

OVERHEAD CONSOLE

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GENERAL INFORMATION

AA BODY

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MAP READING LAMPS

The map reading and rear passenger lamps are turned on and off by pressing their individual switch marked LAMP. These same lamps also serve as courtesy lamps whenever a door is opened, the illuminated entry system is activated, or the headlamp switch is turned fully clockwise.

LAMP REPLACEMENT

(1) Remove lens by inserting a large paper clip or wire, with a hook on the end, into the hole in the lens and pull downward (Fig. 1).

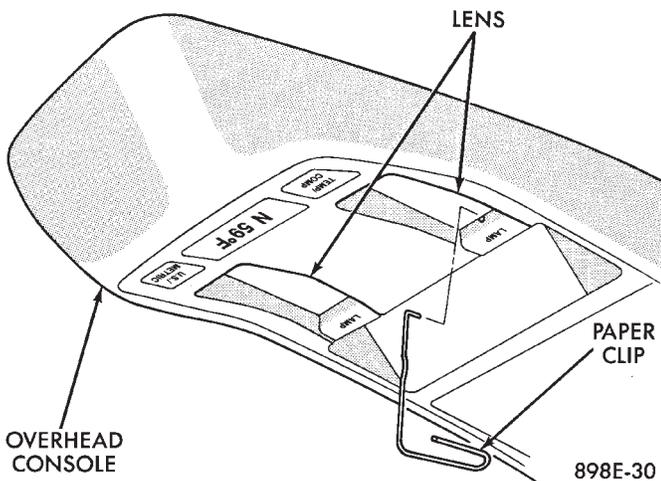


Fig. 1 Overhead Console Lens Removal

(2) Remove lamp by pulling firmly toward front of vehicle.

(3) Install new lamp by pushing firmly into receptacle.

(4) Snap lens into position taking care to orient the tabs on the lens with the slots in the housing and snap into position.

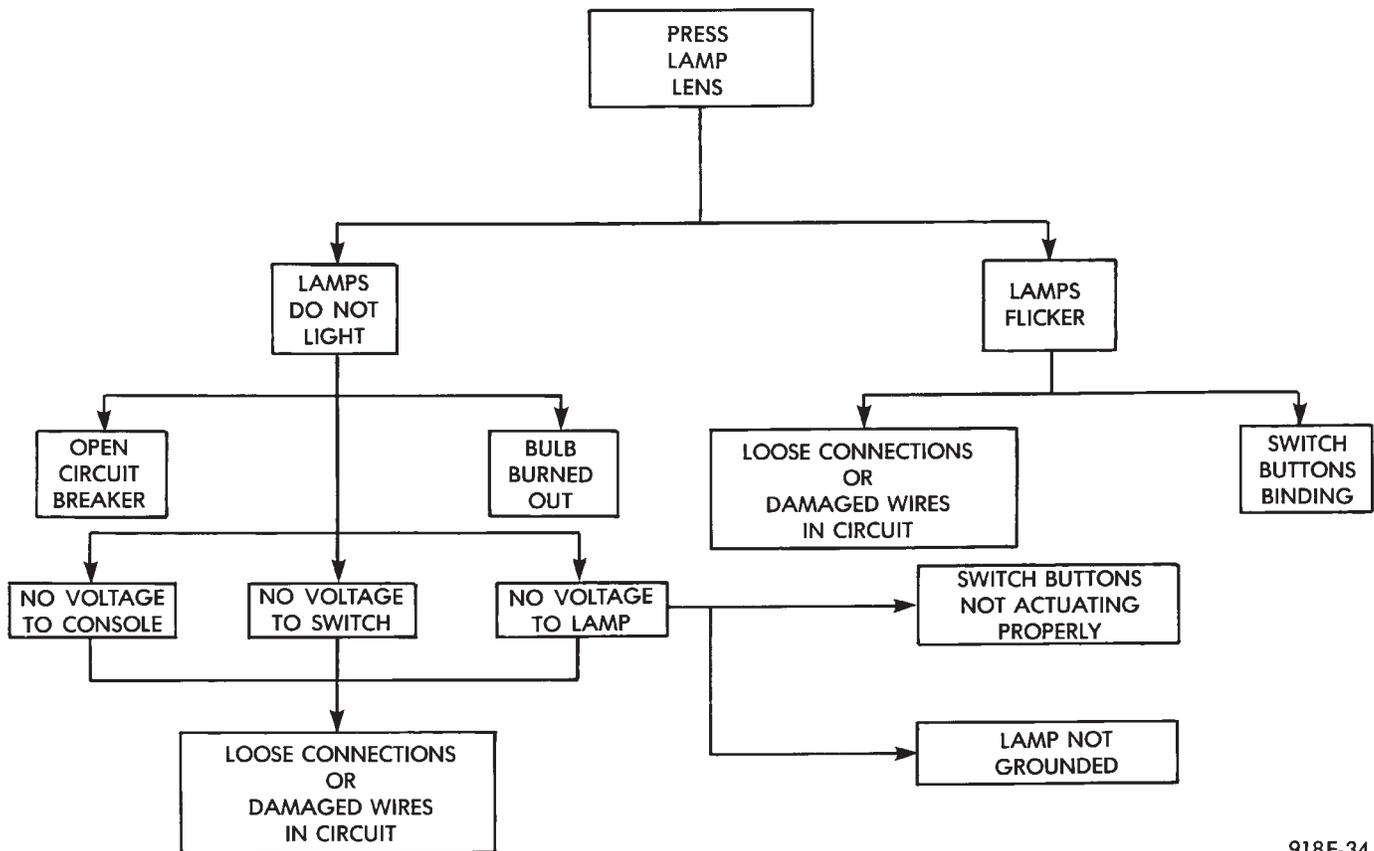
LAMP TEST

- (1) Close vehicle doors.
- (2) Press each lamp switch button (Fig.2). Right hand button should light passenger side lamp and left hand button should light drivers side lamp front or rear.
- (3) If any of the lamps fail to illuminate, open vehicle doors:
 - (a) If lamp does not illuminate check for a burned out lamp. If lamp is OK, check fuse and wire connectors.
 - (b) If lamp illuminates when doors are open check switch.

THERMOMETER AND COMPASS OPERATION

The ignition switch must be in the ON or ACCESSORY position before the temperature and compass reading can be displayed. The COMP/TEMP switch, located left of the display module, turns the display on and off. The US/METRIC switch, located right of the display, changes the temperature reading from Fahrenheit to Celsius. Should the compass blank out and the CAL symbol only light, demagnetizing be necessary.

The compass is a flux-gate system which, is integral to the console. The temperature readout is con-



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Fig. 2 Map Lamp Diagnosis

nected to a thermistor sensor which, located on the front lower radiator closure panel.

When the vehicle is standing still, engine compartment temperature may be radiated to the temperature sensor. Therefore the most accurate ambient temperature readings are displayed when the vehicle is moving in a forward motion.

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 1 minute; then update the display to the actual temperature within 5 minutes. Refer to Compass and Thermometer Diagnosis (Fig. 3).

COMPASS CALIBRATION PROCEDURE

Do not attempt to set compass near large metal objects such as other vehicles, large buildings or, bridges and, remove all magnetic devices from roof panel. This compass is equipped with an auto-calibration feature which, eliminates the need to manually set compass calibration. For a short time, when the vehicle is new, the compass may appear erratic and the CAL symbol will be lit. After completing three complete 360 degree turns, in an area free of metal objects and on level ground, the CAL symbol will turn off and the compass will perform normally.

If at any time the compass should become inaccurate it can be put in auto-calibration mode by using the following procedure.

- (1) Turn key to the ON position.
- (2) Turn display off by pressing COMP/TEMP button.
- (3) While continuing to hold COMP/TEMP button, depress and hold US/METRIC button for approximately 10 seconds, after 5 seconds the VAR symbol will light.
- (4) The CAL symbol will light then the display will reappear. After completing three complete 360 degree turns, in an area free of metal objects and in no less than 48 seconds, the compass will be calibrated.
- (5) Reset compass variation.

VARIANCE

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.

VARIANCE SETTING PROCEDURE

To set the variance: Turn key on, and turn the display off by pressing the COMP/TEMP button. While

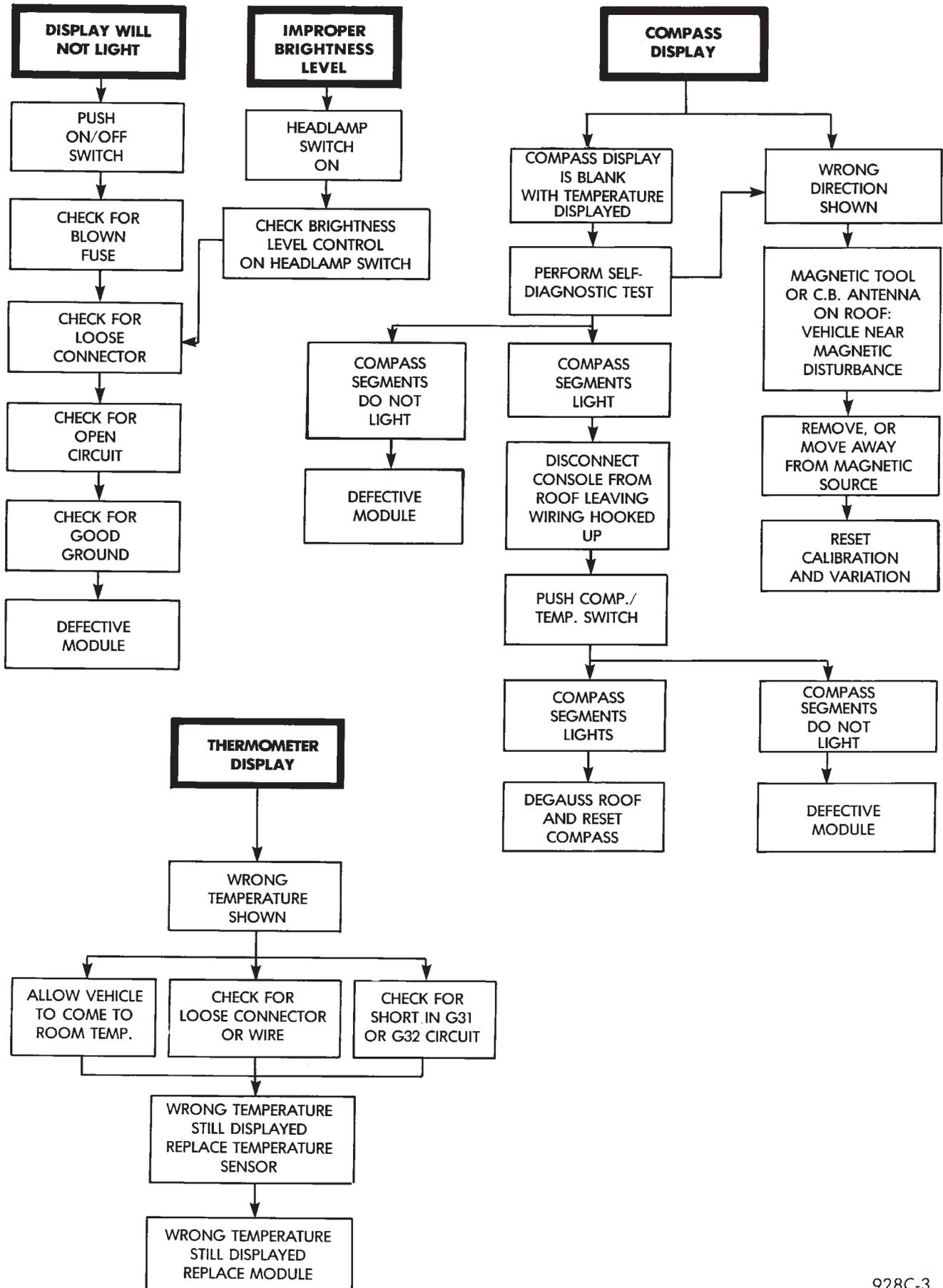


Fig. 3 Compass and Thermometer Diagnosis

continuing to hold COMP/TEMP button depress and hold US/METRIC button until the symbol lights in approximately 5 seconds.

There are two methods for setting variance while in variance set mode. If the CAL symbol is on procedure 2 must be used.

(1) Move away from any large metal objects like buildings, or bridges. With the engine running and the doors closed point vehicle true north. Press Comp/Temp button. The display will go blank. After approximately 5 seconds the display will reappear and be functioning normally.

(2) Preferred method. Toggle the US/METRIC button until the number which, corresponds with your geographic area appears (Fig. 4). Then press Comp/Temp button. The display will go blank. After approximately 5 seconds the display will reappear and be functioning normally.

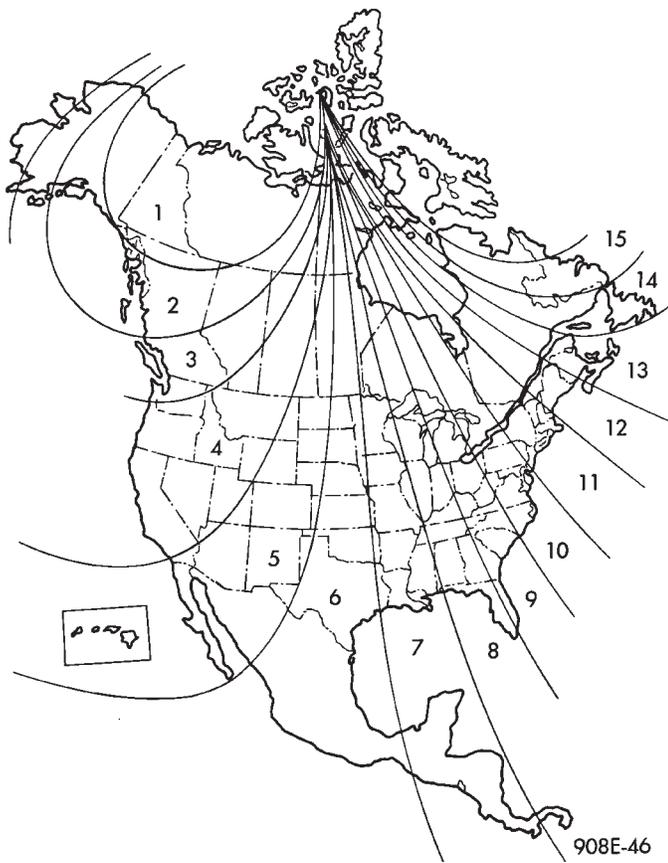


Fig. 4 Variance Settings

DEMAGNETIZING PROCEDURE

Do not attach magnetic devices, such as magnetic CB antennas to the vehicle roof, as they can cause the compass to give false readings.

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 also can be created if the roof is subjected to A magnet, example:

- Magnetic c.b. antenna

Magnetic tipped screwdriver and etc.

If the roof becomes magnetized use a demagnetizing 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 degaussing of the roof panel.

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

(2) Open the sun glass compartment to gain access to the overhead console mounting screws.

(3) 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.

(4) Slowly approach the console mounting screw with the plastic coated tip of the tool for at least 2 seconds.

(5) 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.

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

(7) Place an 8 1/2 in. X 11 in. 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.

(8) Plug in the demagnetizing tool, keeping it at least 2 feet away from the compass unit.

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

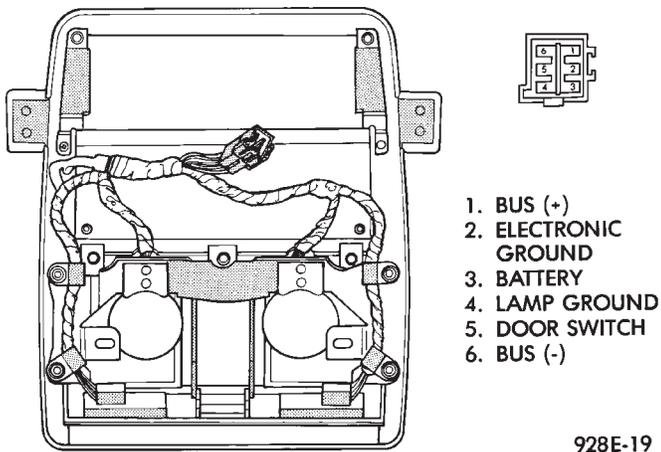
- Contact the roof panel with the tip of the tool.
- Using slow sweeping motions of 1/2 inch between sweeps
- Move the tool approximately 4 inches either side of the centerline, and at least 11 inches back from the windshield.

(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.

COMPASS DIAGNOSTICS

To place the unit into the diagnostics mode, turn the vehicle ignition off. Depress the Comp/Temp button while turning on the ignition/run switch. The display will then show DO. There are three tests that can be performed when in the diagnostics mode. Press the U.S./Metric button to choose test desired (Fig. 5).



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Fig. 5 Terminal Identification

Test 1 (d1) determines the magnetic field strength at the compass. The compass displays compensation numbers which, correspond to the current magnetic field strength at the compass. The letter N is displayed in the compass portion of the display. While a number which, corresponds to the magnetic field strength in the North/South direction is displayed. The temperature portion of the display or the letter W is displayed in the compass portion of the display. A number which, corresponds to the magnetic field strength in the East/West direction is displayed in the temperature portion of the display. For proper compass operation the numbers should be between 1 and 14. A number of 7 or 8 is ideal (no vehicle magnetism) while numbers approaching 1 or 14 show that the vehicle is highly magnetic. If the numbers show that the vehicle is highly magnetic, perform the demagnetized procedure in this Group and retest for magnetism at compass.

Test 2 (d2) checks the electronic circuits of the compass, temperature. If the test passes d2 will be displayed, and if the test fails F2 will be displayed. Refer to Body Diagnostic Procedure Manual for further testing procedures.

Test 3 (d3) performs a walking segment test which, sequentially puts different directions and numbers on the display. If any segment fails, replace the compass module.

SELF-DIAGNOSTIC TEST

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

(2) Turn ignition switch ON.

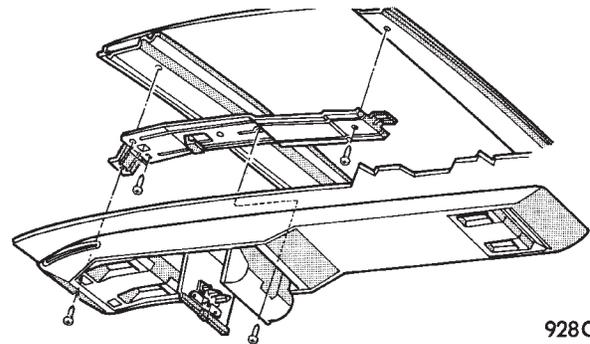
(3) Continue to hold both buttons until the display performs a walking segment test. This checks for open or shorted segments. To repeat the test press the COMP/TEMP button.

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

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

OVERHEAD CONSOLE REPLACEMENT

(1) Unscrew the mounting screw in sun glass bin compartment (Fig. 6).



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Fig. 6 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.

(2) Using a small screwdriver, release the 2 snaps at rear of compass module.

(3) After releasing the 2 snaps, slide compass module rearward until free of mounting bar.

(4) For installation reverse above procedures.

AC AND AY BODY

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ELECTRONIC VEHICLE INFORMATION CENTER (EVIC) OVERHEAD CONSOLE

The Electronic Vehicle Information Center is a computer controlled warning system which, monitors various sensors used on the vehicle. The system supplements the warning indicators in the instrument cluster. Visual warning messages are displayed by a digital display in the overhead console (Fig. 1).

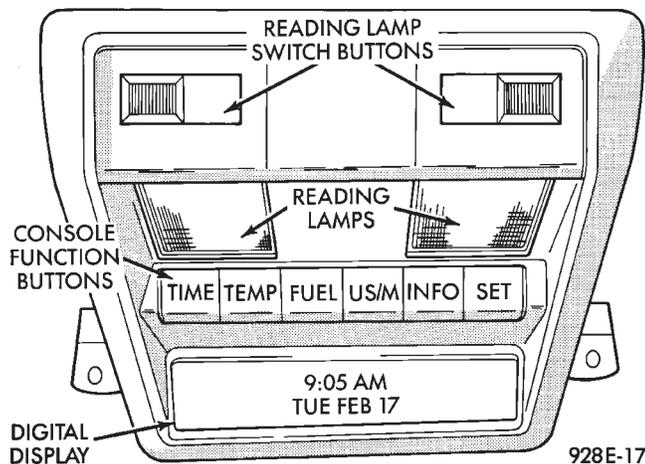


Fig. 1 EVIC Overhead Console

When a warning message has been activated, a tone will sound to attract the driver's attention. The warning message will then be displayed on the overhead console until the condition is corrected or a new display function is called up. A tone will announce each new warning condition.

For complete diagnostic procedures for the EVIC systems, refer to the Body-Chassis Diagnostic Test Procedures Manual.

The EVIC has a 24 function system that provides the driver with visual messages when a warning condition exists. These messages are displayed on the overhead console.

For complete EVIC overhead console operating instructions, refer to the Owners Manual provided with the vehicle.

EVIC BUTTON FUNCTIONS

TIME button will display:

- Time of day
- Day of week
- Day of month
- Month of year

The body controller is the source of this information. The EVIC function buttons are used to reset and display this data.

- To set HOURS, press TIME button and within four seconds press the SET button. An arrow will appear on the display and point to the hours. Press and hold the SET button to advance the hours or INFO button to set back the hours.

- To set MINUTES, press TIME button. The arrow will point to the minutes. Press and hold the SET button to advance the minutes or INFO button to set back the minutes.

- To set DAY of WEEK, press TIME button. An arrow will appear on the display and point to the Day. Press and hold the SET button to move the day forward or INFO button to move it backward.

- To set DAY of MONTH, press TIME button. The arrow will point to Date. Press and hold the SET button to advance the date or INFO button to move it backwards.

- To set MONTH of YEAR, press TIME button. The arrow will point to the Month. Press and hold the SET button to advance the Month forward or INFO button to move backward.

TEMP button, pressing the Temp button will display:

- The temperature outside the vehicle
 - Vehicle direction define by an eight point compass
- If Compass has lost calibration or not receiving good information from the engine node, an asterisk (*) will flash on the display and the word calibrate will appear. Refer to Compass Calibration.

FUEL BUTTON, WILL DISPLAY:

- Pressing FUEL button the first time will show, the estimated number of miles that can be driven with the remaining fuel. The destination to empty indica-

tion will vary every few seconds as the amount of fuel and fuel efficiency is calculated. This function can not be reset.

- Pressing the FUEL button second time; will display the fuel consumed.
- Pressing the FUEL button third time; will display the average fuel economy in miles per gallon since last reset. The display will be updated every 16 seconds.
- Pressing the FUEL button fourth time, the current fuel economy will be displayed. The current fuel economy will be updated every two seconds.
- To reset Fuel consumed, press SET button until the fuel consumed message is displayed and then within five seconds press SET button.
- To reset AVERAGE FUEL ECONOMY, press the FUEL button until average fuel economy is displayed and within five seconds press SET button.

TRIP RESET, press FUEL button and wait four seconds press the SET button twice. This clears all trip information and the message Trip Reset will be displayed. This will occur only if a reset function is currently being displayed. The reset functions:

- Fuel consumed
- Average fuel economy message

INFO button, will active a MONITORED SYSTEMS OK message on display if all monitored systems are operating properly. If a problem is detected, the appropriate message will be displayed.

SET button, will clear the various functions after they have been displayed. It is used to enter the clock set or compass variance modes. This button is also used to reset certain trip computer functions and the maintenance reminder message.

The EVIC display may be turned off by pressing the TIME and SET buttons at the same time. Pressing the buttons a second time will restore the display.

EVIC INFORMATION SOURCES

The EVIC monitors information provided by the body controller, engine compartment node and engine controller. Refer to Body Diagnostic Test Procedure Manual for test procedures.

The Body Controller is a micro-controller unit which, informs the EVIC overhead console via the CCD bus of:

- Time of day
- Day of week
- Day of month
- Month of year
- Fuel range
- Fuel consumed
- Fuel efficiency
- Warning messages as noted in Fig. 2

The Engine Compartment Node is a microcomputer controlled unit which, informs the EVIC overhead console via the CCD bus of:

Warning Message	Sensor	Received From
Keys in Ignition	Key-In Switch	Body Computer
Exterior Lamps On	Headlamp Switch	Body Computer
Passenger Door Ajar	Right Front Door Ajar Switch	Body Computer
Driver Door Ajar	Left Front Door Ajar Switch	Body Computer
Trunk Ajar	Trunk Ajar Switch	Body Computer
Park Brake Engaged	Park Brake Switch	Body Computer
Right Rear Door Ajar	Right Rear Door Ajar Switch	Body Computer
Left Rear Door Ajar	Left Rear Door Ajar Switch	Body Computer
Low Oil Pressure	Oil Pressure Switch	Body Computer
Engine Temp High	Engine Temperature Sensor	Engine Controller
Coolant Level Low	Coolant Level Switch	Engine Node
Low Fuel Level	Fuel Tank Sender	Body Computer
Low Brake Fluid	Brake Fluid Level Sensor	Engine Node
Washer Fluid Low	Washer Fluid Level Switch	Body Computer
Voltage Improper		Engine Controller
Fasten Seat Belts	Seat Belt Switch	Body Computer
Check Engine Oil Level	Oil Level Switch	Engine Node
Headlamp Out	Lamp Outage Module	
Brake Lamp Out	Lamp Outage Module	
Tail Lamp Out	Lamp Outage Module	
Service Reminder		Body Computer
Turn Signal On	Flasher	Body Computer

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Fig. 2 EVIC Messages and Sensors

- Outside temperature
- Compass direction

THE FOLLOWING ARE WARNING MESSAGES:

- Low brake fluid
- Low coolant level
- Low engine oil level

The Engine Controller is a microcomputer controlled unit which, informs the EVIC overhead console via the CCD bus of the following warning messages:

- Engine temperature high
- Voltage improper

VISUAL MESSAGES

Following are the visual messages and the conditions under which, the messages will be given:

- Keys in ignition
- Exterior lamps on

These messages will appear if the conditions are present and the driver's door is open while the ignition switch is in the OFF, LOCK, or ACC positions. A tone will sound until the condition is corrected or the door is closed.

- Passenger door ajar
- Driver door ajar
- Trunk ajar
- Park brake engaged
- Right rear door ajar
- Left rear door ajar

These messages will appear if a condition is detected after the vehicle is in motion. When the condition is corrected, a short tone will sound to acknowledge the action.

LOW OIL PRESSURE

If this message is displayed while the vehicle is at cruising speeds, immediate attention is required. If this message appears at idle speed, increase the idle speed and the message should go off. If the message remains on, immediate attention is required.

ENGINE TEMP CRITICAL

This message appears when a sensor has determined that the engine coolant is overheating. If this message comes on and stays on, immediate action is required.

COOLANT LEVEL LOW

LOW FUEL LEVEL

LOW BRAKE FLUID

WASHER FLUID LOW

These messages will appear if a continuous warning condition is detected while the engine is running. Inspection is required. To clear this message from the display, after the condition is corrected, the ignition switch must be turned OFF.

CHECK TRANS

This message will appear if a continuous warning condition is detected while the engine is running. Immediate attention is recommended. To clear this message from the display, after the condition has been corrected, the ignition switch must be turned OFF.

VOLTAGE IMPROPER

This message will appear if a continuous warning condition is detected. Immediate attention is required. To clear this message from the display, after the condition has been corrected, the ignition switch must be turned OFF.

TURN SIGNAL ON

This message will appear if the turn signal is left on while vehicle speed is over 15 mph and the vehicle has traveled over one-half mile.

FASTEN SEAT BELTS

An intermittent chime tone will sound for several seconds if the seat belt is not fastened.

CHK ENGINE OIL LEVEL

If this message is delivered, a check of the engine oil dipstick is suggested. To clear this message, after the condition is corrected, the ignition switch must be turned OFF.

HEADLAMP OUT

BRAKE LAMP OUT

TAIL LAMP OUT

These conditions are monitored only when the lamps are on. The message will remain, even after the lamp is replaced, until the lamp is turned on and operates.

SERVICE REMINDER

The maintenance reminder statement is programmed to provide general information only. Refer to Group 0, Lubrication & Maintenance for specific vehicle requirements.

The service reminder message is displayed at 7,500 miles or 12 months intervals, whichever comes first.

MONITORED SYSTEMS OK

If there is no warning condition to report, the message Monitored Systems OK is displayed (Fig. 2).

AUTOMATIC CALIBRATION SET PROCEDURE

The engine node will continuously and automatically recalibrate the compass under normal driving conditions. As long as the vehicle is turning, the engine node will record new compass data. This new data will be used to recalibrate the compass at a rate of at least once per full (360 degree) turn of the vehicle. Automatic calibration does not require operator interface.

MANUAL CALIBRATION SET PROCEDURE

Manual compass calibration has been replaced by automatic calibration set procedure. The manual calibration set procedure is available, but no longer serves any useful purpose.

EVIC SELF CHECK DIAGNOSTICS

Ignition switch ON, the EVIC not displaying any message, may imply a system failure and not an EVIC failure. Pressing the TEMP, FUEL and INFO buttons at the same time shall provide the visual message MODULE SELF CHECK for two seconds. Following at two second interval there will be messages:

- E2-0 SELF CHECK
- E3-0 SELF CHECK
- END OF SELF CHECK

Showing the microcomputer is working properly. When the self check mode and message shows:

- E2-1
- E3-2

This would show a fault exists in the EVIC's microcomputer and the EVIC should be replaced (Fig. 3).

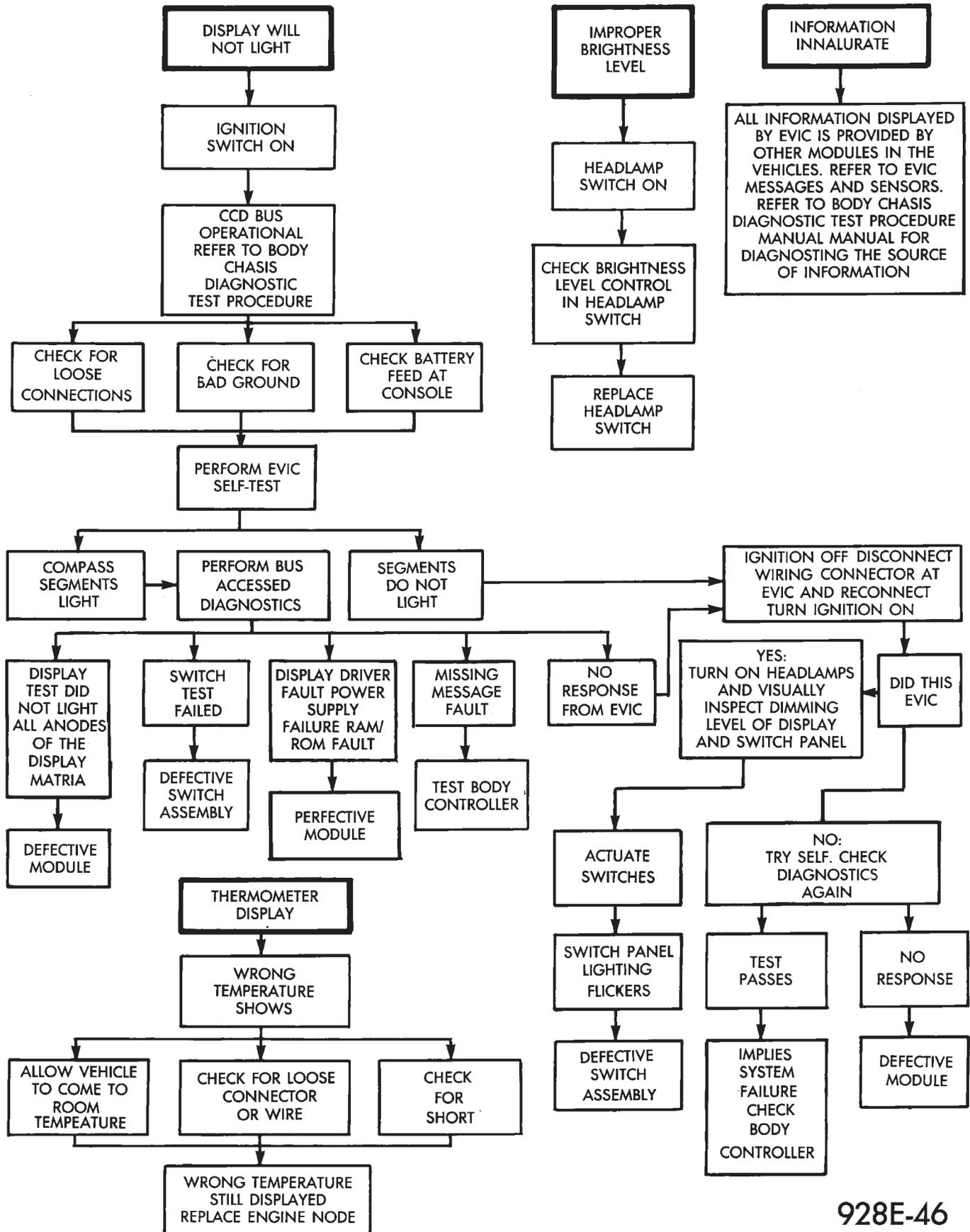
BUS ACCESSED DIAGNOSTICS

The following diagnostic test may be used to check the integrity of the EVIC's internal connections and operations. Refer to the Body Chassis Diagnostic Test Procedure Manual for test procedures.

MODULE RESET TEST, when the EVIC receives this request from the DRB II, the EVIC will immediately enter into reset.

DISPLAY TEST: The EVIC receives a request from the DRB II, the EVIC will enter into a visual display mode. Also checks the integrity of the display driver to anode connections. The test shall consist of walking through the vertical and horizontal rows of anodes in the dot matrix display.

SWITCH STATUS TEST, when the EVIC receives this request from the DRB II, the EVIC will report the open/closed status of each individual switch.



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Fig. 3 Compass and Thermometer Diagnosis

FAULT BYTE TEST, when the EVIC receives this request from the DRB II, the EVIC will report fault status. Messages reported are:

- NO FAULT
- DISPLAY DRIVER FAULT
- EVIC MISSING MESSAGES
- POWER SUPPLY FAILURE
- FAULT IN RAM
- FAULT IN ROM

EVIC missing message implies that there may be a system failure and/or the body controller is not providing EVIC with sufficient information.

DISPLAY DRIVER FAULT, power supply failure and fault in RAM/ROM implies that the EVIC is defective.

CONSOLE REMOVAL

- (1) Remove lenses (Fig. 4).

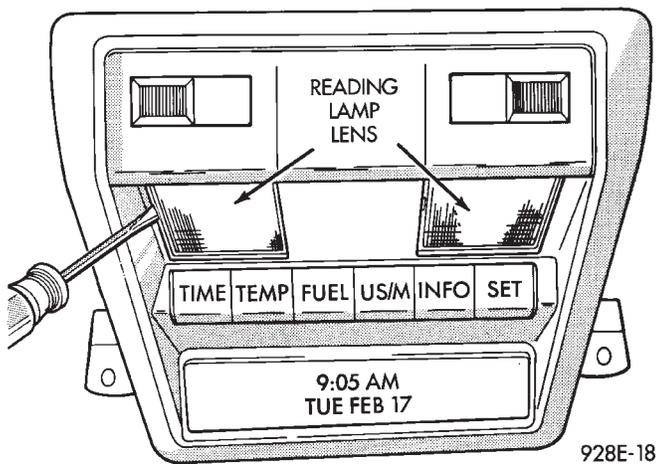


Fig. 4 EVIC Overhead Console Lens Removal

- (2) Remove screws from visor tip-pin retainers.
- (3) Remove screws in lens openings, after removing lamps.
- (4) Remove console and disconnect wires.
- (5) For installation reverse above procedures.

ELECTRONIC BOARD ASSEMBLY REPLACEMENT

- (1) Remove console, refer to Console Replacement (Fig. 5).
- (2) Remove six mounting screws holding bezel to housing.
- (3) Remove switch assembly by pulling down mounting tabs and swing assembly out of position.
- (4) Disconnect switch wiring connector and replace electronic board assembly.
- (5) For installation reverse above procedures.

BEZEL/BUTTON SWITCH REMOVAL

- (1) Remove console, refer to Console Replacement.
- (2) Remove six mounting screws holding bezel to housing.

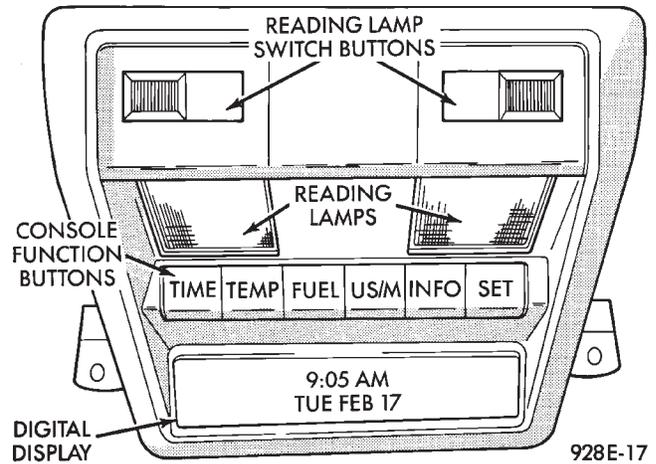


Fig. 5 EVIC Overhead Console

- (3) Remove switch assembly by pulling down mounting tabs and swing assembly out of position.
- (4) Disconnect switch wiring connector and remove electronic board and switch assembly. Replace function button switch assembly. The buttons are not serviceable.
- (5) For installation reverse above procedures.

WIRING HARNESS REMOVAL

- (1) Remove console, refer to Console Replacement (Fig. 6).

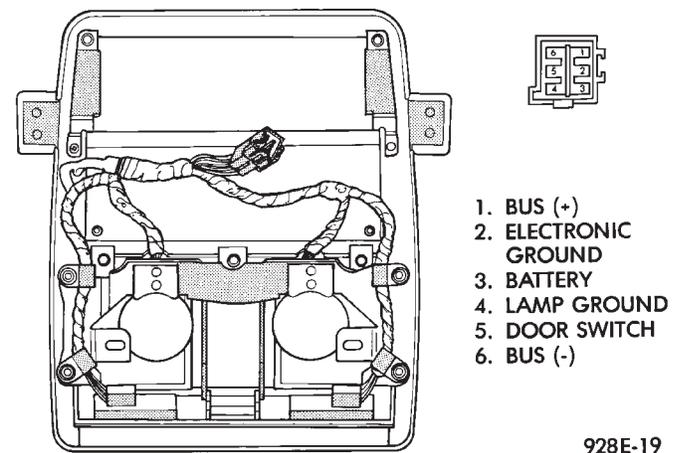


Fig. 6 EVIC Overhead Console Connector

- (2) Disconnect wiring connector from retaining bracket.
- (3) Remove screws, securing wiring to console housing.
- (4) Remove push/slide switches. The reading lamp switch buttons are not serviceable.
- (5) Remove lamp sockets from reflector bracket.
- (6) Remove wiring.
- (7) For installation reverse above procedures.

MAP READING LAMPS/POWER SUNROOF SWITCH REMOVAL

SWITCH REPLACEMENT

- (1) Remove console, refer to Console Replacement.
- (2) Disconnect switch wiring connector from retaining bracket.
- (3) Pry switch out of bezel snap tabs.
- (4) Replace switch.
- (5) For installation reverse above procedures.

POWER SUNROOF SWITCH/BEZEL REMOVAL

- (1) Remove console, refer to Overhead Reading/Courtesy Lamp Console Replacement.
- (2) Disconnect switch wiring connector from retaining bracket.
- (3) Pry switch out of bezel. Replace switch. If necessary, push carefully at top closest to roof of bezel to disengage trim bezel and pivot bezel out of housing.
- (4) Replace switch.
- (5) For installation reverse above procedures.

LAMP/LENS REMOVAL

- (1) Remove lens by inserting a flat blade tool between the round end of lamp lens and housing. Pry lens from the housing. Pivot the lens and remove (Fig. 4).
- (2) Replace lamp as necessary.
- (3) Position lens into housing by locating lens pivot and snap into place.

OVERHEAD READING/COURTESY LAMP CONSOLE

The two reading/courtesy lamps are actuated by pressing on the switch (Fig. 7):

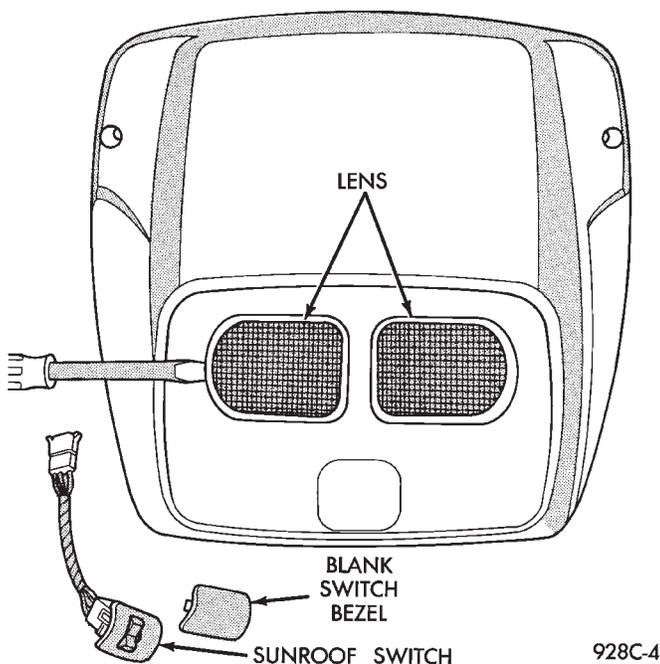


Fig. 7 Reading/Courtesy Lamp Console

- Courtesy lamps for when a door is opened
 - Illuminated entry system is activated
 - Headlamp switch is turned fully clockwise
- The map lamp console also includes:
- A cubby storage bin.
 - Power sunroof switch, if equipped.

READING/COURTESY LAMP CONSOLE REMOVAL

- (1) Remove screws from visor tip-pin retainers.
- (2) Slide console forward until free from retainer bracket.
- (3) Disconnect wiring.
- (4) For installation reverse above procedures. For vehicles equipped with sunroof, avoid sliding console to install. Install screws for console attachment and push at rear of unit to snap over mounting bracket for engagement.

LAMP/LENS REMOVAL

- (1) Remove lens by inserting a flat blade tool into slot located on the left side of lens. Pry lens to the side and swing down as it unhooks from housing (Fig. 4).
- (2) Replace lamp as necessary.
- (3) Position lens with the center tabs on the left side of lens snap into place. The lens are identified with L and R on the reverse side. Do not reverse the lens or it may damage the lens tabs.

OVERHEAD CONSOLE WIRING HARNESS REMOVAL

- (1) Remove console, refer to Overhead Reading/Courtesy Lamp Console Removal.
- (2) Disconnect wiring connector from retaining bracket.
- (3) Remove four screws attaching lamp housing to console bezel.
- (4) Remove wiring and lamp housing.
- (5) Remove lamp and replace assembly.
- (6) For installation, reverse above procedures.

AG AND AJ BODIES

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MAP READING LAMPS

The map lamps are actuated by pressing on the lens. These same lamps also serve as courtesy lamps whenever a door is opened. The illuminated entry system is activated, or the headlamp switch is turned fully clockwise (Fig. 1).

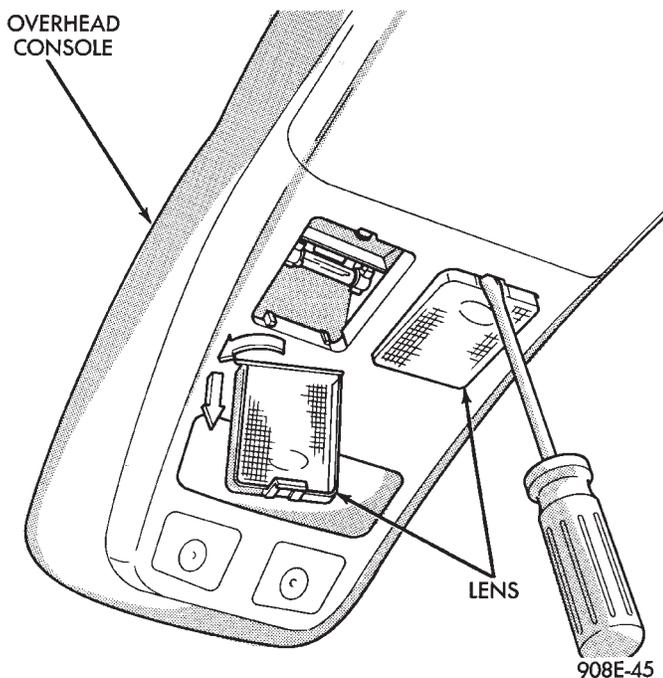


Fig. 1 Overhead Console Lamp Replacement

LAMP REPLACEMENT

- (1) Remove lens by inserting a screw driver or knife blade into slot located along-side of lens. Once screwdriver is inserted pry lens to the side and swing down as it unhooks from housing edge.
- (2) Remove lamp by pulling straight down.
- (3) Install new lamp by pushing firmly into receptacle.
- (4) Snap lens into position taking care to orient the tabs on the lens with the slots in the housing.

LAMP TEST

- (1) Close vehicle doors.
- (2) Press each lamp switch. Right hand switch should light passenger lamp and left hand switch should light drivers lamp.

(3) If either of the lamps fail to illuminate, open vehicle doors.

(a) If lamp does not illuminate check for a burned out lamp.

(b) If lamp illuminates when doors are open check switch and wiring.

ENGINE COMPARTMENT NODE (ECN)

The Engine Compartment Node is a microcomputer controlled unit which, informs the EVIC overhead console via the CCD bus of:

- Outside temperature
 - Compass direction
- and the following warning messages:
- Low Brake Fluid
 - Low Coolant Level
 - Low Engine Oil Level

The Engine Compartment Node is located behind the grill.

For complete diagnostic procedures for the Engine Compartment Node, refer to the Body Diagnostic Test Procedure Manual.

The compass direction displayed will be part of the overhead console.

If the engine compartment node is present without the overhead console, the EVIC display of the:

- Compass direction
- Ambient temperature
- Brake fluid level
- Coolant fluid level
- Engine oil level

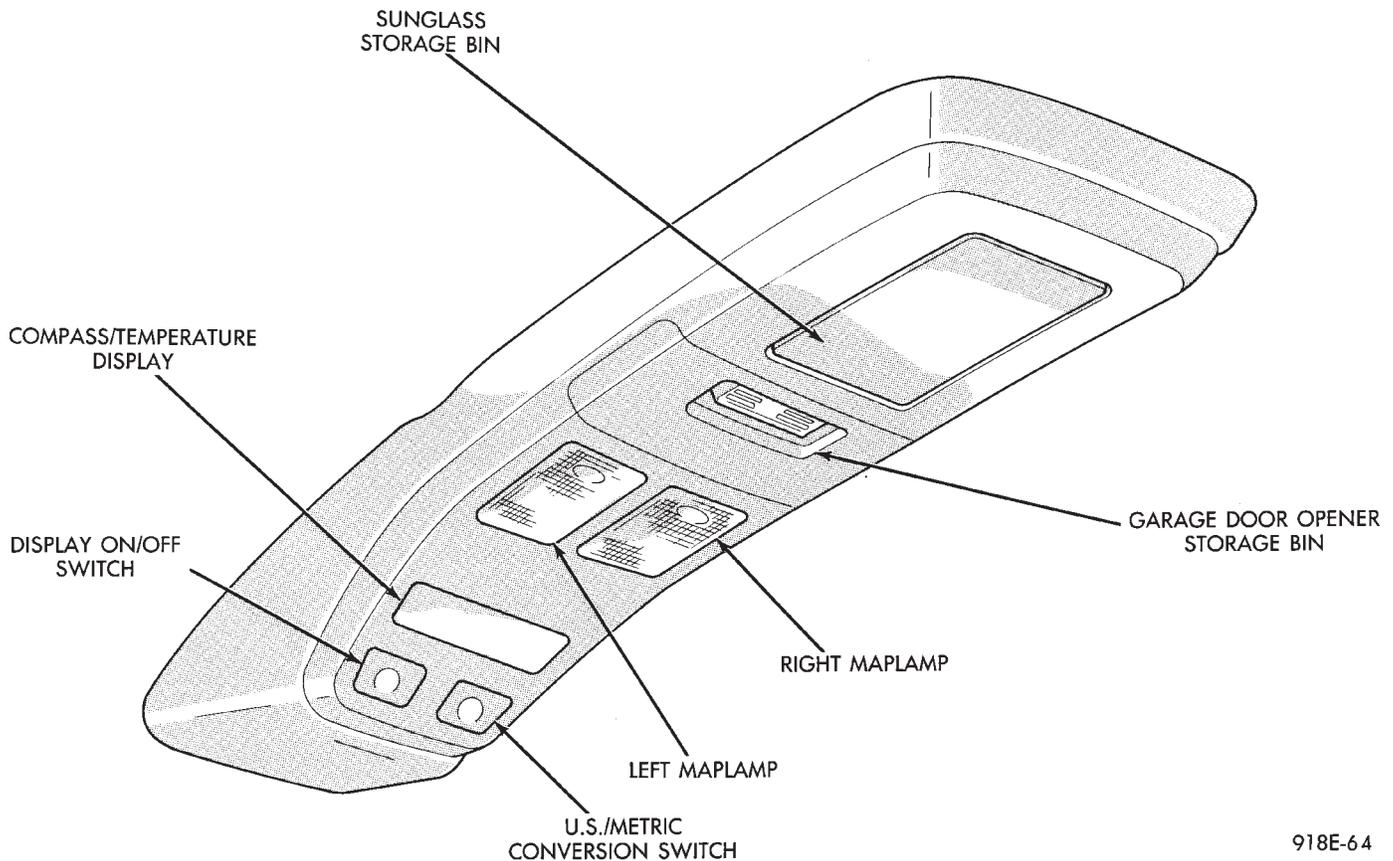
The messages will be send by the ECN.

ECN COMPASS CALIBRATION

Automatic or Manual Calibration, refer to AY Body Compass Calibration.

THERMOMETER AND COMPASS**OPERATION**

The ignition switch must be in the ON or ACCESSORY position before the temperature and compass reading can be displayed. The COMP/TEMP switch turns the compass display on and off. The US/Metric switch changes the temperature reading from Fahrenheit to Celsius (Fig. 2).



918E-64

Fig. 2 Overhead Console

When the vehicle is standing still, engine compartment temperatures may be radiated to the temperature sensor. Therefore the most accurate ambient temperature readings are displayed when the vehicle is moving in a forward motion.

When the ignition switch is in the ON position the temperature display is updated every 5 minutes. 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 1 minute; then update the display to the actual temperature within 5 minutes.

COMPASS CALIBRATION

Do not attempt to set the compass near large metal objects, such as, other vehicles, large buildings, or bridges.

The compass unit automatically calibrates itself as the vehicle is driven; therefore, no calibration should be required. When the compass is first powered up, the CAL light on the display should be on. The CAL light will go off and the compass will be accurate after the vehicle completes 1 to 3 complete circles.

If the vehicle's compass headings are inaccurate, the compass also can be manually calibrated using the following procedures:

(1) Depress and hold down both the Comp/Temp button and the U.S./Metric button.

(2) The display will go off and after 5 seconds the VAR light will come on. Continue to hold both buttons down.

(3) In approximately 10 seconds, the CAL light will come on. Release both buttons and the display will show the heading and outside temperature.

(4) Drive the vehicle 1 to 3 complete circles. The CAL light will then go off, showing the compass is calibrated.

If the compass portion of the display:

- It does not display.
- Readings are not accurate after calibration.
- The vehicle may have too much magnetism for the compass to be accurate.
- The compass circuitry is not working properly.
- Refer to Variance Procedure, Demagnetizing Procedure and/or Compass Diagnostics.

VARIANCE 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, depress and hold down both the Comp/Temp button and the U.S./Metric button.

The display will go off and after 5 seconds the VAR light will come on. Release both buttons. Using the zone map (Fig. 3) to find your geographic location, note the zone which you are in. Press the U.S./Metric button until the zone number appears on the display. Press the Comp/Temp button to enter your zone number.

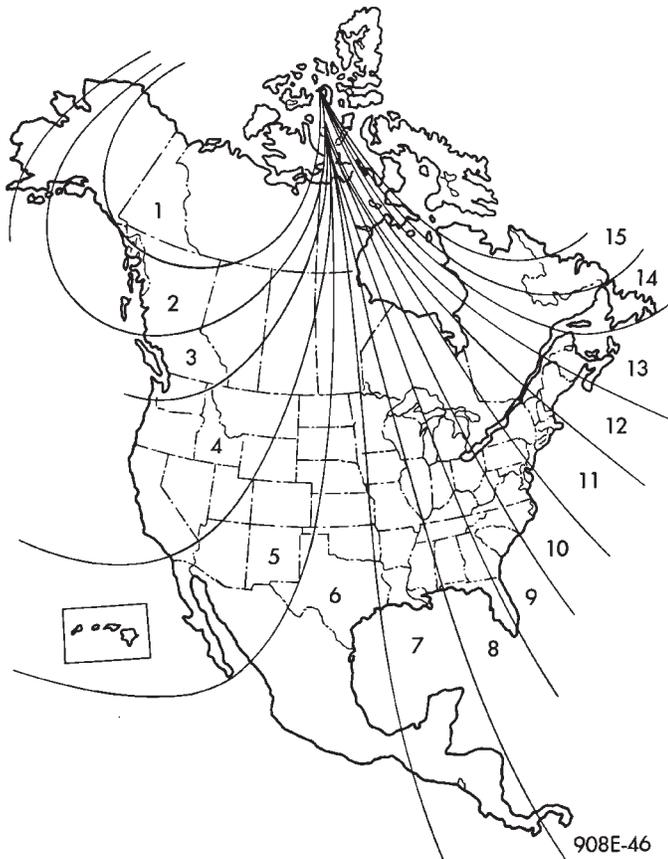


Fig. 3 Variance Zone Map

Do not attach magnetic devices, such as magnetic CB antennas to the vehicle roof, as they can cause the compass to give false readings.

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 also can be created if the roof is subjected to a magnet, example:

- Magnetic c.b. antenna
- Magnetic tipped screwdriver and 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) Open the sun glass compartment to gain access to the overhead console mounting screws.

(3) 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.

(4) Slowly approach the console mounting screw with the plastic coated tip of the tool for at least 2 seconds.

(5) 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.

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

(7) 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.

(8) Plug in the demagnetizing tool, keeping it at least 2 feet away from the compass unit.

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

(10) Contact the roof panel with the tip of the tool. Using slow sweeping motions of 1/2 inch between sweeps. Move the tool approximately 4 inches either side of the centerline and at least 11 inch back from the windshield.

(11) With the demagnetizing tool still energized, slowly back away from the roof panel until the tip is at least 2 feet from the roof before unplugging the tool.

(12) Recalibrate compass.

COMPASS DIAGNOSTICS

To place the unit into the diagnostics mode, turn the vehicle ignition off. Depress the Comp/Temp button while turning on the ignition/run switch. The display will then show DO. There are 3 tests that can be performed when in the diagnostics mode. Press the U.S./Metric button to choose test desired (Fig. 4 and 5).

Test 1 (d1) determines the magnetic field strength at the compass. The compass displays compensation numbers which, correspond to the current magnetic field strength at the compass. The letter N is displayed in the compass portion of the display. While a number which, corresponds to the magnetic field strength in the North/South direction is displayed. The temperature portion of the display or the letter W is displayed in the compass portion of the display. A number which, corresponds to the magnetic field strength in the East/West direction is displayed in

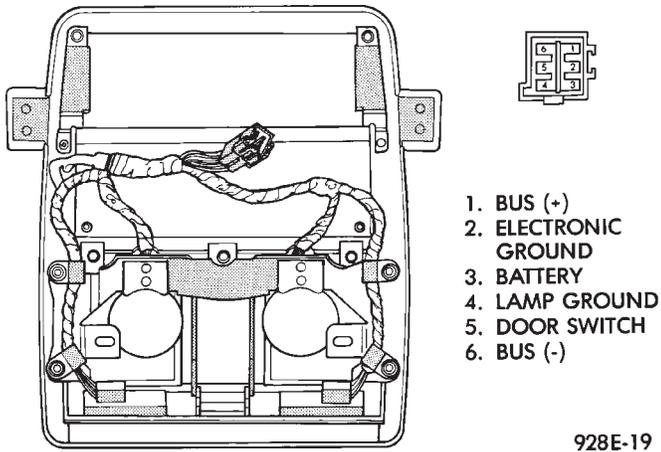


Fig. 4 Terminal Identification

the temperature portion of the display. For proper compass operation the numbers should be between 1 and 14. A number of 7 or 8 is ideal (no vehicle magnetism) while numbers approaching 1 or 14 show that the vehicle is highly magnetic. If the numbers show that the vehicle is highly magnetic, perform the demagnetized procedure in this Group and retest for magnetism at compass. If the compass is not receiving information from the CCD bus, F1 will be displayed 15 seconds after this test is requested. Refer to AG and AJ Body Diagnostic Procedure Manual for further testing procedures.

Test 2 (d2) checks the electronic circuits of the compass, temperature, and CCD bus. If the test

passes d2 will be displayed, and if the test fails F2 will be displayed. Refer to AG and AJ Body Diagnostic Procedure Manual for further testing procedures.

Test 3 (d3) performs a walking segment test which, sequentially puts different directions and numbers on the display. If any segment fails, replace the compass module.

OVERHEAD CONSOLE REPLACEMENT

(1) Unscrew the mounting screw in sun glass bin compartment (Fig. 6).

(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.

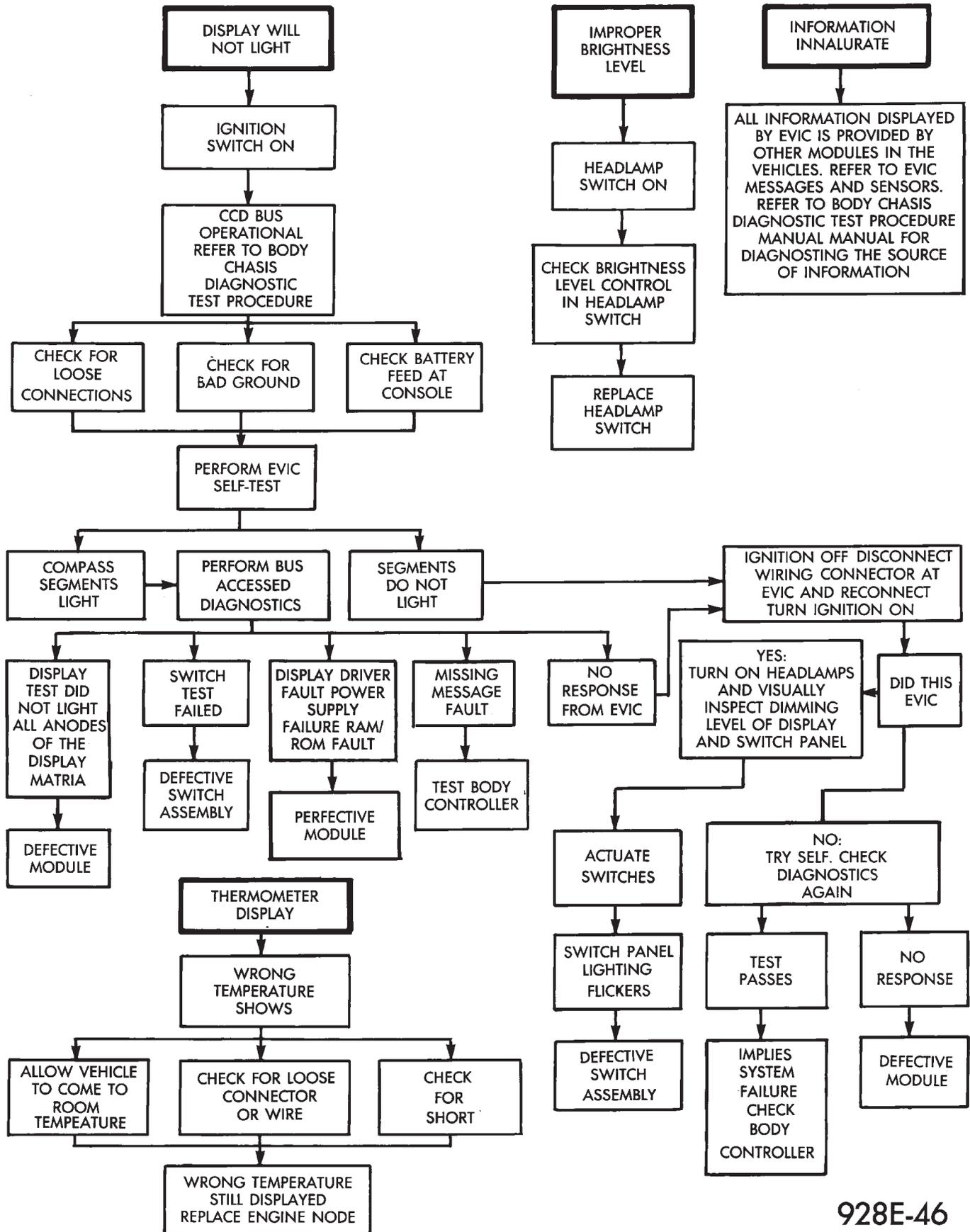
(2) Using a small screwdriver, release the 2 snaps at rear of compass module (Fig. 7).

(3) After releasing the 2 snaps, slide compass module rearward until free of mounting bar.

(4) For installation reverse above procedures.

Because of only a few specific points of gauge position versus sending unit resistance, a good estimate is need when the resistance falls between graduations. Even when the resistance corresponds to graduations, the gauge has a tolerance of ± 4 ohms.

Volt gauge: The calibration dot on the volt gauge corresponds to 13 volts between the gauge ignition and ground pins. If voltage varies from this, estimate proper gauge position with input voltage.



928E-46

Fig. 5 Compass and Thermometer Diagnosis

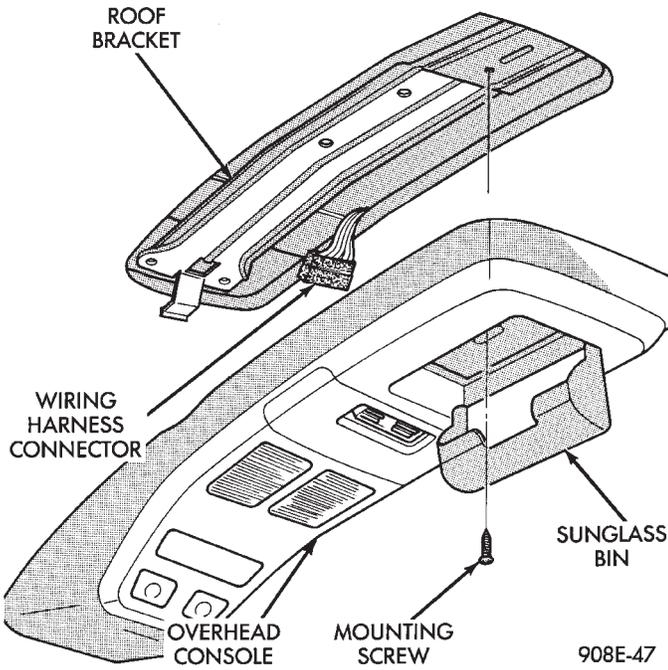


Fig. 6 Overhead Console Mounting

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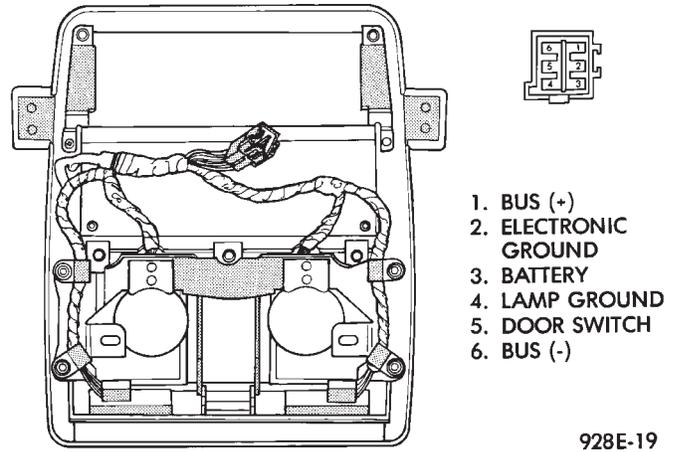


Fig. 7 Compass Module Removal

928E-19

AP BODY

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MAP READING LAMPS OPERATION

The map lamps are actuated by pressing on the lens (Fig. 1).

LAMP REPLACEMENT

- (1) Remove lens by inserting a screw driver or knife blade into slot located along-side of lens. Once screw-driver is inserted pry lens to the side and swing down as it unhooks from housing edge.
- (2) Remove lamp by pulling straight down.
- (3) Install new lamp by pushing firmly into receptacle.
- (4) Snap lens into position taking care to orient the tabs on the lens with the slots in the housing.

MAP LAMP TEST

- (1) Press each lamp switch. Right hand switch should light passenger lamp and left hand switch should light drivers lamp.
- (2) If lamp does not illuminate check for a burned out lamp, voltage, defective switch or faulty wiring.

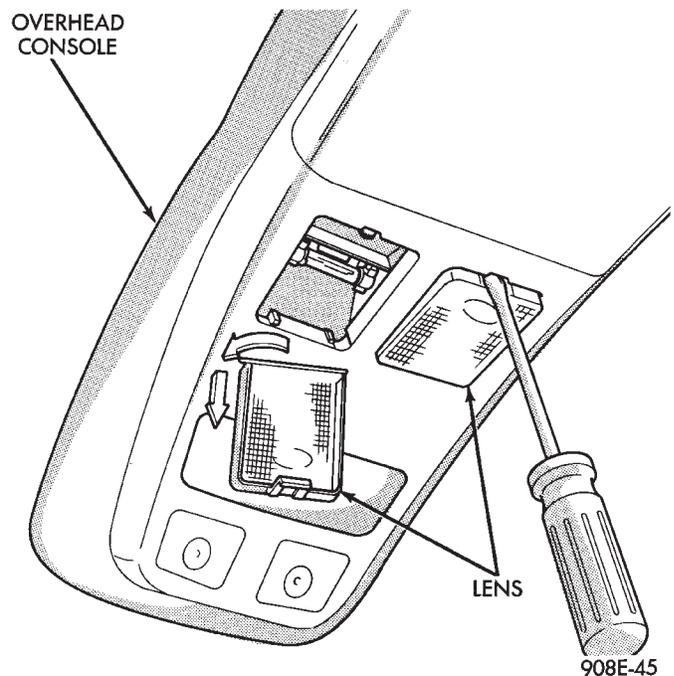
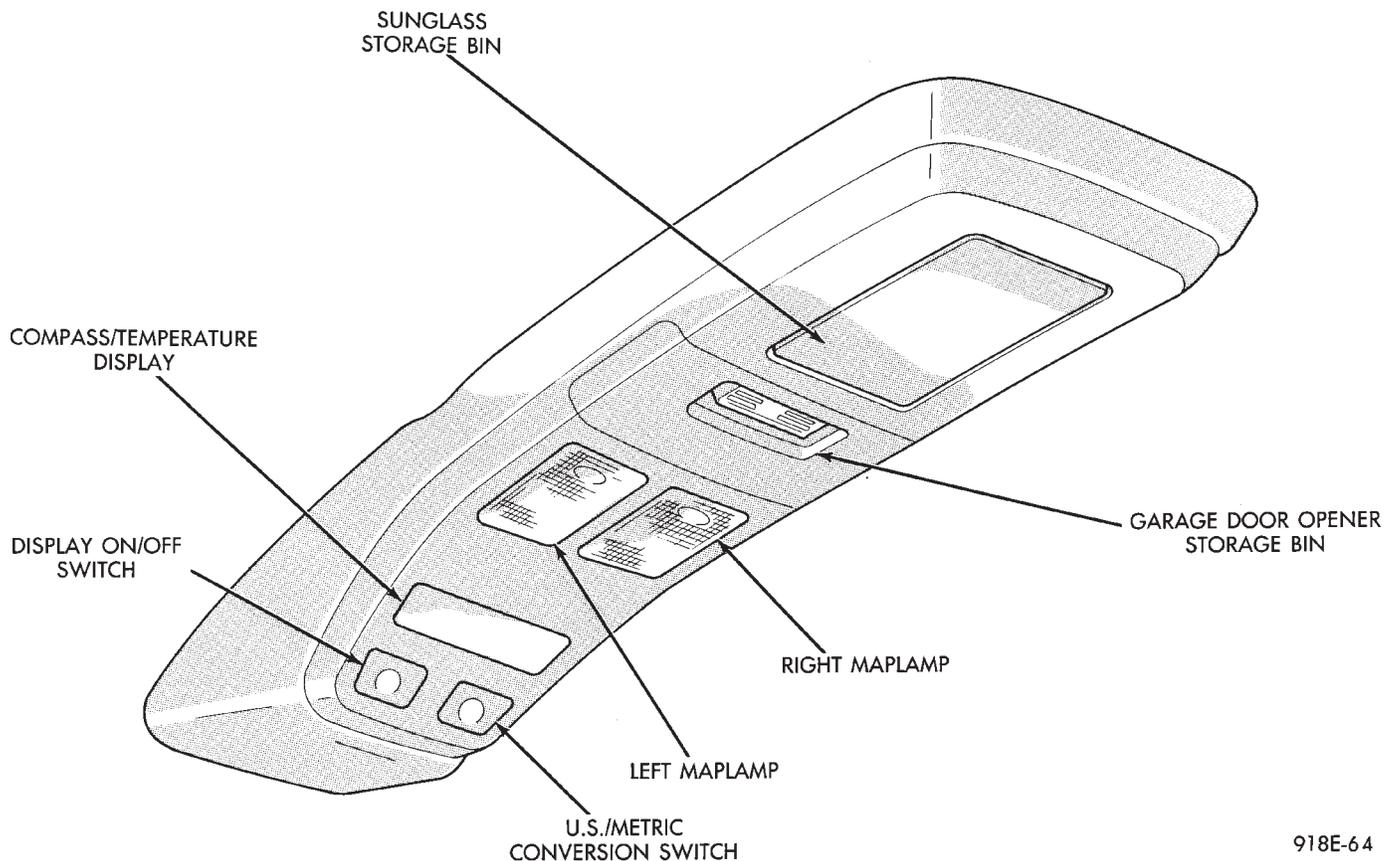


Fig. 1 Overhead Console Lamp Replacement

908E-45



918E-64

Fig. 2 Overhead Console**THERMOMETER AND COMPASS**

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If the vehicle's compass headings are inaccurate, the compass also can be manually calibrated using the following procedures:

(1) Depress and hold down both the Comp/Temp button and the U.S./Metric button.

(2) The display will go off and after 5 seconds the VAR light will come on. Continue to hold both buttons down.

(3) In approximately 10 seconds, the CAL light will come on. Release both buttons and the display will show the heading and outside temperature.

(4) Drive the vehicle 1 to 3 complete circles, without turning ignition OFF. The CAL light will then go off, showing the compass is calibrated.

If the compass portion of the display is not lit or compass readings are not accurate after calibration. The vehicle may have too much magnetism for the compass to be accurate or the compass circuitry is not working properly. Refer to Variance Procedure, Demagnetizing Procedure and/or Compass Diagnostics.

VARIANCE 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, depress and hold down both the Comp/Temp button and the U.S./Metric button. The display will go off and after 5 seconds the VAR light will come on. Release both buttons. Using the zone map (Fig. 3) to find your geographic location, note the zone which you are in. Press the U.S./Metric button until the zone number appears on the display. Press the Comp/Temp button to enter your zone number.

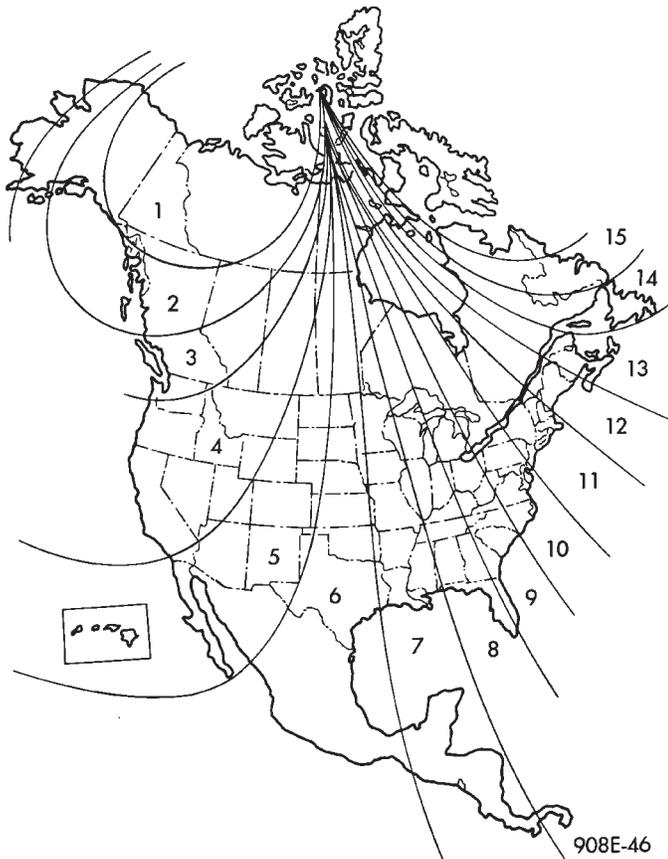


Fig. 3 Variance Zone Map

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

(2) Open the sun glass compartment to gain access to the overhead console mounting screws.

(3) 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.

(4) Slowly approach the console mounting screw with the plastic coated tip of the tool for at least 2 seconds.

(5) 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.

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

(7) 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.

(8) Plug in the demagnetizing tool, keeping it at least 2 feet away from the compass unit.

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

(10) Contact the roof panel with the tip of the tool and using slow sweeping motions of 1/2 inch between sweeps. Move the tool approximately 4 inches either side of the centerline and at least 11 inches back from the windshield.

(11) With the demagnetizing tool still energized, slowly back away from the roof panel until the tip is at least 2 feet from the roof before unplugging the tool.

(12) Recalibrate compass.

COMPASS DIAGNOSTICS

To place the unit into the diagnostics mode, turn the vehicle ignition off. Depress the Comp/Temp button while turning on the ignition/run switch. The display will then show DO. There are 3 tests that can be performed when in the diagnostics mode. Press the U.S./Metric button to choose test desired. Refer to Fig. 4 and 5.

Test 1 (d1) determines the magnetic field strength at the compass. The compass displays compensation

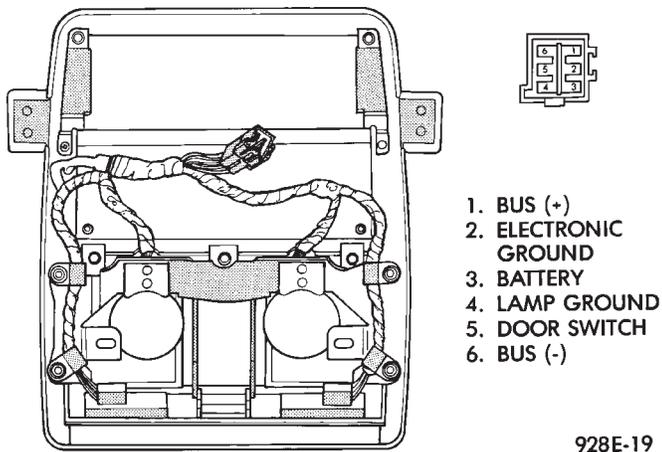


Fig. 4 Terminal Identification

numbers which, correspond to the current magnetic field strength at the compass. The letter N is displayed in the compass portion of the display. While a number which, corresponds to the magnetic field strength in the North/South direction is displayed. The temperature portion of the display or the letter

W is displayed in the compass portion of the display. A number which, corresponds to the magnetic field strength in the East/West direction is displayed in the temperature portion of the display. For proper compass operation the numbers should be between 1 and 14. A number of 7 or 8 is ideal (no vehicle magnetism) while numbers approaching 1 or 14 show that the vehicle is highly magnetic. If the numbers show that the vehicle is highly magnetic, perform the demagnetized procedure in this Group and retest for magnetism at compass. If the numbers show that the vehicle is highly magnetic, perform the demagnetizing procedure in this section and retest for magnetism at compass. The compass is not on the CCD bus, if not functioning properly, refer to the Overhead Console and Thermometer diagnosis.

Test 2 (d2) checks the electronic circuits of the compass, temperature, and CCD bus. If the test passes d2 will be displayed, and if the test fails F2 will be displayed. Refer to AG and AJ Body Diagnostic Procedure Manual for further testing procedures.

Test 3 (d3) performs a walking segment test which, sequentially puts different directions and numbers on the display. If any segment fails, replace the compass module.

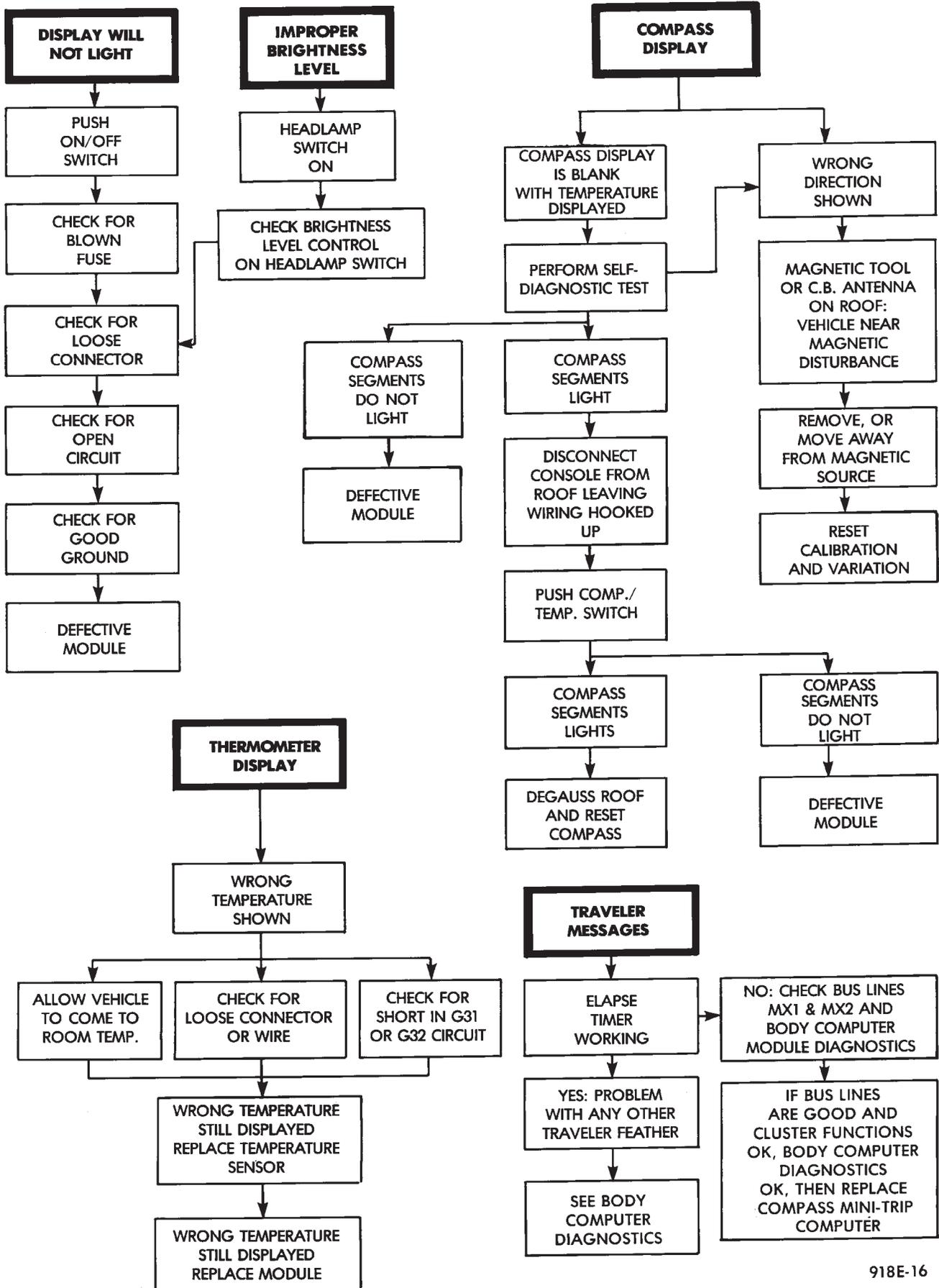


Fig. 5 Compass and Thermometer Diagnosis

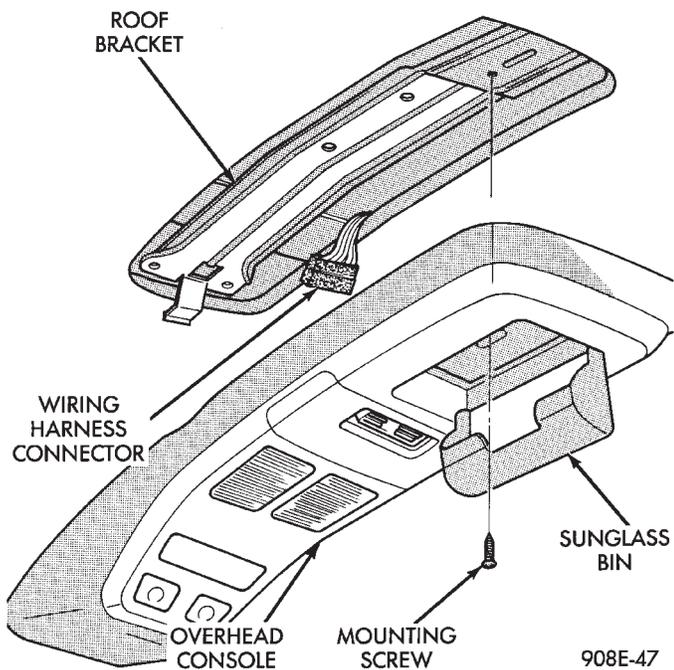


Fig. 6 Overhead Console Mounting

OVERHEAD CONSOLE REPLACEMENT

- (1) Unscrew the mounting screw in sun glass bin compartment (Fig. 6).
- (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.

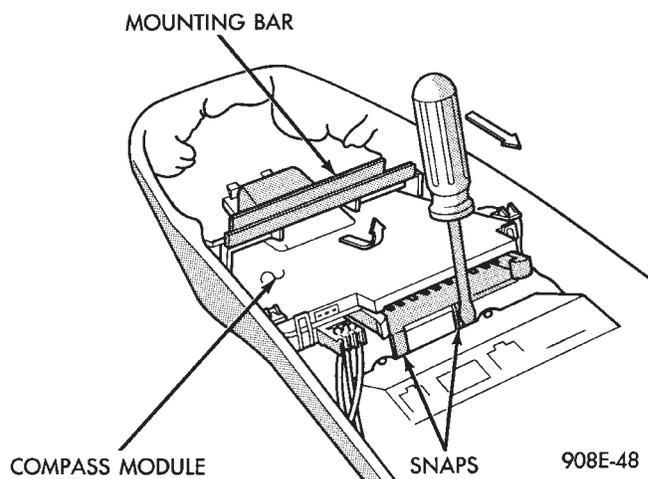


Fig. 7 Compass Module Removal

COMPASS MODULE REPLACEMENT

- (1) Remove overhead console (Fig 6).
- (2) Using a small screwdriver, release the 2 snaps at rear of compass module (Fig. 7).
- (3) After releasing the 2 snaps, slide compass module rearward until free of mounting bar.
- (4) For installation reverse above procedures.