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# **HEATER**

# **Blower Motor**

- 1. Disconnect the negative battery cable.
- 2. Open the glove compartment door, release the door retainers and lower the door.



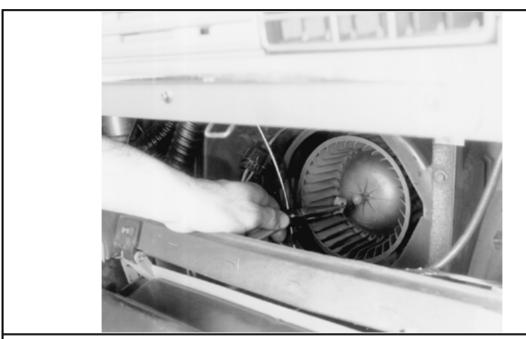
- 3. Remove the screw attaching the recirculation duct support bracket to the instrument panel cowl.
- 4. Remove the vacuum connection to the recirculation door vacuum motor. Remove the screws attaching the recirculation duct to the heater assembly.

HEATER Стр. 2 из 19



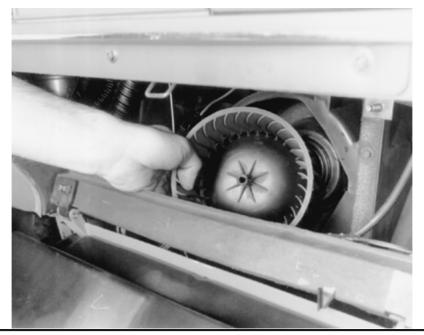
Remove the screws attaching the recirculation duct to the heater assembly, then remove the duct

- 5. Remove the recirculation duct from the heater assembly, lowering the duct from between the instrument panel and the heater case.
- 6. Disconnect the blower motor electrical lead. Remove the blower motor wheel clip and remove the blower motor wheel.

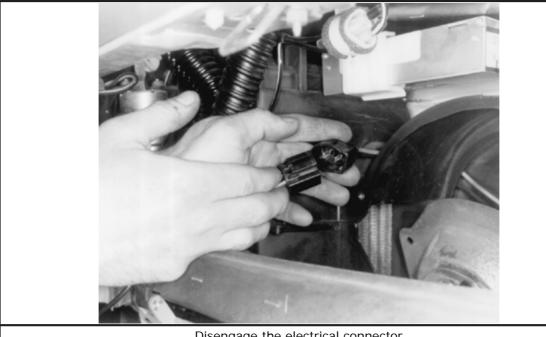


Remove the blower motor wheel clip

**HEATER** Стр. 3 из 19



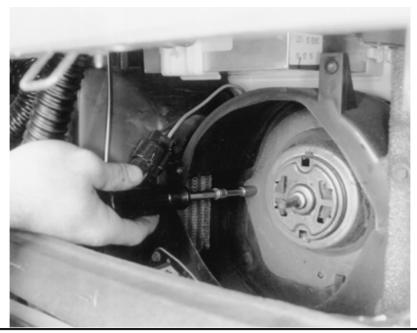
Remove the blower motor wheel



Disengage the electrical connector

7. Remove the blower motor mounting plate screws and remove the blower motor from the evaporator case.

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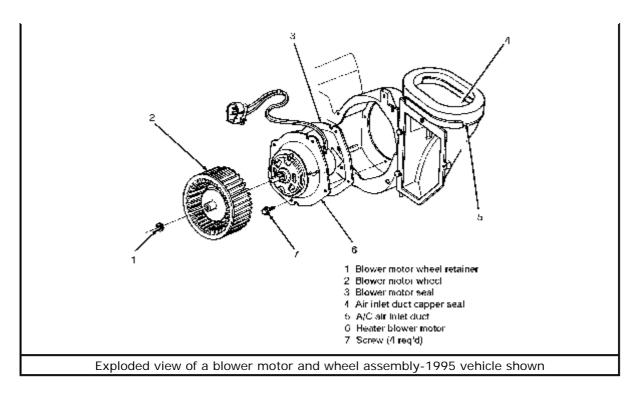


Remove the blower motor retaining screws



Remove the blower motor assembly from the vehicle

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#### Click to enlarge

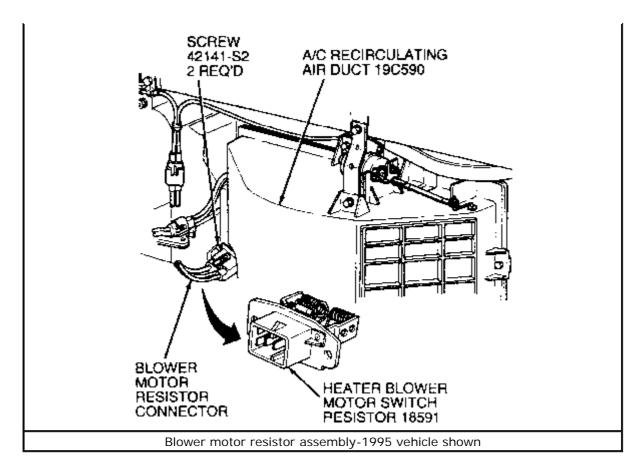
#### To install:

- 8. Feed the blower motor electrical connector through the evaporator housing.
- 9. Position the blower motor into the evaporator housing. Install the retaining screws, making sure the mounting seal is in place.
- 10. Assembly to blower motor to the shaft aligning the flat on the shaft with the flat on the inside diameter of the blower wheel hub. Slide the blower motor wheel onto the blower motor shaft until the wheel is fully seated.
- Install a new blower motor retainer on the blower shaft to retain the blower motor wheel.
- 12. Connect the blower motor electrical lead to the wiring harness.
- 13. Install the recirculation duct using the retaining screws.
- 14. Install the glove compartment door to its original closed position, then connect the negative battery cable.

# **Blower Motor Resistor**

- 1. Disconnect the negative battery cable.
- 2. Open the glove compartment door and release the glove compartment retainers so that the glove compartment hangs down.
- 3. Disengage the wire harness connector from the resistor assembly.
- 4. Remove the two resistor attaching screws and remove the resistor from the evaporator housing.

HEATER Стр. 6 из 19



Click to enlarge

### To install:

- 5. Position the resistor assembly in the evaporator case opening and install the two attaching screws. Do not apply sealer to the resistor assembly mounting surface.
- 6. Engage the wire harness connector to the resistor.
- 7. Connect the negative battery cable, check the operation of the blower motor, then install the glove compartment to the retainers and close the door.

# **Heater Core**

### **REMOVAL & INSTALLATION**

Be sure to consult the laws in your area before beginning any procedure which requires servicing the air conditioning system. In some states, it is illegal to perform repairs involving refrigerant unless the work is done by a certified technician.

# **CAUTION**

When draining the coolant, keep in mind that cats and dogs are attracted by the ethylene glycol antifreeze, and are quite likely to drink any that is left in an uncovered container or in puddles on the ground. This will prove fatal in sufficient quantity. Always drain the coolant into a sealable container. Coolant should be reused unless it is contaminated or several years old.

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When removing the instrument panel, it may be beneficial to have a friend or assistant help you.

### Without Air Conditioning

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument panel on 1986-89 vehicles as follows:
  - 1. Remove the four screws retaining the steering column opening cover, then remove the cover.
  - Remove the sound insulator under the glove compartment by removing the two push nuts securing the insulator to the studs on the climate control case.
  - Remove the steering column trim shrouds, then tag and disengage all electrical connections from the steering column switches.
  - 4. Remove the four screws at the steering column bracket to remove the steering column.
  - Remove the screws retaining the lower left and radio finish panels, then remove the panels by snapping them out.
  - Remove the cluster opening finish panel retaining screws. On Taurus remove the jam nut behind the headlight switch and the screw behind the clock or clock cover. Remove the finish panel by rocking the upper edge toward the driver.
  - Disconnect the speedometer cable by reaching up under the instrument panel and pressing on the flat surface of the plastic connector. The panel can be removed with the cluster installed.
  - 8. Release the glove compartment assembly by depressing the side of the glove compartment bin and swinging the door/bin down.
  - Using the steering column, cluster and glove compartment openings and by reaching under the instrument panel, tag and disengage all electrical connections, vacuum hoses, heater control cables and the radio antenna cable.
  - 10. Tag and disengage all underhood electrical connectors of the main wire loom. Disengage the rubber grommet from the dash panel and push the wire and connectors into the instrument panel area.
  - 11. Remove the right and left speaker opening covers by snapping them out.
  - 12. Remove the two lower instrument panel-to-cowl side retaining screws from the right and left side. Remove the instrument panel brace retaining screw from under the radio area. On Sable, remove the defroster grille by snapping it out.
  - 13. Remove the three instrument panel upper retaining screws, then remove the instrument panel.

- 3. Remove the instrument panel on 1990-95 vehicles as follows:
  - Position the front wheels in the straight-ahead position.
  - 2. Disconnect the positive battery cable.
  - Remove the ignition lock cylinder and, if equipped, remove the tilt lever.
  - Remove the steering column trim shrouds. Tag and disengage all electrical connections from the steering column switches.
  - Remove the four bolts and opening cover, and the two bolts and reinforcement from under the steering column.
  - Disengage the insulator retainer and remove the insulator. Remove the four nuts and reinforcement from under the steering column.

Do not rotate the steering column shaft.

- Remove the four nuts retaining the steering column to the instrument panel, disconnect the shift indicator cable and lower the column on the front seat. Install the lock cylinder to make sure the steering column shaft does not turn.
- Remove bolt at the steering column opening attaching the instrument panel to the brace.
   Remove instrument panel brace retaining bolt from under the radio area.
- Remove the sound insulator under the glove compartment by removing the two push nuts that secure the insulator to the studs on the climate control case.
- 10. Disconnect the wires of the main wire loom in the engine compartment. Disengage the rubber grommet from the dash panel, then feed the wiring through the hole in the dash panel into the passenger compartment.
- 11. Remove the right and left cowl side trim panels.

  Disconnect the wires from the instrument panel at the right and left cowl sides.
- Remove screw each from the left and right side retaining the instrument panel. Pull up to unsnap the right and left speaker opening covers and remove.
- 13. Release the glove compartment assembly by depressing the side of the glove compartment bin and swinging the door/bin down.
- 14. Using the steering column and glove compartment openings and by reaching under the instrument panel, tag and disengage all electrical connections, vacuum hoses, heater control cables, speedometer cable and radio antenna cable.
- 15. Close the glove compartment door, support the

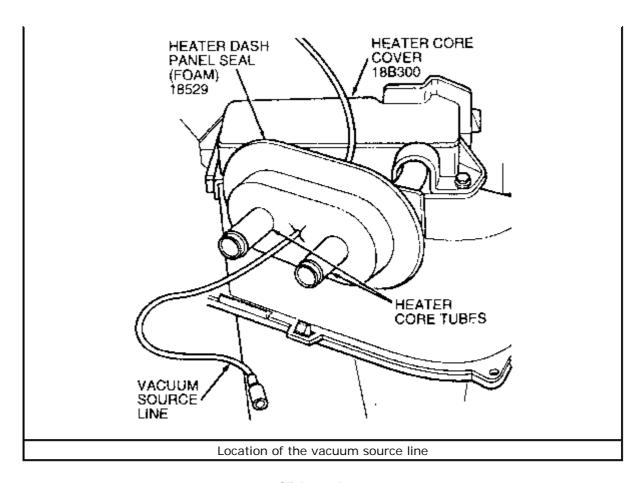
panel and remove the three screws attaching the top of the instrument panel to the cowl top and disconnect any remaining wires. Remove the panel from the vehicle.

- 4. Drain the coolant from the radiator.
- Disconnect and plug the heater hoses at the heater core. Plug the heater core tubes.
- 6. Disconnect the vacuum supply hose from the inline vacuum check valve in the engine compartment. Remove the screw holding the instrument panel shake brace to the heater case and remove the shake brace.
- Remove the floor register and rear floor ducts from the bottom of the heater case.
   Remove the three nuts attaching the heater case to the dash panel in the engine compartment.
- 8. Remove the two screws attaching the brackets to the cowl top panel. Pull the heater case assembly away from the dash panel and remove from the vehicle.
- Remove the vacuum source line from the heater core tube seal and remove the seal from the heater core tubes.
- Remove the four heater core access cover attaching screws and remove the
  access cover from the heater case. Lift the heater core and seals from the heater
  case.

#### To install:

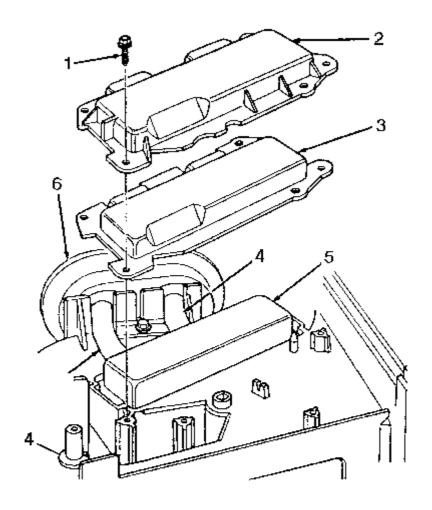
- 11. Transfer the three foam core seals to the new heater core. Install the heater core and seals into the heater case.
- Position the heater case access cover on the case, then install the four retaining screws.
- 13. Install the seal on the heater core tubes, then install the vacuum source line through the seal.
- 14. Position the heater case assembly to the dash panel and cowl top panel at the air inlet opening. Install the two screws to attach the support brackets to the cowl top panel.
- 15. Install the three nuts in the engine compartment to attach the heater case to the dash panel. Install the floor register and rear floor ducts on the bottom of the heater case.
- 16. Install the instrument panel shake brace and screw to the heater case.
- 17. Install the instrument panel by reversing the removal procedure.
- 18. Connect the heater hoses to the heater core. Connect the black vacuum supply hose to the vacuum check valve in the engine compartment.
- 19. Fill the radiator and bleed the cooling system.
- 20. Connect the negative battery cable and check the system for proper operation.

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Click to enlarge

HEATER Стр. 11 из 19



- 1 Screw (4 reg'd)
- 2 Heater core cover
- 3 Heater core cover seal
- 4 Heater core tubes
- 5 Heater core
- 6 Heater dash panel seal

Heater core cover location

## Click to enlarge

# With Air Conditioning

### **CAUTION**

Some 1992-93 and all 1994-95 air conditioned vehicles covered by this manual are equipped with a new non-CFC (chlorofluorocarbon) refrigerant (R-134a). This new refrigerant is not available commercially in most areas, as it is usually illegal for do-it-yourselfers to service a vehicle with this refrigerant. If you have a Taurus or Sable that uses the new refrigerant, R-134a, the vehicle should be taken to a qualified technician for any repair requiring A/C system service.

It is necessary to remove the evaporator case in order to remove the

HEATER Стр. 12 из 19

heater core. Whenever an evaporator case is removed, it will be necessary to replace the suction accumulator/drier.

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument panel on 1986-89 vehicles as follows:
  - 1. Remove the four screws retaining the steering column opening cover and remove the cover.
  - Remove the sound insulator under the glove compartment by removing the two push nuts securing the insulator to the studs on the climate control case.
  - Remove the steering column trim shrouds and disconnect all electrical connections from the steering column switches.
  - Remove the four screws at the steering column bracket to remove the steering column.
  - Remove the screws retaining the lower left and radio finish panels and remove the panels by snapping out.
  - Remove the cluster opening finish panel retaining screws. On Taurus remove jam nut behind the headlight switch and screw behind the clock or clock cover. Remove the finish panel by rocking the upper edge toward the driver.
  - Disconnect the speedometer cable by reaching up under the instrument panel and pressing on the flat surface of the plastic connector. The panel can be removed with the cluster installed.
  - 8. Release the glove compartment assembly by depressing the side of the glove compartment bin and swinging the door/bin down.
  - Using the steering column, cluster and glove compartment openings and by reaching under the instrument panel, tag and disconnect all electrical connections, vacuum hoses, heater/air conditioner control cables and the radio antenna cable.
  - Disconnect all underhood electrical connectors of the main wire loom. Disengage the rubber grommet from the dash panel and push the wire and connectors into the instrument panel area.
  - 11. Remove the right and left speaker opening covers by snapping out.
  - 12. Remove the two lower instrument panel-to-cowl side retaining screws from the right and left side. Remove the instrument panel brace retaining screw from under the radio area. On Sable, remove the defroster grille by snapping out.
  - 13. Remove the three instrument panel upper retaining screws and remove the instrument panel.
- 3. Remove the instrument panel on 1990-95 vehicles as follows:
  - 1. Position the front wheels in the straight-ahead position.

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- Remove the ignition lock cylinder and, if equipped, remove the tilt lever.
- Remove the steering column trim shrouds.
   Disconnect all electrical connections from the steering column switches.
- 4. Remove the four bolts and opening cover and the two bolts and reinforcement from under the steering column.
- Disengage the insulator retainer and remove the insulator. Remove the four nuts and reinforcement from under the steering column.

Do not rotate the steering column shaft.

- Remove the four nuts retaining the steering column to the instrument panel, disconnect the shift indicator cable and lower the column on the front seat. Install the lock cylinder to make sure the steering column shaft does not turn.
- 7. Remove bolt at the steering column opening attaching the instrument panel to the brace. Remove instrument panel brace retaining bolt from under the radio area.
- Remove the sound insulator under the glove compartment by removing the two push nuts that secure the insulator to the studs on the climate control case.
- Disconnect the wires of the main wire loom in the engine compartment. Disengage the rubber grommet from the dash panel, then feed the wiring through the hole in the dash panel into the passenger compartment.
- Remove the right and left cowl side trim panels.
   Disconnect the wires from the instrument panel at the right and left cowl sides.
- Remove one screw from each the left and right side retaining the instrument panel. Pull up to unsnap the right and left speaker opening covers and remove.
- 12. Release the glove compartment assembly by depressing the side of the glove compartment bin and swinging the door/bin down.
- 13. Using the steering column and glove compartment openings and by reaching under the instrument panel, tag and disconnect all electrical connections, vacuum hoses, heater/air conditioner control cables, speedometer cable and radio antenna cable.
- 14. Close the glove compartment door, support the panel and remove the three screws attaching the top of the instrument panel to the cowl top and disconnect any remaining wires. Remove the panel from the vehicle.
- 4. Drain the coolant from the radiator. Properly discharge the air conditioning

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system.

Be sure to consult the laws in your area before beginning any procedure which requires servicing the air conditioning system. In some states, it is illegal to perform repairs involving refrigerant unless the work is done by a certified technician.

- 5. Disconnect and plug the heater hoses at the heater core. Plug the heater core tubes
- 6. Disconnect the vacuum supply hose from the inline vacuum check valve in the engine compartment.
- 7. Disconnect the air conditioning lines from the evaporator core at the dash panel. Cap the lines and the core to prevent entrance of dirt and moisture.
- 8. Remove the screw holding the instrument panel shake brace to the evaporator case and remove the shake brace.
- Remove the two screws attaching the floor register and rear seat duct to the bottom of the evaporator case. Remove the three nuts attaching the evaporator case to the dash panel in the engine compartment.
- Remove the two screws attaching the support brackets to the cowl top panel.
   Carefully pull the evaporator assembly away from the dash panel and remove the evaporator case from the vehicle.
- Remove the vacuum source line from the heater core tube seal and remove the seal from the heater core tubes.
- 12. If equipped with automatic temperature control, remove the three screws attaching the blend door actuator to the evaporator case and remove the actuator.
- 13. Remove the four heater core access cover attaching screws and remove the access cover and seal from the evaporator case. Lift the heater core and seals from the evaporator case.

#### To install:

- 14. Transfer the seal to the new heater core, then install the heater core into the evaporator case.
- 15. Position the heater core access cover on the evaporator case and install the four attaching screws. If equipped with automatic temperature control, position the blend door actuator to the blend door shaft and install the three attaching screws.
- Install the seal on the heater core tubes and install the vacuum source line through the seal.
- 17. Position the evaporator case assembly to the dash panel and cowl top panel at the air inlet opening. Install the two screws attaching the support brackets to the cowl top panel.
- 18. Install the three nuts in the engine compartment attaching the evaporator case to the dash panel. Install the floor register and rear seat duct to the evaporator case and tighten the two attaching screws.
- 19. Install the instrument panel shake brace and screw to the evaporator case. Install the instrument panel in the reverse order of removal.
- Connect the air conditioning lines to the evaporator core and the heater hoses to the heater core.
- 21. Connect the black vacuum supply hose to the vacuum check valve in the engine compartment.

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- 22. Fill and bleed the cooling system. Connect the negative battery cable.
- 23. Leak test, evacuate and charge the air conditioning system. Observe all safety precautions.

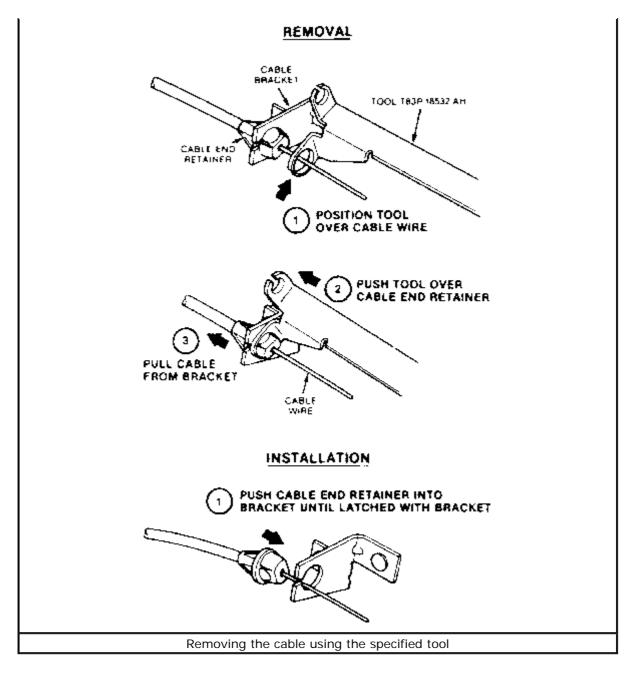
Some 1992-93 and all 1994-95 vehicles covered by this manual are equipped with R-134a NOT R-12 refrigerant. These two refrigerants are NOT compatible. Using the incorrect refrigerant in an R-134a system will lead to compressor failure, refrigerant oil sludge and/or poor air conditioning system performance.

24. Check the system for proper operation.

# **Control Cables**

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument cluster opening finish panel.
- 3. Rotate the temperature control knob to the "COOL" position.
- Disconnect the temperature control knob cable housing end retainer from the heater case bracket using Heater Control Cable Disconnect tool T83P-18532-AH, or equivalent.

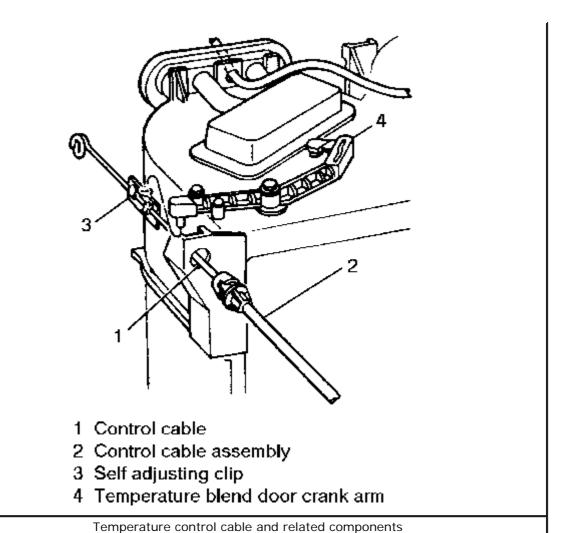
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### Click to enlarge

- 5. Disconnect the cable wire from the temperature door crank arm, using the proper tool.
- 6. Remove the retaining screws that secure the control assembly to the instrument panel. Pull the control assembly away from the instrument panel.
- 7. Disconnect the cable housing end retainer from the control assembly and the cable wire from the temperature control lever arm.
- Remove the cable assembly from the vehicle through the control assembly
  opening in the instrument panel, being careful not to hook or damage the wiring or
  other cables.

HEATER Стр. 17 из 19



Click to enlarge

### To install:

- 9. Position the self-adjusting clip on the control cable.
- 10. Insert the cable through the control assembly opening of the instrument panel and over the left-hand duct to the left-hand side of the evaporator case.
- 11. Rotate the temperature control knob to the "COOL" position.
- 12. Insert the cable wire end into the hole in the temperature control arm. Connect the cable and retainer to the control assembly.
- 13. Position the control assembly to the instrument panel opening, then install the retaining screws.
- 14. Slide the cable housing and retainer into the heater case cable bracket, then push to secure the cable housing to the bracket.
- 15. Connect the self-adjusting clip at the temperature cable to the temperature door crank arm.
- 16. Connect the negative battery cable.

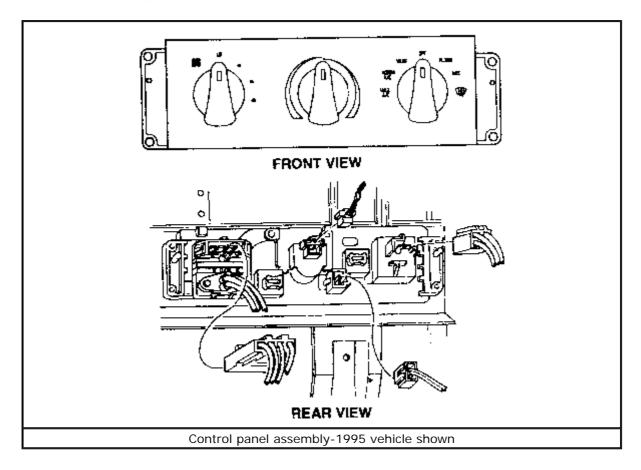
# **Control Panel**

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- 1. Disconnect the negative battery cable.
- 2. Remove the instrument panel finish applique.

Depending on vehicle application, the control assembly may be retained to the instrument panel by Torx® screws, in which case a Torx® head screwdriver must be used to remove them.

- 3. Remove the four screws attaching the control assembly to the instrument panel.
- 4. Pull the control assembly from the instrument panel opening to allow access to the rear electrical connectors.
- 5. Disengage the wire connectors from the control assembly by depressing the latches at the top of the connectors and pulling.
- 6. Disconnect the vacuum harness and temperature control cable from the control assembly. Discard the used pushnut from the vacuum harness.



Click to enlarge

### To install:

- 7. Connect the temperature cable to the control assembly.
- 8. Connect the wire connectors and vacuum harness to the control assembly using new pushnuts.

Push on the vacuum harness retaining nuts. Do not attempt to screw them onto the post.

Position the control assembly to the instrument panel opening and install the four attaching screws. HEATER Стр. 19 из 19

- 10. Install the instrument panel finish applique.
- 11. Connect the negative battery cable, then check the system for proper operation.

# **Blower Switch**

### **REMOVAL & INSTALLATION**

- 1. Disconnect the negative battery cable.
- 2. Remove the climate control assembly from the instrument panel. For details, please refer to the procedure located earlier in this section.
- 3. Remove the blower switch knob.
- 4. Disengage the blower switch electrical connector.
- Remove the retaining screw, then remove the heater blower motor switch from the vehicle.

#### To install:

- 6. Install the blower switch, then secure using the retaining screw.
- 7. Engage the switch electrical connector.
- 8. Install the blower switch knob.
- 9. Install the climate control assembly to the instrument panel. For details, please refer to the procedure located earlier in this section.
- 10. Connect the negative battery cable, then check the switch for proper operation.

# Vacuum Selector Switch

# **REMOVAL & INSTALLATION**

- 1. Disconnect the negative battery cable.
- 2. Remove the control assembly from the instrument panel. For details, please refer to the procedure located earlier in this section.
- 3. Remove the knob from the function selector shaft.
- 4. Remove the screw attaching the vacuum switch to the control assembly, then remove the switch.

### To install:

- 5. Rotate the function selector shaft to the OFF position.
- 6. Position the vacuum selector switch on the control assembly bracket.
- 7. Install the screw attaching the vacuum switch to the control assembly.
- 8. Connect the negative battery cable.

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