

# OVERHEAD CONSOLE

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The overhead console includes:

- Four map reading lamps
- Storage compartments for sunglasses and garage door opener transmitter
- Rear vent windows switches
- Digital electronic display

The Compass Mini Trip Computer (CMTC) electronic display shows 6 conditions:

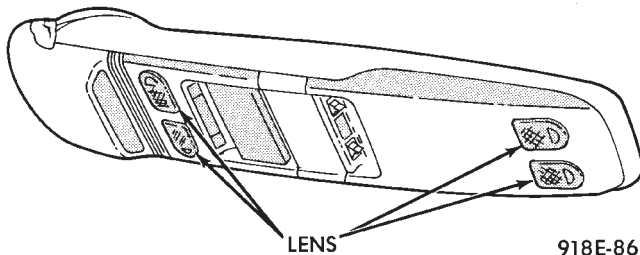
- Compass/Temperature.
- Trip odometer (ODO).
- Average miles per gallon (ECO).
- Instant miles per gallon (ECO).
- Distance to empty (DTE).
- Elapsed time (ET).

As the driver pushes the STEP button they will display individually.

The US/M button changes the display from US to metric units. For complete operating instructions, refer to owner's manual provided with vehicle.

### MAP/READING LAMPS

The four map reading lamps are turned on and off by pressing the lens cover indent. The rear lamps operate as courtesy lamps when the doors are open or closed. The lamps also operated when the headlamp POD switch is slid to the full right position. The front reading lamps do not come ON with the doors open or headlamp dimmer switch in courtesy mode (Fig. 1).



**Fig. 1 Overhead Console**

### LAMP HOUSING REPLACEMENT

(1) Insert a long flat blade tool at either side between the lamp housing and mounting bracket. Ensure the tool is between the lamp and bracket. Carefully pry the lamp from the bracket until it clears one

of the four retaining clips. Locate other clip on the same side and pry a long side clip. Do the same to other two clips until it free.

### LENS/LAMP REPLACEMENT

(1) Insert a long flat blade tool at inside edge of the lens. Carefully pry the lens from the housing and pivot the lens out. May need to move the tool along the edge to free lens.

- (2) Remove bulb by pulling straight down.
- (3) Install new bulb by pushing firmly into socket.
- (4) Begin at outboard edge pivot lens into position and snap in. Test by pressing lens from proper operation and lighting.

### LAMP TEST

- (1) Close vehicle doors.
- (2) Press each lamp lens. Right hand lens should light passenger lamp and left hand lens should light drivers lamp.
- (3) If either of the rear lamps fail to illuminate, open vehicle doors.
  - (a) If rear lamp does not illuminate check for a burned out bulb.
  - (b) If front lamp illuminates when doors are open check switch and wiring (Fig. 2).

### REAR VENT WINDOWS SWITCHES

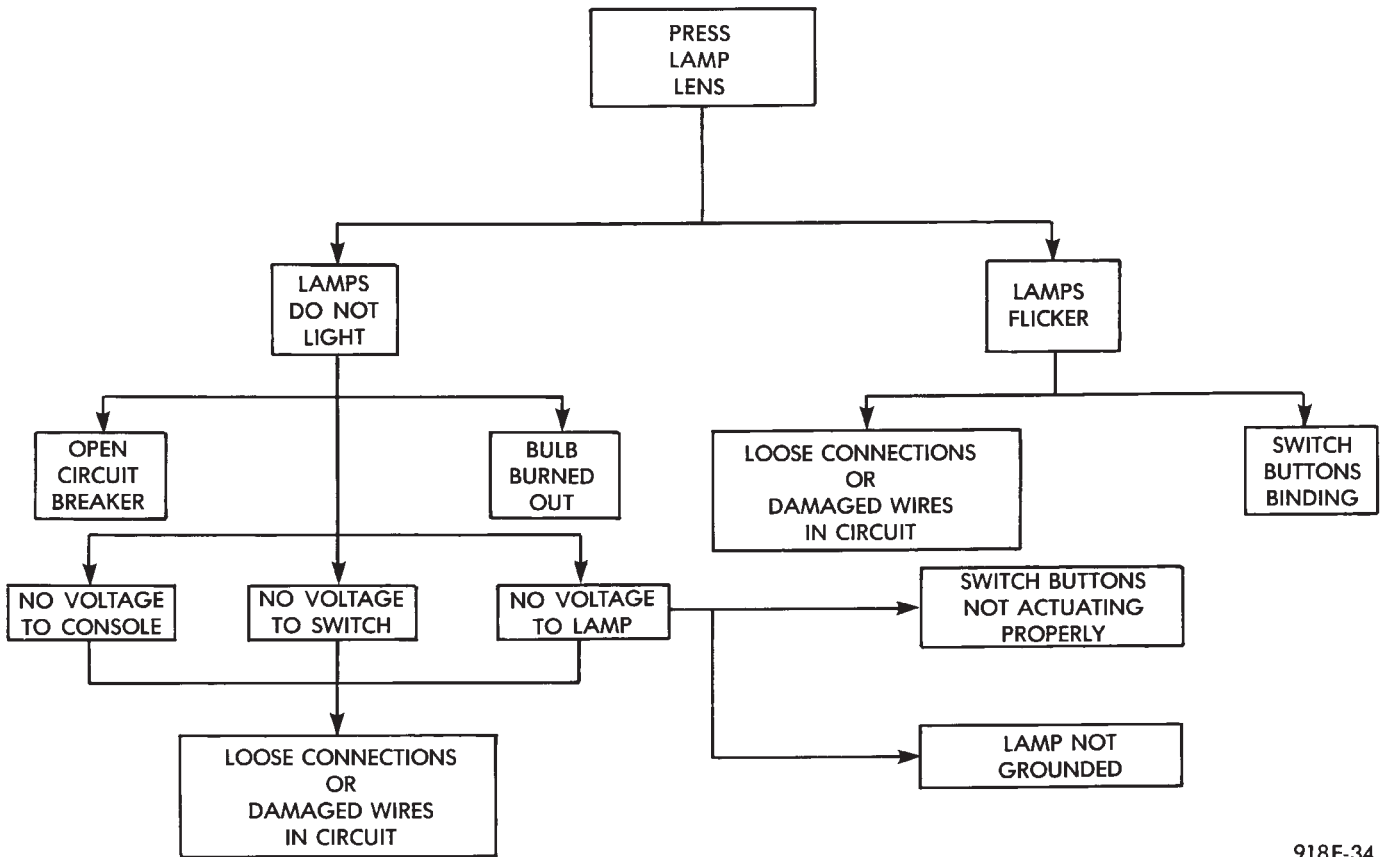
The switch on the right side operates the right rear vent window and switch on the left operates the left rear window.

### SWITCH VOLTAGE TEST

- (1) Remove the overhead console and disconnect wire connectors.
- (2) Ignition switch in the run position.
- (3) Connect voltmeter to terminal 4 and 5. Test for battery voltage.
- (4) If no voltage, test 30 amp circuit breaker or wire.
- (5) If OK, go to Switch Module Test.

### SWITCH MODULE TEST

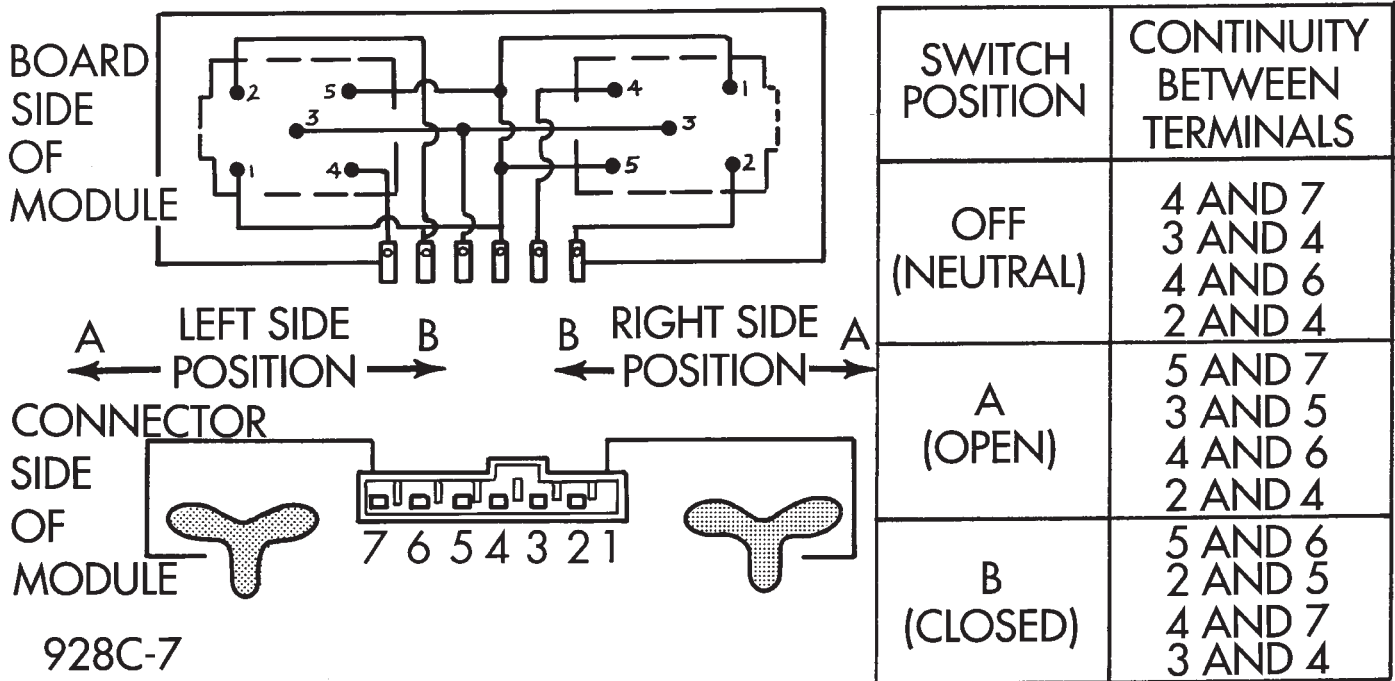
(1) Remove the overhead console and disconnect wire connectors.



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Fig. 2 Map Lamp Diagnosis

- (2) Ignition switch in the run position.
- (3) Using an Ohmmeter refer to Fig. 3 to test switches.
- (4) If no continuity, at any of the positions, replace switch module.



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Fig. 3 Power Vent Window Continuity Test

### SWITCH REMOVAL

(1) Remove the overhead console and disconnect wire connectors.

(2) Remove switch from overhead console by moving the four retaining tabs. Two are located on the sides and two at the rear of the module. Take care in pressing tabs and pivot module out of console.

### COMPASS MINI-TRIP COMPUTER (CMTC)

CMTC is a module that combines Traveler and Compass / Temperature features. Actuating the STEP switch will cause the CMTC to change mode of operation when ignition is ON. Example:

- Compass/Temperature
- Trip odometer (ODO)
- Average miles per gallon (ECO)
- Instant miles per gallon (ECO)
- Distance to empty (DTE)
- Elapsed time (ET)

### THERMOMETER AND COMPASS

Engine temperature can increase the displayed temperature. The CMTC is designed to dampen temperature readings when the vehicle is moving at a rate slower than 18 miles per hour.

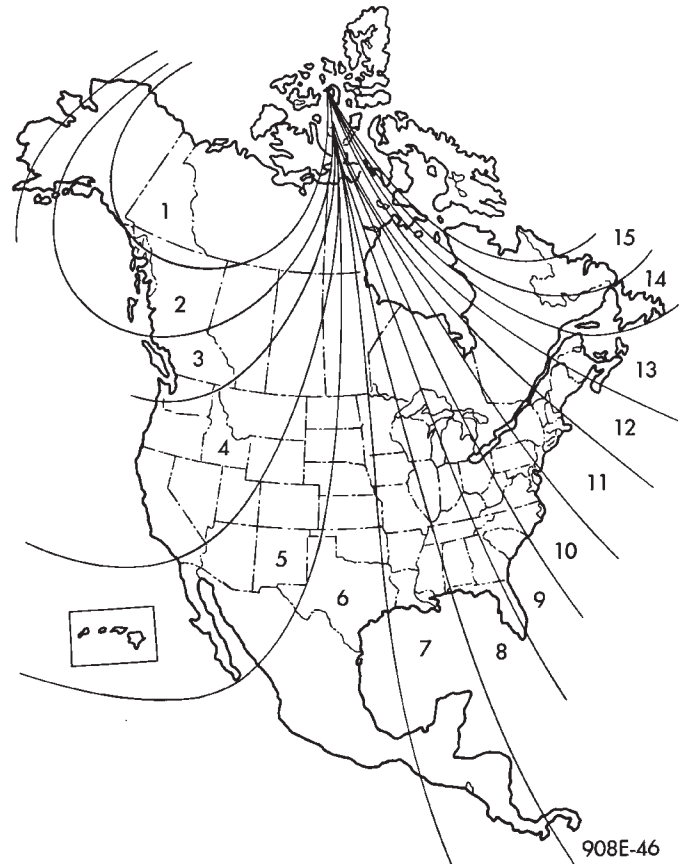
The outside temperature is measured from a sensor mounted in the front of the vehicle. If the temperature is more than 55°C (131°F) or the temperature sending line is shorted to ground, the temperature display should read SC. If the temperature is less than -40°C (-40°F), or the sending line is an open circuit, the display should read OC.

If the calibration data stored in the Body Controller is not received, the compass will read only NE North-East. The CMTC is self calibrating and requires no adjusting. The word CAL is displayed to show that the compass is in calibration mode. CAL will turn off after the vehicle has gone through three complete circles without stopping, in an area free of magnetic disturbance. If module displays temperature while the compass is blank, turn off ignition and run self diagnostics then demagnetize the vehicle. After demagnetizing, check compass calibration number, refer to Self Diagnostic Test. If greater than 15, demagnetize again until reading is less than 15. If compass still goes blank after demagnetizing then check internal diagnostics and demagnetize.

### VARIANCE PROCEDURE

Variance is the difference between magnetic North and geographic North refer to Fig. 4 for variance number. To adjust the compass variance set the CMTC to Compass/Temperature mode and depress both the US/M and STEP buttons for 5 seconds. The word VAR and the last variance zone will be displayed. Depress the US/M button to select the desired zone. Depress the STEP button to set the new variance zone and resume normal operation. If both

buttons are held for 10 seconds instead of 5 seconds the CMTC will set variance to 8 and enter the fast calibration mode.



**Fig. 4 Variance Settings**

### TRAVELER MESSAGES

Traveler data is obtained from the Body Controller on the CCD lines. If the brightness level is improper or the data displayed is wrong then check CCD communication by the following test. STEP the CMTC to the elapsed time ET mode and simultaneously press both the US/M and STEP buttons to reset the module. If the elapsed time clock does not reset or fails to up-date then check the CCD lines and Body Controller. Run self diagnostics before replacing CMTC. The DRB II is recommended for checking out the CCD lines and Body Controller.

### DEMAGNETIZING PROCEDURE

Every vehicle has its own magnetic field. This magnetic field is created by the various processes a steel roof goes through when the vehicle is built. A magnetic field can also be created if the roof is subjected to a magnet. Example:

- Magnetic C.B. antenna
- Magnetic tipped screwdriver
- etc.

If the roof becomes magnetized use a demagnetizer tool 6029 to demagnetize the roof.

In this demagnetizing procedure you will use the demagnetizing tool to demagnetize the roof and mounting screws in the overhead console. It is important that you follow the instructions below exactly. The mounting screws and the mounting brackets around the compass area are steel, and therefore aid in the demagnetizing of the roof panel.

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

(2) Plug the demagnetizing tool into a standard 110/115 volt AC outlet, keeping the demagnetizing tool at least 12 inches away from the compass area when plugging it in.

(3) Slowly approach and contact the console mounting screw with the plastic coated tip of the tool for at least two seconds.

(4) With the demagnetizing tool still energized, slowly back it away from the screw until the tip is at least 12 inches from the screw head.

(5) After you have pulled at least 12 inches from the last screw, remove the demagnetizing tool from inside vehicle and disconnect it from the electrical outlet.

(6) Place an 8-1/2 X 11 inch piece of paper lengthwise on the roof of vehicle directly above compass. The purpose of the paper is to protect the roof panel from scratches and define the area to be demagnetized.

(7) Plug in the demagnetizing tool, keeping it at least two feet away from the compass unit.

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

(9) Contact the roof panel with the tip of the tool. Using slow sweeping motions of 1/2 inch between sweeps. Move the tool approximately four inches either side of the centerline and at least 11 inch back from the windshield.

(10) With the demagnetizing tool still energized, slowly back away from the roof panel until the tip is at least two feet from the roof before unplugging the tool.

(11) Recalibrate compass.

#### SELF-DIAGNOSTIC TEST

(1) The ignition switch in the OFF position, press both the STEP button and the US/M button.

(2) Turn ignition switch ON.

(3) Display showing **do**, release buttons:

- STEP button advances test to next procedure
- US/M button repeats last procedure

(4) Pressing US/M button while **do** is displayed causes CMTC to exit diagnostics and display current heading as a number between 0 and 359 in temperature of the display.

(5) Pressing STEP button, symbols and numbers corresponding to North/South and East/West calibration are displayed.

(6) With **d1** displayed, press STEP button to show the internal diagnostics:

(a) **F1**: Internal failure - replace module.

(b) **F2**: CCD bus failure:

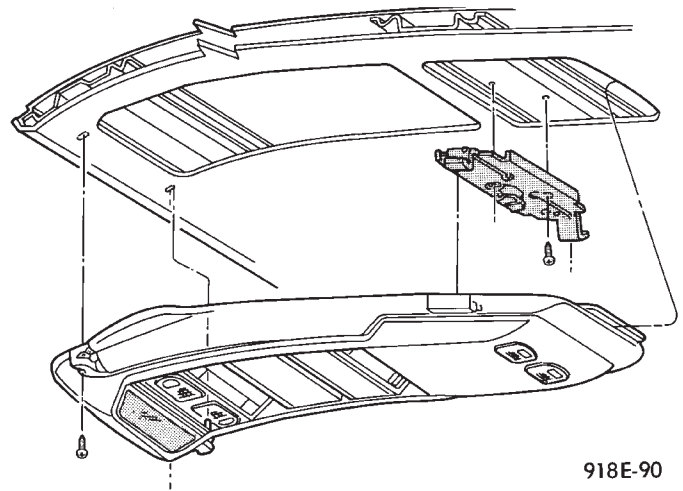
- Check wiring
- Check any other body computer CCD function, if CCD functions are OK, and wiring is OK, then replace module

(7) With **d2** displayed, press STEP button and test all segment. If any segment fails to light, replace module.

(8) With **d3** displayed, press STEP button and EXIT diagnostics and resume normal operation.

#### OVERHEAD CONSOLE REPLACEMENT

(1) Unscrew the mounting screws (Fig. 5).



**Fig. 5 Overhead Console Mounting**

(2) Slide console forward toward windshield until the console unhooks from roof bracket.

(3) Disconnect wire harness from console.

(4) For installation reverse above procedures.

#### COMPASS MODULE REPLACEMENT

(1) Remove overhead console and disconnect wiring.

(2) Remove two forward screws and pry rear of compass module along the sides from the console housing so 1 of the 2 compass pins clear the console. Rotate module out of the console.

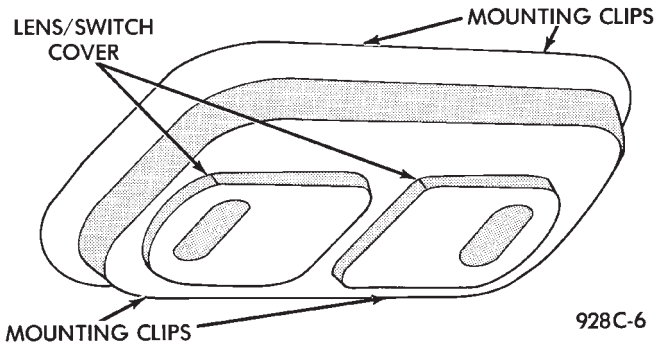
(3) For installation reverse above procedures.

#### FRONT HEADER READING LAMP

The front header reading lamps are turned ON and OFF by pressing on their individual lens cover indent.

#### FRONT HEADER READING LAMP REPLACEMENT/ LAMP REPLACEMENT

(1) Pull the lamp assembly down, along the sides from the bracket. Four metal clips hold the lamp in the bracket (Fig. 6).



**Fig. 6 Header Reading Lamp**

- (2) Disconnect the wire harness connector from the lamp assembly.
- (3) After the lamp assembly is free of the vehicle, pull the metal center reflector to gain access to the lamp.
- (4) For installation reverse above procedures.

