REGAL 8A – 101 - 7

NS - 1.

1



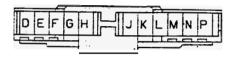
 $\frac{1}{4} = (i \mu h)^{\frac{1}{2}} e^{-i \mu h} (i h)^{$

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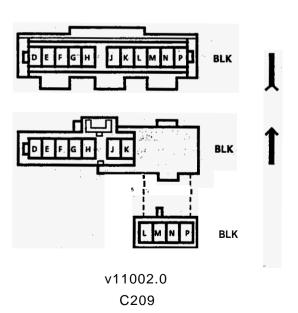
8A - 110

EXTERIOR LIGHTS: TURN/HAZARD/STOP

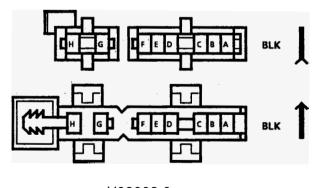
HARNESS CONNECTOR FACES



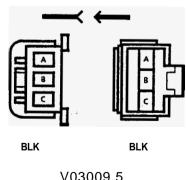
BLK 12004147 C104



COMPONENT LOCATION		Page-Figure
Brake Switch	. Top of brake pedal support	201-12-A
Fuse Block.	Under LH side of I/P	201-12-A
Inverter	In trunk, behind center of rear seat	201-21-D
	Top of steering column.	201-13-A
Turn Flasher	On bracket, right of steering column	201-12-B
C104 (11cavities)	. Attached to RH side of steering column	. 201-13-A
C209 (11cavities)	Attached to LH side of fuse block	201-13-C
C320 (6cavities)	. Rear LH comer of trunk	201-22-A
C558 (1cavity)	. In rear lights harness, above license plate	201-21-B
C780 (1cavity)	. Rear LH comer of trunk	201-22-A
G129	Front center of trunk.	201-21-D
G177	Rear LH comer of trunk	201-22-A
S358	Rear lights harness, below RH tail lights	201-21-B
S359,	Rear lights harness, below LH tail lights	201-21-B
S465	In opera/high level stop lamp harness, behind Ll	H
	side of rear seat	201-21-D







V03009.5 C780

TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. If neither the Turn Lights nor Back Up Lights work, check the TURN B/U Fuse.
- **2.** If neither the Stop Lights nor Hazard Lights work, check the STOP-HA2 Fuse.
- 3. If the Stop Lights 'do not work, check the Brake Switch, and 'ORN (140) wire for continuity (see schematic).
- 4. If Stop Lights do not turn off, adjust or replace the Brake Switch as necessary.
- 5. If the High Level Stop Light does not work, check bulb, LT BLU (820) and BLK (150) wires for an open. Repair/replace as necessary.
- 6. For any of the following symptoms replace the Turn-Hazard Switch Assembly:
- Some Turn Lights work and all Hazard Lights work.
- Some Hazard Lights work and all Turn Lights work.
- Hazard lights do not turn off.
- 7. If Turn Indicator and Front Turn Light on one side are inoperative, check the connection at **C104B**, then replace Turn-Hazard Switch Assembly as necessary.
- 8. If Turn Lights stay on (do not flash) in both TURN LEFT and TURN **RIGHT**, replace the Turn Flasher.
- 9. If Hazard Lights stay on (do not flash) in *HAZARD*, but Stop Lights go off normally, replace the Hazard Flasher.
- 10. If only one light does not operate, check bulb, socket and related wiring (see schematic).
- 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
Turn Lights do not work but Hazard Lights do	A: Turn Lights Test
Hazard Lights do not operate but Stop Lights do	B: Hazard Lights Test .
Stop Lights do not work but the signals work	C: Stop Lights Test
Stop-Turn Lights on one or both sides do not work	C: Stop Lights Test
Park Lights do not turn off	D: Park Lights Short Test
Coach Lights do not work but Tail Lights do	E: Inverter Test

4: TURN LIGHTS TEST

Connect: TEST LAMP

At: CONNECTOR C104B (Connected)

Conditions:

• Ignition Switch: RUN

Connect	Correct	For
Between	Result	Diagnosis
L (PPL) & Ground	Test Lamp 23	See 1

- If the Test Lamp lights, replace Turn-Hazard Switch Assembly.
- 1. Check Turn Flasher and PPL (16)wire for an open.

3: HAZARD LIGHTS TEST (TABLE 1)

Jumper Between	Correct Result	For Diagnosis
ORN & BRN	All Turn Lights turn on	See 1

- If the result is correct, replace the Hazard Flasher.
- 1. Go to Table 2.



B: HAZARD LIGHTS TEST (TABLE 2)

Measure: VOLTAGE

At: CONNECTOR C104B (Disconnected)

Conditions:

Hazard Flasher: CONNECTED

Measure	Correct	For
Between	Voltage	Diagnosis
K (BRN) & Ground	Battery	See 1

- If the voltage is correct, replace the Turn-Hazard Switch Assembly.
- 1. Check ORN (140) and BRN (27) wires for an open.

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C: STOP LIGHTS TEST

Connect: TEST LAMP

At: CONNECTOR C104B (Connected)

Conditions:

Brake Pedal: DEPRESSED

Connect Between	Correct Result	For Diagnosis
P (WHT) & Ground	Test Lamp lights	See 1
M (YEL) & Ground	Test Lamp lights	See 2
N (DK GRN) & Ground	Test Lamp lights	See 2

D: PARK LIGHTS SHORT TEST (TABLE 1)

Disconnect: CONNECTOR

At: Sentinal Amplifier Connector (if equipped) (Disconnected)

Action	Correct Result	For Diagnosis
Disconnect Connector from Sentinel Amplifier	Lights turn off	See 1

- If lights turn off, go to 8A-101.
- 1. Go to Table 2.

D: PARK LIGHTS SHORT TEST (TABLE 2)

Disconnect: CONNECTOR At: LIGHT SWITCH		
Action	Correct Result	For Diagnosis
Disconnect Connector from Light Switch	Lights turn off	See 1

- If lights go off, replace light switch.
- 1. Check BRN (9) wire for a short to voltage.

E: INVERTER TEST

Measure: VOLTAGE

At: INVERTER CONNECTOR (Connected)

Conditions:

• Light Switch: PARK

Measure Between	Correct Result	For Diagnosis	
C1/4 & Ground	Battery	See 1	
C1/4 & C2/1	Battery	See 2	

- If the above results are correct, check the Electroluminescent lights, DK **BLU** (351) and WHT (352)wires **for** opens.
- 1. Check Coach Lights and BRN (9) wires for opens (see schematic).
- 2. Check **BLK** (150)wire for an open.
- 3. Replace the inverter.

CIRCUIT OPERATION

Rear Turn Lights

If the turn left switches in the Turn-Hazard Switch Assembly are closed to the left, the Stop-Turn light comes on. Battery voltage is applied to the Turn Flasher, the hazard switch, the turn left switch, and the YEL wire. The LH Front Turn Light and the LH Turn Indicator also come on. They are fed through the LT BLU wire. The current through the bulbs heats the Turn Flasher. It opens and closes to flash the left turn lights.

The right turn lights operate in a simliar way when the two light switches are closed to the right.

EXTERIOR LIGHTS: TURN/HAZARD/STOP

(Continued from previous page)

If the Brake Switch is closed at the same time the left turn switch is closed, the LH Turn Lights will continue to receive power through the Turn Flasher. The RH Rear Stop-Turn Light comes on steadily as long as the Brake Switch is closed.

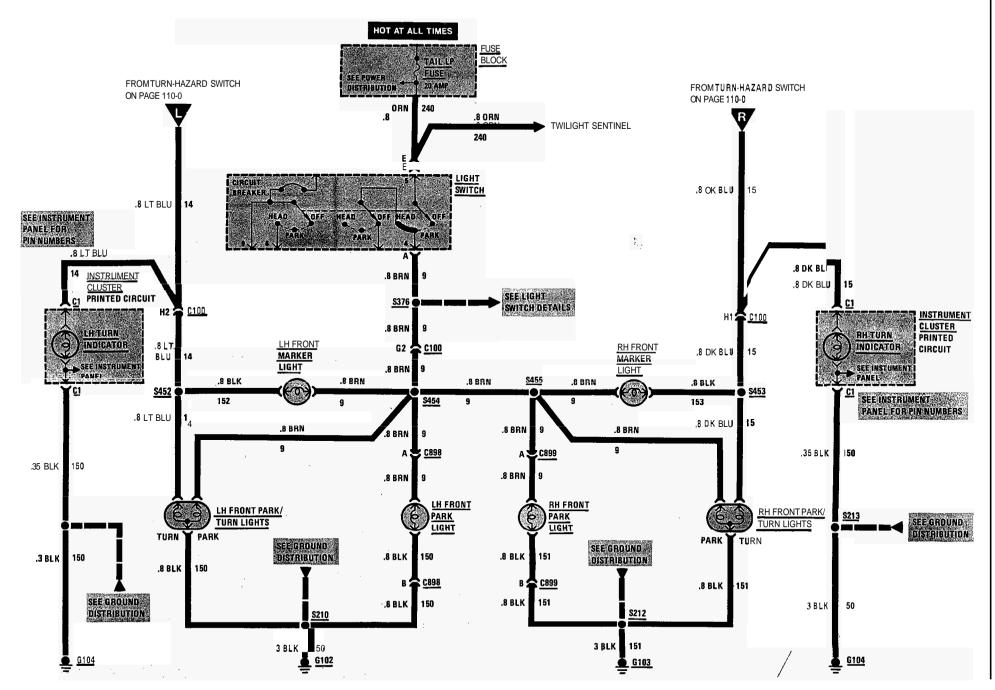
Hazard Lights

If the Hazard switches are moved to the Hazard position, the Stop-Turn lights will flash simultaneously. In this situation, power for all the lamps comes through the **Hazard** Flasher.

Stop Lights

Voltage is applied directly from the Brake Switch to the High Level Stop Light.

The Stop-Turn Lights receive voltage through the WHT wire that feeds the Turn-Hazard Switch. With the switches in the positions shown in the schematic, the Stop-Turn Lights are connected to the WHT wire through the YEL and DK GRN wires and the turn switches. They will come on when the Brake Switch is closed.



EXTERIOR LIGHTS: TURN/HAZARD/MARKER/PARK

HARNESS CONNECTOR FACES

C100, See Page 202-0



BLK 12015454 C898

C899, See C898

COMPONENT LOCATION		Page-Figure
Fuse Block. Inverter. C100 (45 cavities) C898 (2 cavities) C899 (2 cavities) C102. G103 G104 S210. S212. S213. S376. S452. S453. S454.	Under LH side of I/P In trunk, behind center of rear seat. LH rear of engine compartment LH front fender, behind bumper. RH front fender, behind bumper. On front fender, behind LH front lights On RH front fender, behind headlights. Behind I/P, to left of steering column. Front lights harness, behind LH front lights. Front lights harness, behind RH front lights. I/P harness, above radio. I/P harness, above fuse block Front lights harness, near RH front lights. Front lights harness, behind LH front lights. Front lights harness, behind LH front lights. Front lights harness, behind LH front lights. Front lights harness, behind center of radiator	. 201-12-A . 201-21-D . 201- 9-B . 201-2042 . 201-20-C . 201-20-E . 201-21-C . 201-15-A . 201-20-C . 201-21-A . 201-16-A . 201-13-B . 201- 9-B . 201-21-A
~~~~	grill	. 201-21-A

Instrument Panel Connector (Indicators Cluster), See Page 80-6

Instrument Panel Connector (Digital Cluster), See Page 82-5

### EXTERIOR LIGHTS: TURN/HAZARD/MARKER/PARK

### TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. If one of the Turn Indicators goes on when the Park Lights are turned on, check the Front Turn Light on that side.
- 2. If a Turn Indicator does not light but the turn signals work, check the bulb, connections, and wiring to the Indicator,
  If neither the Park, Marker, nor 'pail Lights work, check TAIL LP Fuse, ORN (240), BRN
- (9) wire and the Light Switch for an open.3. If only one light does not operate, check bulb, socket, and related wiring (see schematic).
- Go to System Diagnosis for diagnostic tests.

### SYSTEM DIAGNOSIS

 Refer to System Diagnosis for Exterior Lights: Turn/Hazard/Stop.

### **CIRCUIT OPERATION**

### **Turn Lights**

If the turn left switches in the Turn-Hazard Switch are closed to **the left**, the LH Park/Turn lights come on. It gets battery voltage through the Turn Flasher, the Hazard Switch, the Turn Left Switches. The LH Front Park/Turn Light and the LH Turn Indicator also come on. They are fed through the LT BLU wire. The current through the bulbs heats the Turn Flasher. It opens and closes to flash the left turn lights.

The right turn lights operate in a similar way when the turn light switches are closed to the right.

### **Front Marker Lights**

The Front Marker Lights can be lit by either the Park Lights or the Turn Lights. Neither of the two wires to each of the marker bulbs is a ground wire.

With the Park Lights on, battery voltage is supplied through the BRN wires to both Marker Lights. The path to ground for the marker bulbs is through the Turn Lights. The small Marker Light bulbs light up, but not the larger turn bulbs.

When the Turn Lights are on, but not the Park Lights, battery voltage is applied through the BLU wires to the Marker Lights. They glow since they are grounded through the entire Park Light system. As before, the small marker bulbs light up, but not all the parking bulbs.

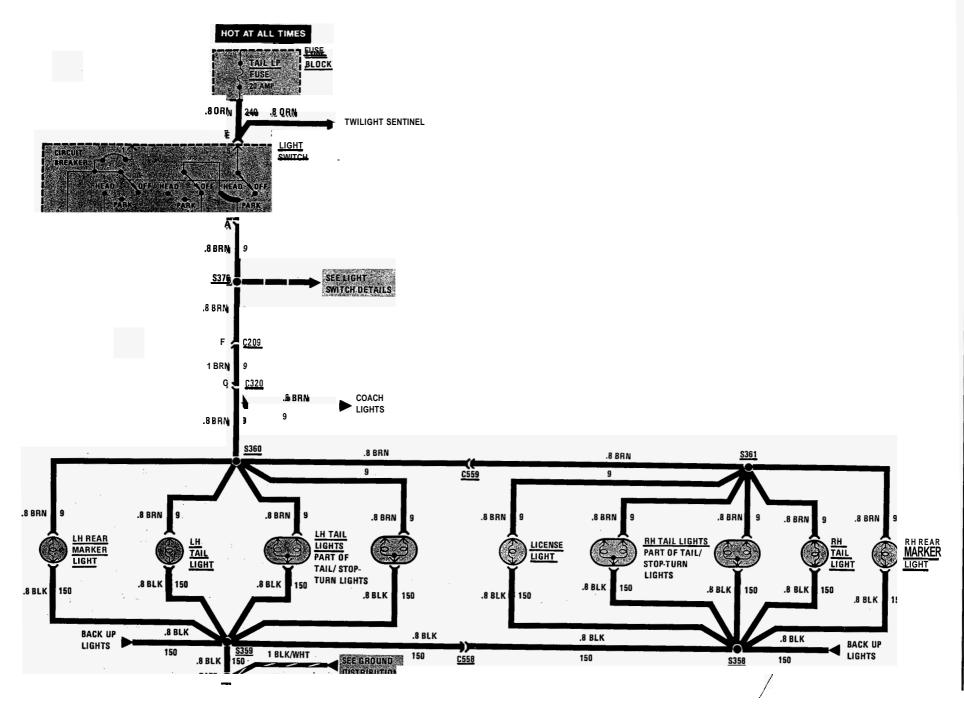
If both the Park Lights and a set of Turn Lights are on at the same time, the marker bulb for that side will not light up. With battery voltage on both sides of a bulb, it will not glow. When the Turn Lights flash off, however, the marker bulb on that side will come on since it is now grounded through the Turn Lights. This circuit makes the turn and marker bulbs flash out of step with each other when the Park Lights are on.

### **Front Park Lights**

The Front Park Lights can be lit by either the Park Lights or the Headlights.

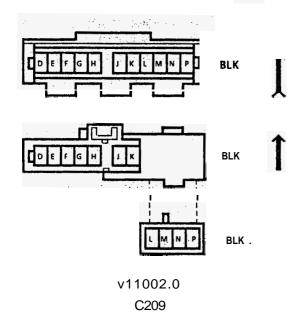
With the Park Lights or Headlights on, battery voltage is provided through the BRN wires to both Park Lights. The path to ground for the Park Lights is G102 (LH) or G103 (RH).

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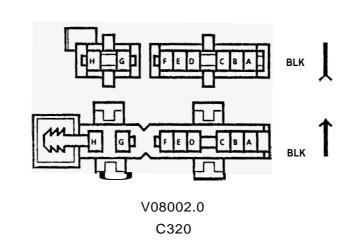


### **EXTERIOR LIGHTS: TAIL/MARKER/LICENSE**

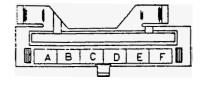
### HARNESS CONNECTOR FACES



### **COMPONENT LOCATION** Page-Figure 201-12-A C209 (11cavities) . . . . . . . Attached to LH side of fuse block . . . . . . . . . 201-13-C C558 (1cavity) ...... In rear lights harness, above license plate ..... 201-21-B C559 (1cavity) ...... In rear lights harness, above license plate ..... 201-21-B G177 ..... Rear lights harness, below RH tail lights. . . . . 201-21-B Rear lights harness, below LH tail lights. . . . . 201-21-B Rear lights harness, below LH tail lights. . . . . 201-21-B Rear lights harness, below RH tail lights. . . . . 201-21-B I/P harness, above fuse block. . . . . . . . . . . . . 201-13-B



Sec.



WHT 12020031 Light **Switch** 

### TROUBLESHOOTING HINTS

- . Try the following checks before doing the System Diagnosis.
- 1. If Tail, Rear Marker and License Lights work, check the TAIL LPS Fuse, Light Switch, ORN (240), BRN (9) and BLK (150) wire for continuity.
- 2. If LH TAIL, and Rear Marker lights do not work, but RH **Tail** and Rear Marker lights do work, check connections of C559 and C558 and BRN (9) and BLK (150) wires for continuity.
- 3. If the Tail, Rear Marker, License, and Coach Lights do not work, but the Front Exterior Lights work, check C320 and related wiring (see schematic).
- . Go to System Diagnosis for diagnostic tests.

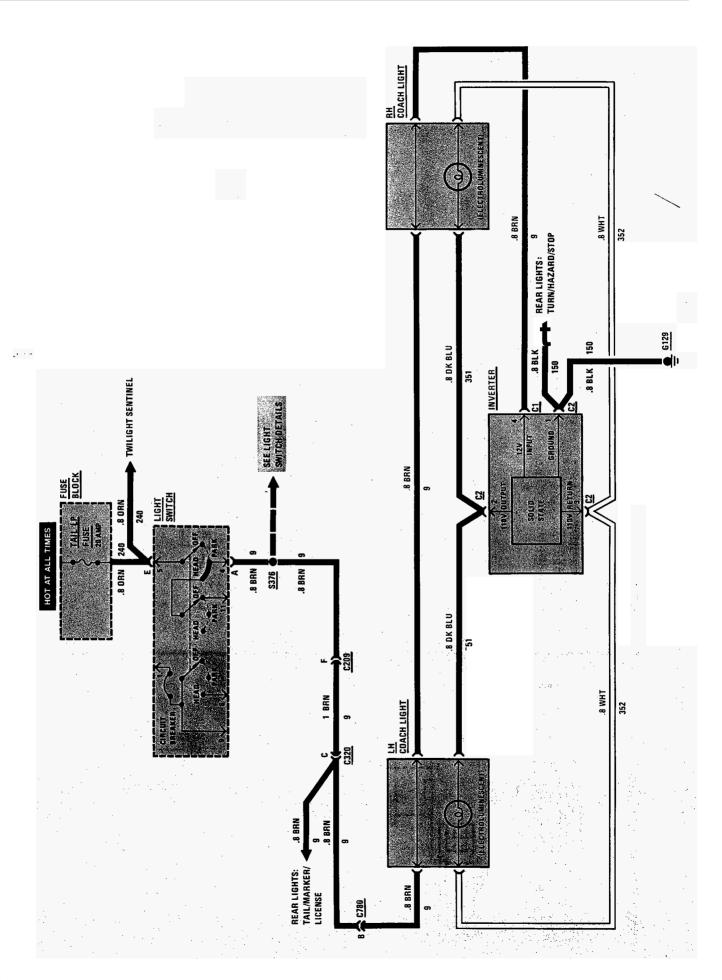
### SYSTEM DIAGNOSIS

• Refer to System Diagnosis for Exterior Lights: Turn/Hazard/Stop.

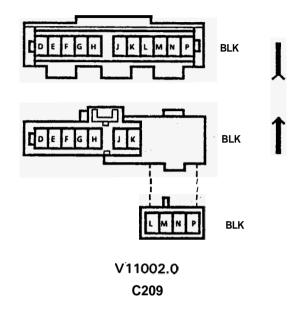
### **CIRCUIT OPERATION**

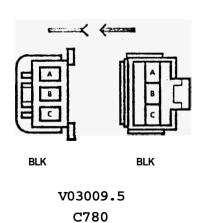
Voltage is applied through the Tail LP Fuse to the Light Switch at all times. With the Light Switch in PARK or HEAD, voltage is applied to all of the lights in this circuit.

8A — **110** - 11

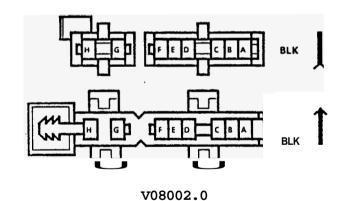


### HARNESS CONNECTOR FACES

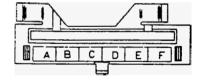




COMPONENT LOCATION		Page-Figure
Fuse Block	Under LH side of <b>I/P</b> .	201-12-A
Inverter	In trunk, behind center of rear seat	201-21-D
C209 (11cavities)	Attached to LH side of fuse block	201-1342
C320 (6 cavities)	Rear LH corner of trunk	201-22-A
C780 (3cavities)	Rear LH corner of trunk	201-22-A
G129	Front center of trunk	201-21-D
S376	I/P harness, above fuse block	201-13-B



C320



WHT 12020031 Light Switch

### **EXTERIOR LIGHTS: COACH**

### TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. If both Coach Lights do not work, check TAIL LP FUSE by operating Park Lights.
- 2. If one Coach Light does not operate, replace the bad lamp assembly, check WHT (352) and DK BLU (351)wires.
- Go to System Diagnosis for diagnostic tests.

### SYSTEM DIAGNOSIS

 Refer to System Diagnosis for Exterior Lights: Turn/Hazard/Stop.

### **CIRCUIT OPERATION**

Voltage is applied through the **Tail** LP Fuse to the Light at all times. With the Light Switch in PARK or HEAD, voltage is applied to the input of the Inverter and the Inverter then supplies a **110** volt AC signal to the Coach Lights.

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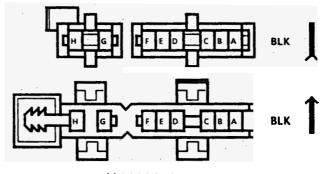
BLK 2973407

Gear Selector Switch

### **COMPONENT LOCATION**

Page-Figure

Gear Selector Switch	. Under LH side of I/P Attached to base of steering column . Attached to LH side of fuse block . Rear LH corner of trunk.	. 201-13-A
• • • • • • • • • • • • • • • • • • • •	Rear LH corner of trunk	. 201-22-A . 201-21-B



∨*08002.0* C320

### **BACK UP LIGHTS**

### TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. Check the Turn B/U Fuse and DK BLU (75) wire by operating the Turn Lights.
- 2 If Back Up Lights go on in the wrong gear, adjust the Gear Selector Switch.
- 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 Diagnosisfor a list of symptoms and diagnostic steps.

### SYSTEM CHECK TABLE

. OTOTEWORLEON TREE		
ACTION	NORMAL RESULT	
Put the Ignition Switch in RUN and the Gear Shift in P (park)	Back Up Lights are off	
Put the Gear Shiftin R (reverse)	Back Up Lights turn on	
Put the Gear <b>Stift</b> in N (neutral)	Back Up Lights go out	

### SYSTEM DIAGNOSIS

• Diagnostic steps for the symptoms listed in the following table are listed after the table.

### **SYMPTOM TABLE**

A: Back Up Lights do not operate

B: Back Up Lights stay on in park or neutral

### A: BACK UP LIGHTS DO NOT OPERATE

Connect: TEST LAMP
At: GEAR SELECTOR SWITCH CONNECTOR

Condition:

Connect Between	Switch: RUN  Correct Result For Diagnosis	
DK BLU & Ground	Test Lamp lights	See 1
DK BLU & LT GRN	Test Lamp lights	See 2

### B: BACK UP LIGHTS STAY ON IN PARK OR NEUTRAL

Remove the connector from the Gear Selector Switch.

- If Back Up Lights go out, adjust/replace the Gear Selector Switch.
- If Back Up Lights do not go out, check for short to voltage in LT GRN (24) wires.

### CIRCUIT OPERATION

With the IGNITION SWITCH in RUN, BULB TEST, or START, voltage is applied through the Turn B/U Fuse to the Gear Selector Switch. Whenever the *gear* selector is **shifted** to REVERSE, the Gear Selector Switch closes, and voltage is applied to the Back Up Lights.

REGAL 8A - 112 - 3

## 3LANK





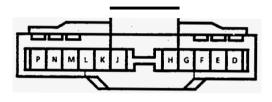
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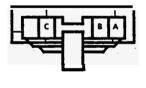
### **CORNERING LIGHTS**

### HARNESS CONNECTOR FACES

C100, See Page 202-0



BLK



BLK

V00057.0 C104

COMPONENT LOCATION		Page-Figure
Turn-Hazard Switch Assembly	Top of steering column	201-13-A
C100 (45 cavities)	LH rear of engine compartment	<b>.</b> 201- 9-B
C104 (11cavities)	Attached to RH side of steering column	. 201-13-A
C118 (1cavity)	LH front of engine compartment, behind LH park and turn light	201-20-D
C119 (1cavity)	RH front of engine compartment, behind RH park and turn light	201-20-D
G105	LH front of engine compartment, <b>on</b> inner fender	201-20-E
G106	RH front of engine compartment, on inner fender	201-21-C
S376	I/P harness, above fuse block	<b>.</b> 201-13-B

### TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. Check the TAIL LP Fuse and Light Switch by turning on the Lights and observing the License Light.
- **2.** If one or both Cornering Lamps do not turn **off**, the Turn-Hazard Switch Assembly is at fault.
- Go to System Diagnosis for diagnostic tests.

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### SYSTEM DIAGNOSIS

 Make the following measurements if one or both Cornering Lamps do not operate.

### CORNERING LIGHTS TEST

Connect: TEST LAMP At: CONNECTOR C104A (Connected)		
Connect Between	Correct Lamp State	For Diagnosis
C (BRN) & Ground	ON	See 1
Turn Signal Switch in the Left turn position		
B (ORN) & Ground	ON	See 2
• Turn Signal Switchin the Right turn position		
A (BLK) & Ground	ON	See 2

- If all tests yield the correct response, check the bulb wire, bulbs and related connectors for opens.
- 1. Check the BRN (9) wire for an open (see schematic).
- **2.** Replace the Turn-Hazard Switch Assembly.

### **CIRCUIT OPERATION**

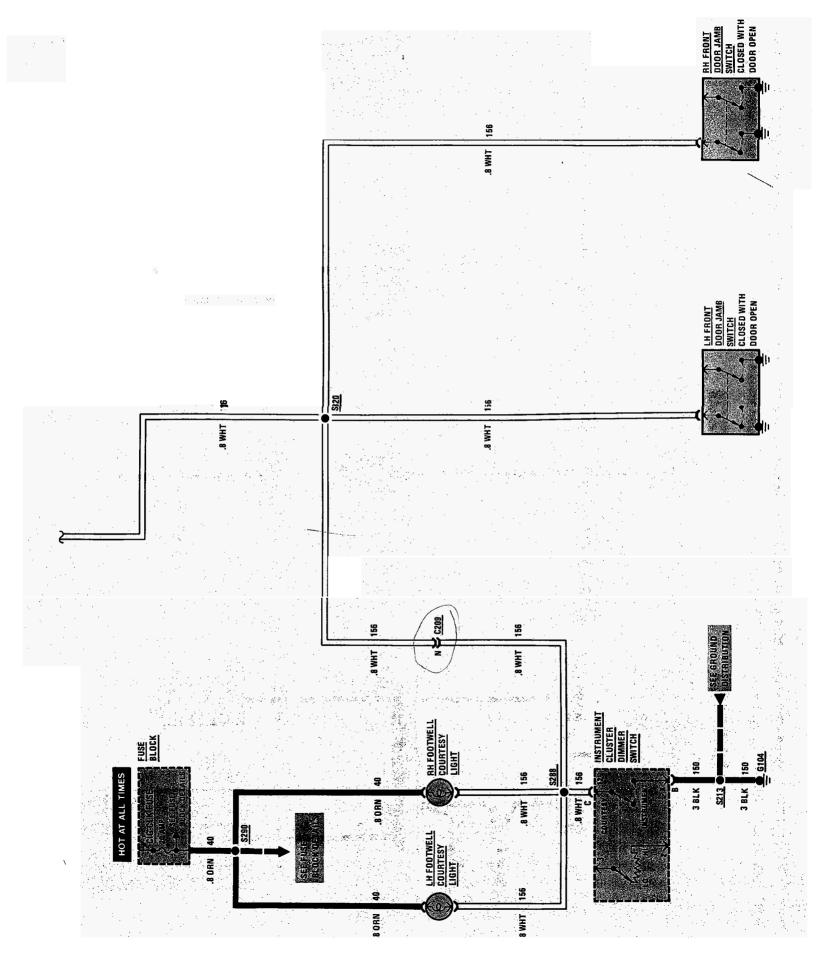
Voltage is applied at all times to the Light Switch. With the Light Switch in PARK or HEAD, voltage is applied to the Cornering Light Switch (part of the Turn-Hazard Switch Assembly). With the Turn-Hazard Switch Assembly in either TURN RIGHT or TURN LEFT, the corresponding Cornering Light goes on.

REGAL 8A – 113 - 3

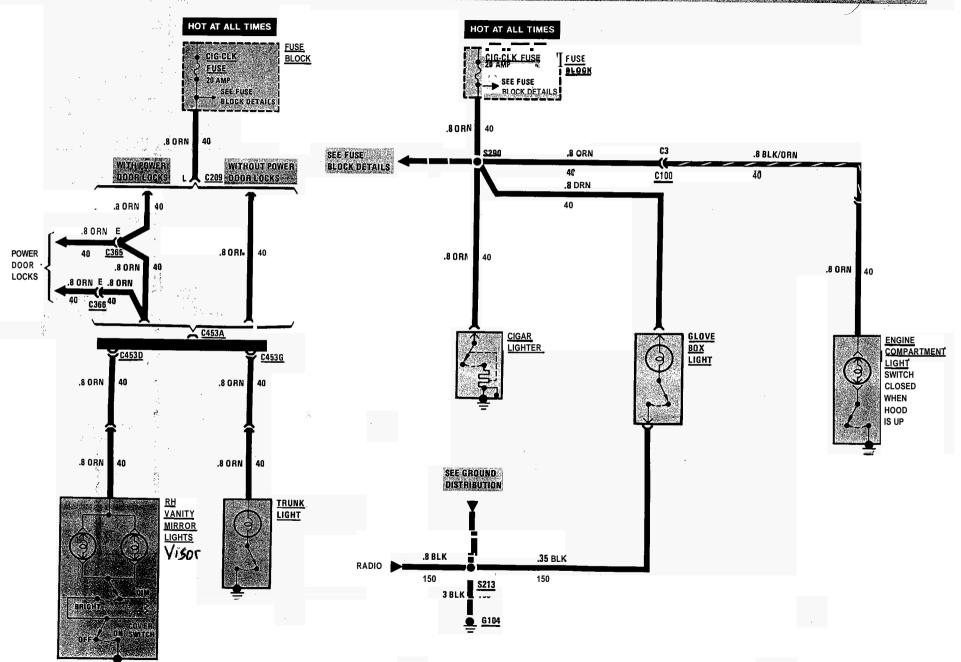


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REGAL 8A - 114 - 1



### FRONT CIGAR LIGHTER/CLOCK/GLOVE BOX LIGHT/ENGINE COMPARTMENT LIGHT/VANITY LIGHTS AND TRUNK LIGHT.

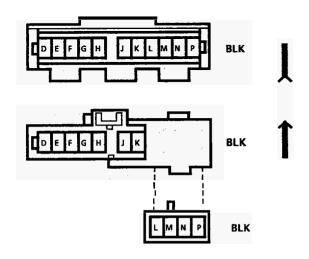


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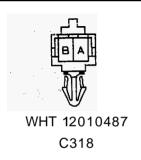
### **INTERIOR LIGHTS**

### HARNESS CONNECTOR FACES

C100, See Page 202-0

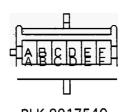


v11002.0 C209



C319, See 318

COMPONENT LOCATION		Page-Figure
C209 (11 cavities)	LH rear of engine compartment Attached to LH side of fuse block. Behind radio. On left reading light. LH shroud, near center access hold. Behind LH side of IIP, near shroud.	201-1342 201-15-A 201-23-D 201-23-B
C490 (1 cavity)  G104  G302  S213.  S288.  S290.  S320.  S376.	Rear of engine compartment, right of brake master cylinder  Behind I/P, to left of steering column On LH sail panel IIP harness, above radio. I/P harness, near headlight switch IIP harness, above steering column. Jamb switch harness, near LH shroud IIP harness, above fuse block	201-23-D 201-13-B 201-13-B 201-15-A 201-23-A



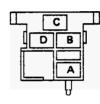
BLK 8917540 C365

C366, See 365

C453, See Page 202-1

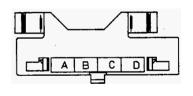


WHT 12004036 Glove Box Light



BLK 8917693 Headlight Dimmer Switch Instrument Panel Connector (Digital Cluster), See Page 82-5

Instrument Panel Connector
Indicators Cluster), See Page 80-6



WHT 12020032
Instrument Panel Dimmer Switch

### **INTERIOR LIGHTS**

### TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.
- 1. If none of the Courtesy Lights work, check the CIG-CLK Fuse.
- 2. If only one light does not operate, check bulb and related wiring.
- 3. Make **sure** connector C453 is mated prop erly.
- 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.

### A: LIGHT SHORT TEST

With all doors *closed* and the Panel Dome Light Control turned off, disconnect connector C209.

- If the Footwell Courtesy lights turn **aff** but the Dome and Courtesy/Warning Lights stay on, check all the Door Jamb Switches and WHT (156)wires (see schematic) for a short to ground.
- If the Dome and Courtesy/Warning Lights turn **f** but the Footwell Courtesy Lights stay on, check the Instrument Panel Dimming Switch and WHT (156) wires for a short to ground (seeschematic).

### **CIRCUIT OPERATION**

Voltage is applied at all times through the CIG-CLK Fuse to each of the components in this circuit. The Dome, Courtesy/Warning, and Courtesy Footwell Lights operate when either the Instrument Panel Dimmer Switch or the Door Jamb Switches are *closed* and provide a path to ground.

The Cigar Lighter, Glove Box Light, Engine Compartment Light, Trunk Light, Vanity Mirror Lights, and Reading Lights are individually operated by their respective switches.

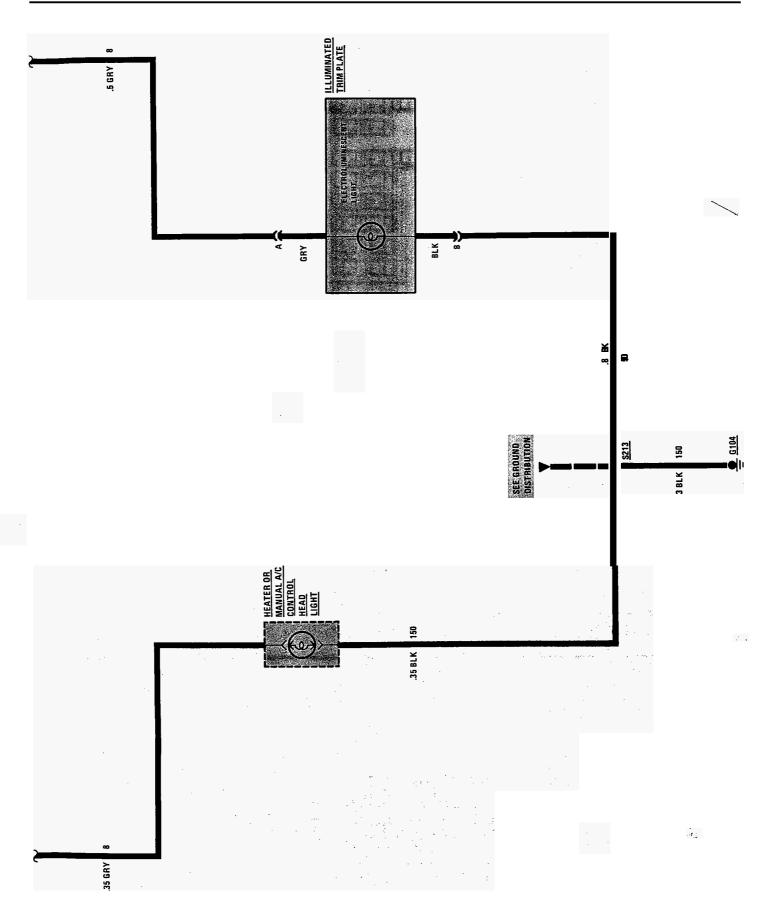
SYMPTOM	FOR DIAGNOSIS
Courtesy Lights stay on at all times	Do Test A
Instrument Panel Dimming Switch does not operate Interior Lights, but lights turn on with	Check WHT (156) and BLK (150) wires (see schematic) for opens
any door <b>open</b>	Check Instrument Panel Dimmer Switch for continuity
	Repair/Replace as necessary
Vanity Mirror does not operate	Check Vanity Mirror Lights connector and related wiring (seeschematic)
	If connector and wiring are OK, repair/replace Vanity Mirror
Vanity Mirror operates only in bright or only in dim	Repair/Replace Vanity Mirror
Cigar Lighter does not work	Check for corrosion or element damage
	Check for voltage at socket with a test lamp, replace Cigar Lighter if test lamp lights

REGAL 8A - 114 - 5

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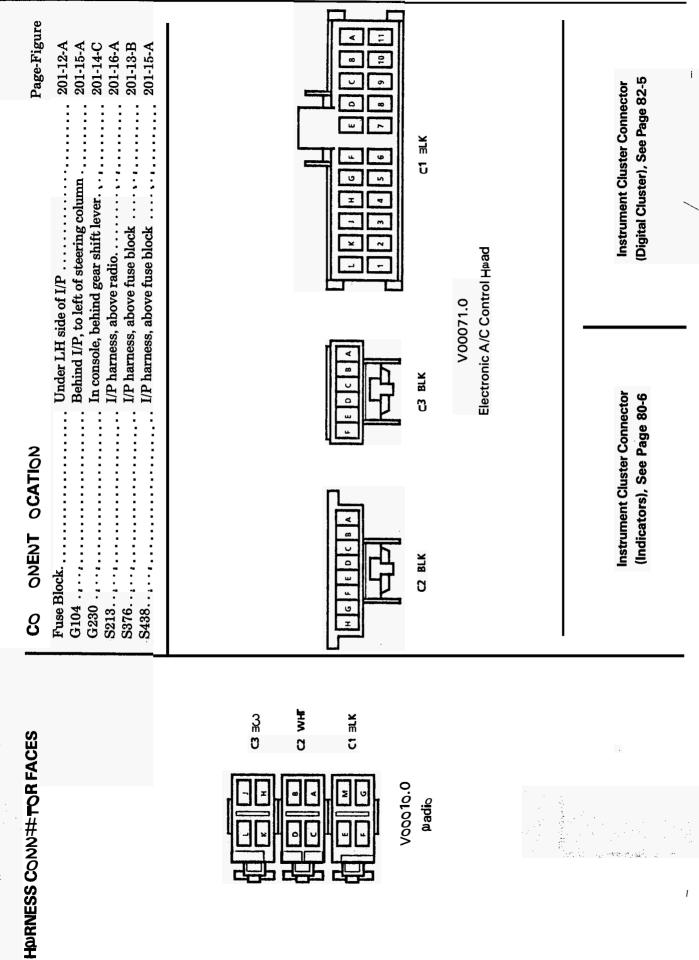
REGAL

8A 117-1



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## INTERIOR LIGHTS DIMMING



- Try the following checks before doing the System Check.
- **1.** Check the TAU, LPS Fuse by observing the Marker Lights.
- **2.** If a group of Interior lights do not come on, check the wires to the suspect lamps (see schematic).
- **3.** If a single Interior Light does not come on, check the bulb and wires to the suspect lamp (see schematic).
- **4.** If the brightness will not vary the Dimmer Switch position, replace the Light Switch.
- **5.** If the Interior Lights will not turn off, replace the Light Switch.
- Go to System Check for a guide to normal operation.
- Go to System Diagnosisfor diagnostic tests.

### SYSTEM CHECK

• Use the System Check as a guide to normal operation.

### SYSTEM CHIECK TABLE

0.0.2 o. <u></u>		
ACTION	NORMAL RESULT	
Move the Light Switch to the Park or Head Lamp position	The Digital Display, Instrument Cluster, Radio, Defogger, Ashtray, Shift Indicator, A/C and Heater Control Head, Tachometer, and the Illuminated Trim Plate Lights come on	
Move the Dimmer Switch to both extremes	In one direction the lights are bright, in the other direction they become dim	

• Refer to the System Diagnosis when a result is not normal.

### SYSTEM DIAGNOSIS

 Do the tests below if none of the Interior Lights come on.

### A: LIGHT SWITCH CONNECTOR TEST

Connect: TEST LAMP At: LIGHT SWITCH CONNECTOR (Connected)		
Connect Between	Correct For Display Diagnosis	
5 (ORN) & Ground	Test Lamp lights	See 1

• Light Switch in the Park or Head Lamp position

4 (BRN) &	Test Lamp	2 0
Ground	lights	See 2

- If all tests yield the correct response, go to Test B.
- 1. Check the ORN (240) wire and the TAIL LP Fuse for an open (see schematic).
- 2. Replace the Light Switch.

### **B: INSTRUMENT DIMMER SWITCH TEST**

**Connect: TEST LAMP** 

At: INSTRUMENT DIMMER SWTICH

(Connected)

Condition:

• Light Switch

Connect	Correct	For
Between	Display	Diagnosis
A (BRN) & Ground	Test Lamp lights	See 1

• Dimmer Switch in the bright position

) (DK GRN) &	Test Lamp	See 2
Ground	. lights	Dee 2

- If all tests yield the correct response, check the GRY (8) wire, DK GRN (49) wire and the INST LPS Fuse for an open (see schematic).
- 1. Check the BRN (9) for an open (see schematic).
- 2. Replace the Dimmer Switch.

### **CIRCUIT OPERATION**

Voltage is applied at all times through the TAIL LP Fuse to the Light Switch. With the Light Switch in the PARK or HEAD position, voltage is applied through the Instrument Cluster Dimmer Switch and then through the INST LPS Fuse to the individual Instrument lamp and the Digital Cluster:

A rheostat inside the Instrument Cluster Dimmer Switch controls the brightness of the lights. When the Dimmer Switch is turned the resistance of the rheostat either increases or decreases thus decreasing or increasing the Instrument Light brightness.

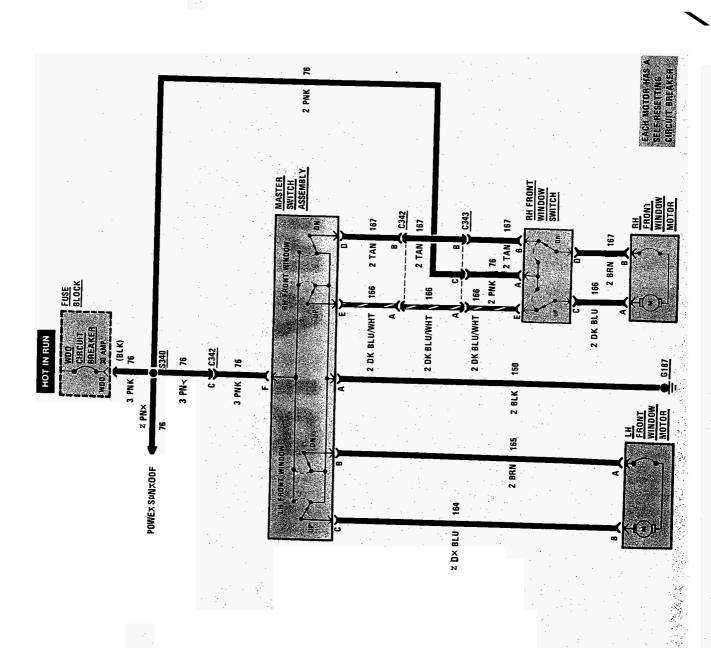
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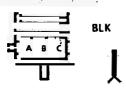
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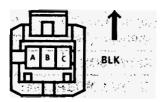
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Page-Figure

# HARNESS CONNECTOR FACES

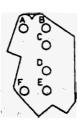




V03003.1 C342

C343, See C342

1.



BLK 12004140

LH Window Motor

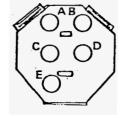
WHT 12010121

Master Switch Assembly

**COMPONENT LOCATION** 

C342 (3 cavities) ... LH shroud, at center access hole ... 201-22-F
C343 (3 cavities) ... RH shroud, at center access hole ... 201-22-F
G187 ... In LH front door, near front ... 201-22-F

RH Window Motor, See LH Window Motor



BLK 12034136 RH Window Switch

# **POWER WINDOWS**

#### TROUBLESHOOTING HINTS

- Try the following check before doing the System Check.
  - If all the Power Windows do not operate, check the WDO CIRCUIT BREAKER by operating the Sunroof (if equipped).
- 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 the Ignition Switch in RUN, operate each window UP and DN from the Master Switch Assembly	Each window operates quietly and smoothly, with no sticking
Operate the RH Front Window from the RH Front Window Switch (UP and DN)	RH Front Window operates quietly and smoothly, with no sticking

• Referto 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	DOTEST
No Power Windows operate from any switch	A: Window Power and Ground Test B: Master Switch Assembly Test D: Window Motor Test
No Power Windows operate from the Master Switch Assembly	A: Window Power and Ground Test B: Master Switch Assembly Test C: RH Front Window Switch Test D: Window Motor Test
LH Front Window does not operate	B: Master Switch Assembly Test  D: Window Motor Test
RH Front Window does not operate from the Master Switch Assembly	B: Master Switch Assembly Test C: RH Front Window Switch Test <b>D:</b> Window Motor Test
RH Front Window operates from the Master Switch Assembly but does not operate from the RH Front Window Switch	E: RH Front Window Switch Power Test

• If your symptom does not appear in the Symptom Table, perform all of the tests.

# **POWER WINDOWS**

# A: WINDOW POWER AND GROUND TEST

Connect: TEST LAMP

At: MASTER SWITCH ASSEMBLY CONNECTOR (Connected)

Condition:

• Ignition Switch: RUN

ignition witon. Non		
Connect Between	Correct Result	For Diagnosis
A (PNK) & Ground	Test Lamp lights	See 1
A (PNK) & F (BLK)	Test Lamp lights	See 2

- If **all** results are correct, go to Symptom Table.
- 1. Check/repair the PNK (76) wire for an open (seeschematic).
- 2. Checkhepair the BLK (150)wire and **G187** for an open (see schematic).

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#### B: MASTER SWITCH ASSEMBLY TEST

Connect: TEST LAMP

At: MASTER SWITCH ASSEMBLY CONNECTOR (Connected)

Conditions:.

• Ignition Switch: RUN

 Operate the LH Front Window UP and DN from the Master Switch Assembly

Connect  Between	Correct Result	For Diagnosis
D (DKBLU) & E (BRN)	Test Lamp lights	sæ 1

B(DKBLU/	T41	
WHT)&C (TAN)	Test Lamp lights	See 1

If all results are correct, go to Symptom Table.

1. Replace Master Switch Assembly.

#### C: RH FRONT WINDOW SWITCH TEST

Connect: TEST LAMP

At: RH FRONT WINDOW SWITCH CONNECTOR (Connected)

Conditions:

• Ignition Switch: RUN

 Operate the RH Front Window Switch in the Master Switch Assembly UP and DN (see schematic)

(see schematic)		
Connect Between	Correct Result	For Diagnosis
B (TAN) & E (DKBLU/ WHT)	Test Lamp lights	See 1
C(DKBLU)& D(BRN)	Test Lamp lights	See 2

# **POWER WINDOWS**

(Continued from previous page)

#### D: WINDOW MOTOR TEST

Connect: TEST LAMP

At: WINDOW MOTOR CONNECTOR

(Disconnected)

**Conditions:** 

• Ignition Switch: RUN

 Operate associated switch in the Master Switch Assembly UP and DN (see

schematic)

Connect Between	Correct Result	For Diagnosis
DK BLU wire & BRN wire (see schematic)	Test Lamp lights	See 1

- If the result is correct, replace the Window Motor. Refer to Section 5 of the Body Service Manual for replacement procedures.
- 1. Checkhepair the wires to the Window Motor for an open (seeschematic).

#### E: RH FRONT WINDOW SWITCH **POWER TEST**

Connect: TEST LAMP

At: RH FRONT WINDOW SWITCH **CONNECTOR (Connected)** 

Condition:

• Ignition Switch: RUN

Connect Between	Correct Result	For Diagnosis
A (PNK) & Ground	Test Lamp lights	See 1

- If the result is correct, replace the RH Front Window Switch.
- 1. Check/repair the PNK (76)wire for an open (seeschematic).

#### **CIRCUIT OPERATION**

The Power Windows are driven by reversible permanent magnetic motors. Each motor is controlled by two normally closed to ground switches. When the RH Front Window UP Switch in the Master Switch Assembly is presed, the DK BLU motor wire is connected to battery voltage through the RH Front Window Switch. The motor drives the window up. When the switch is released, the contacts return to their normal position and the DK BLU motor wire is returned to ground. The motor stops.

To lower the window, the RH Front Window DN Switch in the Master Switch Assembly connects the BRN motor wire to battery voltage through the RH Front Window Switch. The polarity across the motor is reversed from the polarity that occurs when the UP Switch is pressed. The motor runs the opposite way to drive the window down.

When the RH Front Window Swtich is operated, voltage to run the Window Motor is switched from the PNK wire to either motor wire. The other motor wire remains grounded.

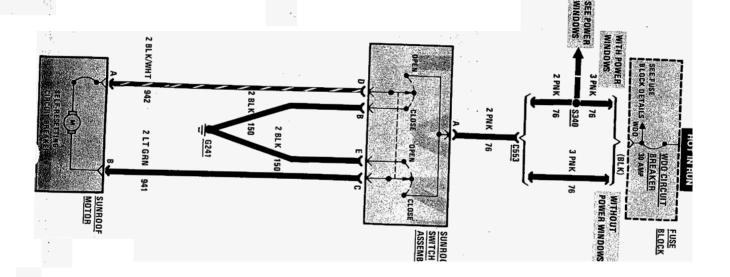
Each motor is protected by a built-in circuit breaker. If a Window Switch is held on too long with the window obstructed or after the window is fully up or down, the circuit breaker opens the circuit. The circuit breaker resets automatically as it cools.

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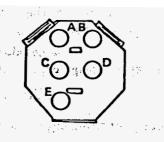


# SUNROOF

# **HARNESS CONNECTOR FACES**



BLK 2989743 Sunroof Motor



BLK 12004602 Sunroof Switch Assembly,

teres and the date of the second

COMPONENT LOCATION		Page-Figure
	Under LH side of I/P	
Sunroof Switch Assembly	Center of windshield header area	201-23-C
• /	Behind LH side of <b>I/P</b> , near upper access hole LH side of windshield header area	
S340	Cross car harness, above steering column	

#### TROUBLESHOOTING HCNTS

- Try the following checks before doing the System Check.
- 1. Check the WDO Circuit Breaker by operating the Power Windows (if equipped).
- 2. Check that G241 is clean and tight.
- 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 normaloperation.
- Refer to System Diagnosis for a list of symptoms and diagnostic steps.

#### SYSTEM CHECK TABLE

ACTION	NORMALRESULT
1. With the Ignition Switchin RUN, move the Sunroof Switch to open.	Sunroof operates smoothly with no sticking to fill open position
2. Hold the Sunroof Switch in CLOSE position	Sunroof operates smoothly with no sticking and closes comdetely

Refer to System Diagnosis if a result is not normal.

#### SYSTEM DIAGNOSIS

 Do the tests below if the Sunroof does not operate.

#### A: SUNROOF SWITCH ASSEMBLY CONNECTOR TEST

Connnect: TEST LAMP

At: SUNROOF SWITCH ASSEMBLY CONNECTOR (Connected)

Condition:  • lanition Switch: RUN			
<b>Connect</b> Between	Correct Result	For Diagnosis	
A (PNK)& Ground	Test lamp lights	See 1	
A (PNK) & B (BLK)	Testlamp lights	See 2	
A (PNK)& E	Testlamp lights	See 2	
Hold Sunroc	Hold Sunroof Switch in OPEN		
D (BLK/ WHT) & C (LT lights See 3		See 3	
Hold the Sunroof Switch in CLOSE			
D (BLK/ WHT) & C (LT GRN)	Test lamp lights	See 3	

- If all the results are correct, **go** to Test B.
- 1. Check/repair PNK (76) wire for an open.
- 2. Check/repair BLK (150)wire for an open.
- 3. Replace Sunroof Switch Assembly.

#### **B: SUNROOF MOTOR CONNECTOR TEST**

Connect: TEST LAMP

At: SUNROOF MOTOR CONNECTOR

(Disconnected)

Conditions:

• Ignition Switch: RUN

• Operate Sunroof Switch in OPEN and **CLOSE** positions

Connect Between	Correct Result	For Diagnosis
(BLK/WHT) wire & (LT GRN) wire	<b>Test lamp</b> lights	See 1

- If the result is correct, replace the Sunroof Motor, Refer to Section 8 of the Body Service Manual for removal and installation procedures.
- 1. Checkhepair BLK/WHT (942) and LT GRN (941)wires for an open.

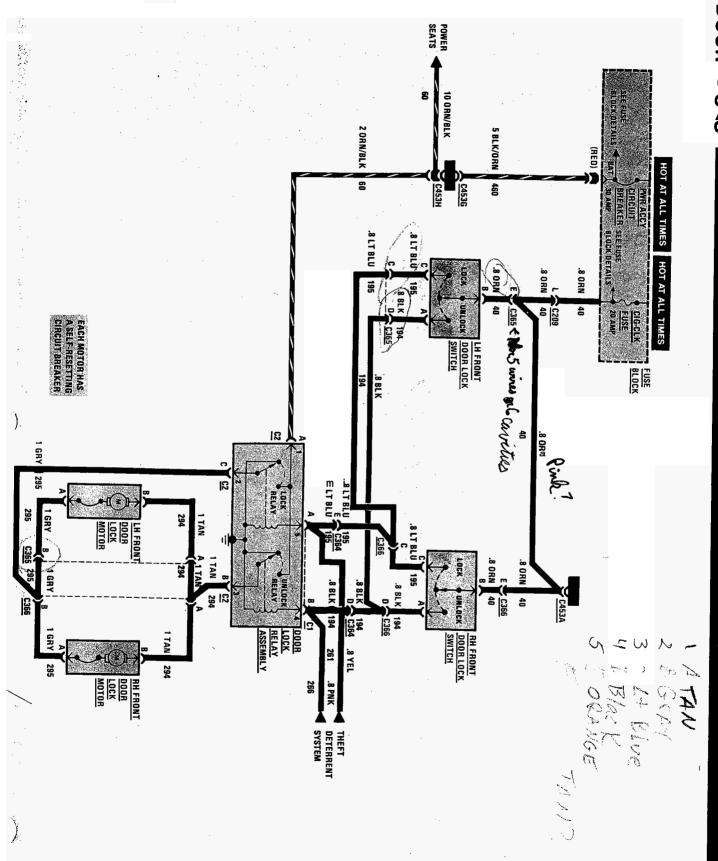
#### **CIRCUIT OPERATION**

With the Ignition Switch in RUN and the Sunroof Switch in OPEN, voltage is applied to the Sunroof Motor windings through the BLK/ WHT wire and the Sunroof opens. When the Sunroof Switch is placed in CLOSE, voltage is applied to the Sunroof Motor through the LT GRN wire. The motor runs in the opposite direction and the window closes.

REGAL 8A – 122 - 3

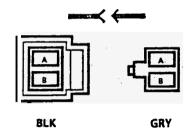
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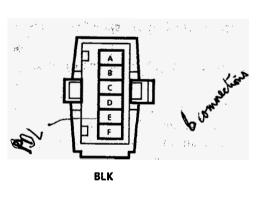


Page-Figure

#### HARNESS CONNECTOR FACES



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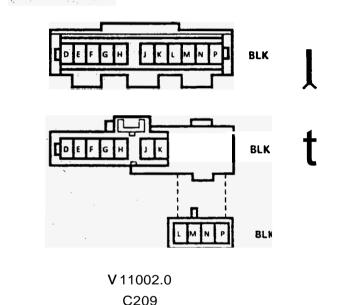
V00021.0 C365

C366, See C365

C453, See Page 202-1

#### **COMPONENT LOCATION**

Door Lock Motors.In bottom of each door201-23-BDoor Lock Relay AssemblyLower RH shroud, at bottom access hole201-22-EFuse Block.Under LH side of I/P.201-12-AC209 (11cavities)Attached to LH side of fuse block201-13-CC364 (2 cavities)Near RH shroud201-15-BC365 (6 cavities)LH shroud, near center access hole201-23-BC366 (6 cavities)RH shroud, near center access hole201-23-BC453 (18 cavities)Behind LH side of I/P, near shroud201-14-A





WHT 12004595 Door Lock Motor (LH)

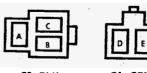
# Door Lock Motor (RH), See Door Lock Motor (LH)



BLK 12004155 Door Switch (LH)

Door Switch (RH), See Door Switch (LH)

2984378 2977373



C2 BLK

C1 GRY

V00018.0 Door Lock Relay

#### POWER DOOR LOCKS

#### TROUBLESHOOTING HINTS

 Try the following checks before doing the System Check.

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- **1.** Check the PWR ACCY Circuit Breaker by operating the Power Seats (if equipped).
- 2. Check the CIG-CLK Fuse by observing that the Glove Box Light comes on when opened.
- **3.** Check that the Door Lock Relay Assembly case ground is making good contact.
- **4.** If one or more of the door lock motors do not operate properly, but the other door locks function **normally**, check the wiring to the motors. If the wiring is correct, replace that motor.
- 5. Check for mechanical binds in the Door Lock System.
- Go to System Check for a guide to normal. operation.
- Go to System Diagnosisfor diagnostic tests.

#### SYSTEM CHECK

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

# SYSTEM CHECK TABLE

0.00,200 0.1200 0.7222		
ACTION	NORMAL OPERATION	
Operate all the LH Door Lock Switches	All the doors lock and unlock	
Operate all the RH Door Lock Switches	All the doors lock and unlock	
Unlock one door using the vehicle key	That door unlocks, but the other doors remain unlocked	
With all the doors closed and locked, operate the inside door handle to try to open each door	The doors will not open	
Open the LH door and move the LH Door Lock Switch to the LOCK position, close the door, and try to open each door from the outside	The doors will not open	

 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	DO TEST
Only some of the doors lock and unlock	A: Door Lock Motor Test on suspect Door Lock Motor
The Power Door Locks do not operate from one or more Door Lock Switch(es)	B: Door Lock Switch Test on suspect Door Lock Switch(es)
The Power Door Locks do not operate from all Door Lock Switches	C: Door Lock Relay Test

#### A: DOOR LOCK MOTOR TEST

Measure: VOLTAGE

At: SUSPECT DOOR LOCK MOTOR CONNECTOR (Disconnected)

Condition:

 LH Door Lock Switch: UNLOCK and hold

Measure Between	Correct Voltage	For Diagnosis
B (TAN) & Ground	Battery	See 1
B (TAN) & A (GRY)	Battery	See 2

- If all the voltages are correct, replace the suspect Door Lock Motor.
- **1.** Check the TAN (294) wire for an open (see schematic).
- 2. Check the GRY (295) wire for an open (see schematic).

# POWER DOOR LOCKS

#### **B: DOOR LOCK SWITCH TEST**

Measure Between	Correct Voltage	For Diagnosis
B (ORN) & Ground	Battery	See 1

• Move the Door Lock Switch to LOCK and hold

C (LT BLU) &	4 24 9 9 7 7	
Ground	Battery See 2	

 Move the Door Lock Switch to UNLOCK and hold

A (BLK) &		20 (1)
A (DLR) &	Battery	See 2
Ground	Dautery	Dec 2

- If all the voltages are correct, check the LT BLU (195) wire and BLK (194) wire for an open (see schematic).
- 1. Check the CIG-CLK Fuse. Check the ORN (40) wire for an open (see schematic).
- 2. Replace the suspect Door Lock Switch.

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Connect Between	Correct Result	For Diagnosis
A (ORN/BLK) & Ground	Test Lamp lights	See 1
	8	<u> </u>

# C: DOOR LOCK RELAY TEST (TABLE 2)

**Connect: TEST LAMP** 

At: DOOR LOCK RELAY CONNECTORS C1 & ;

C2 (Connected)

Condition:

Door Lock Switch: LOCK and hold

Connect Between	Correct Result	For Diagnosis
©1:A (LT BLU) & Ground	Test Lamp lights	See 1
C2:C (GRY) & Ground	Test Lamp lights	See 3
C2:C-(GRY).&	Test Lamp lights	See 3
	=	I D W O CVI

 Move the Door Lock Switch to UNLOCK and hold

(Continued in next column)

# (Continued from previous column)

C1:B (BLK) & Ground	Test Lamp lights	See 2
C2:B (TAN) & Ground	<b>Test Lamp</b> lights	See 3
C2:C (GRY) & C2:B (Tan)	Test Lamp lights	See 3

#### **CIRCUIT OPERATION**

When a Door Lock Switch is activated in the Power Door Lock system, all of the doors will lock or unlock in unison. Each lock can also be operated manually from the locking post. The locks are operated by reversible Motors that receive voltage from two relays in the Door Lock Relay Assembly. These relays operate to turn the Motors on by applying a voltage to one of the terminals and a ground to the other terminal.

When either Door Lock Switch is moved to the LOCK position, it completes the circuit to the coil of the Door Lock Relay Assembly. The lock relay is energized. The contact for the Lock Relay closes, and is connected to battery voltage through the ORN/BLK wire which is the high current feed for **driving** the Motors.

Voltage is then applied to the GRY wire and the Door Lock Motors, which are grounded by the TAN wire from the other terminal of the Motor through the contact for the Unlock Relay. The Motor in each door runs to operate the Door Locks. When the Door Lock Switch is released, the Lock Relay contact returns to ground and the Motors turn off.

A similar action occurs with the unlock relay when it is energized by either of the Door Lock Switches closing to the UNLOCK position. Now the TAN wires to the Motors carry battery voltage and the GRY wires are grounded. The polarity of the voltage to the Motors has been reversed. The Motors run in the opposite direction to unlock the doors.

The Door Lock Switches are usually closed for just a moment. If they are held closed, a circuit breaker in each motor will open to protect against damage. The circuit breakers close automatically when they cool off.