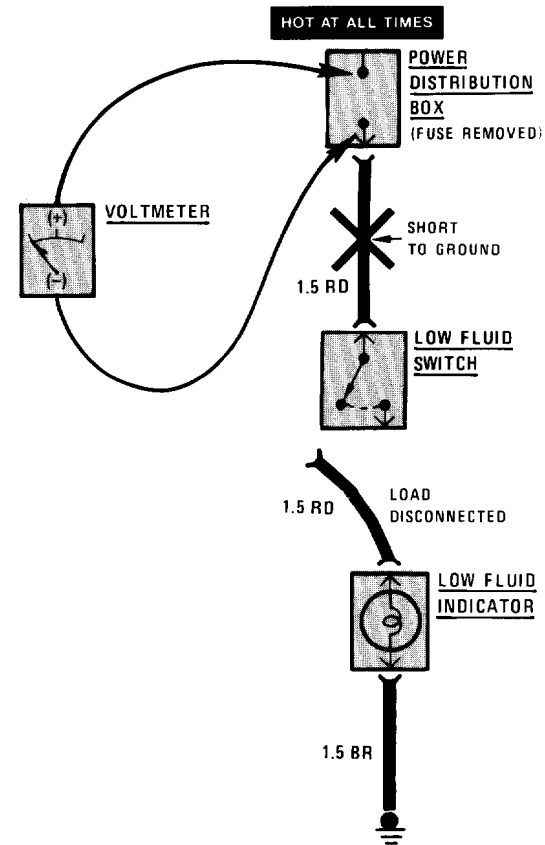


Continuity Test

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.



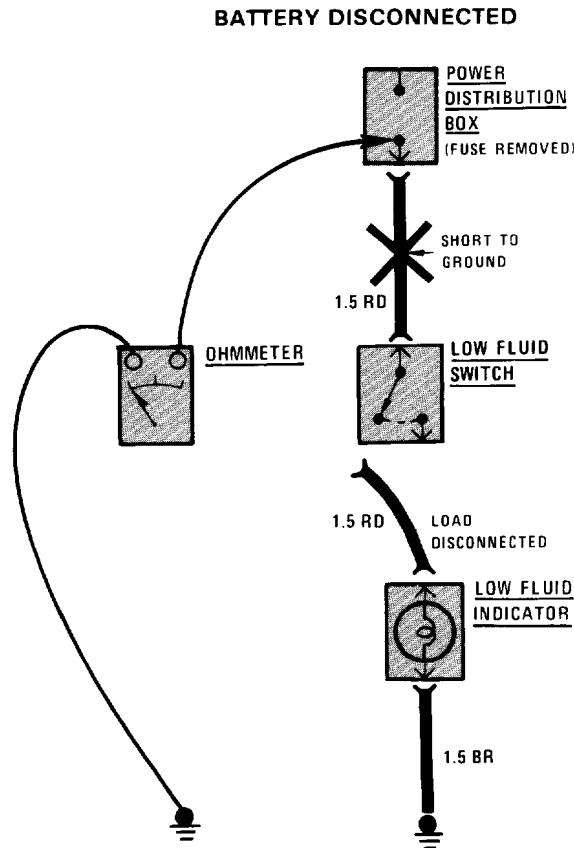
Short Test Using Voltmeter

## 8 SYSTEMATIC TROUBLESHOOTING

### 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.

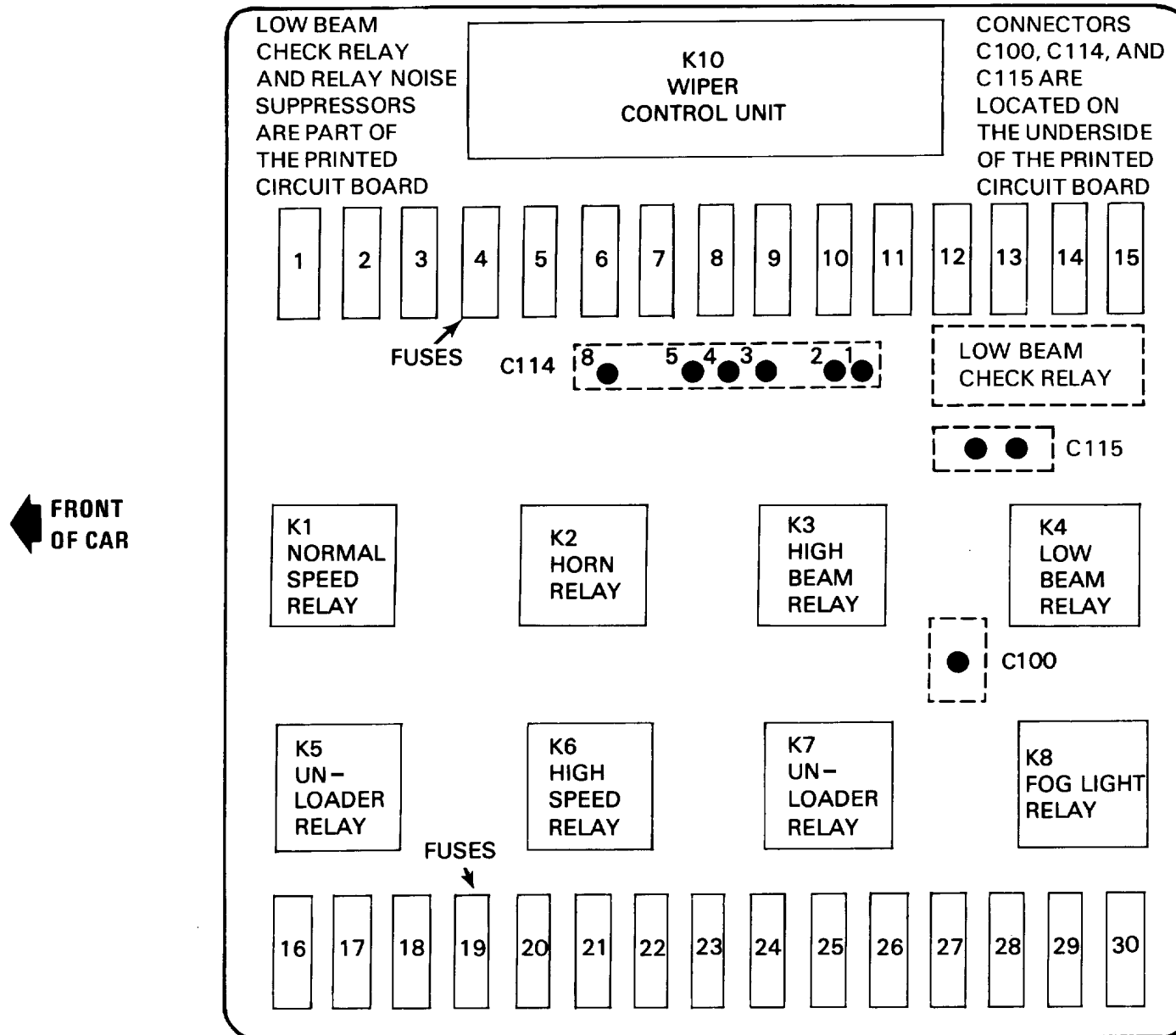
Starting near the POWER DISTRIBUTION BOX, move the wire harness back and forth and watch the ohmmeter reading. Low or no resistance indicates a short to ground in the wiring. Infinitely high resistance indicates no short.



Short Test Using Ohmmeter

# 0670-0 POWER DISTRIBUTION

## POWER DISTRIBUTION BOX



**FUSE DATA CHART**

FUSE NO.	SIZE/COLOR	CIRCUIT NAME
1	7.5A	Headlights (also fuses 2, 13, 14).
2	7.5A	Headlights (also fuses 1, 13, 14).
3	15A	Auxiliary Fan (also fuses 18, 19, 20).
4	15A	Lights: Turn/Hazard (also fuse 24); Active Check Control (also fuses 6, 10, 21, 22, 23).
5	30A	Wiper/Washer.
6	7.5A	Stop Lights; Map Reading Light; Cruise Control; Active Check Control (also fuses 4, 10, 21, 22, 23); Antilock Braking System.
7	15A	Horn.
8	30A	Rear Defogger (also fuse 23).
9	15A	Injection Electronics (also fuse 21).
10	7.5A	Seatbelt Warning (also fuse 21); Service Interval Indicator (also fuse 21); Tachometer/Fuel Economy Gauges (also fuse 21); Gauges/Indicators; Brake Warning System; Back Up Lights; On-Board Computer (also fuses 12, 21, 23, 27); Start; Injection Electronics (also fuses 11, 21); Active Check Control (also fuses 4, 6, 21, 22, 23).
11	7.5A	Injection Electronics.
12	7.5A	Radio/Antenna (also fuses 21, 27, 28); Speedometer/Indicators; On-Board Computer (also fuses 10, 21, 23, 27).
13	7.5A	Headlights (also fuses 1, 2, 14).
14	7.5A	Headlights (also fuses 1, 2, 13).
15	7.5A	Not Used.
16	15A	Not Used.
17	30A	Sunroof; Power Windows.
18	30A	Auxiliary Fan (also fuses 3, 19, 20).
19	7.5A	Auxiliary Fan (also fuses 3, 18, 20); Interior Lights (also fuses 6, 21, 27); Power Mirrors.

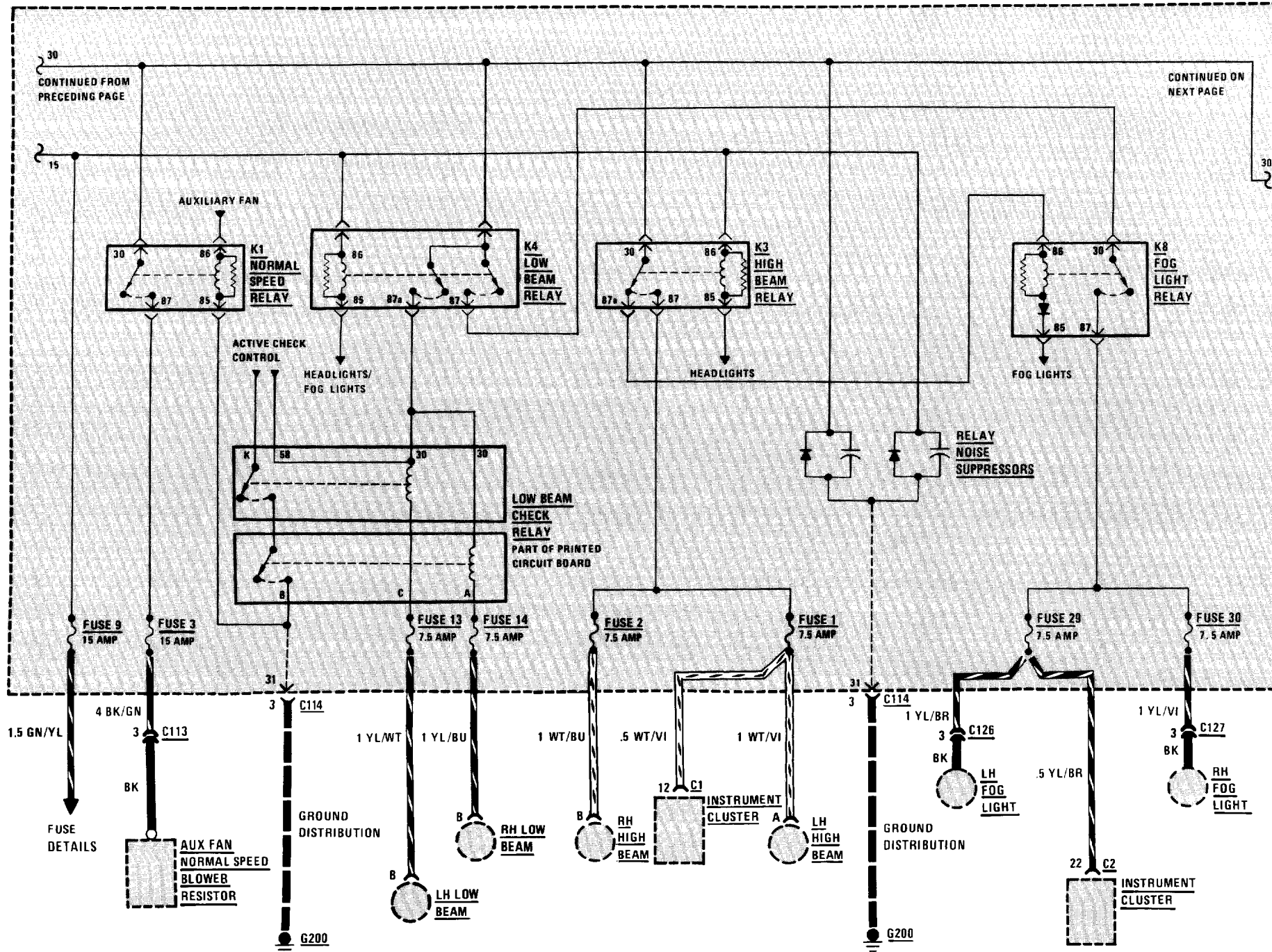
FUSE NO.	SIZE/COLOR	CIRCUIT NAME
20	30A	Heater/Air Conditioning; Auxiliary Fan (also fuses 3, 18, 19).
21	7.5A	Auto-Charging Flashlight; Glove Box Light; Ignition Key Warning/Seatbelt Warning; (also fuse 10); Injection Electronics (also fuses 10, 11); Interior Lights (also fuses 19, 27); Radio/Antenna (also fuses 12, 27, 28); Trunk Light; Active Check Control (also fuses 4, 6, 10, 22, 23); Service Interval Indicator (also fuse 10); On-Board Computer (also fuses 10, 12, 23, 27); Tachometer/Fuel Economy Gauge (also fuse 10).
22	7.5A	Active Check Control (also fuses 4, 6, 10, 21, 23); Lights: Front Park/Tail (also fuse 23); Lights: Front Side Marker (also fuse 23).
23	7.5A	Lights: Dash Lights: Front Park/Tail (also fuse 22); Lights: Front Side Marker (also fuse 22); Lights: Rear Marker/License; Active Check Control (also fuses 4, 6, 10, 21, 22); Rear Defogger (also fuse 8).
24	15A	Lights: Turn/Hazard (also fuse 4).
25	—	Not Used.
26	15A	Not Used.
27	30A	Interior Lights (also fuses 19, 21); Central Locking; Radio/Antenna (also fuses 12, 21, 28); On-Board Computer (also fuses 10, 12, 21).
28	30A	Cigar Lighter; Radio/Antenna (also fuses 12, 21, 27).
29	7.5A	Fog Lights (also fuse 30).
30	7.5A	Fog Lights (also fuse 29).
POWER WINDOW CIRCUIT BREAKER		25A Power Windows





# 0670-4 POWER DISTRIBUTION

POWER DISTRIBUTION BOX

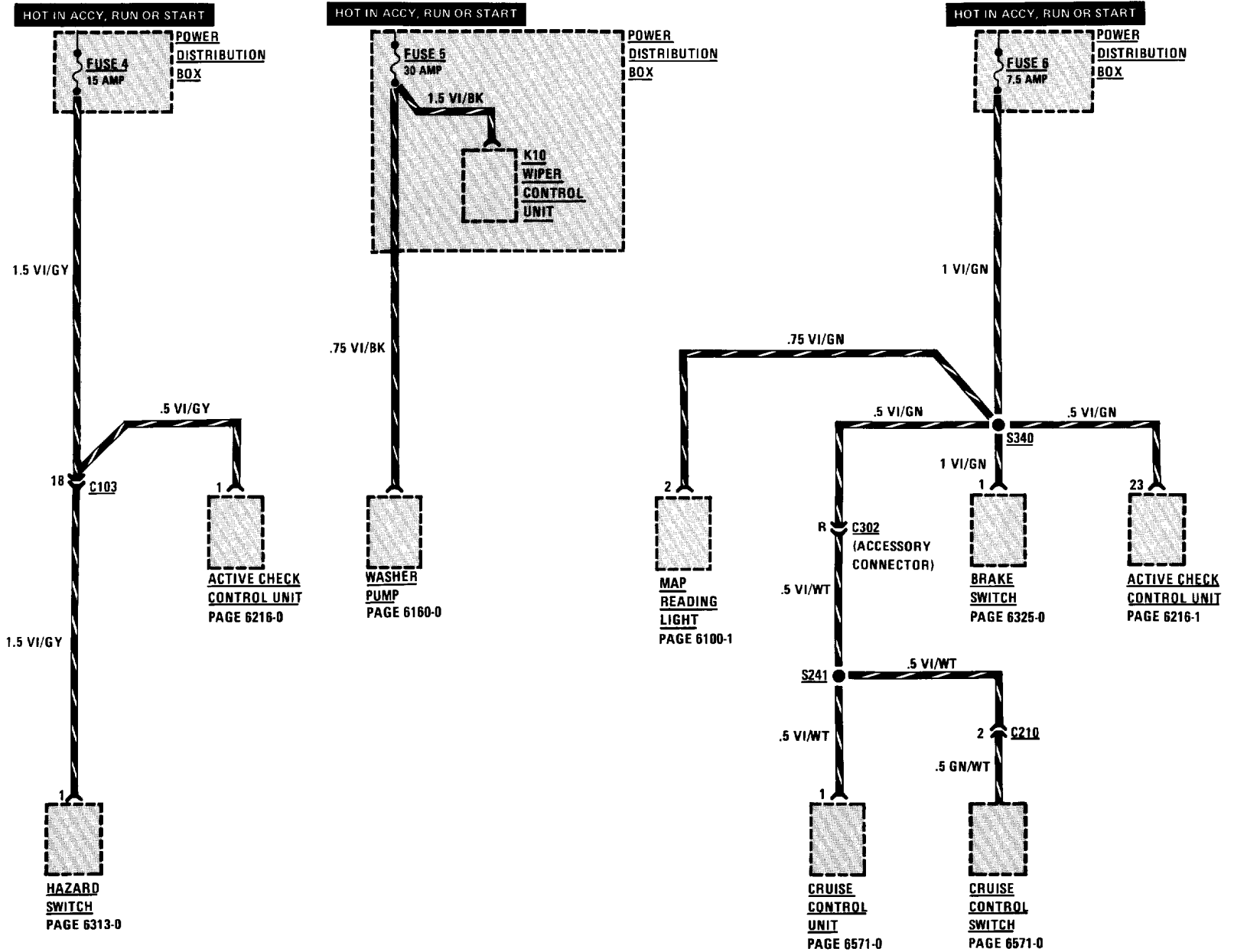




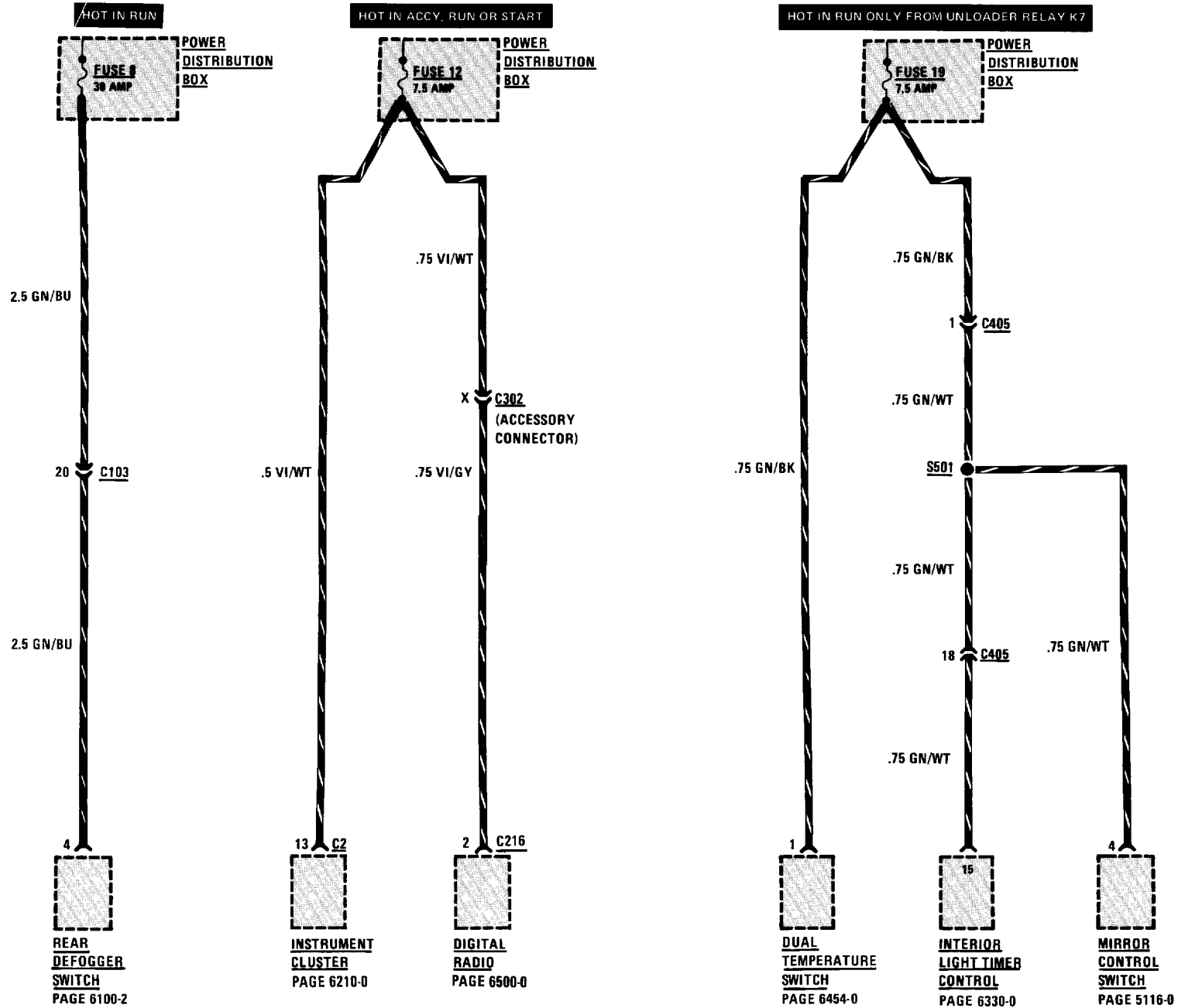


# 0670-6 POWER DISTRIBUTION

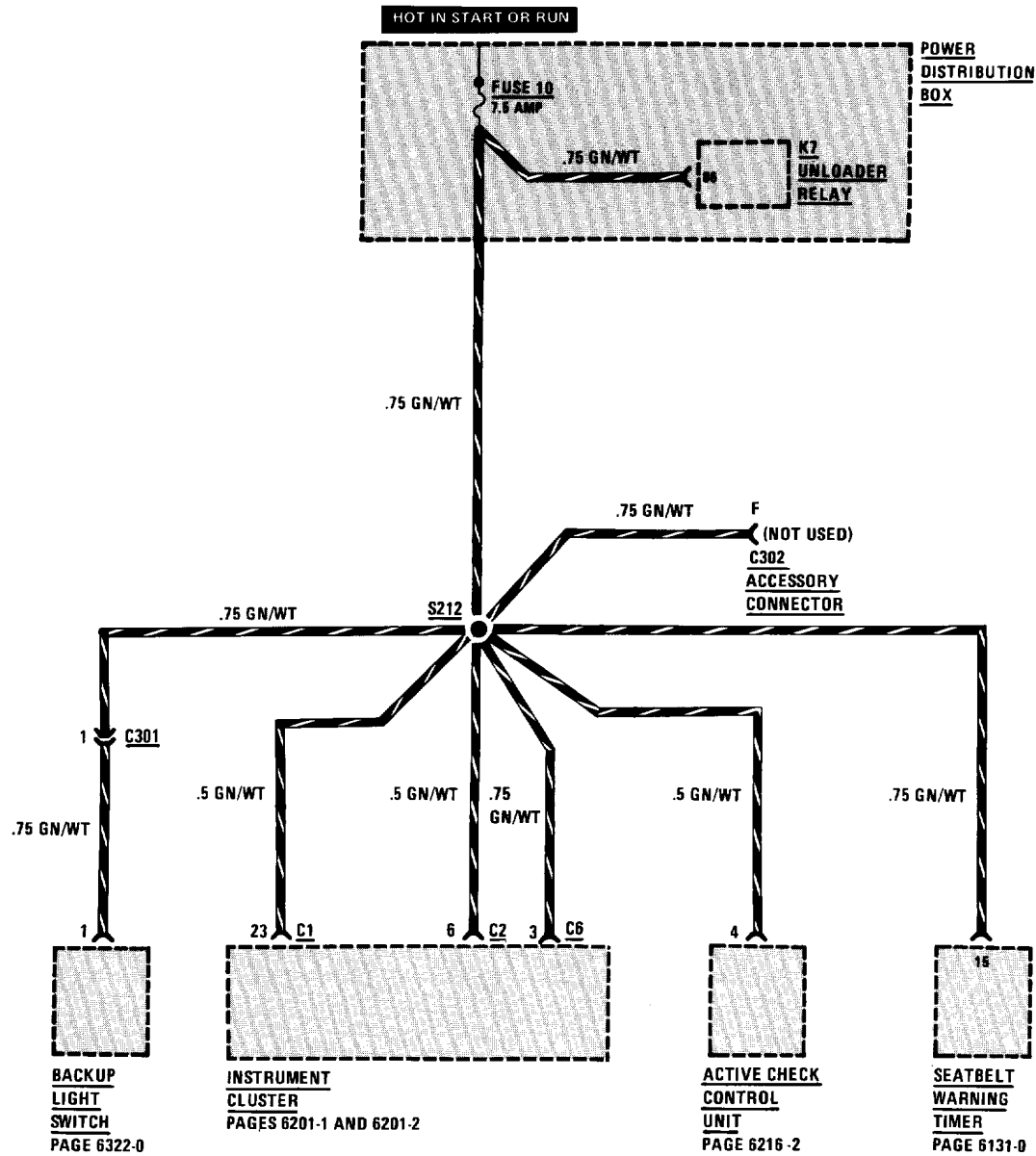
## FUSE DETAILS: FUSES 4, 5, AND 6



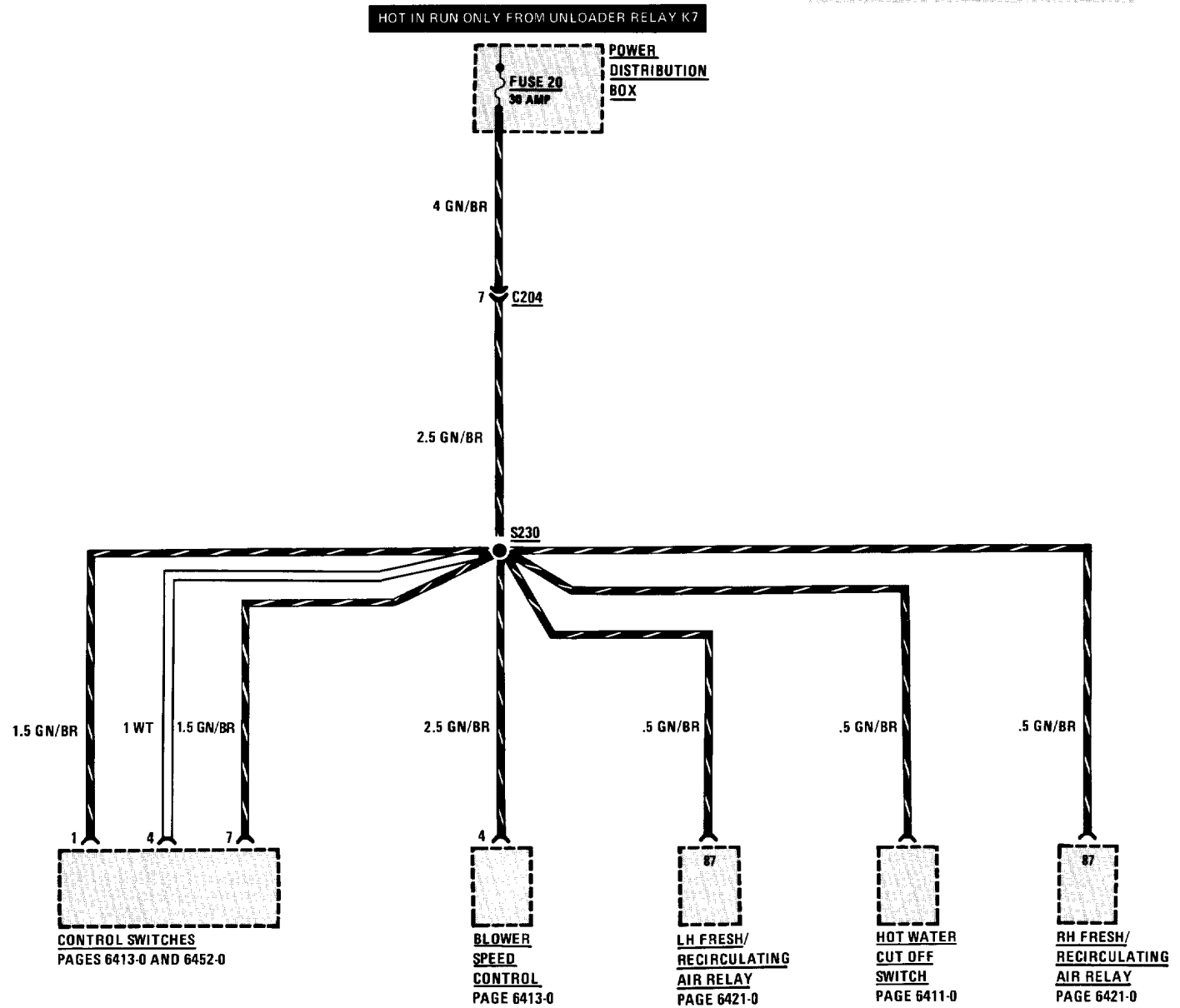
FUSE DETAILS: FUSES 8, 12 AND 19



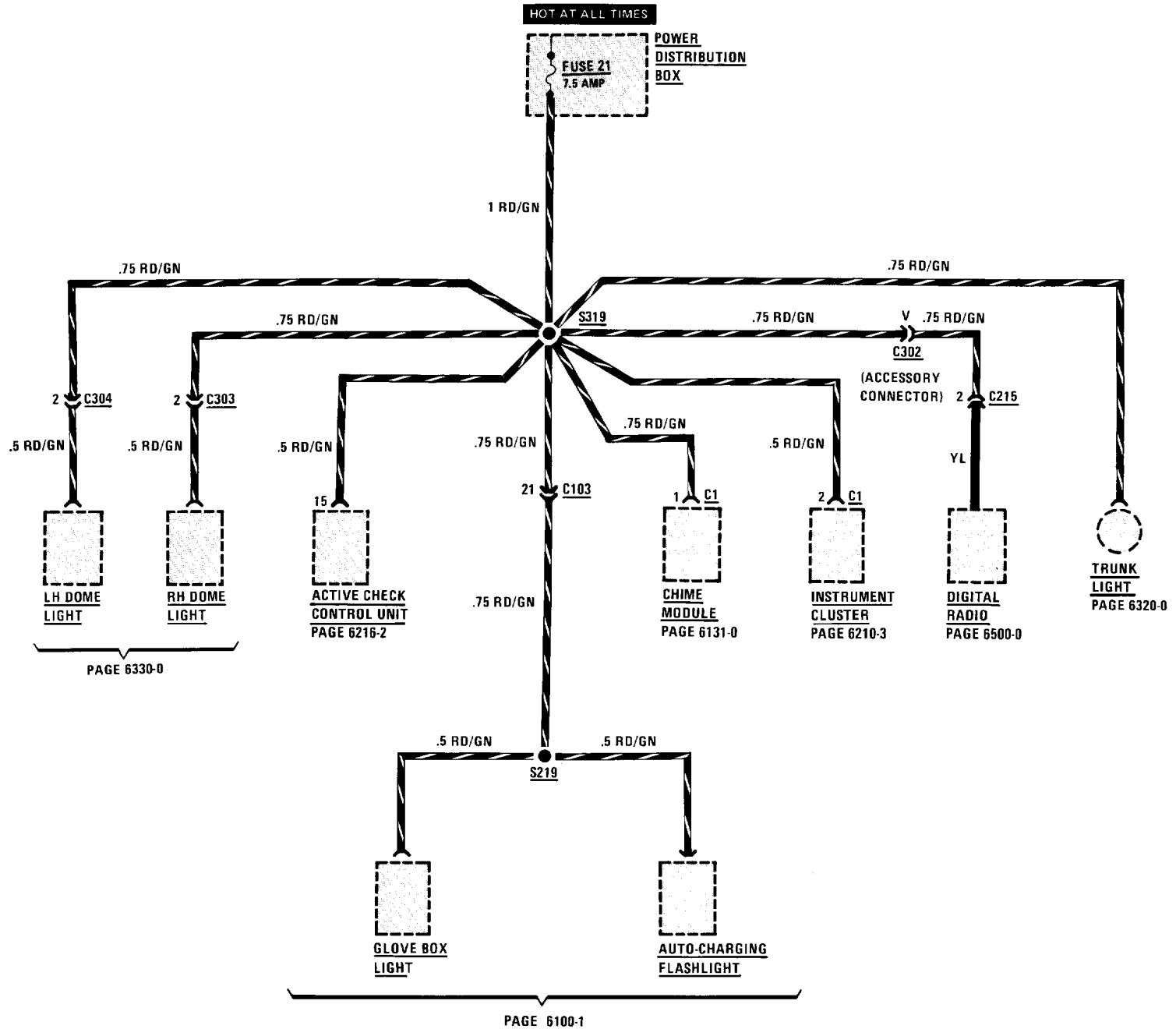
**FUSE DETAILS: FUSE 10**



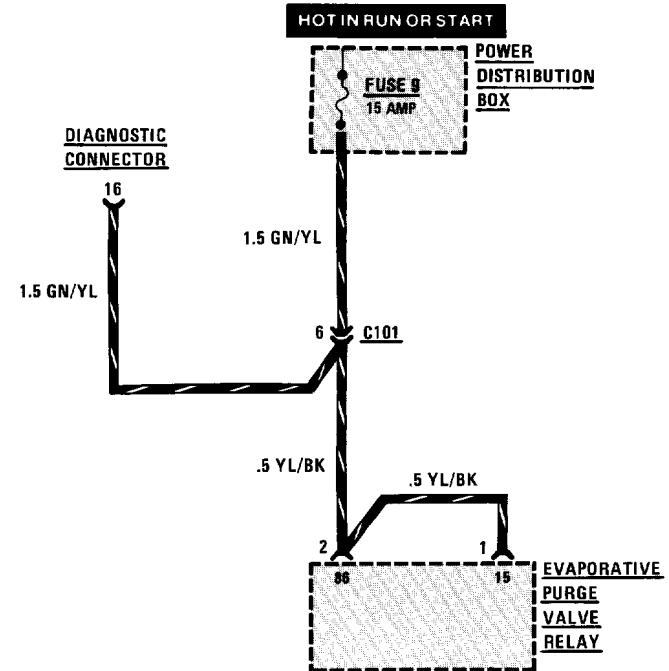
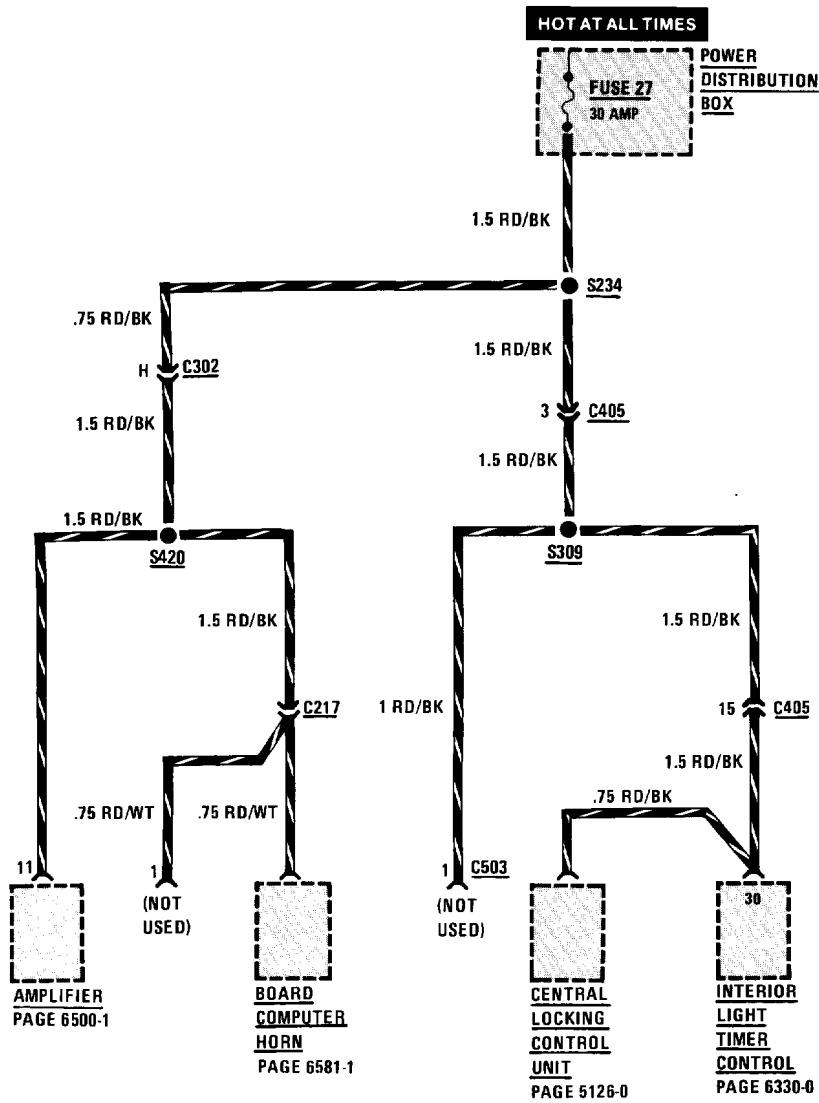
FUSE DETAILS: FUSE 20



FUSE DETAILS: FUSE 21

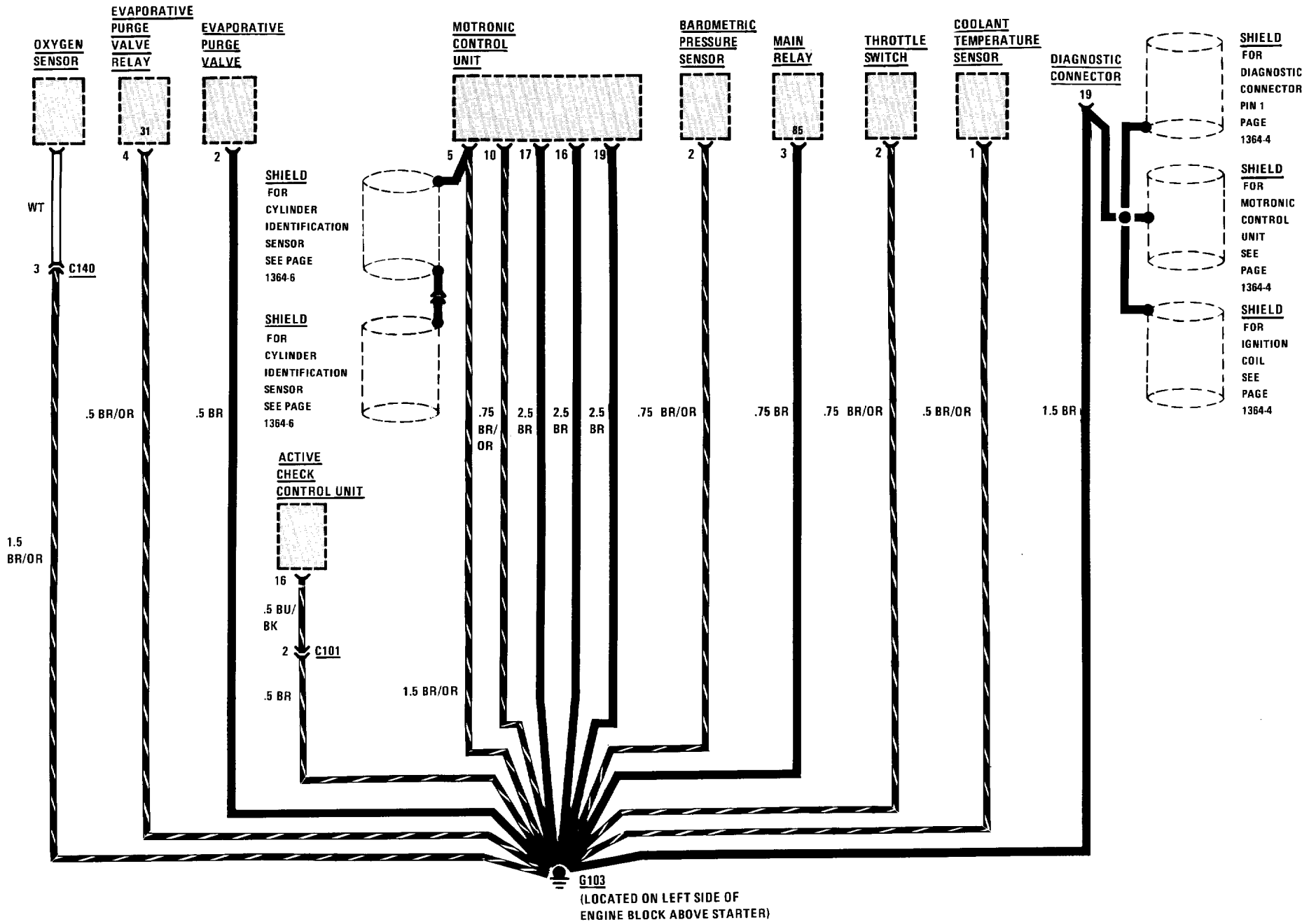


FUSE DETAILS: FUSES 27 AND 9

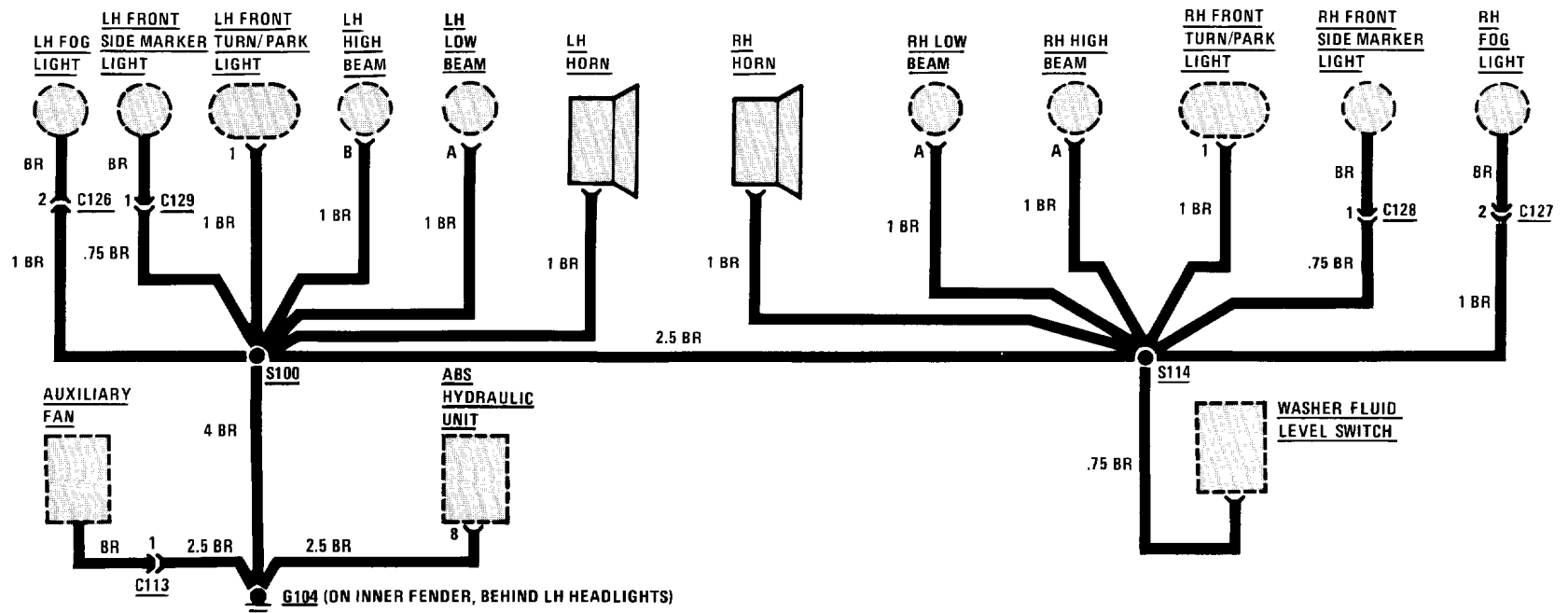
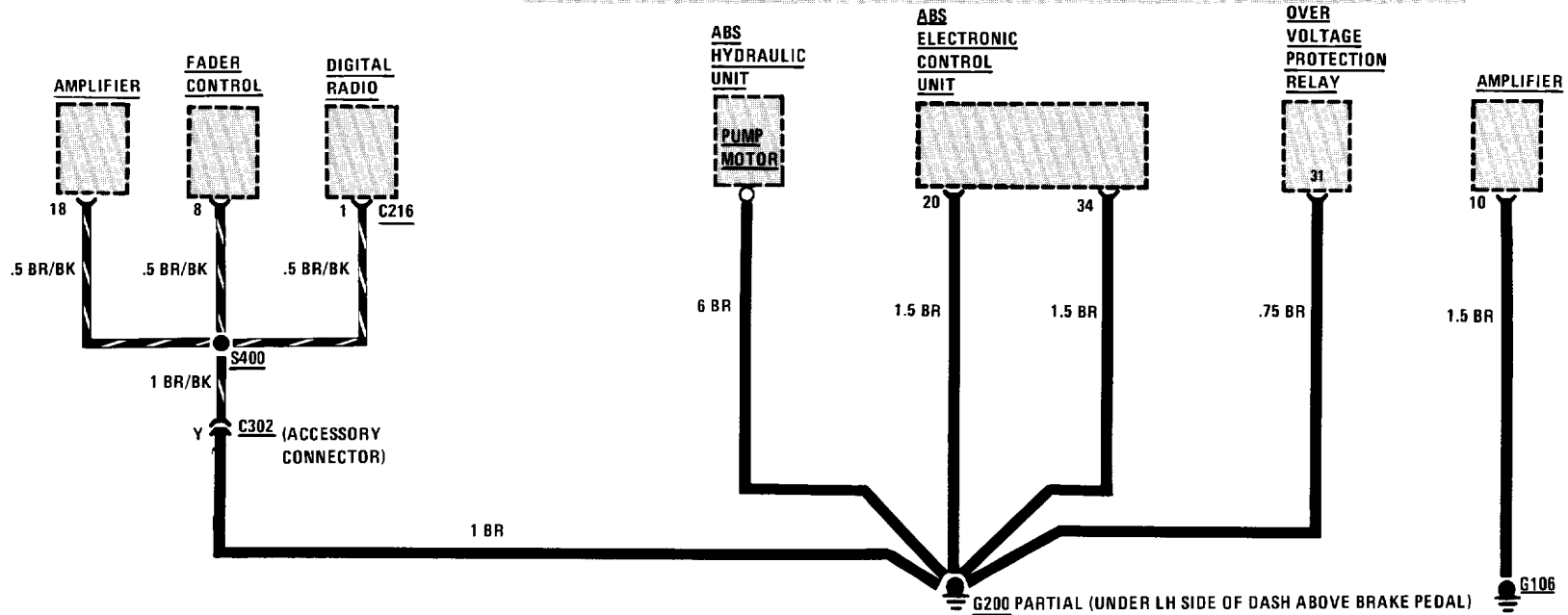


# 0670-12 POWER DISTRIBUTION

## GROUND DISTRIBUTION (G103)



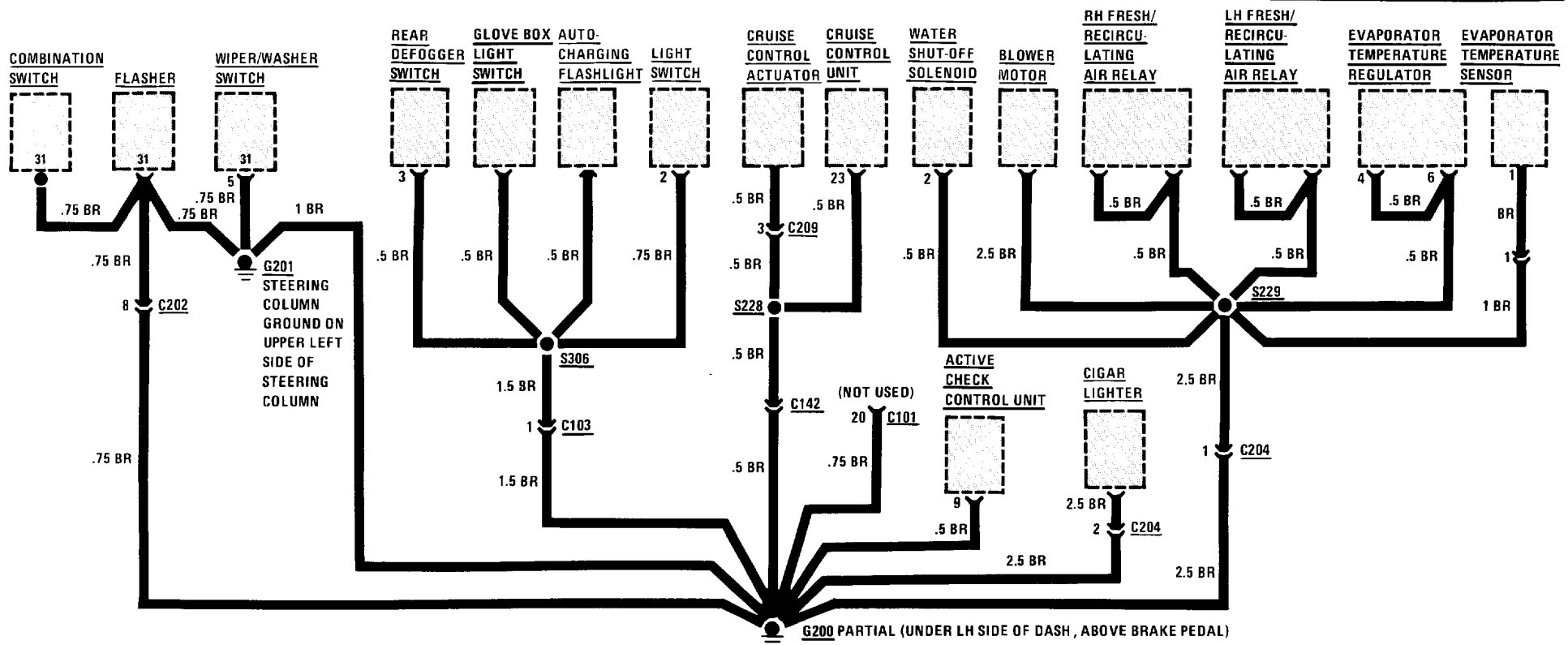
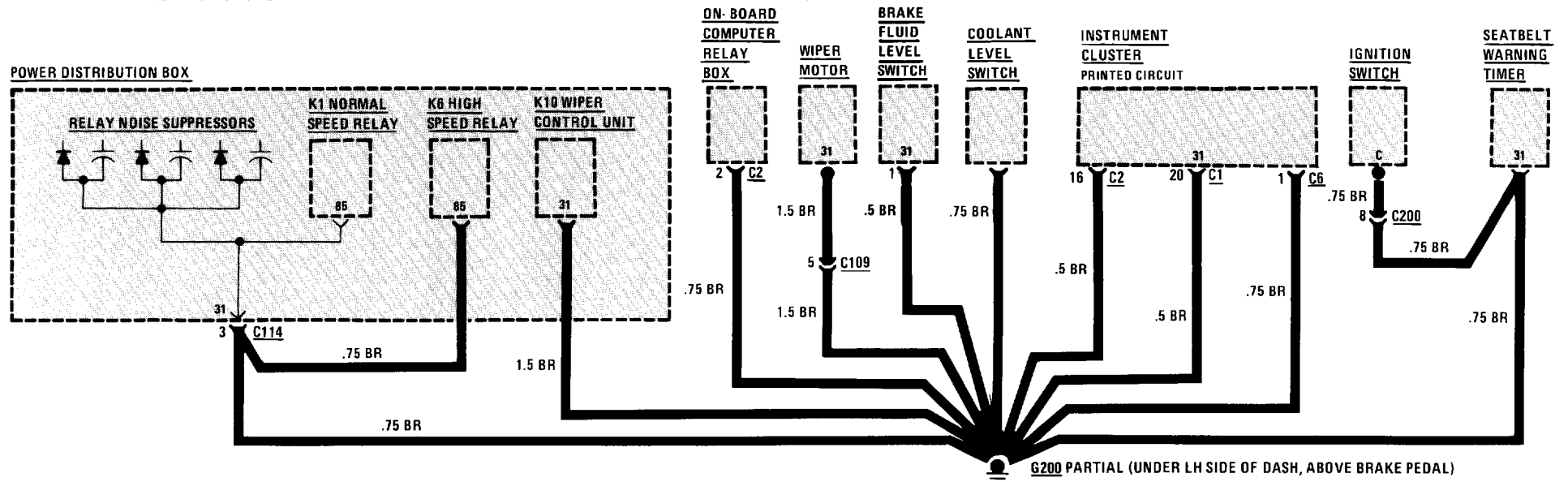
GROUND DISTRIBUTION (G104, G106 AND G200 PARTIAL)





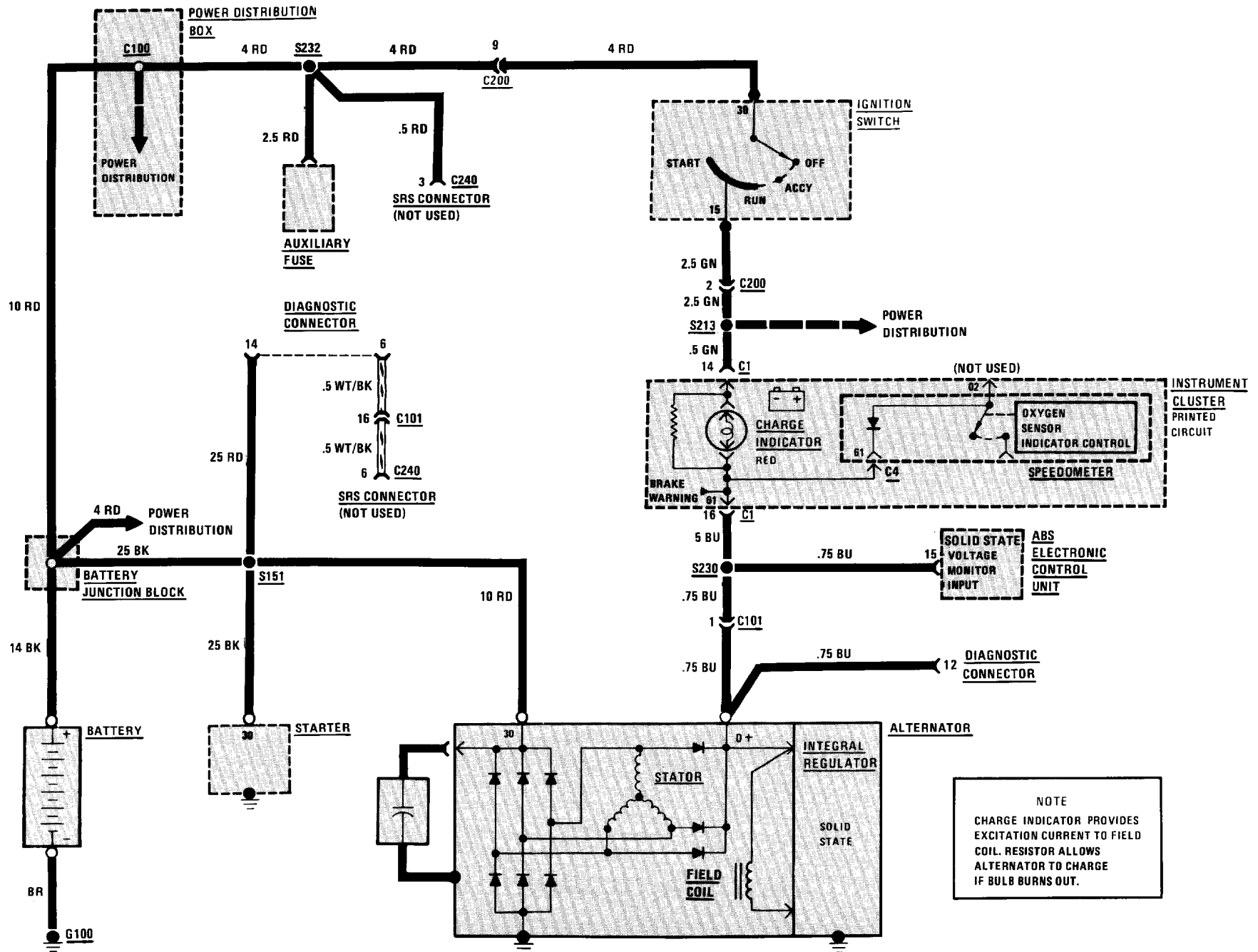
# 0670-14 POWER DISTRIBUTION

## GROUND DISTRIBUTION (G200 PARTIAL AND G201)



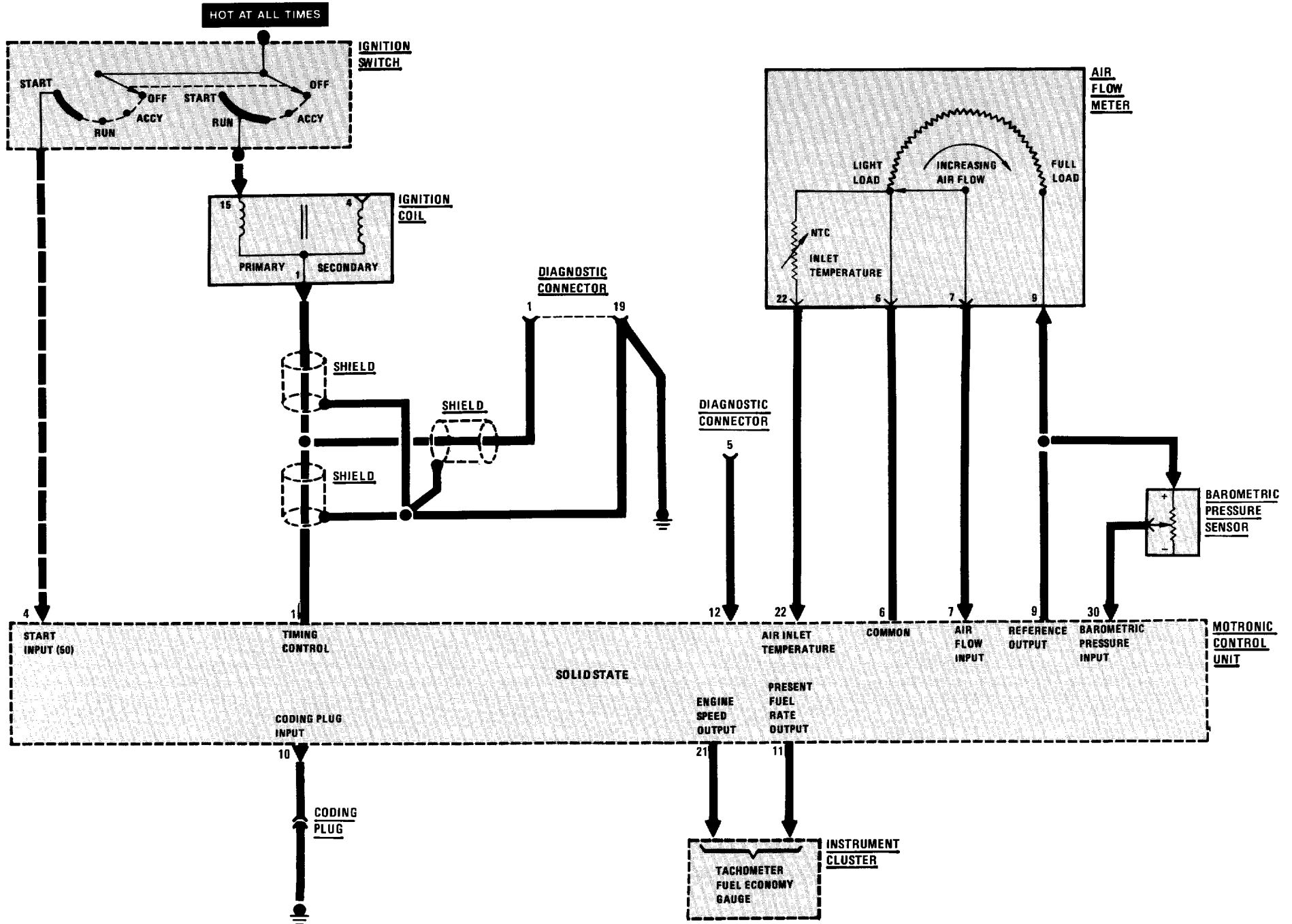


# 1230-0 CHARGE

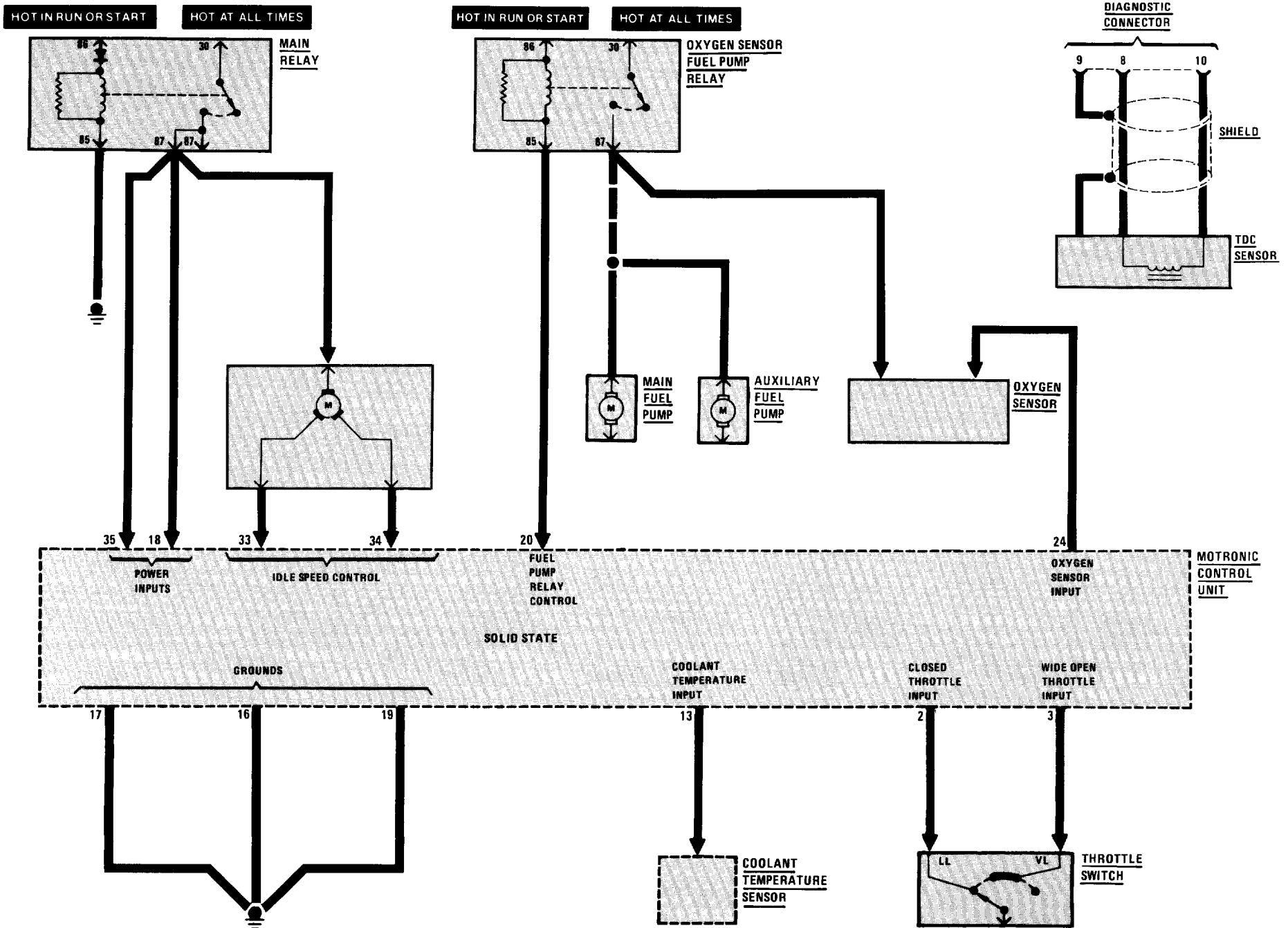




**ENGINE BLOCK DIAGRAM**

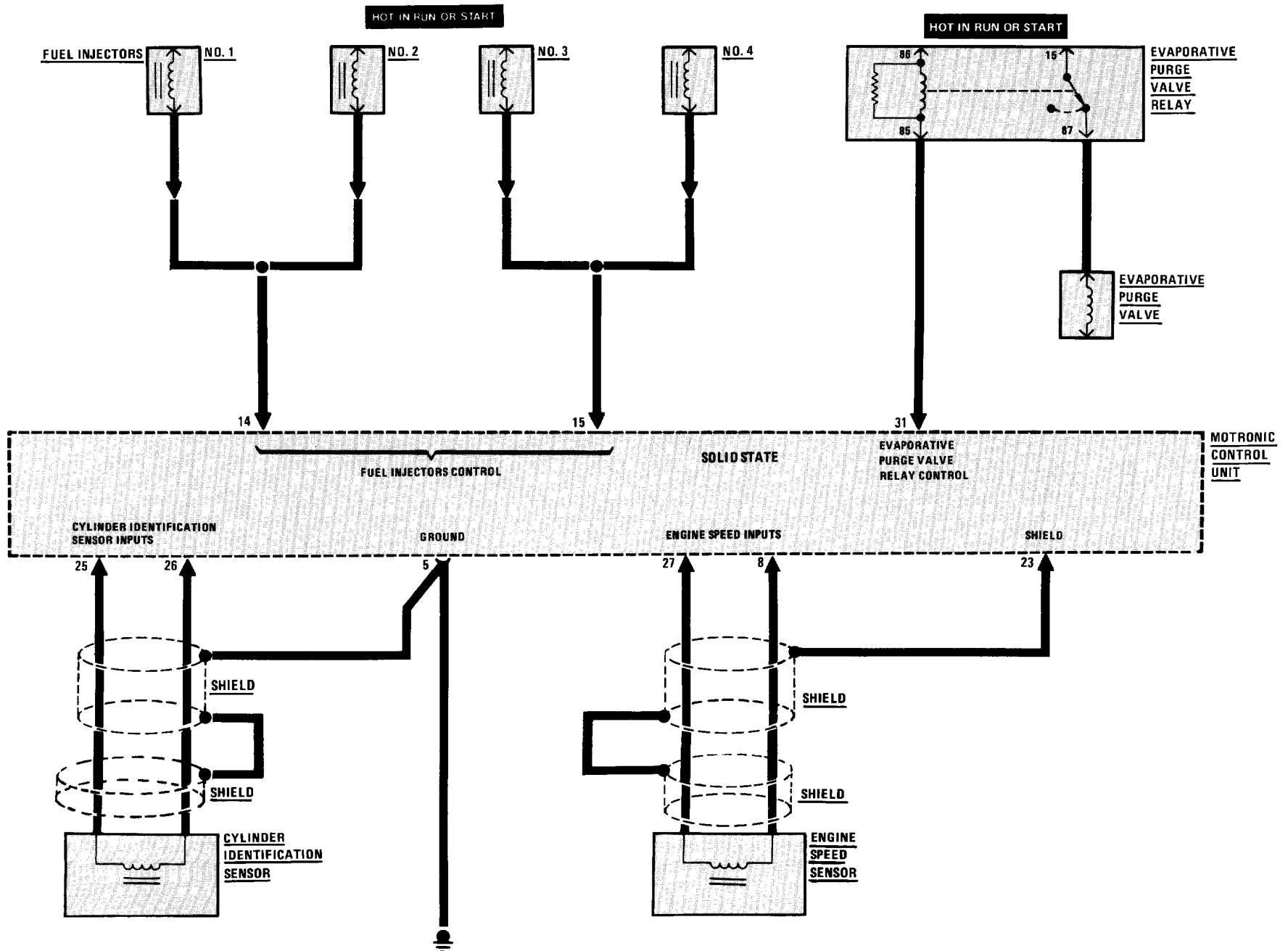


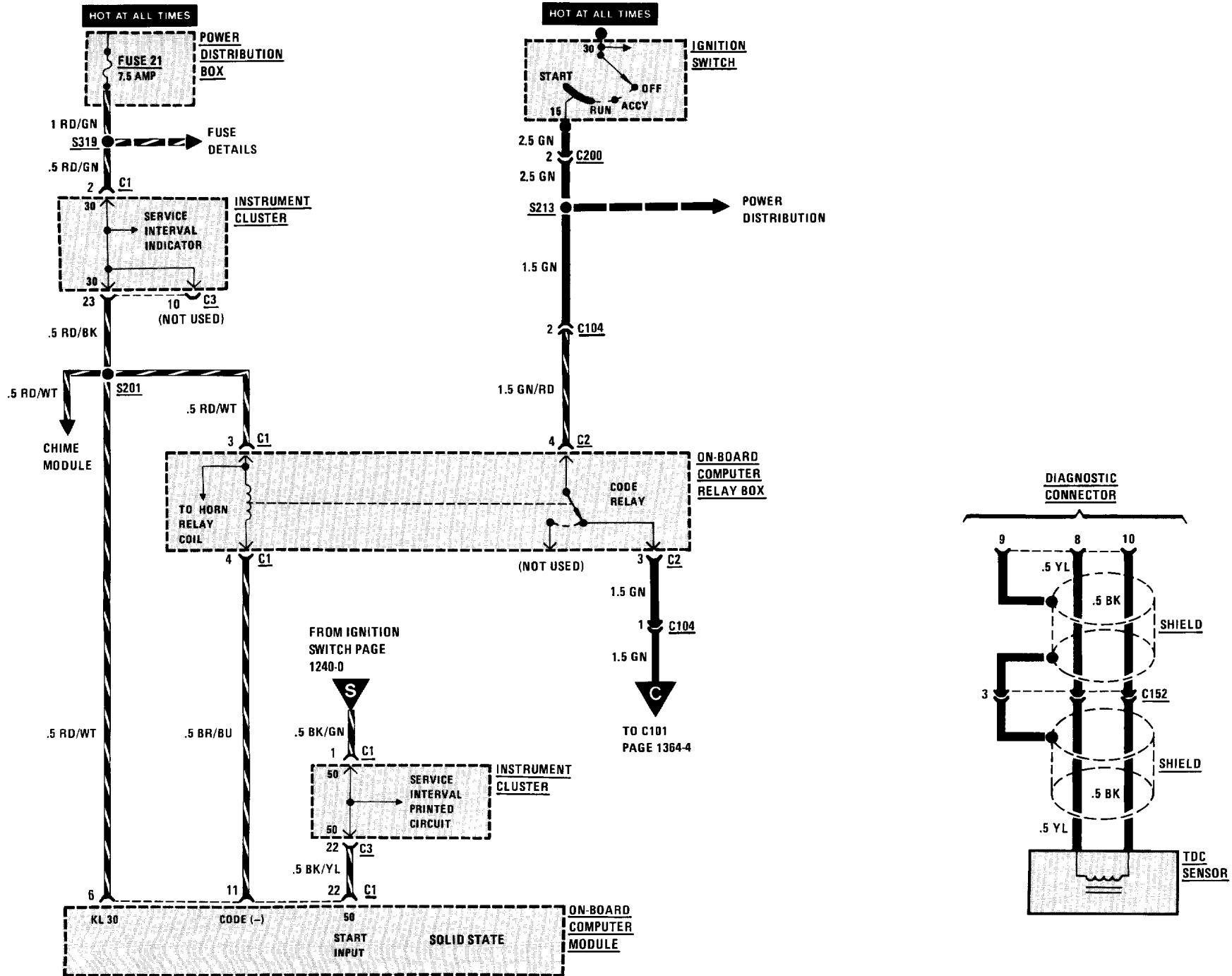
**ENGINE BLOCK DIAGRAM**



# 1364-2 INJECTION ELECTRONICS S14 ENGINE

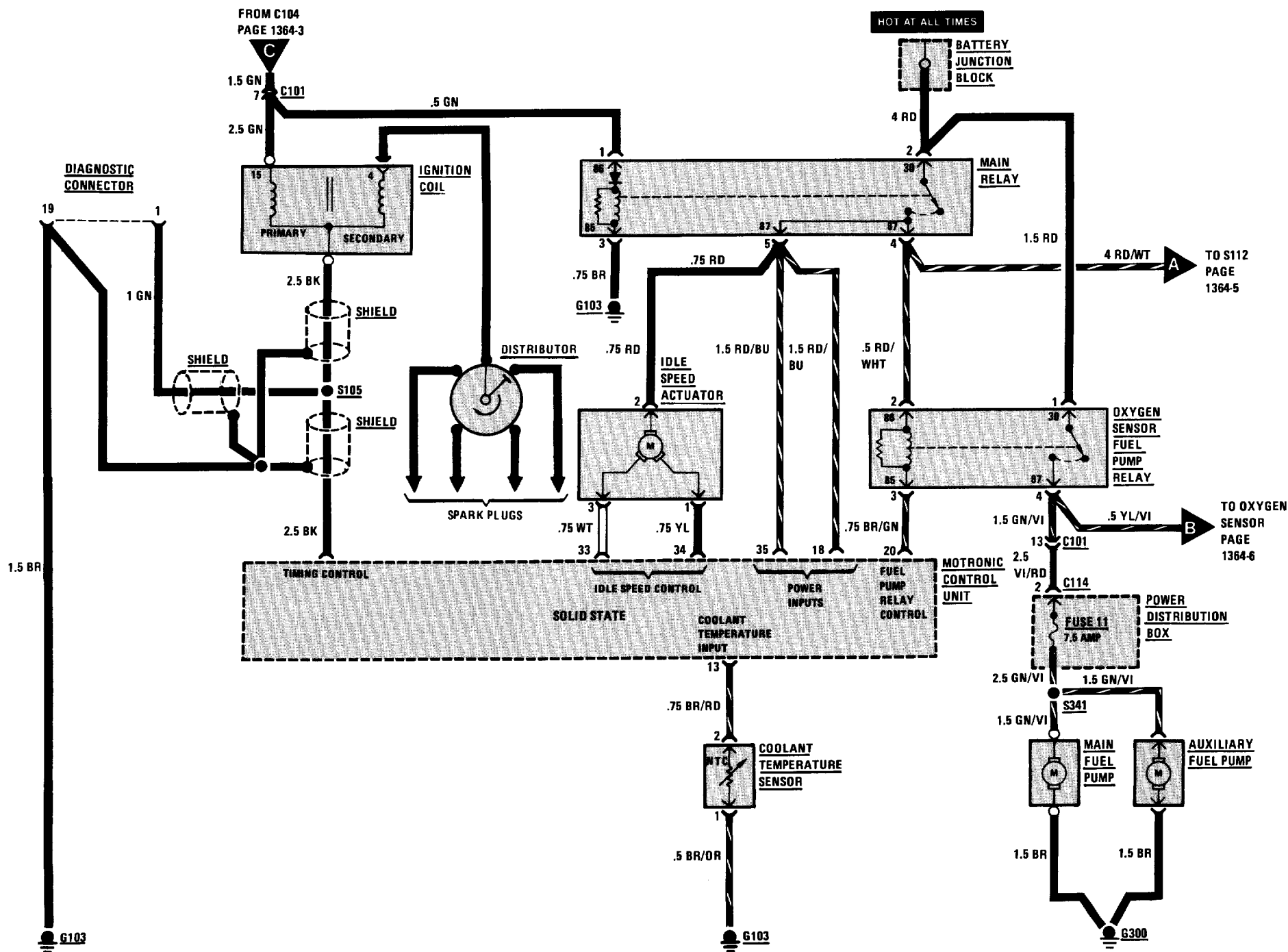
## ENGINE BLOCK DIAGRAM

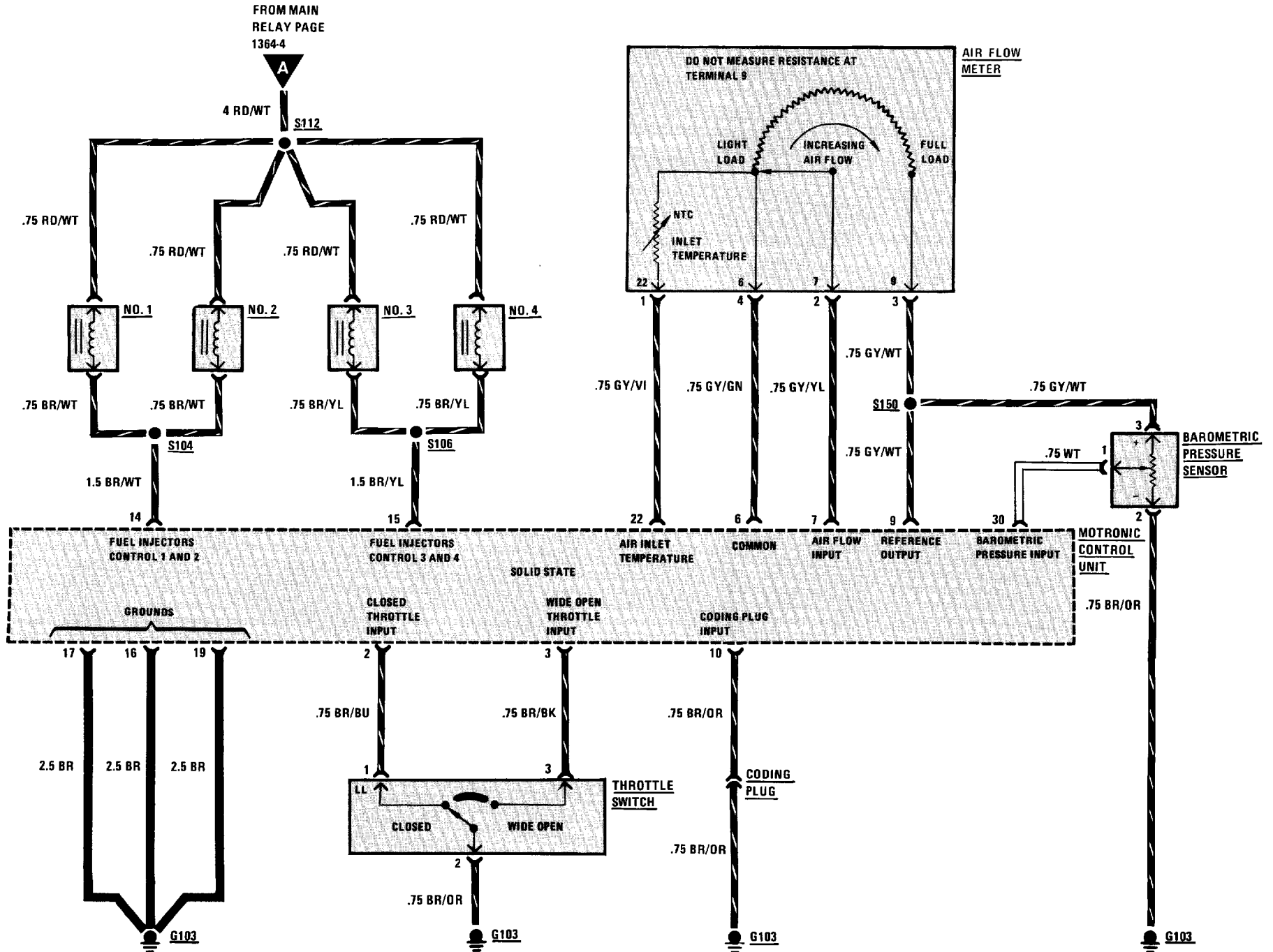




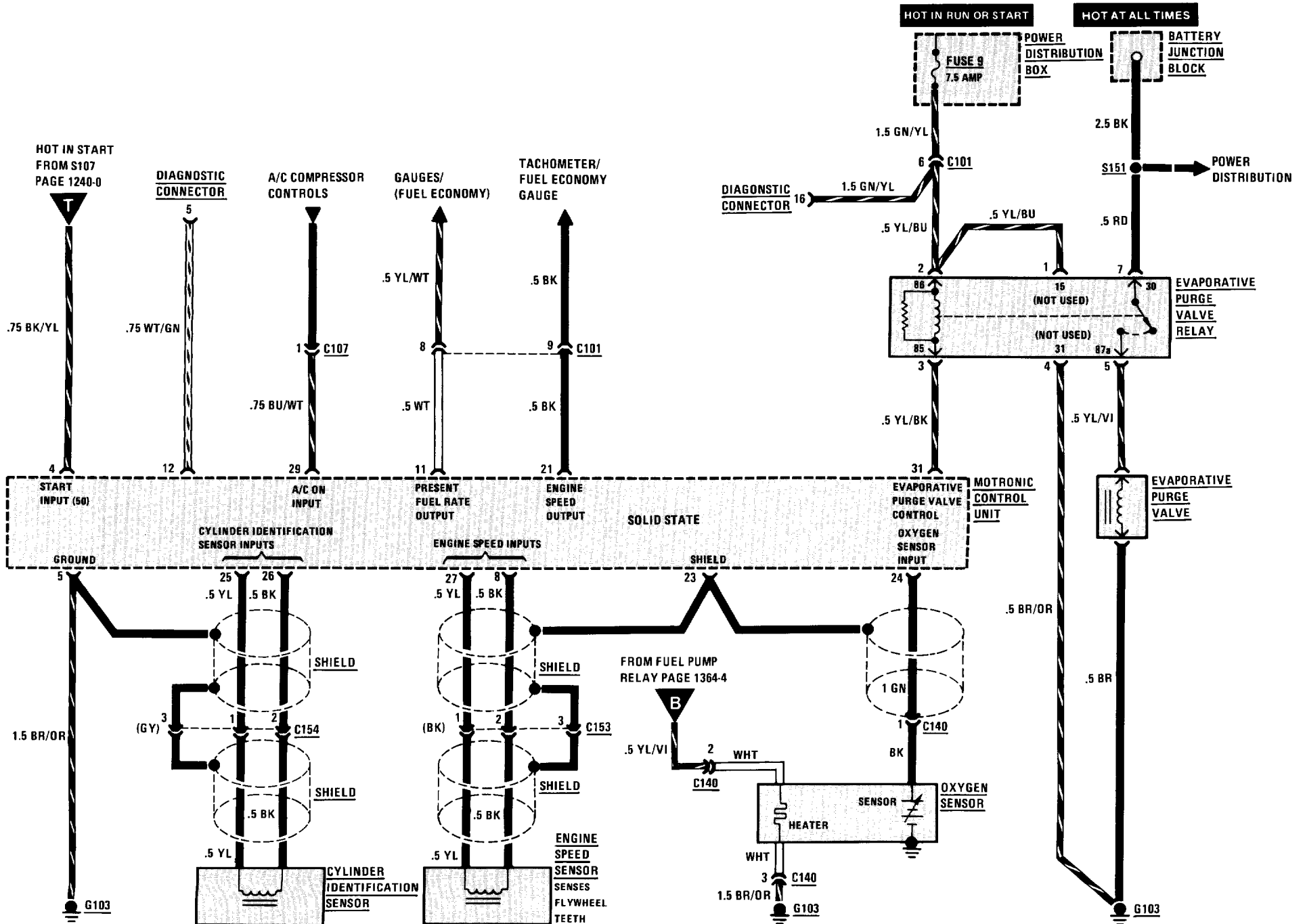


# 1364-4 INJECTION ELECTRONICS S14 ENGINE



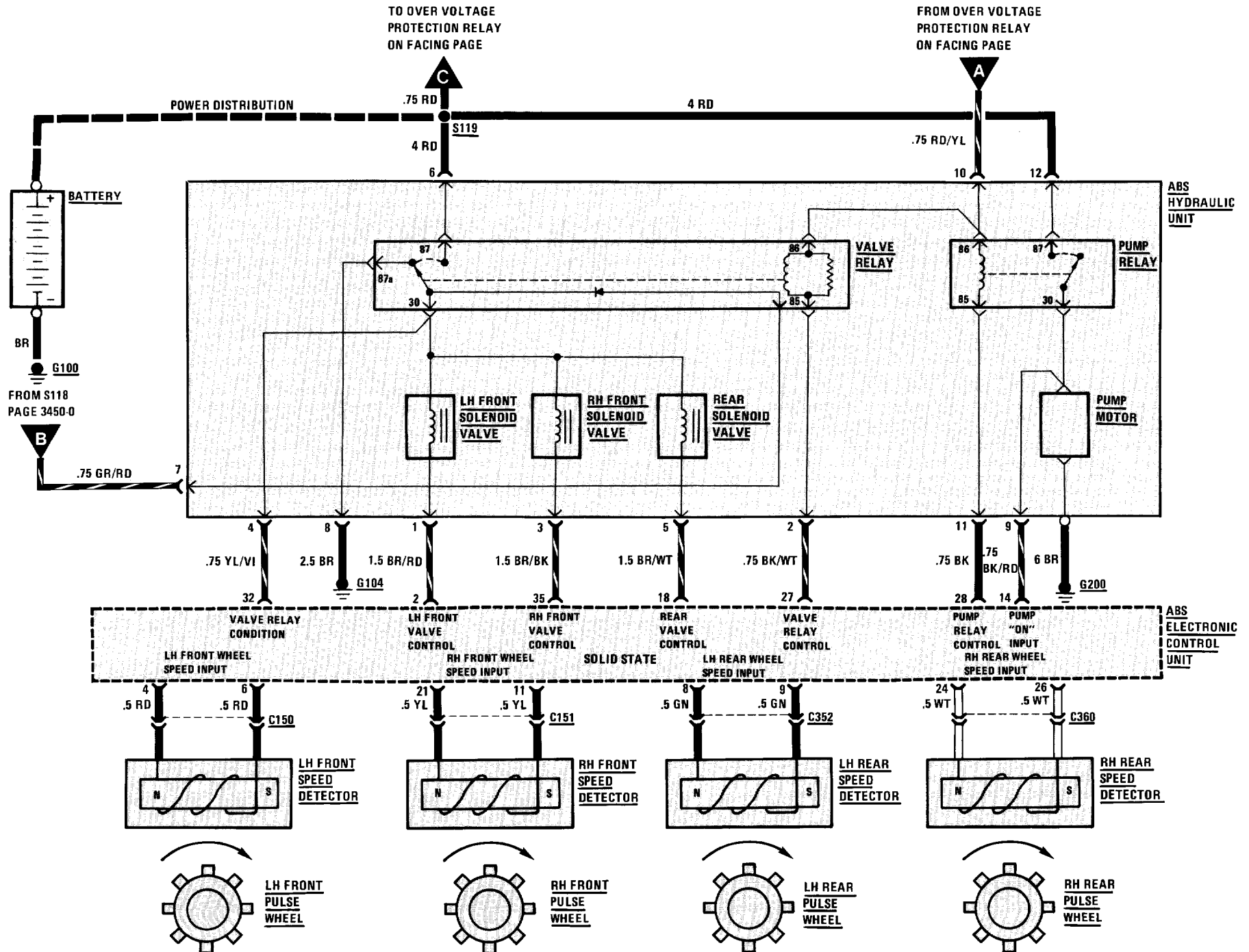


# 1364-6 ENGINE INJECTION ELECTRONICS S14 ENGINE



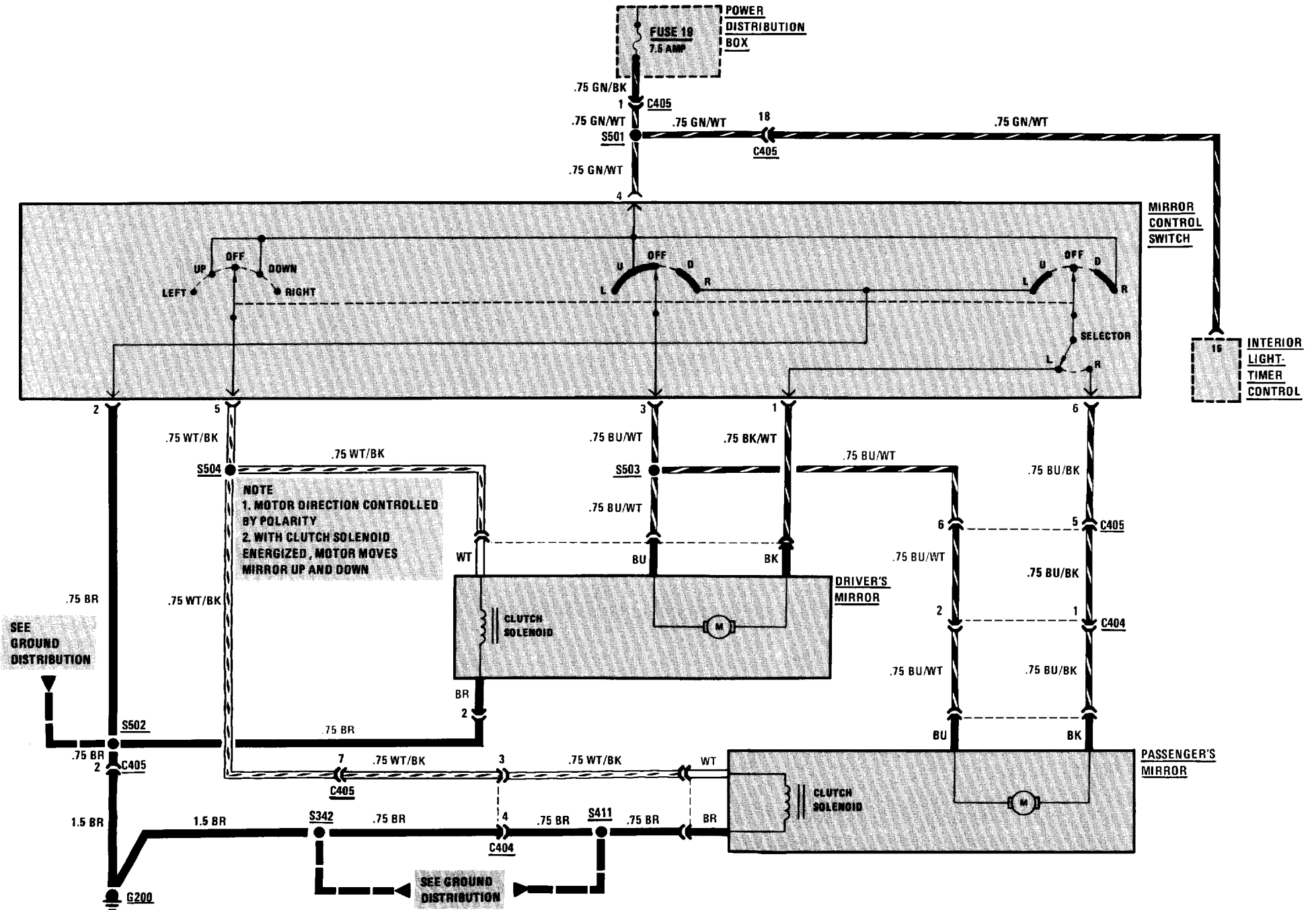






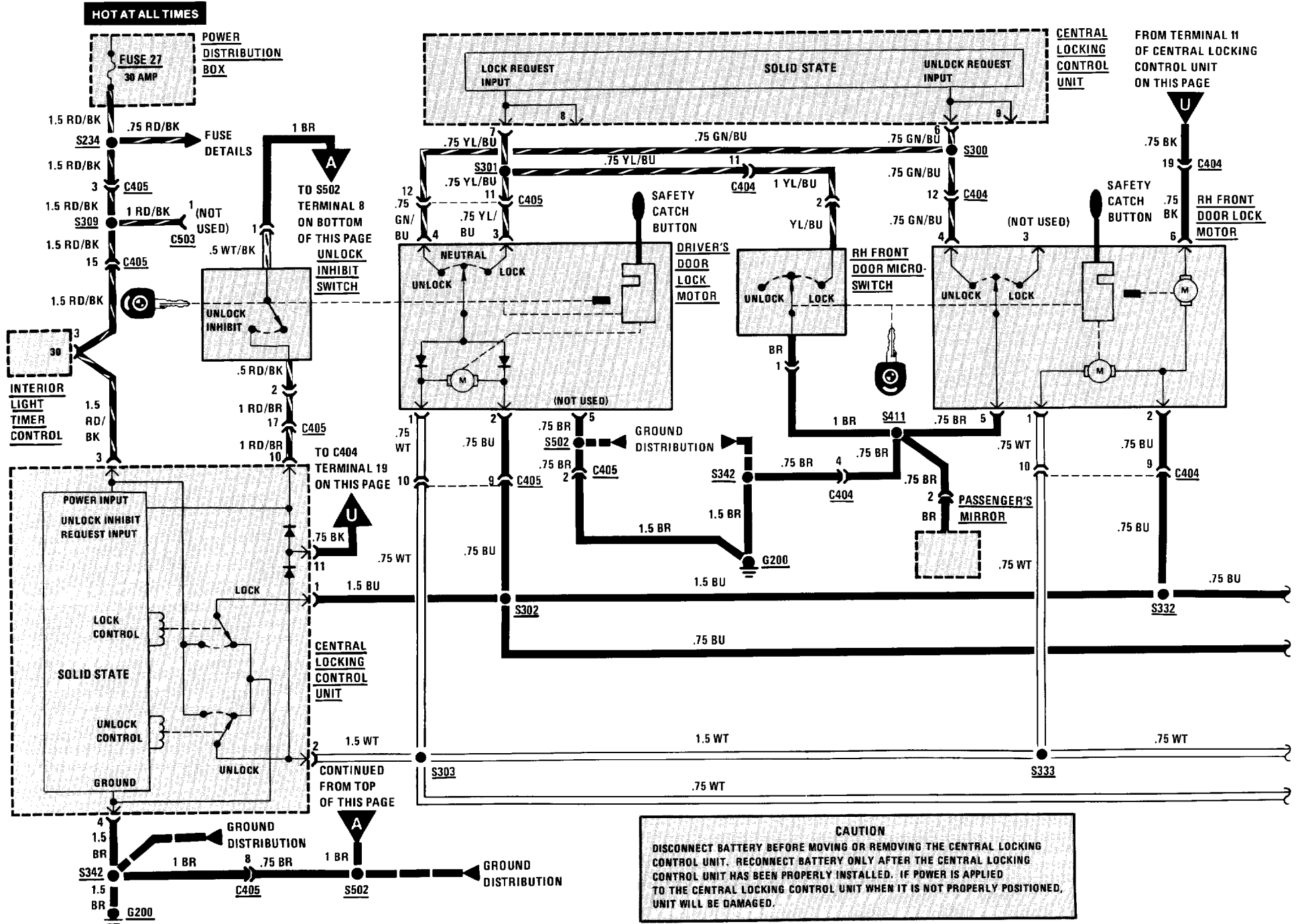
# 5116-0 POWER MIRRORS

HOT IN RUN ONLY FROM UNLOADER RELAY K7

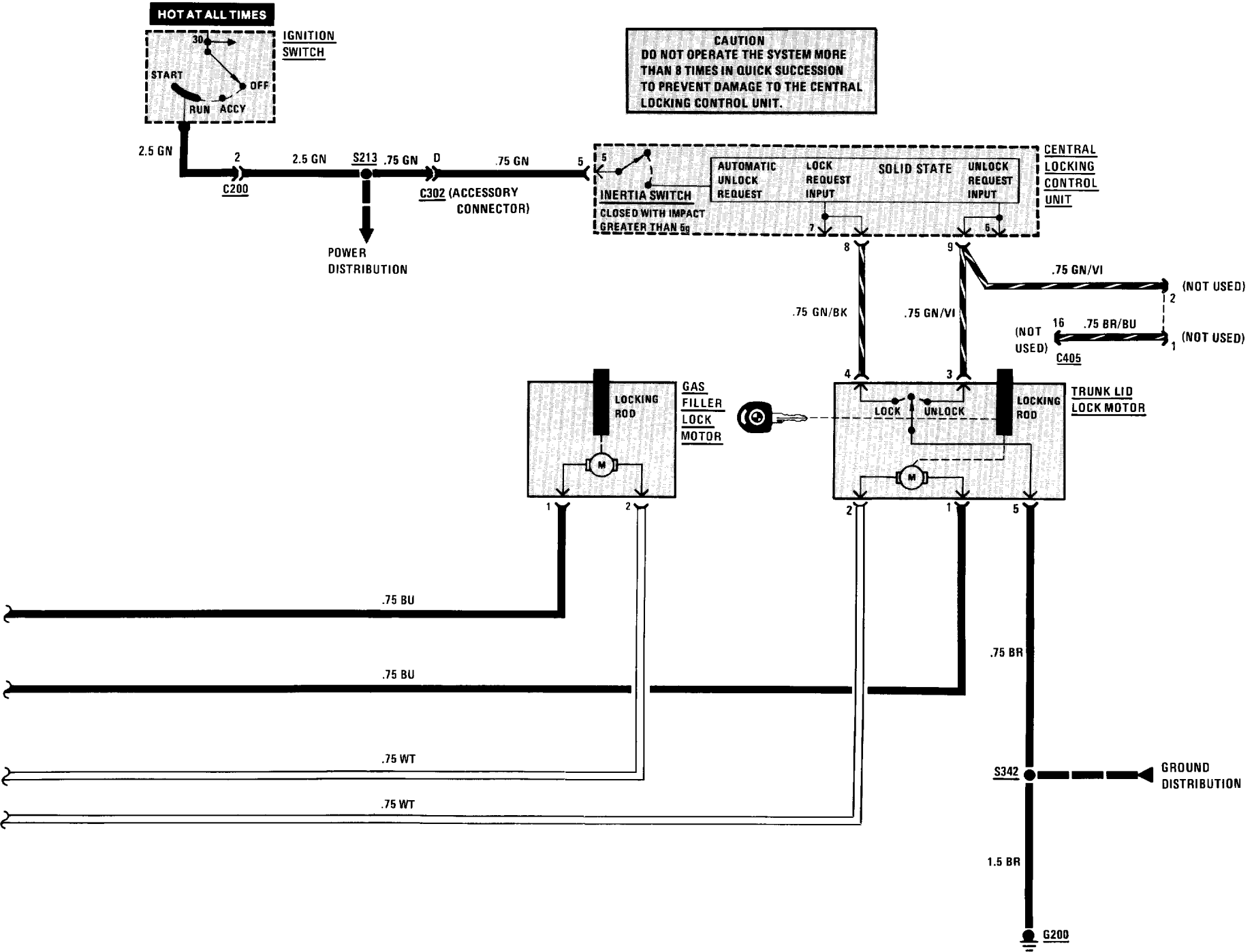


# 5126-0 CENTRAL LOCKING

## 2 DOOR (SELECT)







## 5126A-0 CENTRAL LOCKING

### TROUBLESHOOTING HINTS

1. Check Fuse by operating the Interior Light Timer for either Dome Light.
2. If all locks stay in UNLOCK INHIBIT, check the wires to terminal 10 of the Central Locking Control Unit for a short to ground.

### SYSTEM CHECK

- Operate controls in sequence listed in the System Check Table.
- Refer to Repair Action for the Response received (tests follow the System Check Table).
- After any repair, repeat System Check to verify proper system operation.

**NOTE:** Before replacing any system component, check all connectors, splices, and wiring to that component.

**SYSTEM CHECK TABLE**

OPERATION	RESPONSE	REPAIR ACTION
1. Insert the key in the Driver's door and turn to LOCK	All doors lock	None, proceed to Operation 2
	Some doors lock	Repair/replace the suspect Door Lock Motor circuit
	No doors lock	Proceed to Operation 4
2. Turn the key to UNLOCK INHIBIT (clockwise until key is horizontal)	All doors double lock (Safety Catch Buttons cannot be pulled up by hand)	None, proceed to Operation 3
	Driver's door double locks and only some of the other doors double lock	Repair/replace the suspect Door Lock Motor
	Driver's door double locks but all the other doors do not double lock	Perform Test B
	Driver's door does not double lock	Mechanical problem, see BMW Troubleshooting Manual

**SYSTEM CHECK TABLE (CONT'D)**

OPERATION	RESPONSE	REPAIR ACTION
3. Turn the key to UNLOCK	All doors unlock	None, proceed to Operation 4
	Some doors unlock	Repair/replace the suspect Door Lock Motor circuit
	No doors unlock	Proceed to Operation 5
4. Insert the key in the Passenger's door and turn to LOCK	All doors lock	If the doors did not lock in Operation 1, repair/replace the Driver's Door Lock Switch, otherwise proceed to Operation 5
	Some doors lock	Repair/replace the suspect Door Lock Motor circuit
	No doors lock	If all the doors locked in Operation 1, repair/replace the Right Front Door Microswitch. If the doors did not lock in Operation 1, perform Test A
5. Insert the key in the Passenger's door and turn to UNLOCK	All doors unlock	If all the doors did not unlock in Operation 3, repair/replace the Driver's Door Lock Switch, otherwise proceed to Operation 6
	Some doors unlock	Repair/replace the suspect Door Lock Motor
	No doors unlock	If all the doors unlocked in Operation 3, repair/replace the Passenger's Door Lock Switch. If the doors did not unlock in Operation 3, perform Test C
6. Get in the car and close and lock all doors Turn the Ignition Switch to RUN	Doors remain locked	None, proceed to Operation 7
	Doors unlock	Repair/replace the Central Locking Control Unit
7. Get out of the car Insert the key in the Driver's door and turn to LOCK Unlock each of the doors by pulling up the Safety Catch Buttons	All doors can be unlocked	None, proceed to Operation 8
	All doors remain secure	Disconnect the connector from the Central Locking Control Unit and check for a short to ground in the wires at terminal 11. <ul style="list-style-type: none"> <li>• If short to ground is not present, replace the Central Locking Control Unit.</li> <li>• If short to ground is present isolate wiring from Door Lock Motors one at a time to find short</li> </ul>

## 5126A-2 CENTRAL LOCKING

### SYSTEM CHECK TABLE (CONT'D)

OPERATION	RESPONSE	REPAIR ACTION
8. Insert the key in the Trunk Cylinder Switch. Turn the key to LOCK	Trunk locks	None, proceed to Operation 9
	Trunk does not lock	If the doors lock, repair/replace the Trunk Lock Motor Circuit or Trunk Lock Motor If the doors do not lock, repair/replace the Trunk Switch Repair/replace the Central Locking Control Unit if the Trunk Switch Circuit is OK
9. Turn the key to UNLOCK	Trunk unlocks	None, proceed to Operation 10
	Trunk does not unlock	If the doors unlock, repair/replace the Trunk Lock Motor circuit or Trunk Lock Motor If the doors do not unlock, repair/replace the Trunk Switch Repair/replace the Central Locking Control Unit if the Trunk Switch Circuit is OK
10. Turn the key back to LOCK	Gas Filler locks	None, proceed to Operation 11
	Gas Filler does not lock	Repair/replace the Gas Filler Lock Motor circuit
11. Turn the key to UNLOCK	Gas Filler unlocks	None
	Gas Filler does not unlock	Repair/replace the Gas Filler Lock Motor circuit

- If all results are normal, the system is OK.

### SYSTEM DIAGNOSIS

- Do the following tests when directed by the System Check Table.

#### A: CONTROL UNIT LOCK TEST (TABLE 1)

Measure: VOLTAGE At: CONTROL UNIT CONNECTOR (Connected)		
Measure Between	Correct Voltage	For Diagnosis
3 & Ground	Battery	See 1
3 & 4	Battery	See 2
<ul style="list-style-type: none"> <li>If the voltages are correct, proceed to Table 2.</li> <li>1. Check the wire to terminal 3 for an open.</li> <li>2. Check the wire from terminal 4 for an open to ground (see schematic).</li> </ul>		

#### A: CONTROL UNIT LOCK TEST (TABLE 2)

Connect: A FUSED JUMPER At: CONTROL UNIT CONNECTOR (Connected)		
Jumper Between	Correct Result	For Diagnosis
7 & Ground	Doors lock	See 1
<ul style="list-style-type: none"> <li>If the result is correct, repair/replace the switches and related wiring (see schematic).</li> <li>1. Proceed to Table 3.</li> </ul>		

**A: CONTROL UNIT LOCK TEST  
(TABLE 3)**

<b>Connect: FUSED JUMPERS At: CONTROL UNIT CONNECTOR (Disconnected)</b>		
Jumper Between	Correct Result	For Diagnosis
1 & 3 2 & 4	Doors lock	See 1
<ul style="list-style-type: none"> <li>If the result is correct, replace the Central Locking Control Unit.</li> </ul> <ol style="list-style-type: none"> <li>Check the wire from terminal 1 to splice and the wire from terminal 3 to splice for opens (see schematic).</li> </ol>		

**B: UNLOCK INHIBIT TEST**

<b>Connect: A FUSED JUMPER At: CONTROL UNIT CONNECTOR (Connected)</b>		
Jumper Between	Correct Result	For Diagnosis
10 & Ground	Doors double lock	See 1
<ul style="list-style-type: none"> <li>If the result is correct, check the wires from terminal 10 to ground for opens (see schematic). Replace the Unlock Inhibit Switch if the wires and connections are OK.</li> </ul> <ol style="list-style-type: none"> <li>Check the wires from terminal 11 for opens (see schematic). Replace the Central Locking Control Unit, if the wires and connections are OK.</li> </ol>		

**C: CONTROL UNIT UNLOCK TEST**

<b>Connect: A FUSED JUMPER At: CONTROL UNIT CONNECTOR (Connected)</b>		
Jumper Between	Correct Result	For Diagnosis
6 & Ground	Doors unlock	See 1
<ul style="list-style-type: none"> <li>If the result is correct, repair/replace the switches and related wiring (see schematic).</li> </ul> <ol style="list-style-type: none"> <li>Replace the Central Locking Control Unit.</li> </ol>		

**CIRCUIT DESCRIPTION**

The Central Locking System is controlled by the Central Locking Control Unit. This unit senses when a lock switch is moved by a key, and sends the appropriate signal to drive the Motors. The Central Locking Control Unit controls the Door Locks, Gas Filler Lock and Trunk Lock. The unit also has an Inertia Switch which closes on impact greater than 5g. If in RUN or START the locks are then unlocked.

**Lock**

When the Key is inserted into a lock and turned clockwise, the Lock switch moves to LOCK and grounds terminal 7 of the Central Locking Control Unit. The unit then activates the Lock Relay and applies voltage from Fuse 27 to the Lock Motor, which is grounded through the Central Locking Control Unit terminal 2. The Lock Motor then pulls the lock down. The door locks also control the Trunk Lock and Gas Filler Lock.

**Unlock**

When the key is turned counterclockwise, terminal 6 of the Central Locking Control Unit is grounded through the Lock Switch. The Central Locking Control Unit then activates the Unlock Relay and applies voltage from Fuse 27, through terminal 2 to the Lock Motor. The motor is grounded through the Central Locking Control Unit terminal 1. The polarity is reversed and the motor pushes the lock up.

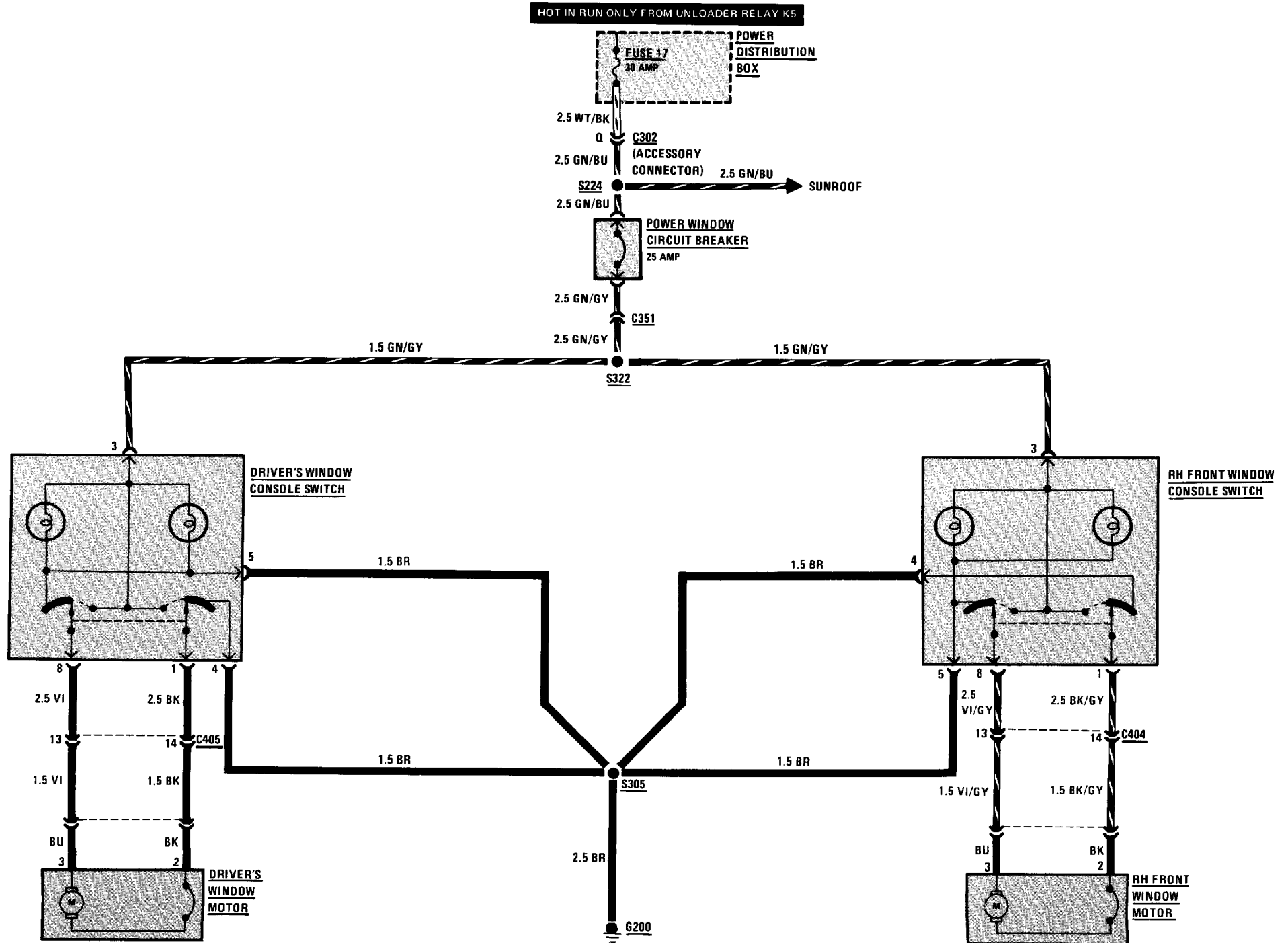
**Unlock Inhibit**

When the key is inserted into the Driver's Lock and turned clockwise past the LOCK position, the Unlock Inhibit mechanism is engaged. This mechanically inserts a bar into the driver's lock and prevents unlocking through use of the Safety Catch Button. When in the Unlock Inhibit position, ground is applied to the Unlock Inhibit motors in the other lock units. The Central Locking Control Unit is grounded at terminal 10 and then activates the Lock Relay. Voltage is applied to the Unlock Inhibit motors through terminal 1. They are now activated and engage the other Unlock Inhibit mechanisms. The direction of the motors is reversed when the doors are unlocked (see Unlock).

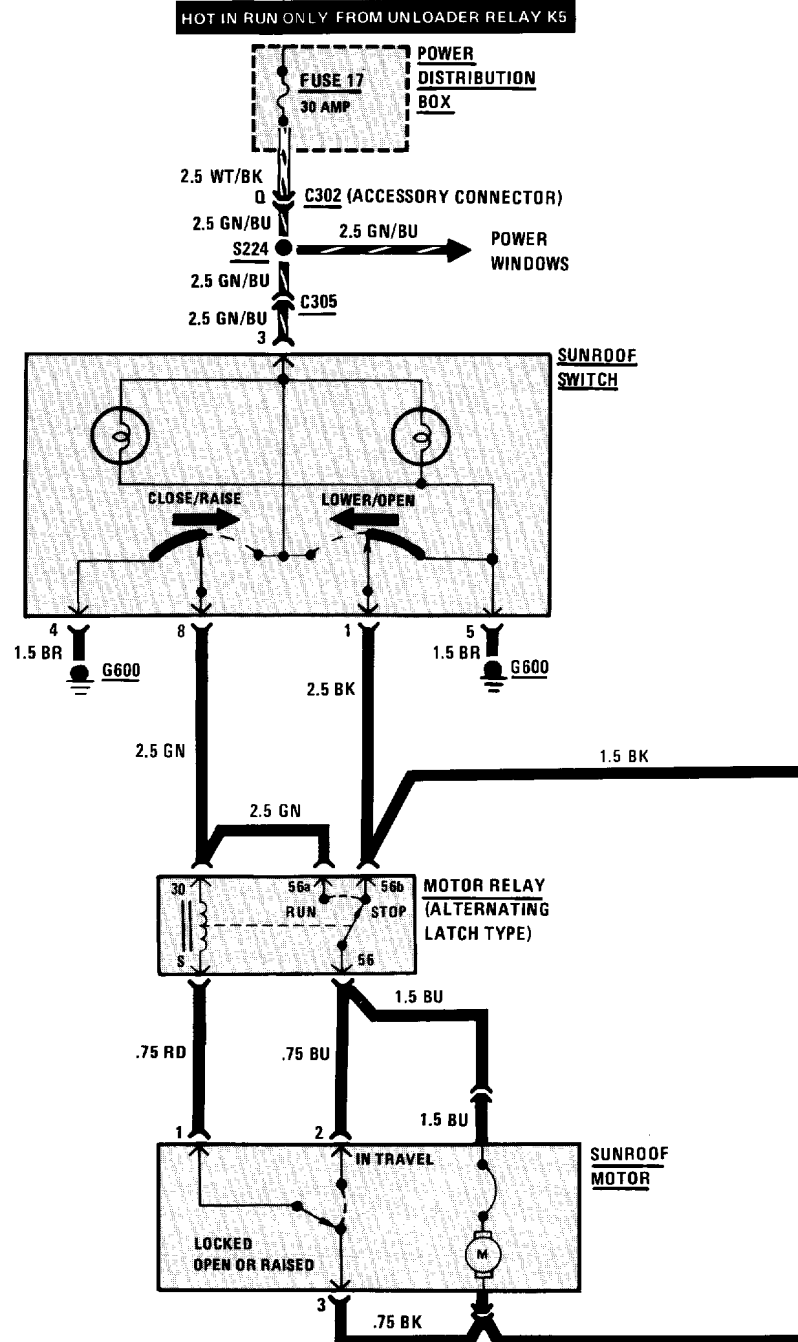
**Trunk Lock**

The Trunk Lock operates in a manner similar to the Door Locks.

# 5133-0 POWER WINDOWS

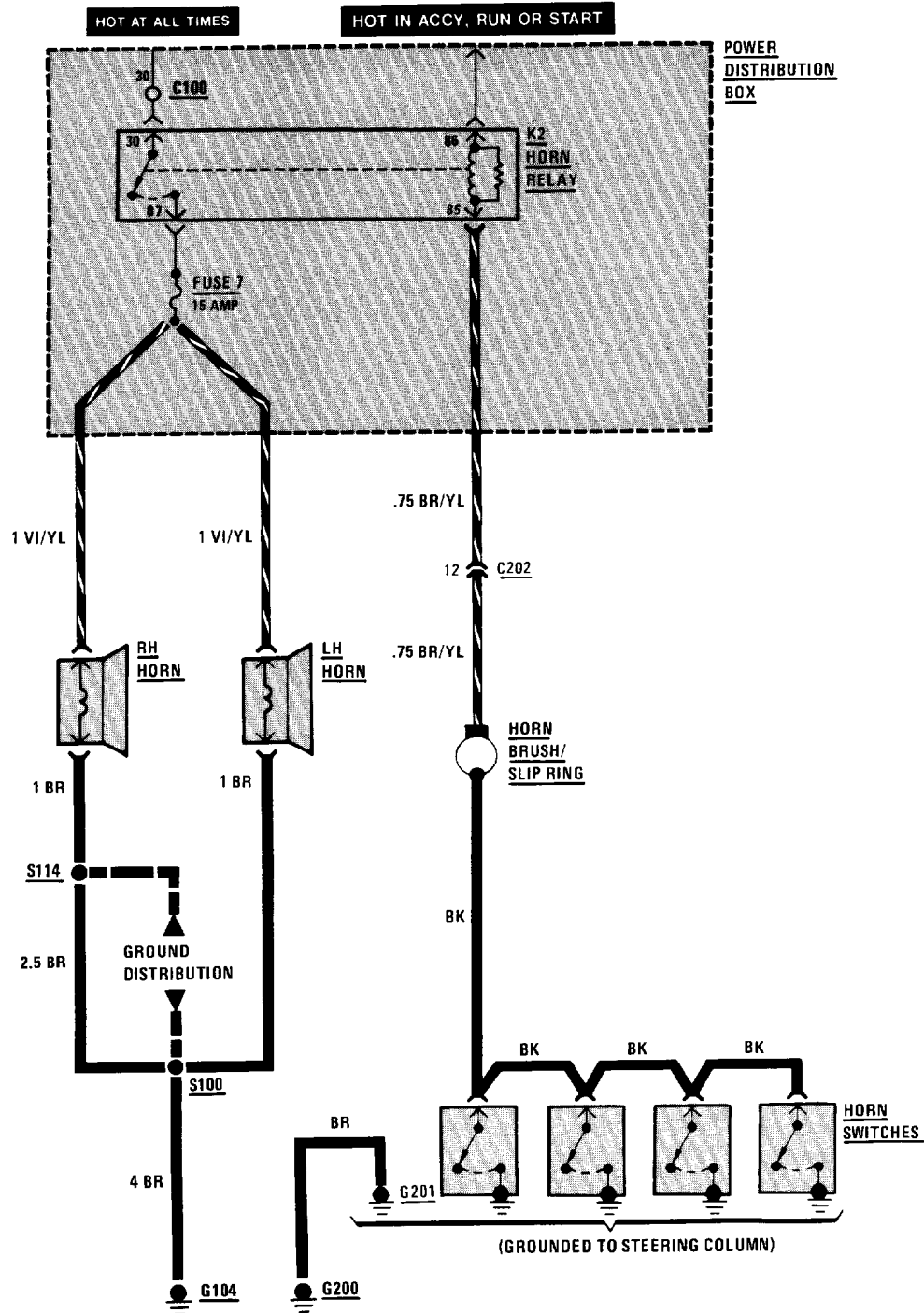


# 5413-0 SUNROOF



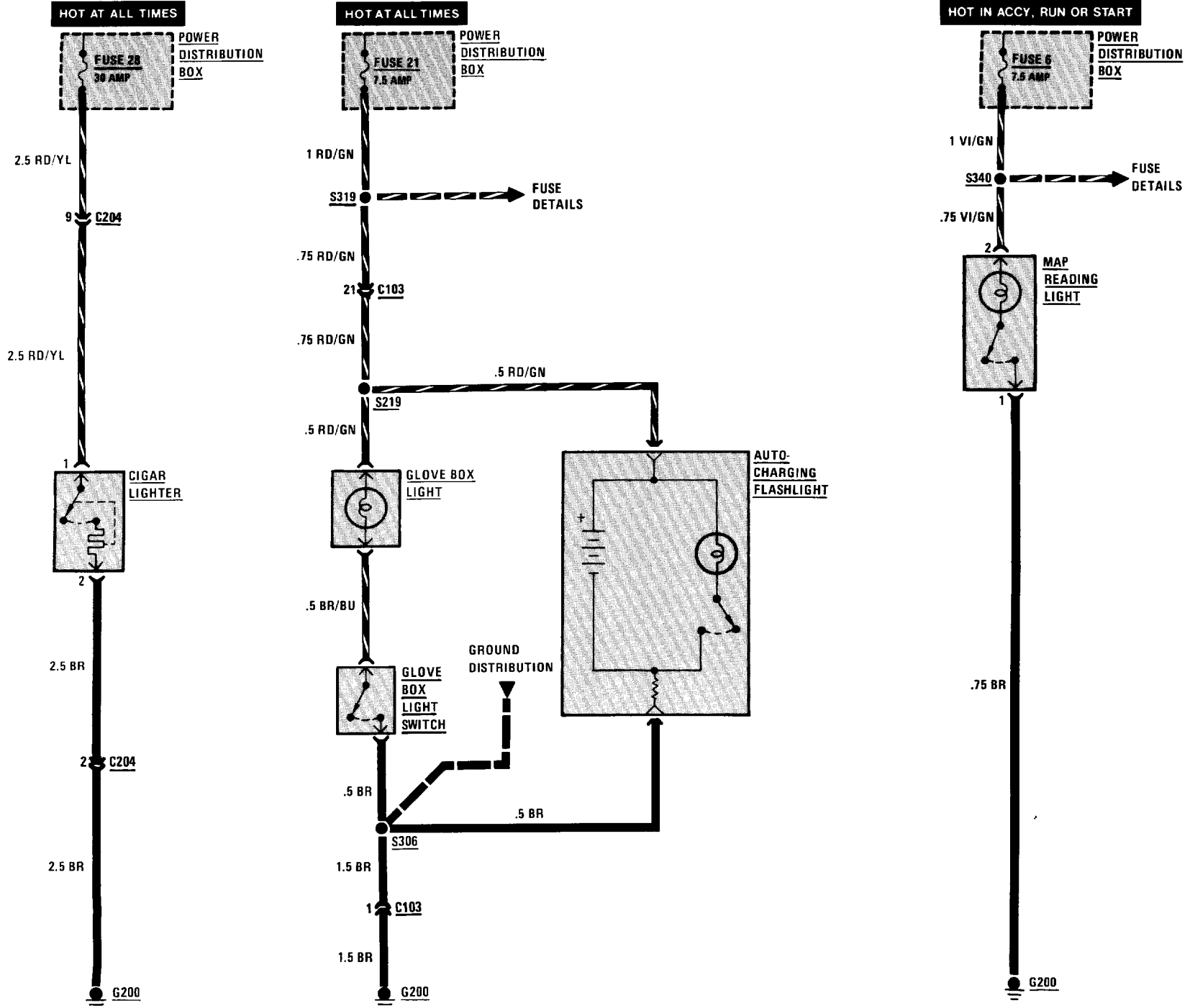
# 6100-0 BODY ELECTRICAL

## HORNS



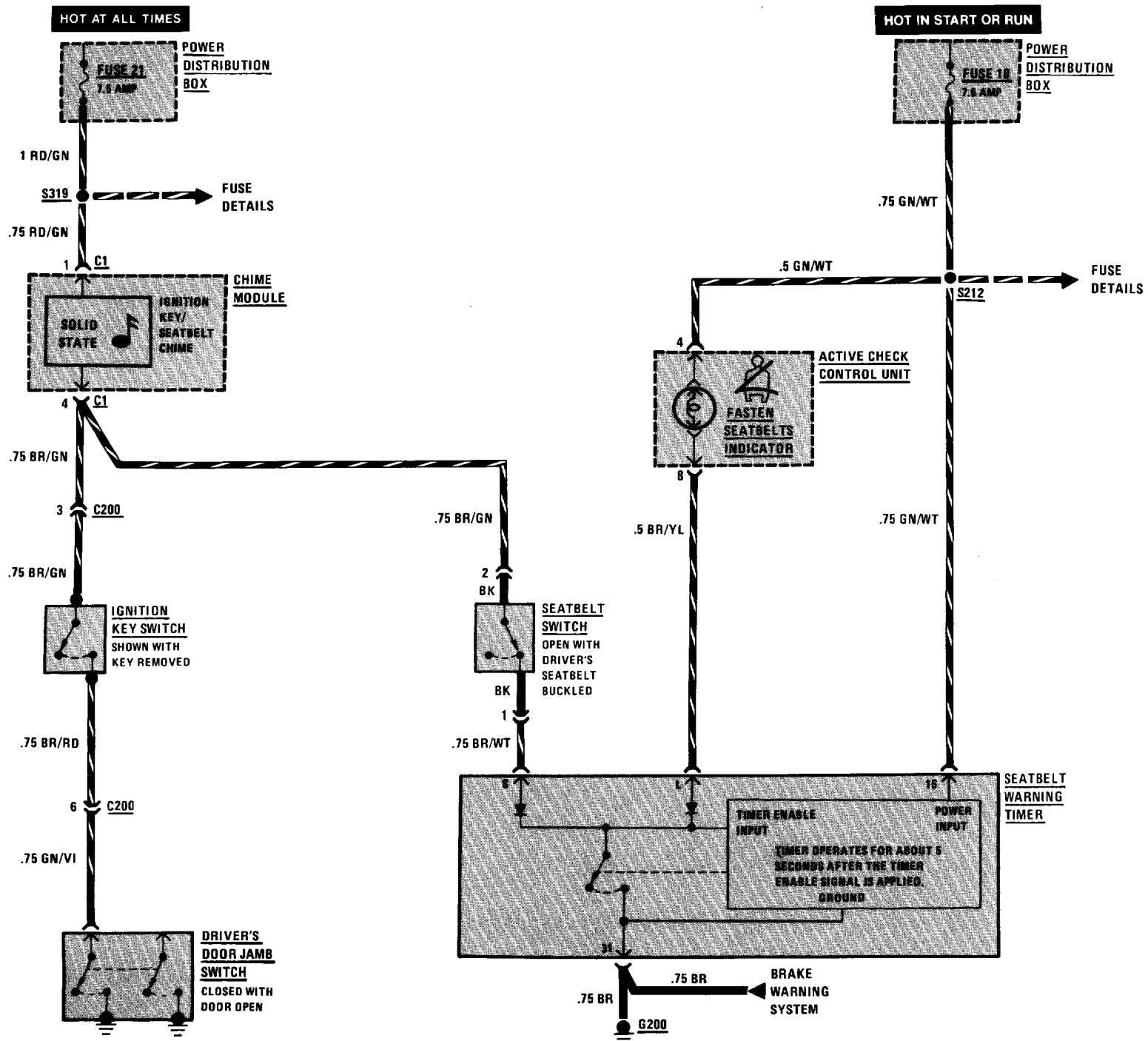


**CIGAR LIGHTER/GLOVE BOX LIGHT/AUTO-CHARGING FLASHLIGHT/MAP READING LIGHT**





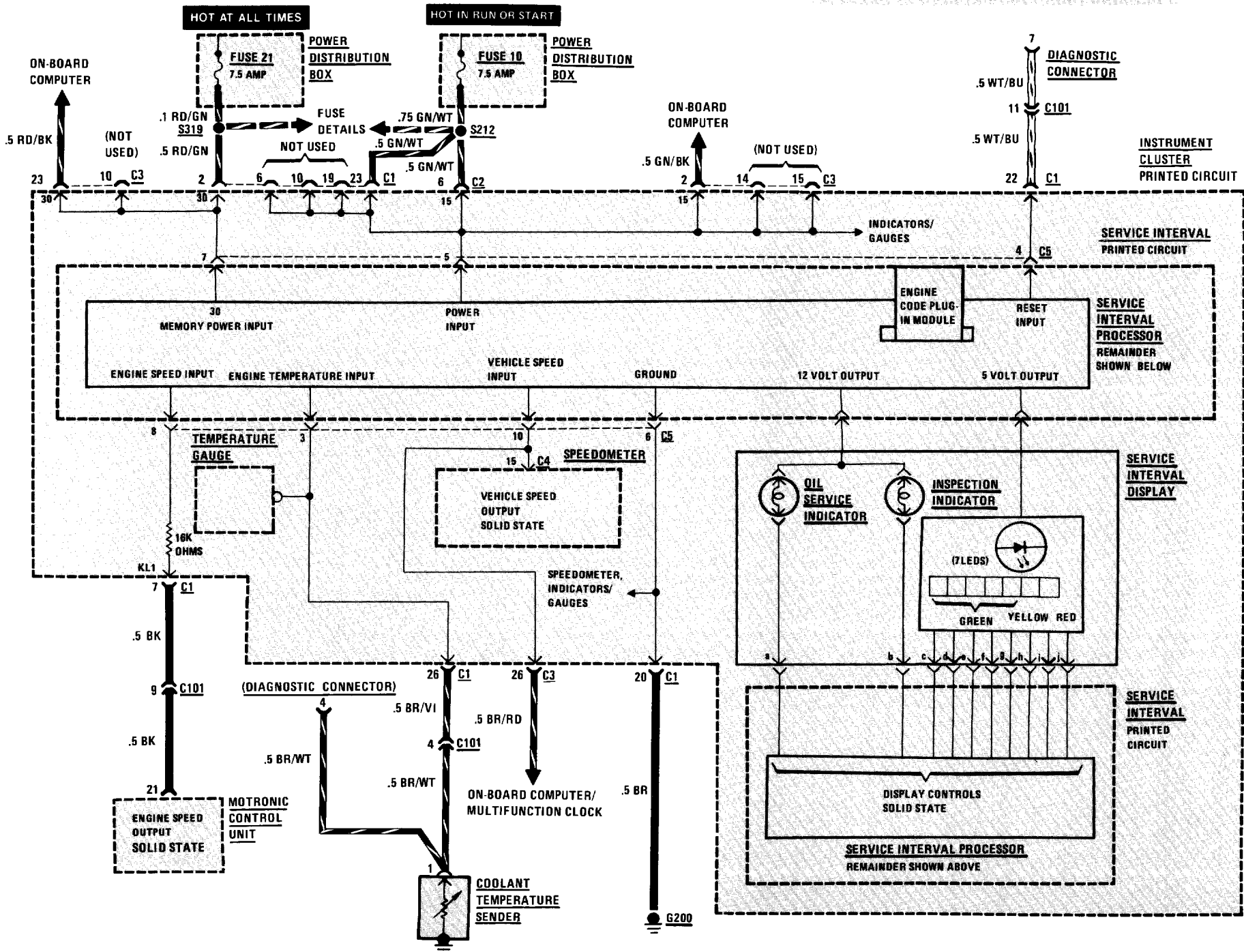
# 6131-0 IGNITION KEY WARNING/SEATBELT WARNING





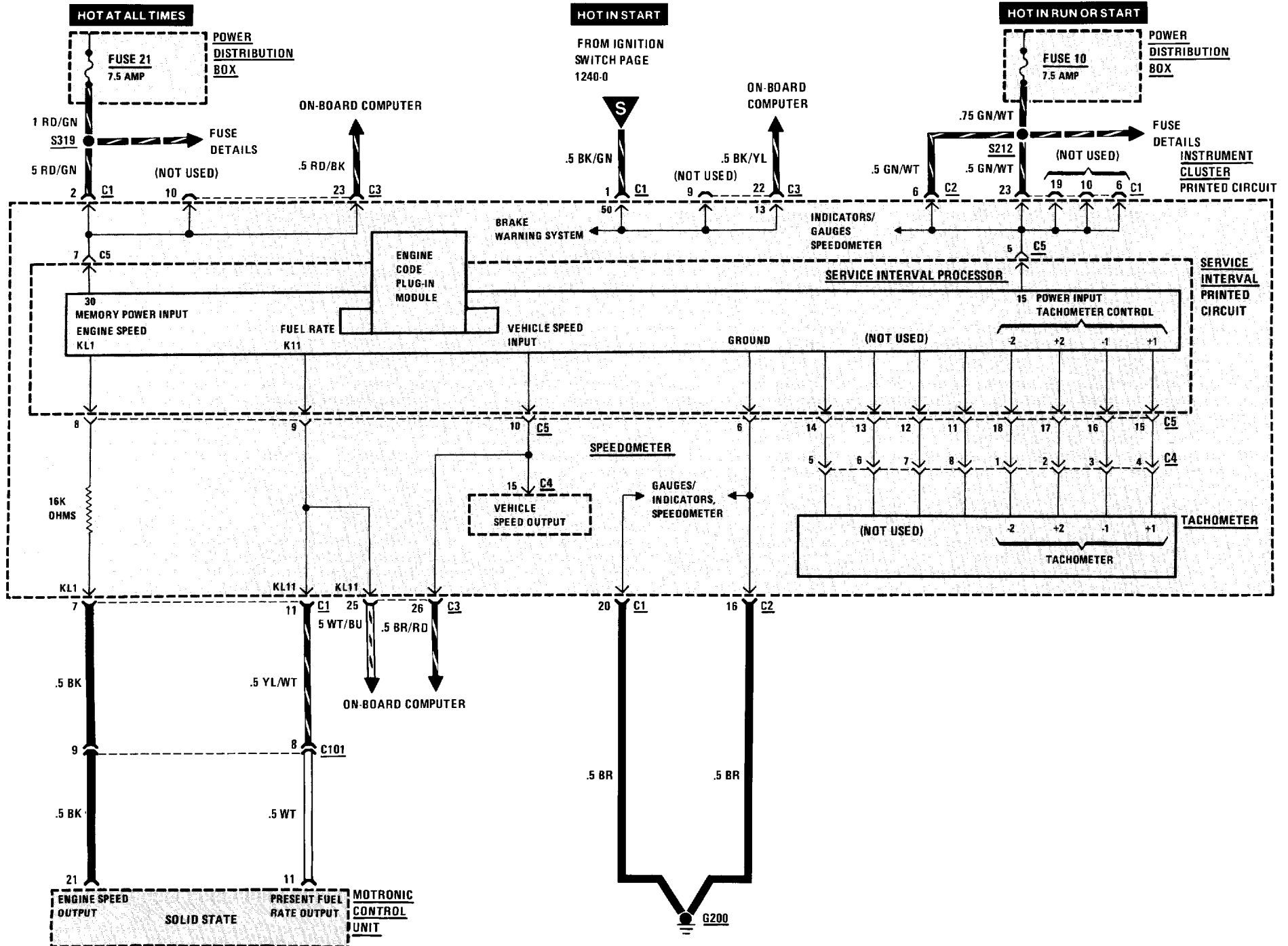


SERVICE INTERVAL INDICATOR





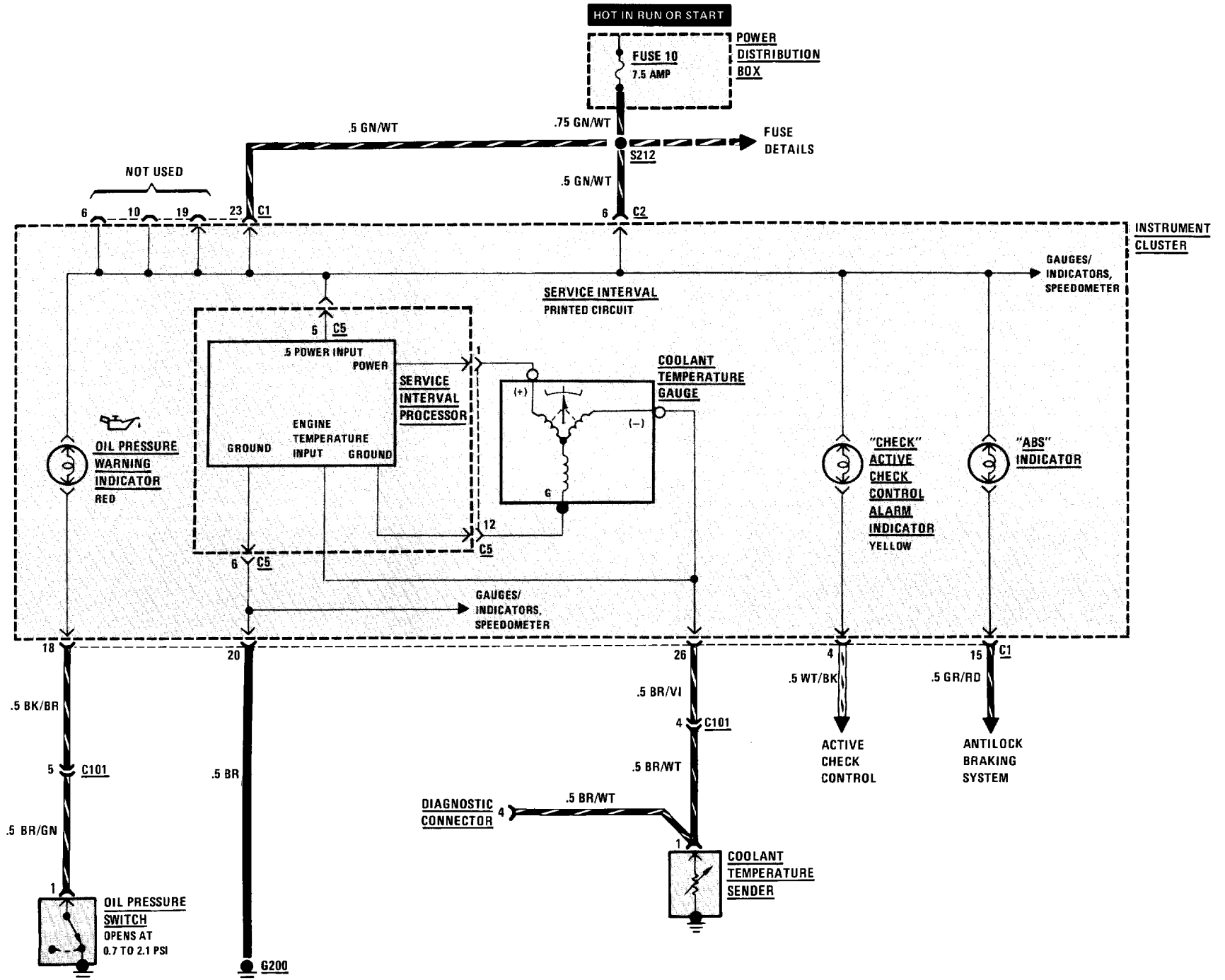
TACHOMETER/FUEL ECONOMY GAUGE





# 6210-4 INSTRUMENT CLUSTER

## GAUGES 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. An exception to this is when all brake light circuits are open. A fault will be indicated with the ignition switch in "RUN".
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.
4. To test the unit, depress the test button. The LED fault indicators and the panel lights should go on.

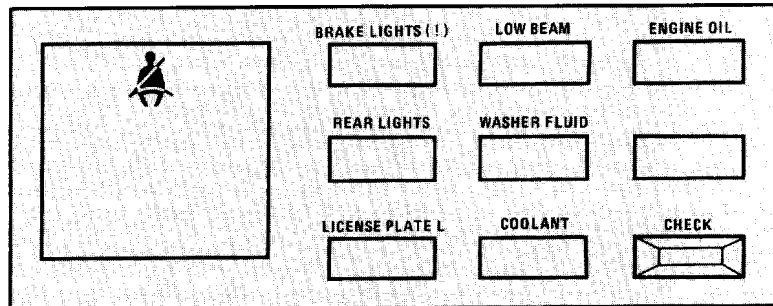
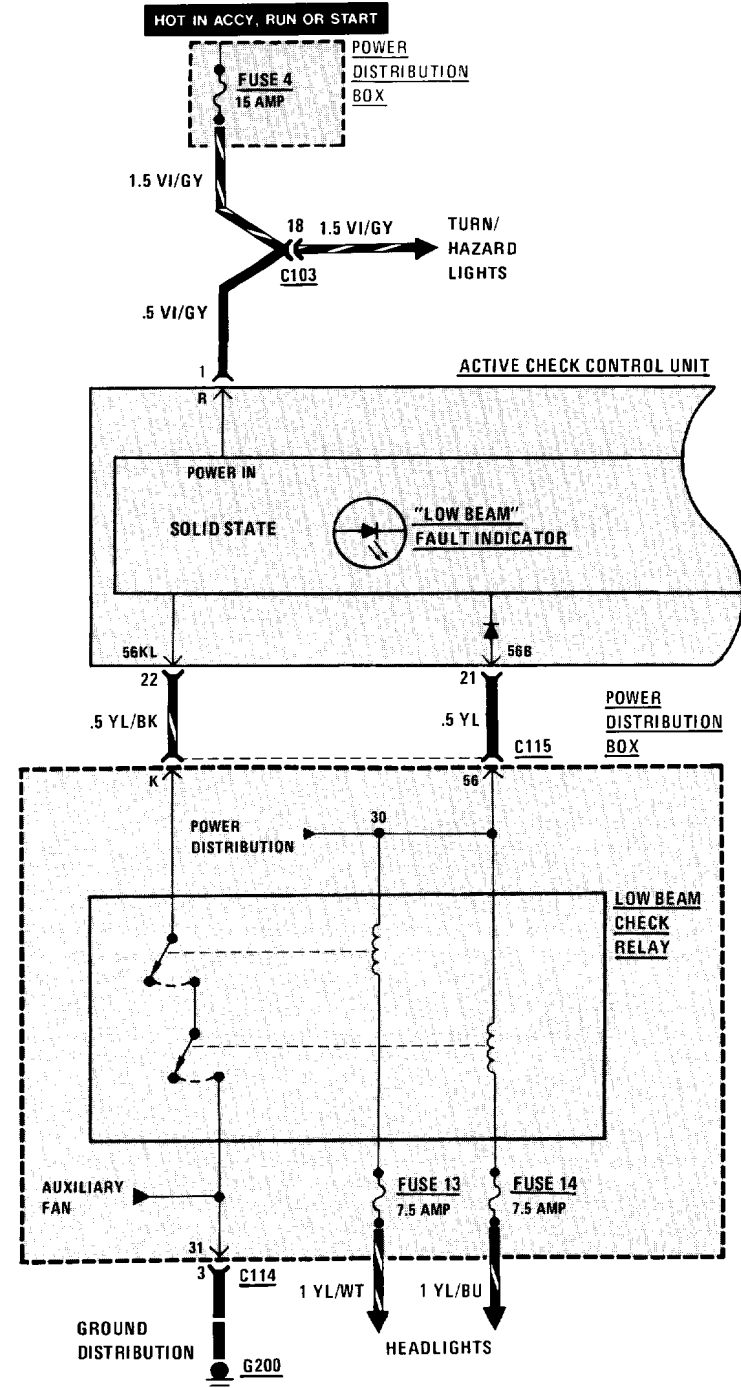
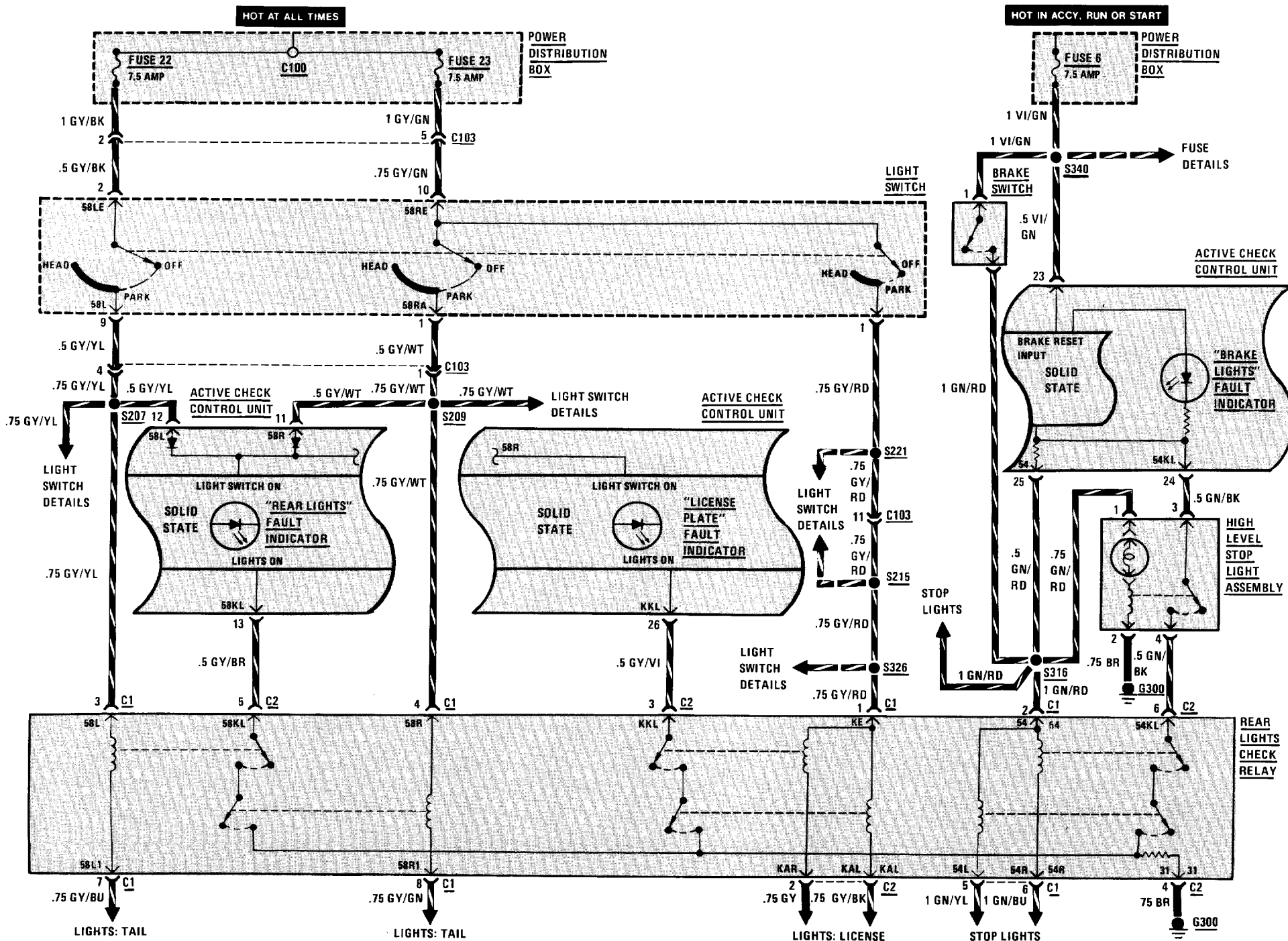
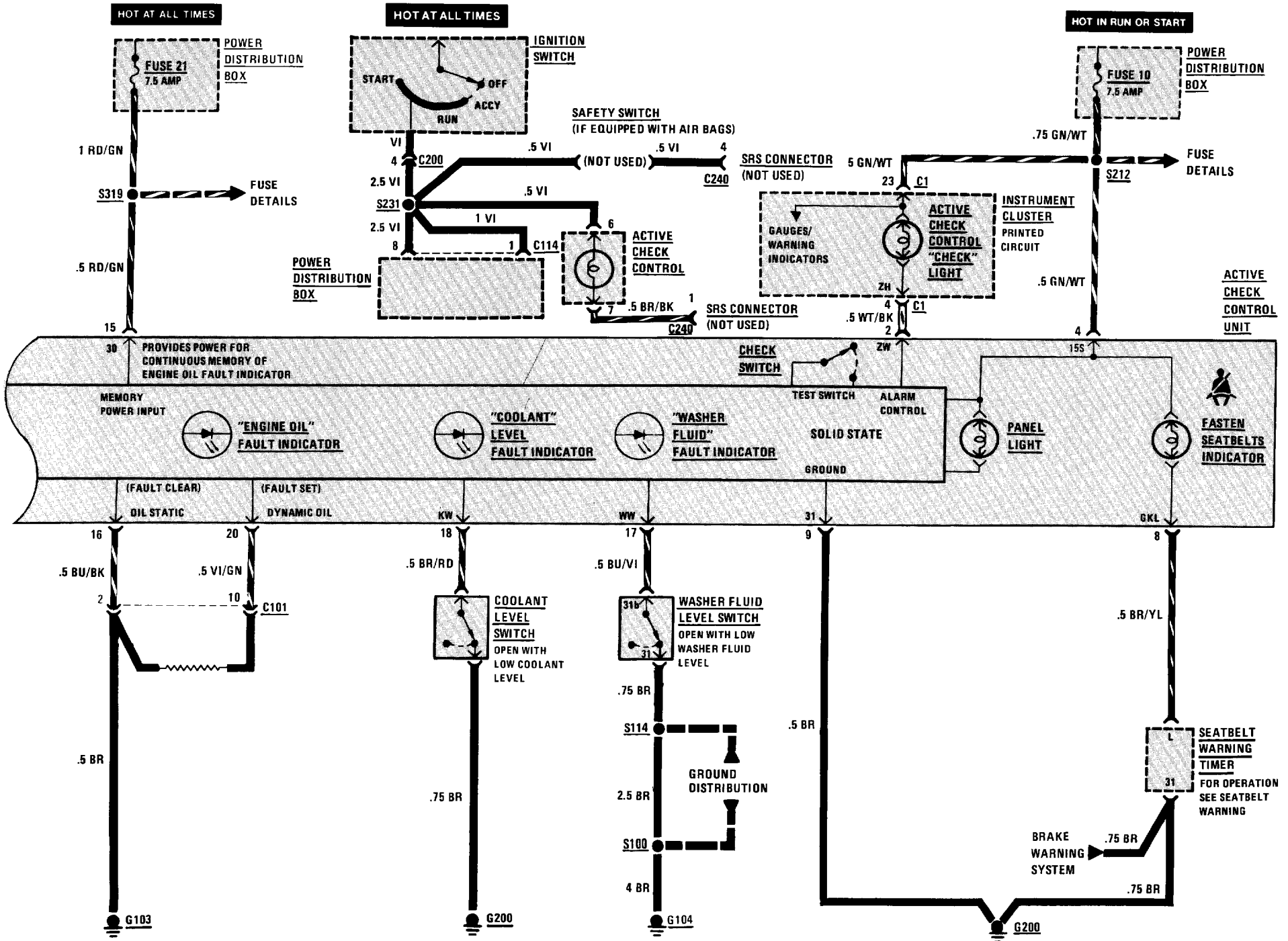


Figure 1 - Active Check Control Unit Above Rear View Mirror

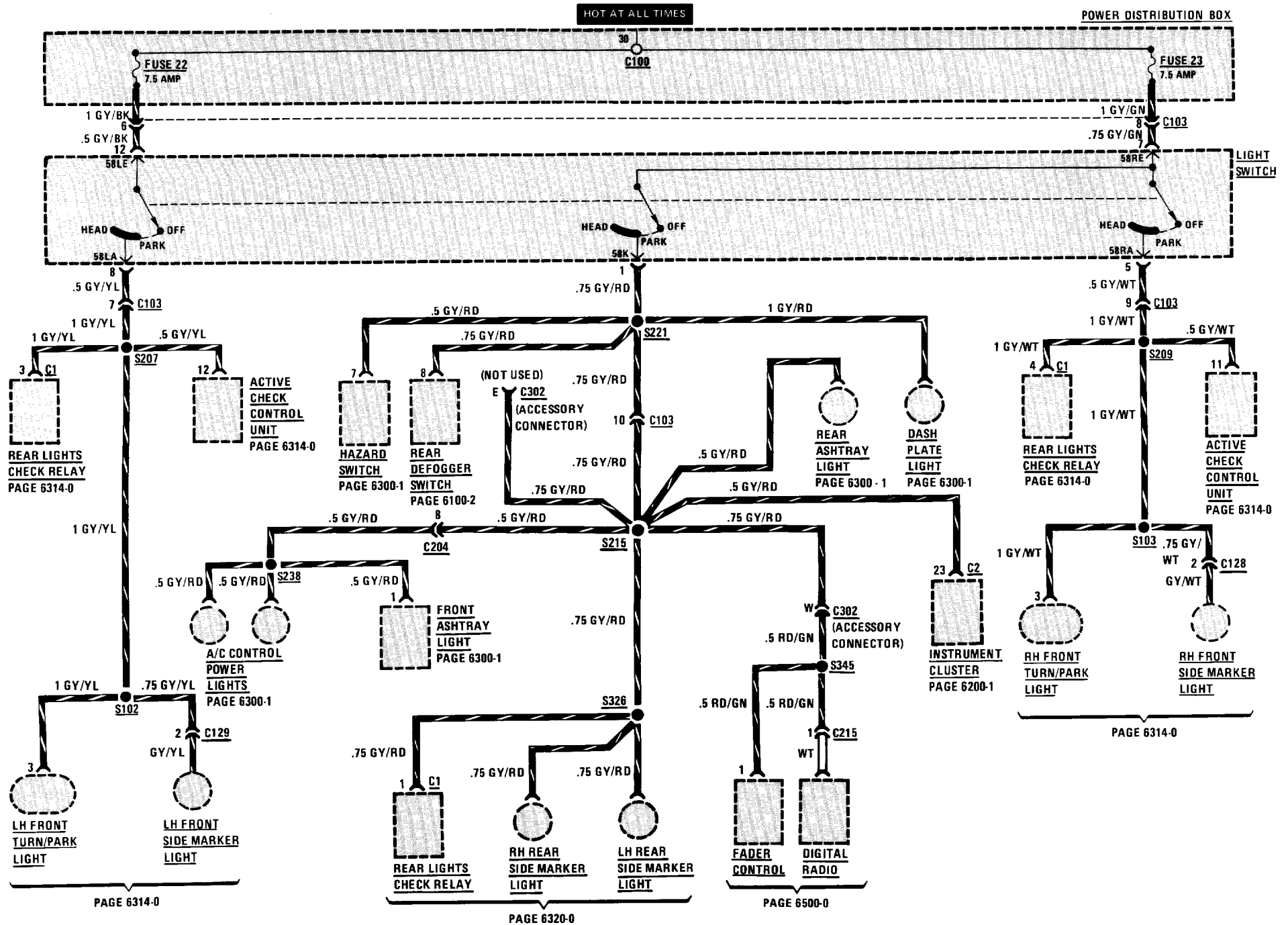




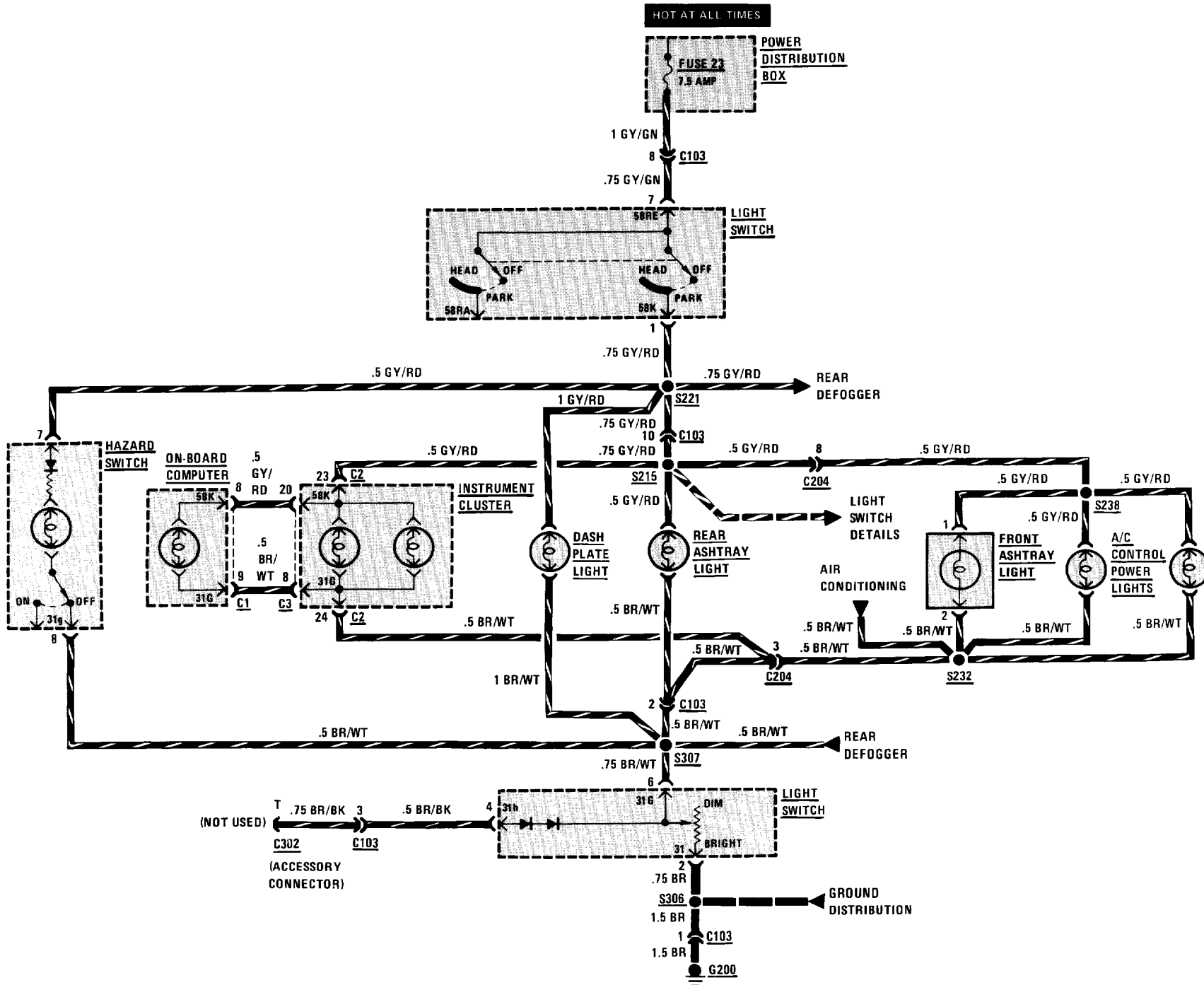
# 6216-2 ACTIVE CHECK CONTROL



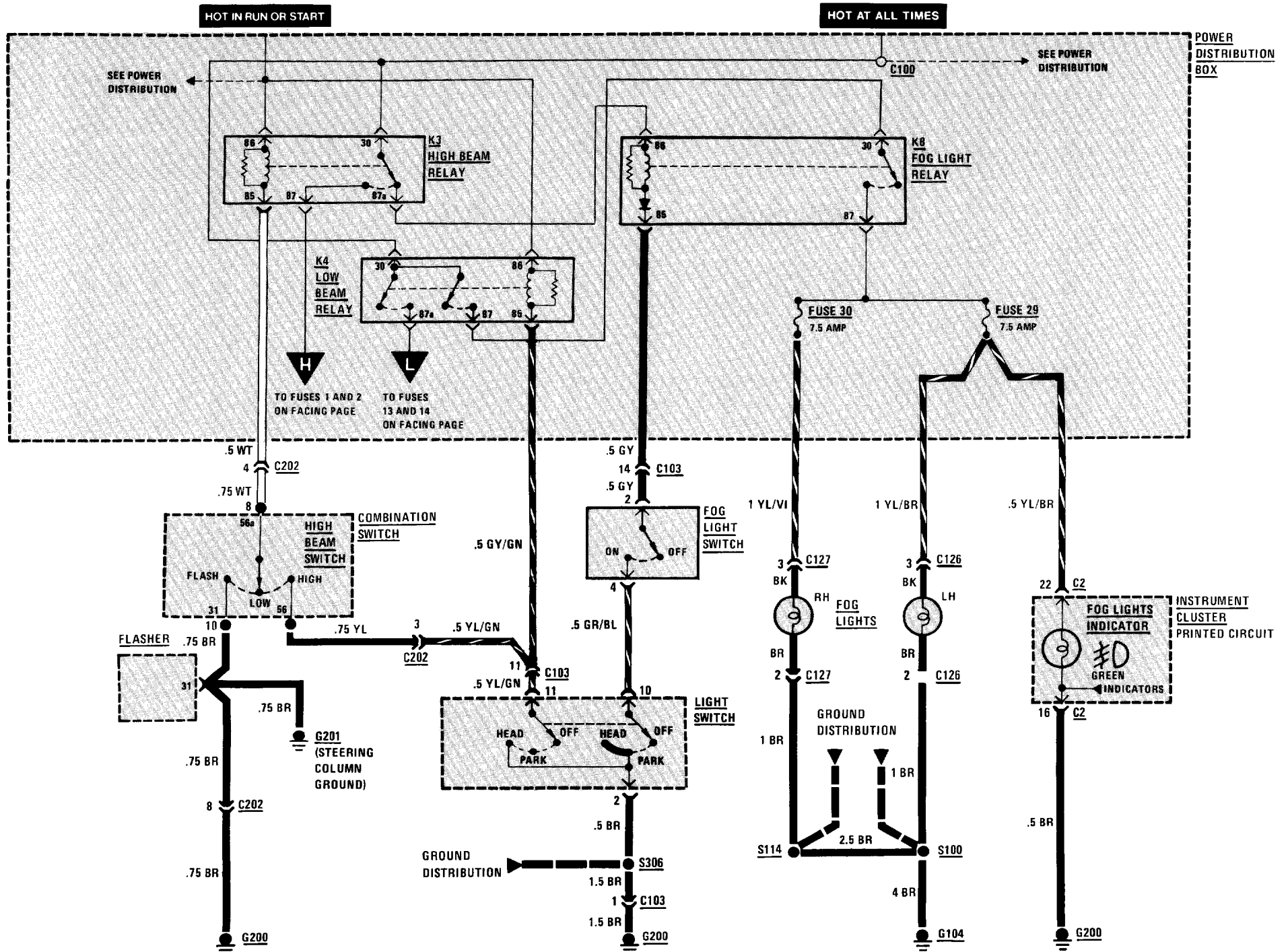
# 6300-0 LIGHT SWITCH DETAILS

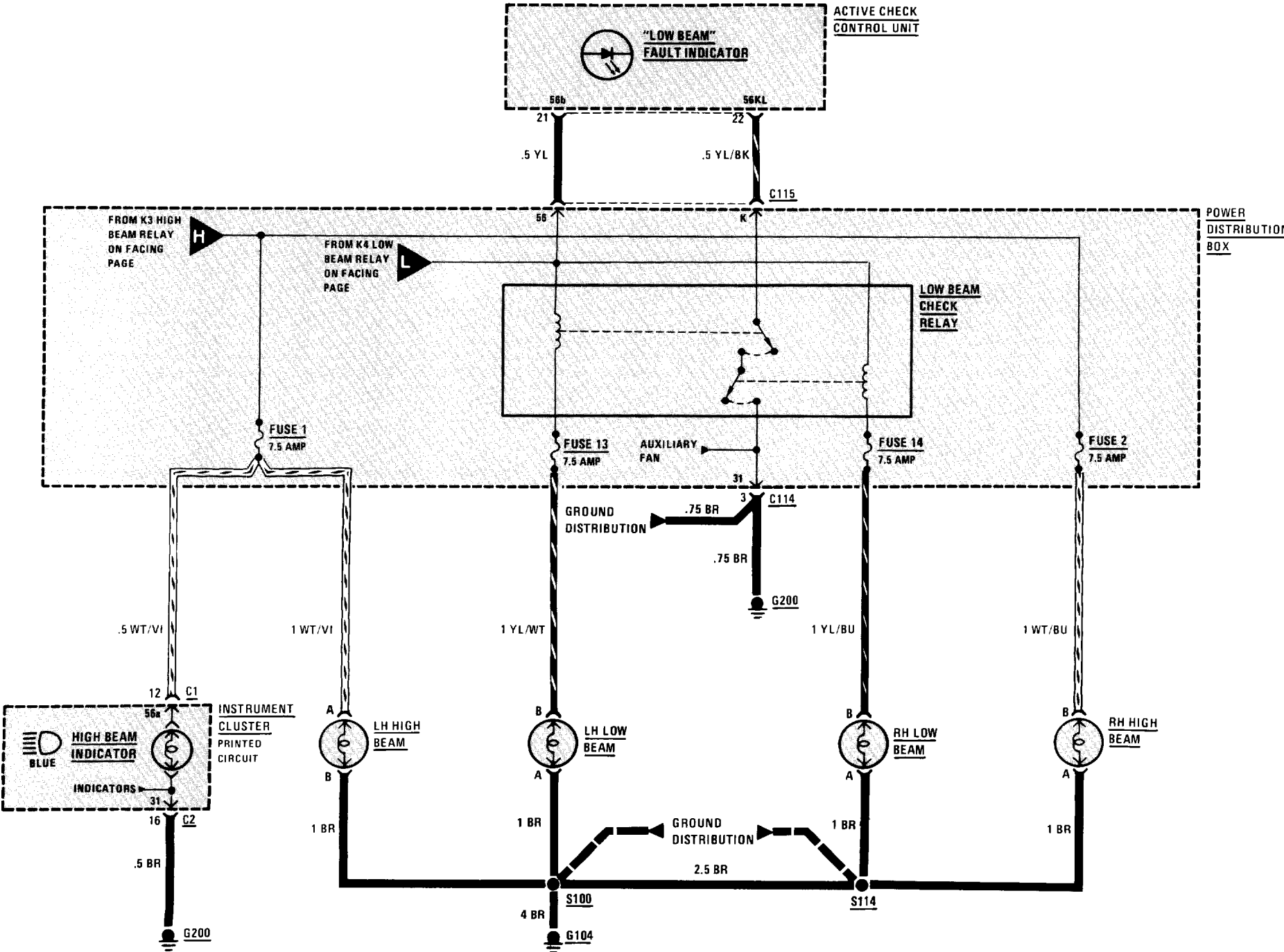


DASH LIGHTS



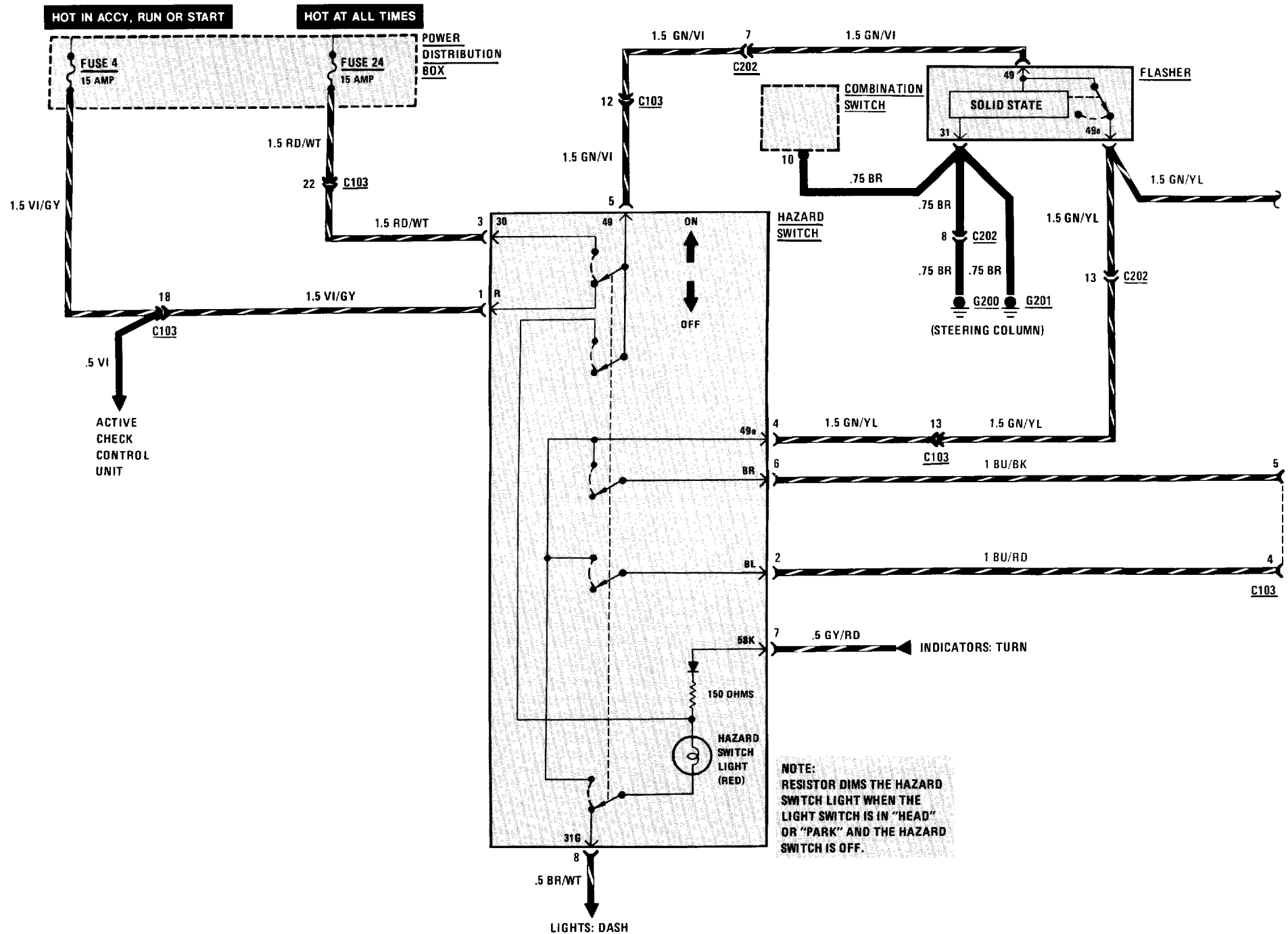
# 6312-0 HEADLIGHTS/FOG LIGHTS

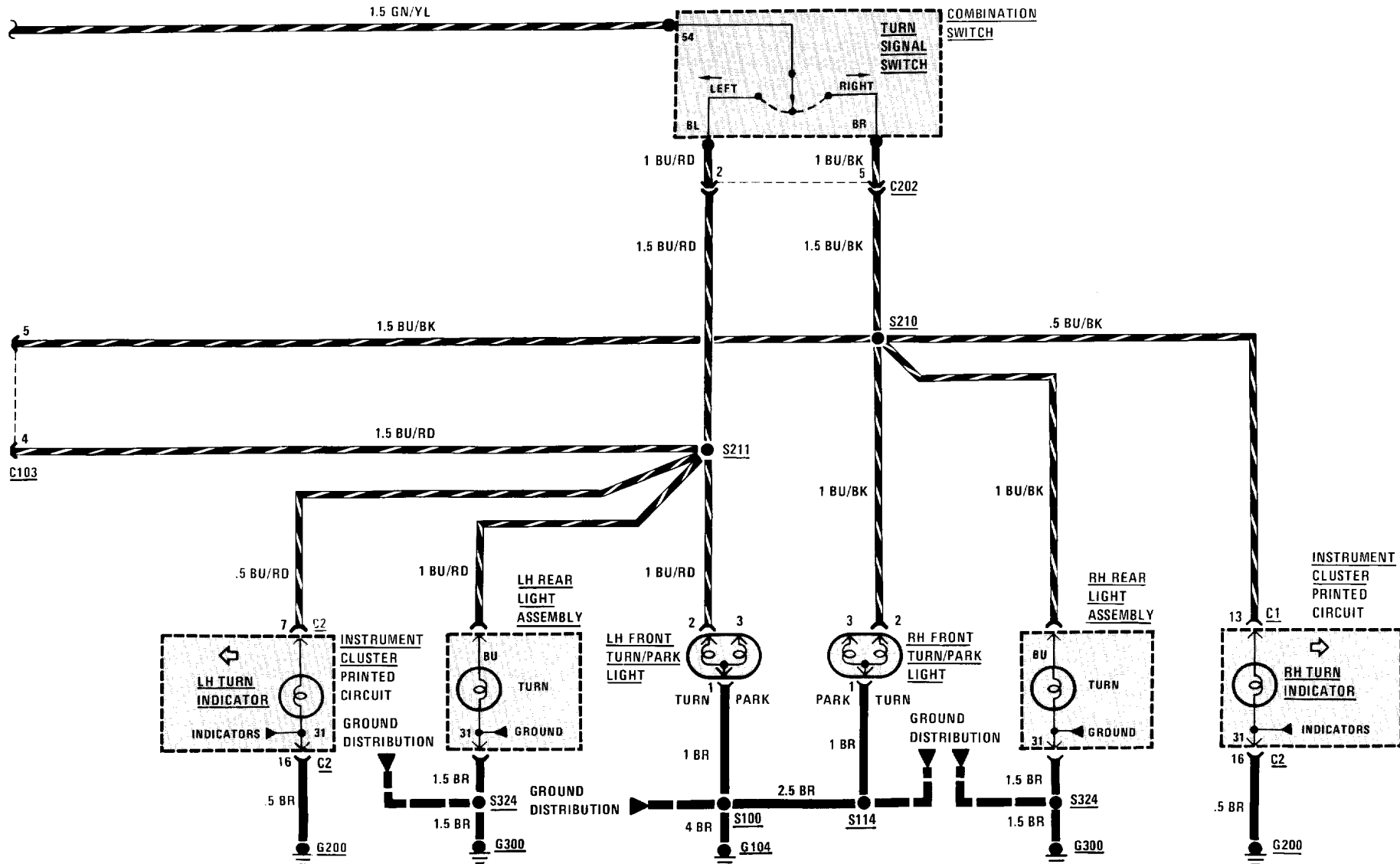




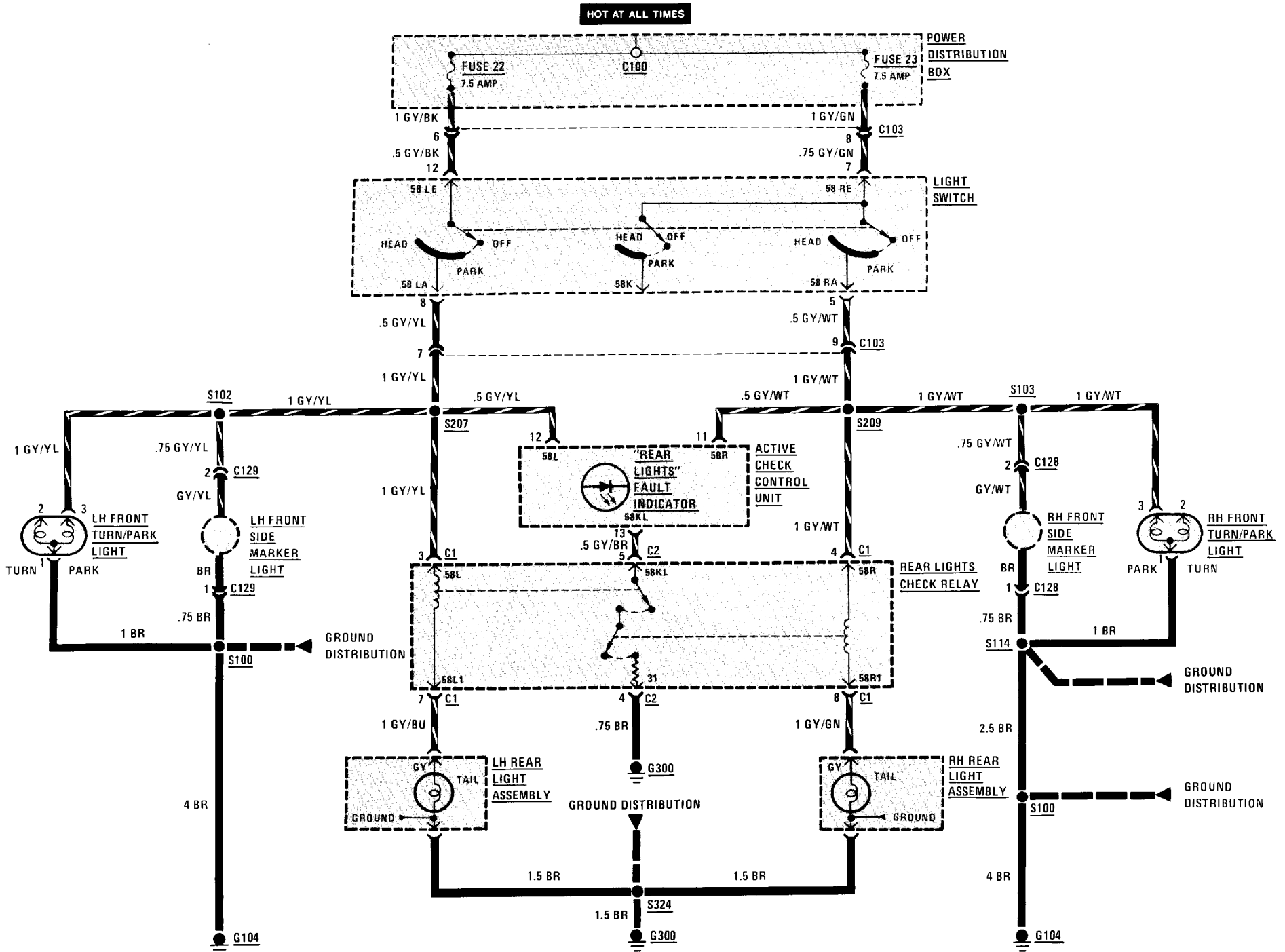


# 6313-0 TURN/HAZARD LIGHTS

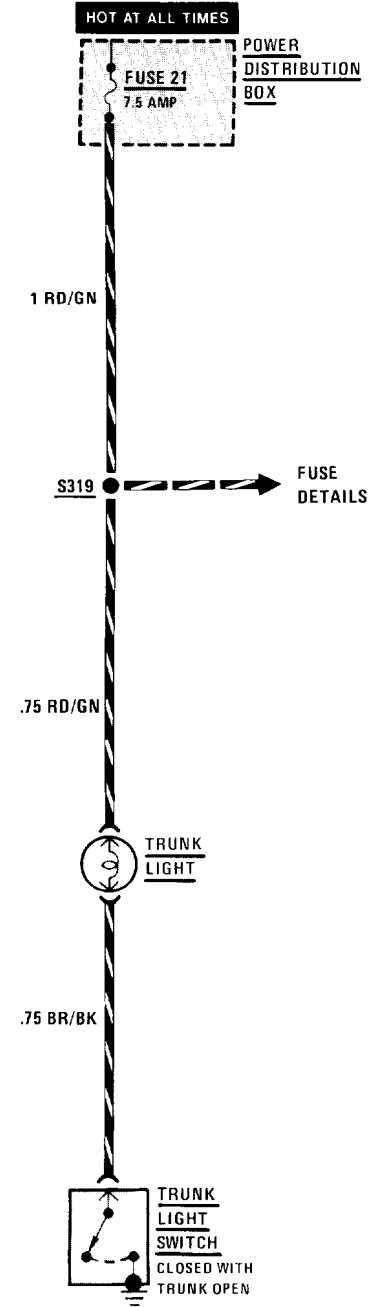
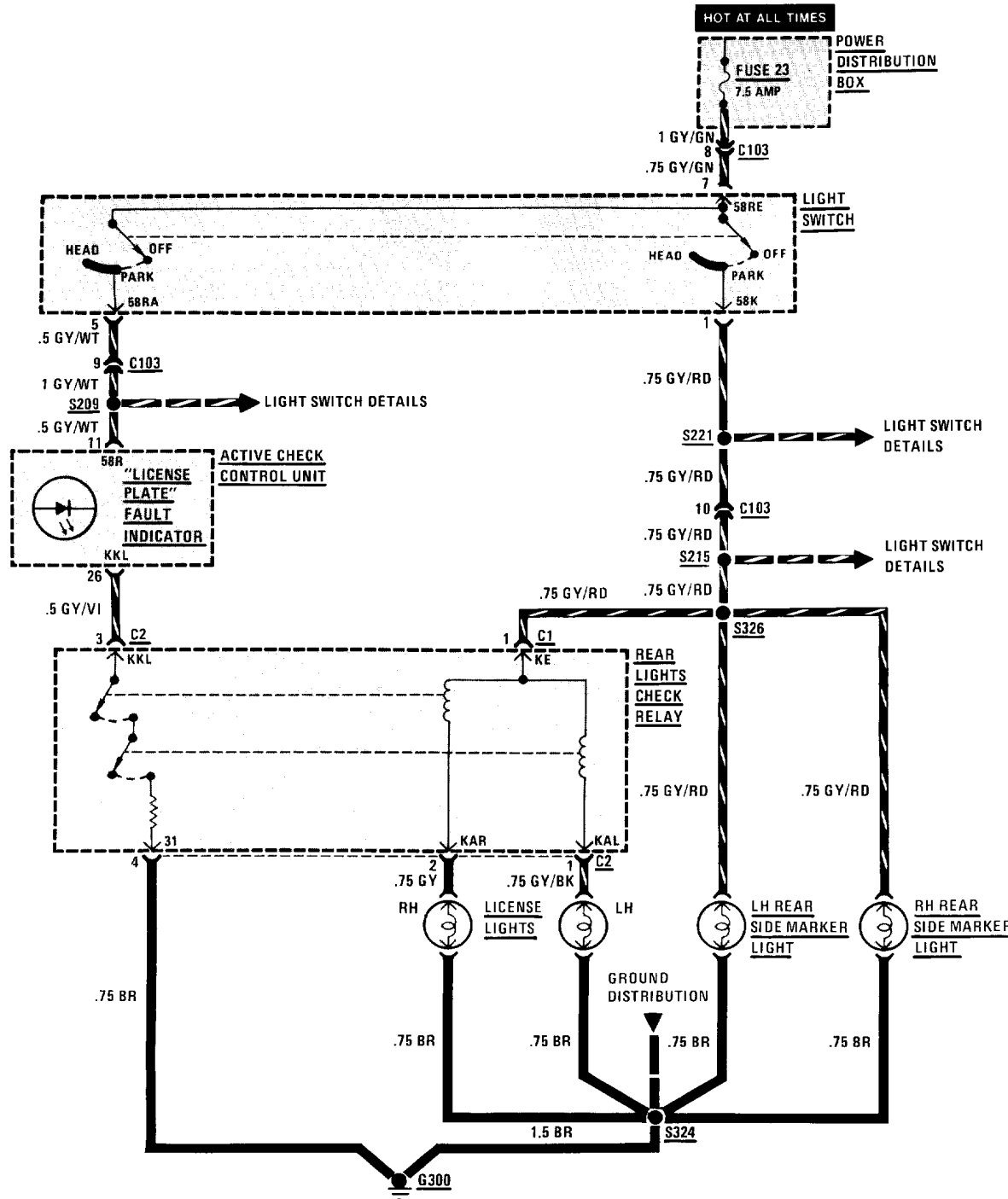




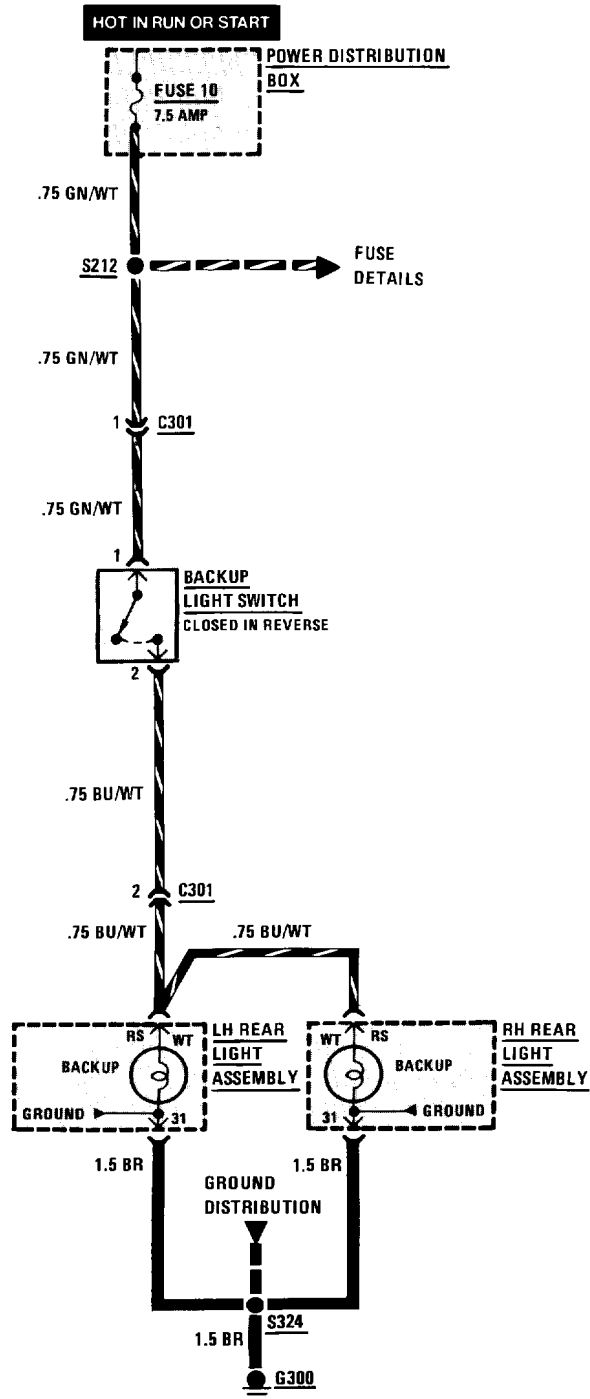
# 6314-0 PARK/TAIL/FRONT MARKER LIGHTS



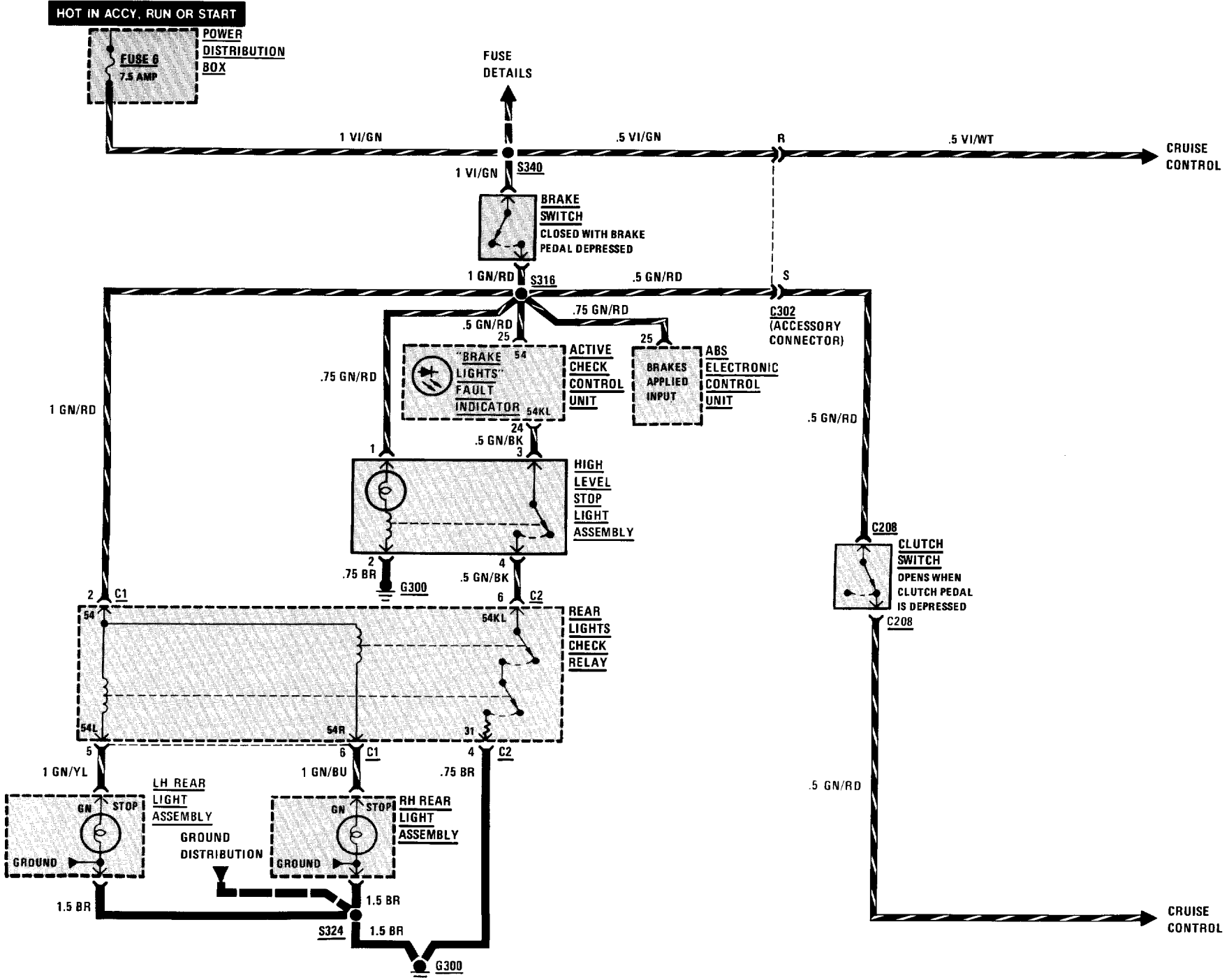
# 6320-0 REAR MARKER/LICENSE/TRUNK LIGHTS



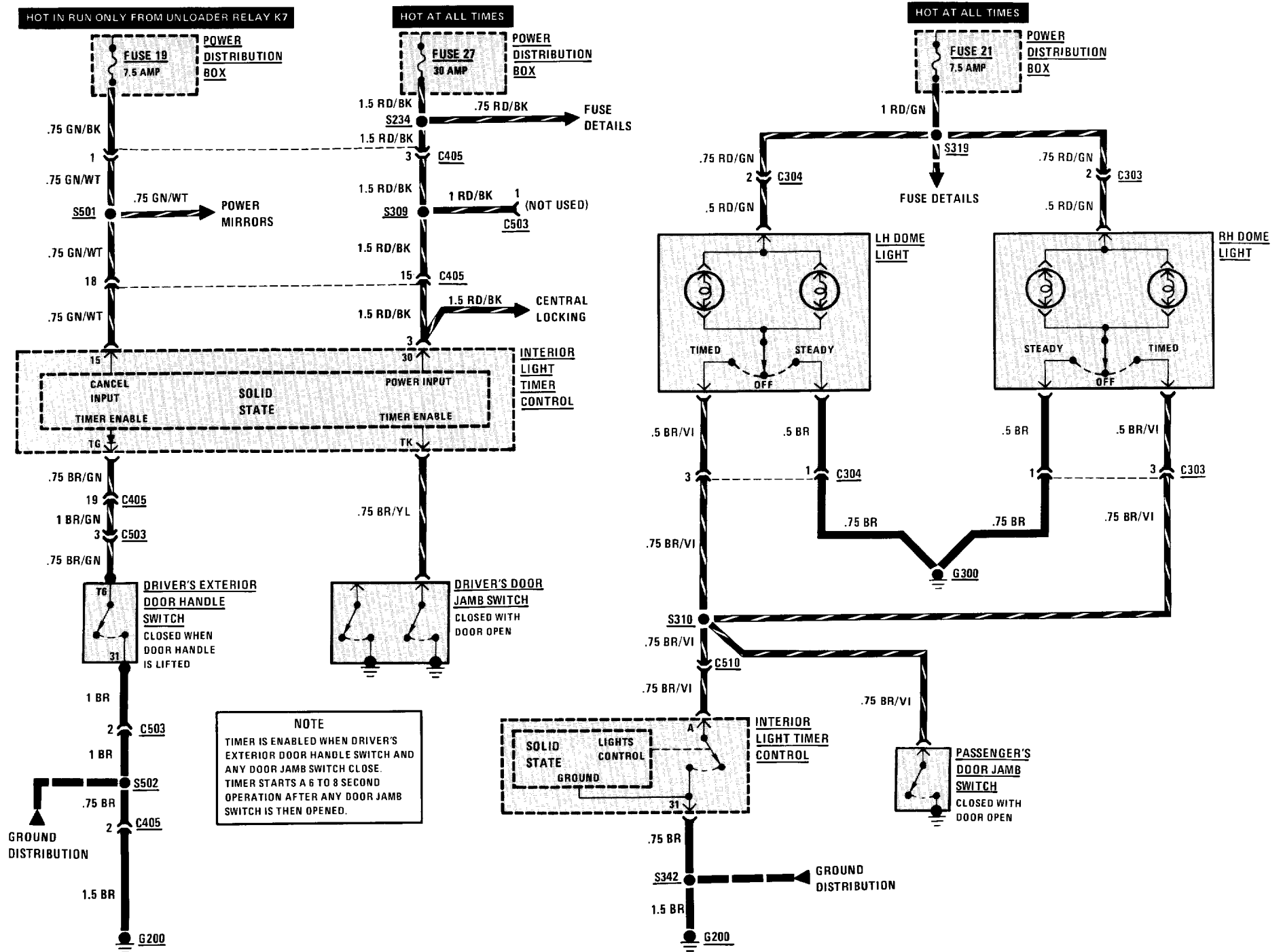
# 6322-0 BACKUP LIGHTS



# 6325-0 STOP LIGHTS



# 6330-0 INTERIOR LIGHTS



## 6410-0 HEATING AND AIR CONDITIONING

### SYSTEM CHECK

This procedure provides an overall check of the Heating and Air Conditioning System. Each of the steps can be performed without disassembly or the use of tools.

Complete this procedure with the temperature outside the car above 60 degrees F (16 degrees C) and the engine warm and running at idle.

### SYSTEM CHECK TABLE

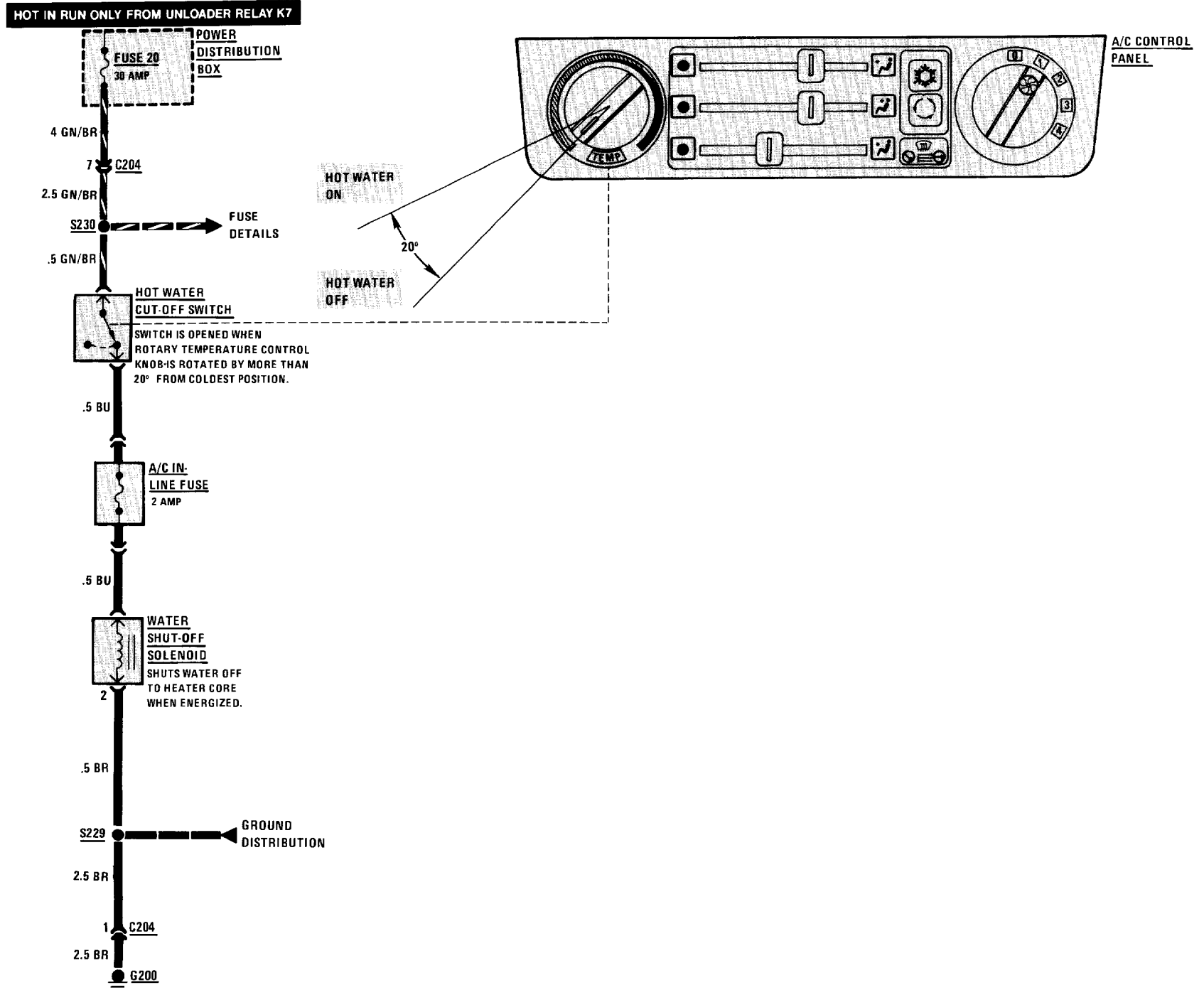
<b>SET: Temperature Control fully counterclockwise Upper and Lower Slide Levers to extreme left Center Slide Lever to extreme right Blower Speed Control at 0 (OFF)</b>	
<b>ACTION</b>	<b>NORMAL RESULT</b>
Press Fresh/Recirculating Air Switch (ON). Release A/C button (OFF).	Fresh/Recirculating pushbutton lights. Blower runs slowly.
Rotate Blower Speed Control through steps 1 to 4	Blower speed increases at each step to maximum speed at Step 4
Press Fresh/Recirculating Air Switch to release it (OFF)	Fresh/Recirculating button is no longer lit. Outside air is drawn into car. (The sound of Flap Door Motors may be heard repositioning flaps.)
Rotate Temperature Control at least 1/4 turn clockwise	Air flow becomes warm
Depress A/C button (ON)	A/C button lights. A/C Compressor runs. Auxiliary Cooling Fans runs.
Move Center Slide Lever to the extreme left	A/C button is no longer lighted. A/C Compressor turns off. Auxiliary Cooling Fan turns off.
Move Bottom Slide Lever to the center	A/C button lights. A/C Compressor turns off. Auxiliary Cooling Fan runs.
Press A/C button to release it (OFF)	A/C button is no longer lighted. A/C Compressor turns off. Auxiliary Cooling Fan turns off.
Set Blower Speed Control to 0 (OFF)	Blower turns off

- If all of the steps can be completed as described, the Heating and Air Conditioning System is operating normally.



# 6411-0 A/C TEMPERATURE CONTROL

## HEATING AND AIR CONDITIONING (HOT WATER CONTROL)



**CIRCUIT OPERATION**

The Water Shut-Off Solenoid controls the flow of engine coolant through the heater core. When the solenoid is energized, coolant flow is shut off to allow maximum cooling from the air conditioning system. The Water Shut-Off Solenoid is controlled by the Hot Water Cut-Off Switch, which is part of the A/C Control Panel TEMP Control.

Battery voltage is applied through Fuse 20 to the Hot Water Cut-Off Switch when the Ignition Switch is in RUN. The Hot Water Cut-Off Switch is closed when the TEMP Control is rotated fully counterclockwise (coldest position), and opens when the control is rotated more than 20 degrees in a clockwise direction. When the switch is closed, battery voltage is applied through the A/C In-Line Fuse to the Water Shut-Off Solenoid. The solenoid is energized and shuts off the coolant flow through the heater core.

The Water Shut-Off Solenoid and A/C In-Line Diode are protected by the A/C In-Line Fuse. If any failures occur in the solenoid, the fuse will isolate them to prevent the failures from affecting other parts of the heating and air conditioning circuits.

**TROUBLESHOOTING HINTS**

- Try the following checks before doing the System Diagnosis.
- 1. Check that Water Shut-Off Solenoid connector is firmly seated.
- 2. Check the A/C In-Line Fuse.
- Go to Heating and Air Conditioning (6410A-0) System Check for a guide to normal operation.
- Go to System Diagnosis for diagnostic tests.

**SYSTEM DIAGNOSIS**

- Do the following test if the Water Shut-Off Solenoid does not operate normally.

**WATER SHUT-OFF SOLENOID TEST (TABLE 1)**

<b>Measure: VOLTAGE</b> <b>At: WATER SHUT-OFF SOLENOID CONNECTOR (Disconnected)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Control Panel TEMP Control: FULLY COUNTERCLOCKWISE</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
BU & Ground	Battery	See 1
BU & or BR	Battery	See 2
<ul style="list-style-type: none"> <li>• Rotate A/C Control Panel TEMP Control to Mid-Position</li> </ul>		
BU & Ground	0 Volts	See 3

(Continued in next column)

(Continued from previous column)

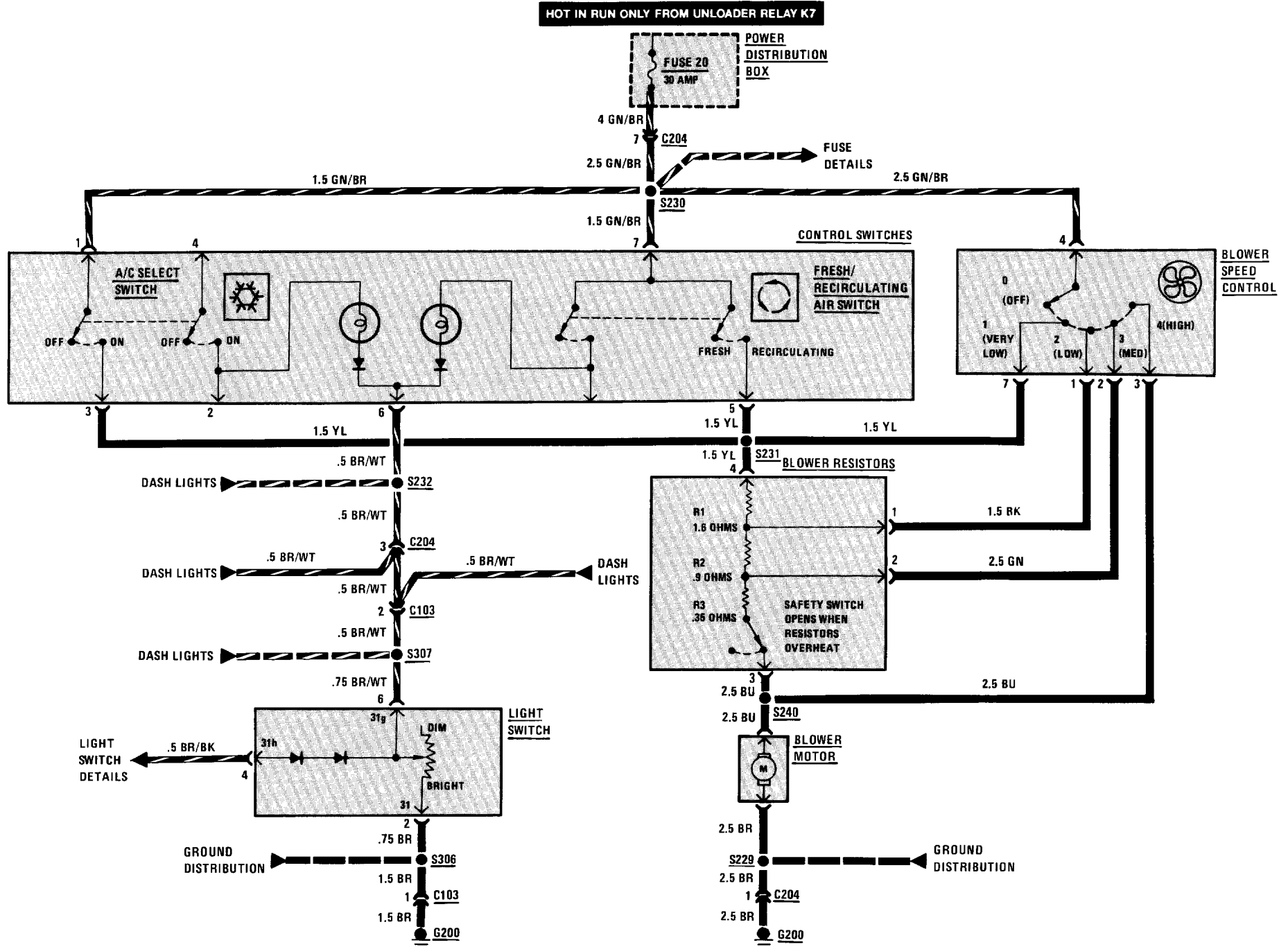
- If all voltages are correct, replace the Water Shut-Off Solenoid.
- 1. Check the BU wire and A/C In-Line Fuse for an open. If wire and fuse are good, go to Table 2.
- 2. Check the BR wire for an open to ground. Check that connector C204 is properly mated.
- 3. Check BU wire for a wire-to-wire short to voltage. If wire is good, replace the A/C Control Panel TEMP Control.

**WATER SHUT-OFF SOLENOID TEST (TABLE 2)**

<b>Measure: VOLTAGE</b> <b>At: HOT WATER CUT-OFF SWITCH CONNECTOR (Disconnected)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• Water Shut-Off Solenoid: CONNECTED</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
GN/BR & Ground	Battery	See 1
GN/BR & BU	Battery	See 2
<ul style="list-style-type: none"> <li>• If both voltages are correct, replace the A/C Control Panel TEMP Control.</li> <li>1. Check the GN/BR wire for an open back to Fuse 20.</li> <li>2. Check the BU wire for an open.</li> </ul>		

# 6413-0 A/C BLOWER CONTROLS

## HEATING AND AIR CONDITIONING (BLOWER CONTROLS)



**CIRCUIT OPERATION**

With the Ignition Switch in RUN, battery voltage is applied to the Control Switches and the Blower Speed Control through the GN/BR wires. If either the A/C Select Switch or the Fresh/Recirculating Air Switch are ON or the Blower Speed Control is in position 1, battery voltage is applied through the YL wire to the Blower Resistors and the Blower Motor.

The Blower Motor is a variable speed motor which runs at a speed proportional to the voltage applied to it. With all of the Blower Resistors in the circuit, the voltage applied to the Motor is reduced so the Motor runs at a low speed.

As the Blower Speed Control is moved through positions 2 and 3, some of the Resistors are bypassed, allowing more voltage to be applied to the Blower Motor, which then runs at a higher speed. When the Blower Speed Control is moved to position 4, battery voltage is applied directly to the Blower Motor, which then runs at maximum speed.

The Blower Resistors dissipate heat because of the current flowing through them. They are cooled by the air flow from the Blower. If there is insufficient air flow to cool the Resistors, the Safety Switch will open, shutting the Blower Motor off until the Resistors have cooled.

**TROUBLESHOOTING HINTS**

- Try the following checks before doing the System Diagnosis.
  1. Check Fuse 20 by visual inspection.
  2. If Blower will run in high only, check the Blower Resistors' Safety Switch for an open.
- Go to Heating and Air Conditioning (6410A-0) System Check for a guide to normal operation.
- Go to System Diagnosis for diagnostic tests.

**SYSTEM DIAGNOSIS**

- Do the tests listed for your symptom in the Symptom Table below.
- Tests follow the Symptom Table.

**SYMPTOM TABLE**

SYMPTOM	DO TEST
Blower Motor does not run in any speed setting.	B
Blower runs only in HIGH (does not run in any other speed setting).	B
Blower does not run in some modes.	A
Blower does not run with A/C ON or in Recirculating mode.	A
A/C Select Switch or Fresh/Recirculating Air Switch does not light.	A

**A: CONTROL SWITCH VOLTAGE TEST**

<b>Measure: VOLTAGE</b> <b>At: CONTROL SWITCHES CONNECTOR (Disconnected)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• Blower Speed Control: OFF</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
1 (GN/BR) & Ground	Battery	See 1

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1 (GN/BR) & 3 (YL)	Battery	See 2 & 4
7 (GN/BR) & Ground	Battery	See 1
7 (GN/BR) & 5 (YL)	Battery	See 2 & 4
7 (GN/BR) & 6 (BR/WT)	Battery	See 3
<ul style="list-style-type: none"> <li>• If all voltages are correct, do Test B.                             <ol style="list-style-type: none"> <li>1. Check the GN/BR wire for an open.</li> <li>2. Check the YL wire for an open.</li> <li>3. Check the BR/WT wire for an open.</li> <li>4. If voltage is not present between the GN/BR wire and both the YL wires (terminals 3 and 5), do Test B.</li> </ol> </li> </ul>		

**B: BLOWER SPEED CONTROL TEST**

<b>Measure: VOLTAGE</b> <b>AT: BLOWER SPEED CONTROL CONNECTOR (Disconnected)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Select Switch: ON (Depressed)</li> <li>• Fresh/Recirculating Air Switch: FRESH (Not Depressed)</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
4 (GN/BR) & Ground	Battery	See 1
7 (YL) & Ground	Battery	See 2
<ul style="list-style-type: none"> <li>• A/C Select Switch: OFF (Not Depressed)</li> </ul>		
7 (YL) & Ground	0 Volts	See 3

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## 6413-2 A/C BLOWER CONTROLS

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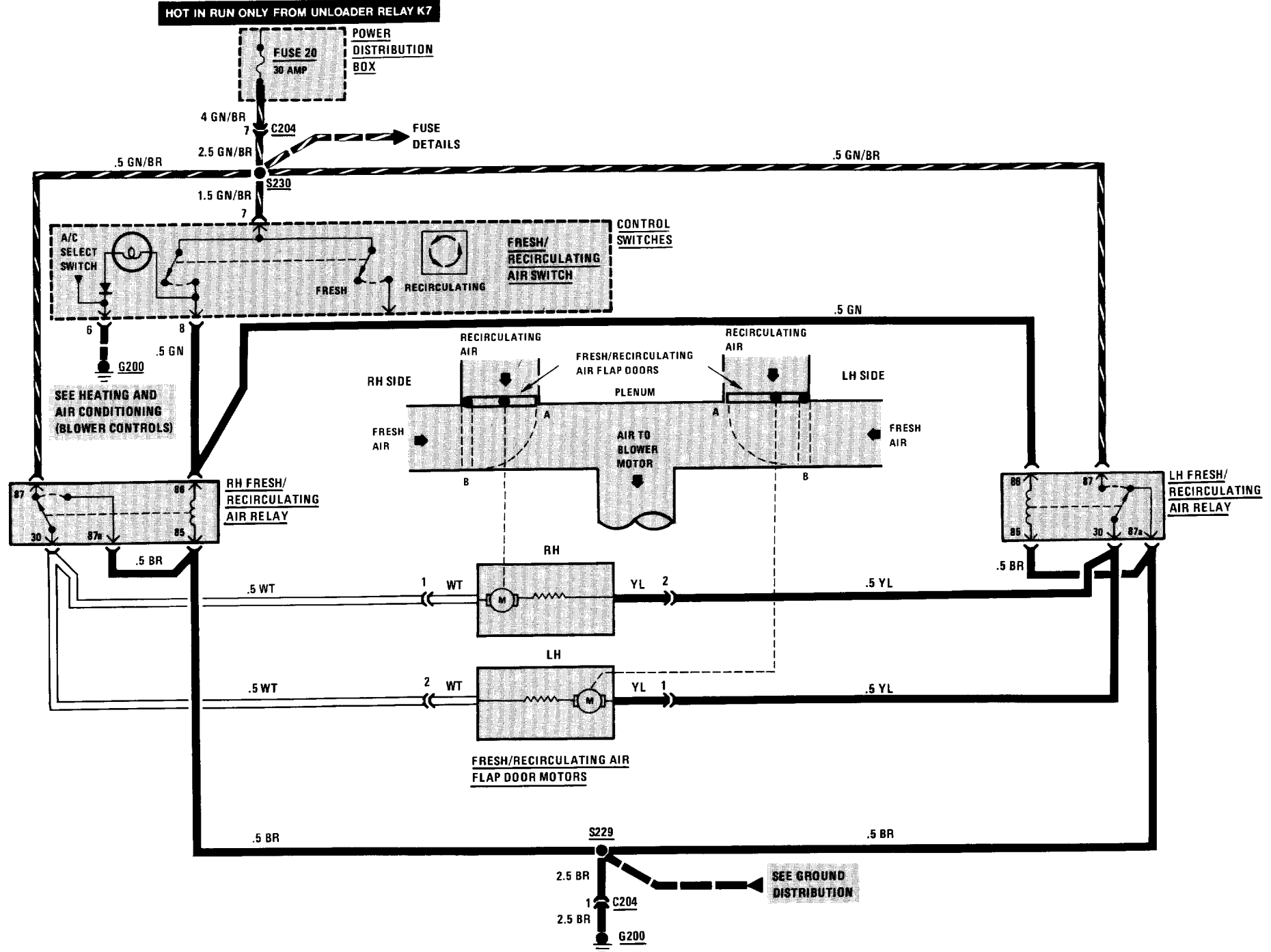
4 (GN/BR) & 7 (YL)	Battery	See 4, 8, 9, & 10
4 (GN/BR) & 1 (BK)	Battery	See 5, 8, 9, & 10
4 (GN/BR) & 2 (GN)	Battery	See 6, 8, 9, & 10
4 (GN/BR) & 3 (BU)	Battery	See 7 & 10
<ul style="list-style-type: none"> <li>• If all voltages are correct, replace the Blower Motor.</li> </ul> <ol style="list-style-type: none"> <li>1. Check the GN/BR wire for an open.</li> <li>2. Check the YL wire for an open between Blower Speed Control and splice S231.</li> <li>3. Check the YL wire for a wire to wire short to voltage.</li> <li>4. Check the YL wire for an open between splice S231 and the Blower Resistors.</li> <li>5. Check the BK wire for an open.</li> <li>6. Check the GN wire for an open.</li> <li>7. Check the BU wire for an open.</li> <li>8. If voltage is not present at the YL wire, but is present at the GN wire or BK wire, replace the Blower Resistors.</li> <li>9. If voltage is not present at the YL, BK or GN wires, check for an open Blower Resistors' Safety Switch.</li> <li>10. If voltage is not present at the YL, BK, GN and BU wires, do Test C.</li> </ol>		

### C: BLOWER MOTOR TEST

<b>Measure: VOLTAGE</b> <b>At: BLOWER MOTOR CONNECTOR</b> (Disconnected) <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Select Switch: ON</li> <li>• Blower Speed Control: HIGH</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
BU & Ground	Battery	See 1
BU & BR	Battery	See 2
<ul style="list-style-type: none"> <li>• If both voltages are correct, replace the Blower Motor.</li> </ul> <ol style="list-style-type: none"> <li>1. Check the BU wire for an open. If wire is good, recheck Test B.</li> <li>2. Check the BR wire to ground G200 for an open.</li> </ol>		

# 6421-0 A/C AIR DELIVERY CONTROL

## HEATING AND AIR CONDITIONING (FRESH/RECIRCULATING AIR CONTROLS)



**CIRCUIT OPERATION**

When the Ignition Switch is in RUN, battery voltage is applied to terminal 7 of the Control Switches, the normally open contacts of the LH Fresh/Recirculating Air Relay, and the normally closed contacts of the RH Fresh/Recirculating Air Relay. If the Fresh/Recirculating Air Switch is not depressed (open), battery voltage is applied through the normally closed contacts of the RH Fresh/Recirculating Air Relay to both Fresh/Recirculating Air Flap Door Motors and then to ground through the normally closed contacts of the LH Fresh/Recirculating Air Relay. Both motors operate and move the Fresh/Recirculating Air Flap Doors to position A, allowing fresh air to enter the blower.

When the Fresh/Recirculating Air Switch is depressed (closed), battery voltage is applied through the switch to both the LH and RH Fresh/Recirculating Air Relay coils. Both relays are energized. Battery voltage is then applied through the closed contacts of the LH Fresh/Recirculating Air Relay to the Flap Door Motors, and to ground through the closed contacts of the RH Fresh/Recirculating Air Relay. Since the voltage is now applied to the Flap Door Motors in the opposite direction, the motors reverse direction and move the Fresh/Recirculating Air Flap Doors to position B, allowing only recirculating air to enter the blower. Both of the Air Flap Door Motors remain energized continuously. When the doors reach the end of their travel, the motors stall and hold the doors in position.

**TROUBLESHOOTING HINTS**

- Try the following checks before doing the System Diagnosis.
- 1. Check that LH and RH Fresh/Recirculating Air Relays are firmly seated.
- 2. Check that LH and RH Fresh/Recirculating Air Relay pigtail connectors are properly mated.
- Go to Heating and Air Conditioning (6410A-0) System Check for a guide to normal operation.
- Go to System Diagnosis for diagnostic tests.

**SYSTEM DIAGNOSIS**

- Do the tests below if the Fresh/Recirculating Air Flap Doors do not operate.

**A: FRESH/RECIRCULATING AIR FLAP DOOR MOTOR VOLTAGE TEST**

Measure: VOLTAGE At: FRESH/RECIRCULATING AIR FLAP DOOR MOTOR PIGTAIL CONNECTORS (Disconnected) Conditions: • Ignition Switch: RUN • Fresh/Recirculating Air Switch: RELEASED (FRESH)		
Measure Between	Correct Voltage	For Diagnosis
WT and Ground	Battery	See 1
WT and YL	Battery	See 2
• Fresh/Recirculating Air Switch: DEPRESSED (RECIRCULATING)		
YL and Ground	Battery	See 3

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YL and WT	Battery	See 3
• If all voltages are correct, replace the inoperative motor. 1. Check the WT wire for an open. If wire is good, do Test B for RH Air Relay. 2. Check the YL wire for an open. If wire is good, do Test B for LH Air Relay. 3. Do Test B for both Air Relays.		

**B: FRESH/RECIRCULATING AIR RELAY VOLTAGE TEST**

Measure: VOLTAGE At: FRESH/RECIRCULATING AIR RELAY CONNECTOR (Disconnected) Conditions: • Ignition Switch: RUN • Fresh/Recirculating Air Switch: DEPRESSED (RECIRCULATING) • Fresh/Recirculating Air Flap Door Motor Connectors: CONNECTED		
Measure Between	Correct Voltage	For Diagnosis
87 (GN/BR) and Ground	Battery	See 1
86 (GN) and Ground	Battery	See 2
86 (GN) and 85 (BR)	Battery	See 3
86 (GN) and 87a (BR)	Battery	See 3

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## 6421-2 A/C AIR DELIVERY CONTROL

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- If all voltages are correct, replace the suspect Fresh/Recirculating Air Relay.
1. Check the GN/BR wire for an open.
  2. Check the GN wire back to the Control Switches for an open. If wire is good, do Test C.
  3. Check the BR wire for an open.

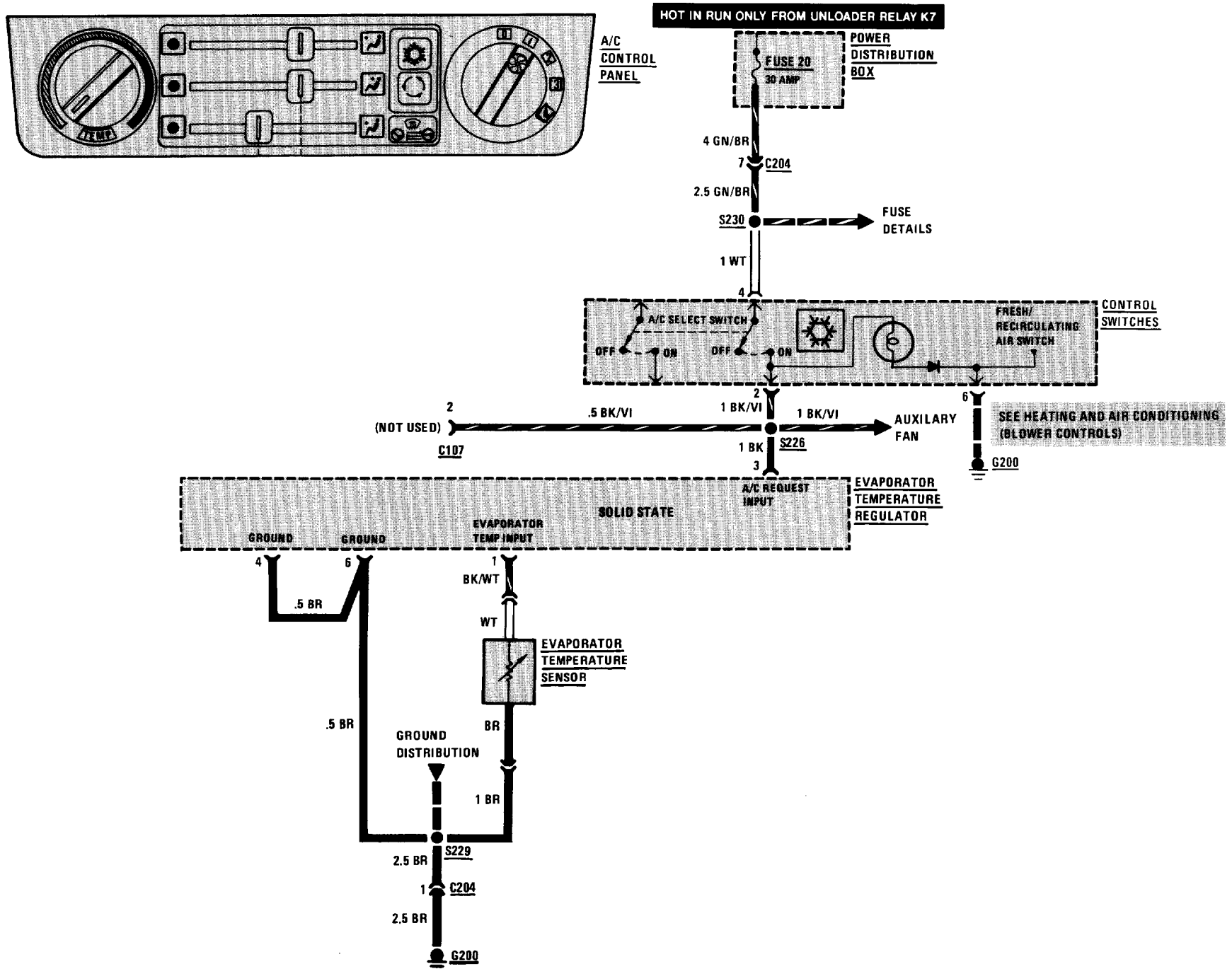
### C: CONTROL SWITCHES VOLTAGE TEST

<b>Measure: VOLTAGE</b> <b>At: CONTROL SWITCHES CONNECTOR</b> <b>(Disconnected)</b> <b>Condition:</b> <ul style="list-style-type: none"><li>• Ignition Switch: RUN</li></ul>		
<b>Measure Between</b>	<b>Correct Voltage</b>	<b>For Diagnosis</b>
7 (GN/BR) & Ground	Battery	See 1
7 (GN/BR) & 8 (GN)	Battery	See 2
<ul style="list-style-type: none"><li>• If both voltages are correct, replace the Control Switches.</li></ul> <ol style="list-style-type: none"><li>1. Check the GN/BR wire for an open. If wire is good, check that connector C204 is properly mated.</li><li>2. Check the GN wire for an open between the Control Switches and the LH and RH Fresh/Recirculating Air Relays.</li></ol>		

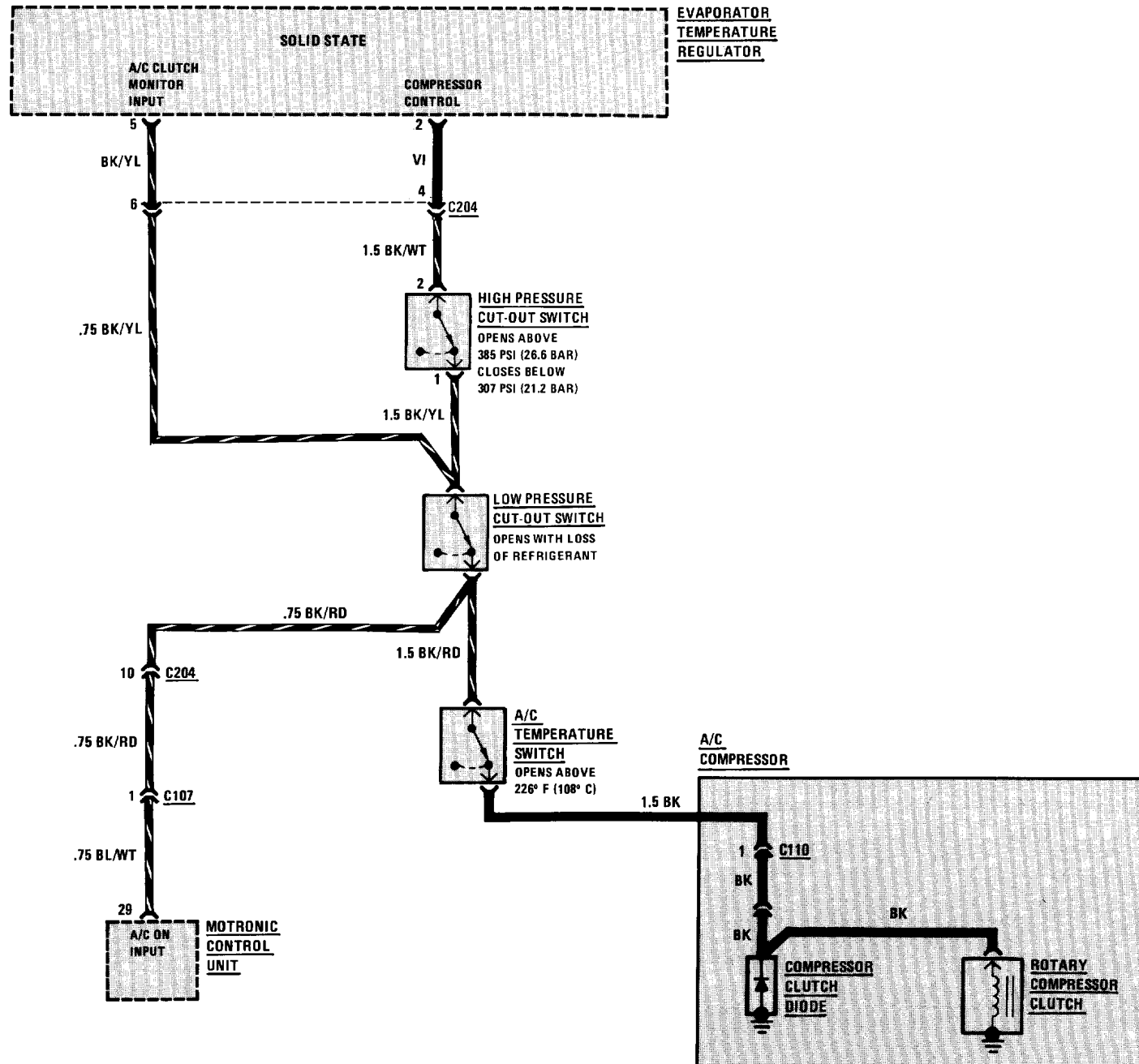


# 6452-0 A/C COMPRESSOR CONTROLS

## HEATING AND AIR CONDITIONING (COMPRESSOR CONTROLS)



HEATING AND AIR CONDITIONING (COMPRESSOR CONTROLS)



**CIRCUIT OPERATION**

When the Ignition Switch is in RUN, battery voltage is applied through Fuse 20 to the A/C Select Switch. When the A/C Select Switch is pressed, voltage is applied to terminal 3 of the Evaporator Temperature Regulator. The Evaporator Temperature Regulator applies voltage from terminal 2 to the Compressor Clutch through the High Pressure Cut-Out Switch, the Low Pressure Cut-Out Switch, and the Temperature Switch.

The High Pressure Cut-Out Switch will disengage the Compressor Clutch when refrigerant pressure rises above 385 PSI (26.6 Bar). The Evaporator Temperature Regulator will detect the High Pressure Cut-Out Switch opening at terminal 5 and will turn off the output voltage at the Compressor Control terminal. The Evaporator Temperature Regulator will not allow the Compressor Clutch to be turned on again until circuit continuity has been restored between terminals 5 and 2. The regulator tests for continuity by momentarily applying voltage at the Compressor Control every 8 to 10 seconds. Voltage at the A/C Clutch Monitor Input indicates continuity. The Evaporator Temperature Regulator will continue to apply voltage at the Compressor Control output, which will energize the Compressor.

The Temperature Switch opens to remove the compressor load from the engine if the engine coolant temperature rises above 226 °F (108 °C). The Evaporator Temperature Sensor signals the Evaporator Temperature Regulator to de-energize the Compressor Clutch when evaporator temperature is low enough for freezing to result.

**Clutch Diode**

Whenever the Compressor Clutch is de-energized, the collapsing magnetic field induces a voltage in the winding. The Clutch Diode provides a path for the resulting current.

**A/C On Input**

When the Compressor Clutch is turned on, voltage is applied to terminal 29 of the Motronic Control Unit. The Motronic Control Unit uses this signal to increase idle speed to compensate for the increased engine load from the Compressor Clutch engaging.

**TROUBLESHOOTING HINTS**

- Try the following checks before doing the System Diagnosis.
  1. Check Fuse 20 by visual inspection.
  2. Check that Compressor Clutch connector is firmly seated.
- Go to Heating and Air Conditioning (6410A-0) System Check for a guide to normal operation.
- Go to System Diagnosis for diagnostic tests.

**SYSTEM DIAGNOSIS**

- Do the tests listed for your symptom in the Symptom Table below.
- Tests follow the Symptom Table.

**SYMPTOM TABLE**

Compressor Clutch does not engage	A
Engine idle speed is not high enough when Compressor Clutch engages (325 engine only)	D

**A: A/C ISOLATION TEST (TABLE 1)**

Measure: VOLTAGE At: EVAPORATOR TEMPERATURE REGULATOR (Disconnected) Conditions: <ul style="list-style-type: none"> <li>• Ignition Switch: RUN (Engine need not be running)</li> <li>• A/C Selector Switch: Depressed (ON)</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
3 & Ground	Battery	See 1
• If voltage is correct, go to Table 2. 1. Go to Test E.		

**A: A/C ISOLATION TEST (TABLE 2)**

Connect: FUSED JUMPER At: EVAPORATOR TEMPERATURE REGULATOR (Disconnected) Conditions: <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Selector Switch: Depressed (ON)</li> </ul>		
Connect Across	Correct Result	For Diagnosis
2 & 3	Compressor Clutch Engages	See 1
<ul style="list-style-type: none"> <li>• If result is correct go to Test C.</li> </ul> 1. Go to Test B.		

**B: PRESSURE SWITCH TEST**

Measure: RESISTANCE At: EVAPORATOR TEMPERATURE REGULATOR CONNECTOR (Disconnected) Conditions: <ul style="list-style-type: none"> <li>• Ignition Switch: OFF</li> <li>• Negative Battery Terminal: DISCONNECTED</li> </ul>		
Measure Between	Correct Resistance	For Diagnosis
2 & Ground	Approximately 3 to 4 ohms	See 1
<ul style="list-style-type: none"> <li>• If measurement is correct replace the Evaporator Temperature Regulator.</li> </ul> 1. Check for an open Low Pressure Cut-Out Switch, High Pressure Cut-Out Switch, A/C Temperature Switch, or associated wiring (see schematic). If High Pressure Cut-Out Switch is open, replace it. If Low Pressure Cut-Out Switch is open, check refrigerant pressure to be sure it is normal before replacing the switch. Replace the A/C Temperature Switch if it is open and engine coolant temperature is below 226 °F (108 °C). If the switches and related wiring is OK, replace the Compressor Clutch.		

**C: EVAPORATOR TEMPERATURE REGULATOR VOLTAGE AND RESISTANCE TEST**

Measure: RESISTANCE At: EVAPORATOR TEMPERATURE REGULATOR CONNECTOR (Disconnected) Conditions: <ul style="list-style-type: none"> <li>• Ignition Switch: OFF</li> <li>• Negative Battery Terminal: DISCONNECTED</li> </ul>		
Measure Between	Correct Resistance	For Diagnosis
1 & Ground	Approximately 3.5K to 4.5K ohms at 70 °F (21 °C)	See 1
4 & Ground	Less than 0.5 ohms	See 2
6 & Ground	Less than 0.5 ohms	See 2
5 & 2	Less than 0.5 ohms	See 3
<ul style="list-style-type: none"> <li>• If all resistances are correct but Compressor Clutch does not operate normally, replace the Evaporator Temperature Regulator.</li> </ul> 1. Check the BK/WT wire for an open or a short to ground (see schematic). Check the BR wire for an open (see schematic). If wires are good, replace the Evaporator Temperature Sensor. 2. Check the BR wire for an open (see schematic). 3. Check BK/YL for an open between terminal 5 and the Low Pressure Cut-Out Switch.		

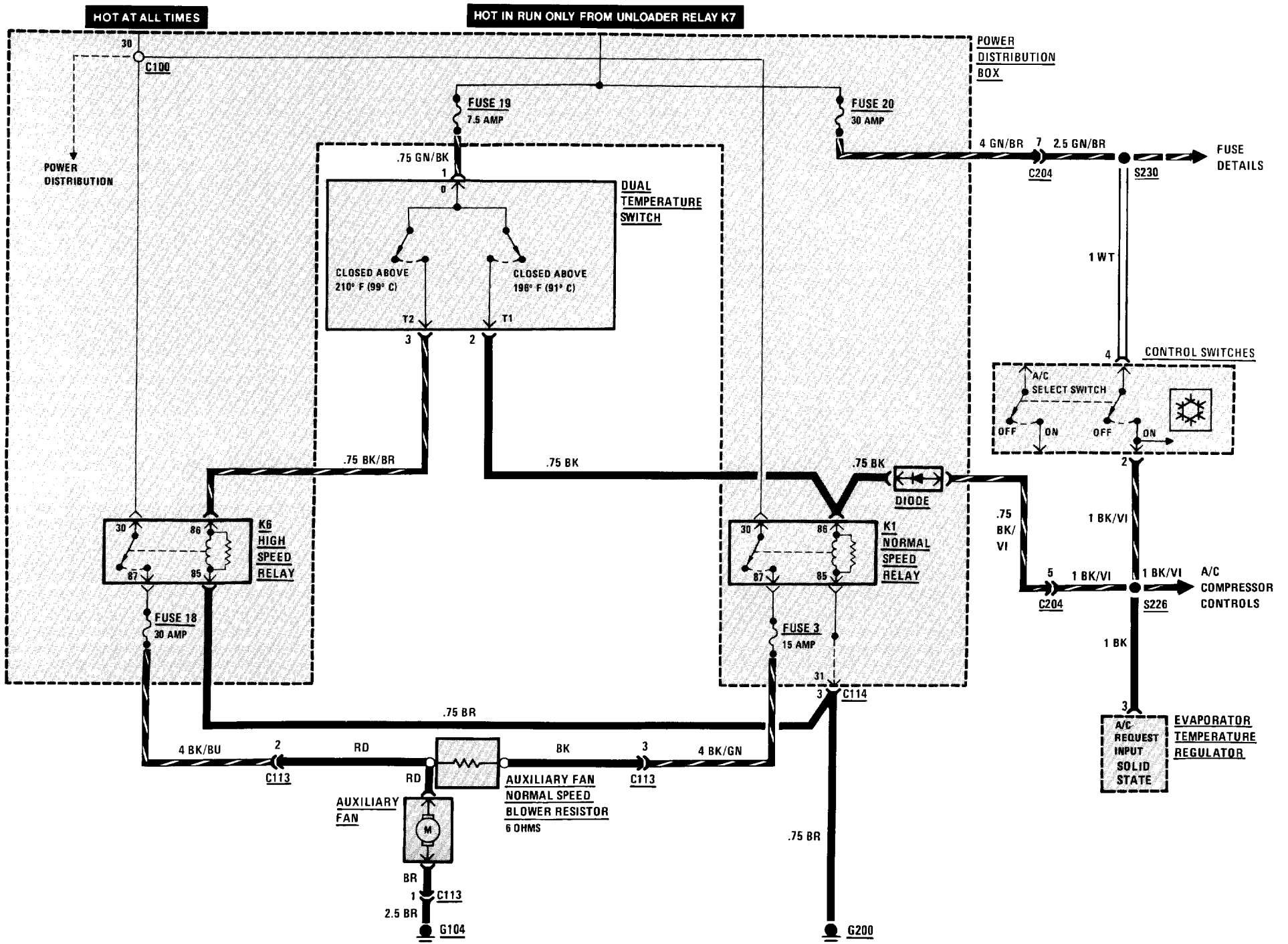
**D: IDLE SPEED CONTROL VOLTAGE TEST**

<b>Measure: VOLTAGE</b> <b>At: MOTRONIC CONTROL UNIT CONNECTOR (Connected – Universal Adapter)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Control Panel: A/C ON</li> <li>• Temperature Outside Car: Above 60 degrees F (16 degrees C)</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
29 BL/WT & Ground	Battery	See 1
<ul style="list-style-type: none"> <li>• If the voltage is correct, repair/replace the Motronic Control Unit.</li> </ul> <ol style="list-style-type: none"> <li>1. Check for an open in the BL/WT and BK/RD wires.</li> </ol>		

**E: A/C SELECT SWITCH VOLTAGE TEST**

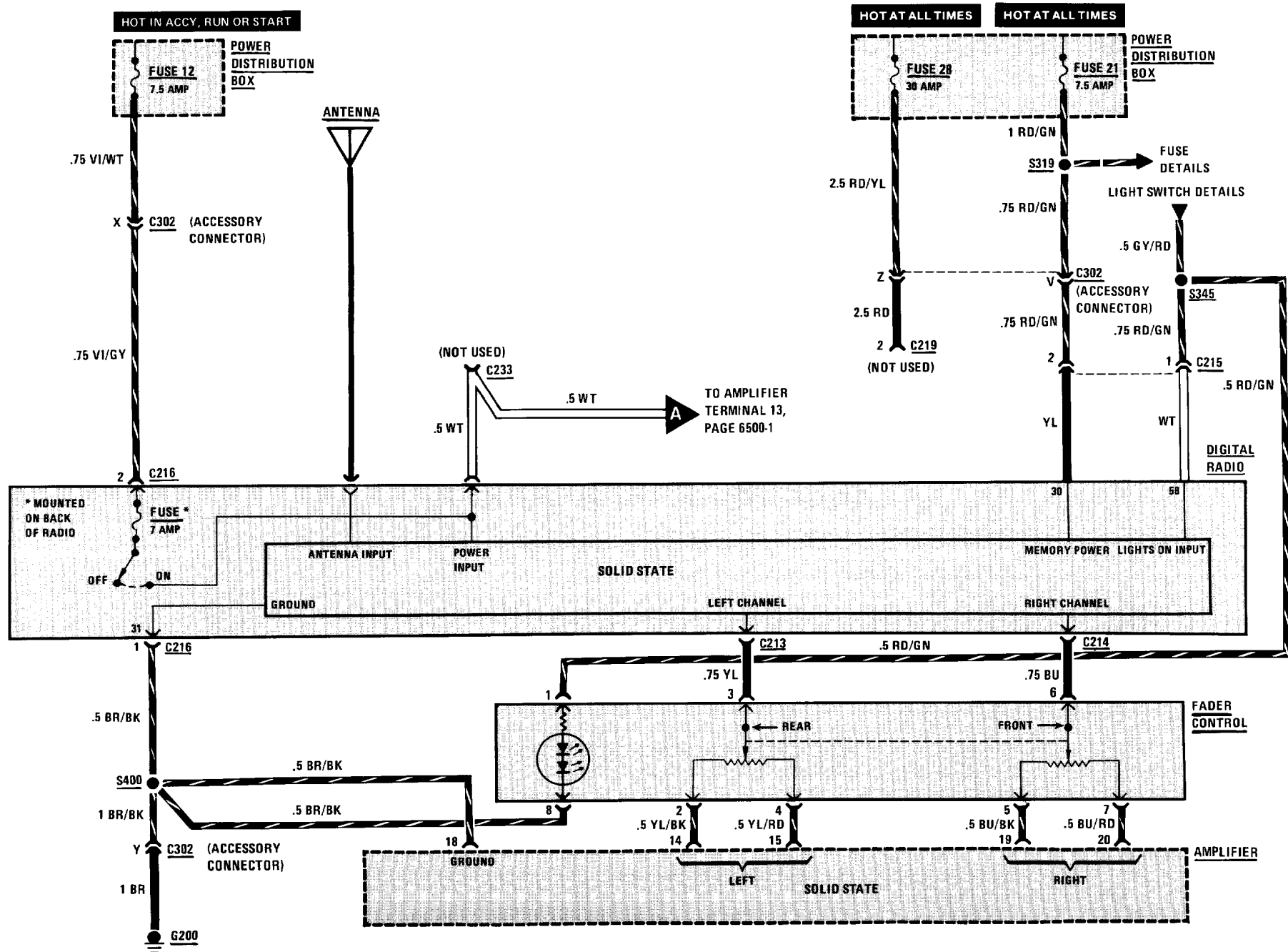
<b>Measure: VOLTAGE</b> <b>At: CONTROL SWITCHES CONNECTOR (Connected)</b> <b>Conditions:</b> <ul style="list-style-type: none"> <li>• Ignition Switch: RUN</li> <li>• A/C Control Panel: A/C ON</li> <li>• Temperature Outside Car: Above 60 degrees F (16 degrees C)</li> </ul>		
Measure Between	Correct Voltage	For Diagnosis
4 (WT) & Ground	Battery	See 1
2 (BK/VI) & Ground	Battery	See 2
<ul style="list-style-type: none"> <li>• If both voltages are correct, check connections at Evaporator Temperature Regulator.</li> </ul> <ol style="list-style-type: none"> <li>1. Check for an open in the WT and GN/BR wires.</li> <li>2. Replace the A/C Select Switch.</li> </ol>		

# 6454-0 AUXILIARY FAN

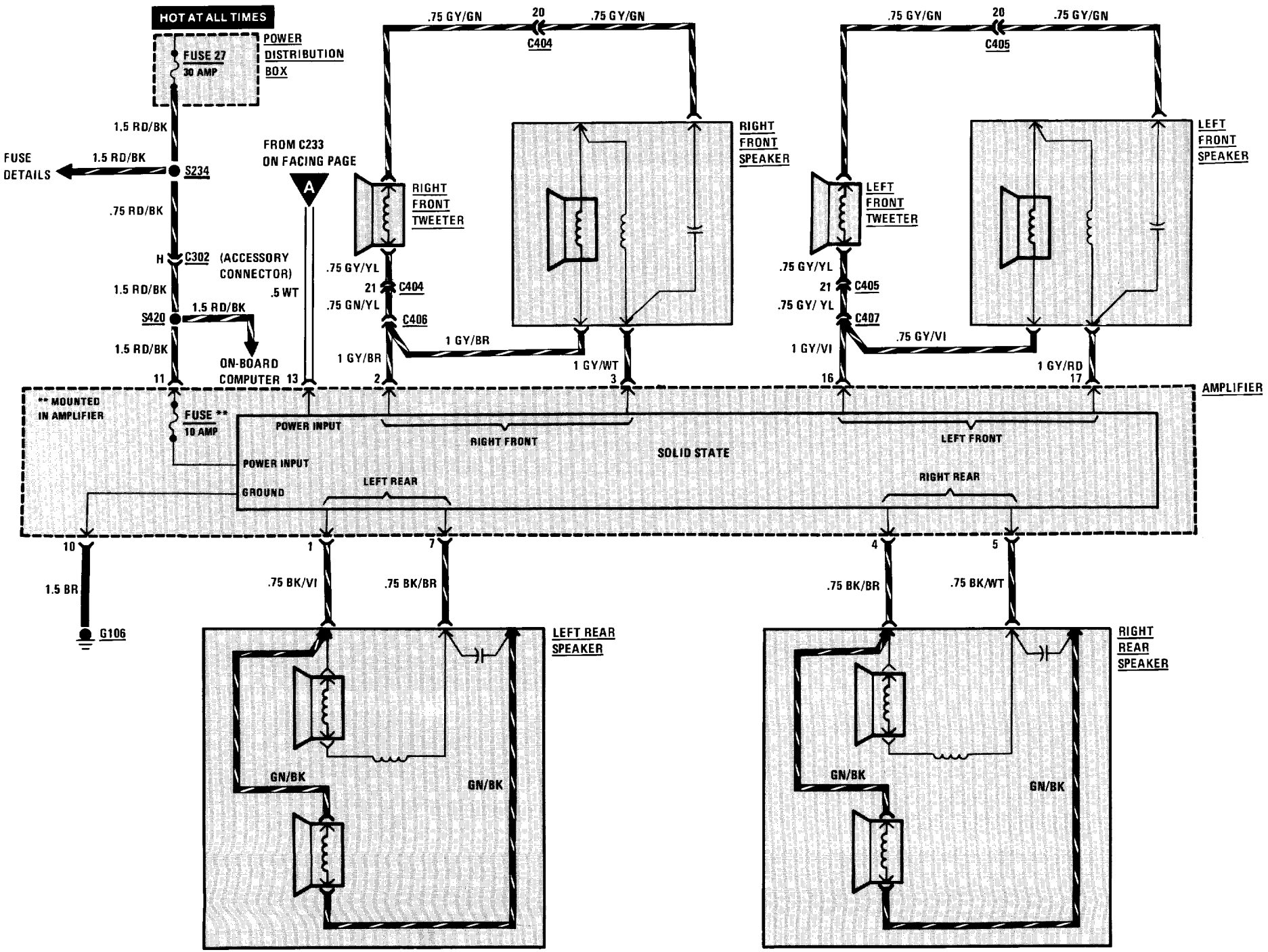


# 6500-0 RADIO/ANTENNA

## WITH SOUND SYSTEM



WITH SOUND SYSTEM





# 6500A-0 RADIO/ANTENNA

## CIRCUIT OPERATION

With the Ignition Switch in ACCY, RUN or START, Fuse 12 provides voltage to turn on the three components in the system. When the Radio Switch is on, voltage is applied to the Radio and the Amplifier. This voltage is used to control the individual unit's main power supply.

Fuse 21 constantly supplies voltage to the Memory Power Input of the Radio. This allows the Radio to maintain the present settings while it is turned off.

The Amplifier receives constant power at terminal 11 from Fuse 27. When the Radio is on, voltage is applied to terminal 13 to enable the Amplifier.

The actual Radio signal originates at the Antenna. It is supplied to the Radio, processed, and output from the Left Channel and Right Channel Outputs to the Fader Control. The Fader Control alters the front to rear volume by decreasing the resistance to the desired higher volume outputs. The signal is then input to the Left Front, Left Rear, Right Front and Right Rear Inputs to the Amplifier. After amplification, the signal is output to the corresponding speakers.

## TROUBLESHOOTING HINTS

- Try the following checks before doing the System Check.
  1. Check power input to the Radio by observing if Instrument Cluster Indicators light.
  2. Check memory power to Radio by checking operation of the Glove Box Light.
  3. Check power input to the Amplifier.
  4. If Fader Control has on effect, but sound is heard from all speakers, replace the Fader Control.
  5. Check that the Antenna is properly connected.
  6. Before troubleshooting a suspect Speaker, check all connections to that Speaker.
  7. If display shows "CODE" and Radio will not operate, the individual Anti-Theft Code must be entered. Refer to "Anti-Theft" instruction booklet.
  8. Check Radio Fuse located on back of Radio.
  9. Check Amplifier Fuse located on back of Amplifier.
- Go to System Check for a guide to normal operation.
- Go to System Diagnosis for diagnostic tests.

## SYSTEM CHECK

- Use the System Check Table as a guide to normal operation.
- Refer to System Diagnosis for a list of symptoms and diagnostic steps.

**SYSTEM CHECK TABLE**

ACTION	NORMAL RESULT
With Ignition Switch in RUN, turn Radio ON.	Digital display lights. Sound is emitted from all Speakers.
Operate Fader Control.	Sound volume varies from front to rear.

- Refer to System Diagnosis when a result is not normal.

## SYSTEM DIAGNOSIS

- Do the tests listed for your symptom in the Symptom Table below.
- Tests follow the Symptom Table.

**SYMPTOM TABLE**

SYMPTOM	FOR DIAGNOSIS
Radio does not work (no display, no sound).	Do Test A
Digital display lights, but there is no sound.	Do Test B
LH Speakers or RH Speakers do not operate.	Do Test C

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An individual Speaker does not operate.	Do Test D
Excessive noise comes from all speakers.	Do Test E

**A: RADIO POWER TEST**

<b>Measure: VOLTAGE</b> <b>At: RADIO CONNECTOR C216 (Disconnected) or CONNECTOR C215 (Disconnected)</b> <b>Condition:</b> • Ignition Switch: RUN		
Measure Between	Correct Voltage	For Diagnosis
C216 Ground	Battery	See 1
C216/2 & C216/1	Battery	See 2
C215/2 & Ground	Battery	See 3
• If all voltages are correct, check wire from connector C215 to Radio for an open. If wire is OK, remove Radio for service.		
1. Check power input wire for an open.		
2. Check ground wire for an open to ground. Make sure ground G200 is clean and tight.		
3. Check memory power supply wire for an open.		

**B: AMPLIFIER POWER TEST**

<b>Measure: VOLTAGE</b> <b>At: AMPLIFIER CONNECTOR (Disconnected)</b> <b>Conditions:</b> • Ignition Switch: RUN • Radio: ON		
Measure Between	Correct Voltage	For Diagnosis
11 & Ground	Battery	See 1
11 & 18	Battery	See 2
13 & Ground	Battery	See 3
11 & 10	Battery	See 4
• If all voltages are correct, go to Test C.		
1. Check power supply wire for an open.		
2. Check Amplifier ground to Amplifier for an open to ground. Make sure ground G200 is clean and tight.		
3. Check Amplifier "Radio On" wire for an open.		
4. Check wire from terminal 10 for an open to ground. Make sure ground G106 is clean and tight.		

**C: FADER SIGNAL TEST (TABLE 1)**

<b>Measure: VOLTAGE</b> <b>At: FADER CONTROL CONNECTOR (Disconnected)</b> <b>Conditions:</b> • Ignition Switch: RUN • Radio: ON		
Measure Between	Correct Voltage	For Diagnosis
3 & Ground	Approximately 6 Volts	See 1
6 & Ground	Approximately 6 Volts	See 2
• If both voltages are correct, check for AC voltage at Radio outputs with Radio tuned to a strong signal. If AC voltage is present, go to Table 2. Remove Radio for service if AC voltage is not present.		
1. Check wire from Left Channel on Radio for an open. If wire is good, remove Radio for service.		
2. Check wire from Right Channel on Radio for an open. If wire is good, remove Radio for service.		

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## 6500A-2 RADIO/ANTENNA

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### C: FADER SIGNAL TEST (TABLE 2)

Measure: VOLTAGE At: AMPLIFIER CONNECTOR (Disconnected) Conditions: • Ignition Switch: RUN • Radio: ON		
Measure Between	Correct Voltage	For Diagnosis
14 & Ground	Approximately 6 Volts	See 1
15 & Ground	Approximately 6 Volts	See 2
19 & Ground	Approximately 6 Volts	See 3
20 & Ground	Approximately 6 Volts	See 4

• If all voltages are correct but sound was not present, remove Amplifier for service.

1. Check between pin 7 (Fader) to pin 14 (Amplifier) for an open in the wiring. If wire is OK, replace Fader Control.
2. Check between pin 3 (Fader) to pin 15 (Amplifier) for an open in the wiring. If wire is OK, replace Fader Control.
3. Check between pin 6 (Fader) to pin 19 (Amplifier) for an open in the wiring. If wire is OK, replace Fader Control.
4. Check between pin 2 (Fader) to pin 20 (Amplifier) for an open in the wiring. If wire is OK, replace Fader Control.

### D: SUSPECT SPEAKER TEST

Connect: OHMMETER At: SUSPECT SPEAKER (Disconnected) Condition: • Ohmmeter set on Rx 1 scale or Diode Check Scale		
Action	Correct Result	For Diagnosis
Connect Ohmmeter across Speaker Terminals	Speaker "pops"	See 1

• If the result is correct, check wires to the Amplifier for opens or shorts. If wires are OK, check the related wire between Fader and Amplifier.

1. Replace the suspect Speaker.

### E: NOISE DIAGNOSIS

- With Radio on and noise present, unplug the Antenna at the back of the Radio.
- If noise is no longer present, it was being picked up by the Antenna. Perform Antenna Noise Test.
  - If noise persists, it is coming in the Radio wiring. Refer to the following Noise Symptom Table.

### ANTENNA NOISE TEST

Measure: RESISTANCE At: ANTENNA		
Measure Between	Correct Resistance	For Diagnosis
Antenna Plug Base & Ground	Less than 3 Ohms	See 1
Antenna Plug Tip & Antenna Plug Base	Greater than 1 Megaohm (open circuit)	See 2

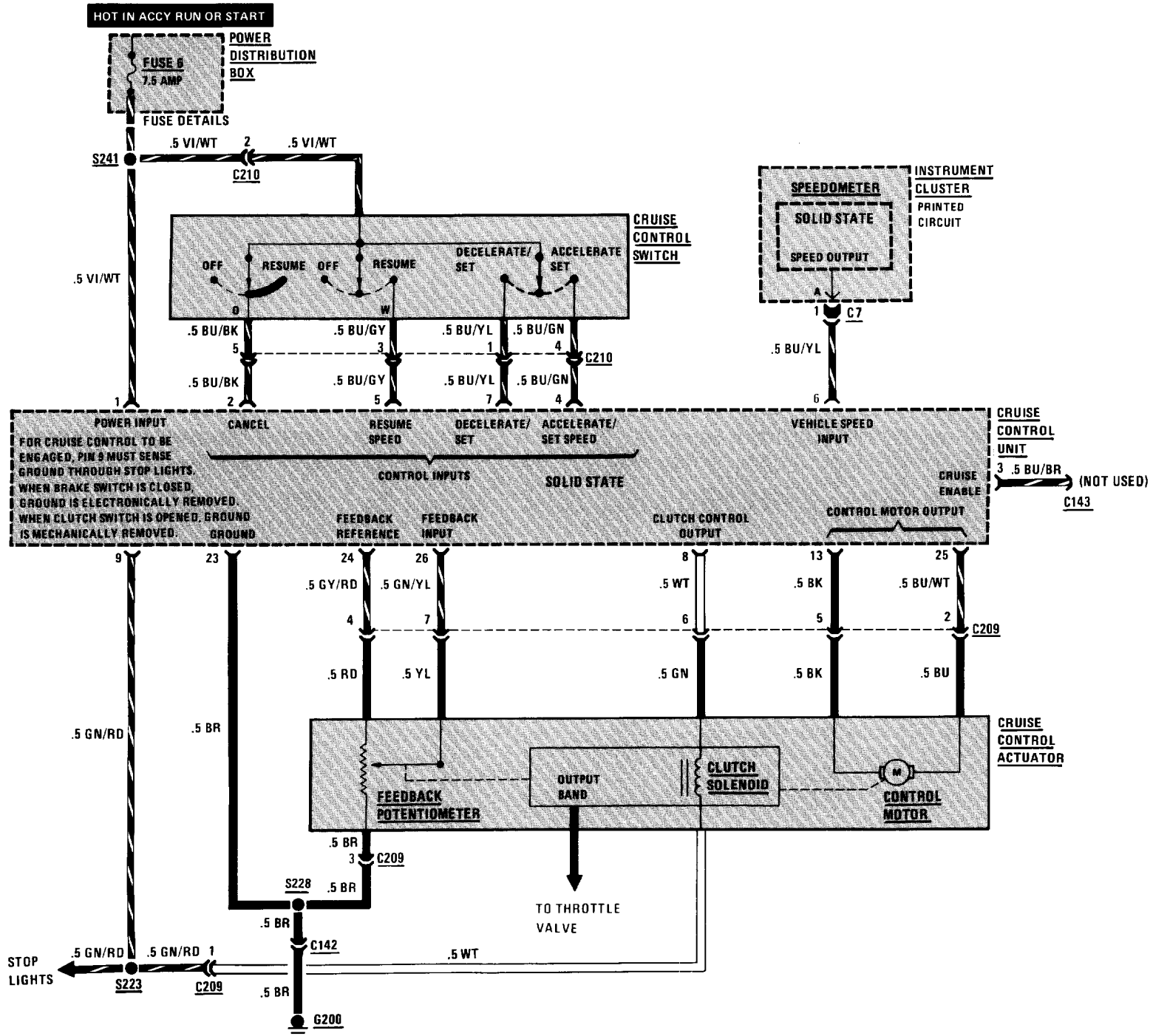
• If both resistances are correct, check the hood ground strap. If OK, substitute different Antenna at Radio. If good, replace Antenna. If noise is still present, refer to Noise Symptom Table.

1. Check ground contact at Antenna base. If necessary, install a braided ground strap from the Antenna Base to Chassis ground. Check for an open in the Antenna Cable.
2. Check for a short to ground at the Antenna or Antenna cable.

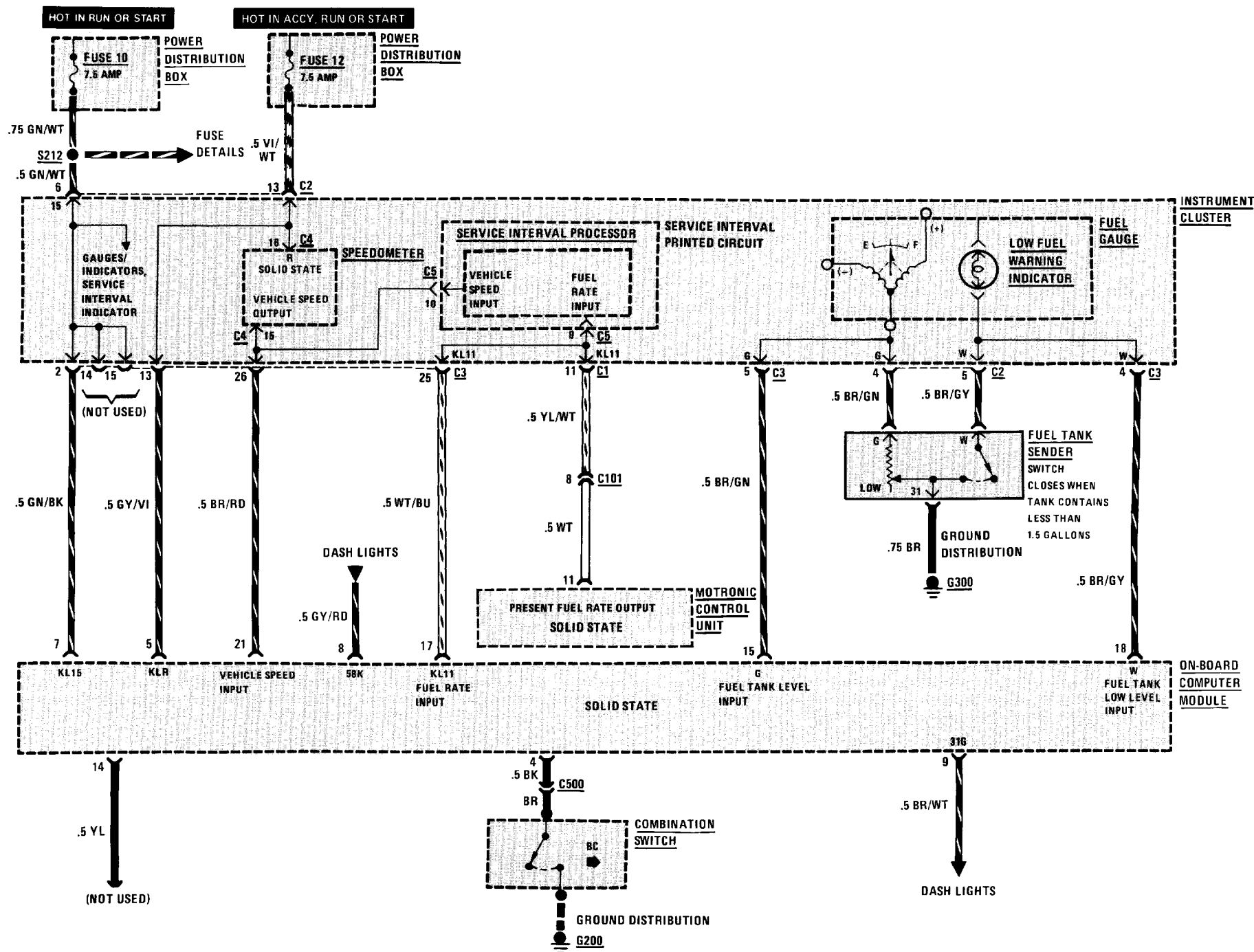
**NOISE SYMPTOM TABLE :**

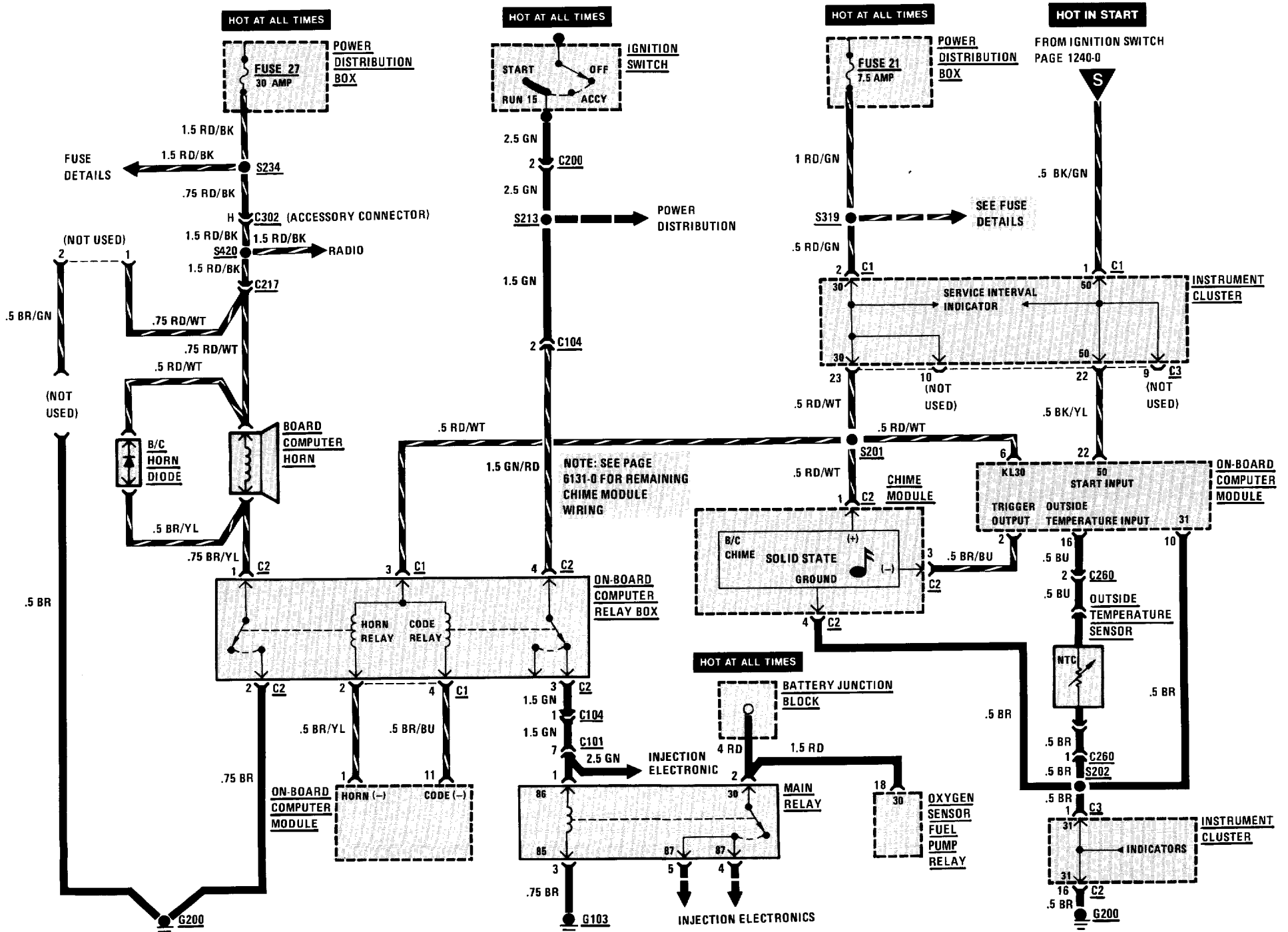
SYMPTOM	POSSIBLE CAUSE	REPAIR ACTION
Harsh popping or crackling noise present when ignition on-changes with engine rpm.	Ignition Noise	<ul style="list-style-type: none"> <li>• Check for proper distributor cap shielding.</li> <li>• Check shielding ground strap. If not present, install.</li> <li>• Check for defective spark plug or spark plug wire.</li> <li>• Reroute spark plug wires laying against anything that could be transmitting noise to the Radio (wiring or sensor leads traveling into the passenger compartment).</li> <li>• Check engine/firewall ground strap and engine hood/body ground strap.</li> <li>• Check if engine hood is closing properly.</li> <li>• Connect dedicated ground strap to Radio.</li> <li>• Replace distributor cap and rotor.</li> </ul>
High whine or howling that changes with engine rpm.	Alternator noise	<ul style="list-style-type: none"> <li>• Connect dedicated ground strap to Radio.</li> <li>• Run a direct wire from Battery to Alternator.</li> </ul>
AM only is weak and noisy.	AM alignment	<ul style="list-style-type: none"> <li>• Remove Radio for service.</li> </ul>
FM only is weak and noisy.	FM alignment	<ul style="list-style-type: none"> <li>• Remove Radio for service.</li> </ul>

# 6571-0 CRUISE CONTROL



# 6581-0 ON-BOARD COMPUTER





# 7000-0 COMPONENT LOCATION VIEWS

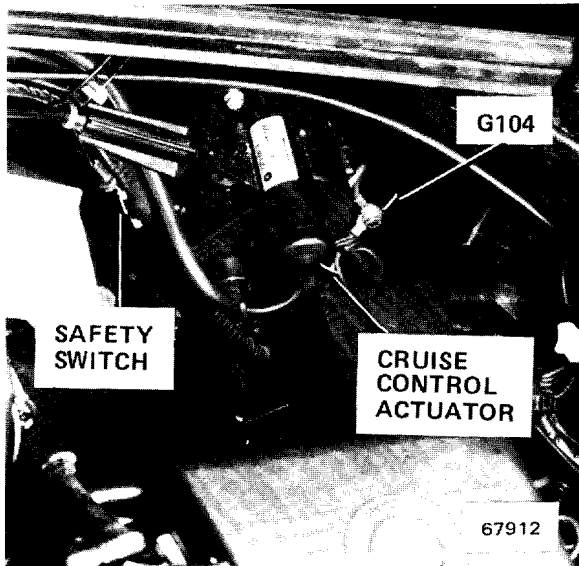


Figure 1 - Forward of LH Front Wheel Well

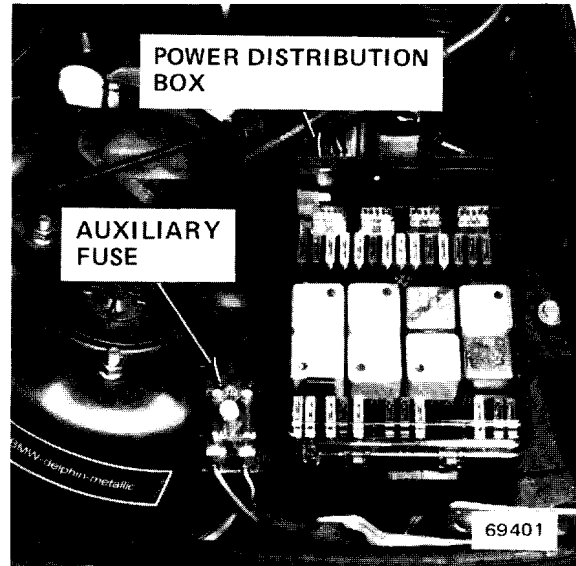


Figure 3 - LH Rear of Engine Compartment

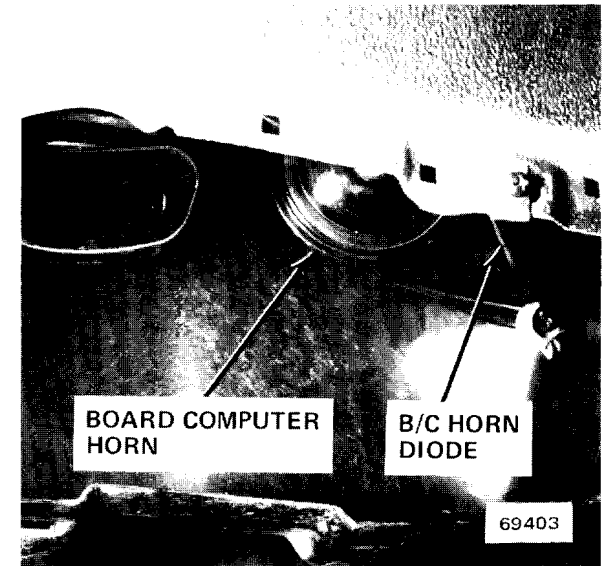


Figure 5 - Under LH Side of Front Bumper (Splash Guard Pulled Down)

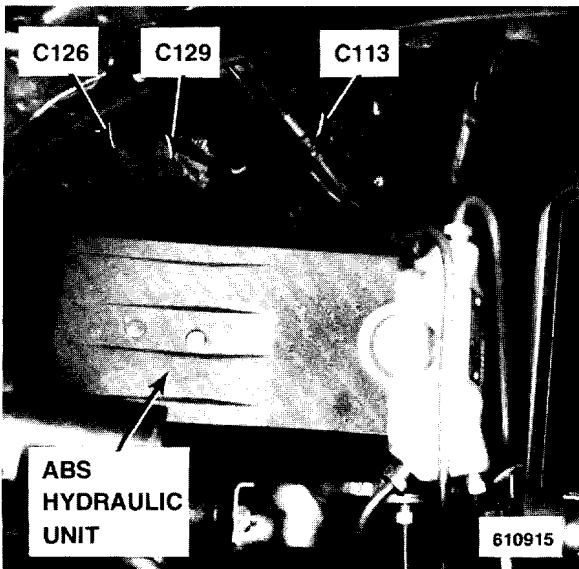


Figure 2 - LH Front of Engine Compartment (Cover Removed)

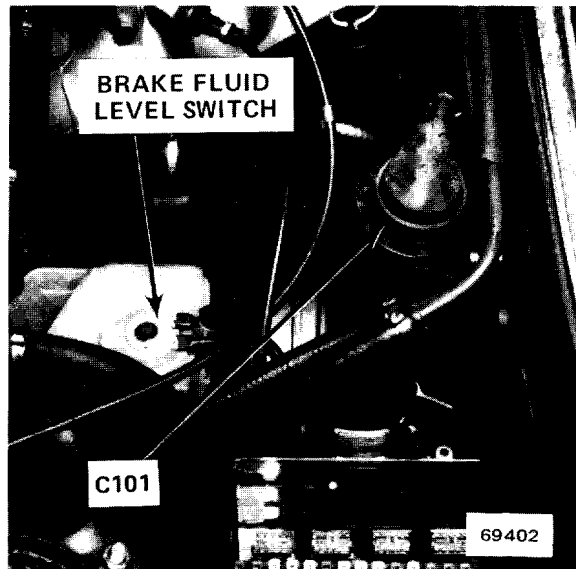


Figure 4 - LH Rear of Engine Compartment

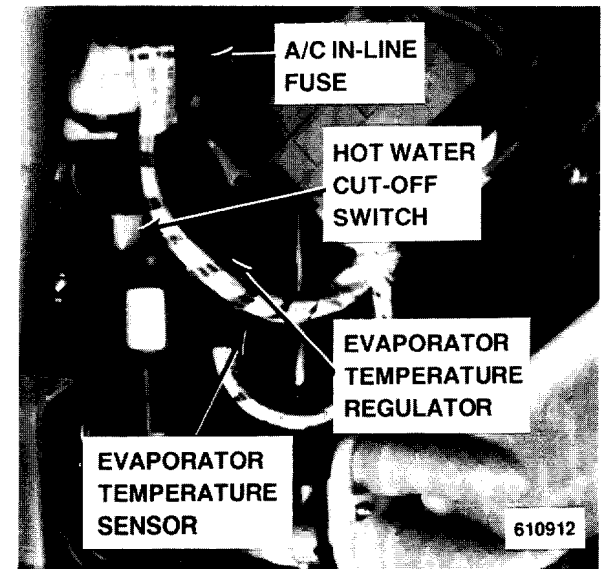


Figure 6 - Under LH Side of Dash



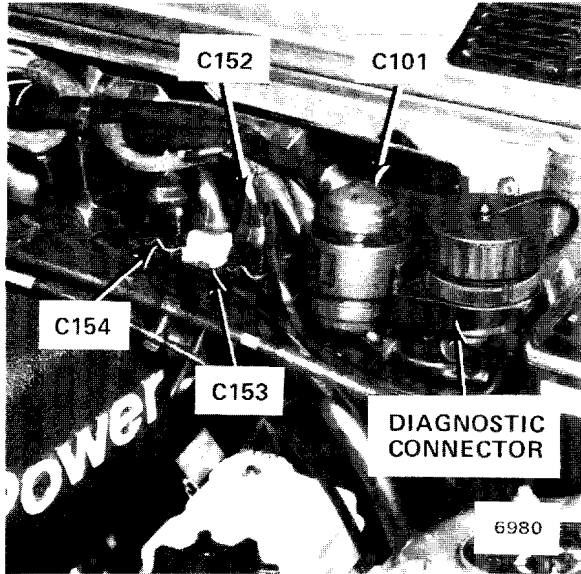


Figure 1 - LH Rear of Engine Compartment

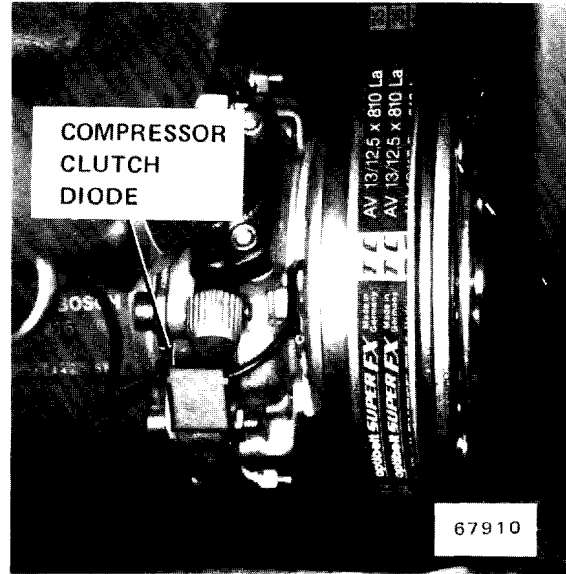


Figure 3 - Lower RH Front of Engine

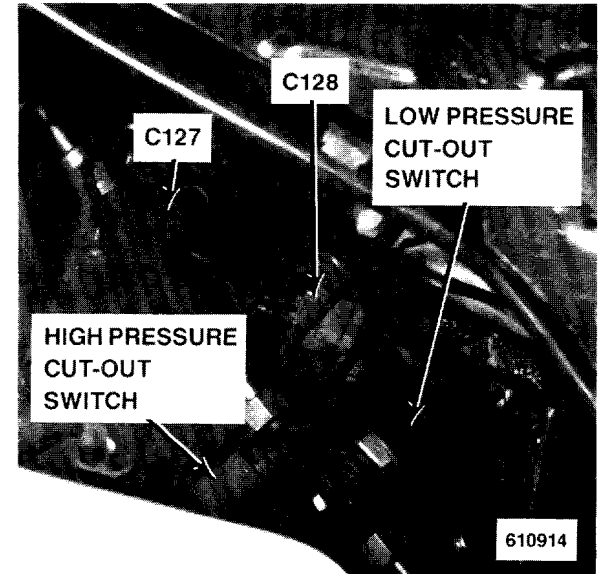


Figure 5 - Behind RH Headlights (Cover Removed)

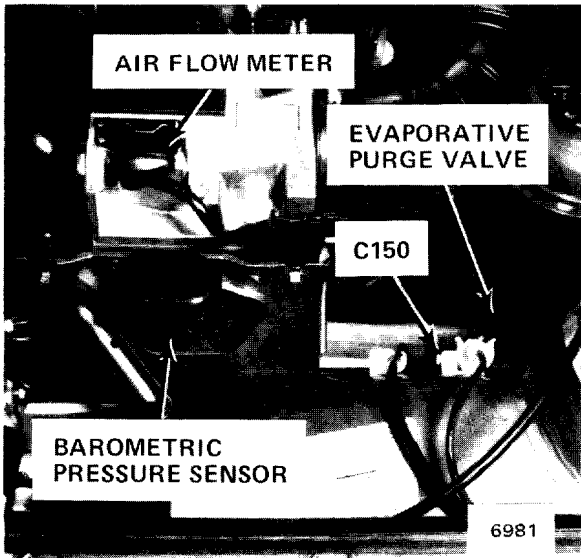


Figure 2 - LH Side of Engine Compartment

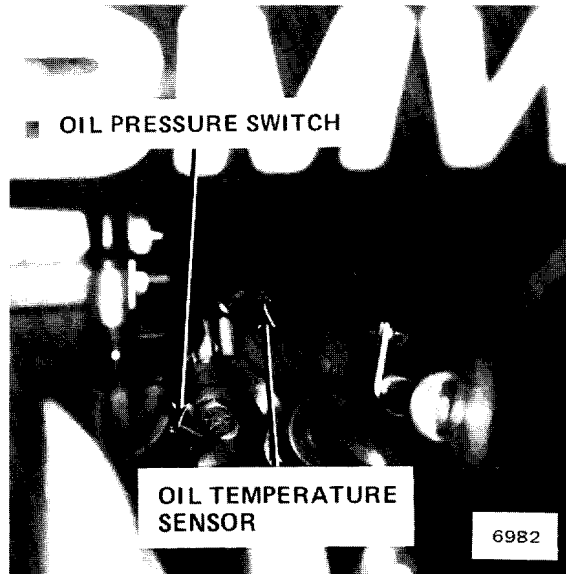


Figure 4 - LH Side of Engine Compartment

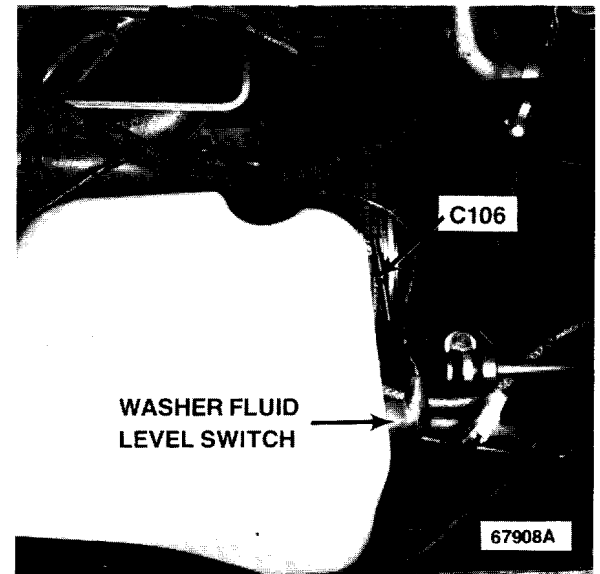


Figure 6 - RH Side of Engine Compartment

# 7000-2 COMPONENT LOCATION VIEWS

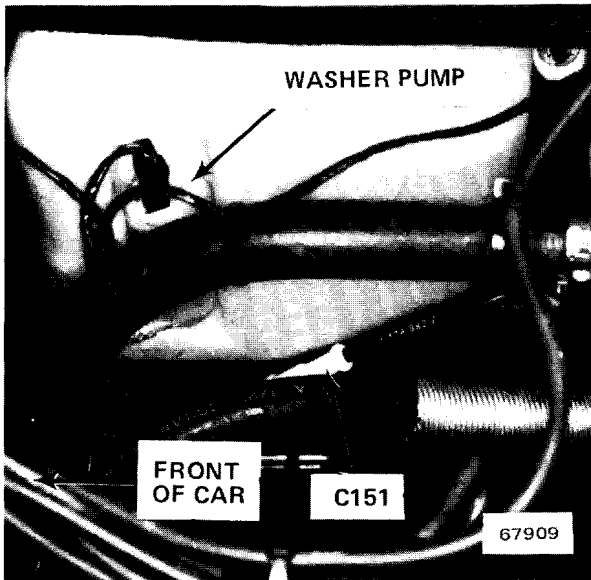


Figure 1 - RH Side of Engine Compartment

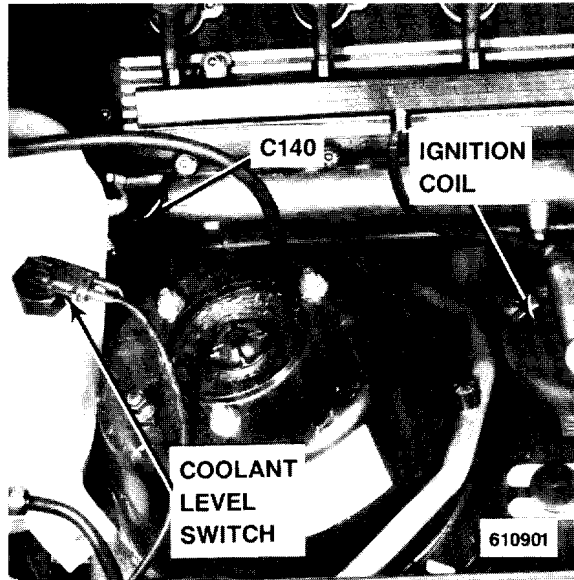


Figure 3 - RH Rear of Engine Compartment

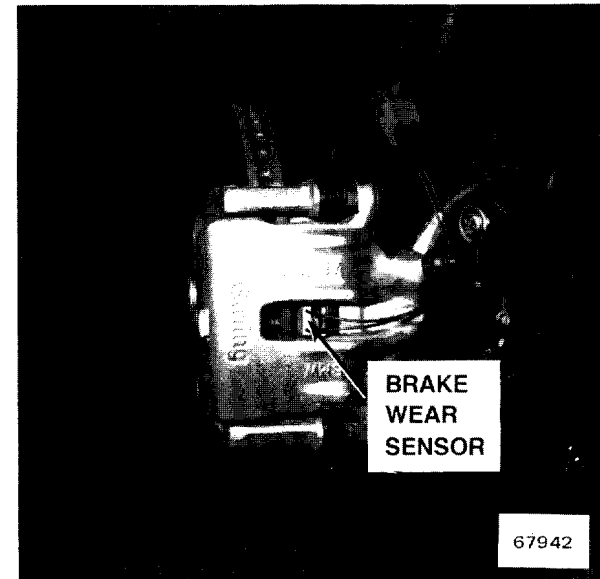


Figure 5 - LH Front Brake Assembly (Wheel Removed)

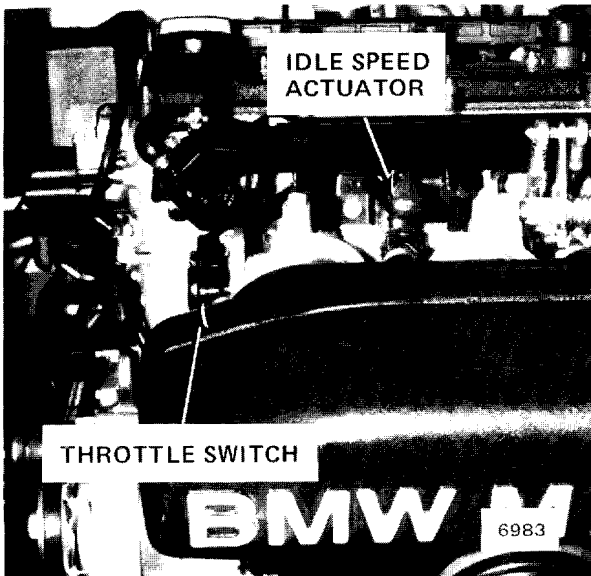


Figure 2 - Center of Engine

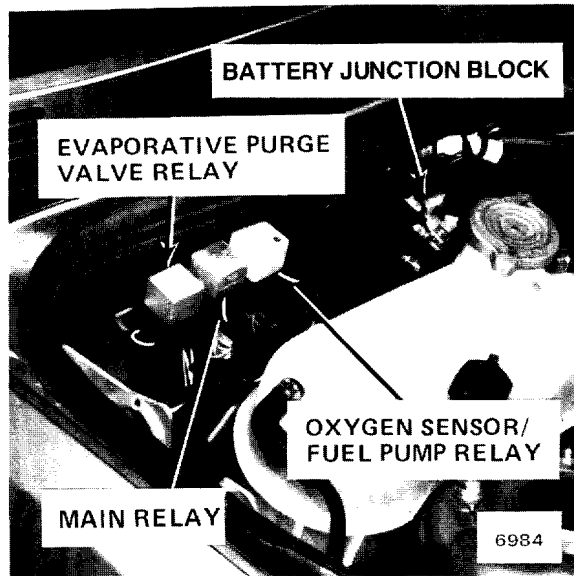


Figure 4 - RH Rear Corner of Engine Compartment



Figure 6 - LH Front Spindle Assembly

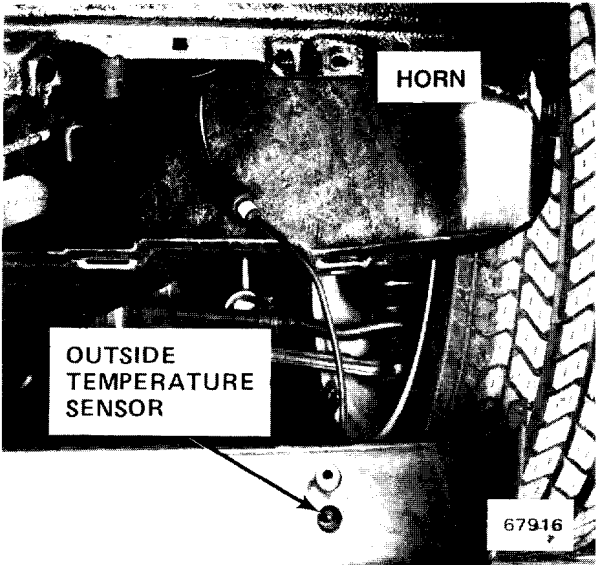


Figure 1 - Under LH Side of Bumper (Splash Guard Pulled Down)

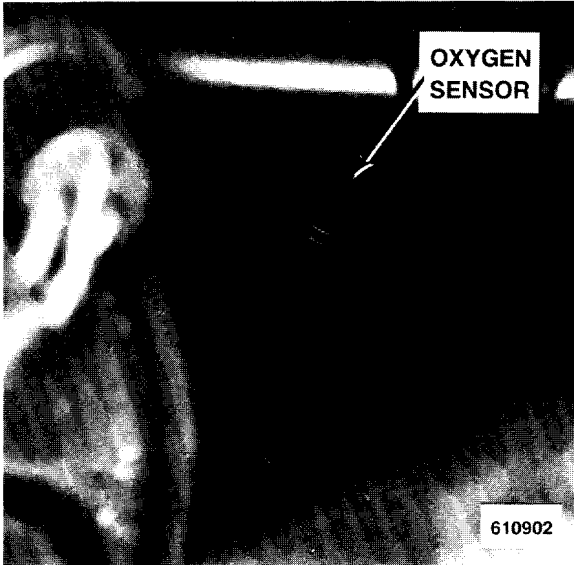


Figure 3 - Below RH Rear of Engine

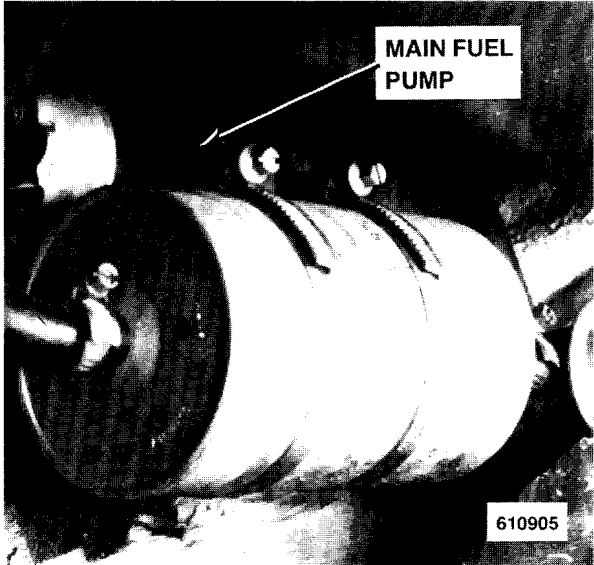


Figure 5 - Ahead of LH Rear Wheel

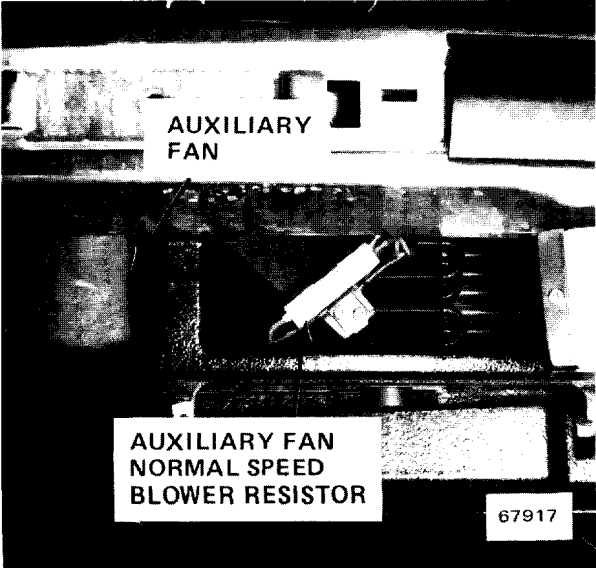


Figure 2 - Under Middle of Front Bumper

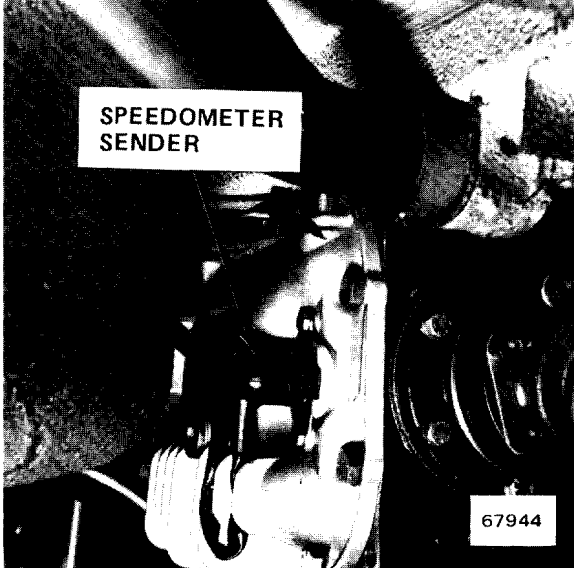


Figure 4 - RH Rear of Differential

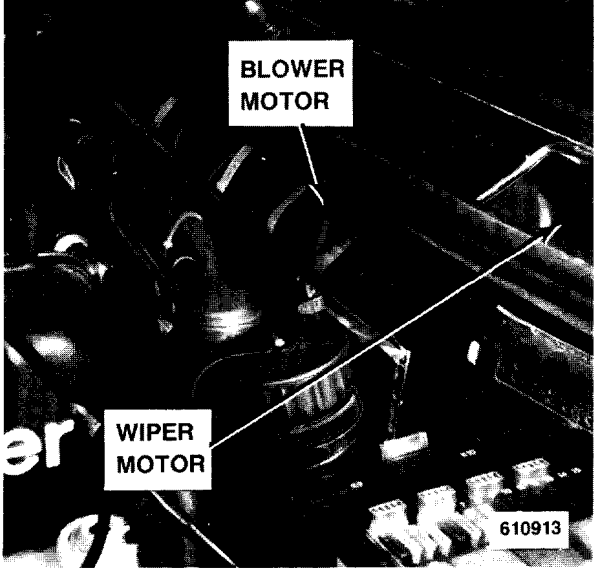


Figure 6 - Behind Cowl (Cover Removed)

## 7000-4 COMPONENT LOCATION VIEWS

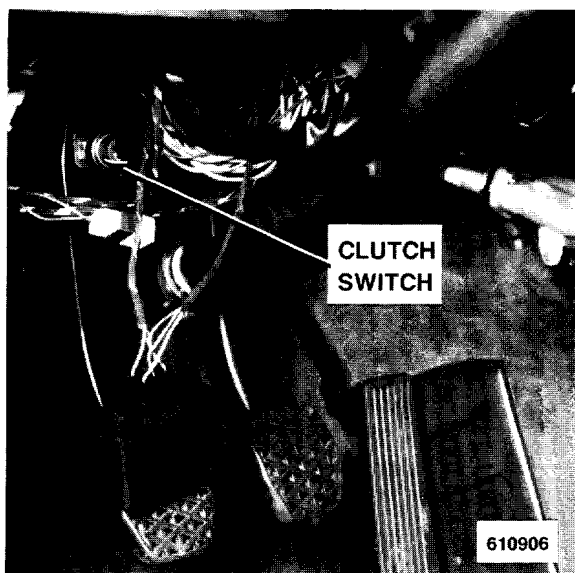


Figure 1 - Under LH Side of Dash

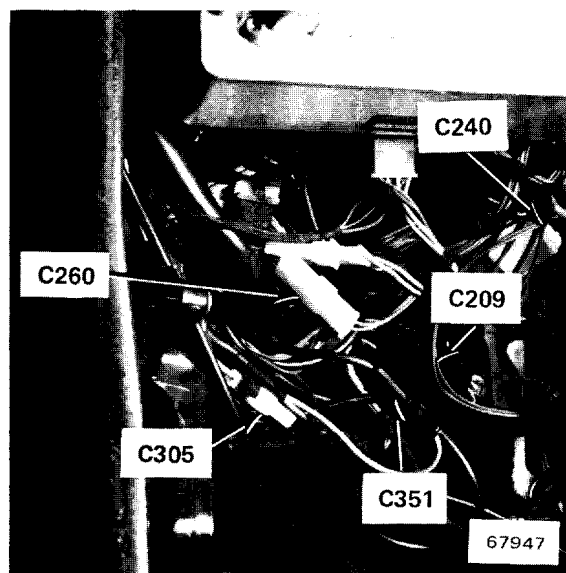


Figure 3 - Under LH Side of Dash

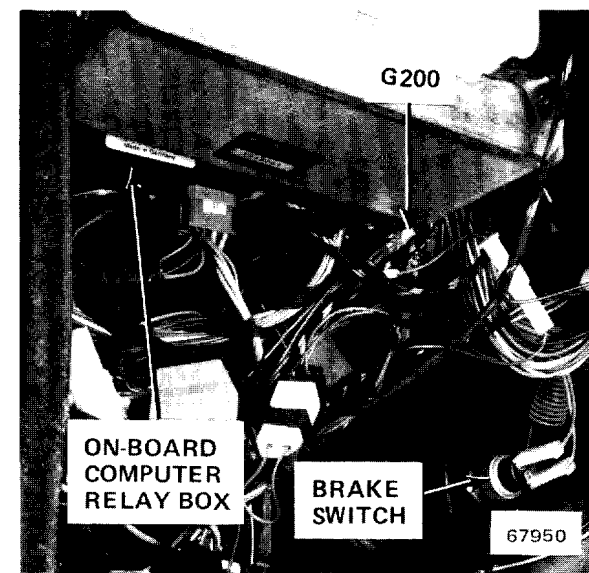


Figure 5 - Under LH Side of Dash



Figure 2 - Under LH Side of Dash

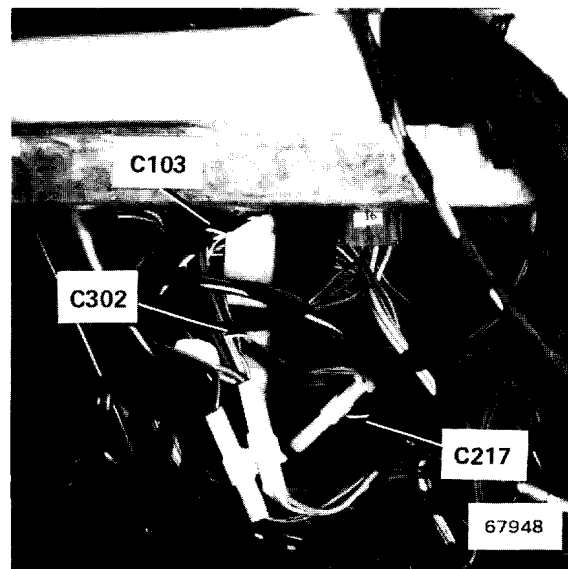


Figure 4 - Under LH Side of Dash

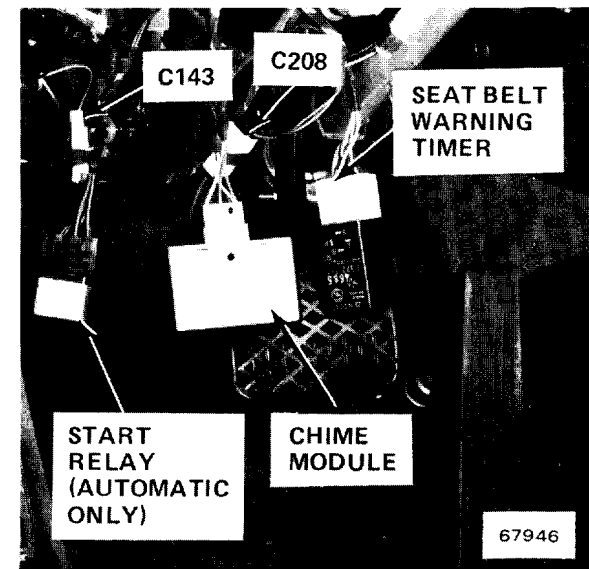


Figure 6 - Under LH Side of Dash

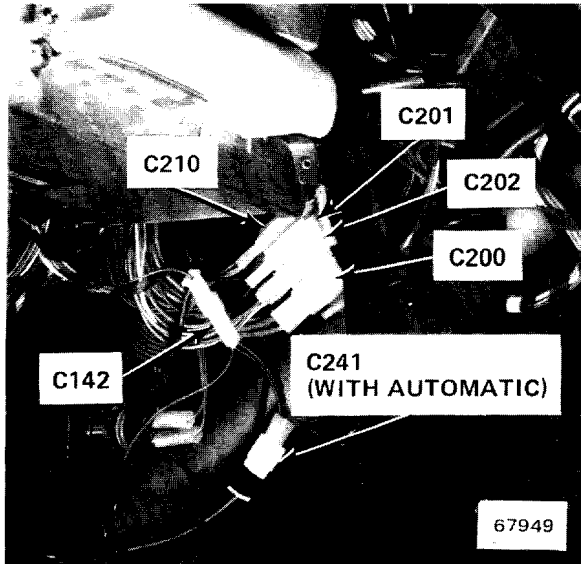


Figure 1 - Under LH Side of Dash

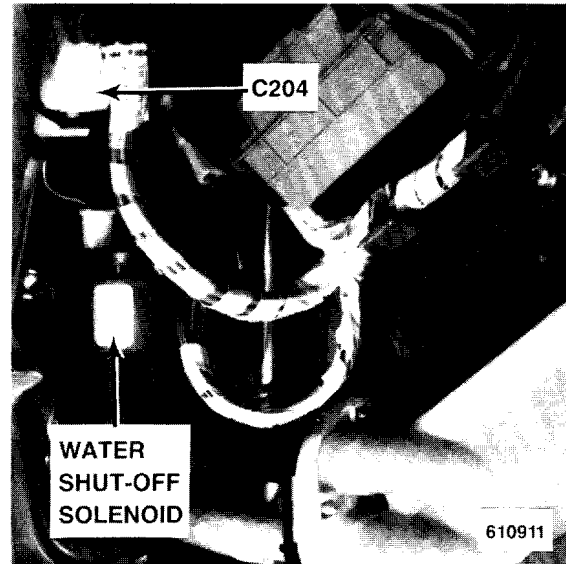


Figure 3 - Under LH Side of Dash

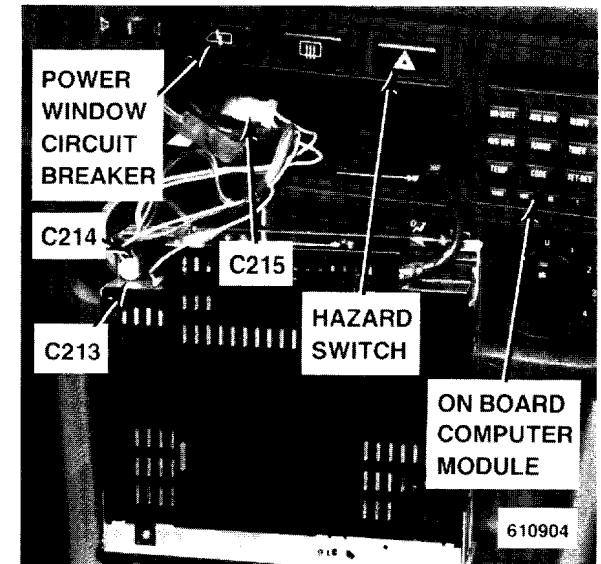


Figure 5 - Center of Dash

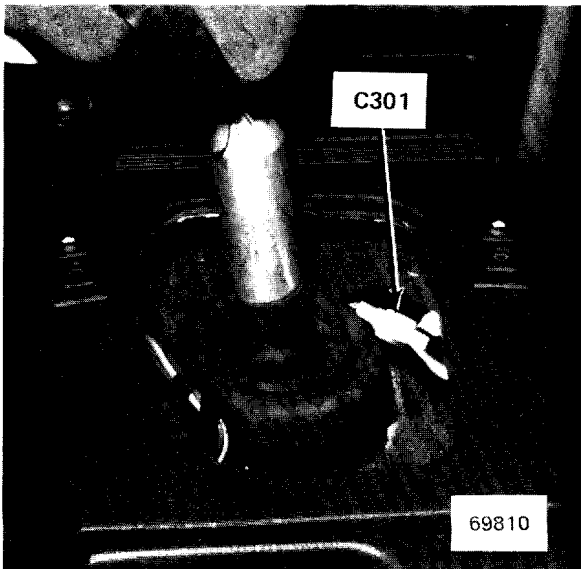


Figure 2 - Center Console

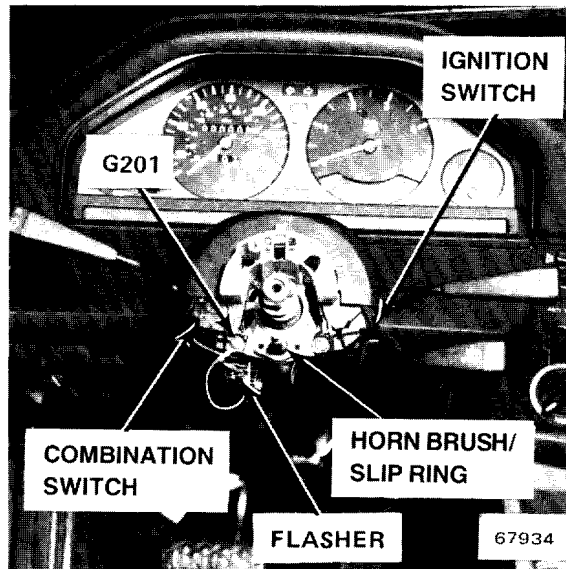


Figure 4 - Top of Steering Column

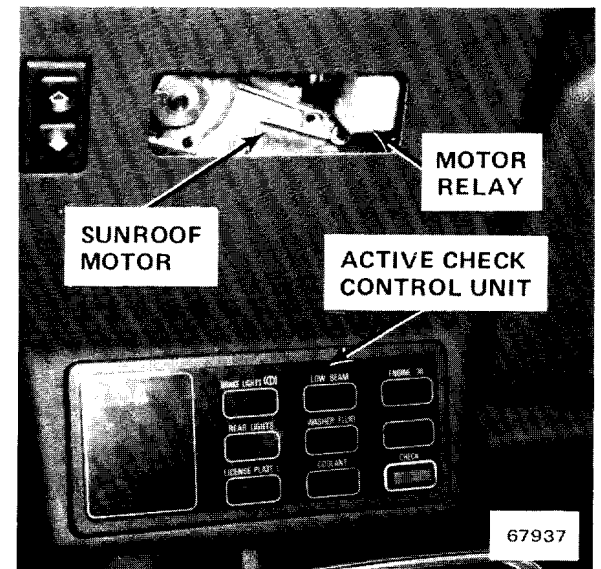


Figure 6 - Center of Windshield Header

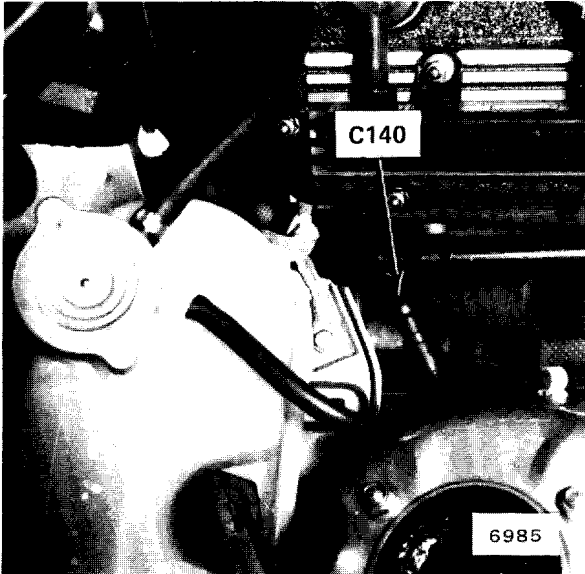


Figure 1 - RH Rear of Engine Compartment



Figure 3 - Behind RH Side of Center Console

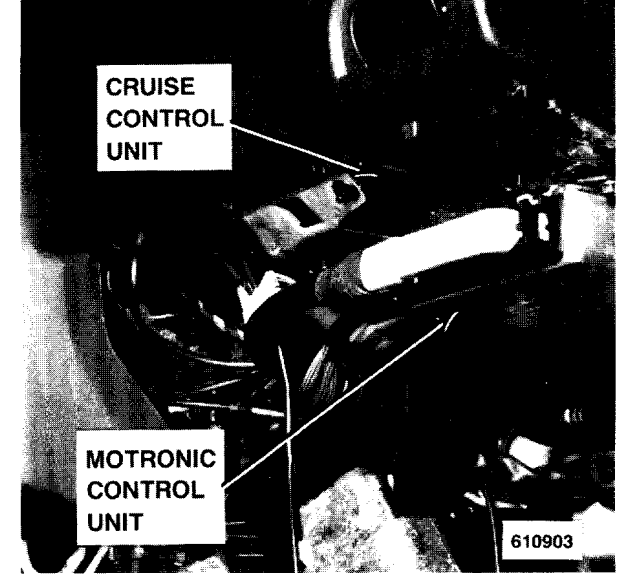


Figure 5 - Under RH Side of Dash

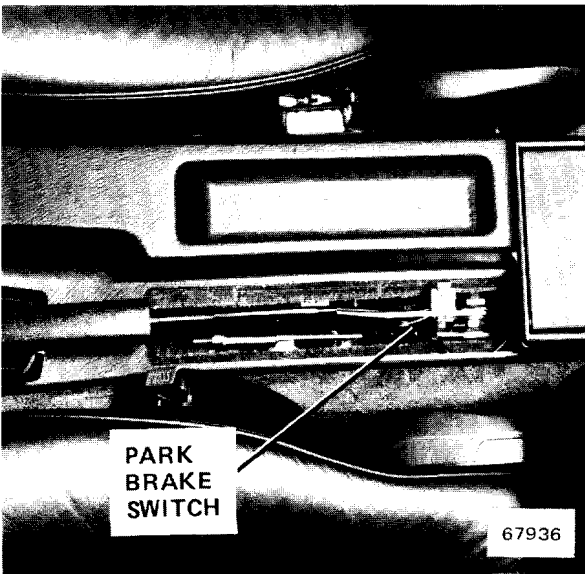


Figure 2 - Rear of Center Console

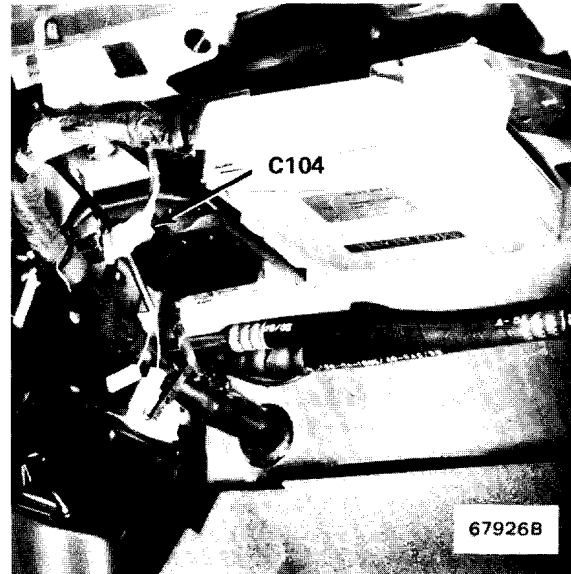


Figure 4 - Under RH Side of Dash

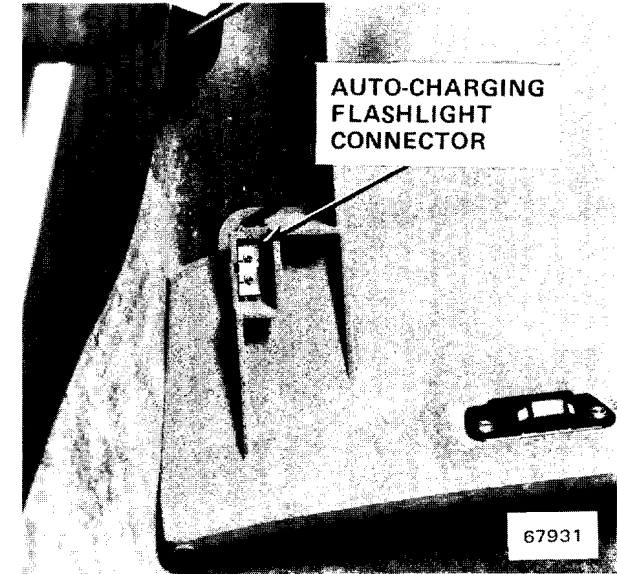


Figure 6 - Inside Glove Box

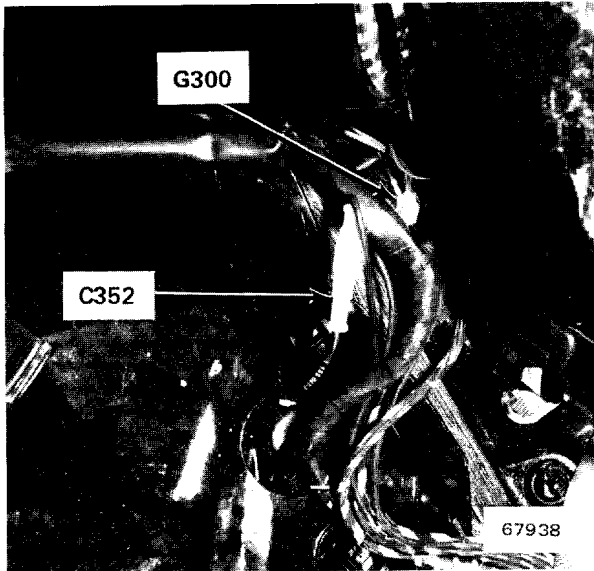


Figure 1 - Under LH Side of Rear Seat

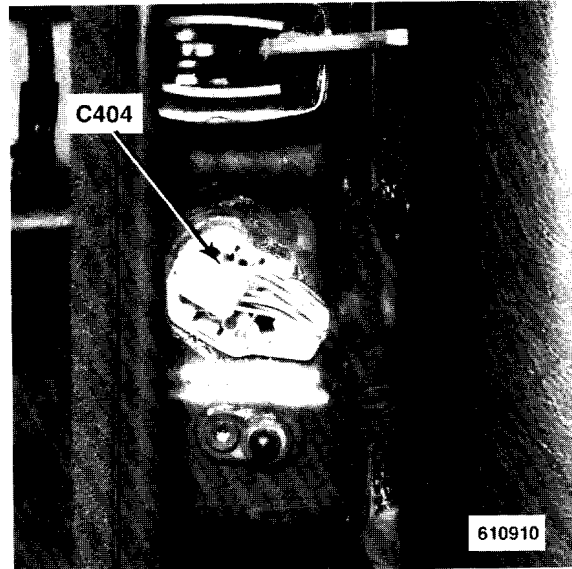


Figure 3 - Above RH Front Door Jamb Switch

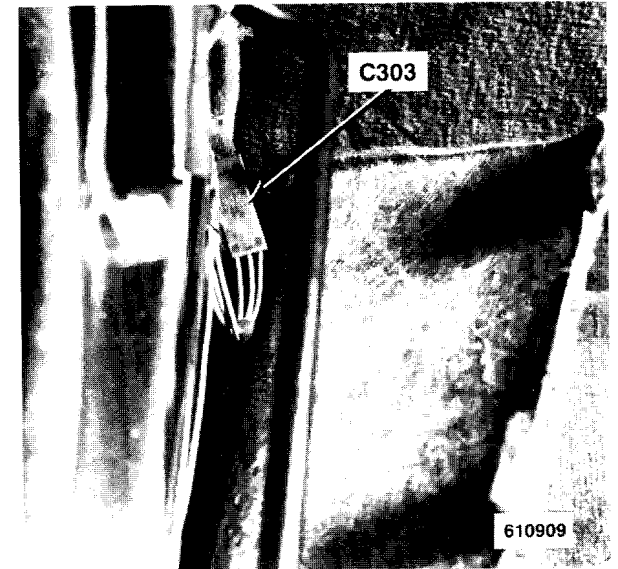


Figure 5 - At Base of RH "B" Pillar

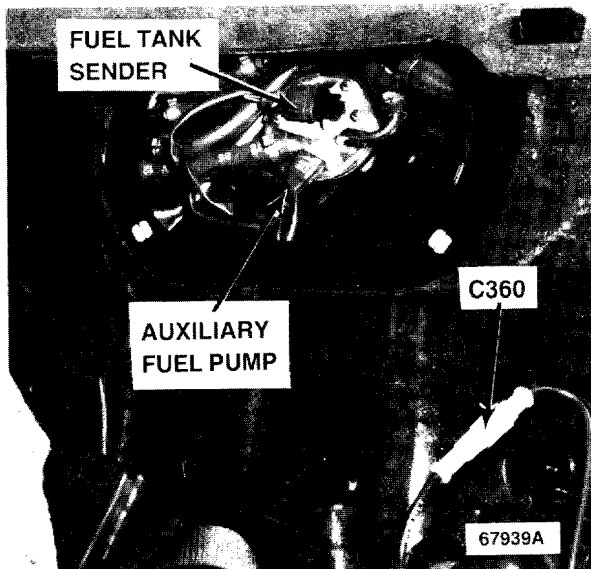


Figure 2 - Under RH Side of Rear Seat

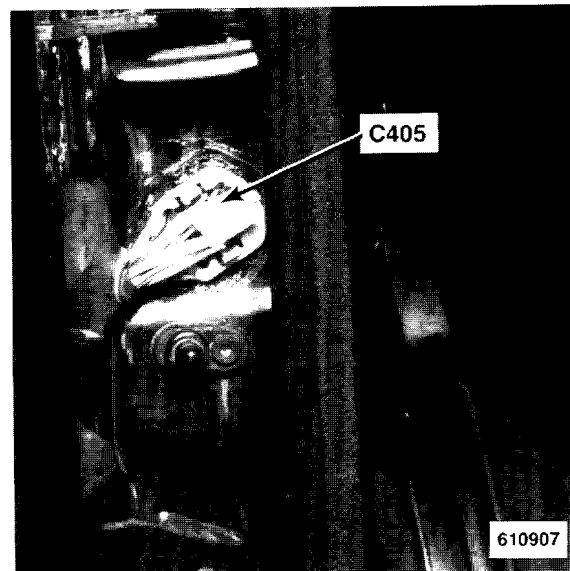


Figure 4 - Above LH Front Door Jamb Switch

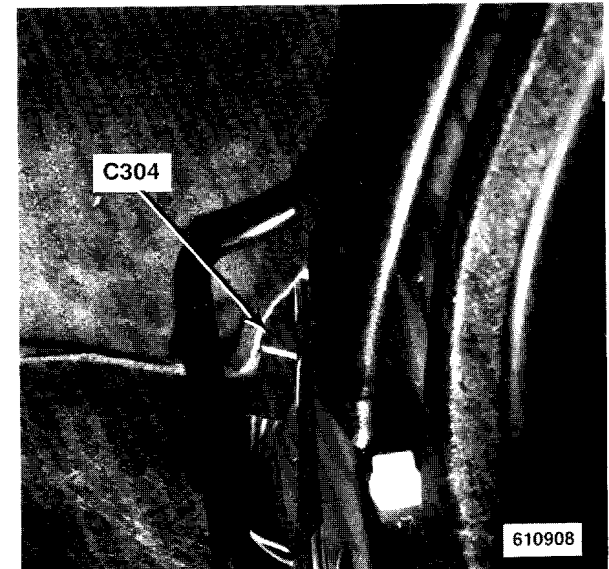


Figure 6 - At Base of LH "B" Pillar

# 7000-8 COMPONENT LOCATION VIEWS

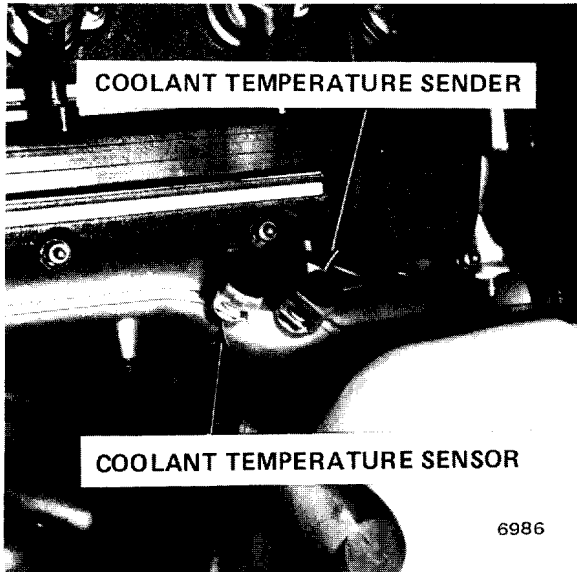


Figure 1 - RH Side of Engine Compartment

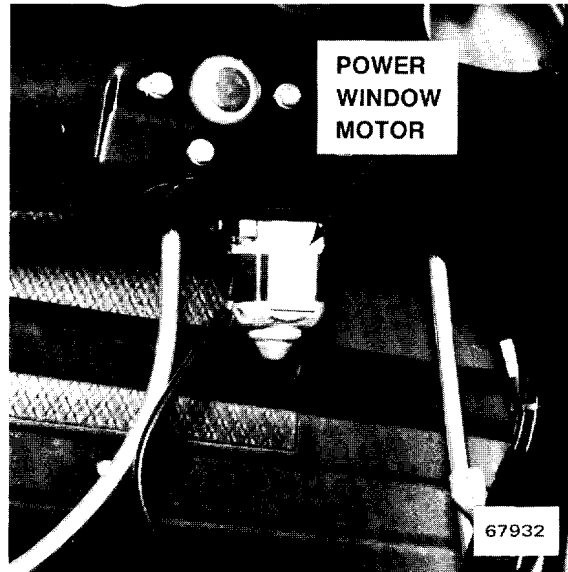


Figure 3 - Inside LH Front Door (Panel Removed)

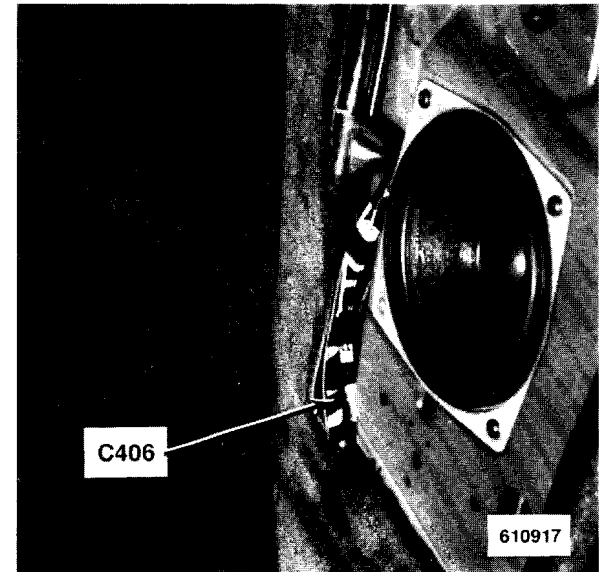


Figure 5 - Below Right Front Speaker

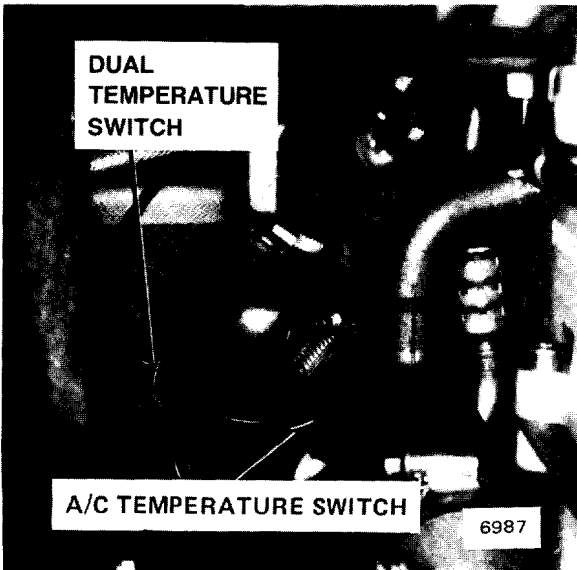


Figure 2 - Lower RH Corner of Engine Compartment

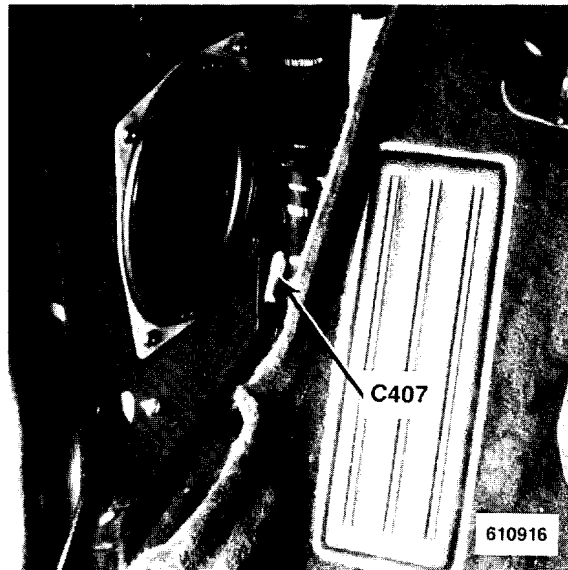


Figure 4 - Below Left Front Speaker

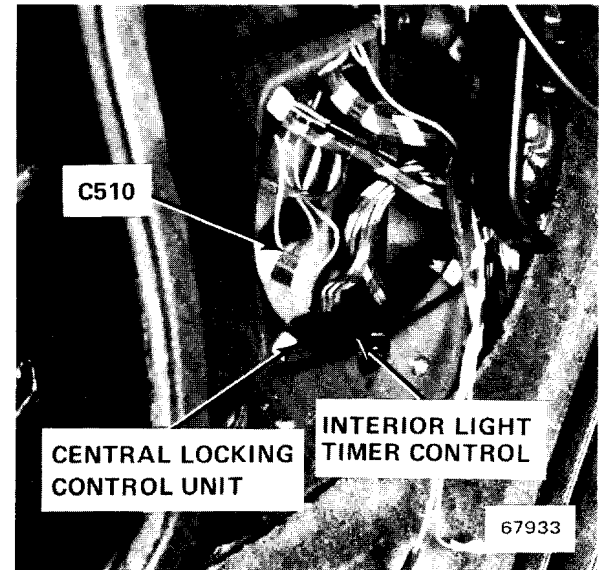


Figure 6 - Behind Left Front Speaker



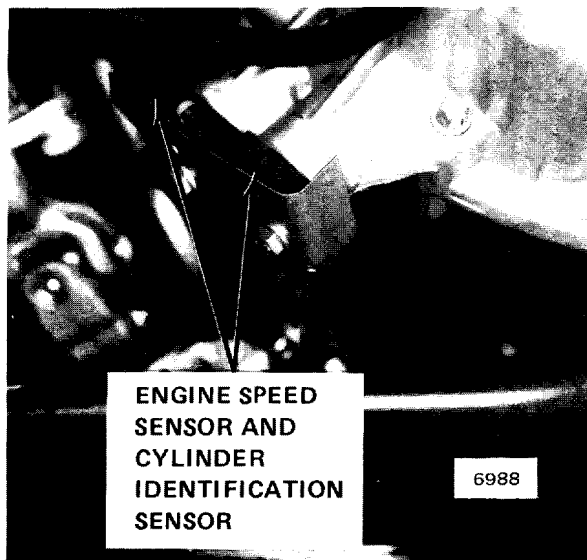


Figure 1 - Underside of Car, LH Side of Transmission Bell Housing



Figure 3 - Middle Rear of Trunk

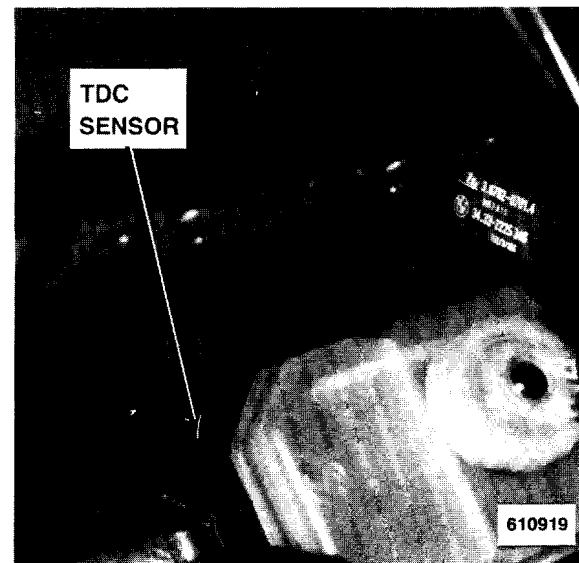


Figure 5 - Lower LH Rear of Engine

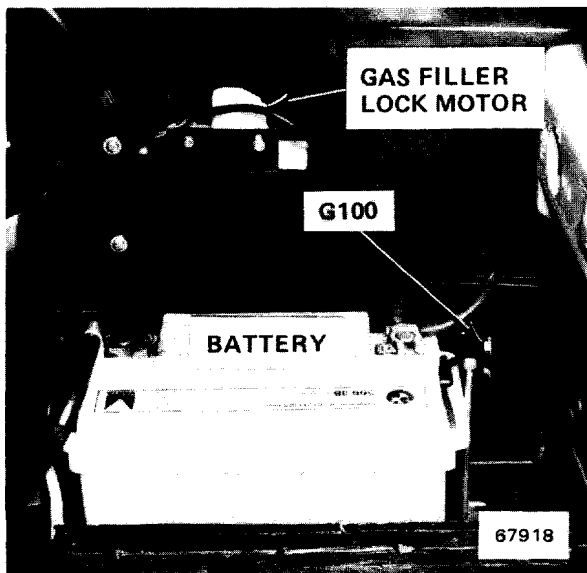


Figure 2 - LH Front of Trunk

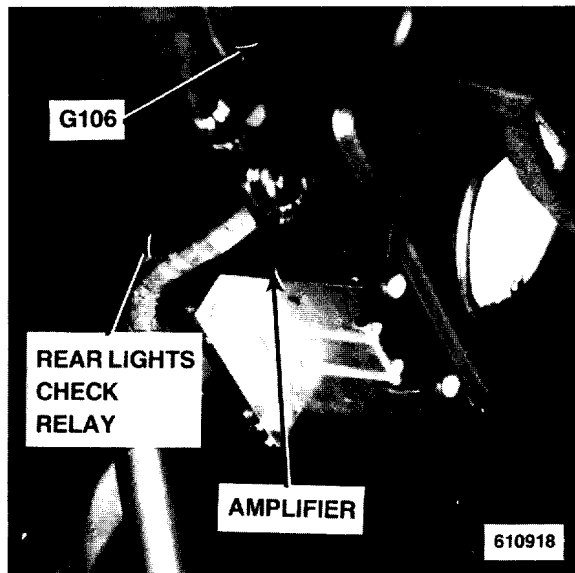


Figure 4 - RH of Trunk

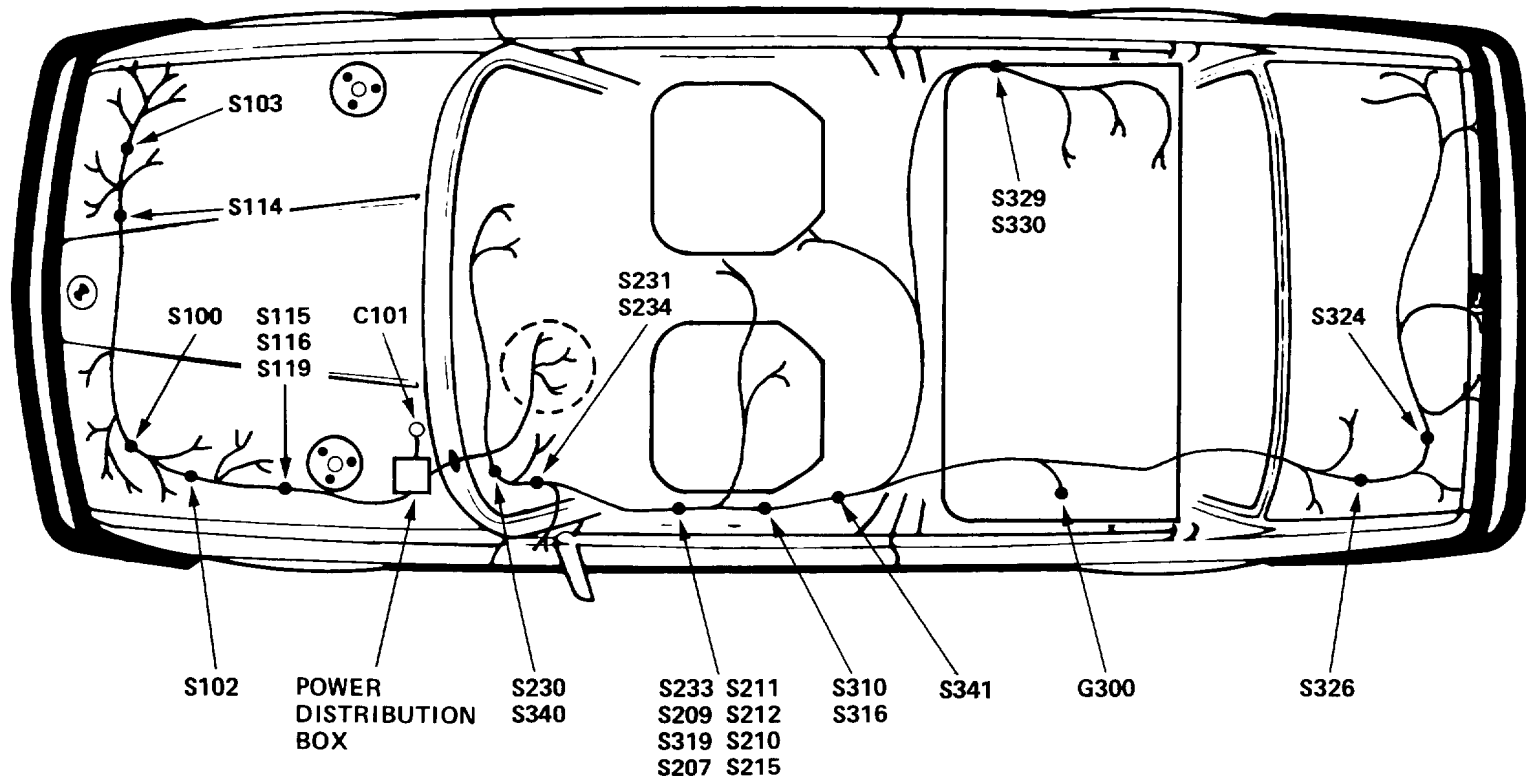
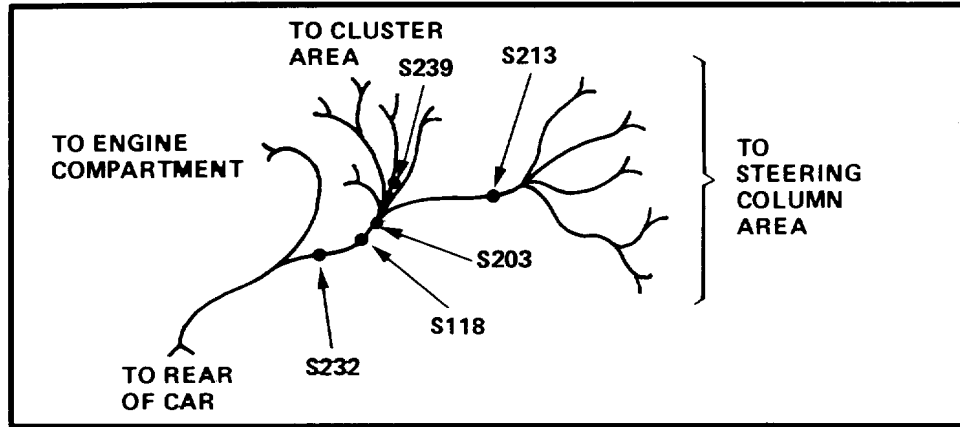
## 8000-0 SPLICE LOCATION VIEWS

### INDEX

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.

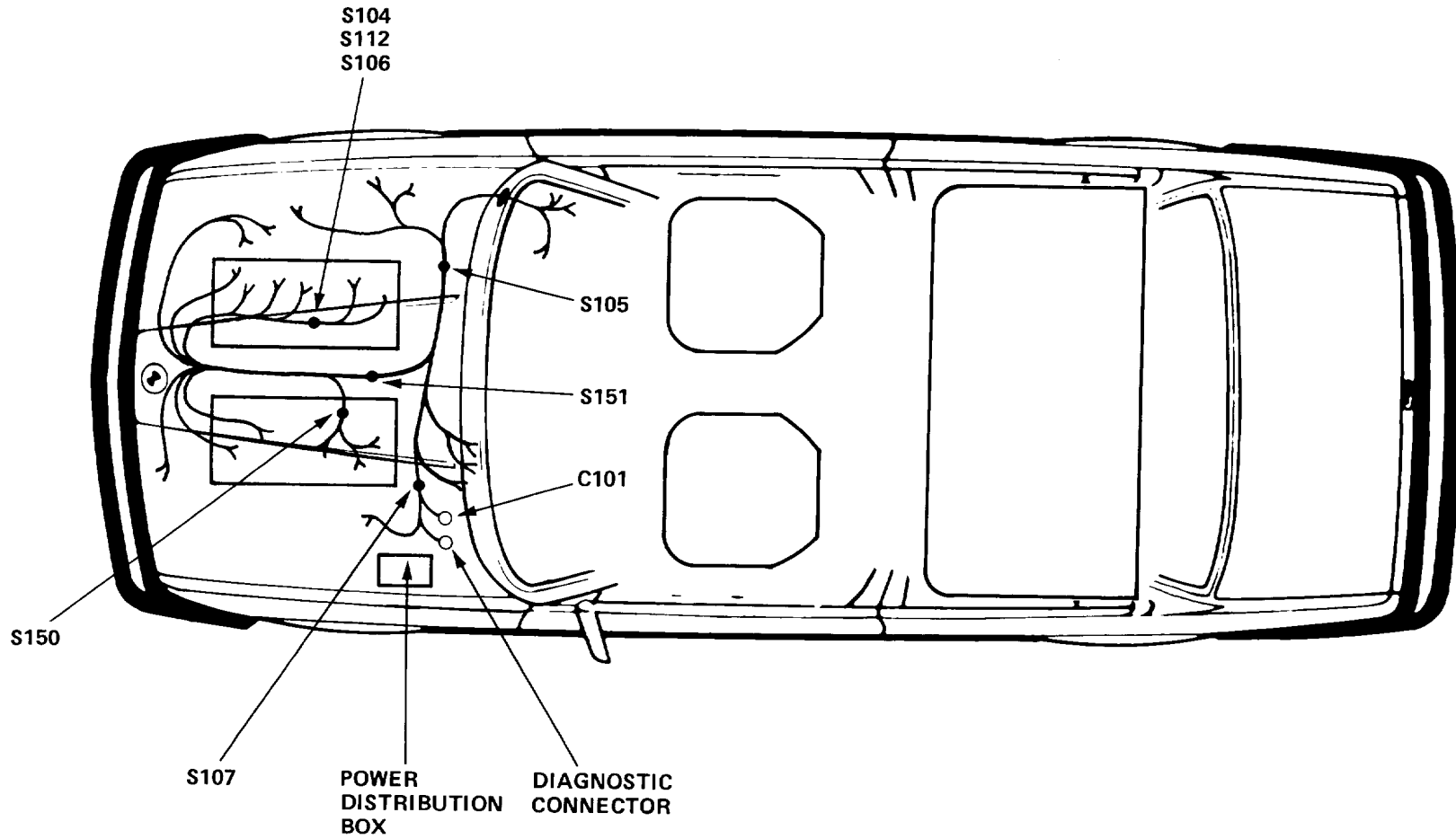
SPLICE	HARNESS	PAGE NUMBER	SPLICE	HARNESS	PAGE NUMBER
S100	MAIN	8000-1	S240	A/C	NOT SHOWN
S102	MAIN	8000-1	S241	CRUISE CONTROL	NOT SHOWN
S103	MAIN	8000-1	S300	DOOR	8000-3
S104	ENGINE (S14)	8000-2	S301	DOOR	8000-3
S105	ENGINE (S14)	8000-2	S302	DOOR	8000-3
S106	ENGINE (S14)	8000-2	S303	DOOR	8000-3
S107	ENGINE (S14)	8000-2	S305	DOOR	8000-3
S112	ENGINE (S14)	8000-2	S306	INSTRUMENT PANEL	8000-4
S114	MAIN	8000-1	S307	INSTRUMENT PANEL	8000-4
S115	MAIN	8000-1	S309	DOOR	8000-3
S116	MAIN	8000-1	S310	MAIN	8000-1
S118	MAIN	8000-1	S316	MAIN	8000-1
S119	MAIN	8000-1	S319	MAIN	8000-1
S150	ENGINE (S14)	8000-2	S322	DOOR	8000-3
S151	ENGINE (S14)	8000-2	S324	MAIN	8000-1
S201	ON-BOARD COMPUTER	8000-5	S326	MAIN	8000-1
S202	ON-BOARD COMPUTER	8000-5	S329	MAIN	8000-1
S203	MAIN	8000-1	S330	MAIN	8000-1
S207	MAIN	8000-1	S332	DOOR	8000-3
S209	MAIN	8000-1	S333	DOOR	8000-3
S210	MAIN	8000-1	S340	MAIN	8000-1
S211	MAIN	8000-1	S341	MAIN	8000-1
S212	MAIN	8000-1	S342	DOOR	8000-3
S213	MAIN	8000-1	S345	RADIO	NOT SHOWN
S215	MAIN	8000-1	S400	RADIO	NOT SHOWN
S219	INSTRUMENT PANEL	8000-4	S403	RADIO	NOT SHOWN
S221	INSTRUMENT PANEL	8000-4	S404	RADIO	NOT SHOWN
S223	CRUISE CONTROL	NOT SHOWN	S411	DOOR	8000-3
S226	A/C	NOT SHOWN	S501	DOOR	8000-3
S228	CRUISE CONTROL	NOT SHOWN	S502	DOOR	8000-3
S229	AIR CONDITIONING	NOT SHOWN	S503	DOOR	8000-3
S230	MAIN	8000-1	S504	DOOR	8000-3
S231	MAIN	8000-1			
S232	MAIN	8000-1			
S233	MAIN	8000-1			
S234	MAIN	8000-1			
S239	MAIN	8000-1			

MAIN HARNESS SPLICE LOCATIONS

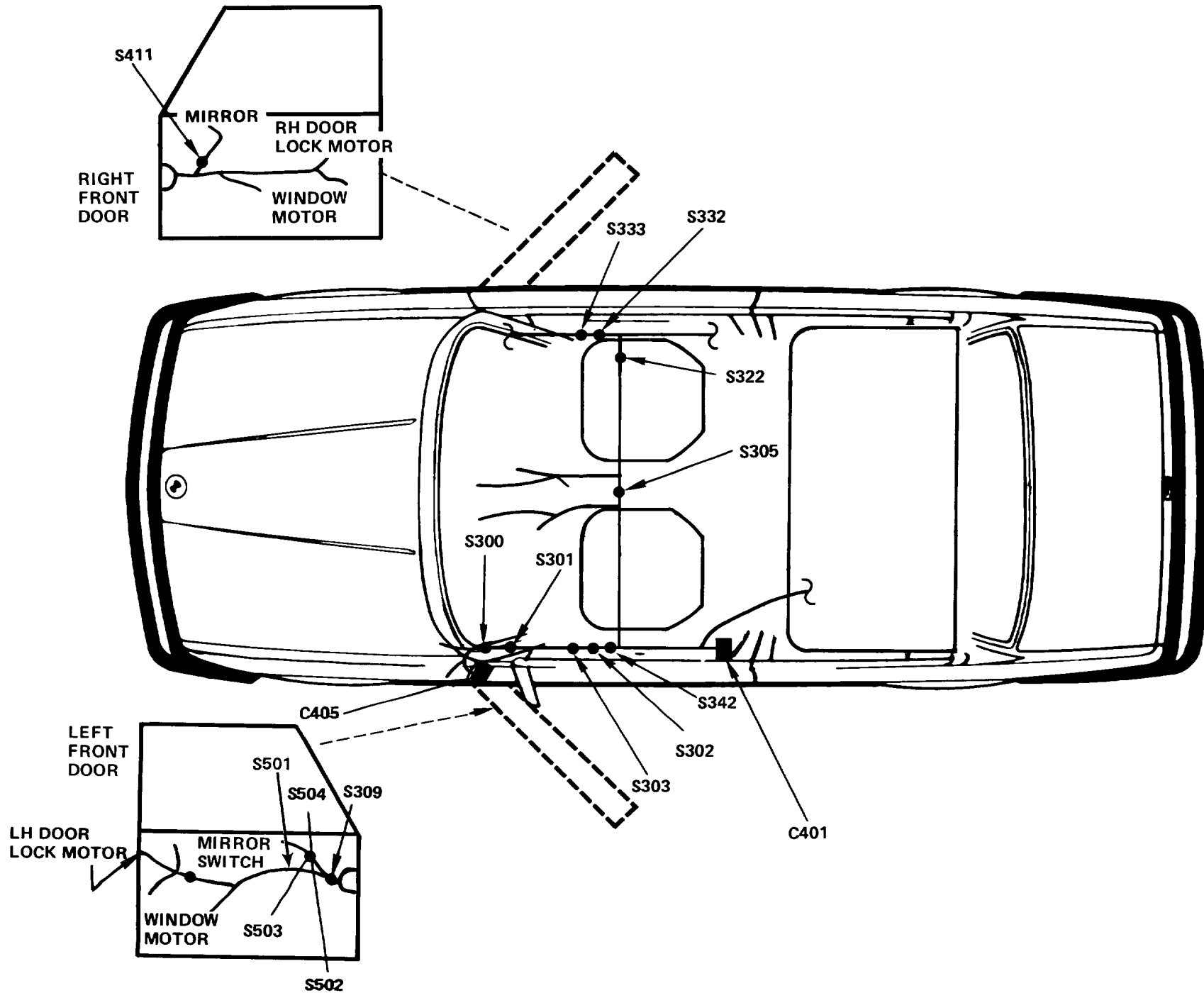


# 8000-2 SPLICE LOCATION VIEWS

## ENGINE HARNESS SPLICE LOCATIONS

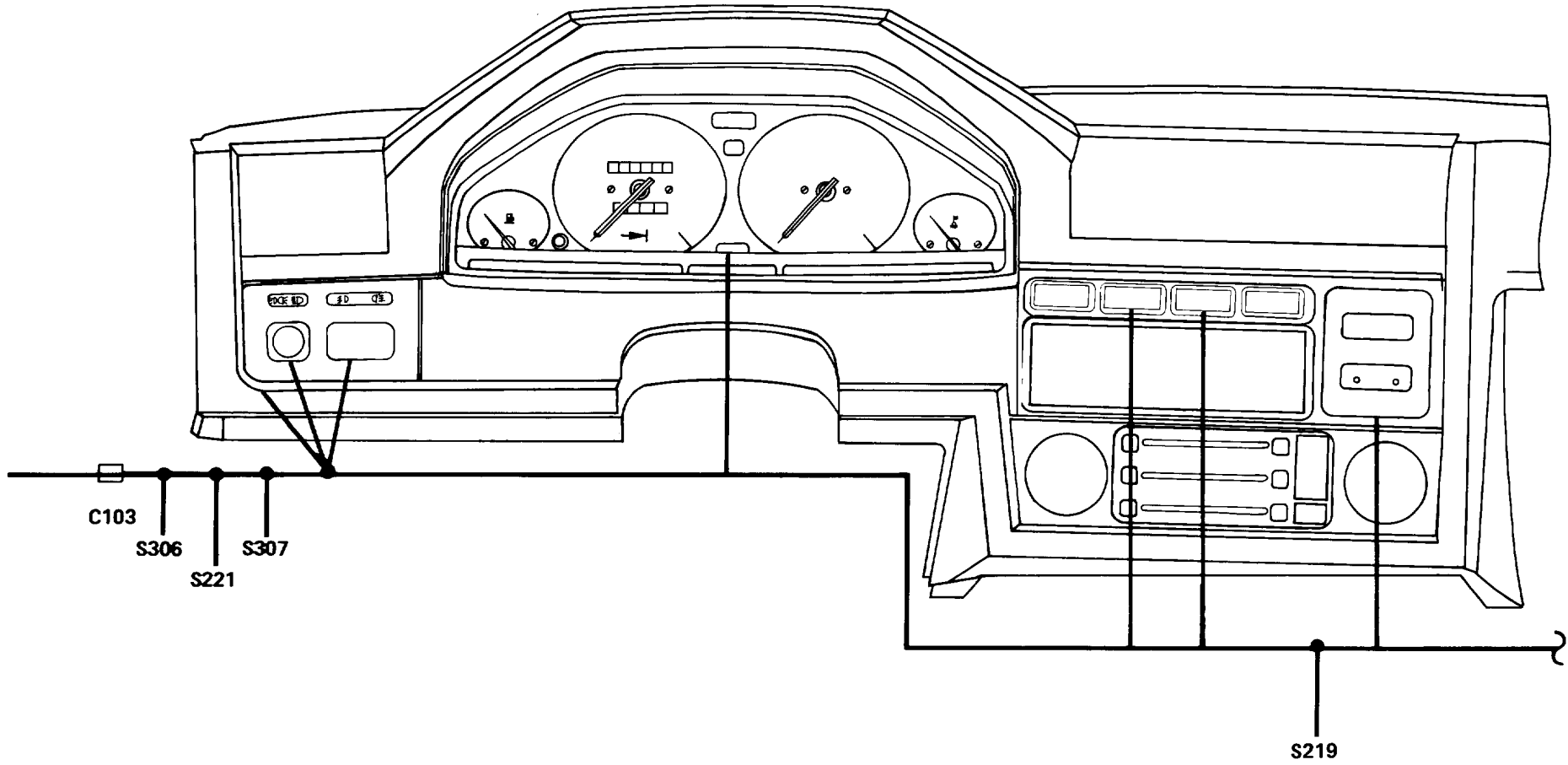


DOOR HARNESS SPLICE LOCATIONS

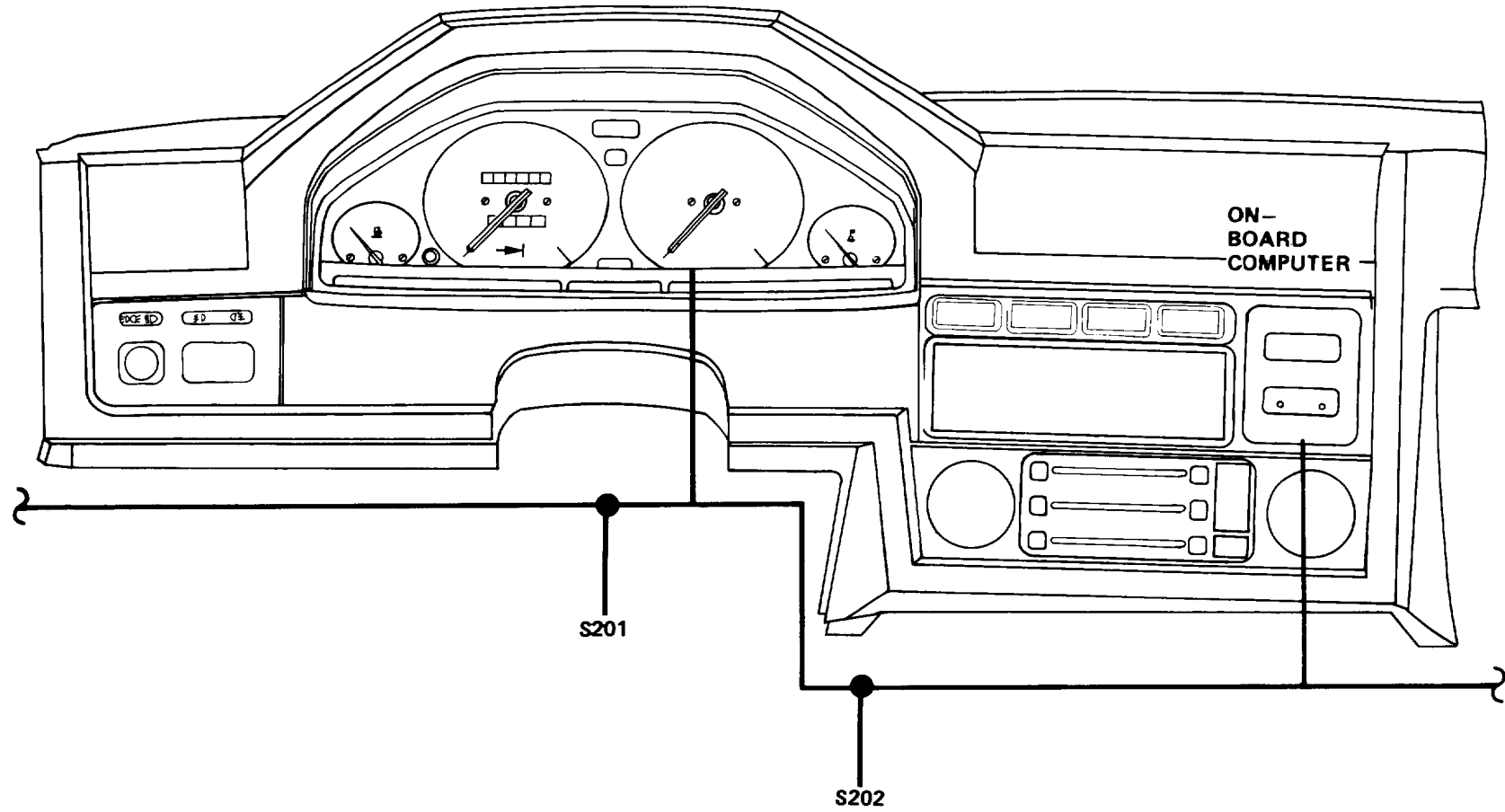


# 8000-4 SPLICE LOCATION VIEWS

## INSTRUMENT PANEL HARNESS SPLICE LOCATION

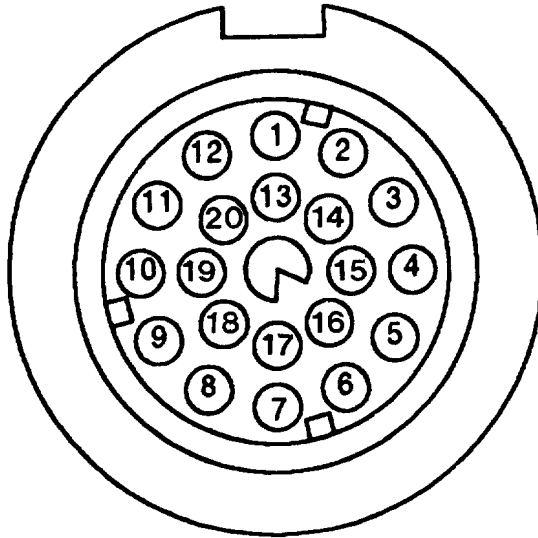


ON-BOARD COMPUTER HARNESS SPLICE LOCATIONS



# 8500-0 CONNECTOR VIEWS

## DIAGNOSTIC CONNECTOR



DIAGNOSTIC CONNECTOR FACE

Pin	Wire Size	Wire Color	Circuit and Component Connected
1	1	GN	Ignition Coil, Motronic Control Unit
4	.5	BR/WT	Coolant Temperature Sender
5	.75	WT/GN	Motronic Control Unit
6	.5	WT/BK	SRS Connector (Not Used)
7	.5	WT/BU	Service Interval Indicator, Service Interval Processor (Reset)
8	.5	YL	Ignition, TDC Sensor
9	Shield		Ignition, TDC Sensor
10	.5	BK	Ignition, TDC Sensor
11	2.5	BK/YL	Starter, Start (50), Motronic Control Unit
12	.75	BU	Charge System, Alternator
14	2.5	RD	Battery (+)
16	1.5	GN/YL	Evaporative Purge Valve Relay
19	Shield		Ignition Coil, Motronic Control Unit
	1.5	BR	Ground Distribution (G103)



## ACCESSORY CONNECTOR

## CIRCUITS USING C302 (ACCESSORY CONNECTOR)

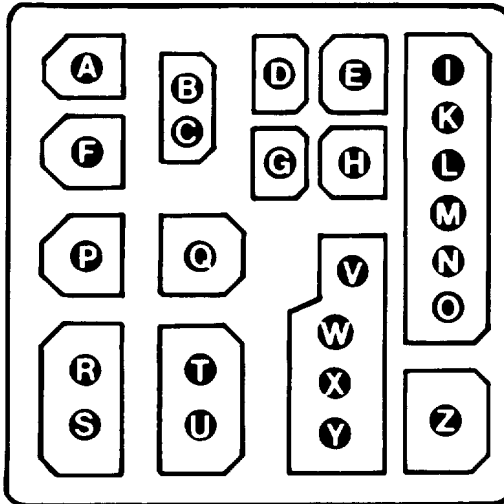
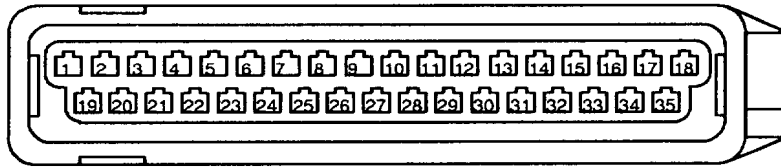


Figure 1-C302 (Accessory Connector)  
Front View—Under LH Side  
of Dash Ahead of Pedal Assembly

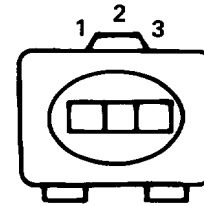
TERMINAL	CIRCUIT	TERMINAL	CIRCUIT
A	Not Used	N	Not Used
B	Not Used	O	Not Used
C	Not Used	P	Not Used
D	Central Locking	Q	Power Windows & Sunroof
E	Not Used	R	Cruise Control
F	Not Used	S	Cruise Control
G	Not Used	T	Not Used
H	On-Board Computer	U	Not Used
I	Not Used	V	Radio
J	Not Used	W	Radio
K	Not Used	X	Radio
L	Not Used	Y	Radio
M	Not Used	Z	Power Antenna

# 8500-2 CONNECTOR VIEWS

B350002

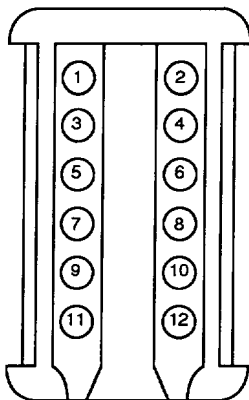


Mating Face  
ABS CONTROL UNIT



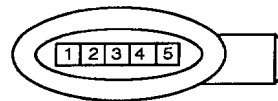
Wiring Face  
BAROMETRIC PRESSURE SENSOR

B120014

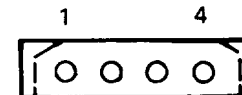


Wiring Face  
ABS HYDRAULIC UNIT

B050008

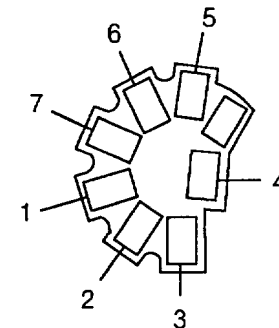


Wiring Face  
AIR FLOW METER



Wiring Face  
BLOWER RESISTORS

B080014



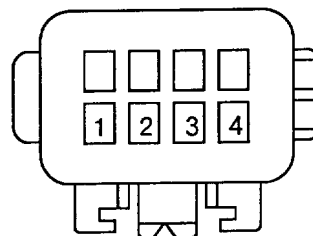
Wiring Face  
BLOWER SPEED CONTROL

14 26

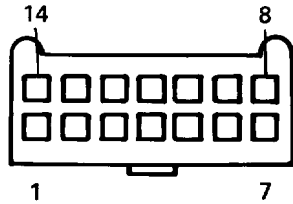


Wiring Face  
ACTIVE CHECK CONTROL

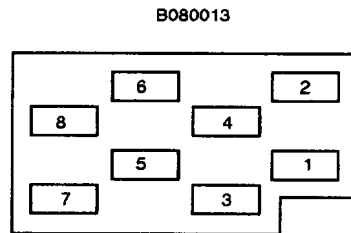
B080012



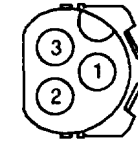
Wiring Face  
AUXILIARY FUSE



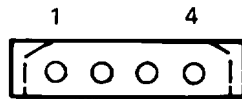
Wiring Face  
CENTRAL LOCKING CONTROL UNIT



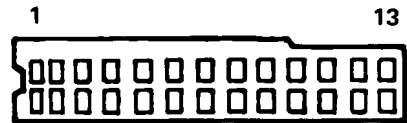
Wiring Face  
CONTROL SWITCHES



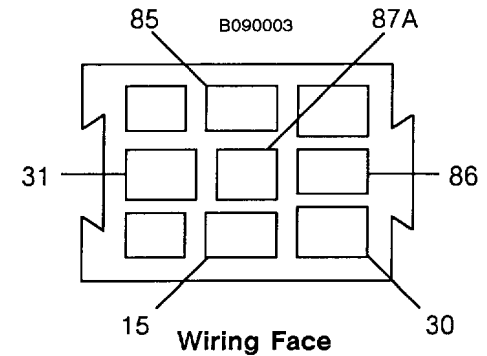
Mating Face  
DUAL TEMPERATURE SWITCH



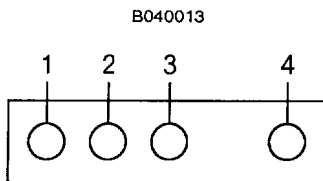
Wiring Face  
CHIME MODULE (C1)



Wiring Face  
CRUISE CONTROL



Wiring Face  
EVAPORATIVE PURGE VALVE RELAY

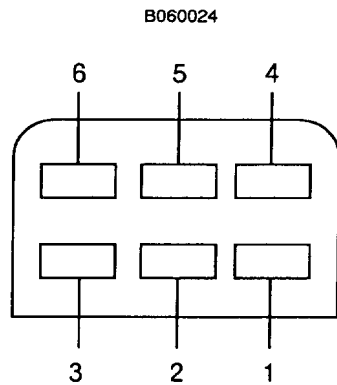


Wiring Face  
CHIME MODULE (C2)



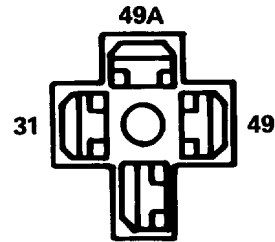
Wiring Face  
DOOR LOCK MOTOR

# 8500-4 CONNECTOR VIEWS

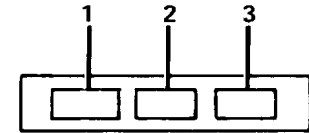


Wiring Face

EVAPORATOR TEMPERATURE  
REGULATOR

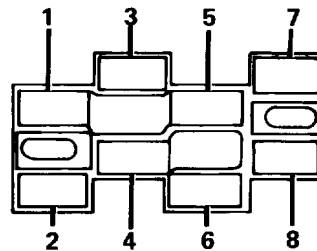


Wiring Face  
FLASHER



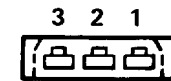
Wiring Face

FRONT TURN/PARK LIGHT



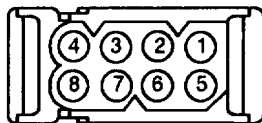
Wiring Face

FOG LIGHT SWITCH



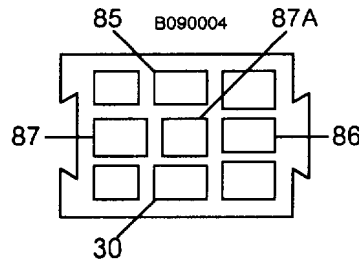
Wiring Face

FUEL TANK SENDER



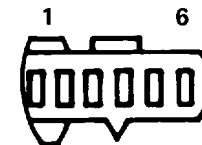
Mating Face

FADER CONTROL



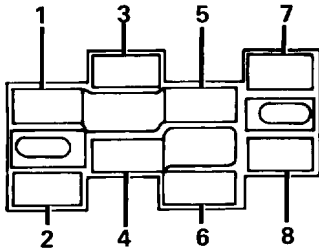
Wiring Face

FRESH/RECIRCULATING  
AIR RELAY

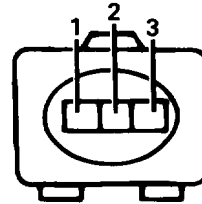


Wiring Face

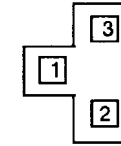
GAS FILLER LOCK MOTOR



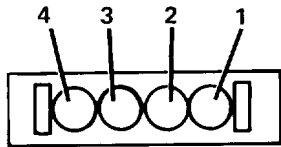
Wiring Face  
HAZARD SWITCH



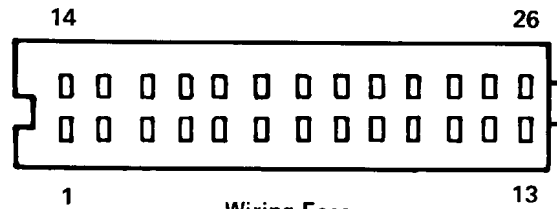
Wiring Face  
IDLE SPEED ACTUATOR



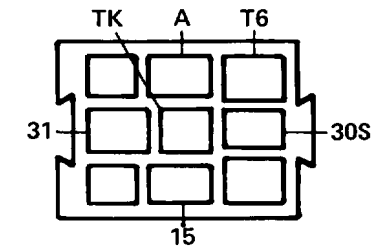
Wiring Face  
INSTRUMENT CLUSTER (C6)



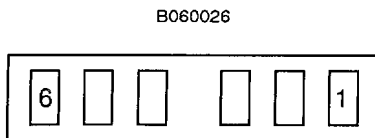
Wiring Face  
HIGH LEVEL STOP LIGHT



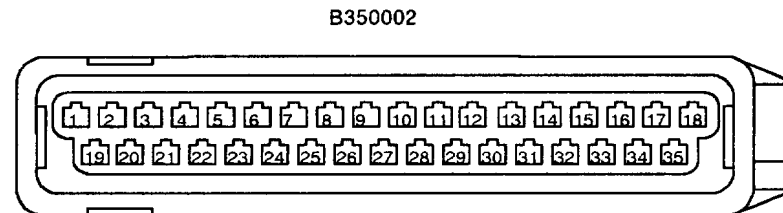
Wiring Face  
INSTRUMENT CLUSTER (C2)



Wiring Face  
INTERIOR LIGHT TIMER CONTROL



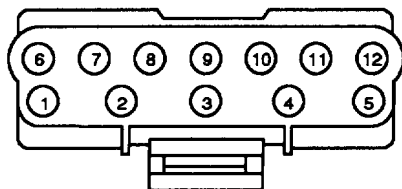
Wiring Face  
HOT WATER CUT-OFF SWITCH



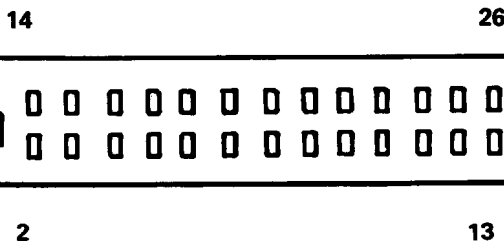
Mating Face  
MOTRONIC CONTROL UNIT

# 8500-6 CONNECTOR VIEWS

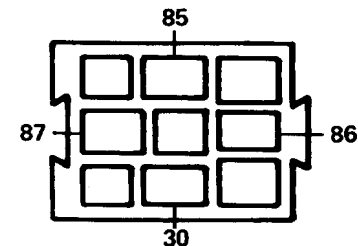
B120006.00



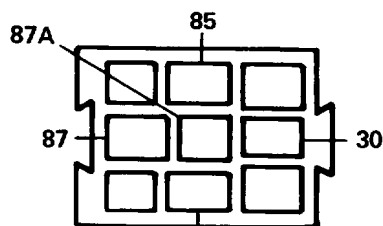
Wiring face  
LIGHT SWITCH



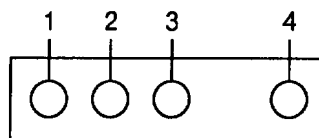
Wiring Face  
ON-BOARD COMPUTER MODULE



Wiring Face  
OXYGEN SENSOR/FUEL PUMP RELAY

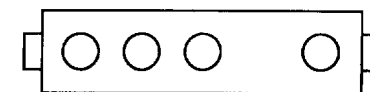


Wiring Face  
MAIN RELAY

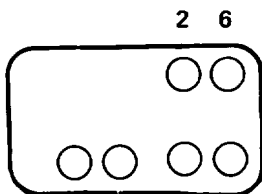


Wiring Face  
ON-BOARD COMPUTER RELAY BOX

B040012

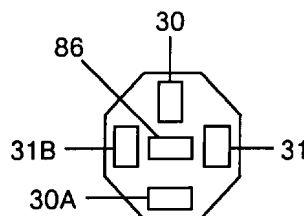


Wiring Face  
POWER MIRRORS

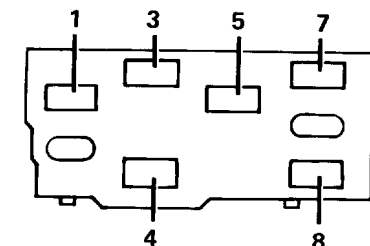


Mating Face  
MIRROR CONTROL SWITCH

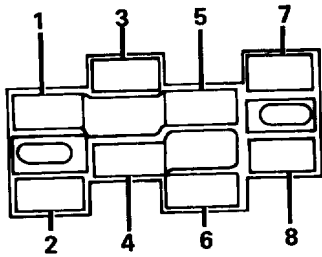
B060027



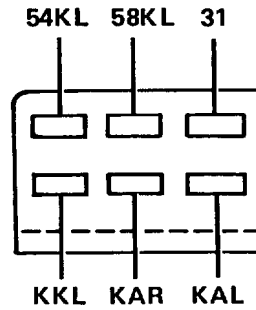
Wiring Face  
OVER VOLTAGE PROTECTION RELAY



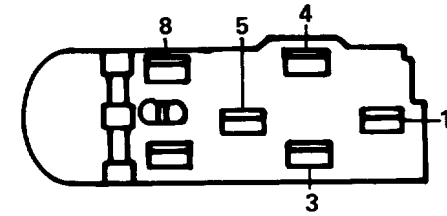
Wiring Face  
POWER WINDOW SWITCHES



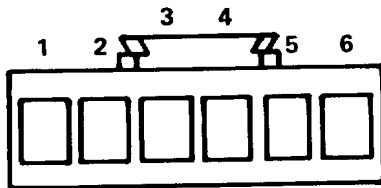
Wiring Face  
REAR DEFOGGER SWITCH



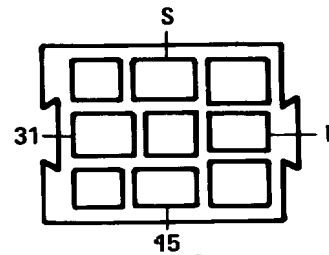
Wiring Face  
REAR LIGHTS CHECK RELAY (C2)



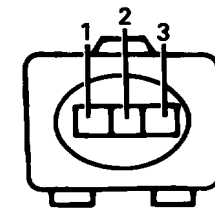
Wiring Face  
SUNROOF SWITCH



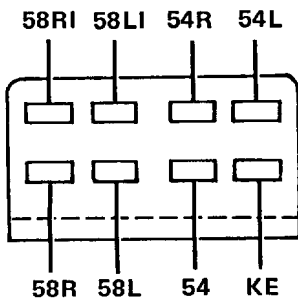
Wiring Face  
REAR LIGHT ASSEMBLY



Wiring Face  
SEAT BELT WARNING TIMER



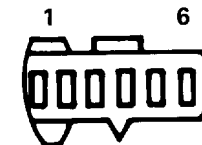
Wiring Face  
THROTTLE SWITCH



Wiring Face  
REAR LIGHTS CHECK RELAY (C1)

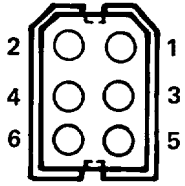


Wiring Face  
SUNROOF MOTOR (CI)

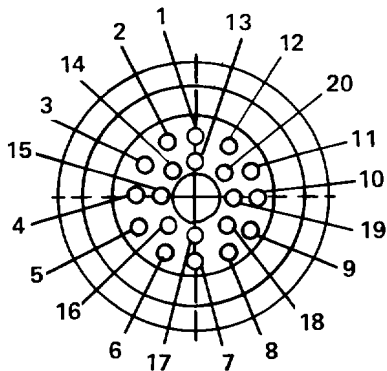


Wiring Face  
TRUNK LID LOCK MOTOR

# 8500-8 CONNECTOR VIEWS

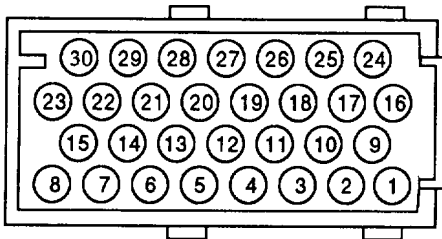


Wiring Face  
WIPER MOTOR

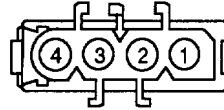


Wiring Face  
C101

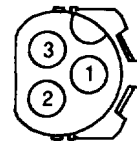
B300001.00



Wiring Face  
C103



Wiring Face  
C107



Mating Face  
C110

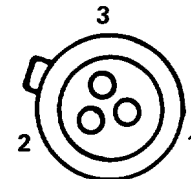
B030004.00



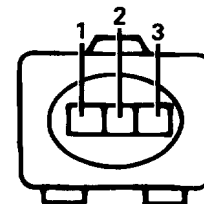
Wiring Face  
C113



Wiring Face  
C114

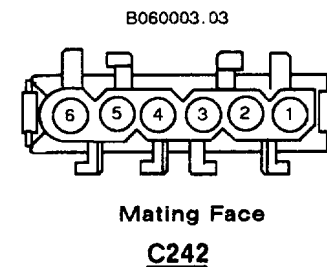
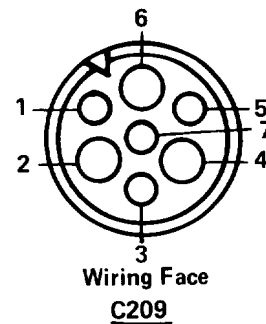
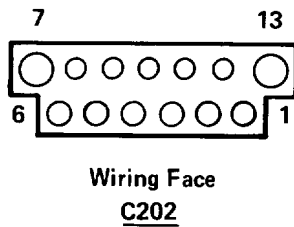
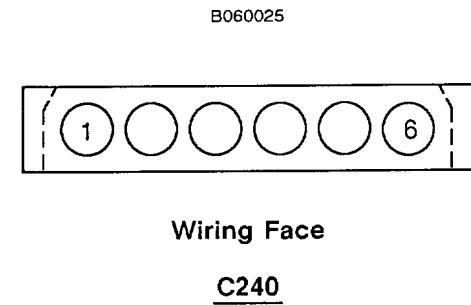
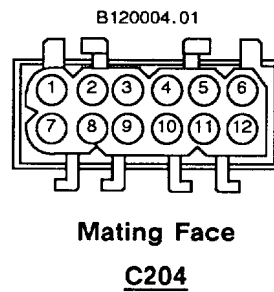
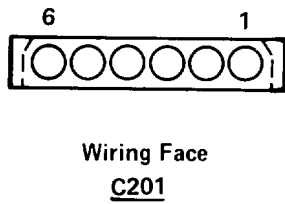
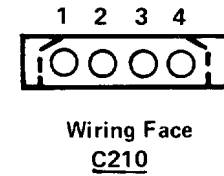
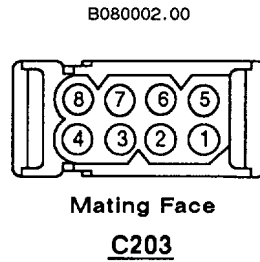
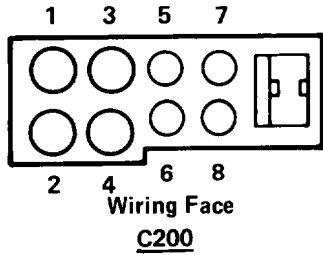


Wiring Face  
C140

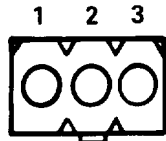


Wiring Face  
C152, C153, C154





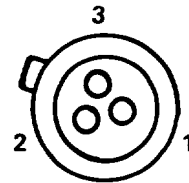
# 8500-10 CONNECTOR VIEWS



Wiring Face

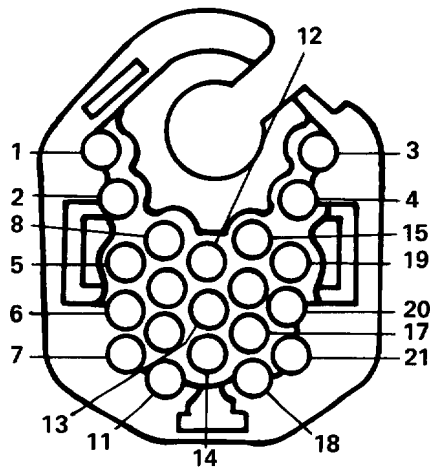
C303

C304



Wiring Face

C503



Wiring Face

C404

C405

## 9000-0 COMPONENT LOCATION CHART

COMPONENTS		Page-Figure
A/C In-Line Fuse . . . . .	LH side of evaporator housing . . . . .	7000-0-6
A/C Temperature Switch . . . . .	Lower front RH corner of engine compartment . . . . .	7000-8-2
ABS Electronic Control Unit . . . . .	Under LH side of dash, above hood release . . . . .	7000-4-2
ABS Hydraulic Unit . . . . .	In front of LH front wheel well . . . . .	7000-0-2
Active Check Control Unit . . . . .	Above rear view mirror . . . . .	7000-5-6
Air Flow Meter . . . . .	Behind air cleaner . . . . .	7000-1-2
Amplifier . . . . .	In trunk, above LH wheel well . . . . .	7000-9-2
Auto-Charging Flashlight . . . . .	In glove box . . . . .	7000-6-6
Auxiliary Fan . . . . .	In front of radiator . . . . .	7000-3-2
Auxiliary Fan Normal Speed Blower Resistor . . . . .	Front of LH side of auxiliary fan . . . . .	7000-3-2
Auxiliary Fuel Pump . . . . .	Beneath RH front seat . . . . .	7000-7-2
Auxiliary Fuse . . . . .	On top of LH front shock tower . . . . .	7000-0-3
B/C Horn Diode . . . . .	In LH side of spoiler . . . . .	7000-0-5
Backup Light Switch . . . . .	On transmission	
Barometric Pressure Sensor . . . . .	LH side of engine compartment, on wheel well . . . . .	7000-1-2
Battery . . . . .	In RH rear of trunk . . . . .	7000-9-4
Battery Junction Block . . . . .	RH side of bulkhead, behind cover . . . . .	7000-2-4
Blower Motor . . . . .	Behind cowl . . . . .	7000-3-6
Blower Resistors . . . . .	Behind cowl, inside blower housing	
Board Computer Horn . . . . .	In LH side of spoiler, right of LH horn . . . . .	7000-0-5
Brake Fluid Level Switch . . . . .	Left of engine, on brake fluid reservoir . . . . .	7000-0-4
Brake Switch . . . . .	On brake pedal support, above brake pedal . . . . .	7000-4-5
Brake Wear Sensors . . . . .	On LH front and RH rear brake calipers . . . . .	7000-2-5
Central Locking Control Unit . . . . .	Below and behind LH front speaker . . . . .	7000-8-6
Chime Module . . . . .	Mounted on LH dash hush panel . . . . .	7000-4-6
Clutch Switch . . . . .	Above clutch pedal . . . . .	7000-4-1
Coding Plug . . . . .	Behind RH side of dash, in harness, above glove box	
Combination Switch . . . . .	Upper LH side of steering column . . . . .	7000-5-4
Compressor Clutch Diode . . . . .	Lower RH front of engine, on compressor . . . . .	7000-1-3
Compressor Enable Switch . . . . .	Behind A/C face plate	
Coolant Level Switch . . . . .	On RH front wheel well, in coolant reservoir . . . . .	7000-2-3
Coolant Temperature Sender . . . . .	Front RH side of engine, on coolant manifold . . . . .	7000-8-1
Coolant Temperature Sensor . . . . .	Front RH side of engine, on coolant manifold . . . . .	7000-8-1
Cruise Control Actuator . . . . .	Forward of LH front shock tower . . . . .	7000-0-1
Cruise Control Unit . . . . .	Mounted under RH side of dash . . . . .	7000-6-5
Cylinder Identification Sensor . . . . .	Lower LH rear of engine, on transmission bell housing . . . . .	7000-9-1
Diagnostic Connector . . . . .	LH side of bulkhead, by power distribution box . . . . .	7000-1-1
Door Lock Motors . . . . .	Rear part of each door	
Driver's Exterior Door Handle Switch . . . . .	In rear of LH front door	

<b>COMPONENTS</b>	<b>Page-Figure</b>
Dual Temperature Switch . . . . .	Lower front RH corner of engine compartment . . . . . 7000-8-2
Engine Speed Sensor . . . . .	Lower LH rear of engine, on transmission bell housing . . . . . 7000-9-1
Evaporative Purge Valve . . . . .	LH side of engine compartment, on wheel well . . . . . 7000-1-2
Evaporative Purge Valve Relay . .	RH side of bulkhead, behind cover . . . . . 7000-2-4
Evaporator Temperature Regulator . . . . .	Behind center of dash, LH side of evaporator housing . . . . . 7000-0-6
Evaporator Temperature Sensor .	On LH side of evaporator housing . . . . . 7000-0-6
Flasher . . . . .	Upper part of steering column . . . . . 7000-5-4
Fresh/Recirculating Air Flap Door Motors . . . . .	Behind A/C face plate . . . . . 7000-6-3
Fresh/Recirculating Air Relays . .	Behind A/C face plate
Fuel Tank Sender . . . . .	Top of fuel tank, beneath RH rear seat . . . . . 7000-7-2
Gas Filler Lock Motor . . . . .	In trunk, behind RH wheel well . . . . . 7000-9-4
Hazard Switch . . . . .	In center console, above radio . . . . . 7000-5-5
High Pressure Cut-Out Switch . .	On receiver dryer, behind RH headlight . . . . . 7000-1-5
Horn Brush/Slip Ring . . . . .	In upper part of steering column . . . . . 7000-5-4
Horns . . . . .	Near fog lights, behind splash guard . . . . . 7000-3-1
Hot Water Cut-Off Switch . . . . .	Under LH side of dash, near evaporator . . . . . 7000-0-6
Idle Speed Actuator . . . . .	Top center of engine . . . . . 7000-2-2
Ignition Coil . . . . .	On RH front wheel well . . . . . 7000-2-3
Ignition Key Switch . . . . .	Part of ignition switch, in upper part of steering column
Ignition Switch . . . . .	Upper part of steering column . . . . . 7000-5-4
Interior Light Timer Control . . . .	Below LH front speaker . . . . . 7000-8-6
Low Pressure Cut-Out Switch . .	Behind RH headlights . . . . . 7000-1-5
Main Fuel Pump . . . . .	Under car, in front of LH rear wheel. . . . . 7000-3-5
Main Relay . . . . .	RH side of bulkhead, behind cover . . . . . 7000-2-4
Motor Relay . . . . .	Behind header, above rear view mirror . . . . . 7000-5-6
Motronic Control Unit . . . . .	Under RH side of dash, above glove box . . . . . 7000-6-5
Oil Pressure Switch . . . . .	Lower LH front of engine . . . . . 7000-1-4
Oil Temperature Sensor . . . . .	Lower LH front of engine . . . . . 7000-1-4
On-Board Computer Module . . . .	In center console, on RH side of radio . . . . . 7000-5-5
On-Board Computer Relay Box. . .	Under LH side of dash, above hood release. . . . . 7000-4-5
Oscillating Plate Compressor Clutch . . . . .	Lower RH front of engine, on compressor. . . . . 7000-1-3
Outside Temperature Sensor . . . .	Behind splash guard, near LH fog light . . . . . 7000-3-1
Over Voltage Protection Relay . .	Under LH side of dash, above ABS Electronic Control Unit . . . . . 7000-4-2

## 9000-2 COMPONENT LOCATION CHART

<b>COMPONENTS</b>		<b>Page-Figure</b>
Oxygen Sensor . . . . .	Below RH rear of engine, in exhaust manifold . . . . .	7000-3-3
Oxygen Sensor/Fuel Pump Relay . . . . .	RH side of bulkhead, behind cover . . . . .	7000-2-4
Park Brake Switch . . . . .	At base of parking brake . . . . .	7000-6-2
Power Distribution Box . . . . .	At top rear of LH front wheel well . . . . .	7000-0-3
Power Window Circuit Breaker . . . . .	On center console, above radio . . . . .	7000-5-5
Power Window Motors . . . . .	Forward part of each door . . . . .	7000-8-3
Pulse Wheels . . . . .	On wheel, in brake housing	
Rear Lights Check Relay . . . . .	In trunk, above LH wheel well . . . . .	7000-9-2
RH Front Door Micro Switch . . . . .	In rear of RH front door	
Rotary Compressor Clutch . . . . .	Lower RH front of engine, on compressor . . . . .	7000-1-3
Safety Switch . . . . .	On top of LH wheel well, near cruise control actuator . . . . .	7000-0-1
Seatbelt Switch . . . . .	In driver's seatbelt buckle	
Seatbelt Warning Timer . . . . .	Under LH side of dash, on electrical bracket . . . . .	7000-4-6
Speed Detectors . . . . .	On wheel, in brake housing . . . . .	7000-2-6
Speedometer Sender . . . . .	In rear of differential . . . . .	7000-3-4
Starter . . . . .	Lower LH rear of engine	
Sunroof Motor . . . . .	In windshield header, above rear view mirror . . . . .	7000-5-6
TDC Sensor . . . . .	Lower LH rear of engine . . . . .	7000-9-5
Throttle Switch . . . . .	Top front center of engine . . . . .	7000-2-2
Trunk Lid Lock Motor . . . . .	On trunk lock center support . . . . .	7000-9-3
Unlock Inhibit Switch . . . . .	Rear of LH front door	
Washer Fluid Level Switch . . . . .	In reservoir, behind RH headlights . . . . .	7000-1-6
Washer Pump . . . . .	Ahead of RH front wheel well, on reservoir . . . . .	7000-2-1
Water Shut-Off Solenoid . . . . .	LH side of evaporator housing . . . . .	7000-5-3
Wiper Motor . . . . .	Under LH fresh air intake cowl . . . . .	7000-3-6
<b>CONNECTORS</b>		
C101 (20 pins) . . . . .	Center of bulkhead, above rear of engine . . . . .	7000-1-1
C103 (29 pins) . . . . .	Behind LH side of dash, on body electrical bracket . . . . .	7000-4-4
C104 (2 pins) . . . . .	Under RH side of Dash . . . . .	7000-6-4
C106 (1 pin) . . . . .	Near washer pump . . . . .	7000-1-6
C107 (4 pins) . . . . .	Behind RH side of dash, above glove box	
C113 (3 pins) . . . . .	Behind LH headlights . . . . .	7000-0-2
C126 (2 pins) . . . . .	Behind LH headlights . . . . .	7000-0-2
C127 (2 pins) . . . . .	Behind RH headlights . . . . .	7000-1-5
C128 (2 pins) . . . . .	Behind RH front side marker light . . . . .	7000-1-5
C129 (2 pins) . . . . .	Behind LH front side marker light . . . . .	7000-0-2
C140 (3 pins) . . . . .	RH rear corner of engine compartment, under coolant reservoir . . . . .	7000-6-1
C141 (3 pins) . . . . .	Under RH side of car, below passenger side . . . . .	7000-3-3

<b>COMPONENTS</b>	<b>Page-Figure</b>
C142 (1 pin) . . . . .	Under LH side of dash, near steering column . . . . . 7000-5-1
C143 (1 pin) . . . . .	Under LH side of dash, near body electrical bracket . . . . . 7000-4-6
C150 (2 pins) . . . . .	On top of LH front wheel well. . . . . 7000-1-2
C151 (2 pins) . . . . .	On top of RH front wheel well . . . . . 7000-2-1
C152 (3 pins) . . . . .	Center of bulkhead, above rear of engine . . . . . 7000-1-1
C153 (3 pins) . . . . .	Center of bulkhead, above rear of engine . . . . . 7000-1-1
C154 (3 pins) . . . . .	Center of bulkhead, above rear of engine . . . . . 7000-1-1
C200 (9 pins) . . . . .	Under LH side of dash, on steering column . . . . . 7000-5-1
C201 (6 pins) . . . . .	Under LH side of dash, on steering column . . . . . 7000-5-1
C202 (13 pins) . . . . .	Under LH side of dash, on steering column . . . . . 7000-5-1
C203 (8 pins) . . . . .	Under LH side of dash
C204 (9 pins) . . . . .	Under LH side of dash, near steering column . . . . . 7000-5-3
C208 (2 pins) . . . . .	Near brake pedal support bracket . . . . . 7000-4-6
C209 (7 pins) . . . . .	Above brake pedal . . . . . 7000-4-3
C210 (4 pins) . . . . .	On LH side of steering column . . . . . 7000-5-1
C212 (2 pins) . . . . .	Under LH side of dash, near accessory connector . . . . . 7000-4-3
C213 (1 pin) . . . . .	Center of dash, behind radio . . . . . 7000-5-5
C214 (1 pin) . . . . .	Center of dash, behind radio . . . . . 7000-5-5
C215 (2 pins) . . . . .	Center console, behind radio . . . . . 7000-5-5
C217 (1 pin) . . . . .	Under LH side of dash, near accessory connector . . . . . 7000-4-4
C219 . . . . .	In trunk, near LH wheel well
C235 (3 pins) . . . . .	Under RH side of dash, near cruise control unit . . . . . 7000-6-3
C240 (6 pins) . . . . .	Under LH side of dash, above body electrical bracket . . . . . 7000-4-3
C260 (2 pins) . . . . .	Behind LH side of dash . . . . . 7000-4-3
C301 (2 pins) . . . . .	At base of shift lever. . . . . 7000-5-2
C302 (25 pins) Accessory Connector . . . . .	Upper LH corner of driver's footwell . . . . . 7000-4-4
C303 (3 pins) . . . . .	At base of RH "B" pillar . . . . . 7000-7-5
C304 (3 pins) . . . . .	At base of LH "B" pillar . . . . . 7000-7-6
C305 (1 pin) . . . . .	Under LH side of dash, near accessory connector . . . . . 7000-4-3
C351 (1 pin) . . . . .	Under LH side of dash, near accessory connector . . . . . 7000-4-3
C352 (2 pins) . . . . .	Behind LH side of rear seat. . . . . 7000-7-1
C360 (2 pins) . . . . .	Behind RH side of rear seat . . . . . 7000-7-2
C404 (21 pins) . . . . .	Above RH front door jamb switch . . . . . 7000-7-3
C405 (21 pins) . . . . .	Above LH front door jamb switch . . . . . 7000-7-4
C406 . . . . .	Below RH front speaker. . . . . 7000-8-5
C407 . . . . .	Below LH front speaker . . . . . 7000-8-4
C413 (5 pins) . . . . .	In trunk, near LH wheel well
C500 (1 pin) . . . . .	Behind LH side of steering column
C503 (3 pins) . . . . .	In rear of LH front door
C510 (1 pin) . . . . .	Behind and above LH front speaker . . . . . 7000-8-6

## 9000-4 COMPONENT LOCATION CHART

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<b>COMPONENTS</b>		<b>Page-Figure</b>
<b>GROUNDINGS</b>		
G100. ....	RH rear of trunk, behind battery . . . . .	7000-9-4
G103. ....	Lower LH side of engine, above starter	
G104. ....	On inner fender, behind LH headlights . . . . .	7000-0-1
G106. ....	In trunk, near LH wheel well. . . . .	7000-9-2
G200. ....	Under LH side of dash, above brake pedal . . . . .	7000-4-5
G201 (Steering Column Ground)	Upper LH side of steering column . . . . .	7000-5-4
G300. ....	Behind LH side of rear seat. . . . .	7000-7-1
G600. ....	In windshield header	

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