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## SECTION 7A

# HEATING AND VENTILATION SYSTEM

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

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## DESCRIPTION AND SYSTEM OPERATION

### HEATING AND VENTILATION SYSTEMS

The base heater system is designed to provide heating, ventilation, windshield defrosting, and side window defogging.

The heater and fan assembly blower regulates the air-flow from the air inlet for further processing and distribution.

The heater core transfers the heat from the engine coolant to the inlet air.

The temperature door regulates the amount of the air that passes through the heater core. The temperature door also controls the temperature of the air by controlling the mix of the heated air and the ambient air.

The mode door regulates the flow and the distribution of the processed air to the heater ducts and to the defroster ducts.

This console-mounted heating and ventilation panel contains the following:

#### Three Rotary Control Knobs

1. The Rotary Temperature Control Knob
  - Actuates by cable.
  - Raises the temperature of the air entering the vehicle by rotation toward the right, or the red portion of the knob.
2. The Rotary Blower Control Knob
  - Turns on to operate the blower motor at four speeds.
  - Turns  $\otimes$  to stop the blower.
  - Operates completely independently both from the mode control that regulates the defroster door and from the temperature control knob.

- Changes the fan speed in any mode and at any temperature setting.

#### 3. The Rotary Mode Control Knob:

- Actuates by cable.
- Regulates the air distribution between the windshield, the instrument panel, and the floor vents.

#### Push Knobs

##### 1. The Rear Window Defogger Push Knob

- Controls the rear window defogger.
- Turns ON the rear window defogger when the push knob is pressed and the indicator lamp is illuminated.

##### 2. The A/C Push Knob (if the vehicle is equipped with air conditioning)

- Controls the A/C.
- Turns the A/C ON when the push knob is down. However, if the blower control knob is OFF, the A/C system is OFF, regardless of the position of the A/C knob.

#### One Lever

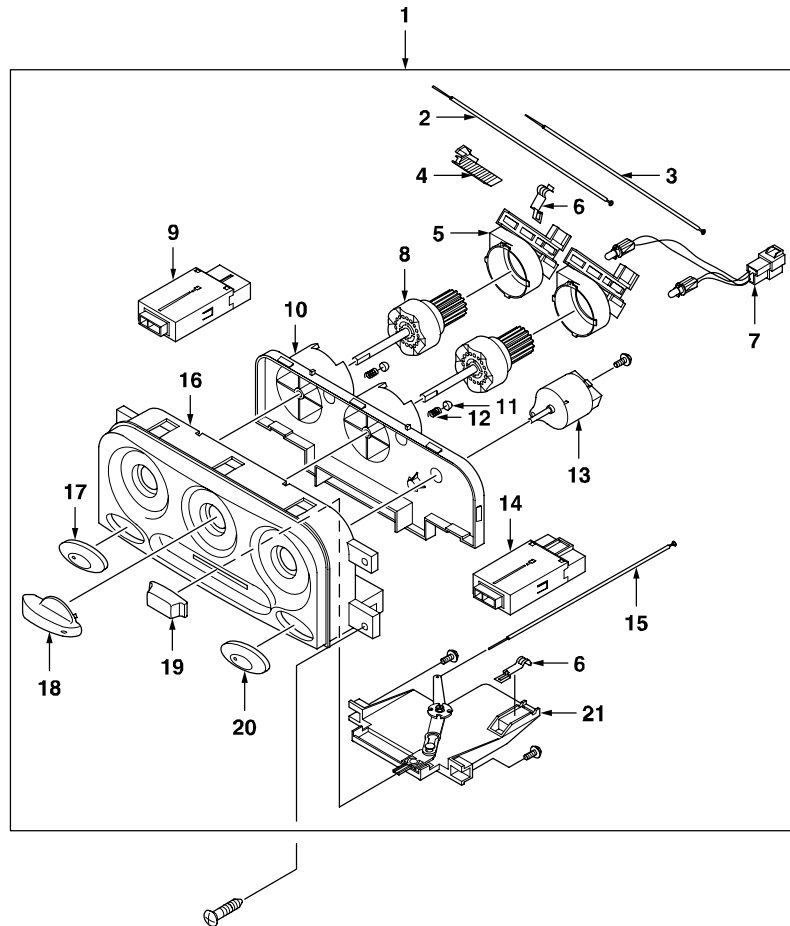
##### 1. The Fresh Air Control Lever

- Operates by cable.
- Switches between recirculating passenger compartment air and bringing outside air into the passenger compartment.
- Draws in outside air when the lever is moved to the left.
- Recirculates inside air when the lever is moved to the right.

# COMPONENT LOCATOR

## CONTROL ASSEMBLY

(Left-Hand Drive Shown, Right-Hand Drive Similar)

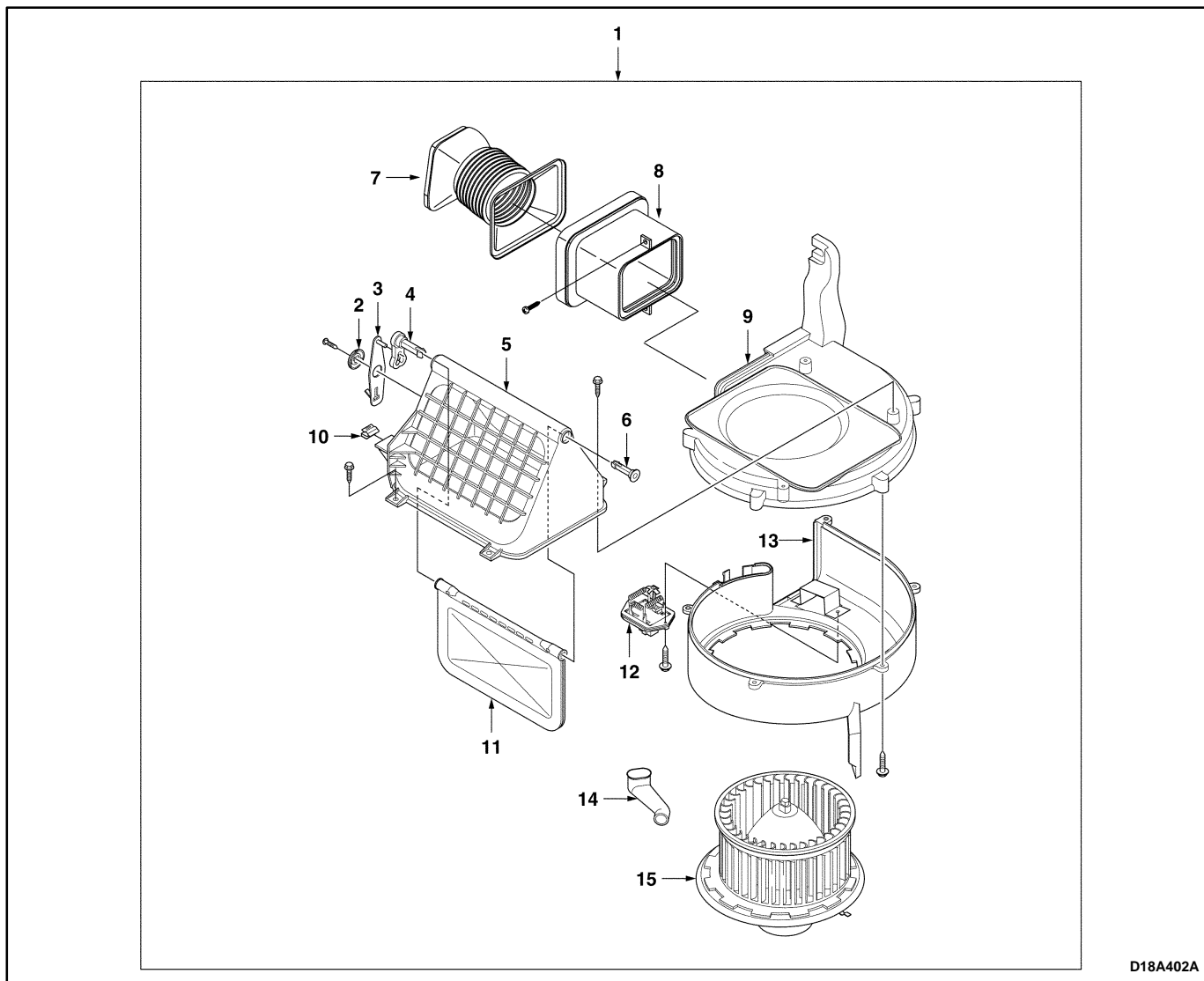


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- |                              |  |
|------------------------------|--|
| 1. HVAC Control Assembly     | 12. Detent Spring                      |
| 2. Temperature Control Cable | 13. Blower Switch                      |
| 3. Mode Select Cable         | 14. Rear Defogger Switch               |
| 4. Rack                      | 15. Recirculating/Fresh Air Door Cable |
| 5. Bracket                   | 16. Panel                              |
| 6. Cable Clamp               | 17. A/C Push Knob                      |
| 7. Bulb Socket Assembly      | 18. Rotary Knob                        |
| 8. Pinion Assembly           | 19. Recirculating Knob                 |
| 9. A/C Switch                | 20. Rear Defogger Push Knob            |
| 10. Housing                  | 21. Recirculation                      |
| 11. Detent Cap               |  |

## BLOWER MODULE ASSEMBLY

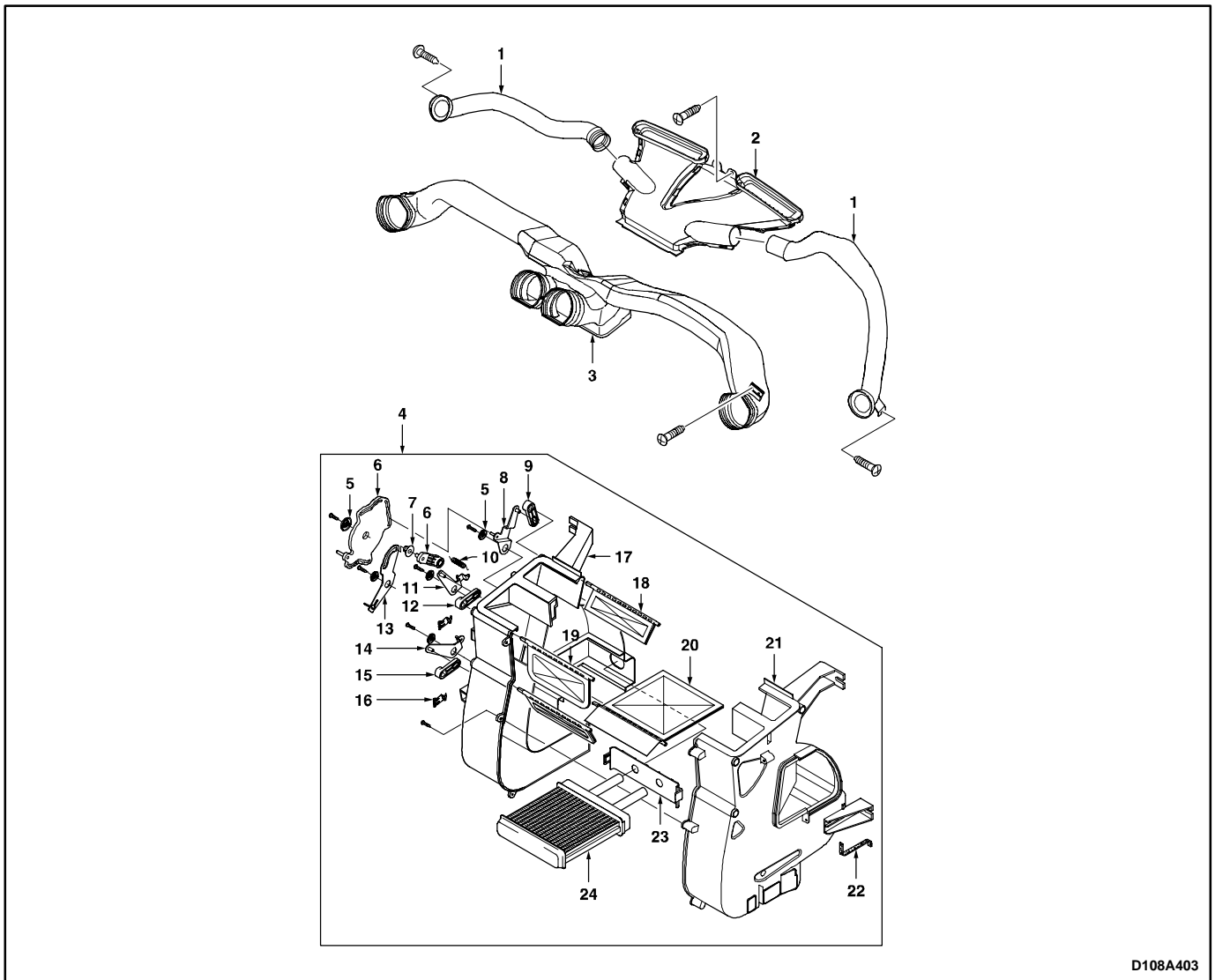
(Left-Hand Drive Shown, Right-Hand Drive Similar)



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- 1. Blower Module Assembly
- 2. Plastic Washer
- 3. Blower Link
- 4. Blower Lever
- 5. Air Intake Case
- 6. Valve Retainer
- 7. Heater Duct Assembly
- 8. Blower Connector Duct

- 9. Orifice Case
- 10. Cable Clamp
- 11. Blower Valve
- 12. Blower Resistor
- 13. Lower Case
- 14. Cooling Hose
- 15. Blower Motor

**AIR DISTRIBUTOR AND HEATER MODULE ASSEMBLY****(Left-Hand Drive Shown, Right-Hand Drive Similar)**

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- |                                      |                               |
|--------------------------------------|-------------------------------|
| 1. Defroster Duct Hose               | 13. Temperature Control Link  |
| 2. Defroster Duct                    | 14. Heater Link               |
| 3. Ventilation Duct                  | 15. Heater Lever              |
| 4. Heater Module Assembly            | 16. Cable Link                |
| 5. Plastic Washer                    | 17. Left Heater Case          |
| 6. Temperature Control Lever         | 18. Defroster Valve           |
| 7. Temperature Control Lever Bearing | 19. Ventilation Valve         |
| 8. Defroster Link                    | 20. Temperature Control Valve |
| 9. Defroster Lever                   | 21. Right Heater Case         |
| 10. Spring                           | 22. Case Seal                 |
| 11. Ventilation Link                 | 23. Heater Core Cover         |
| 12. Ventilation Lever                | 24. Heater Core               |

# DIAGNOSTIC INFORMATION AND PROCEDURES

## HEATER SYSTEM

### INSUFFICIENT HEATING OR DEFROSTING

**Caution:** The cooling system is pressurized when hot. Injury can result from removing the surge tank cap before the engine is sufficiently cool.

Step	Action	Value(s)	Yes	No
1	Verify the customer's complaint. Are the customer's concerns verified?	–	Go to <i>Step 2</i>	System OK
2	Check the coolant level. Is the coolant level correct?	–	Go to <i>Step 4</i>	Go to <i>Step 3</i>
3	Add coolant as needed. Is the repair complete?	–	System OK	Go to <i>Step 4</i>
4	Check the timing belt for tension or damage. Is the timing belt OK?	–	Go to <i>Step 6</i>	Go to <i>Step 5</i>
5	Correct any problem with the drive belts. Is the repair complete?	–	System OK	Go to <i>Step 6</i>
6	Check the coolant hoses for leaks or kinks. Are the coolant hoses OK?	–	Go to <i>Step 8</i>	Go to <i>Step 7</i>
7	Repair any problem with the coolant hoses. Is the repair complete?	–	System OK	Go to <i>Step 8</i>
8	Check the surge tank cap. Refer to <i>Section 1D, Engine Cooling</i> . Is the surge tank cap OK?	–	Go to <i>Step 10</i>	Go to <i>Step 9</i>
9	Repair or replace the surge tank cap as needed. Is the repair complete?	–	System OK	Go to <i>Step 10</i>
10	1. Set the A/C switch OFF on vehicles equipped with air conditioning. 2. Set the blower motor switch on 4. 3. Set the heater control to full hot. 4. Turn the ignition ON. 5. Check for airflow from the heater outlet. Is there heavy airflow from the heater outlet?	–	Go to <i>Step 11</i>	Go to <i>Step 25</i>
11	Check for a change in the airflow at various blower speeds. Does the blower speed increase as the switch is turned from 1 to 4?	–	Go to <i>Step 12</i>	Go to "Blower Electrical"
12	1. Set the A/C switch to OFF, on vehicles equipped with air conditioning. 2. Set the temperature lever to full hot. 3. Set the blower motor switch on 4. 4. With the engine sufficiently cool, remove the surge tank cap. 5. Start the vehicle and idle the engine. 6. Watch for the flow of the coolant. Is the coolant flow visible?	–	Go to <i>Step 14</i>	Go to <i>Step 13</i>

## Insufficient Heating or Defrosting (Cont'd)

Step	Action	Value(s)	Yes	No
13	1. Check for a <ul style="list-style-type: none"> <li>● Restriction in the cooling system.</li> <li>● Failed water pump impeller.</li> <li>● Faulty thermostat.</li> </ul> 2. Make repairs to the cooling system, as needed. Are the repairs complete?	–	System OK	–
14	1. Check the vehicle for cold air leaks at the <ul style="list-style-type: none"> <li>● Dash.</li> <li>● Heater cases.</li> <li>● Vents.</li> </ul> 2. Check under the seat for obstructions. 3. Repair any leaks or obstructions. Are the repairs complete?	–	System OK	–
15	1. Turn the ignition OFF. 2. Turn the temperature control knob to full cold, then rapidly to full hot. 3. Listen for the sound of the temperature door slam just before reaching the end of the travel range of the control knob. Did the door slam?	–	Go to Step 17	Go to Step 16
16	1. Check the temperature door <ul style="list-style-type: none"> <li>● Travel.</li> <li>● Cables.</li> <li>● Linkage.</li> </ul> 2. Verify the accuracy of the temperature controls at full hot. 3. Verify the accuracy of the temperature controls at full cold. Is the repair complete?	–	System OK	–
17	1. Set the temperature door to full hot. 2. Start the vehicle. 3. Check the temperature of the heater inlet hose and the heater outlet hose by feel. Is the heater inlet hose hot and the heater outlet hose warm?	–	Go to Step 18	Go to Step 21
18	Check the thermostat. Refer to <i>Section 1D, Engine Cooling</i> . Is the thermostat installed and seated properly?	–	Go to Step 19	Go to Step 20
19	Replace the thermostat. Refer to <i>Section 1D, Engine Cooling</i> . Is the repair complete?	–	System OK	–
20	Reinstall the thermostat. Is the repair complete?	–	System OK	–
21	Inspect the heater hoses for proper installation. Are heater hoses reversed?	–	Go to Step 22	Go to Step 23
22	Reinstall the heater hoses properly. Is the repair complete?	–	System OK	–

## Insufficient Heating or Defrosting (Cont'd)

Step	Action	Value(s)	Yes	No
23	1. Back flush the heater core. 2. Drain the cooling system. 3. Replace the coolant. 4. Warm the engine to an average operating temperature. 5. Feel the heater inlet hose and the heater outlet hose. Is the heater inlet hose hot and the heater outlet hose warm?	–	System OK	Go to Step 24
24	Replace the heater core. Is the repair complete?	–	System OK	–
25	Recheck the system using the “Control Settings/Correct Results” tests. Refer to “Improper Air Delivery or No Mode Shift” in this section. Is the repair complete?	–	System OK	Go to Step 26
26	Check for airflow from the defroster or the vent outlets. Is there high airflow from the defroster or the vent outlets?	–	Go to Step 27	Go to Step 28
27	Adjust the heater door at the floor and the vent door to get the proper airflow. Is the repair complete?	–	System OK	–
28	Switch the mode knob to defrost. Is the defroster airflow OK?	–	Go to Step 29	Go to Step 30
29	1. Remove the heater outlet and check for obstructions. 2. Remove any obstructions in the heater outlet. Is the repair complete?	–	System OK	–
30	Check for airflow change at various blower speeds. Does the blower speed increase as the control is turned from 1 to 4?	–	Go to Step 31	Go to “Blower Electrical”
31	Check for obstructions in the system at the blower inlet. Are there any obstructions?	–	Go to Step 32	Go to Step 33
32	Remove the obstructions in the system at the blower inlet. Is the repair complete?	–	System OK	–
33	1. Set the blower on 4. 2. Rotate the temperature control from full hot to full cold. 3. Listen for an airflow change. Does the airflow change?	–	Go to Step 34	Go to Step 35



## Insufficient Heating or Defrosting (Cont'd)

Step	Action	Value(s)	Yes	No
34	1. Check the temperature door <ul style="list-style-type: none"> <li>● Travel.</li> <li>● Cables.</li> <li>● Linkage.</li> <li>● Control.</li> </ul> 2. Verify the accuracy of the temperature controls at full hot. Is the repair complete?	-	System OK	-
35	1. Check the system for any obstruction between the blower and the system outlets. 2. Remove any obstruction. Is the repair complete?	-	System OK	-

**BLOWER ELECTRICAL**

Step	Action	Value(s)	Yes	No
1	Verify the customer's complaint. Are the customer's concerns verified.	–	Go to <i>Step 2</i>	System OK
2	Check the blower. Does the blower run at any speed?	–	System OK	Go to <i>Step 3</i>
3	1. Disconnect the power connector from the blower motor under the dashboard on the passenger side of the vehicle. 2. Use an ohmmeter check the resistance between the 1 terminal of the blower motor connector and each step with the blower switch place each position. Does the ohmmeter show the specified value of the each position?	Refer to "Specifications" in this section.	Go to <i>Step 4</i>	Go to <i>Step 5</i>
4	Replace the blower motor. Is the repair complete?	–	System OK	Go to <i>Step 7</i>
5	Check the fuse Ef6. Is the fuse blown?	–	Go to <i>Step 6</i>	Go to <i>Step 7</i>
6	1. Turn the ignition ON. 2. Use a short detector to locate a possible short. <ul style="list-style-type: none"> <li>● From the fuse Ef6 to the blower switch.</li> <li>● From the blower switch to the blower resistor.</li> <li>● From the blower resistor to the blower motor.</li> </ul> 3. Repair any short. 4. Replace any blown fuse. Is the repair complete?	–	System OK	–
7	1. Turn the ignition ON. 2. Disconnect the power connector from the blower motor. 3. Use a test lamp to locate a possible short. <ul style="list-style-type: none"> <li>● From the terminal 2 of the motor connector to the terminal 3 of the motor switch connector.</li> <li>● From the terminal 2 of the motor connector to the terminal 4 of the motor switch connector.</li> <li>● From the terminal 2 of the motor connector to the terminal 5 of the motor switch connector.</li> <li>● From the terminal 2 of the motor connector to the terminal 6 of the motor switch connector.</li> </ul> Does the test lamp light ON?	–	Go to <i>Step 9</i>	Go to <i>Step 8</i>
8	Replace the blower resistor. Is the repair complete?	–	System OK	Go to <i>Step 10</i>
9	Replace the blower motor switch. Is the repair complete?	–	System OK	–
10	1. Check the ground of the blower motor. 2. Repair the ground of the blower motor. Is the repair complete?	–	System OK	–

## IMPROPER AIR DELIVERY OR NO MODE SHIFT

This procedure provides a test of all functions of the heater/defroster unit.

1. Warm up the vehicle.
2. Keep the engine running.
3. Perform the tests outlined in the table below and look for the results indicated.

CONTROL SETTINGS			CORRECT RESULTS				
MODE KNOB	TEMP. CONTROL	BLOWER MOTOR SWITCH	BLOWER SPEED	POWER VENT OUTLET	FLOOR OUTLET	DEFROST OUTLET	SIDE WINDOW OUTLET
Vent	Cold	Off	Off	No Airflow	No Airflow	No Airflow	No Airflow
Vent	Cold	4	High	Ambient Airflow	No Airflow	No Airflow	No Airflow
Floor	Cold to Hot	4	High	No Airflow	Cold to Hot Airflow	Minimum Cold to Hot Airflow	Minimum Cold to Hot Airflow
Defroster	Cold to Hot	4	High	No Airflow	Minimum Cold to Hot Airflow	Cold to Hot Airflow	Minimum Cold to Hot Airflow

If any of these settings does not produce the correct results, perform the following diagnostic procedure.

Step	Action	Value(s)	Yes	No
1	Verify the customer's complaint. Are the customer's concerns verified?	–	Go to <i>Step 2</i>	System OK
2	Examine the affected door in the unit for proper cable attachment. <ul style="list-style-type: none"> <li>• Check the cable connection to the door.</li> <li>• Check that the cable sheath is properly retained.</li> </ul> Is the cable connected properly?	–	Go to <i>Step 4</i>	Go to <i>Step 3</i>
3	Repair as necessary. Is the repair complete?	–	System OK	–
4	1. Disconnect the cable at the door. 2. Check the range of the door travel and the effort required to move it. Does the door move freely through its entire range of travel so that it can close at both ends of the range?	–	Go to <i>Step 5</i>	Go to <i>Step 3</i>
5	Check the travel of the Bowden cable by turning the control knob. Is the cable travel OK?	–	Go to <i>Step 6</i>	Go to <i>Step 7</i>
6	1. Reinstall the cable. 2. Recheck the system using the "Control Settings/Correct Results" tests in this procedure. Does the system perform properly?	–	System OK	Go to <i>Step 9</i>
7	1. Check the cable attachment at the control. 2. Check for a broken control. Is there a problem with the cable attachment or the control?	–	Go to <i>Step 8</i>	Go to <i>Step 9</i>

## Improper Air Delivery or No Mode Shift (Cont'd)

Step	Action	Value(s)	Yes	No
8	Repair the cable attachment or control as necessary. Is the repair complete?	–	System OK	Go to <i>Step 9</i>
9	Recheck the system using the “Control Settings/Correct Results” tests in this procedure. Is the repair complete?	–	System OK	Go to <i>Step 10</i>
10	Check for airflow from the defroster or the vent outlets. Is there high airflow from the defroster or the vent outlets?	–	Go to <i>Step 11</i>	Go to <i>Step 12</i>
11	Adjust the heater door at the floor and the vent door to get the proper airflow. Is the repair complete?	–	System OK	–
12	Switch the mode knob to defrost. Is the defroster airflow OK?	–	Go to <i>Step 13</i>	Go to <i>Step 14</i>
13	1. Remove the heater outlet. 2. Check the heater outlet for obstructions. 3. Remove any obstructions in the heater outlet. Is the repair complete?	–	System OK	–
14	Check the blower speeds for change in the airflow. Does the blower speed increase as the control is turned from 1 to 4?	–	Go to <i>Step 15</i>	Go to “Blower Electrical”
15	1. Check for obstructions in the system at the blower inlet. 2. Remove any obstructions at the blower inlet. Is the repair complete?	–	System OK	Go to <i>Step 16</i>
16	1. Set the blower on 4. 2. Rotate the temperature control from full hot to full cold. 3. Listen for an airflow change. Did the airflow change?	–	Go to <i>Step 17</i>	Go to <i>Step 18</i>
17	1. Check the temperature door adjustment, the cables, the linkage, and the control. 2. Adjust the temperature control to full hot. Is the repair complete?	–	System OK	–
18	1. Check the system for any obstruction between the blower and the system outlets. 2. Remove any obstruction between the blower and the system outlets. Is the repair complete?	–	System OK	–

**TOO MUCH HEAT**

<b>Step</b>	<b>Action</b>	<b>Value(s)</b>	<b>Yes</b>	<b>No</b>
1	Verify the customer's complaint. Are the customer's concerns verified?	-	Go to <i>Step 2</i>	System OK
2	Set the mode switch to the floor position. Is there too much heat when the mode switch is in the floor position?	-	Go to <i>Step 3</i>	Go to <i>Step 9</i>
3	Check for defroster bleed. Is there objectionable defroster bleed?	-	Go to <i>Step 4</i>	Go to <i>Step 5</i>
4	1. Check the door travel, the cables, the controls, and the linkage for the heater and the defroster. 2. Adjust or repair, as required. Is the repair complete?	-	System OK	-
5	1. In vehicles equipped with A/C, set the A/C switch OFF. 2. In all vehicles, set the blower speed to 4. 3. Set the temperature to full hot. 4. Turn the ignition switch to ON. 5. Check for airflow from the floor outlets. 6. Check the floor outlet attachment. Is the airflow high?	-	Go to <i>Step 7</i>	Go to <i>Step 8</i>
6	Check for a change in the airflow at different blower speeds. Does the airflow change as the setting for the blower-speed switch is changed?	-	System OK	Go to "Blower Electrical"
7	1. Check the temperature door travel, the cables, and the linkage. 2. Adjust to full cold. 3. Check for full hot. Is the repair complete?	-	System OK	-
8	Adjust or repair the floor/defroster and/or the vent/floor mode. Is the repair complete?	-	System OK	-
9	Set the mode switch to the vent position. In the vent position, is the problem objectionable bleed?	-	Go to <i>Step 10</i>	Go to <i>Step 15</i>
10	1. Check the system case for leaks. 2. Check the floor outlet attachment. Are any problems found?	-	Go to <i>Step 11</i>	Go to <i>Step 12</i>
11	Repair the system case or the floor outlet attachment as required. Is the repair complete?	-	System OK	Go to <i>Step 12</i>
12	1. Turn the ignition switch OFF. 2. Turn the temperature control knob to full hot, then rapidly to full cold. Do you hear the door slam just before you reached the end of the control travel?	-	Go to <i>Step 13</i>	Go to <i>Step 14</i>
13	Adjust the vent door to vent more. Is the repair complete?	-	System OK	-

**Too Much Heat (Cont'd)**

<b>Step</b>	<b>Action</b>	<b>Value(s)</b>	<b>Yes</b>	<b>No</b>
14	1. Check the temperature door travel, the cables, and the linkage. 2. Verify that the temperature door goes to full cold. 3. Check the temperature door for full hot. Is the temperature door travel correct?	-	System OK	-
15	1. Check for hot air leaks from the engine compartment to the blower inlet. 2. Repair as needed. Is the repair complete?	-	System OK	-

**CONTROLS**

<b>Step</b>	<b>Action</b>	<b>Value(s)</b>	<b>Yes</b>	<b>No</b>
1	Verify the customer's complaint. Are the customer's concerns verified?	–	Go to <i>Step 2</i>	System OK
2	Is excessive effort required to move a control?	–	Go to <i>Step 5</i>	Go to <i>Step 3</i>
3	Does a door move too easily on a high-blower setting?	–	Go to <i>Step 4</i>	System OK
4	1. Replace the Bowden cable with a longer cable. 2. Add a loop to the cable routing to increase the effort required to move a control. 3. Check for instrument panel interference with the new cable routing. Does the control operate properly?	–	System OK	Go to <i>Step 5</i>
5	Check the cables for improper routing, kinks, wiring interference, or other instrument panel interference. Is any cable problem found?	–	Go to <i>Step 6</i>	Go to <i>Step 7</i>
6	Repair as needed. Is the repair complete?	–	System OK	–
7	1. Remove the cable from any door that binds on the cable. 2. Cycle the door manually. 3. Check for door binding. Is there any door binding?	–	Go to <i>Step 8</i>	Go to <i>Step 11</i>
8	Check the door seal for proper installation. Is the door seal OK?	–	Go to <i>Step 9</i>	Go to <i>Step 10</i>
9	1. Check a binding door for shaft alignment, a bent shaft or a bent door, or a warped case. 2. Repair, as needed. Is the repair complete?	–	System OK	–
10	Repair the door seal, as needed. Is the repair complete?	–	System OK	–
11	Check for control binding. Does the control bind?	–	Go to <i>Step 13</i>	Go to <i>Step 12</i>
12	1. Reinstall the cable to the door. 2. Check the cable-to-dash components clearances. 3. Repair any interference. Is the repair complete?	–	System OK	–
13	1. Remove the cable from the control. 2. Check the control for binding. Does the control bind?	–	Go to <i>Step 14</i>	Go to <i>Step 15</i>
14	Replace the control. Is the repair complete?	–	System OK	–
15	Replace the cable. Is the repair complete?	–	System OK	–

**BLOWER NOISE**

<b>Step</b>	<b>Action</b>	<b>Value(s)</b>	<b>Yes</b>	<b>No</b>
1	Verify the customer's complaint. Are the customer's concerns verified?	–	Go to <i>Step 2</i>	System OK
2	1. Sit inside the vehicle. 2. Close the doors and windows. 3. Turn the ignition ON. 4. Set the blower speed to 4. 5. Set the temperature to full cold. 6. Cycle through the blower speeds, the modes, and the temperature settings in order to find the noise. Is the blower noise constant at high blower speeds or certain modes, but absent at lower speeds or in other modes?	–	Go to <i>Step 11</i>	Go to <i>Step 3</i>
3	Check for vibrations from the blower motor and fan assembly at each blower speed by feeling the blower motor housing. Did you find excessive vibration?	–	Go to <i>Step 6</i>	Go to <i>Step 4</i>
4	1. Remove the blower motor and fan assembly. Refer to "Blower Motor" in this section. 2. Check for foreign material at the opening of the blower inlet. Did you find any foreign material at the blower inlet?	–	Go to <i>Step 5</i>	Go to <i>Step 6</i>
5	Remove all foreign material. Is the repair complete?	–	System OK	Go to <i>Step 6</i>
6	1. Examine the blower fan for wear spots, cracked blades, a cracked hub, a loose fan retaining nut, or bad alignment. 2. Examine the blower case for wear spots. Did you find any problem?	–	Go to <i>Step 7</i>	Go to <i>Step 9</i>
7	Lubricate the motor. Is the repair complete?	–	System OK	Go to <i>Step 8</i>
8	Replace the motor and fan assembly. Is the repair complete?	–	System OK	Go to <i>Step 9</i>
9	If the noise is a click/tick or whine, replace the motor. Is the repair complete?	–	System OK	Go to <i>Step 10</i>
10	Reinstall the original motor. Is the problem still present?	–	Go to <i>Step 11</i>	System OK
11	1. Set the blower speed on 4. 2. Check full-hot to full-cold temperature positions in the defrost, floor, and vent modes. Is the noise present in the defrost mode only?	–	Go to <i>Step 12</i>	Go to <i>Step 13</i>
12	1. Check the ducts for obstructions or foreign materials. 2. Remove any obstructions or foreign materials. 3. Check floor/defroster door seals. 4. Repair or replace, as needed. Is the repair complete?	–	System OK	–
13	Is the noise present in the floor mode only?	–	Go to <i>Step 12</i>	Go to <i>Step 14</i>



**Blower Noise (Cont'd)**

<b>Step</b>	<b>Action</b>	<b>Value(s)</b>	<b>Yes</b>	<b>No</b>
14	Is the noise present in the vent mode only?	–	Go to <i>Step 15</i>	Go to <i>Step 16</i>
15	1. Check the ducts for obstructions or foreign materials. 2. Remove any obstructions or foreign materials. 3. Check the vent door seals. 4. Repair or replace as needed. Is the repair complete?	–	System OK	–
16	Is the noise present in all modes, but not all temperature positions?	–	Go to <i>Step 17</i>	Go to <i>Step 18</i>
17	1. Check the temperature door seals. 2. Repair or replace, as needed. Is the repair complete?	–	System OK	–
18	1. Check the system for obstructions or foreign materials between the fan and the temperature door. 2. Repair or replace, as needed. Is the repair complete?	–	System OK	Go to <i>Step 2</i>