



| 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 |
| Turn-HazardSwitch Assembly | 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 side of rear seat $\qquad$ | 201-21-D |



V08002.0
C320


BLK
BLK
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 RIGFI, 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 Șuetem Diagnosisfor 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 <br> work but Hazard <br> Lights do | A: Turn Lights Test |
| Hazard Lights do not <br> operate but Stop <br> Lights do | B: Hazard Lights <br> Test |
| Stop Lights do not <br> work but the signals <br> work | C: Stop Lights Test |
| Stop-Turn Lights on <br> one or both sides do <br> not work | C: Stop Lights Test |
| Park Lights do not <br> turn off | D: Park Lights Short |
| Test |  |
| Coach Lights do not but Tail Lights <br> do | E: Inverter Test |

## 4: TURN LIGHTS TEST

| Connect: TEST LAMP <br> At: CONNECTOR C104B (Connected) <br> Conditions: <br> - Ignition Switch: RUN |  |  |
| :---: | :---: | :---: |
| Connect <br> Between | Correct <br> Result | For <br> Diagnosis |
|  <br> Ground | Test Lamp <br> lights | See 1 |

- If the Test Lamp lights, replace Turn $\cdot$ Hazard Switch Assembly.

1. Check Turn Flasher and PPL (16)wire for an open.

3: HAZARD LIGHTS TEST (TABLE 1)

|  |  |  |
| :---: | :---: | :---: |
| Jumper <br> Between | Correct <br> Result | For <br> Diagnosis |
| ORN \& BRN | All Turn <br> Lights turn on | See 1 |
| - If the result is correct, replace the Hazard <br> Flasher. <br> 1. Go to Table 2. |  |  |

B: HAZARD LIGHTS TEST (TABLE2)

| Measure: VOLTAGE <br> At: CONNECTOR C104B (Disconnected) |
| :--- | :---: | :---: |
| Conditions: |
| - Hazard Flasher: CONNECTED |


| Measure <br> Between | Correct <br> Voltage | Diagnosis |
| :---: | :---: | :---: |
| K <br>  <br> Ground | Battery | See 1 |

- If the voltage is correct, replace the TurnHazard Switch Assembly.

1. Check ORN (140) and BRN (27)wires for an open.

C: STOP LIGHTS TEST

| Connect: TEST LAMP <br> At: CONNECTOR C104B (Connected) Conditions: <br> - 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 <br> At: Sentinal Amplifier Connector (if <br> equipped) (Disconnected) |  |  |
| :---: | :---: | :---: |
| Action | Correct Result\| | For Diagnosis |
| Disconnect <br> Connector <br> from Sentinel <br> 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 <br> At: LIGHT SWITCH

| Action | Correct Result | For Diagnosis |
| :---: | :---: | :---: |
| Disconnect |  |  |
| Connector | Lights turn off | See 1 |
| from Light |  |  |
| Switch |  |  |

- If lights go off, replace light switch.

1. Check BRN (9) wire for a short to voltage.

## E: INVERTER TEST

## Measure: VOLTAGE <br> At: INVERTER CONNECTOR (Connected) Conditions:

- Liaht Switch: PARK

| Measure <br> Between | Correct <br> Result | For <br> Diagnosis |
| :---: | :---: | :---: |
| $\overline{\square 1 / 4 ~ \& ~ F r n i n d ~}$ | Rattorv | See 1 |
| $\mathrm{C} 1 / 4 \& \mathrm{C} 2 / 1$ | 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 StopTurn 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

## (Continuedfrom 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 TurnHazard 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.


## HARNESS CONNECTOR FACES

C100, See Page 202-0

C899, See C898



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

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

## 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 diagnostictests.


## 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).

## EXTERIOR LIGHTS: TAIL/MARKER/LICENSE



## EXTERIOR LIGHTS: TAIL/MARKER/LICENSE

HARNESS CONNECTOR FACES

v11002.0
C209
COMPONENT LOCATIONFuse Block. . . . . . . . . . . . . . . . . . . . Under LH side of I/P, . . . . . . . . . . . . . . . . . . . 201-12-A
C209 (11cavities) Attached to LH side of fuse block ..... 201-13-C
C320 (6 cavities) Rear LH corner of trunk ..... 201-22-A
C558 (1cavity) In rear lights harness, above license plate ..... 201-21-B
C559 (1 cavity) In rear lights harness, above license plate ..... 201-21-B
G177 Rear LH corner 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
S360 Rear lights harness, below LH tail lights ..... 201-21-B
S361. Rear lights harness, below RH tail lights ..... 201-21-B
S376. I/P harness, above fuse block. ..... 201-13-B


WHT 12020031
Light Switch

## EXTERIOR LIGHTS:TAIL/MARKER/LICENSE

## TROUBLESHOOTING HINTS

- Try the following checks before doing the System Diagnosis.

1. If Tail, Rear Marker and License Lights work, check the TAIL IPS Fuse, Light Switch, ORN (240), BRN (9)and BLK (150) wire for continuity.
2. IfLH 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 Bil,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 t.o the light Switch at all times. With the Light Switch in PARK or HEAD, voltage is applied Lo all of the lights in this circuit.
ミXTERIWr LIGHTS: COACH
hot at all times


COMPONENT LOCATION
Fuse Block Under LH side of $\mathbf{I} / \mathbf{P}$ ..... 201-12-A
Inverter In trunk, behind center of rear seat ..... 01-21-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
G129Front center of trunk201-21-D
S376 I/P harness, above fuse block ..... 201-13-B

## 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.

HARNESS CONNECTOR FACES


BLK 2973407
Gear Selector Switch

| COMPONENT LOCATION |  | Page－Figure |
| :---: | :---: | :---: |
| Fuse Block． | Under LH side of I／P． | 201－12－A |
| Gear Selector Switch． | Attached to base of steering column | 201－13－A |
| $\begin{aligned} & \text { C209 (11cavities) . . . . } \\ & \text { C320 (6 cavities) } \end{aligned}$ | Attached to LH side of fuse block <br> Rear LH corner of trunk． | 201－13－C |
| C558（1cavity） | ．In rear lights harness，above license plate． | ．201－21－B |
| G177 | Rear LH corner 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 |



V 08002.0
C320

## 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 Diagnosisfor diagnostic tests.


## SYSTEM CHECK

- Use the System Check Table as a guide to normaloperation.
- Refer to System Diagnosisfor a list of symptoms and diagnosticsteps.

SYSTEM CHECK TABLE

| ACTION | NORMAL RESULT |
| :--- | :--- |
| Put the Ignition <br> Switch in RUN and <br> the Gear Stifitt in $\mathbf{P}$ <br> (park) | Back Up Lights are <br> off |
| Put the Gear Shiftin <br> $\mathbf{R}$ (rewersel) | Back Up Lights turn <br> on |
| Put the Gear Shift in <br> N (neutral) | Back Up Lights go <br> out |

## SYSTEM DIAGNOSIS

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


## SYMPTOMTABLE

A: Back Up Lights do not operate
B: Back Up Lights stay on in park or neutral
A: BACK UP LIGHTSDO NOT OPERATE

| Connect: TEST LAMP <br> At: GEAR SELECTOR SWITCH CONNECTOR <br> Condition: <br> - gnition Switch: RUN |  |  |  |
| :--- | :---: | :---: | :---: |
| Connect <br> Between | Correct Result | For Diagnosis |  |
|  <br> Ground | Test Lamp <br> lights | See 1 |  |
|  <br> LT GRN | Test Lamp <br> 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 selectoris shifted to REVERSE, the Gear Selector Switch closes, and voltage is applied to the Back Up Lights.

conNERIN ：WGHTS

HOT AT ALL TIMES
或要首


$$
\begin{gathered}
\text { ORN } \\
\text { B } \\
Y
\end{gathered}
$$




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B

－

| HARNESS CONNECTOR FACES | COMPONENT LOCATION |  | Page-Figure |
| :---: | :---: | :---: | :---: |
|  | Turn-Hazard Switch Assembly. | Top of steering column | 201-13-A |
|  | C100 (45cavities) . . . . . . . . | . LH rear of engine compartment. | 201-9-B |
|  | C104 (11cavities) .......... | Attached to RH side of steering column | 201-13-A |
| C100, See Page 202-0 | $\begin{aligned} & \text { C118 (1cavity). } \\ & \text { C119 (1 cavity). } \end{aligned}$ | LH front of engine compartment, behind LH park and turn light | 201-20-D |
|  |  | RH front of engine compartment, behind RH park and turn light $\qquad$ | 201-20-D |
|  | G105 ........................ | LH front of engine compartment, on inner fender $\qquad$ | 201-20-E |
|  | G106 | RH front of engine compartment, on inner fender $\qquad$ | 201-21-C |
|  | S376................... | I/P harness, above fuse block. . . . . . . . . . | . 201-13-B |



BLK


BLK

V00057.0 C104

## CORNERING LIGHTS

## TROUBLESHOOTING HINTS

- Try the following checks beforedoing 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 CorneringLamps do not turn off, the Turn-Hazard Switch Assembly is at fault.

- Go to System Diagnosis for diagnostic tests.


## SYSTEM DIAGNOSIS

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


## ;ORNERING LIGHTSTEST

## Connect: TEST LAMP At: CONNECTOR C104A (Connected)

| Connect <br> Between | Correct Lamp <br> State | For Diagnosis |
| :---: | :---: | :---: |
|  <br> Ground | ON | See 1 |

- Turn Signal Switch in the Left turn position

|  <br> Ground | ON | See 2 |
| :---: | :---: | :---: |

- Turn Signal Switchin the Right turn position

- 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 CorneringLight goes an.



－FRONT CIGAR LIGHIER／CLOCK／GLOVEBOX LIGHTENGINE COMPARTMENT LIGHTVANITY LGHTS AND TBUNK LGHT


## HARNESSCONNECTOR FACES

C100, See Page 202-0


C319, See 318

| COMPONENT LOCATION |  | Page-Figure |
| :---: | :---: | :---: |
| Fuse Block. | Under LH side of I/P | 201-12-A |
| C100 (45cavities) | LH rear of engine compartment | 201- 9-B |
| C209 (11cavities) | Attached to LH side of fuse block. | 201-1342 |
| C258 (2cavities) | Behind radio. | 201-15-A |
| C318(2 cavities) | On left reading light. | 201-23-D |
| C365(6 cavities) | LH shroud, near center access hold. | 201-23-B |
| C453(18cavities) | Behind LH side of IIP, near shroud. | 201-14-A |
| C490(1 cavity) .. | Rear of engine compartment, right of brake master cylinder | 201-9.C |
| G104 | Behind $\mathrm{I} / \mathrm{P}$, to left of steering column | 201-15-A |
| G302 | On LH sail panel. | 201-23-D |
| S213. | IIP harness, above radio. | 201-13-B |
| S288. | I/P harness, near headlight switch | 201-13-B |
| S290. | IIP harness, above steering column. | 201-15-A |
| S320. | Jamb switch harness, near LH shroud | 201-23-A |
| S376. | IIP harness, above fuse block | 201-13-B |



## TROUBLESHOOTING HINTS

- Try the following checks beforedoing the System Diagnosis.

1. If none of the Courtesy Lights work, check the CIG-CLK Fuse.
2. If only one light does not operate, checkbulb and related wiring.
3. Make sure connector C 453 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: LIGHTSHORT TEST

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

- If the Footwell Courtesy lights turn off but the Dome and Courtesy/Warning Lights stay on, check all the Door Jamb Switches and WHT (156) wires (seeschematic) for a short to ground.
- If the Dome and Courtesy/Warning Lights turn off 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 Mir ror 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 <br> operate Interior Lights, but lights turn on with <br> any door open | Check WHT (156)and BLK (150)wires (see sche- <br> matic) for opens <br> Check Instrument Panel Dimmer Switch for <br> continuity <br> Repair/Replace as necessary |
| Vanity Mirror doesnot operate | Check Vanity Mirror Lights connector and <br> related wiring (seeschematic) <br> If connector and wiring are OK, repair/replace <br> Vanity Mirror |
| Vanity Mirror operates only in bright or only in <br> dim | Repair/Replace Vanity Mirror <br> Cigar Lighter does not workCheck for corrosion or element damage <br> Check for voltage at socket with a test lamp, <br> replaceCigar Lighterif test lamplights |


$\qquad$




## TROUBLESHOOTING HINTS

- 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

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

Connect: TEST LAMP
At: LIGHT SWITCH CONNECTOR
(Connected)

| Connect <br> Between | Correct <br> Display | For <br> Diagnosis |
| :---: | :---: | :---: |
| $5($ ORN $) \&$ <br> Ground | Test Lamp <br> lights | See 1 |

- Light Switch in the Park or Head Lamp position

|  <br> Ground | Test Lamp <br> 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.

## A: LIGHT SWITCH CONNECTOR TEST

(Continued from previous page)

## B: INSTRUMENT DIMMER SWITCH TEST

| Connect: TEST LAMP <br> At: INSTRUMENT DIMMER SWTICH <br> (Connected) <br> Condition: <br> • Light Switch |  |
| :--- | :--- |
| Connect <br> Between | Correct <br> Display |
|  <br> Ground | Test Lamp <br> lights |

- Dimmer Switch in the bright position

$\left.$|  |
| :---: | :---: | :---: |
| Ground | | Test Lamp |
| :---: |
| lights | \right\rvert\, | See 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.



## POWER WINDOWS

## HARNESSCONNECTOR FACES



V03003.1
C342

C343, See C342

| COMPONENT LOCATION |  | Page-Figure |
| :---: | :---: | :---: |
| Fuse Block. | Under LH side of I/P. | 201-12-A |
| Window Motors. | Lower front of each door. | 201-22-F |
| 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 |
| S340. | Cross car harness, above steering |  |

RH Window Motor, See LHWindow Motor

BLK 12034136
RH Window Switch

## 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 Diagnosisfor 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.


## SYSTEMCHECK TABLE

| ACTION | * NORMALRESULT |
| :---: | :---: |
| 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 <br> Front Window from <br> the RH Front <br> Window Switch (UP and DN) | RH Front Window operates quietly and smoothly, with no sticking |

- Referto SystemDiagnosiswhen a resultis not normal.


## SYSTEMDIAGNOSIS

- 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 <br> B: Master Switch Assembly Test <br> D: Window Motor Test |
| No Power Windows operate from the Master <br> Switch Assembly | A: Window Power and Ground Test <br> B: Master Switch Assembly Test <br> C: RH Front Window Switch Test <br> D: Window Motor Test |
| LH Front Window does not operate | B: Master Switch Assembly Test <br> D: Window Motor Test |
| RH Front Window does not operate from the <br> Master Switch Assembly | B: Master Switch Assembly Test <br> C: RH Front Window Switch Test <br> D: Window Motor Test |
| RH Front Window operates from the Master <br> Switch Assembly but does not operate from the <br> 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: MASTERSWITCHASSEMBLY CONNECTOR (Connected) |  |  |
| Condition: <br> - IgnitionSwitch: RUN |  |  |
| Connect <br> Between | Correct Result | For Diagnosis |
| A (PNK) \& Ground | Test Lamp lights | See 1 |
| $\begin{gathered} \hline \text { A }(\text { PNK }) \& F \\ (B L K) \end{gathered}$ | 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 (seeschematic).

## B: MASTER SWITCH ASSEMBLY TEST

|  |  |  |
| :---: | :---: | :---: |
| At: MASTER SWITCHASSEMBLY CONNECTOR (Connected) |  |  |
| Conditions:. <br> - Ignition Switch: RUN <br> - Operate the LH FrontWindow UP and DNfrom the Master Switch Assembly |  |  |
| Connect Between | Correct Result | For Diagnosis |
| $\begin{gathered} \mathrm{D}_{\&} \text { (DKBLU) } \\ \hline \end{gathered}$ | Test Lamp lights | see 1 |
|  |  |  |
| B ${ }^{\text {(DK BLU/ }}$ WHT) \& C (TAN) | Test Lamp lights | See 1 |
| If all results are correct, go to Symptom Table. |  |  |

C: RH FRONTWINDOW SWITCH TEST

| Connect: TEST LAMP <br> At: RHFRONTWINDOW SWITCH <br> CONNECTOR (Connected) |  |
| :--- | :--- |
| Conditions: <br> • Ignition Switch: RUN <br> • Operate the RH Front Window Switch in <br> the Master Switch Assembly UP and DN <br> (seeschematic) |  |
| Connect <br> Between | Correct Result | For Diagnosis.

## (Continuedfrom previous page)

## D: WINDOW MOTOR TEST

| Connect: TEST LAMP <br> At: WINDOW MOTOR CONNECTOR <br> (Disconnected) <br> Conditions: <br> - IgnitionSwitch: RUN <br> - 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 POWERTEST

| $\|$Connect: TEST LAMP <br> At: RH FRONT WINDOW SWITCH <br> CONNECTOR (Connected) <br> Condition: <br> • Ignition Switch: RUN |
| :--- |
| Connect <br> Between |
| Correct Result | For Diagnosis $\quad$.

- 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.


HARNESS CONNECTOR FACES


BLK 2989743
Sunroof Motor
COMPONENT LOCATION Page－FigureFuse Block．Under LH side of I／P．201－12－A
Sunroof Motor Center of windshield header area ..... 201－23－C
Sunroof Switch Assembly． ．Center of windshield header area ..... 201－23－C
C553（1 cavity） Behind LH side of I／P，near upper access hole． ..... 201－23－C
G241 LH side of windshield header area ..... 201－2342
S340．


BLK 12004602
Sunroof Switch Assembly，

## TROUBLESHOOTING HCNTS

- Try thefollowing checks beforedoingtheSystem 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 Diagnosisfor a list of symptoms and diagnosticsteps.


## SYSTEM CHECK TABLE

| ACTION | NORMALRESULT |
| :--- | :--- |
| 1. With the Ignition <br> Switchin RUN, <br> move the Sunroof | Sunroof operates <br> smoothly with no <br> Sticking to fill open <br> Sosition |
| 2. Hold the Sunroof |  |
| Switch in CLOSE <br> position | Sunroof operates <br> smoothly with no <br> sticking and closes <br> comdetelv |

- 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

 CONNECTORTEST| Connnect: TEST LAMP |  |  |
| :---: | :---: | :---: |
| At: SUNROOF SWITCHASSEMBLY CONNECTOR (Connected) |  |  |
| Condition: <br> - Ianition Switch: RUN |  |  |
| Connect <br> Between | Correct Result | For Diagnosis |
| $\mathrm{A}(\mathrm{PNK}) \&$ Ground | Test lamp lights | See 1 |
| $\begin{gathered} \mathrm{A}(\mathrm{PNK}) \& B \\ (\mathrm{BLK}) \end{gathered}$ | Testlamp lights | See 2 |
| A (PBLK) \& E | Testlamp | See 2 |
| - Hold Sunroof Switch in OPEN |  |  |
| D (BLK/ WHT) \& C (LT GRN) | Test lamp lights | 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
- OperateSunroof Switch in OPEN and CLOSE positions

| Connect <br> Between | Correct Result | For Diagnosis |
| :---: | :---: | :---: |
| (BLK/WHT) <br> wire \& (LT <br> GRN) wire | Test lamp <br> 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 runsin the opposite direction and the window closes.



## HARNESSCONNECTOR FACES <br> 



BLK

V00021．0
C365

C366，See C365

C453，See Page 202－1

| COMPONENT LOCATION |  | Page－Figure |
| :---: | :---: | :---: |
| Door Lock Motors． | In bottom of each door | 201－23－B |
| Door Lock Relay Assembly | Lower RH shroud，at bottom access hole． | 201－22－E |
| Fuse Block． | Under LH side of I／P． | 201－12－A |
| C209（11cavities） | Attached to LH side of fuse block | 201－13－C |
| C364（2 cavities） | Near RH shroud | 201－15－B |
| C365（6cavities） | LH shroud，near center access hole | 201－23－B |
| C366（6cavities） | RH shroud，near center access hole | 201－23－B |
| C453（18cavities） | Behind LH side of I／P，near shroud | 201－14－A |


|  |
| :---: |



V 11002.0 C209


WHT 12004595
Door Lock Motor（L．H）

Door Lock Motor（RH），


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.

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

| ACTION | NORMAL OPERATION |
| :--- | :--- |
| Operate all the LH <br> Door Lock Switches | All the doors lock <br> and unlock |
| Operate all the RH <br> Door Lock Switches | All the doors lock <br> and unlock |
| Unlock one door <br> using the vehicle key | That door unlocks, <br> but the other doors <br> remain unlocked |
| With all the doors <br> closed and locked, <br> operate the inside <br> door handle to try to <br> open each door | The doors will not <br> open |
| Open the LH door <br> and move the LH <br> Door Lock Switch to <br> the LOCK position, <br> close the door, and <br> try to open each door <br> from the outside | The doors will not <br> 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 <br> doors lock and unlock | A: Door Lock Motor <br> Test on suspect <br> Door Lock Motor |
| The Power Door <br> Locks do not operate <br> from one or more <br> Door Lock Switch(es) | B: Door Lock Switch <br> Test on suspect <br> Door Lock <br> Switch(es) |
| The Power Door <br> Locks do not operate <br> from all Door Lock <br> Switches | C: Door Lock Relay <br> Test |

## A: DOOR LOCK MOTOR TEST

| Measure: VOLTAGE |  |  |
| :---: | :---: | :---: |
| At: SUSPECT DOOR LOCK MOTOR CONNECTOR (Disconnected) |  |  |
| Condition: <br> - LH Door Lock Switch: UNLOCK and hold |  |  |
| Measure <br> Between | Correct Voltage | For Diagnosis |
| $\begin{aligned} & \hline \text { B }{ }^{(\text {TAN }) \&} \\ & \text { Ground } \end{aligned}$ | Battery | See 1 |
| $\begin{gathered} \text { B (TAN) \& } \\ \text { A (GRY) } \end{gathered}$ | 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 <br> Between | Correct <br> Voltage | For <br> Diagnosis |
| B（ORN）\＆ <br> Ground | Battery | See 1 |

－Move the Door Lock Switch to LOCK and hold

| C（LT BLU）\＆ |
| :---: | :---: | :---: |
| Ground |$\quad$ Battery $\quad$ See 2

－Move the Door Lock Switch to UNLOCK and hold
$\mathrm{A}(\mathrm{BLK}) \&$
Ground $|$ Battery $\mid$ See 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．


## C：DOOR LOCK RELAY TEST（TABLE 2）

－Move the Door Lock Switch to UNLOCK

## Connect：TEST LAMP

At：DOOR LOCK RELAY CONNECTORS C1 \＆ C2（Connected）
Condition：
－Door Lock Switch：LOCK and hold

| Connect Between | Correct Result | For Diagnosis |
| :---: | :---: | :---: |
| $\begin{gathered} \hline \text { C1:A (LT BLU) } \\ \& \text { Ground } \end{gathered}$ | Test Lamp lights | See 1 |
| $\begin{gathered} \hline \text { C2:C (GRY) \& } \\ \text { Ground } \end{gathered}$ | Test Lamp lights | See 3 |
|  | Test Lamp lights | See 3 |
| －Move the Door Lock Switch to UNLOCK and hold |  |  | and hold

（Continued from previous column）

| C1：B（BLK）\＆ <br> Ground | Test Lamp <br> lights | See 2 |
| :---: | :---: | :---: |
| C2：B（TAN）\＆ <br> Ground | Test Lamp <br> lights | See 3 |
| C2：C（GRY）\＆ <br> C2：B（Tan） | Test Lamp <br> lights | See 3 |

Continued in next column）

## 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.

