

# OVERHEAD CONSOLE

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### DESCRIPTION

The overhead console includes:

- a compass/temperature display
- reading and courtesy lights for the front and rear seats
- the receiver for the keyless entry system
- storage compartment for remote garage door opener
- storage compartment for sunglasses.

### COMPASS

The compass will display the direction the vehicle is pointed, using the eight major compass headings (Examples: North is "N", Northeast is "NE"). It does not display the headings in actual degrees. The display is turned on/off using the TEMP/COMP button on the left of the display.

The compass is a self calibrating unit that should not require recalibration. The only calibration that may prove necessary is to drive the vehicle in 3 complete circles, on level ground, in not less than 48 seconds. This will "reorient" the unit to its vehicle. The unit also will compensate for magnetism the vehicle may acquire during its life. Care should be used to avoid putting anything magnetic on the roof of the vehicle.

The unit can compensate for some magnetic fields in the body. The use of magnetic attachments like antenna mounts or repair order "hats" placed directly on the roof can exceed the compensation ability of the unit. Magnetic bit drivers used on the fasteners to hold the assembly to the roof header can also affect operation. If the vehicle roof should become magnetized, then the degaussing and calibration procedures may be required to restore proper operation.

If the compass functions but accuracy is suspect, it may be necessary to perform a variation adjustment. This procedure allows the unit to accommodate variations in the earth's magnetic field strength based on geographic location.

**If the compass has blanked out and only CAL appears, degaussing may be necessary to remove residual magnetic fields.**

### THERMOMETER

The ambient temperature display can be changed from Fahrenheit to Celsius using the U.S./METRIC button on the right of the display. The temperature reported is not an instant reading of conditions but an average temperature. It may take the unit several minutes to react to a major change such as driving out of a heated garage into winter temperatures.

When the ignition switch is turned OFF, the last displayed temperature reading stays in memory. When the ignition switch is turned ON again the thermometer will display the memory temperature for one minute; then update the display to the actual temperature within five minutes.

### READING AND COURTESY LAMPS

All reading and courtesy lamps in the overhead console are activated by the door courtesy circuit. When all four doors and the liftgate are closed the lamps can be activated by depressing the corresponding lens. When any door or the liftgate is open, the switches are disabled. They will not turn the lamps off.

### MAP AND COURTESY LAMPS

These lamps offer several unique features. Both the map and courtesy lamps can be turned on with the integral "Soft Touch" switch. Pushing this switch energizes an electrical circuit, which in turn directs power to the light. The map lamps are unaffected by the door switches, while the courtesy lamps are turned on with the opening of any door. When any door is open, the "Soft Touch" switches are disabled, you cannot turn the lights off with these switches.

### DIAGNOSTIC PROCEDURES

Follow the appropriate diagnostic flow chart:

- Chart 1 describes the procedures for compass and display problems.
- Chart 2 describes the procedures for illumination lamp problems.
- Chart 3 describes the procedures for outside temperature measuring problems.

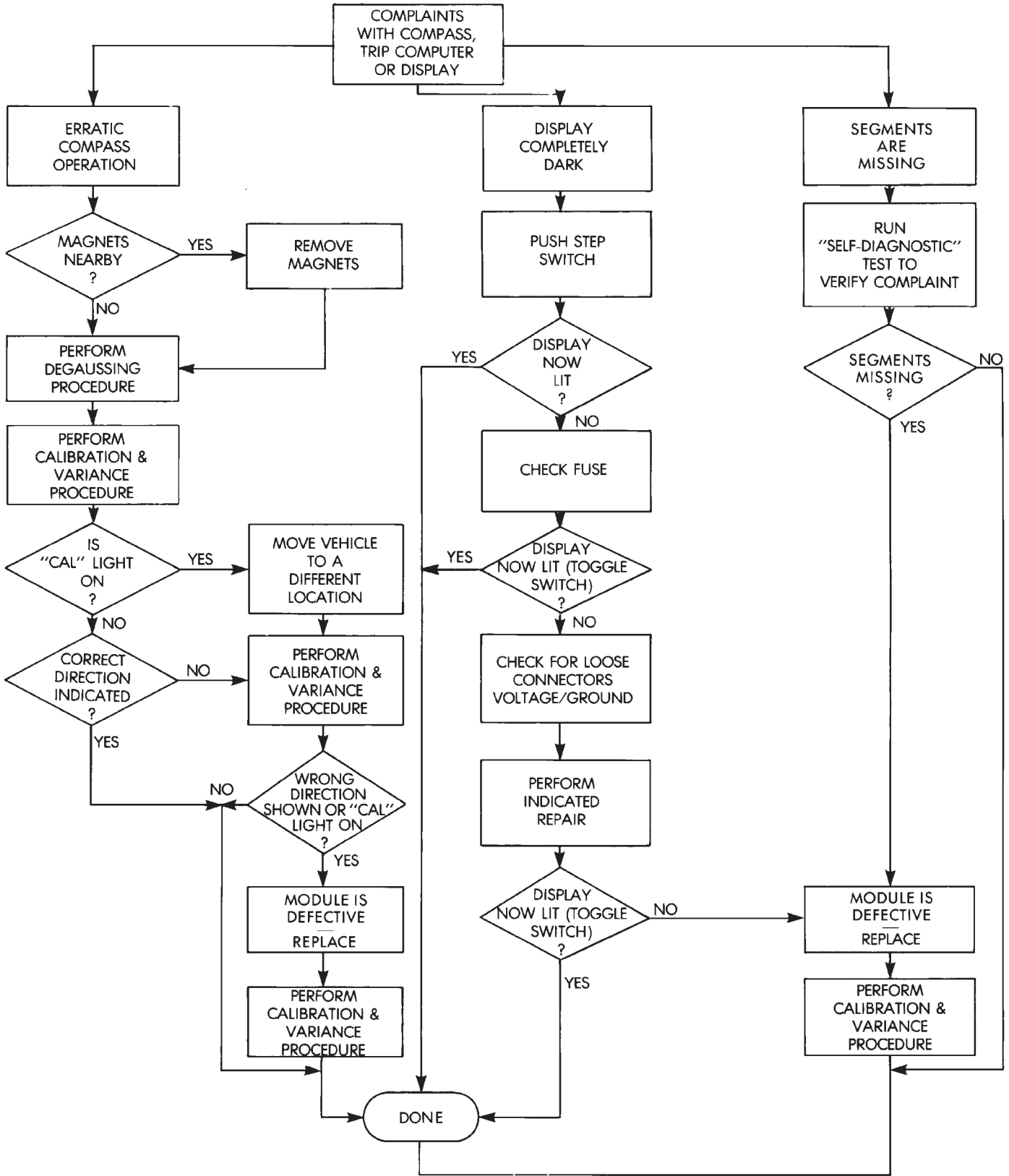


Chart 1

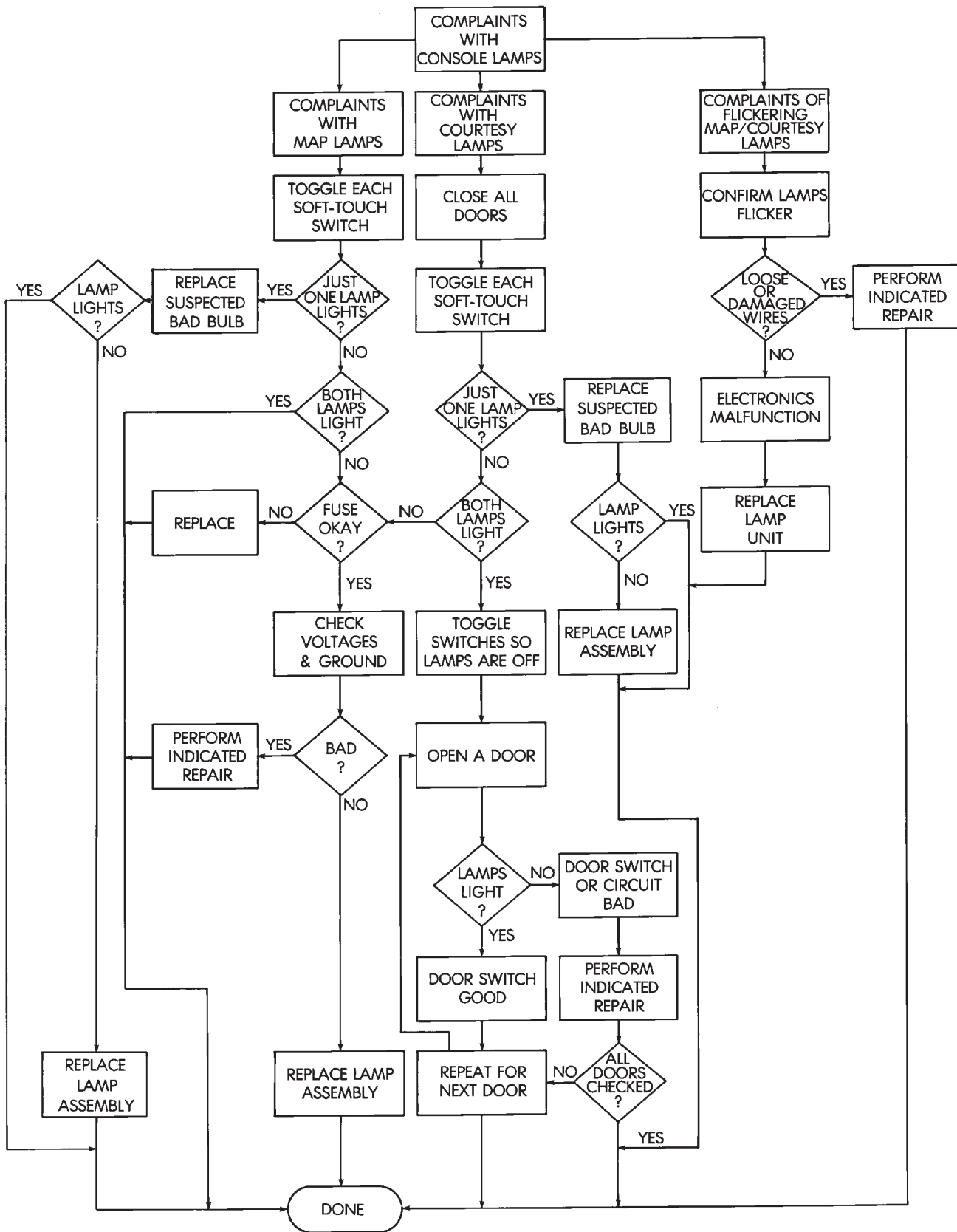


Chart 2

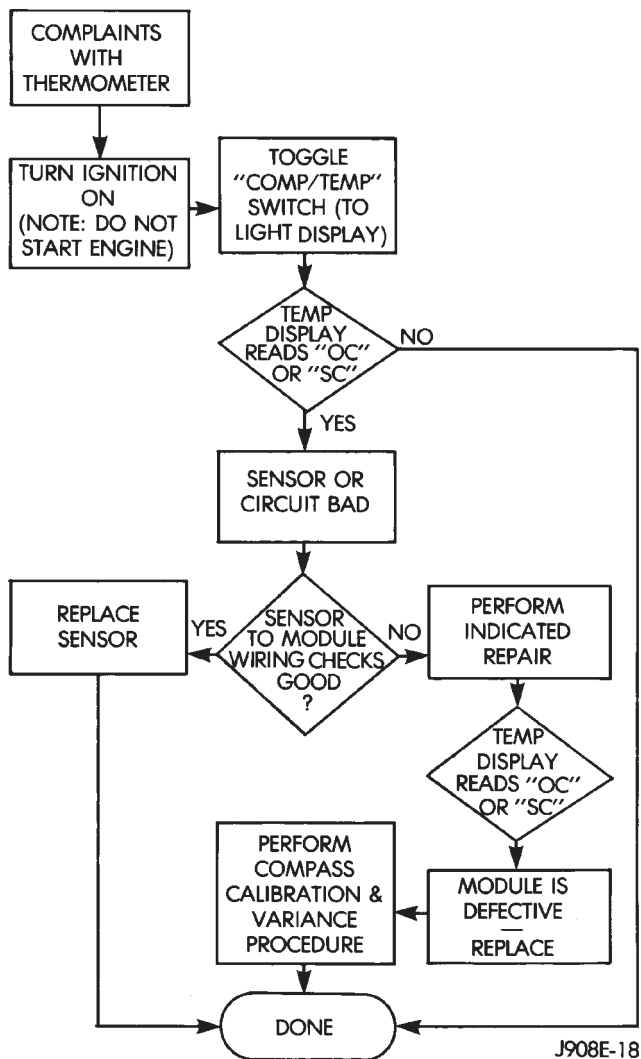


Chart 3

COMPASS REPAIR PROCEDURES

VARIATION ADJUSTMENT PROCEDURE

Variance is the difference between magnetic North and geographic North. In some areas the difference between magnetic and geographic north is great enough to cause the compass to give false readings. If this occurs, the variance must be set.

To set the variance:

- (1) Turn ignition switch to the ON position.
- (2) Depress both buttons and holddown until VAR light appears. This takes about 5 seconds.
- (3) Release both buttons.
- (4) Using the map (Fig. 1) find your geographic location and note the zone number.
- (5) Press the U.S./METRIC button to sequentially go through the numbers until the zone number for your area appears in the display.
- (6) Press the COMP/TEMP button to enter this zone number.
- (7) Confirm correct directions are indicated.

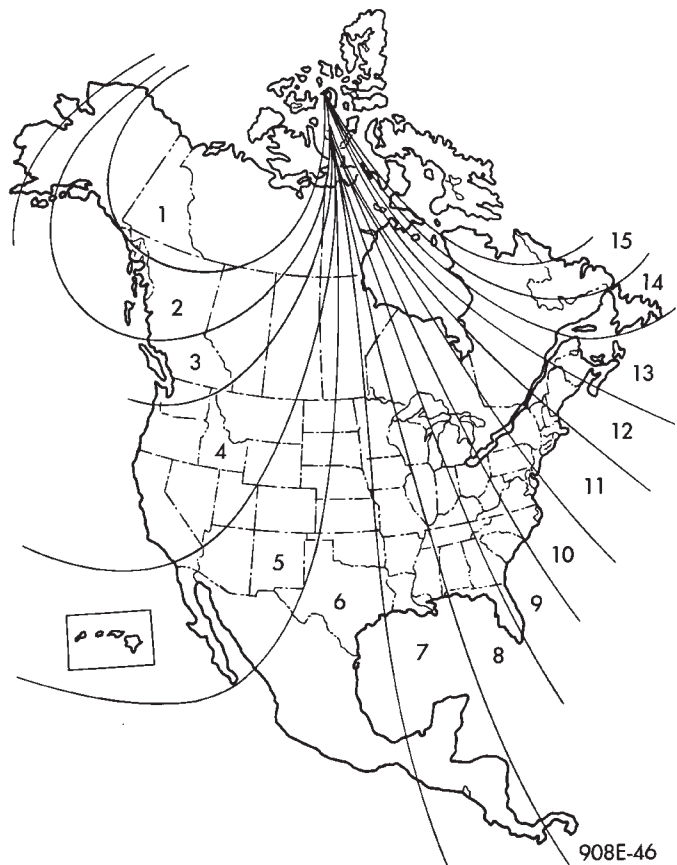


Fig. 1 Variance Settings

COMPASS CALIBRATION PROCEDURE

**CAUTION: DO NOT** use magnetic tools when servicing the overhead console.

**CAUTION: DO NOT** place any external magnets such as magnetic roof mount antennas, in the vicinity of the compass.

Do not attempt to set compass near large metal objects such as other vehicles, large buildings or bridges. The compass features an "Auto-Cal" design which simplifies the calibration procedure. During normal driving this feature automatically updates the compass calibration. This takes into account incremental changes in magnetism the vehicle may see over its lifetime.

**Whenever the compass is calibrated manually, the variation number must also be reset.**

Calibrate the compass as follows:

- (1) Start the engine.
- (2) Depress both buttons on the compass and hold down until CAL light appears. This takes about 10 seconds and appears about 5 seconds after the VAR light appears.
- (3) Release buttons.
- (4) Drive vehicle on a level surface that is away from metal objects through three or more complete

circles, in not less than 48 seconds. The CAL light will go off and the compass is now calibrated.

(5) Reset variation number. This step must be done every time step 2 is performed.

**If CAL light does not go off, either there is excessive magnetism near the compass or the unit is defective. Repeat the degaussing and calibration procedures at least one more time.**

**If the wrong direction is still indicated, the area selected may be too close to a magnetic source. Repeat the calibration procedure in another location.**

#### DEGAUSSING PROCEDURE

The tool used to degauss or demagnetize the forward console attaching screw and roof panel is the Miller Tool 6029. Equivalent units must be rated as continuous duty for 110/115 volts, 60Hz with a field strength of over 350 gauss at 1/4 inch beyond the tip of the probe.

In this degaussing procedure the degaussing tool is used to demagnetize both the roof panel and console forward mounting screw.

(1) Be sure the ignition switch is in the OFF position before you begin the degaussing procedures.

**CAUTION: Keep the degaussing tool at least 2 inches away from the compass area when plugging it in.**

(2) Plug the degaussing tool into a standard 110/115 volt AC outlet.

#### CONSOLE FORWARD MOUNTING SCREW

(3) Slowly approach the head of the forward mounting screw with the plastic coated tip of the degaussing tool. Contact the head of the screw for about two seconds.

(4) With the degaussing tool still energized, slowly back it away from the screw until the tool is at least 2 inches from the screw head then unplug the tool.

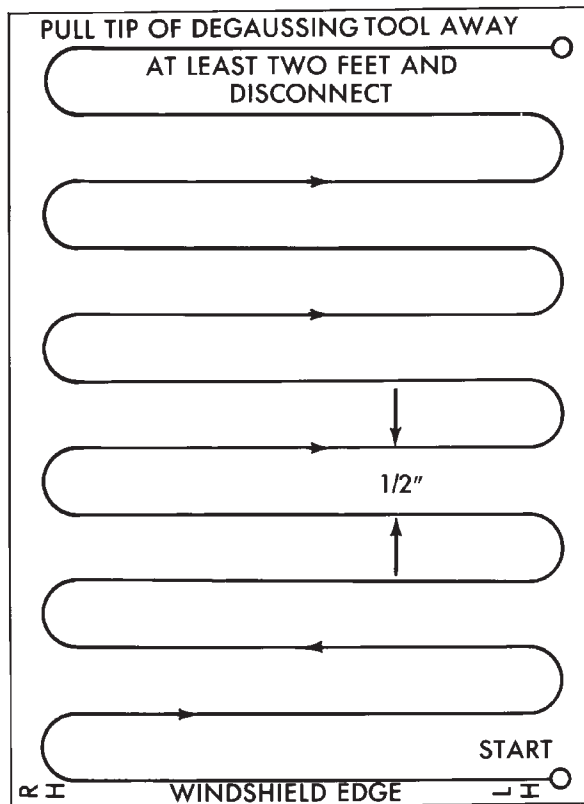
#### ROOF PANEL

(5) Place an 8 1/2 X 11 piece of paper on the center of the roof at the windshield, oriented lengthwise from front to rear. The purpose of the paper is protect the roof panel from scratches and define the area to be degaussed (Fig. 2). Figure 2 shows the recommended sweep pattern of 1/2 inch between passes in a sweeping zig-zag pattern.

(6) Plug in the degaussing tool. Keep the tool at least 2 inches away from the compass unit.

(7) Slowly approach the center of the roof panel at the windshield with the degaussing tool plugged in.

(8) Contact the roof panel with the tip of the tool (be sure template is in place to avoid scratching the roof panel). Using slow sweeping motions of 1/2 inch between sweeps, move the tool approximately 4" either side of the centerline and at least 11 inches back from the windshield.



**Fig. 2 Roof Degaussing Pattern**

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(9) With the degaussing tool still energized, slowly back it away from the roof panel until the tip is at least 2 inches from the roof then unplug the tool.

(10) Calibrate the compass and set the variance as described.

#### SELF-DIAGNOSTIC TEST

The self-diagnostic test is used to verify the compass is working properly electrically. This can be used to confirm that the display and all of its segments are operating properly. Initiate the self-diagnostic test as follows:

(1) With the ignition switch in the OFF position simultaneously press and hold the COMP/TEMP button and the US/METRIC button.

(2) Turn ignition switch to ON.

(3) Continue to hold both buttons until the display performs a walking segment test. In this test all of the compass points are displayed along with various number combinations. These combinations verify that all segments work. To repeat the test, press the COMP/TEMP button.

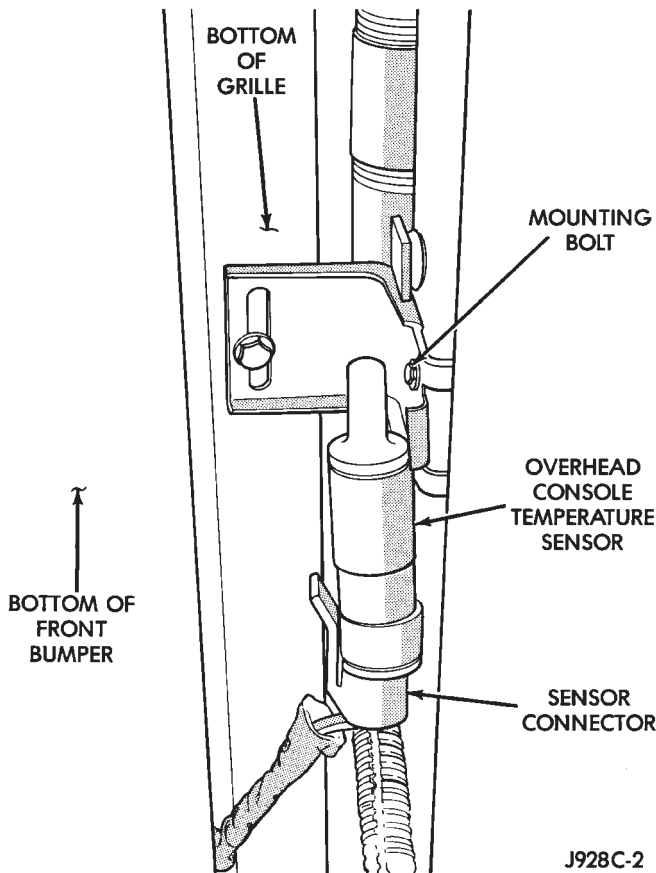
(4) Press the US/METRIC button, and all segments will light simultaneously for about 2 seconds. To repeat the test, press the COMP/TEMP button.

(5) Press the US/METRIC button to return to normal operation.

(6) Should any segment in any of the digit positions fail to light, the unit is defective and should be replaced.

**THERMOMETER AND SENSOR SYSTEM REPAIR PROCEDURES**

This portion of the display consists of a sensor, the circuit and display devoted to the temperature measuring and display. The sensor is mounted at the center of the vehicle below the grille, behind the front bumper (Fig. 3).



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**Fig. 3 Temperature Sensor Viewed From Underneath Vehicle**

If an electrical component breaks it will diagnose as an open or short circuit. The system reports SC when the sensor is exposed to temperatures in excess of 140°F or if the circuit is shorted. If the temperature is below -40°F or an open exists, the system will display OC.

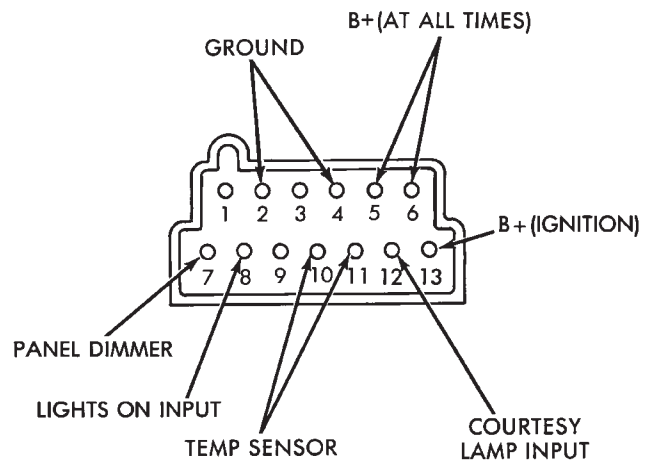
To diagnose the temperature sensor perform the following procedures. If the sensor and wiring are OK then the electronic module is defective and should be replaced.

**SENSOR TEST**

- (1) Turn the ignition switch to OFF.
- (2) Measure resistance of sensor. At -40°F the resistance is 336K ohms. At 140°F the resistance is 2.488K ohms. If resistance is NOT between these two values, then the sensor is faulty. Replace the sensor.

**CIRCUIT TEST**

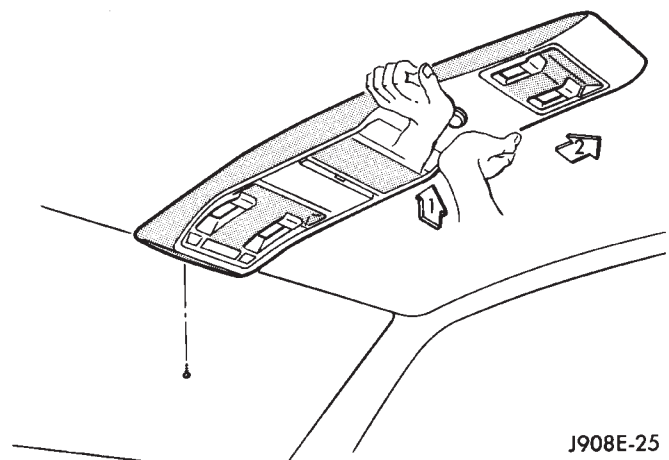
- (1) Locate temperature sensor and disconnect harness connector.
- (2) Short the pins on the harness connector by using a jumper wire.
- (3) Remove the overhead console as described in Console Repair Procedures.
- (4) Check continuity between pins 10 and 11 of compass/temperature harness connector (Fig. 4). If an open circuit is detected, repair as required.
- (5) Remove jumper wire on temperature sensor harness connector. Check continuity between pins 10 and 11 of compass/temperature harness connector (Fig. 4). If a short is detected, repair as required.



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**Fig. 4 Compass/Temperature Harness Connector**  
**CONSOLE REPAIR PROCEDURES**

- (1) Remove screw forward of the compass unit (Fig. 5).



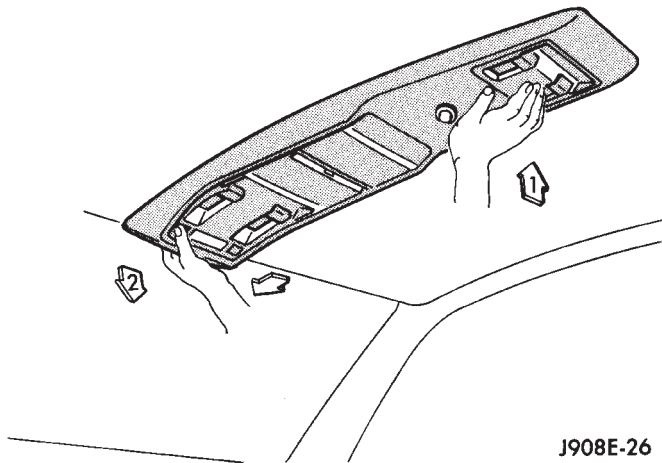
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**Fig. 5 Remove/Install Overhead Console**

- (2) Flex housing outward while pressing upward to disengage the housing from the rear bracket (arrow 1) (Fig. 5).

(3) Slide console rearward until the console detaches from the front mounting bracket (arrow 2) (Fig. 5).

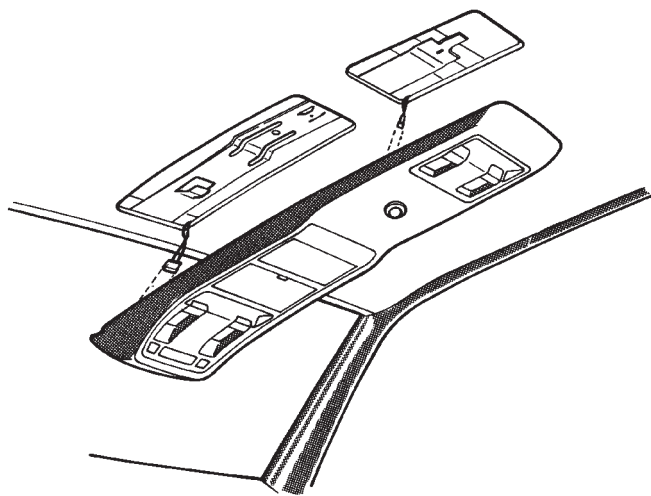
(4) While pressing up on rear of console (arrow 1), slide console forward holding front away from headliner (arrow 2). Move console forward until the rear detaches from headliner and becomes free (Fig. 6).



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**Fig. 6 Remove/Install Overhead Console**

(5) Disconnect wire harnesses from keyless entry and compass (Figs. 7 and 8).



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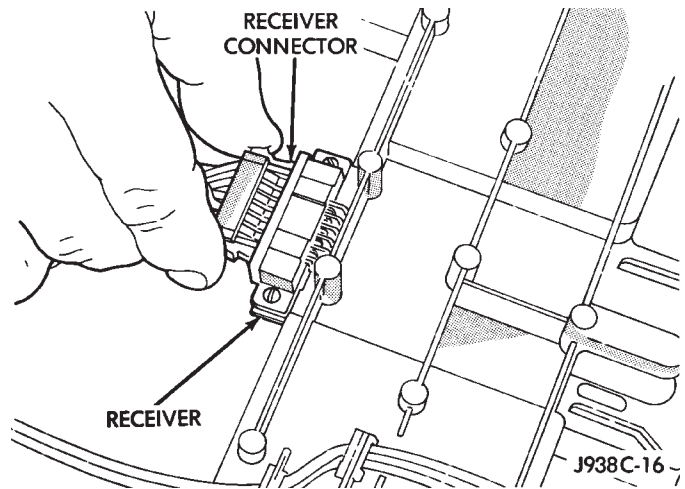
**Fig. 7 Disconnect Wire Harnesses**

(6) To install the overhead console, reverse the removal procedures. Be sure to flex housing outward near the keyless entry receiver until the console snaps onto the rear mounting bracket.

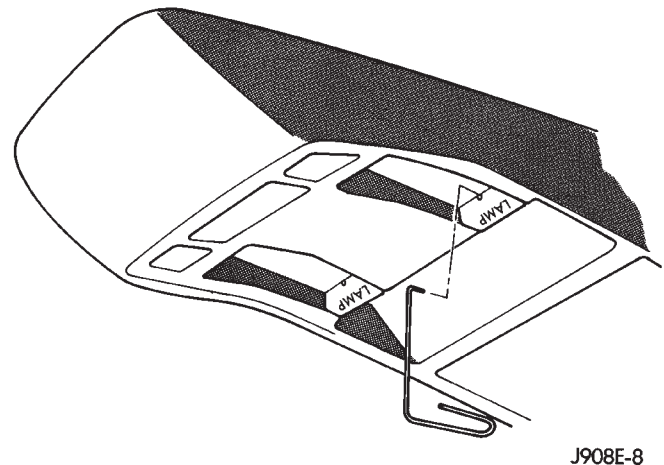
#### BULB REPLACEMENT

(1) With a large paper clip or wire (approximately 0.06 in. diameter) make a hook in the end. Insert into the hole in the lens and pull downward (Fig. 9).

(2) Set lens aside and replace bulb.



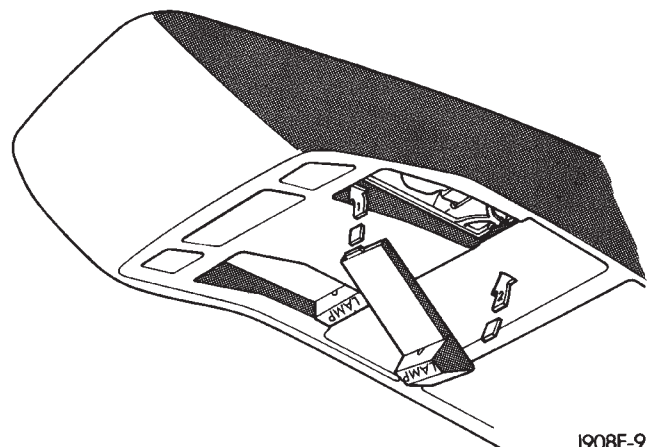
**Fig. 8 Keyless Entry Connector**



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**Fig. 9 Map Lamp Lens Removal**

(3) Replace lens by inserting tab on thin portion of lens into mating slot on console and push upwards on opposite end of lens (Fig. 10).

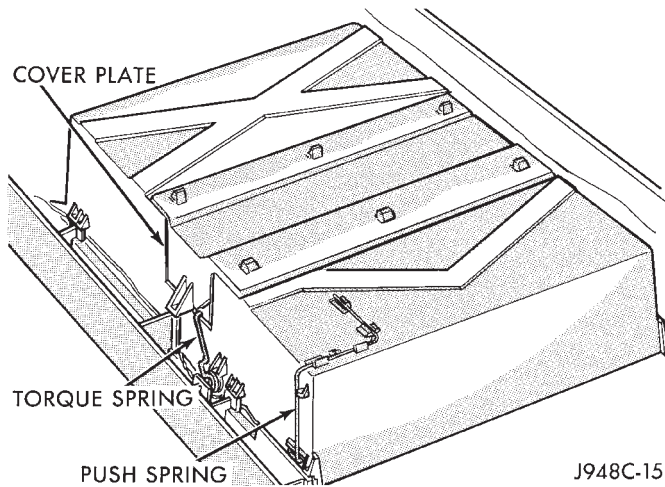


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**Fig. 10 Map Lamp Lens Installation**

**SUNGLASS BIN AND SPRING ASSEMBLY**

- (1) Open sunglass bin door.
- (2) Remove cover plate (Fig. 11).

**Fig. 11 Remove Cover Plate From Sunglass Bin**

(3) Unhook torque spring from wall and put in down position as shown by arrow (Fig. 12).

(4) Remove sunglass bin door by flexing the center panel and removing the side of the door with the gear first (Fig. 13). The gear side of the door has a short pivot rod. Slide door out of the compartment.

(5) Remove and discard push spring (Fig. 11).

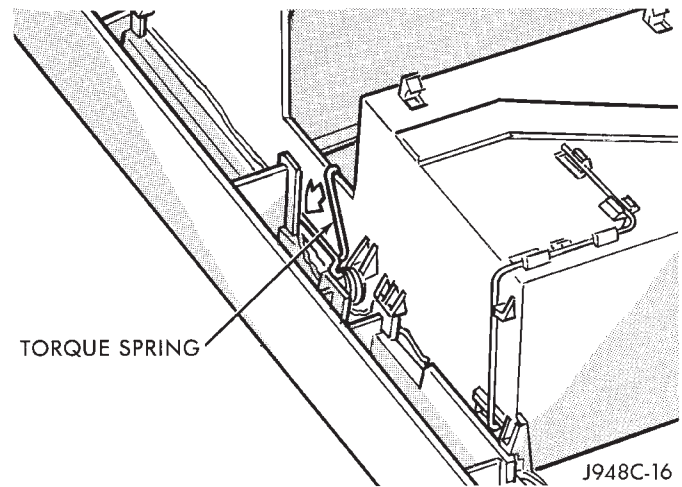
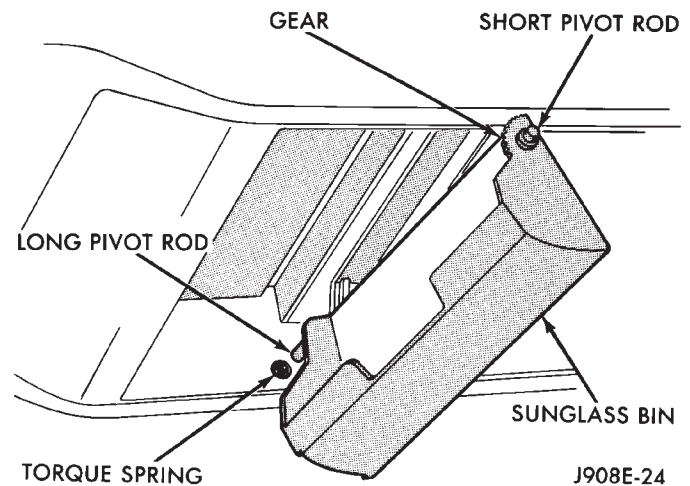
(6) Install new push spring as shown. This may require flexing the housing in that area for clearance.

(7) Install new sunglass bin door in the open position as follows:

(a) Make sure the torque spring lines up with the slot in the longer pivot rod then insert the longer pivot rod (Fig. 13).

(b) Flex the center panel and snap in the short pivot rod.

(c) Hook torque spring back over the wall (Fig. 11).

**Fig. 12 Release Torque Spring****Fig. 13 Remove Sunglass Bin**

(d) Cycle door several times to ensure that the door functions properly.

(8) Snap cover plate back in position as shown (Fig. 11). Some pressure from the inside of the bins may be required to engage all 6 snaps.