

## SECTION : 9E

# INSTRUMENTATION/DRIVER INFORMATION

**CAUTION :** *Disconnect the negative battery cable before removing or installing any electrical unit or when a tool or equipment could easily come in contact with exposed electrical terminals. Disconnecting this cable will help prevent personal injury and damage to the vehicle. The ignition must also be in LOCK unless otherwise noted.*

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# SPECIFICATIONS

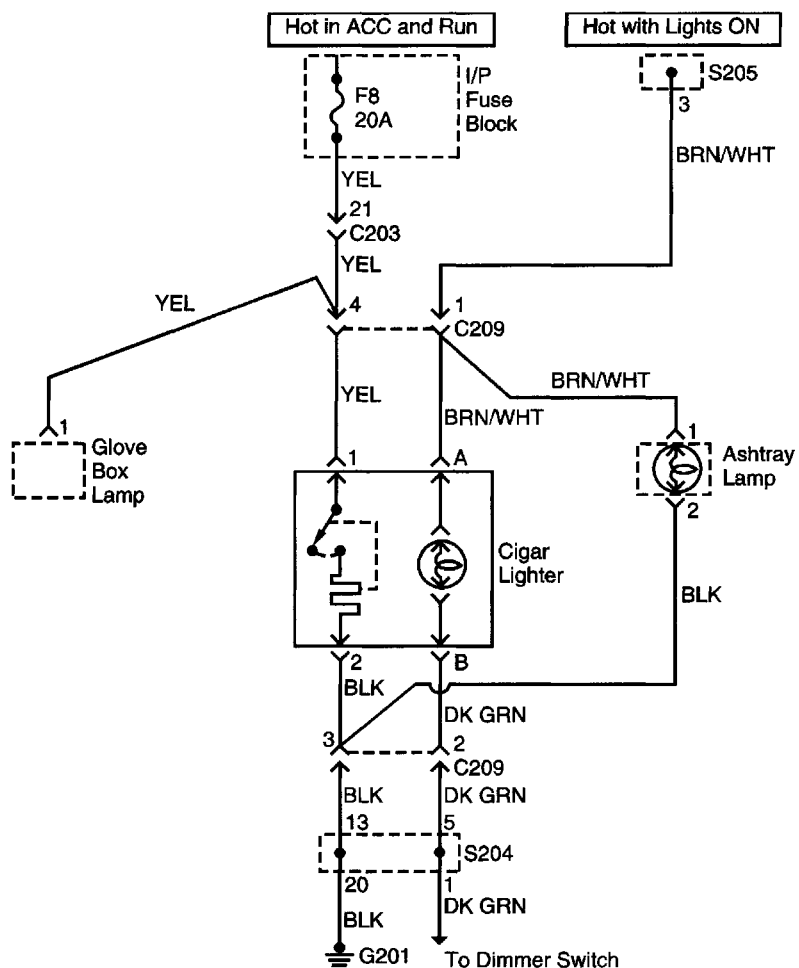
## FASTENER TIGHTENING SPECIFICATIONS

| Application   | N•m | Lb–Ft | Lb–In |
|---|-----|-------|-------|
| Ashtray Housing Screws                                | 2.5 | –     | 22    |
| Chime Module Screws                                   | 4   | –     | 35    |
| Cluster Illumination Connector Screws                 | 2   | –     | 18    |
| Digital Clock Screws                                  | 3   | –     | 27    |
| Fuel Gauge Screws                                     | 2   | –     | 18    |
| Glove Box Brace Bolts                                 | 10  | –     | 89    |
| Glove Box Housing Screws                              | 2.5 | –     | 22    |
| Glove Box Screws                                      | 2.5 | –     | 22    |
| Hood Release Handle Screw                             | 2.5 | –     | 22    |
| Instrument Cluster Screws                             | 3   | –     | 27    |
| Instrument Cluster Trim Panel Screws                  | 3   | –     | 27    |
| Instrument Panel Bolts Below the Windshield           | 22  | 16    | –     |
| Instrument Panel Screw Behind the Audio System        | 3   | –     | 27    |
| Instrument Panel Screw Behind the Glove Box Brace     | 2.5 | –     | 22    |
| Instrument Panel Storage Compartment Screws           | 2.5 | –     | 22    |
| Instrument Panel Vent Screws                          | 3   | –     | 27    |
| Instrument Panel–to–Body Bolts                        | 22  | 16    | –     |
| Instrument Panel–to–Floor Bolts                       | 22  | 16    |       |
| Instrument Panel–to–Heater Air Distributor Case Screw | 4   | –     | 35    |
| Passenger Side Knee Bolster Trim Panel Screws         | 3   | –     | 27    |
| Speedometer Screws                                    | 2   | –     | 18    |
| Steering Column Bolts                                 | 22  | 16    | –     |
| Steering Column Nuts                                  | 22  | 16    | –     |
| Tachometer Screws                                     | 2   | –     | 18    |
| Temperature Gauge Screws                              | 2   | –     | 18    |

## INSTRUMENT CLUSTER INDICATOR LAMPS SPECIFICATIONS

| Indicator Lamp                                  | Color | Bulb       |
|---|-------|------------|
| ABS Warning                                     | Amber | 14 v 1.4 W |
| Airbag Warning                                  | Red   | 14 v 1.4 W |
| Automatic Transaxle Shift Position Indicators   | Green | 14 v 1.4 W |
| Park  | Red   | 14 v 1.4 W |
| Reverse   | Green | 14 v 1.4 W |
| Neutral   | Green | 14 v 1.4 W |
| Drive   | Green | 14 v 1.4 W |
| 3   | Green | 14 v 1.4 W |
| L   | Green | 14 v 1.4 W |
| Battery Charge Indicator                        | Red   | 14 v 1.4 W |
| Cruise Control Indicator                        | Green | 14 v 1.4 W |
| Daytime Running Lamps                           | Amber | 14 v 1.4 W |
| Door Open Warning                               | Red   | 14 v 1.4 W |
| Fasten Seat Belt Warning                        | Red   | 14 v 1.4 W |
| Fog Lamp Indicator                              | Green | 14 v 1.4 W |
| High Beam Indicator                             | Blue  | 14 v 1.4 W |
| Low Fuel Level Warning                          | Amber | 14 v 3 W   |
| Luggage Compartment Open Warning                | Amber | 14 v 1.4 W |
| Oil Pressure Warning                            | Red   | 14 v 1.4 W |
| Parking Brake Indicator and Brake Fluid Warning | Red   | 14 v 1.4 W |
| Malfunction Indicator                           | Amber | 14 v 1.4 W |
| Traction Control System Warning                 | Amber | 14 v 1.4 W |
| Transaxle Power Mode Indicator                  | Amber | 14 v 1.4 W |
| Transaxle Hold Mode Indicator                   | Amber | 14 v 1.4 W |
| Turn Signal Indicators                          | Green | 14 v 1.4 W |

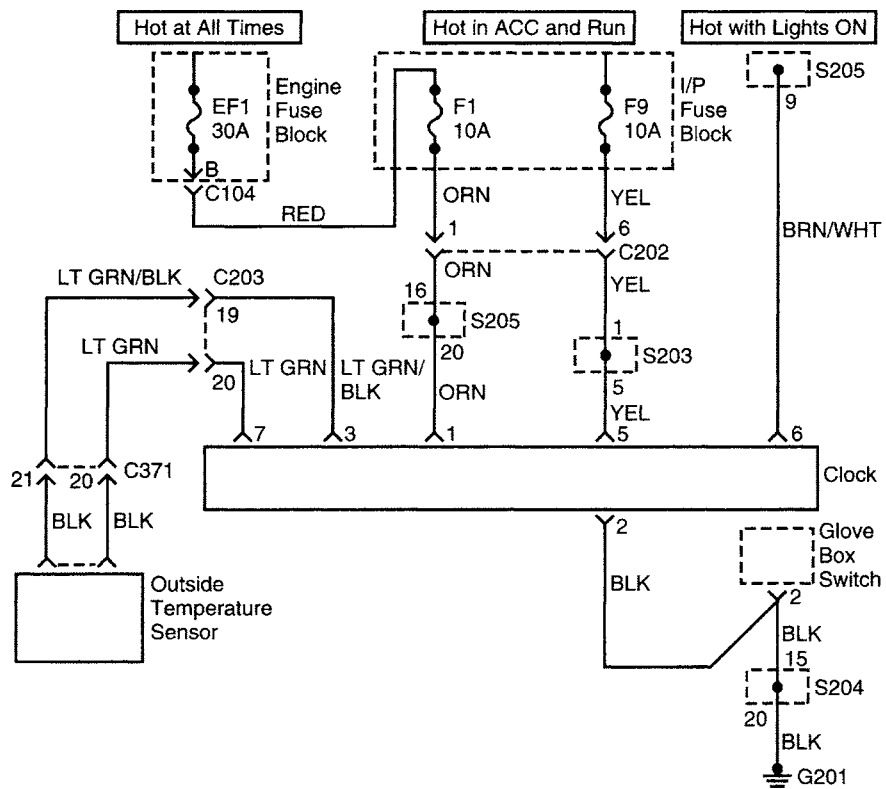
# DIAGNOSIS



## CIGAR LIGHTER

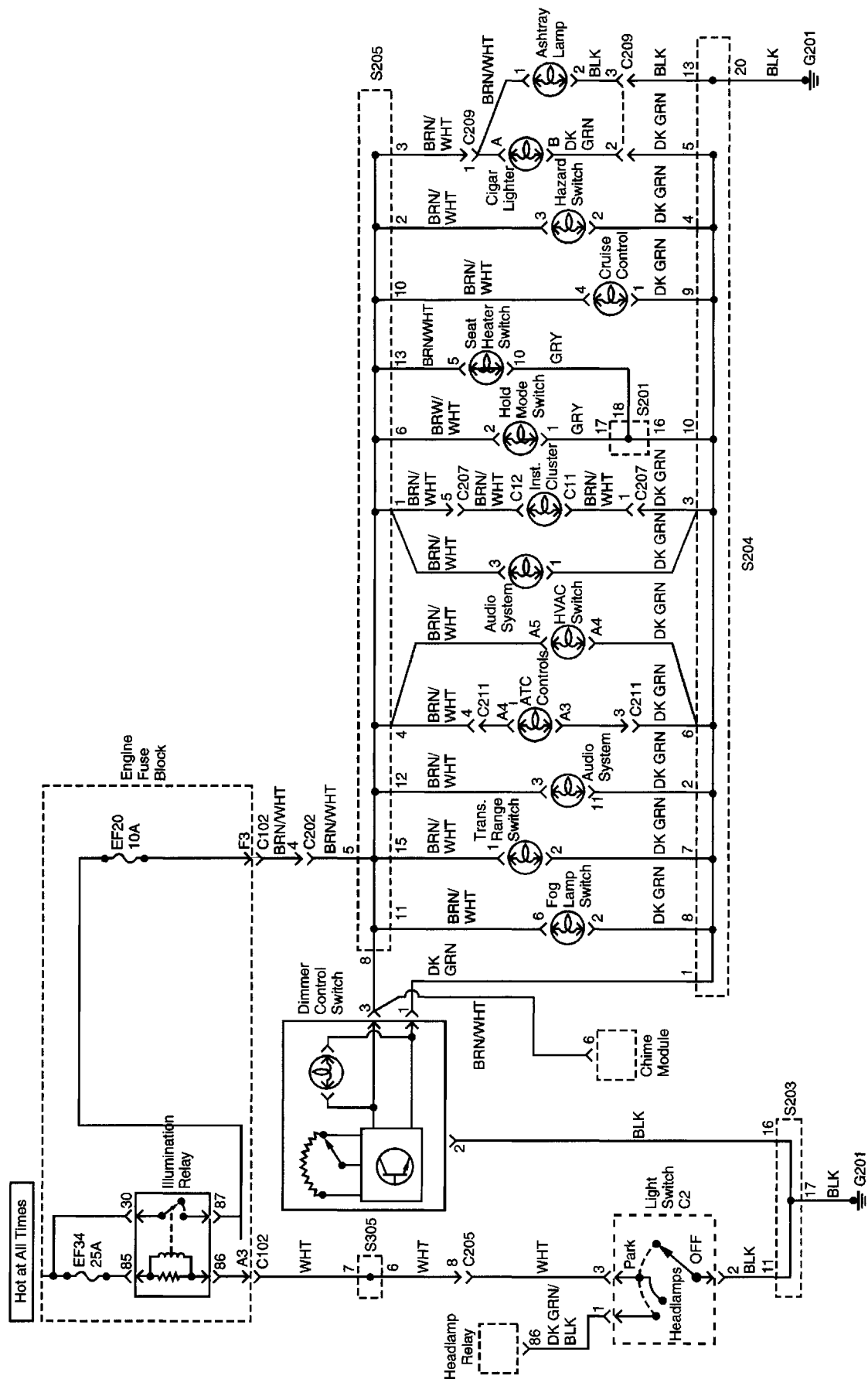
### Cigar Lighter Inoperative

| Step | Action   | Value(s) | Yes         | No          |
|------|--|----------|-------------|-------------|
| 1    | Check fuse F8.<br>Is the fuse blown?   |          | Go toStep 2 | Go toStep 3 |
| 2    | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the fuse.<br>Is the repair complete?   |          | System OK   |             |
| 3    | 1. Turn the ignition to ACC.<br>2. Use a voltmeter to check for voltage at fuse F8.<br>Is the voltage equal to the specified value?  | 11–14 v  | Go toStep 5 | Go toStep 4 |
| 4    | Repair the open power–supply circuit for fuse F8.<br>Is the repair complete?   |          | System OK   |             |
| 5    | 1. Remove the electrical connector from the back of the cigar lighter.<br>2. Turn the ignition to ACC.<br>3. Use a voltmeter to check the voltage at terminal 1 on the cigar lighter electrical connector.<br>Is the voltage equal to the specified value? | 11–14 v  | Go toStep 7 | Go toStep 6 |
| 6    | Repair the open circuit between fuse F8 and the cigar lighter.<br>Is the repair complete?  |          | System OK   |             |
| 7    | With the ignition key still in ACC, connect the voltmeter between terminal 1 and terminal 2 on the cigar lighter connector.<br>Is the battery voltage equal to the specified value?  | 11–14 v  | Go toStep 9 | Go toStep 8 |
| 8    | Repair the open ground circuit.<br>Is the repair complete?   |          | System OK   |             |
| 9    | Replace the cigar lighter.<br>Is the repair complete?  |          | System OK   |             |



**DIGITAL CLOCK****Digital Clock Inoperative**

| <b>Step</b> | <b>Action</b>  | <b>Value(s)</b>    | <b>Yes</b>   | <b>No</b>    |
|-------------|--|--------------------|--------------|--------------|
| 1           | Check fuse F1 and F9.<br>Is either of the fuses F1 or F9 blown?  |                    | Go toStep 2  | Go toStep 3  |
| 2           | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the blown fuses.<br>Is the repair complete?  |                    | System OK    |              |
| 3           | 1. Turn the ignition ON.<br>2. Use a voltmeter to check the battery voltage available at fuses F1 and F9.<br>Is the voltage equal to the specified value?                | 11–14 v            | Go toStep 6  | Go toStep 2  |
| 4           | Repair the open power supply circuit for the fuse.<br>Is the repair complete?  |                    | System OK    |              |
| 5           | 1. Turn the ignition ON.<br>2. Use a voltmeter to check the battery voltage available at the clock connector terminal 5.<br>Is the voltage equal to the specified value? | 11–14 v            | Go toStep 7  | Go toStep 6  |
| 6           | Repair the open circuit between the clock connector terminal 5 and fuse F9.<br>Is the repair complete?   |                    | System OK    |              |
| 7           | Turn the ignition ON.<br>Is battery voltage available at the clock connector terminal 1?   |                    | Go toStep 9  | Go toStep 8  |
| 8           | Repair the open circuit between the clock connector terminal 1 and fuse F1.<br>Is the repair complete?   |                    | System OK    |              |
| 9           | Check the continuity between the clock connector terminal 2 and ground.<br>Is the continuity equal to the specified value?   | $\approx 0 \Omega$ | Go toStep 10 | Go toStep 11 |
| 10          | Replace the clock.<br>Is the repair complete?  |                    | System OK    |              |
| 11          | Repair the open ground circuit between the clock connector terminal 2 and ground G201.<br>Is the repair complete?  |                    | System OK    |              |

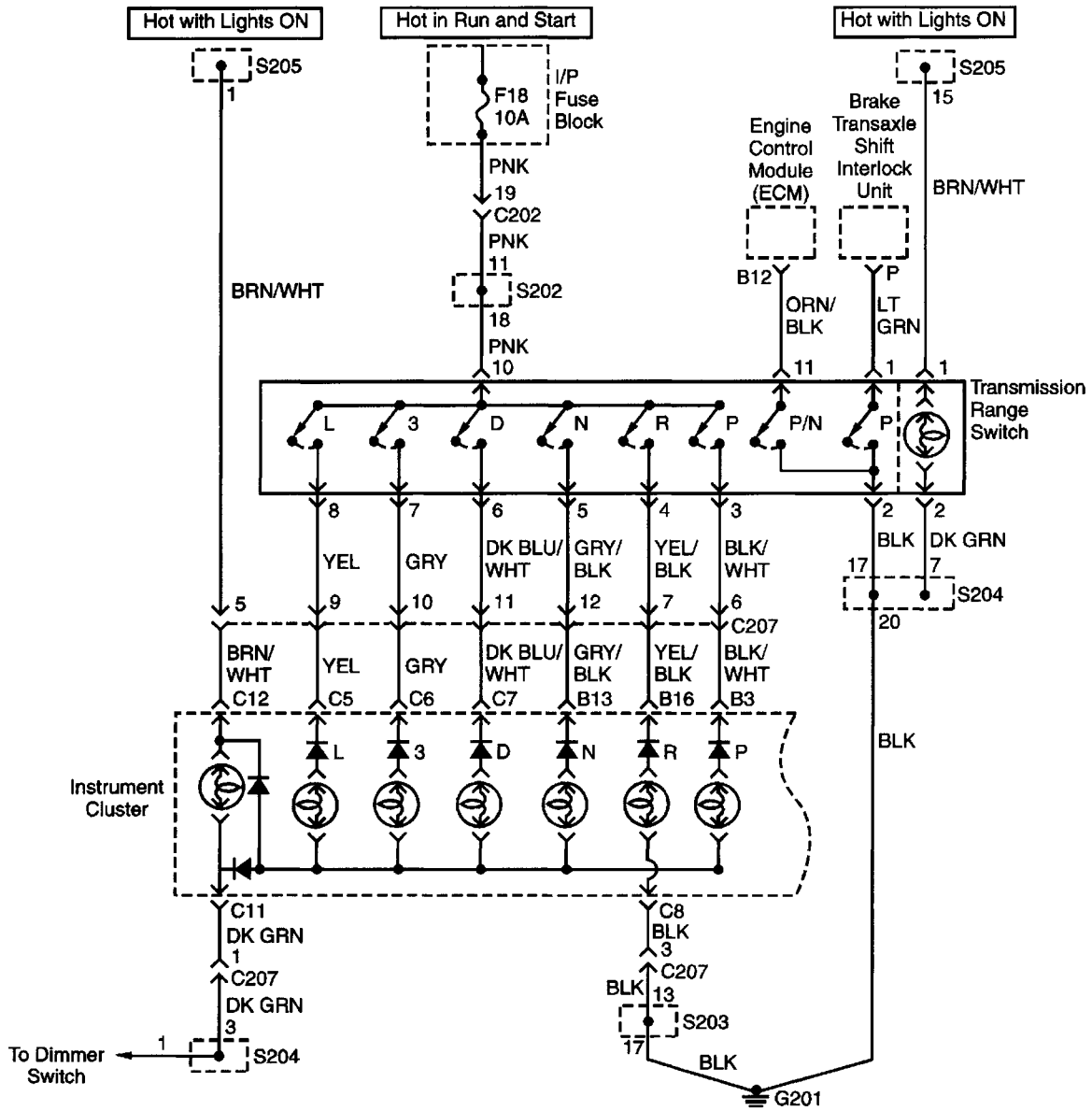




## INSTRUMENT PANEL ILLUMINATION

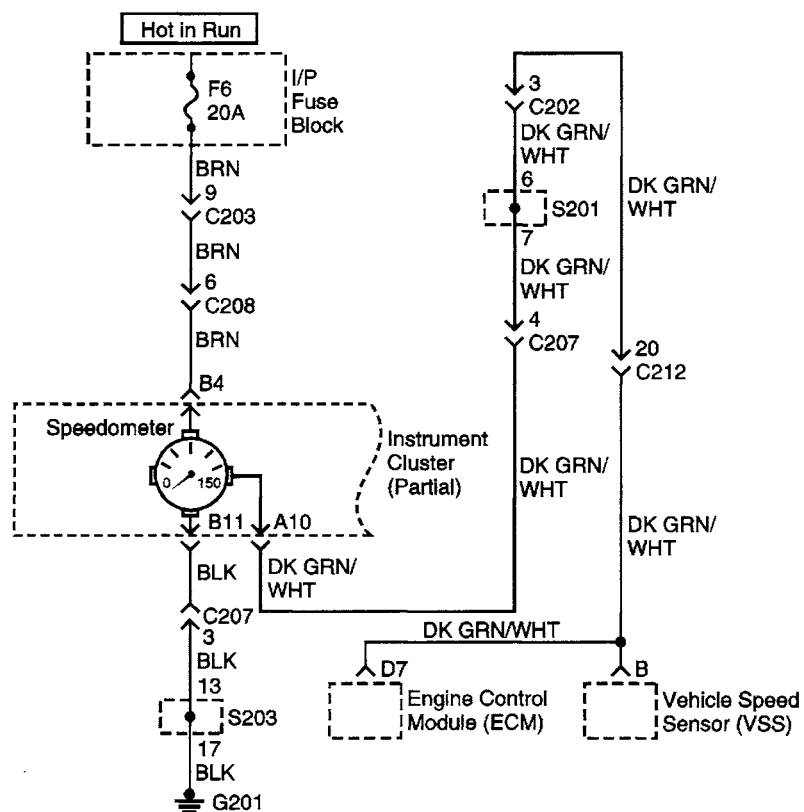
### Instrument Panel Does Not Illuminate When Lights Are ON

| Step | Action  | Value(s)           | Yes         | No          |
|------|---|--------------------|-------------|-------------|
| 1    | Check the operation of the headlamps and the parking lamps.<br>Do the headlamps and the parking lamps work on both sides of the vehicle?  |                    | Go toStep 3 | Go toStep 2 |
| 2    | Repair the headlamps and the parking lamps.<br>Does the instrument panel illumination turn ON after the headlamps and the parking lamps have been repaired?   |                    | System OK   | Go toStep 3 |
| 3    | 1. Disconnect the electrical connector at the dimmer control switch.<br>2. Turn the parking lamps ON.<br>3. Use a voltmeter to check the voltage at the dimmer control switch terminal 3.<br>Is the voltage equal to the specified value? | 11–14 v            | Go toStep 5 | Go toStep 4 |
| 4    | Repair the open circuit between fuse EF20 and the dimmer control switch.<br>Is the repair complete?   |                    | System OK   |             |
| 5    | 1. Turn the lights OFF.<br>2. At the disconnected dimmer control switch, use an ohmmeter to check the resistance between ground and terminal 2 of the dimmer switch connector.<br>Is the resistance equal to the specified value?         | $\approx 0 \Omega$ | Go toStep 7 | Go toStep 6 |
| 6    | Repair the open circuit between ground and terminal 2 of the dimmer control switch connector.<br>Is the repair complete?  |                    | System OK   | —           |
| 7    | 1. Turn the parking lights ON.<br>2. At the disconnected dimmer control switch, check the voltage at terminal 1 of the dimmer control switch.<br>Is the voltage equal to the specified value?   | 11–14 v            | Go toStep 9 | Go toStep 8 |
| 8    | Repair the open circuit between connector C202 and terminal 1 of the dimmer control switch.<br>Is the repair complete?  |                    | System OK   |             |
| 9    | Replace the dimmer control switch.<br>Is the repair complete?   |                    | System OK   |             |



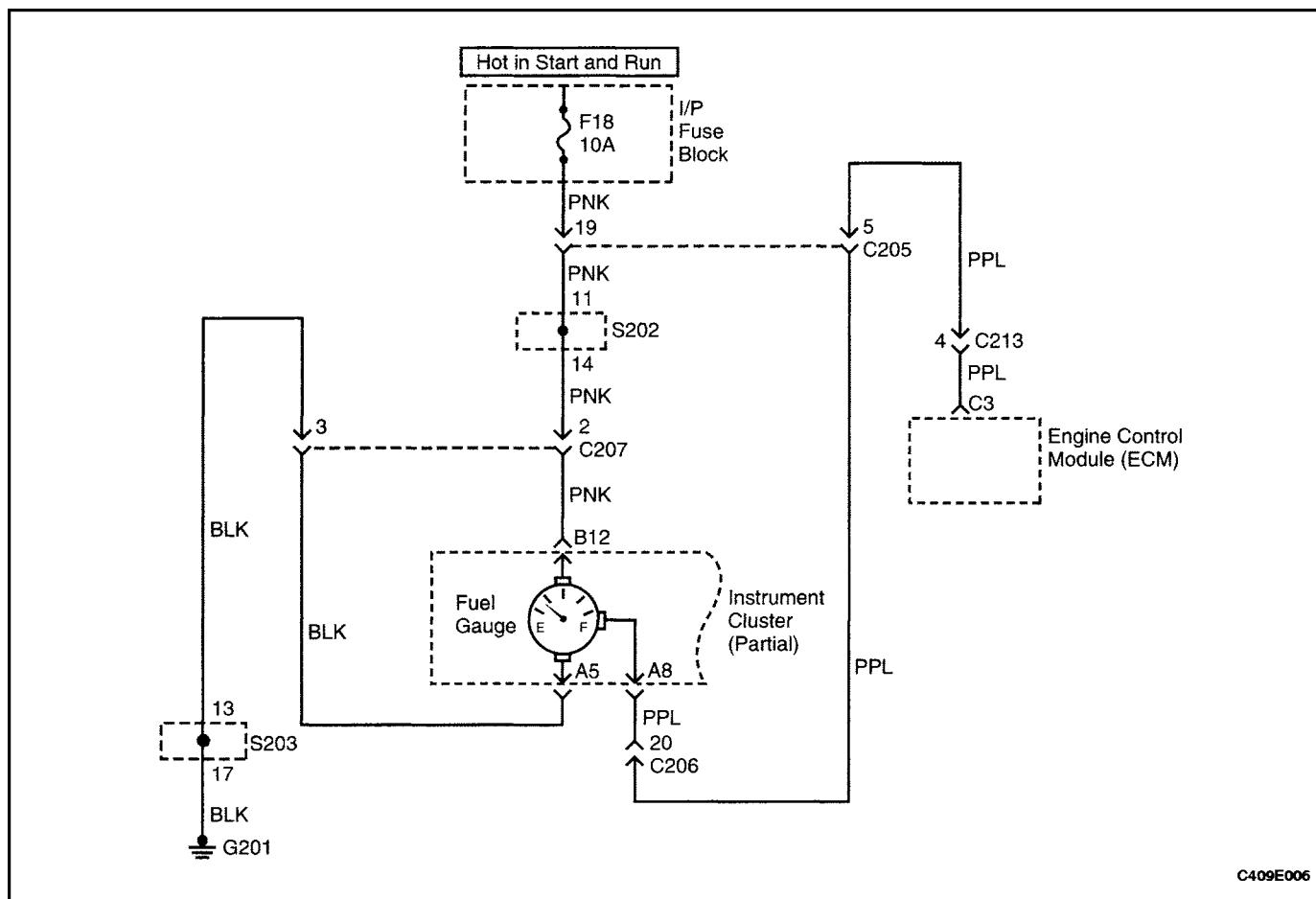
**Automatic Transaxle Gear Position Illumination Lamp Inoperative,  
All Other Instrument Lamps OK**

| Step | Action   | Value(s)           | Yes                 | No                  |
|------|--|--------------------|---------------------|---------------------|
| 1    | Check for fuse F18.<br>Is fuse F18 blown?  |                    | Go to <i>Step 2</i> | Go to <i>Step 3</i> |
| 2    | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the blown fuse.<br>Is the repair complete?   |                    | System OK           |                     |
| 3    | 1. Turn the ignition ON.<br>2. Use a voltmeter to check the battery voltage available at fuse F18.<br>Is the battery voltage equal to the specified value?   | 11–14 v            | Go to <i>Step 5</i> | Go to <i>Step 4</i> |
| 4    | Repair the open power supply circuit to fuse F18.<br>Is the repair complete?   |                    | System OK           | —                   |
| 5    | 1. Turn the ignition switch ON.<br>2. Remove the automatic transaxle position lamp.<br>3. Use a voltmeter to check battery voltage available at the lamp socket.<br>Is the battery voltage equal to the specified value? | 11–14 v            | Go to <i>Step 7</i> | Go to <i>Step 6</i> |
| 6    | Repair the open circuit between the automatic transaxle position lamp socket and fuse F18.<br>Is the repair complete?  |                    | System OK           |                     |
| 7    | 1. Remove the automatic transaxle position lamp.<br>2. Use an ohmmeter to check the resistance between the ground circuit and the lamp socket.<br>Is the resistance equal to the value specified?                        | $\approx 0 \Omega$ | Go to <i>Step 9</i> | Go to <i>Step 8</i> |
| 8    | Repair the open ground circuit between the automatic transaxle position lamp socket and ground G201.<br>Is the repair complete?  |                    | System OK           |                     |
| 9    | Replace the automatic transaxle position lamp.<br>Is the repair complete?  |                    | System OK           |                     |



**SPEEDOMETER****Speedometer Is Inoperative**

| <b>Step</b> | <b>Action</b>   | <b>Value(s)</b>    | <b>Yes</b>                       | <b>No</b>    |
|-------------|---|--------------------|----------------------------------|--------------|
| 1           | Check fuse F6.<br>Is fuse F6 blown?   |                    | Go toStep 2                      | Go toStep 3  |
| 2           | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace fuse F6.<br>Is the repair complete?   |                    | System OK                        |              |
| 3           | 1. Turn the ignition ON.<br>2. Check the voltage at fuse F6.<br>Is the voltage equal to the specified value?  | 11–14 v            | Go toStep 5                      | Go toStep 4  |
| 4           | Repair the power supply for the ignition 2 relay.<br>Is the repair complete?  |                    | System OK                        |              |
| 5           | 1. Connect a scan tool.<br>2. Check for engine control diagnostic trouble codes (DTCs).<br>Is a vehicle speed sensor DTC P052 set?  |                    | Go toSection 1F, Engine Controls | Go toStep 6  |
| 6           | 1. Remove the instrument cluster.<br>2. Turn the ignition ON.<br>3. Check the voltage at instrument cluster connector terminal B4.<br>Is the voltage equal to the specified value?                        | 11–14 v            | Go toStep 8                      | Go toStep 7  |
| 7           | Repair the open circuit between fuse F6 and the instrument cluster.<br>Is the repair complete?  |                    | System OK                        | —            |
| 8           | Use an ohmmeter to check the resistance between ground and instrument cluster connector terminal B11.<br>Is the resistance equal to the specified value?  | $\approx 0 \Omega$ | Go toStep 10                     | Go toStep 9  |
| 9           | Repair the open circuit between ground and instrument cluster connector terminal B11.<br>Is the repair complete?  |                    | System OK                        |              |
| 10          | Use an ohmmeter to check the continuity of the circuit wire between the vehicle speed sensor terminal B and instrument cluster connector terminal A10.<br>Is the continuity equal to the specified value? | $\approx 0 \Omega$ | Go toStep 12                     | Go toStep 11 |
| 11          | Repair the open circuit between the vehicle speed sensor and the instrument cluster.<br>Is the repair complete?   |                    | System OK                        |              |
| 12          | Replace the speedometer.<br>Is the repair complete?   |                    | System OK                        |              |



## FUEL GAUGE

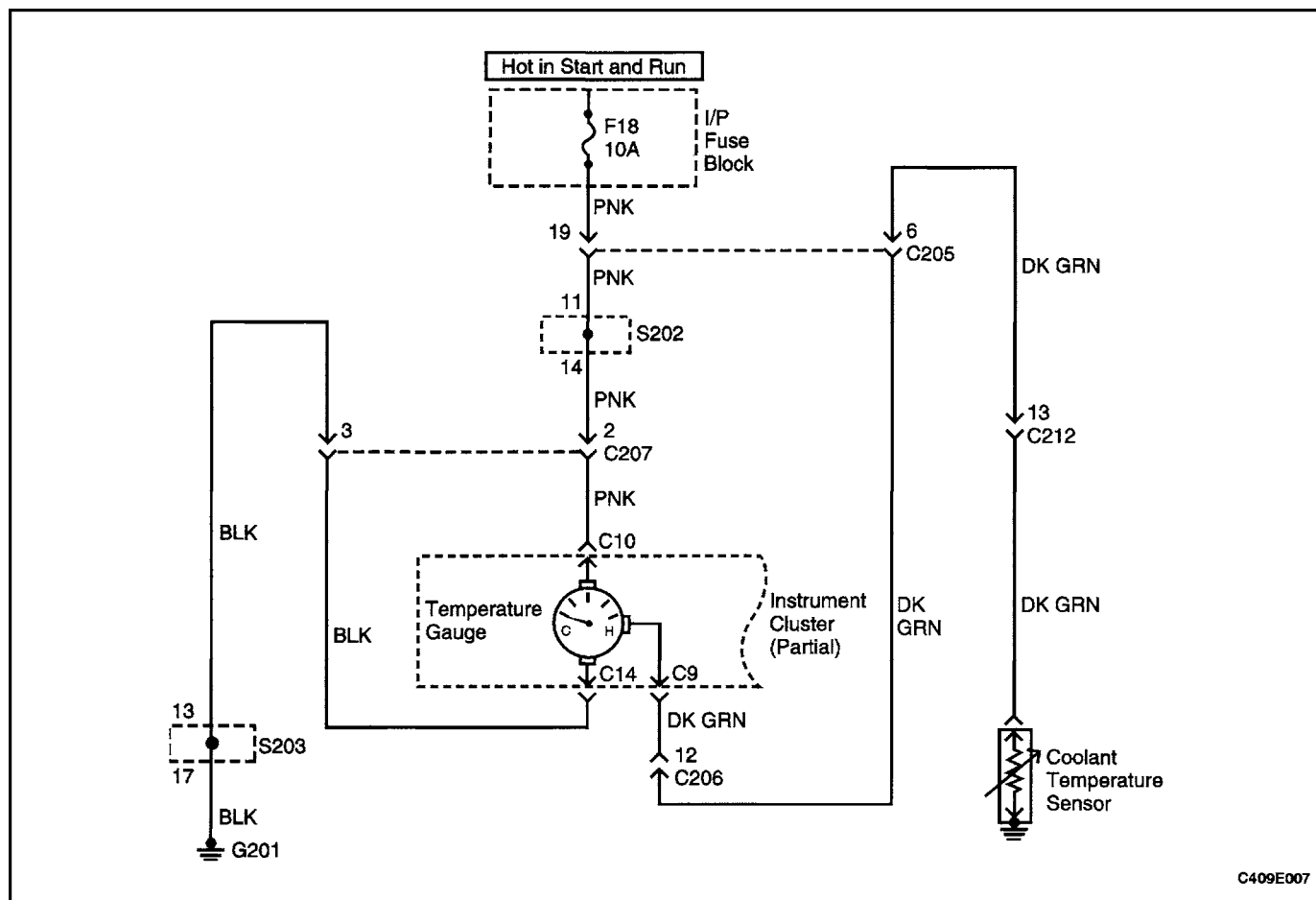
### Fuel Gauge Inoperative

#### Test Description

The number(s) below refer to step(s) on the diagnostic table.

1. Begin the diagnostic table at Step 1 if the problem is that the fuel gauge always indicates full. Begin the diagnostic table at Step 7 if the problem is that the fuel gauge always indicates empty.

| Step | Action   | Value(s) | Yes          | No           |
|------|--|----------|--------------|--------------|
| 1    | Turn the ignition ON.<br>Does the fuel gauge always indicate a full fuel tank with the ignition ON?  |          | Go to Step 2 | Go to Step 7 |
| 2    | 1. Turn the ignition OFF.<br>2. Disconnect the white connector from the engine control module (ECM).<br>3. Turn the ignition ON.<br>Does the fuel gauge change to empty?   |          | Go to Step 3 | Go to Step 4 |
| 3    | Replace the ECM.<br>Is the repair complete?  |          | System OK    |              |
| 4    | Check the wiring harness for a short to ground between the ECM and the fuel gauge.<br>Is there a short to ground?  |          | Go to Step 5 | Go to Step 6 |
| 5    | Repair the short to ground.<br>Is the repair complete?   |          | System OK    |              |
| 6    | Replace the fuel gauge.<br>Is the repair complete?   |          | System OK    |              |
| 7    | 1. Turn the ignition OFF.<br>2. Disconnect connector terminal C3 from the ECM.<br>3. Turn the ignition ON.<br>4. Check the voltage at the ECM connector terminal C3.<br>Is the voltage equal to the specified value? | 11–14 v  | Go to Step 9 | Go to Step 8 |
| 8    | Repair the open circuit between the fuel gauge and the ECM.<br>Is the repair complete?   |          | System OK    |              |
| 9    | Replace the ECM.<br>Is the repair complete?  |          | System OK    |              |





## TEMPERATURE GAUGE

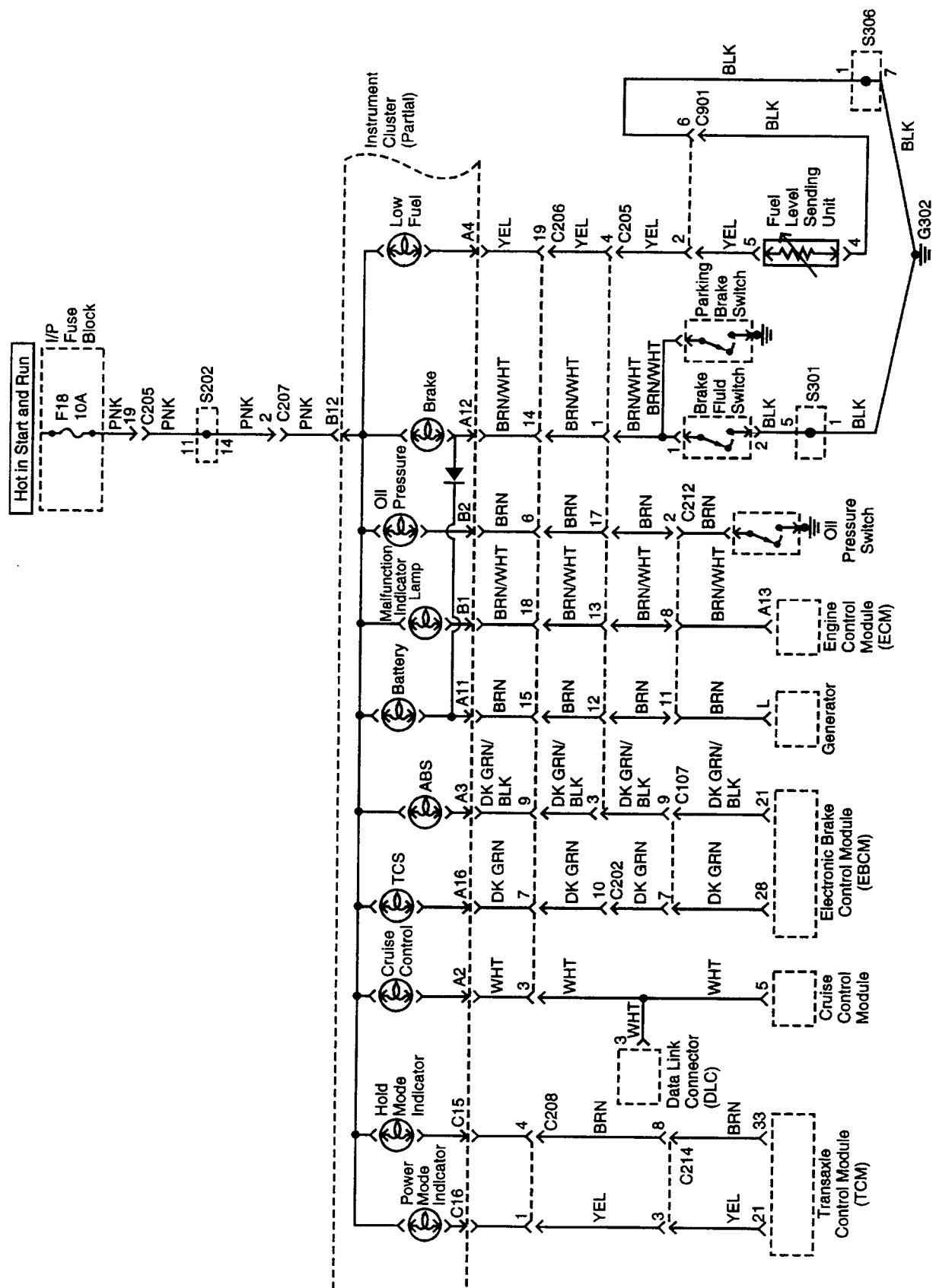
### Temperature Gauge Inoperative, Other Gauges OK

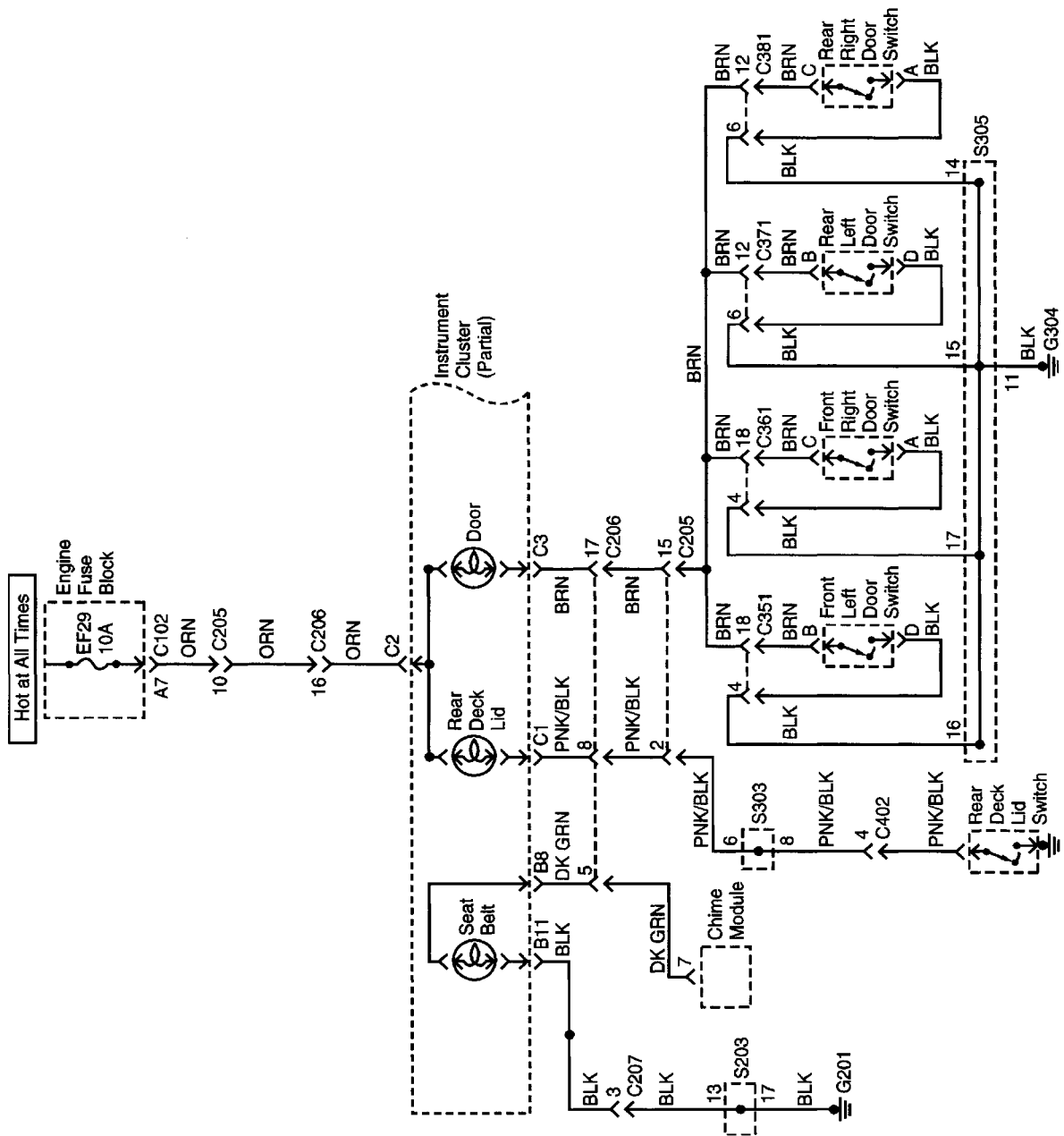
#### Test Description

The number(s) below refer to step(s) on the diagnostic table.

1. Begin the diagnostic table at Step 1 if the problem is that the temperature gauge always indicates full. Begin the diagnostic table at Step 7 if the problem is that the temperature gauge always indicates empty.

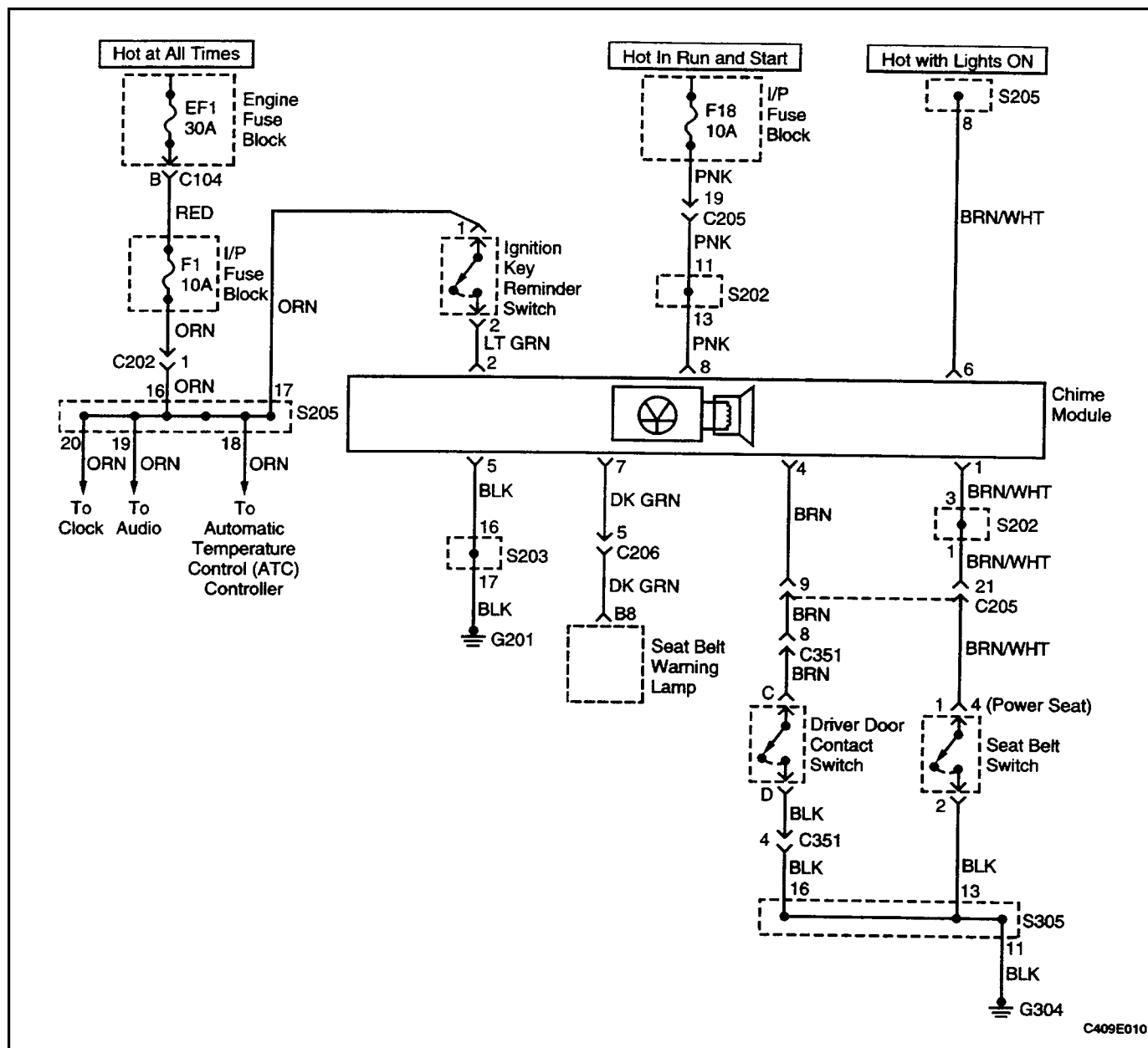
| Step | Action  | Value(s) | Yes          | No          |
|------|---|----------|--------------|-------------|
| 1    | Allow the engine to cool to room temperature.<br>With the ignition ON, does the temperature gauge always read at the high end of the scale?   |          | Go toStep 3  | Go toStep 2 |
| 2    | Disconnect the coolant temperature sensor electrical connector.<br>Does the temperature gauge indicator drop to the low end of the scale?   |          | Go toStep 3  | Go toStep 4 |
| 3    | Replace the coolant temperature sensor.<br>Is the repair complete?  |          | System OK    |             |
| 4    | Check for a short to ground between the coolant temperature sensor and the temperature gauge.<br>Is there a short to ground?  |          | Go toStep 5  | Go toStep 6 |
| 5    | Repair the short to ground.<br>Is the repair complete?  |          | System OK    |             |
| 6    | Replace the temperature gauge.<br>Is the repair complete?   |          | System OK    |             |
| 7    | 1. Disconnect the coolant temperature sensor.<br>2. Turn the ignition ON.<br>3. Check the voltage at the coolant temperature sensor connector.<br>Is the the voltage equal to the specified value?                                  | 11–14 v  | Go toStep 10 | Go toStep 8 |
| 8    | Check for an open circuit between the coolant temperature sensor and the temperature gauge.<br>Is there an open circuit?  |          | Go toStep 9  | Go toStep 6 |
| 9    | Repair the open circuit between the coolant temperature sensor and the temperature gauge.<br>Is the repair complete?  |          | System OK    |             |
| 10   | 1. Disconnect the coolant temperature sensor.<br>2. Connect a jumper wire between the coolant temperature sensor connector and ground.<br>3. Turn the ignition ON.<br>Does the temperature gauge move to the high end of the scale? |          | Go toStep 3  | Go toStep 6 |





**INSTRUMENT CLUSTER INDICATOR LAMPS****Instrument Cluster Indicator Lamps Do Not Operate**

| <b>Step</b> | <b>Action</b>  | <b>Value(s)</b> | <b>Yes</b>  | <b>No</b>   |
|-------------|--|-----------------|-------------|-------------|
| 1           | Check fuse EF29 and F18.<br>Is fuse EF29 or F18 blown?   |                 | Go toStep 2 | Go toStep 3 |
| 2           | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the blown fuse.<br>Is the repair complete?   |                 | System OK   |             |
| 3           | 1. Turn the ignition ON.<br>2. Check the voltage at fuse EF29 and F18.<br>Is the battery voltage equal to the specified value?   | 11–14 v         | Go toStep 5 | Go toStep 4 |
| 4           | Repair the open power supply circuit to fuse EF29 or F18.<br>Is the repair complete?   |                 | System OK   |             |
| 5           | 1. Remove the instrument cluster.<br>2. Disconnect instrument cluster connectors C2 and B12.<br>3. Turn the ignition ON.<br>Is the battery voltage equal to the specified value?                                   | 11–14 v         | Go toStep 7 | Go toStep 6 |
| 6           | Repair the open circuit between fuses EF29 and F18 and instrument cluster connectors C2 and B12.<br>Is the repair complete?  |                 | System OK   |             |
| 7           | Check the instrument cluster warning lamp bulbs.<br>Are the bulbs OK?  |                 | Go toStep 9 | Go toStep 8 |
| 8           | 1. Replace any warning lamp bulbs that were defective.<br>2. Check the charging system to make sure the alternator is not overcharging.<br>3. Repair the charging system, if necessary.<br>Is the repair complete? |                 | System OK   |             |
| 9           | Replace the instrument cluster.<br>Is the repair complete?   |                 | System OK   |             |



## CHIME MODULE

### No Chime With the Seat Belt Unfastened and the Key in the Ignition Switch

table.

#### Diagnostic Aids

For headlamps reminder chime diagnosis, refer to *Section 9B, Lighting Systems*.

#### Test Description

The number(s) below refer to step(s) on the diagnostic

7. The chime module is under the instrument panel on the left side.
10. The wires at the ignition switch may be RED and BLK, but they connect to ORN and LT GRN at the two-pin connector.

| Step | Action   | Value(s) | Yes                  | No                   |
|------|--|----------|----------------------|----------------------|
| 1    | Check fuse F18 and EF1.<br>Is fuse F18 or EF1 blown?   |          | Go to <i>Step 2</i>  | Go to <i>Step 3</i>  |
| 2    | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the blown fuse.<br>Is the repair complete?   |          | System OK            |                      |
| 3    | Check the voltage at fuse EF1.<br>Is the voltage equal to the specified value?   | 11–14 v  | Go to <i>Step 5</i>  | Go to <i>Step 4</i>  |
| 4    | Repair the power supply for fuse EF1.<br>Is the repair complete?   |          | System OK            |                      |
| 5    | 1. Turn the ignition ON.<br>2. Check the voltage at fuse F18.<br>Is the voltage equal to the specified value?  | 11–14 v  | Go to <i>Step 7</i>  | Go to <i>Step 6</i>  |
| 6    | Repair the power supply for fuse F18.<br>Is the repair complete?   |          | System OK            |                      |
| 7    | 1. Disconnect the chime module electrical connector.<br>2. Turn the ignition ON.<br>3. Check the voltage at terminal 8 of the chime module connector.<br>Is the voltage equal to the specified value?  | 11–14 v  | Go to <i>Step 9</i>  | Go to <i>Step 8</i>  |
| 8    | Repair the open circuit between fuse F18 and chime module connector terminal 8.<br>Is the repair complete?   |          | System OK            |                      |
| 9    | 1. Disconnect the chime module electrical connector.<br>2. Insert the key in the ignition switch.<br>3. Check the voltage at terminal 2 of the chime module connector.<br>Is the voltage equal to the specified value?                             | 11–14 v  | Go to <i>Step 15</i> | Go to <i>Step 10</i> |
| 10   | 1. There are two wires from the key reminder switch which lead to an instrument harness connector. Disconnect that two-pin connector.<br>2. Check the voltage at the circuit wire from terminal 1.<br>Is the voltage equal to the specified value? | 11–14 v  | Go to <i>Step 12</i> | Go to <i>Step 11</i> |
| 11   | Repair the open circuit between fuse EF1 and the key reminder switch.<br>Is the repair complete?   |          | System OK            |                      |

| Step | Action  | Value(s)           | Yes                  | No                   |
|------|---|--------------------|----------------------|----------------------|
| 12   | 1. Insert a key into the ignition switch.<br>2. With the two-pin key reminder connector still disconnected, connect one ohmmeter lead to each wire leading to the key reminder switch.<br>Is the continuity equal to the specified value? | $\approx 0 \Omega$ | Go to <i>Step 14</i> | Go to <i>Step 13</i> |
| 13   | Replace the ignition switch.<br>Is the repair complete?   |                    | System OK            |                      |
| 14   | Repair the open circuit between the connector for the key reminder switch and chime module connector terminal 2.<br>Is the repair complete?   |                    | System OK            |                      |
| 15   | Use an ohmmeter to check the continuity between ground and terminal 5 of the chime module connector.<br>Is the continuity equal to the specified value?   | $\approx 0 \Omega$ | Go to <i>Step 17</i> | Go to <i>Step 16</i> |
| 16   | Repair the open circuit between ground and terminal 5 of the chime module connector.<br>Is the repair complete?   |                    | System OK            |                      |
| 17   | 1. Unfasten the driver's side seat belt.<br>2. With the chime module electrical connector still disconnected, connect an ohmmeter between ground and terminal 1 of the chime module.<br>Is the continuity equal to the specified value?   | $\approx 0 \Omega$ | Go to <i>Step 18</i> | Go to <i>Step 19</i> |
| 18   | Replace the chime module.<br>Is the repair complete?  |                    | System OK            |                      |
| 19   | 1. Disconnect the seat belt switch under the driver's side seat.<br>2. Connect one ohmmeter lead to each wire leading to the driver's side seat belt switch.<br>Is the continuity equal to the specified value?                           | $\approx 0 \Omega$ | Go to <i>Step 21</i> | Go to <i>Step 20</i> |
| 20   | Replace the seat belt switch.<br>Is the repair complete?  |                    | System OK            |                      |
| 21   | Repair the open circuit between ground and terminal 1 of the chime module connector.<br>Is the repair complete?   |                    | System OK            |                      |

### No Chime With the Door Open and the Key in the Ignition Switch

#### Test Description

The number(s) below refer to step(s) on the diagnostic table.

7. The chime module is under the instrument panel on the left side.
10. The wires at the ignition switch may be RED and BLK, but they connect to ORN and LT GRN at the two-pin connector.

| Step | Action   | Value(s)           | Yes          | No           |
|------|--|--------------------|--------------|--------------|
| 1    | Check fuse F18 and EF1.<br>Is fuse F18 or EF1 blown?   |                    | Go toStep 2  | Go toStep 3  |
| 2    | 1. Check for a short circuit and repair it, if necessary.<br>2. Replace the blown fuse.<br>Is the repair complete?   |                    | Go toStep 5  | Go toStep 4  |
| 3    | Check the voltage at fuse EF1.<br>Is the voltage equal to the specified value?   | 11–14 v            | Go toStep 5  | Go toStep 4  |
| 4    | Repair the power supply for fuse EF1.<br>Is the repair complete?   |                    | System OK    |              |
| 5    | 1. Turn the ignition ON.<br>2. Check the voltage at fuse F18.<br>Is the voltage equal to the specified value?  | 11–14 v            | Go toStep 7  | Go toStep 6  |
| 6    | Repair the power supply for fuse F18.<br>Is the repair complete?   |                    | System OK    |              |
| 7    | 1. Disconnect the chime module electrical connector.<br>2. Turn the ignition ON.<br>3. Check the voltage at terminal 8 of the chime module connector.<br>Is the voltage equal to the specified value?  | 11–14 v            | Go toStep 9  | Go toStep 8  |
| 8    | Repair the open circuit between fuse F18 and chime module connector terminal 8.<br>Is the repair complete?   |                    | System OK    |              |
| 9    | 1. Disconnect the chime module electrical connector.<br>2. Insert the key in the ignition switch.<br>3. Check the voltage at terminal 2 of the chime module connector.<br>Is the voltage equal to the specified value?                             | 11–14 v            | Go toStep 15 | Go toStep 10 |
| 10   | 1. There are two wires from the key reminder switch which lead to an instrument harness connector. Disconnect that two-pin connector.<br>2. Check the voltage at the circuit wire from terminal 1.<br>Is the voltage equal to the specified value? | 11–14 v            | Go toStep 12 | Go toStep 11 |
| 11   | Repair the open circuit between fuse EF1 and the key reminder switch.<br>Is the repair complete?   |                    | System OK    |              |
| 12   | 1. Insert a key into the ignition switch.<br>2. With the two-pin key reminder connector still disconnected, connect one ohmmeter lead to each wire leading to the key reminder switch.<br>Is the continuity equal to the specified value?          | $\approx 0 \Omega$ | Go toStep 14 | Go toStep 13 |



| Step | Action   | Value(s)           | Yes                  | No                   |
|------|--|--------------------|----------------------|----------------------|
| 13   | Replace the ignition switch.<br>Is the repair complete?  |                    | System OK            |                      |
| 14   | Repair the open circuit between the connector for the key reminder switch and chime module connector terminal 2.<br>Is the repair complete?  |                    | System OK            |                      |
| 15   | Use an ohmmeter to check the continuity between ground and terminal 5 of the chime module connector.<br>Is the continuity equal to the specified value?  | $\approx 0 \Omega$ | Go to <i>Step 17</i> | Go to <i>Step 16</i> |
| 16   | Repair the open circuit between ground and terminal 5 of the chime module connector.<br>Is the repair complete?  |                    | System OK            |                      |
| 17   | 1. Open the driver's side door.<br>2. With the chime module electrical connector still disconnected, connect an ohmmeter between ground and terminal 4 of the chime module.<br>Is the continuity equal to the specified value? | $\approx 0 \Omega$ | Go to <i>Step 18</i> | Go to <i>Step 19</i> |
| 18   | Replace the chime module.<br>Is the repair complete?   |                    | System OK            |                      |
| 19   | Repair the open circuit between ground and terminal 4 of the chime module connector. (The driver door contact switch should be closed when the driver's side door is open.)<br>Is the repair complete?                         |                    | System OK            |                      |

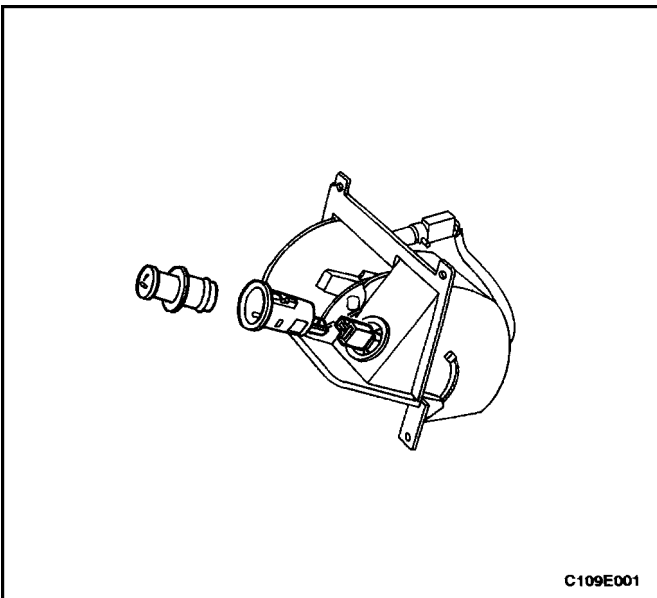
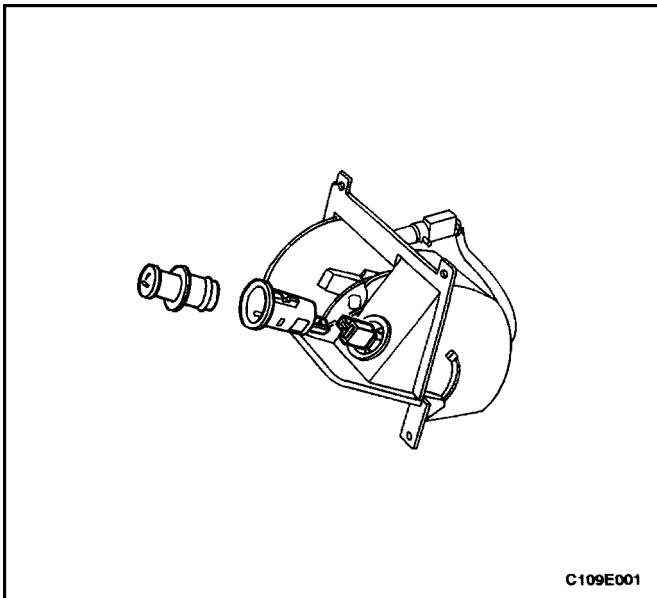
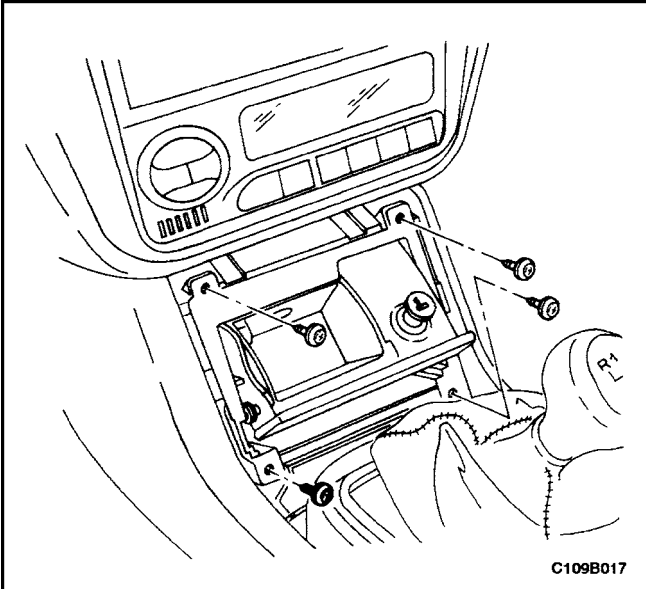
## MAINTENANCE AND REPAIR

### ON-VEHICLE SERVICE

#### CIGAR LIGHTER

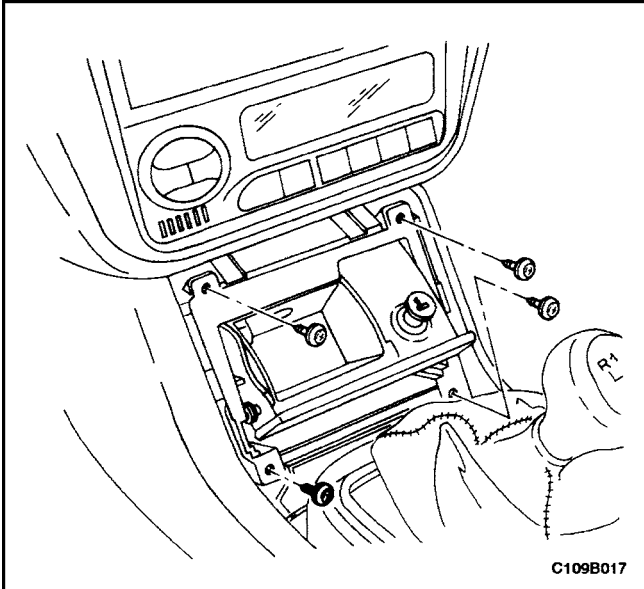
##### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the shift lever trim panel.
3. Remove the screws and the ashtray housing.
4. Disconnect the ashtray housing electrical connector.
5. Disconnect the cigar lighter electrical connector.
6. Remove the cigar lighter from the cigar lighter housing.
7. Remove the cigar lighter housing from the ashtray housing.



##### Installation Procedure

1. Install the cigar lighter housing in the ashtray housing.
2. Install the cigar lighter in the cigar lighter housing.
3. Connect the cigar lighter electrical connector.

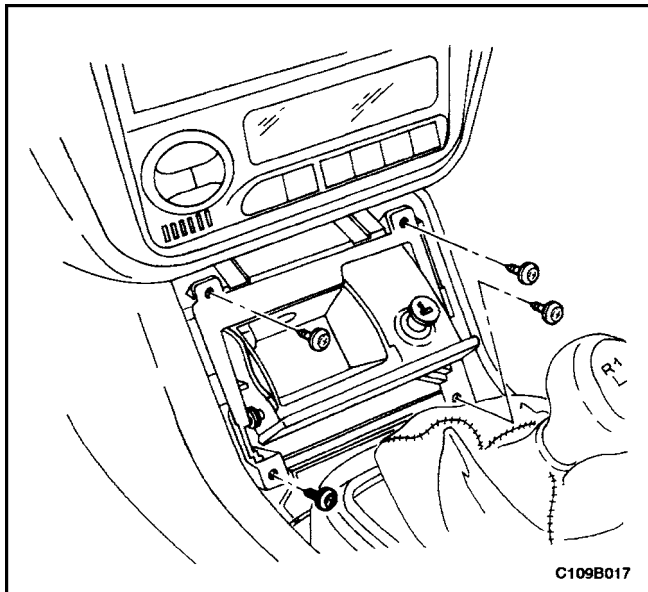


4. Connect the ashtray housing electrical connector.
5. Install the ashtray housing with the screws.

### **Tighten**

Tighten the ashtray housing screws to 2.5 N•m (22 lb-in).

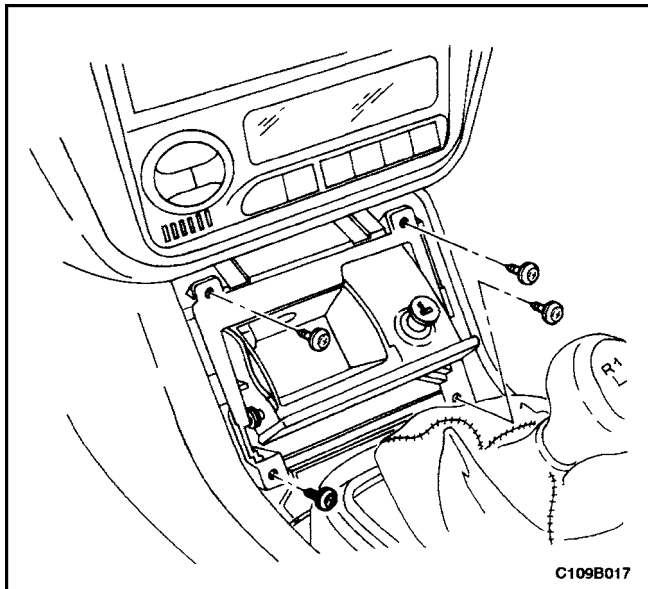
6. Install the shift lever trim panel.
7. Connect the negative battery cable.



## **ASHTRAY**

### **Removal Procedure**

1. Disconnect the negative battery cable.
2. Remove the shift lever trim panel.
3. Remove the screws and the ashtray housing.
4. Disconnect the ashtray electrical connector.
5. Remove the cigar lighter. Refer to "Cigar Lighter" in this section.
6. Remove the ashtray lamp. Refer to *Section 9B, Lighting Systems*.



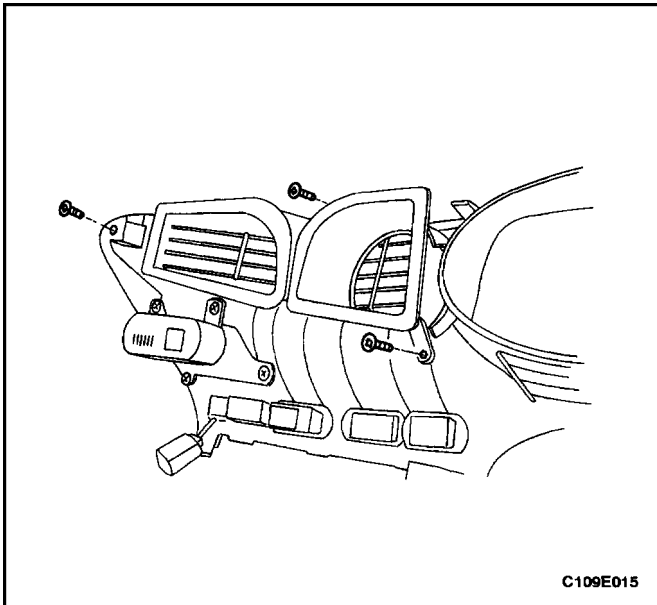
### **Installation Procedure**

1. Install the ashtray lamp. Refer to *Section 9B, Lighting Systems*.
2. Install the cigar lighter. Refer to "Cigar Lighter" in this section.
3. Connect the ashtray electrical connector.
4. Install the screws and the ashtray housing.

### **Tighten**

Tighten the ashtray housing screws to 2.5 N•m (22 lb-in).

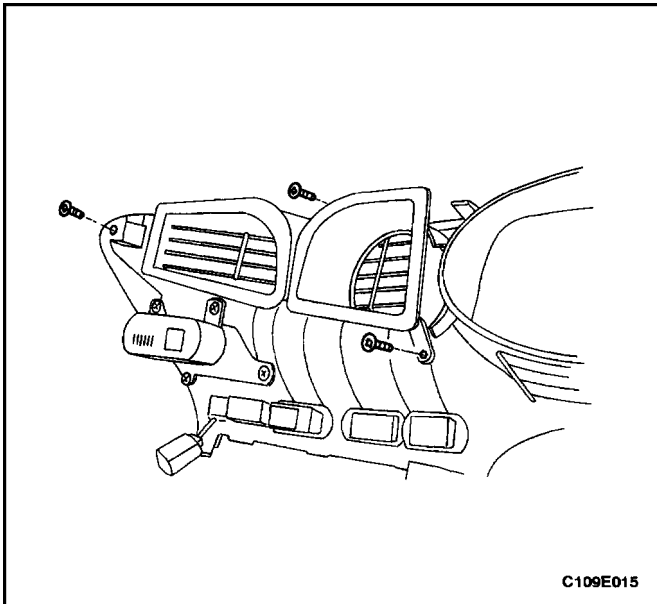
5. Install the shift lever trim panel.
6. Connect the negative battery cable.



## INSTRUMENT PANEL VENTS

### Removal Procedure

1. Remove the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.
2. Remove the screws and the vents.



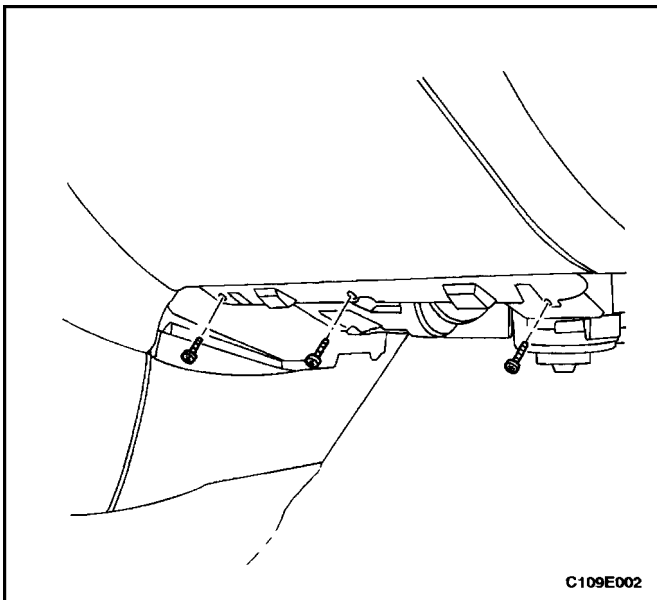
### Installation

1. Install the vents with the screws.

#### Tighten

Tighten the instrument panel vent screws to 3 N•m (27 lb-in).

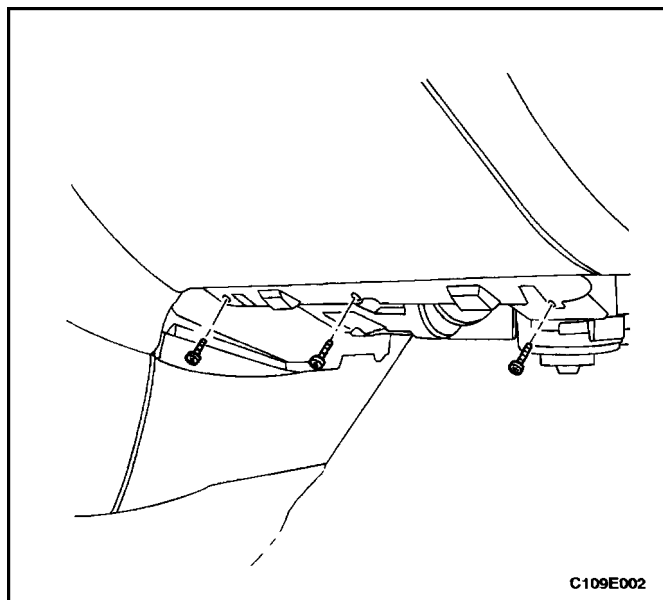
2. Install the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.



## GLOVE BOX

### Removal Procedure

1. Remove the footwell upper cover.
2. Remove the screws at the base of the glove box.
3. Open and remove the glove box.



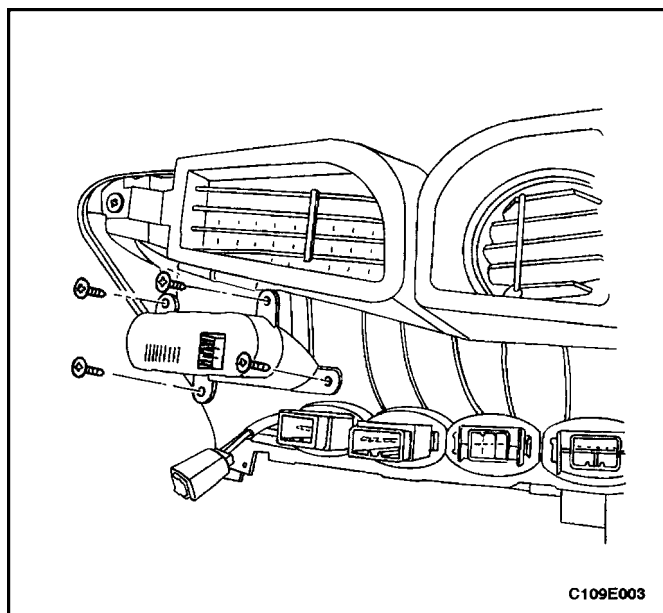
### Installation Procedure

1. Position the glove box in the instrument panel.
2. Install the glove box with the screws.

#### Tighten

Tighten the glove box screws to 2.5 N•m (22 lb-in).

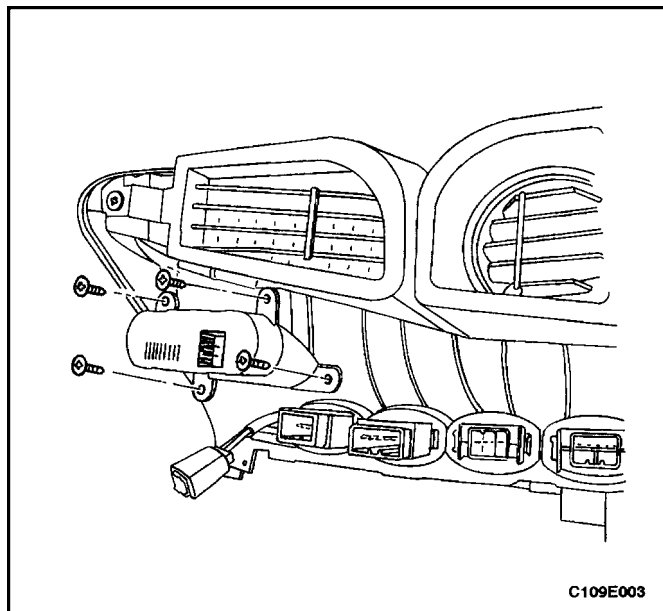
3. Install the footwell upper cover.



## DIGITAL CLOCK

### Removal Procedure

1. Remove the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.
2. Remove the screws and the digital clock.



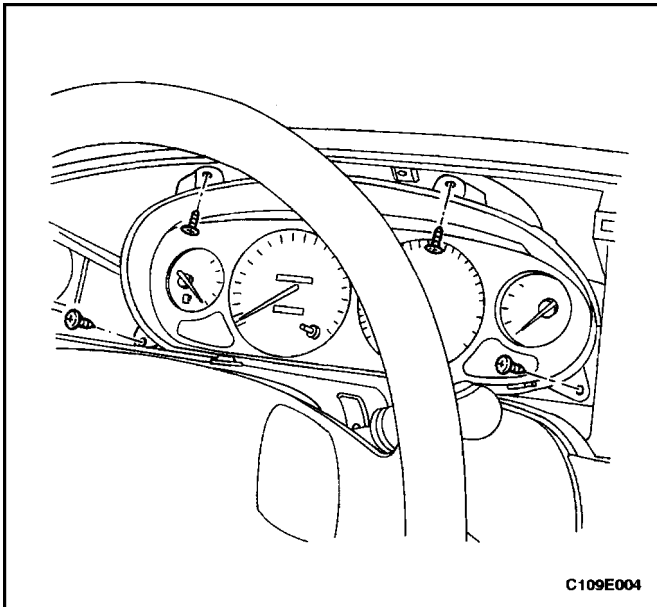
### Installation Procedure

1. Install the digital clock with the screws.

#### Tighten

Tighten the digital clock screws to 3 N•m (27 lb-in).

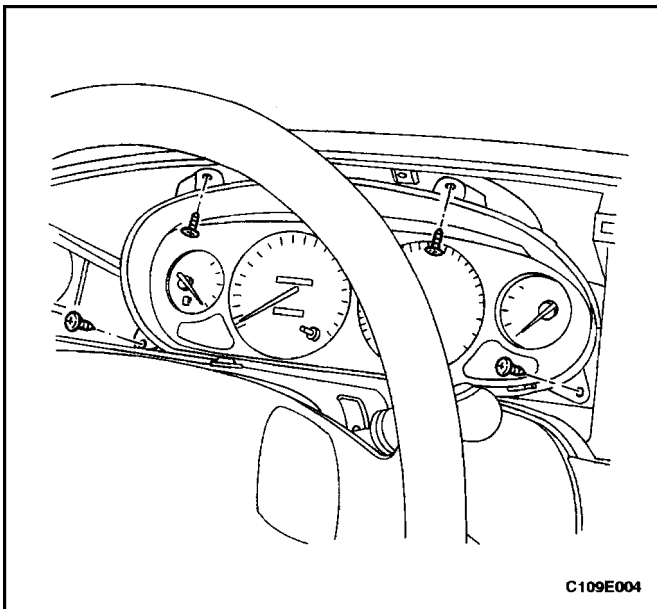
2. Install the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.



## INSTRUMENT CLUSTER

### Removal Procedure

1. Remove the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.
2. Remove the screws and the instrument cluster.



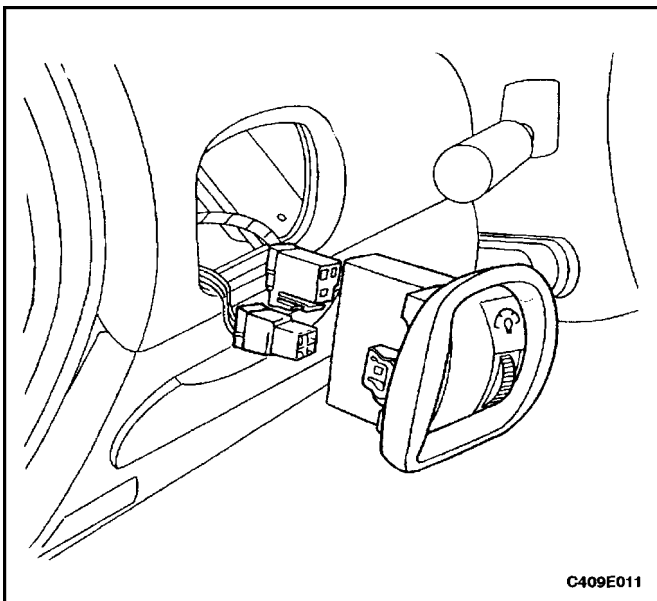
### Installation Procedure

1. Install the instrument cluster with the screws.

#### Tighten

Tighten the instrument cluster screws to 3 N•m (27 lb-in).

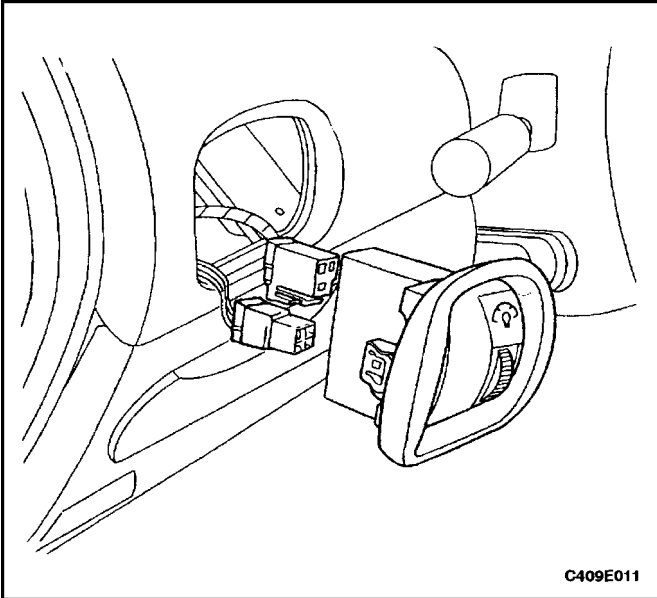
2. Install the instrument cluster trim panel. Refer to "Instrument Cluster Trim Panel" in this section.



## INSTRUMENT CLUSTER DIMMER SWITCH

### Removal Procedure

1. Remove the instrument cluster dimmer switch assembly.
2. Disconnect the electrical connectors.



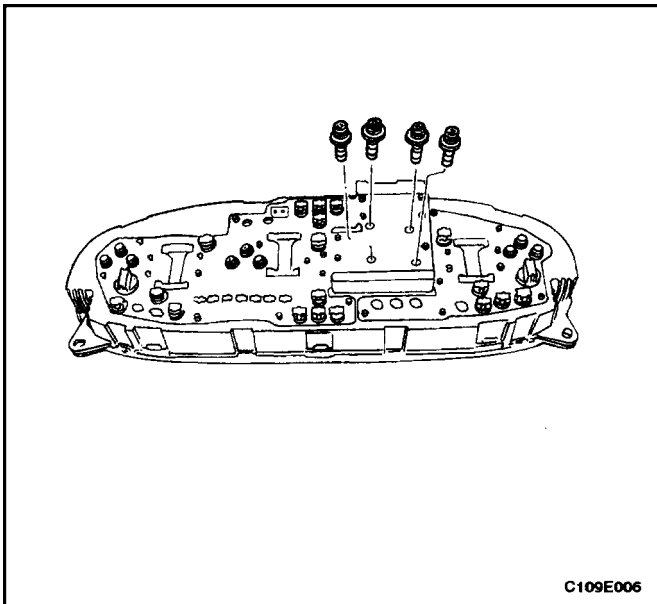
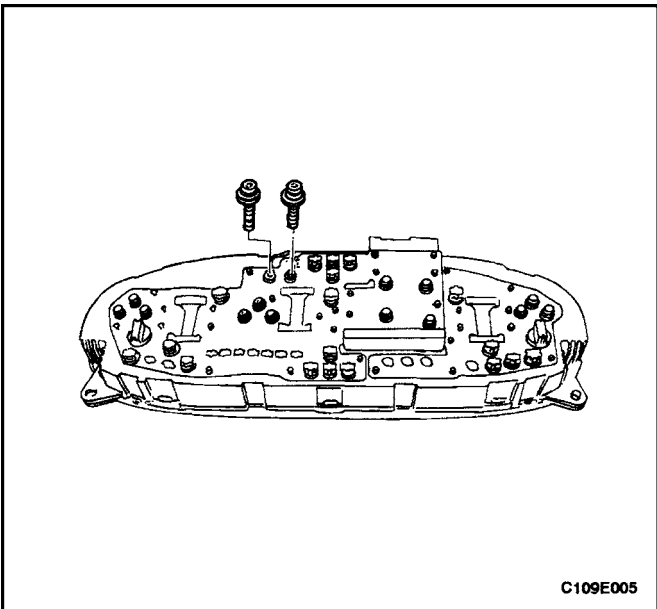
### Installation Procedure

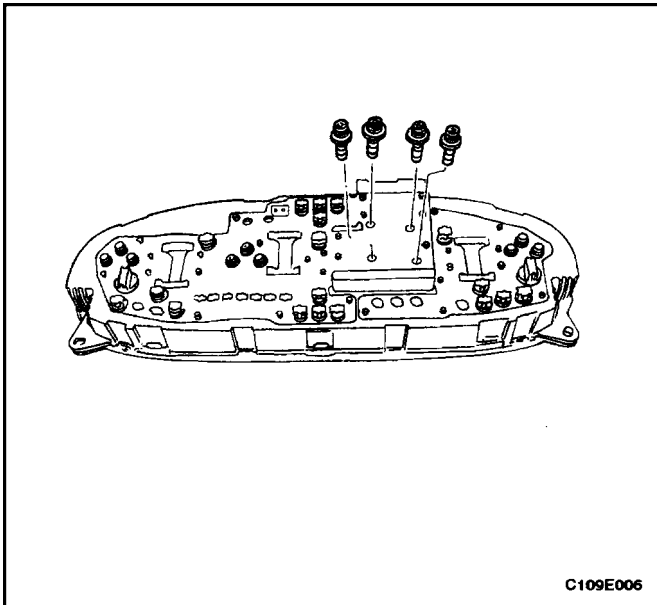
1. Replace the appropriate switch.
2. Connect the electrical connectors.
3. Install the instrument cluster dimmer switch assembly.

## SPEEDOMETER/ODOMETER/TRIP ODOMETER

### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Remove the cluster illumination connector screws.
4. Press the clips down and remove the instrument cluster lens.
5. Remove the screws and the speedometer from the instrument cluster.



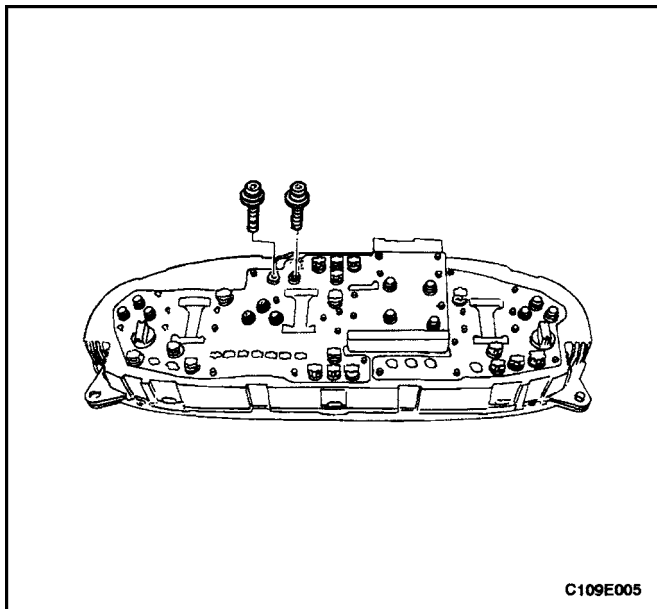


## Installation Procedure

1. Install the speedometer with the screws.

### Tighten

Tighten the speedometer screws to 2 N•m (18 lb-in).

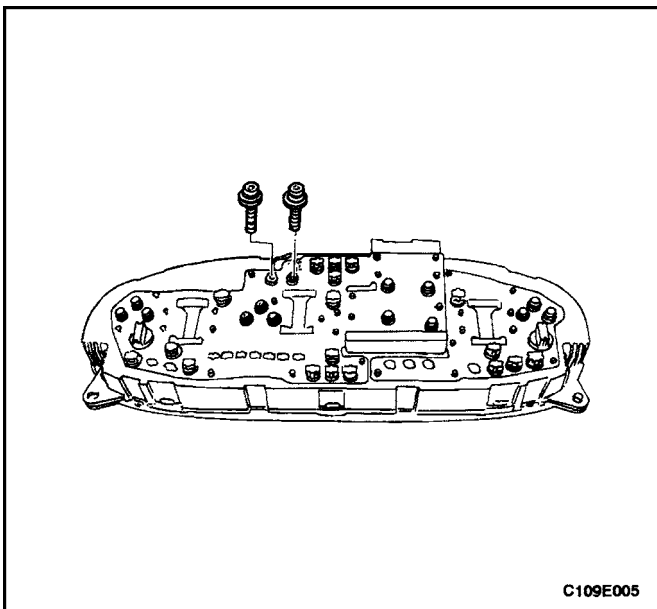


2. Install the instrument cluster lens.
3. Install the cluster illumination connector screws.

### Tighten

Tighten the cluster illumination connector screws to 2 N•m (18 lb-in).

4. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
5. Connect the negative battery cable.

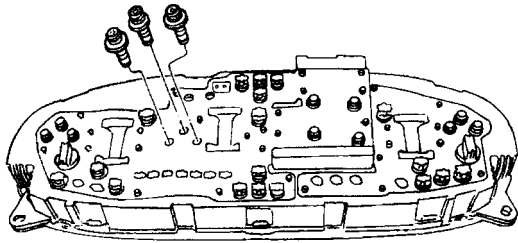


## TACHOMETER

### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Remove the cluster illumination connector screws.





C109E007

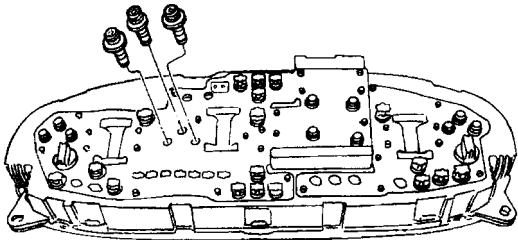
4. Press the clips down and remove the instrument cluster lens.
5. Remove the screws and the tachometer from the instrument cluster.

### Installation Procedure

1. Install the tachometer to the instrument cluster with the screws.

#### **Tighten**

Tighten the tachometer screws to 2 N•m (18 lb-in).



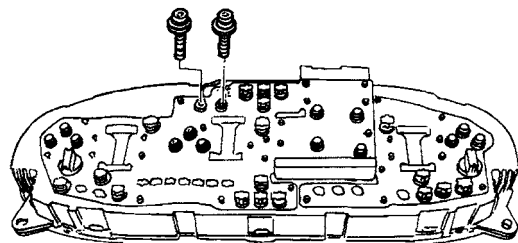
C109E007

2. Install the instrument cluster lens with the screws.
3. Install the cluster illumination connector screws.

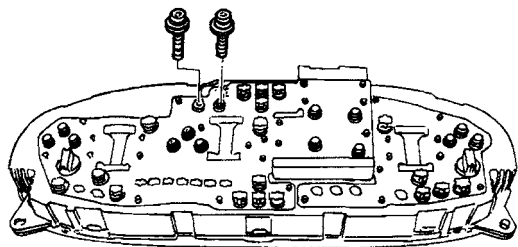
#### **Tighten**

Tighten the cluster illumination connector screws to 2 N•m (18 lb-in).

4. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
5. Connect the negative battery cable.



C109E005



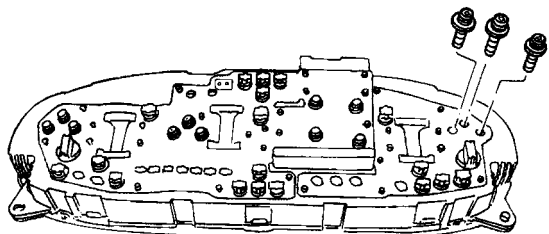
C109E005

## FUEL GAUGE

### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Remove the cluster illumination connector screws.
4. Press the clips down and remove the instrument cluster lens.

5. Remove the fuel gauge screws and the fuel gauge from the cluster assembly.



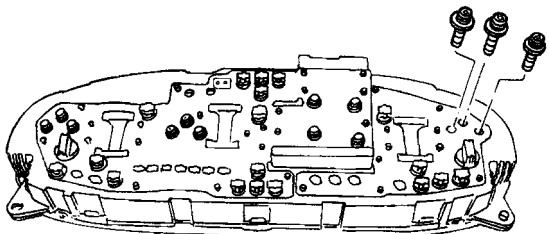
C109E008

### Installation Procedure

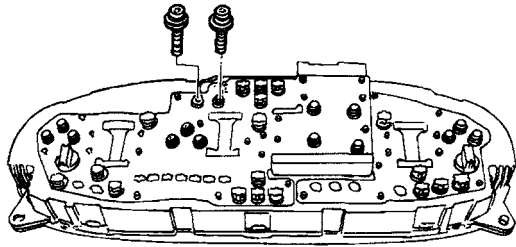
1. Install the fuel gauge to the cluster assembly with the screws.

#### **Tighten**

Tighten the fuel gauge screws to 2 N•m (18 lb-in).



C109E008



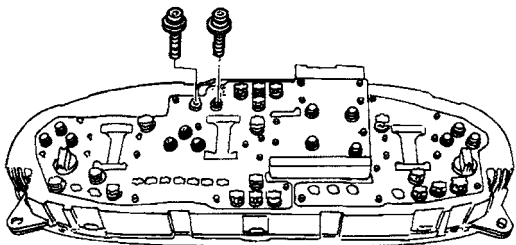
C109E005

2. Install the instrument cluster lens with the instrument cluster lens screws.
3. Install the cluster illumination connector screws.

**Tighten**

Tighten the cluster illumination connector screws to 2 N•m (18 lb-in).

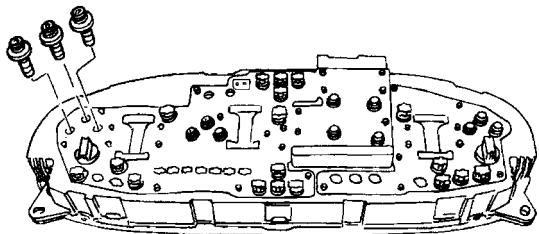
4. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
5. Connect the negative battery cable.



C109E005

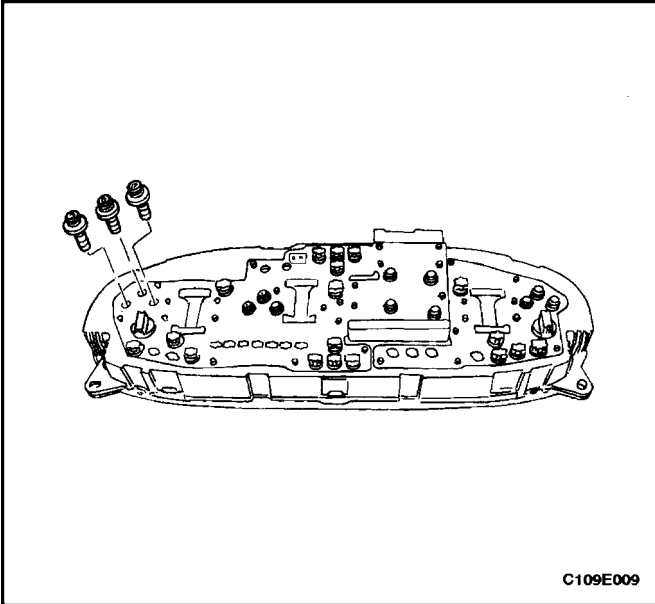
**TEMPERATURE GAUGE****Removal Procedure**

1. Disconnect the negative battery cable.
2. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Remove the cluster illumination connector screws.
4. Press the clips down and remove the instrument cluster lens.



C109E009

5. Remove the screws and the temperature gauge from the cluster assembly.

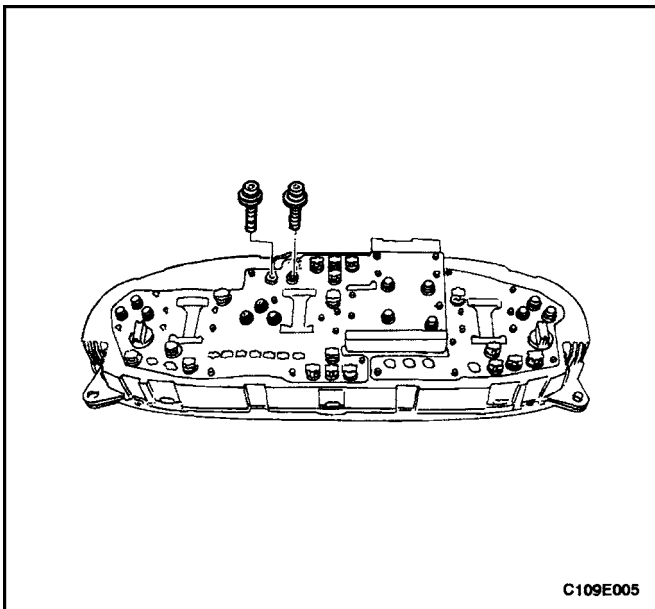


## Installation Procedure

1. Install the temperature gauge to the cluster assembly with the screws.

### Tighten

Tighten the temperature gauge screws to 2 N•m (18 lb-in).

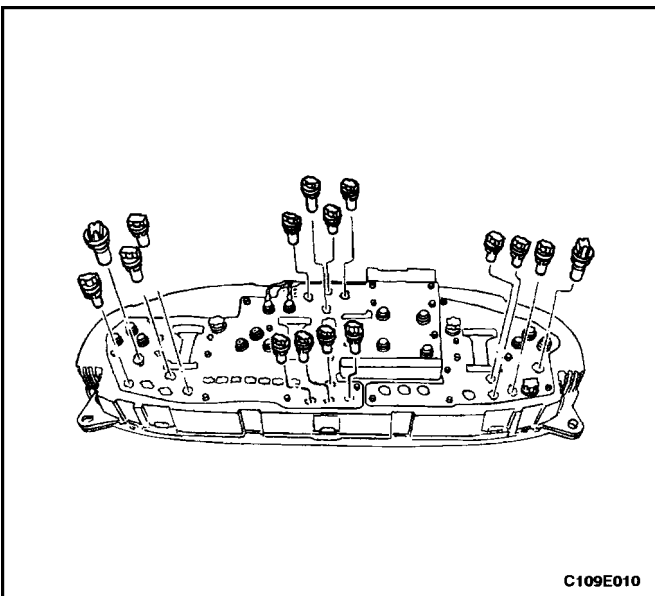


2. Install the instrument cluster lens.
3. Install the cluster illumination connector screws.

### Tighten

Tighten the cluster illumination connector screws to 2 N•m (18 lb-in).

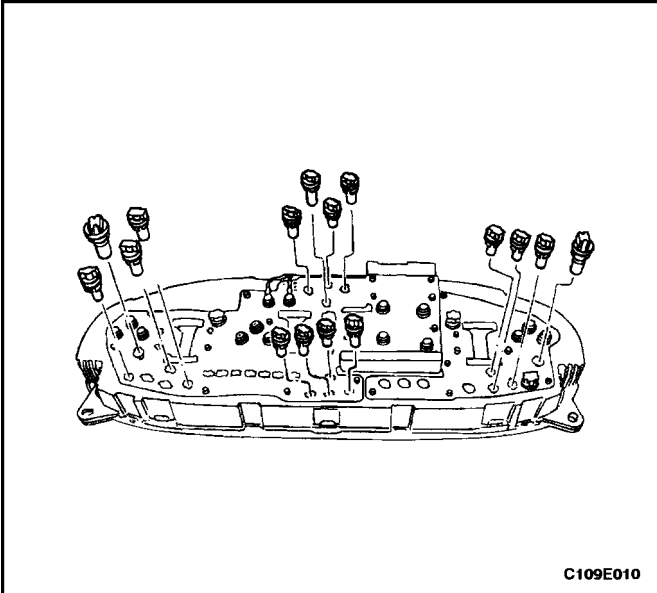
4. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
5. Connect the negative battery cable.



## INSTRUMENT CLUSTER INDICATOR LAMPS

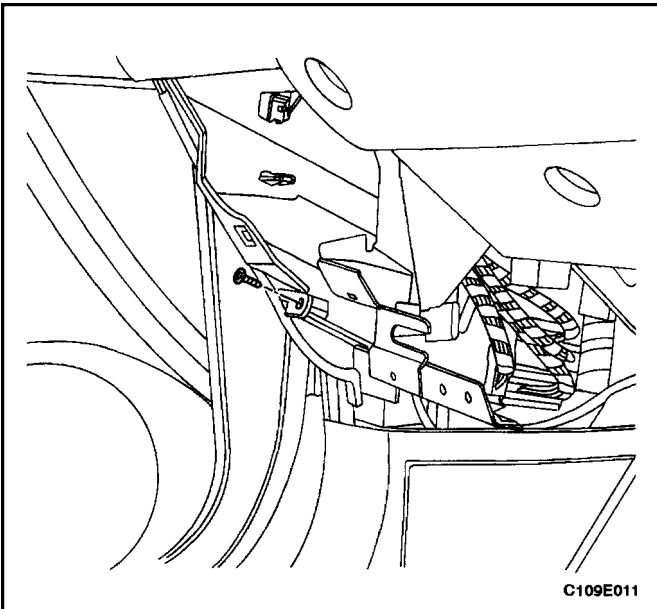
### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Remove the defective bulb from the rear of the cluster.



### Installation Procedure

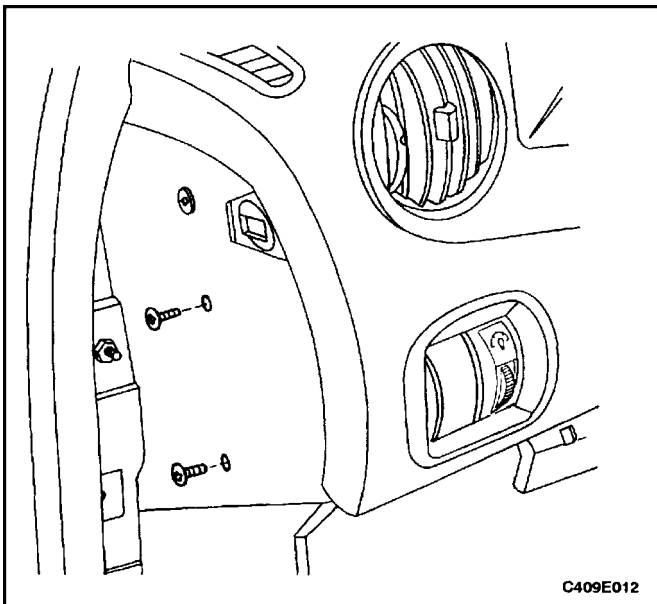
1. Install the new bulb.
2. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
3. Connect the negative battery cable.

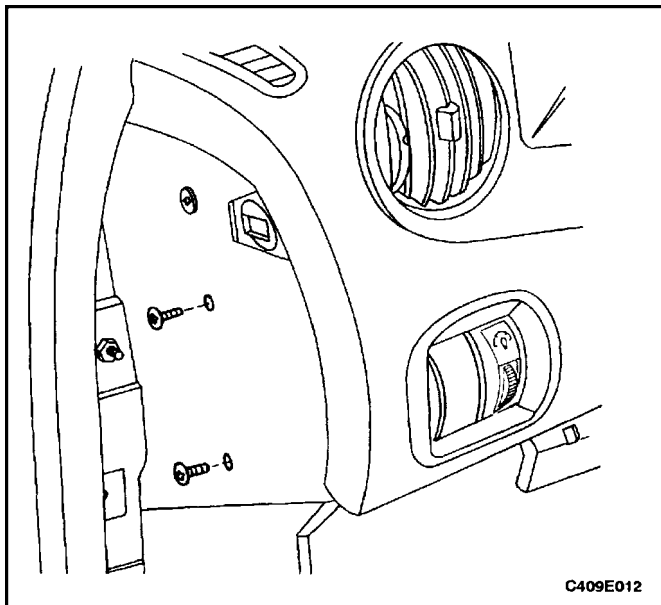


### CHIME MODULE

#### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the hood release handle screw and the knee bolster trim panel. Refer to *Section 9G, Interior Trim*.
3. Remove the screw and the instrument panel side trim cover.
4. Disconnect the electrical connector.
5. Remove the screws and the chime module.



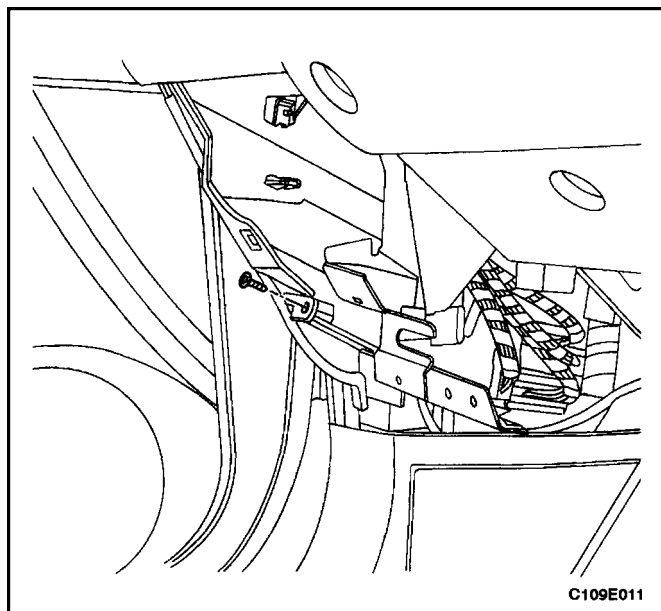


## Installation Procedure

1. Install the chime module with the screws.

### Tighten

Tighten the chime module screws to 4 N•m (35 lb-in).



2. Connect the electrical connector.
3. Install the instrument panel side trim cover with the screw.

### Tighten

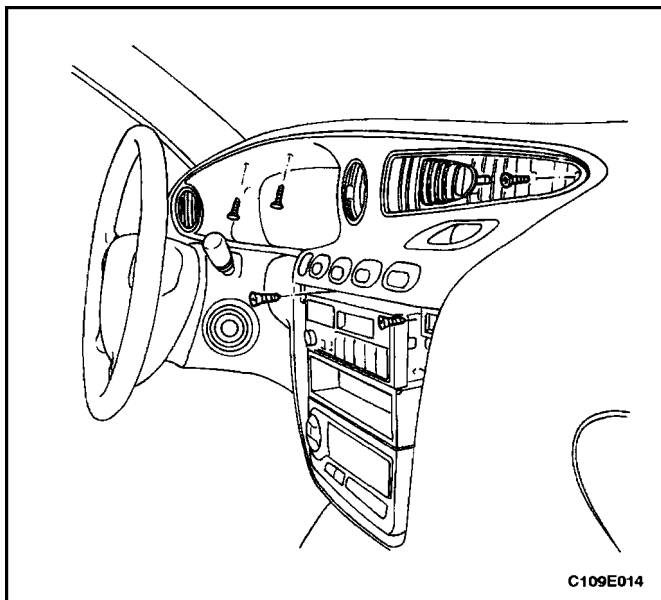
Tighten the instrument panel side trim cover screw to 2.5 N•m (22 lb-in).

4. Install the knee bolster trim panel with the hood release handle screw. Refer to *Section 9G, Interior Trim*.

### Tighten

Tighten the hood release handle screw to 2.5 N•m (22 lb-in).

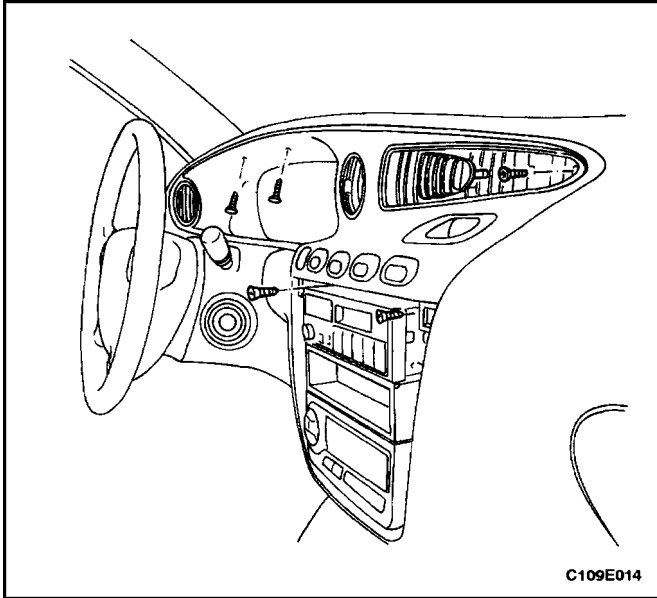
5. Connect the negative battery cable.



## INSTRUMENT CLUSTER TRIM PANEL

### Removal Procedure

1. Remove the audio system trim plate.
2. Remove the screws and the instrument cluster trim panel.
3. Disconnect the electrical connectors.



C109E014

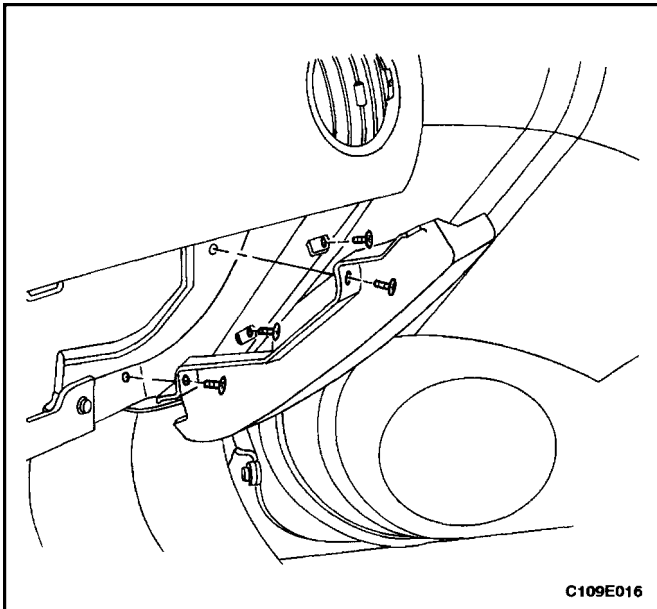
### Installation Procedure

1. Connect the electrical connectors.
2. Install the instrument cluster trim panel with the screws.

### Tighten

Tighten the instrument cluster trim panel screws to 3 N•m (27 lb-in).

3. Install the audio system trim plate.

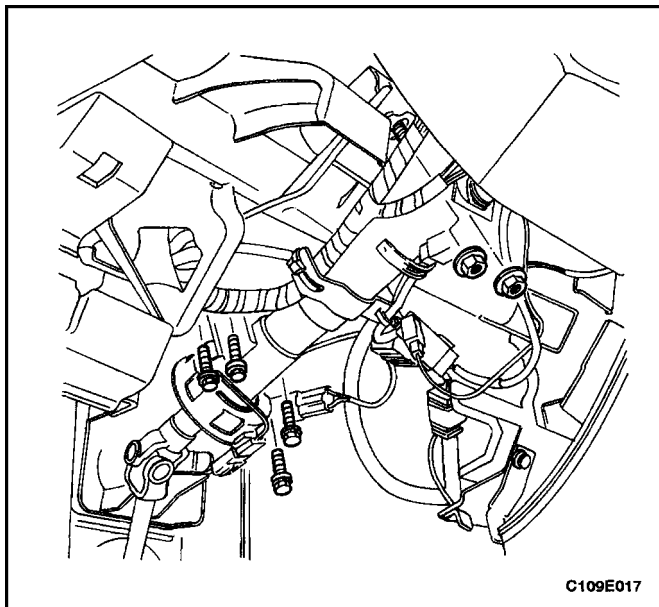


C109E016

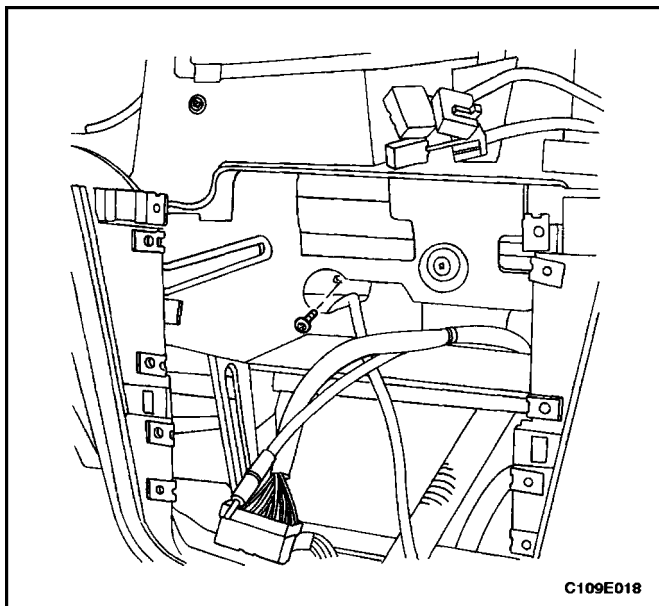
## INSTRUMENT PANEL

### Removal Procedure

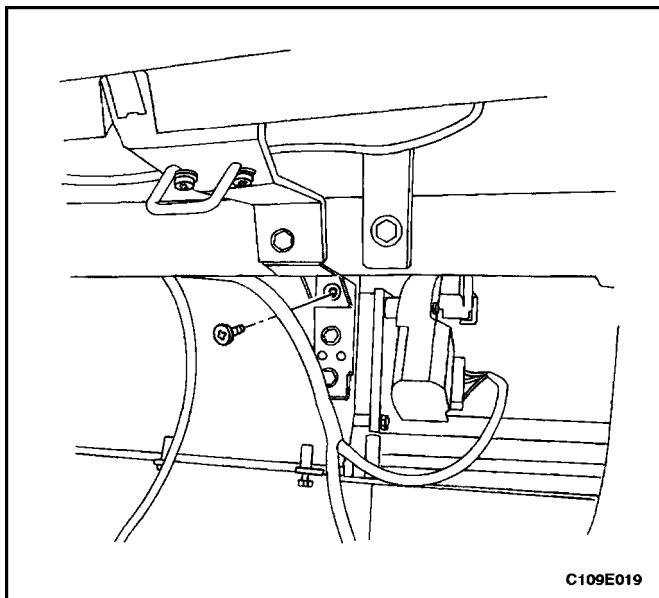
1. Disconnect the negative battery cable.
2. Remove the floor console. Refer to *Section 9G, Interior Trim*.
3. Remove the sun sensor and the automatic temperature controls assembly. Refer to *Section 7D, Automatic Temperature Control Heating, Ventilation, and Air Conditioning System*.
4. Remove the tweeter speakers and the stereo cassette AM/FM radio. Refer to *Section 9F, Audio Systems*.
5. Remove the screws and the instrument panel storage compartment.
6. Remove the instrument cluster dimmer switch assembly. Refer to "Instrument Cluster Dimmer Switch" in this section.
7. Remove the instrument cluster. Refer to "Instrument Cluster" in this section.
8. Remove the chime module. Refer to "Chime Module" in this section.
9. Remove the kick panels. Refer to *Section 9G, Interior Trim*.
10. Remove the glove box. Refer to "Glove Box" in this section.
11. Remove the screws and the glove box housing.
12. Disconnect the glove box housing electrical connectors.
13. Remove the knee bolster. Refer to *Section 9G, Interior Trim*.



14. Remove the nuts and the bolts securing the steering column.

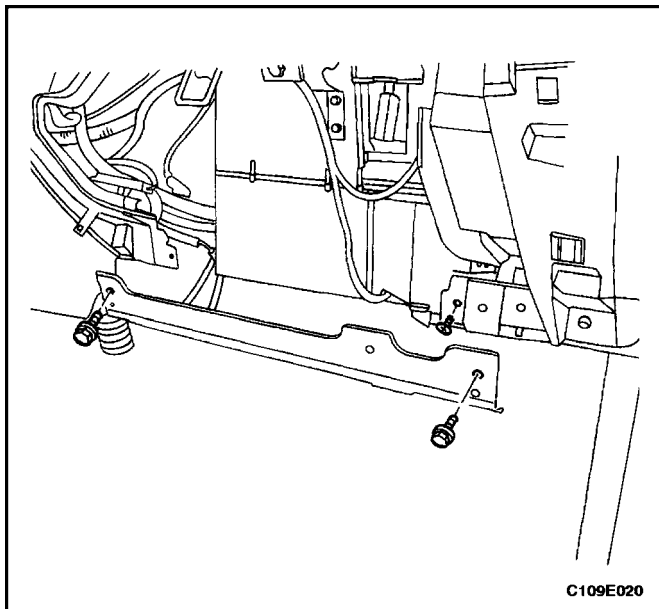


15. Disconnect the steering column electrical connectors.  
16. Lower the steering column.  
17. Remove the screw behind the stereo cassette AM/FM radio.

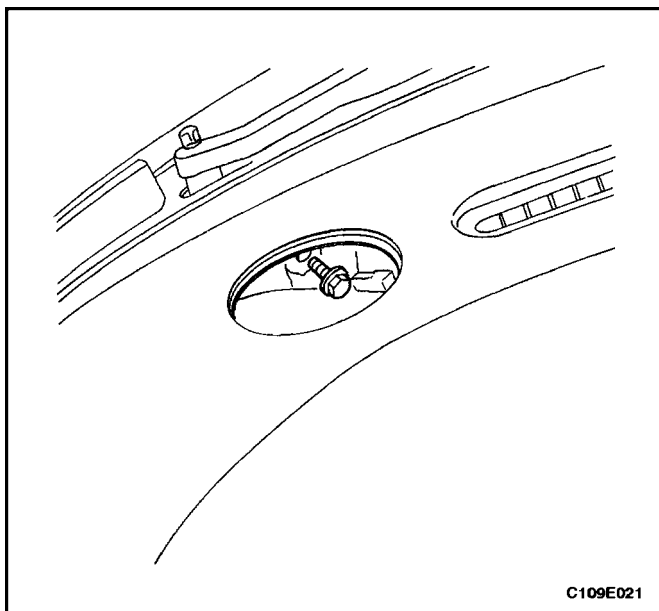


18. Remove the screw securing the instrument panel to the heater air distributor case.

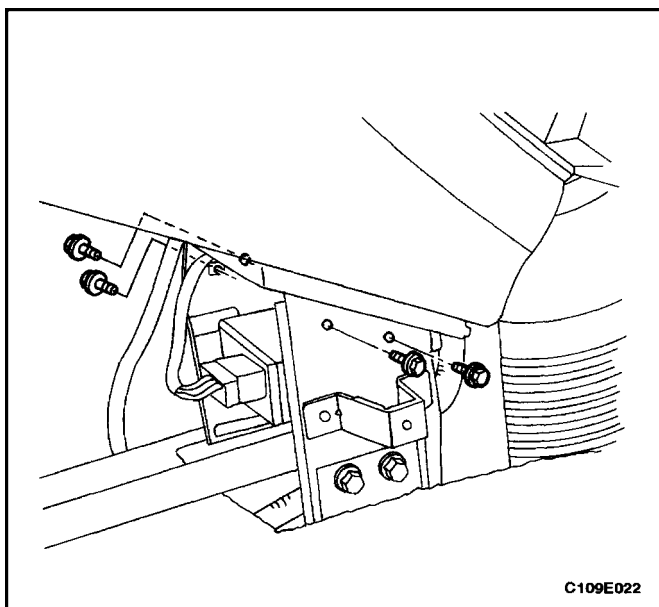




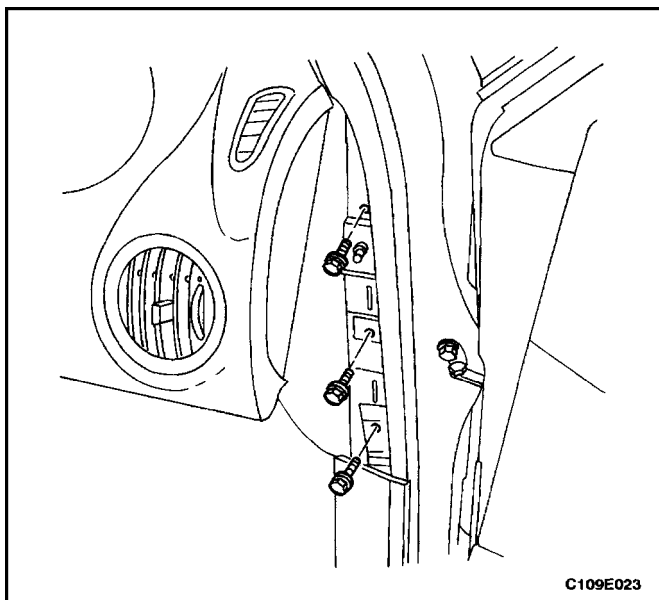
19. Remove the bolts and the glove box brace.
20. Remove the instrument panel screw behind the glove box brace.



21. Remove the instrument panel bolts below the windshield.

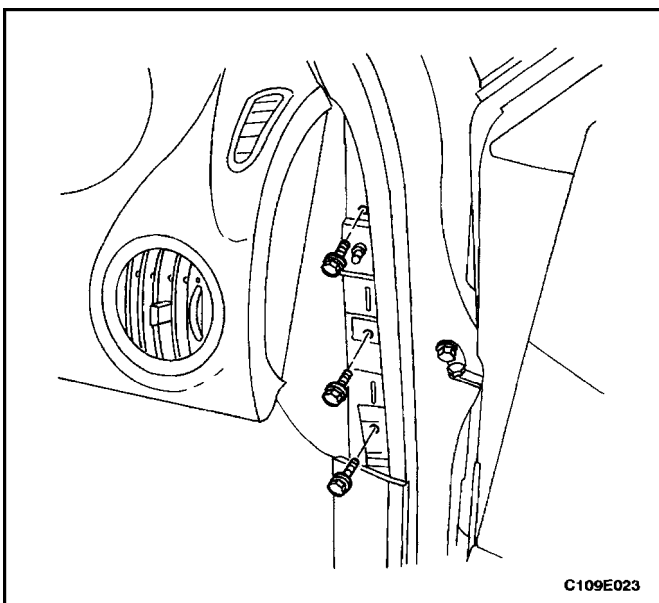


22. Remove the bolts securing the bottom of the instrument panel to the floor.



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23. Remove the bolts securing the sides of the instrument panel to the body.
24. Disconnect the instrument panel electrical connectors.
25. Remove the instrument panel.



C109E023

## Installation Procedure

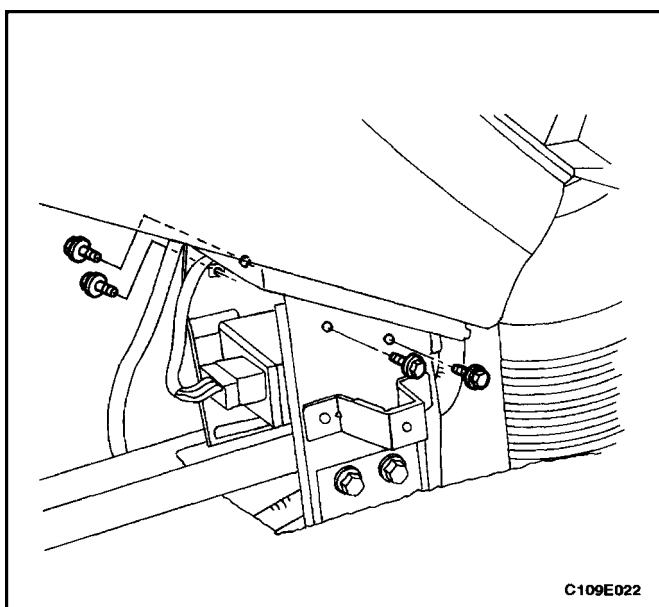
1. Position the instrument panel in the vehicle.
2. Connect the instrument panel electrical connectors.

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

3. Install the bolts securing the sides of the instrument panel to the body.

### Tighten

Tighten the instrument panel-to-body bolts to 22 N•m (16 lb-ft).

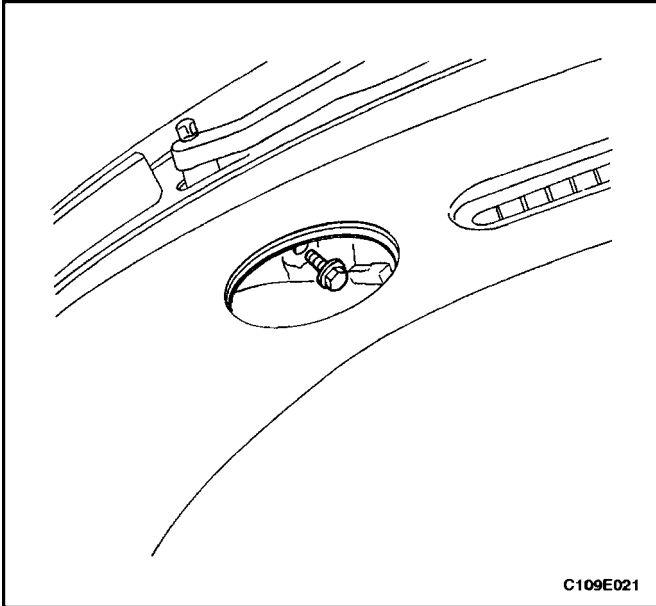


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4. Install the bolts securing the bottom of the instrument panel to the floor.

### Tighten

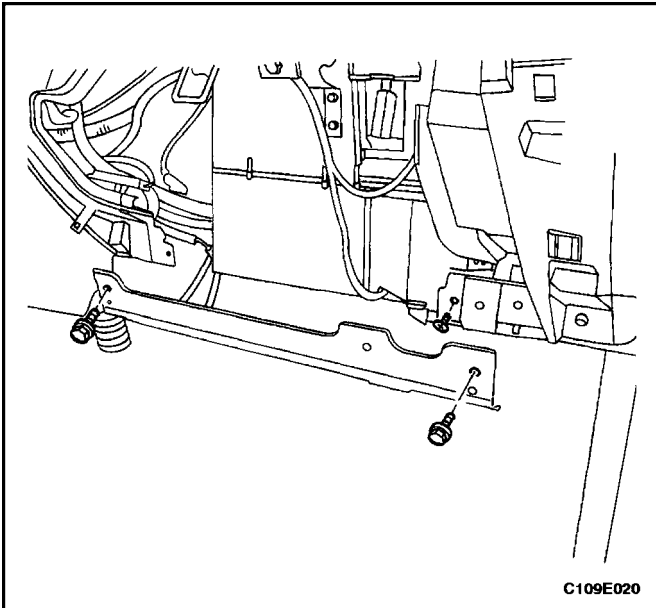
Tighten the instrument panel-to-floor bolts to 22 N•m (16 lb-ft).



5. Install the instrument panel bolts below the windshield.

**Tighten**

Tighten the instrument panel bolts below the windshield to 22 N•m (16 lb–ft).



6. Install the instrument panel screw behind the glove box brace.

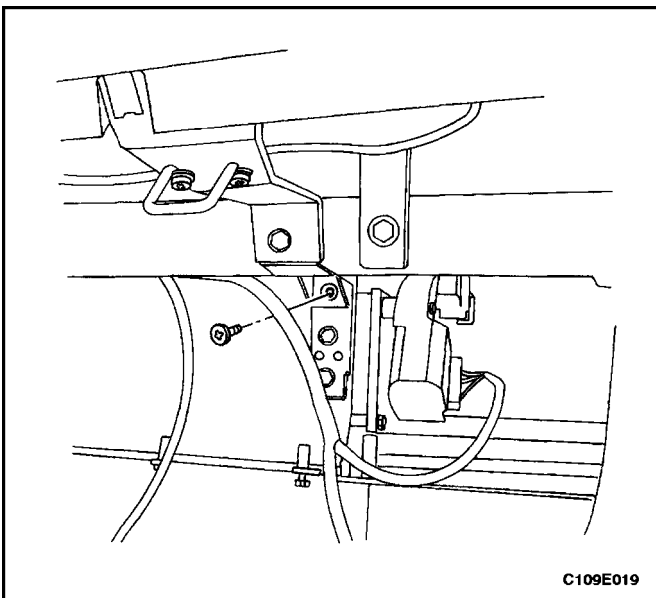
**Tighten**

Tighten the instrument panel screw behind the glove box brace to 2.5 N•m (22 lb–in).

7. Install the glove box brace with the bolts.

**Tighten**

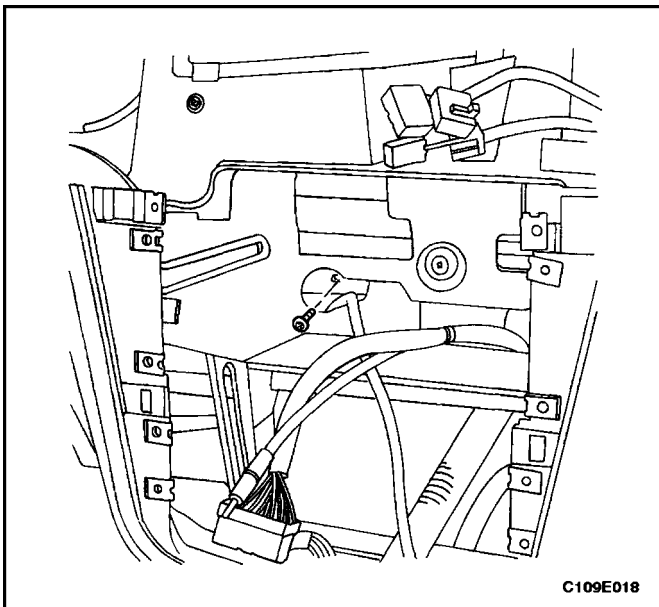
Tighten the glove box brace bolts to 10 N•m (89 lb–in).



8. Install the screw securing the instrument panel to the heater air distributor case.

**Tighten**

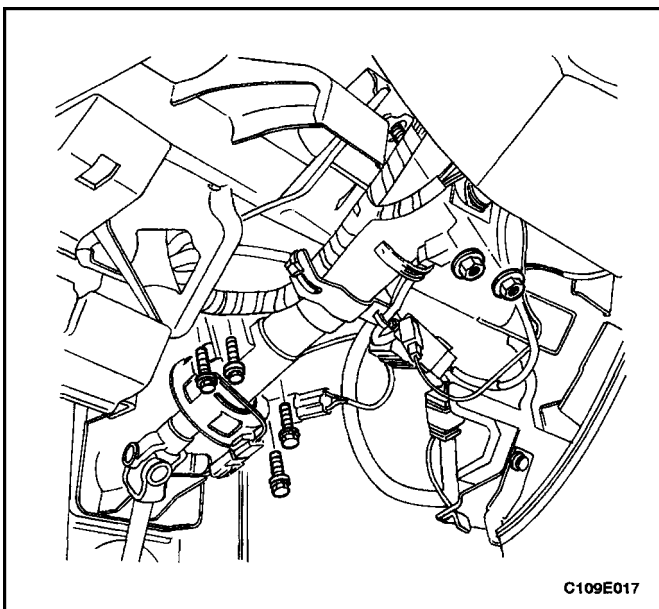
Tighten the instrument panel-to-heater air distributor case screw to 4 N•m (35 lb–in).



9. Install the screw behind the stereo cassette AM/FM radio.

**Tighten**

Tighten the instrument panel screw behind the audio system to 3 N•m (27 lb-in).

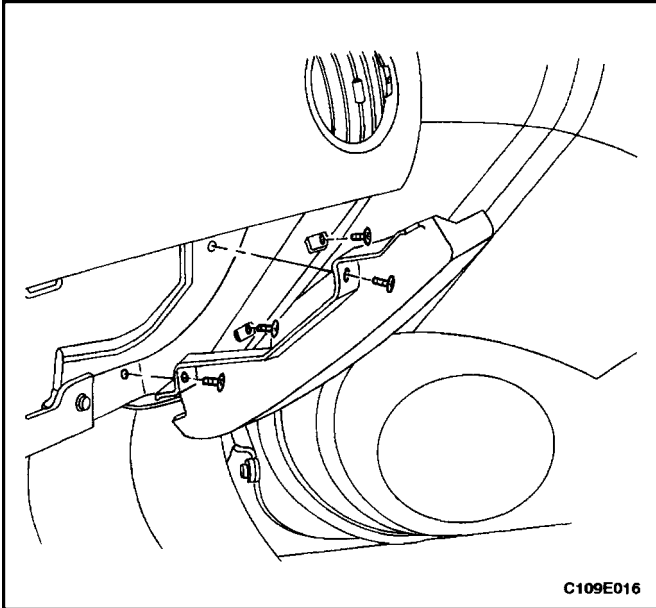


10. Raise the steering column.
11. Connect the steering column electrical connectors.
12. Install the nuts and the bolts securing the steering column.

**Tighten**

Tighten the steering column nuts to 22 N•m (16 lb-ft).

Tighten the steering column bolts to 22 N•m (16 lb-ft).



13. Install the knee bolsters. Refer to *Section 9G, Interior Trim*.

### **Tighten**

Tighten the passenger side knee bolster trim panel screws to 3 N•m (27 lb-in).

14. Connect the glove box housing electrical connectors.
15. Install the glove box housing with the screws.

### **Tighten**

Tighten the glove box housing screws to 2.5 N•m (22 lb-in).

16. Install the glove box. Refer to "Glove Box" in this section.
17. Install the kick panels. Refer to *Section 9G, Interior Trim*.
18. Install the chime module. Refer to "Chime Module" in this section.
19. Install the instrument cluster. Refer to "Instrument Cluster" in this section.
20. Install the instrument cluster dimmer switch assembly. Refer to "Instrument Cluster Dimmer Switch" in this section.
21. Install the instrument panel storage compartment with the screws.

### **Tighten**

Tighten the instrument panel storage compartment screws to 2.5 N•m (22 lb-in).

22. Install the tweeter speakers and the stereo cassette AM/FM radio. Refer to *Section 9F, Audio Systems*.
23. Install the sun sensor and the automatic temperature controls assembly. Refer to *Section 7D, Automatic Temperature Control Heating, Ventilation, and Air Conditioning System*.
24. Install the floor console. Refer to *Section 9G, Interior Trim*.
25. Connect the negative battery cable.

## GENERAL DESCRIPTION AND SYSTEM OPERATION

### CIGAR LIGHTER

The cigar lighter is located in the front portion of the floor console. To use the lighter, push it in completely. When the lighter is hot, it will release itself from contact with the heating element. The lighter and the heating element can be damaged if the lighter does not fully release itself from the heating element.

### ASHTRAY

The ashtray is located in the console. To access the ashtray, pull it out of the ashtray housing. The ashtray lamp will go on when the parking lamps or headlamps are turned on.

### INSTRUMENT PANEL VENTS

The center and the side vents in the instrument panel can be adjusted up and down and from side to side. The side vents can also be aimed toward the side windows to defog them.

### GLOVE BOX

The glove box can be opened by pulling up on the latch handle. The glove box must be removed to gain access to the passenger side airbag module, (if equipped).

### DIGITAL CLOCK

The digital clock is located on the instrument panel above the radio. The clock is capable of an outside temperature display and a 12-hour or a 24-hour display.

### INSTRUMENT CLUSTER

The instrument cluster is located above the steering column and in the instrument cluster trim panel. The instrument cluster contains the instruments that provide the driver with vehicle performance information. The instrument cluster contains a speedometer, a tachometer, an odometer, a trip odometer, a temperature gauge, a fuel gauge, and several indicator lamps. For replacement of the indicator lamp bulbs contained in the instrument cluster, refer to "Instrument Cluster Indicator Lamps Specifications" in this section.

### SPEEDOMETER

The speedometer measures the speed of the vehicle in km/h or mph (with km/h). It consists of an instrument cluster gauge connected to the vehicle speed sensor on the transaxle output shaft.

### TRIP ODOMETER

The trip odometer measures the distance the vehicle has traveled since it was last reset. It consists of an instrument cluster gauge connected to the sending unit on the trans-

axle output shaft. The trip odometer can be reset to zero at any time so that the driver can record the distance traveled from any starting point.

### FUEL GAUGE

The fuel gauge consists of an instrument cluster gauge connected to a sending unit in the fuel tank.

The fuel gauge indicates the quantity of fuel in the tank only when the ignition is turned to ON or ACC. When the ignition is turned to LOCK or START, the pointer may come to rest at any position.

### TEMPERATURE GAUGE

The temperature gauge consists of an instrument cluster gauge connected to a temperature sensor that is in contact with the circulating engine coolant.

The temperature gauge indicates the temperature of the coolant. Prolonged driving or idling in very hot weather may cause the pointer to move beyond the center of the gauge. The engine is overheating if the pointer moves into the red zone at the upper limit of the gauge.

### INSTRUMENT CLUSTER INDICATOR LAMPS

The instrument cluster contains indicator lamps that indicate the functioning of certain systems or the existence of potential problems with the operation of the vehicle. The indicator lamps are replaceable. For replacement of the indicator lamps contained in the instrument cluster, refer to "Instrument Cluster Indicator Lamps Specifications" in this section.

### TACHOMETER

The tachometer measures the engine's speed in terms of thousands of revolutions per minute. It consists of an instrument cluster gauge connected to a sending unit in the engine control module.

Do not operate the engine in the red zone. Engine damage may occur.

### CHIME MODULE

The chime module will sound to bring attention to one or more of the following conditions:

- The lights are on and the ignition is not in ACC, ON, or START.
- The ignition key is in the ignition switch when the driver's side door is open.
- The seat belt is unbuckled when the ignition is in ACC, ON, or START.

Voltage is supplied at all times through the fuse block to power the chime module.