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Heating - Insight

COMPONENT LOCATION INDEX



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Fig. 1: Identifying Heating Components Location (1 Of 2) Courtesy of AMERICAN HONDA MOTOR CO., INC.

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Fig. 2: Identifying Heating Components Location (2 Of 2) Courtesy of AMERICAN HONDA MOTOR CO., INC.

GENERAL TROUBLESHOOTING INFORMATION

HOW TO RETRIEVE A DTC

The heater control panel has a self-diagnostic function. To run the self-diagnostic function, do the following:

- 1. Turn the ignition switch ON (II).
- 2. Press the FAN UP button and then the FAN DOWN button. Continue to hold both buttons down.

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Fig. 3: Locating Fan Up Button And Fan Down Button Courtesy of AMERICAN HONDA MOTOR CO., INC.

If there is any abnormality in the system, the DTC indicator will light up the segment (C, D, I, J, K, L, M, or N) corresponding to the error. Then the DTC indicator will alternate every second between displaying "88" (all segments lit) and the error code segment (C, D, I, J, K, L, M, or N). To determine the meaning of the DTC, refer to the <u>DTC TROUBLESHOOTING INDEX</u>. If there is no abnormality, the segments will not light up.

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DTC INDICATOR



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Fig. 4: Identifying DTC Indicator Courtesy of AMERICAN HONDA MOTOR CO., INC.

Canceling the self-diagnostic Function

3. Turn the ignition switch OFF to cancel the self-diagnostic function. After completing repair work, run the self-diagnostic function again to make sure that there are no other malfunctions.

DTC TROUBLESHOOTING INDEX

To retrieve the DTC, you must run the self-diagnostic function (see CANCELING

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THE SELF-DIAGNOSTIC FUNCTION). In the case of multiple problems, the respective indicator segments will come on. If indicator segments C, I, and L come on at the same time, there may be an open in the common ground wire of the sensors.



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Fig. 5: Identifying DTC Indicator Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC DETECTION ITEM AND PAGE

DTC (Indicator	Detection Item	Page
(Indicator		

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Segment)		
С	An open in the outside air temperature sensor circuit	(see DTC INDICATOR C: AN OPEN IN THE OUTSIDE AIR TEMPERATURE SENSOR CIRCUIT)
D	A short in the outside air temperature sensor circuit	(see DTC INDICATOR D: A SHORT IN THE OUTSIDE AIR TEMPERATURE SENSOR CIRCUIT)
Ι	An open in the air mix control motor circuit	(see DTC INDICATOR I: AN OPEN IN THE AIR MIX CONTROL MOTOR CIRCUIT)
J	A short in the air mix control motor circuit	(see DTC INDICATOR J: A SHORT IN THE AIR MIX CONTROL MOTOR CIRCUIT)
K	A problem in the air mix control linkage, doors, or motor	(see DTC INDICATOR K: A PROBLEM IN THE AIR MIX CONTROL LINKAGE, DOORS, OR MOTOR)
L	An open in the heater core temperature sensor circuit	(see DTC INDICATOR L: AN OPEN IN THE HEATER CORE TEMPERATURE SENSOR CIRCUIT)
М	A short in the heater core temperature sensor circuit	(see DTC INDICATOR M: A SHORT IN THE HEATER CORE TEMPERATURE SENSOR CIRCUIT)
N	A problem in the blower motor circuit	(see DTC INDICATOR N: A PROBLEM IN THE BLOWER MOTOR CIRCUIT)

SYMPTOM TROUBLESHOOTING INDEX

SYMPTOM TROUBLESHOOTING INDEX

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Mode control motor does not run, or one or more modes do not work	Mode control motor circuit troubleshooting (see <u>MODE</u> <u>CONTROL MOTOR</u> <u>CIRCUIT</u> <u>TROUBLESHOOTING</u>)	 HVAC DTCs (see <u>GENERAL</u> <u>TROUBLESHOOTING</u> <u>INFORMATION</u>) Blown fuse No. 16 (7.5 A) in the under-dash fuse/relay box Cleanliness and tightness of all connectors
Recirculation control doors do not change between Fresh and Recirculate	Recirculation control motor circuit troubleshooting (see <u>RECIRCULATION</u> <u>CONTROL MOTOR</u> <u>CIRCUIT</u> <u>TROUBLESHOOTING</u>)	 HVAC DTCs (see <u>GENERAL</u> <u>TROUBLESHOOTING</u> <u>INFORMATION</u>) Blown fuse No. 16 (7.5 A) in the under-dash fuse/relay box Blown fuse No. 16 (7.5 A) in the under-dash fuse/relay box Cleanliness and tightness of all connectors
Blower and heater controls do not work	Heater control power and ground circuit troubleshooting (see <u>HEATER CONTROL</u> <u>POWER AND GROUND</u> <u>CIRCUIT</u> <u>TROUBLESHOOTING</u>)	 HVAC DTCs (see <u>GENERAL</u> <u>TROUBLESHOOTING</u> <u>INFORMATION</u>) Blown fuse No. 16 (7.5 A) in the under-dash fuse/relay box Blown fuse No. 16 (30 A) in the under-hood fuse/relay box, and No. 16 (7.5 A) and No. 18 (7.5 A) in the under- dash fuse/relay box

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• Poor ground at G404
• Cleanliness and tightness of
all connectors

SYSTEM DESCRIPTION

HEATER CONTROL PANEL INPUTS AND OUTPUTS

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HEATER CONTROL PANEL CONNECTORS





Wire side of female terminals

CONNECTOR A (O on Circuit Diagram)

Cavity	Wire color	Signal	
1	RED	GAUGE ASSEMBLY	OUTPUT
2	BLK/YEL	IG2 (Power)	INPUT
3	WHT/RED	+B (Power)	INPUT
4			
5	BLU/ORN	BLOWER MOTOR HIGH RELAY	INPUT
6	RED/BLK	TAILLIGHTS RELAY	INPUT
7			
8	BLU/RED	POWER TRANSISTOR CONTROL	OUTPUT
9	BLU/BLK	BLOWER FEEDBACK	INPUT
10	BLK	GROUND (G404)	INPUT
11	BLK/YEL	ECM	OUTPUT
12	BRN/YEL	REAR WINDOW DEFOGGER RELAY	OUTPUT

CONNECTOR B (on Circuit Diagram)

Cavity	Wire color	Signal	
1	PNK	OUTSIDE AIR TEMPERATURE SENSOR	OUTPUT
2			
, 3			
4	RED/WHT	HEATER CORE TEMPERATURE SENSOR	INPUT
5	LT GRN	SENSOR COMMON GROUND	OUTPUT
6	BRN/WHT	MODE CONTROL MOTOR GROUND	OUTPUT
7			
8	BRN/YEL	ECM	INPUT
9	YEL/RED	MODE VENT	OUTPUT
10	YEL/GRN	MODE HEAT/VENT	OUTPUT
11			
12	PNK/BLK	AIR MIX POTENTIAL	INPUT
13	BLU/WHT	VEHICLE SPEED SENSOR (VSS)	OUTPUT
14	GRY	AIR MIX POTENTIAL +5 V	OUTPUT
15	RED/YEL	AIR MIX HOT	OUTPUT
16	GRN/BLK	AIR MIX COOL	OUTPUT
17			
18	GRN/YEL	RECIRCULATE	OUTPUT
19	GRN/WHT	FRESH	OUTPUT
20	YEL/BLU	MODE DEF	OUTPUT
21	YEL	MODE HEAT/DEF	OUTPUT
22	YEL/BLK	MODE HEAT	OUTPUT

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Fig. 6: Identifying Heater Control Panel Inputs And Outputs Connectors Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

2000-06 HVAC Heating - Insight



Fig. 7: Heating Circuit Diagram Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

2000-06 HVAC Heating - Insight

DTC INDICATOR C: AN OPEN IN THE OUTSIDE AIR TEMPERATURE SENSOR CIRCUIT

NOTE: This code can cause the auto idle stop not to work.

1. Check to see if the outside air temperature sensor is connected.

Is the outside air temperature sensor connected?

YES -Go to step 2.

NO -Connect the sensor, clear the code and recheck.

- 2. Remove the outside air temperature sensor (see <u>OUTSIDE AIR</u> <u>TEMPERATURE SENSOR REPLACEMENT</u>).
- 3. Measure the resistance between the No. 1 and No. 2 terminals of the outside air temperature sensor.

* Dip the sensor in ice water, and measure resistance. Then pour warm water on the sensor, and check for a change in resistance.

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OUTSIDE AIR TEMPERATURE SENSOR



G03682660

Fig. 8: Measuring Resistance Between No. 1 And No. 2 Terminals Of Outside Air Temperature Sensor Courtesy of AMERICAN HONDA MOTOR CO., INC.

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* *Is the resistance within the specifications shown on the graph?* **YES** -Go to step 4.

NO -Replace the outside air temperature sensor.

- 4. Disconnect heater control panel connector B (22P).
- 5. Check for continuity between the No. 1 terminal of heater control panel connector B (22P) and the No. 1 terminal of the outside air temperature sensor 2P connector.



Wire side of female terminals

G03682661

Fig. 9: Identifying Heater Control Panel Connector B (22P) Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

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YES -Go to step 6.

NO -Repair open in the wire between the heater control panel and the outside air temperature sensor.

6. Check for continuity between the No. 5 terminal of heater control panel connector B (22P) and the No. 2 terminal of the outside air temperature sensor 2P connector.

HEATER CONTROL PANEL CONNECTOR B (22P)

Wire side of female terminals



OUTSIDE AIR TEMPERATURE SENSOR 2P CONNECTOR Wire side of female terminals

G03682662

Fig. 10: Checking For Continuity Between No. 5 And No 2 Terminal Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector B (22P) and at the outside air temperature sensor 2P connector.

If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair open in the wire between the heater control panel and the outside air temperature sensor.

DTC INDICATOR D: A SHORT IN THE OUTSIDE AIR TEMPERATURE SENSOR CIRCUIT

- 1. Remove the outside air temperature sensor (see <u>OUTSIDE AIR</u> <u>TEMPERATURE SENSOR REPLACEMENT</u>).
- 2. Test the outside air temperature sensor (see <u>OUTSIDE AIR</u> <u>TEMPERATURE SENSOR TEST</u>).

Is the outside air temperature sensor OK?

YES -Go to step 3.

NO -Replace the outside air temperature sensor.

- 3. Disconnect heater control panel connector B (22P).
- 4. Check for continuity between the No. 1 terminal of heater control panel connector B (22P) and body ground.

2000-06 HVAC Heating - Insight



Wire side of female terminals

G03682663

Fig. 11: Checking For Continuity Between No. 1 Terminal Of Heater Control Panel Connector B (22P) And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair short to body ground in the wire between the heater control panel and the outside air temperature sensor.

NO -Substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

DTC INDICATOR I: AN OPEN IN THE AIR MIX CONTROL MOTOR CIRCUIT

- 1. Disconnect the air mix control motor 5P connector.
- 2. Disconnect heater control panel connector B (22P).
- 3. Check for continuity between following terminals of heater control panel connector B (22P) and the air mix control motor 5P connector.

TERMINALS FOR CONTINUITY CHECK

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22P:	5P:
No. 5	No. 2
No. 12	No. 4
No. 14	No. 3
No. 15	No. 1
No. 16	No. 5

HEATER CONTROL PANEL CONNECTOR B (22P)

Wire side of female terminals



G03682664

Fig. 12: Checking For Continuity Between Terninals

2000-06 HVAC Heating - Insight

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Test the air mix control motor (see <u>AIR MIX CONTROL</u> <u>MOTOR TEST</u>). If the motor is OK, check for loose wires or poor connections at heater control panel connector B (22P) and at the air mix control motor 5P connector. If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair any open in the wire(s) between the heater control panel and the air mix control motor.

DTC INDICATOR J: A SHORT IN THE AIR MIX CONTROL MOTOR CIRCUIT

- 1. Disconnect the air mix control motor 5P connector.
- 2. Disconnect heater control panel connector B (22P).
- 3. Check for continuity between body ground and heater control panel connector B (22P) terminals No. 5, 12, 14, 15, and 16 individually.

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HEATER CONTROL PANEL CONNECTOR B (22P)



Wire side of female terminals

G03682665

Fig. 13: Checking For Continuity Between Body Ground And Heater <u>Control Panel Connector B (22P) Terminals</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair any short to body ground in the wire(s) between the heater control panel and the air mix control motor.

NO -Go to step 4.

4. Turn the ignition switch ON (II), and check the same terminals for voltage.

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HEATER CONTROL PANEL CONNECTOR B (22P)



Wire side of female terminals

G03682666

Fig. 14: Checking Terminals For Voltage Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there any voltage?

YES -Repair any short to power in the wire(s) between the heater control panel and the air mix control motor. This short may also damage the heater control panel. Repair the short to power before replacing the heater control panel.

NO -Test the air mix control motor (see <u>AIR MIX CONTROL MOTOR</u> <u>**TEST**</u>). If the motor is OK, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

DTC INDICATOR K: A PROBLEM IN THE AIR MIX CONTROL LINKAGE, DOORS, OR MOTOR

1. Test the air mix control motor (see AIR MIX CONTROL MOTOR TEST).

Is the air mix control motor OK?

YES -Substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel. **NO** -Go to step 2.

- 2. Remove the air mix control motor (see <u>AIR MIX CONTROL MOTOR</u> <u>TEST</u>).
- 3. Check the air mix control linkage and doors for smooth movement.

Do the air mix control linkage and doors move smoothly?

YES -Replace the air mix control motor.

NO -Repair the air mix control linkage and doors.

DTC INDICATOR L: AN OPEN IN THE HEATER CORE TEMPERATURE SENSOR CIRCUIT

NOTE: This code can cause the auto idle stop not to work.

1. Check to see if the outside air temperature sensor is connected.

Is the outside air temperature sensor connected?

YES -Go to step 2.

NO -Connect the sensor, clear the code and recheck.

- 2. Disconnect the heater core temperature sensor 2P connector.
- 3. Measure the resistance between the No. 1 and No. 2 terminals of the heater core temperature sensor.

2000-06 HVAC Heating - Insight

HEATER CORE TEMPERATURE SENSOR



Terminal side of male terminals

G03682667

Fig. 15: Measuring Resistance Between No. 1 And No. 2 Terminals Of Heater Core Temperature Sensor Courtesy of AMERICAN HONDA MOTOR CO., INC.

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G03682668

Fig. 16: Identifying Resistance And Temperature Graph Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance within the specifications shown on the graph?

YES -Go to step 4.

NO -Replace the heater core temperature sensor.

- 4. Disconnect heater control panel connector B (22P).
- 5. Check for continuity between the No. 4 terminal of heater control panel connector B (22P) and the No. 2 terminal of the heater core temperature sensor 2P connector.

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G03682669

Fig. 17: Checking For Continuity Between Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair open in the wire between the heater control panel and the heater core temperature sensor.

6. Check for continuity between the No. 5 terminal of heater control panel connector B (22P) and the No. 1 terminal of the heater core temperature sensor 2P connector.

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HEATER CONTROL PANEL CONNECTOR B (22P)

Wire side of female terminals



G03682670

Fig. 18: Checking For Continuity Between Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector B (22P) and at the heater core temperature sensor 2P connector. If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair open in the wire between the heater control panel and the heater core temperature sensor.

DTC INDICATOR M: A SHORT IN THE HEATER CORE TEMPERATURE SENSOR CIRCUIT

1. Disconnect the heater core temperature sensor 2P connector.

2. Test the heater core temperature sensor (see <u>HEATER CORE</u> <u>TEMPERATURE SENSOR TEST</u>).

Is the heater core temperature sensor OK?

YES -Go to step 3.

NO -Replace the heater core temperature sensor.

- 3. Disconnect heater control panel connector B (22P).
- 4. Check for continuity between the No. 4 terminal of heater control panel connector B (22P) and body ground.



HEATER CONTROL PANEL CONNECTOR B (22P)

G03682671

Fig. 19: Checking For Continuity Between No. 4 Terminal Of Heater Control Panel Connector B (22P) And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair short to body ground in the wire between the heater control

panel and the heater core temperature sensor.

NO -Substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

DTC INDICATOR N: A PROBLEM IN THE BLOWER MOTOR CIRCUIT

1. Turn the ignition switch ON (II) and turn the blower fan speed button to HIGH.

Does the blower motor run?

YES -Go to step 2.

NO -Go to step 14.

- 2. Turn the ignition switch OFF, then disconnect the power transistor 3P connector.
- 3. Check for continuity between the No. 3 terminal of the power transistor 3P connector and body ground.

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POWER TRANSISTOR 3P CONNECTOR



Wire side of female terminals

G03682672

Fig. 20: Checking For Continuity Between No. 3 Terminal Of Power Transistor 3P Connector And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 4.

NO -Check for an open in the wire between the power transistor and body ground. If the wire is OK, check for poor ground at G404.

4. Connect the No. 1 and No. 3 terminals of the power transistor 3P connector with a jumper wire.

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POWER TRANSISTOR 3P CONNECTOR



Wire side of female terminals

G03682673

Fig. 21: Connecting No. 1 And No. 3 Terminals Of Power Transistor 3P Connector With A Jumper Wire Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Turn the ignition switch ON (II).

Does the blower motor run at high speed?

YES -Go to step 6.

NO -Repair open in the wire between the power transistor and the blower motor.

6. Turn the ignition switch OFF.

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- 7. Disconnect the jumper wire.
- 8. Disconnect heater control panel connector A (12P).
- 9. Check for continuity between the No. 8 terminal of heater control panel connector A (12P) and the No. 2 terminal of the power transistor 3P connector.

HEATER CONTROL PANEL CONNECTOR A (12P)

Wire side of female terminals



Wire side of female terminals

G03682674

Fig. 22: Checking For Continuity Between Terminals **Courtesy of AMERICAN HONDA MOTOR CO., INC.**

Is there continuity?

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YES -Go to step 10.

NO -Repair open in the wire between the heater control panel and the power transistor.

10. Check for continuity between the No. 8 terminal of heater control panel connector A (12P) and body ground.

HEATER CONTROL PANEL CONNECTOR A (12P)



Wire side of female terminals

G03682675

Fig. 23: Checking For Continuity Between No. 8 Terminal Of Heater Control Panel Connector A (12P) And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair short to body ground in the wire between the heater control panel and the power transistor.

NO -Go to step 11.

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11. Check for continuity between the No. 9 terminal of heater control panel connector A (12P) and the No. 1 terminal of the power transistor 3P connector.



POWER TRANSISTOR 3P CONNECTOR Wire side of female terminals

G03682676

Fig. 24: Checking For Continuity Between Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 12.

NO -Repair open in the wire between the heater control panel and the

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power transistor.

- 12. Reconnect heater control panel connector A (12P).
- 13. Test the power transistor (see **<u>POWER TRANSISTOR TEST</u>**).

Is the power transistor OK?

YES -Check for loose wires or poor connections at heater control panel connector A (12P) and at the power transistor 3P connector. If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Replace the power transistor.

14. Turn the ignition switch OFF, and check the No. 12 (40 A) fuse in the underhood fuse/relay box, and No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

Are the fuses OK?

YES -Go to step 15.

NO -Replace the fuse(s), and recheck.

15. Connect the No. 2 terminal of the blower motor 2P connector to body ground with a jumper wire.

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BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

G03682677

Fig. 25: Connecting No. 2 Terminal Of Blower Motor 2P Connector To Body Ground With A Jumper Wire Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Turn the ignition switch ON (II).

Does the blower motor run?

YES -Go to step 17. **NO** -Go to step 30.

17. Turn the ignition switch OFF.

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- 18. Disconnect the jumper wire.
- 19. Remove the blower motor high relay, and test it (see <u>NORMALLY-OPEN</u> <u>TYPE B</u>).

Is the relay OK?

YES -Go to step 20.

NO -Replace the blower motor high relay.

20. Connect the No. 1 terminal of the blower motor high relay 4P connector to body ground with a jumper wire.

BLOWER MOTOR HIGH RELAY 4P CONNECTOR



Wire side of female terminals

G03682678

Fig. 26: Connecting No. 1 Terminal Of Blower Motor High Relay 4P Connector To Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Turn the ignition switch ON (II).

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Does the blower motor run?

YES -Go to step 22.

NO -Repair open in the wire between the blower motor high relay and the blower motor.

- 22. Turn the ignition switch OFF.
- 23. Disconnect the jumper wire.
- 24. Turn the ignition switch ON (II).
- 25. Measure the voltage between the No. 2 terminal of the blower motor high relay 4P connector and body ground.

BLOWER MOTOR HIGH RELAY 4P CONNECTOR



Wire side of female terminals

G03682679

Fig. 27: Measuring Voltage Between No. 2 Terminal Of Blower Motor High Relay 4P Connector And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?
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YES -Go to step 26.

NO -Repair open in the wire between the blower motor high relay and the No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

- 26. Turn the ignition switch OFF.
- 27. Check for continuity between the No. 3 terminal of the blower motor high relay 4P connector and body ground.

BLOWER MOTOR HIGH RELAY 4P CONNECTOR



Wire side of female terminals

G03682680

Fig. 28: Checking For Continuity Between Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 28.

NO -Check for an open in the wire between the blower motor high relay and body ground. If the wire is OK, check for poor ground at G404.

28. Disconnect heater control panel connector A (12P).

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29. Check for continuity between the No. 5 terminal of heater control panel connector A (12P) and the No. 4 terminal of the blower motor high relay 4P connector.



BLOWER MOTOR HIGH RELAY 4P CONNECTOR Wire side of female terminals

G03682681

Fig. 29: Checking For Continuity Between No. 5 Terminal Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector A (12P) and at the blower motor high relay 4P connector. If the connections are good, substitute a known-good heater control panel, and

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recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair open in the wire between the heater control panel and the blower motor high relay.

- 30. Disconnect the jumper wire.
- 31. Disconnect the blower motor 2P connector.
- 32. Measure the voltage between the No. 1 terminal of the blower motor 2P connector and body ground.

BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals G03682682

Fig. 30: Measuring Voltage Between No. 1 Terminal Of Blower Motor 2P

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<u>Connector And Body Ground</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Replace the blower motor.

NO -Go to step 33.

- 33. Turn the ignition switch OFF.
- 34. Remove the blower motor relay from the under-hood fuse/relay box, and test it (see <u>NORMALLY-OPEN TYPE B</u>).

Is the relay OK?

YES -Go to step 35.

NO -Replace the blower motor relay.

35. Measure the voltage between the No. 4 terminal of the blower motor relay 4P socket and body ground.

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BLOWER MOTOR RELAY 4P SOCKET



G03682683

Fig. 31: Measuring Voltage Between No. 4 Terminal Of Blower Motor Relay 4P Socket And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 36.

NO -Replace the under-hood fuse/relay box.

- 36. Turn the ignition switch ON (II).
- 37. Measure the voltage between the No. 1 terminal of the blower motor relay 4P socket and body ground.

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BLOWER MOTOR RELAY 4P SOCKET



G03682684

Fig. 32: Measuring Voltage Between No. 1 Terminal Of Blower Motor Relay 4P Socket And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 38.

NO -Repair open in the BLK/YEL wire between the No. 16 (7.5 A) fuse in the under-dash fuse/relay box and the blower motor relay.

- 38. Turn the ignition switch OFF.
- 39. Check for continuity between the No. 2 terminal of the blower motor relay 4P socket and body ground.

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BLOWER MOTOR RELAY 4P SOCKET



Fig. 33: Checking For Continuity Between No. 2 Terminal Of Blower Motor Relay 4P Socket And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair open in the BLU/WHT wire between the blower motor relay and the blower motor.

NO -Check for an open in the wire between the blower motor relay and body ground. If the wire is OK, check for poor ground at G301.

MODE CONTROL MOTOR CIRCUIT TROUBLESHOOTING

1. Check the No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

YES -Go to step 2.

NO -Replace the fuse, and recheck.

- 2. Disconnect the mode control motor 7P connector.
- 3. Turn the ignition switch ON (II).
- 4. Measure the voltage between the No. 1 terminal of the mode control motor 7P connector and body ground.

MODE CONTROL MOTOR 7P CONNECTOR



Wire side of female terminals

G03682686

Fig. 34: Measuring Voltage Between No. 1 Terminal Of Mode Control Motor 7P Connector And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

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Is there battery voltage?

YES -Go to step 5.

NO -Repair open in the wire between the mode control motor and the No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

- 5. Turn the ignition switch OFF.
- 6. Test the mode control motor (see $\underline{MODE \ CONTROL \ MOTOR \ TEST}$).

Is the mode control motor OK?

YES -Go to step 7.

NO -Go to step 12.

- 7. Disconnect heater control panel connector B (22P).
- 8. Check for continuity between the No. 6, 9,10, 20, 21, and No. 22 terminals of heater control panel connector B (22P) and body ground individually.



HEATER CONTROL PANEL CONNECTOR B (22P)

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Fig. 35: Checking For Continuity Between No. 6, 9,10, 20, 21, And No. 22

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Terminals Of Heater Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair any short to body ground in the wire(s) between the heater control panel and the mode control motor.

NO -Go to step 9.

9. Turn the ignition switch ON (II), and check the same terminals for voltage.



HEATER CONTROL PANEL CONNECTOR B (22P)

G03682688

Fig. 36: Checking Terminals For Voltage Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there any voltage?

YES -Repair any short to power in the wire(s) between the heater control panel and the mode control motor. This short may also damage the heater control panel. Repair the short to power before replacing the heater control

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panel.

NO -Go to step 10.

- 10. Turn the ignition switch OFF.
- 11. Check for continuity between the following terminals of heater control panel connector B (22P) and the mode control motor 7P connector.

TERMINALS FOR CONTINUITY CHECK

22P:	7P:
No. 6	No. 7
No. 9	No. 6
No. 10	No. 5
No. 20	No. 2
No. 21	No. 3
No. 22	No. 4

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Wire side of female terminals

G03682689

Fig. 37: Checking For Continuity Between Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector B (22P) and at mode control motor 7P connector. If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair any open in the wire(s) between the heater control panel and the mode control motor.

- 12. Remove the mode contol motor (see MODE CONTROL MOTOR TEST).
- 13. Check the mode control linkage and doors for smooth movement.

Do the mode control linkage and doors move smoothly?

YES -Replace the mode control motor.

NO -Repair the mode control linkage or doors.

RECIRCULATION CONTROL MOTOR CIRCUIT TROUBLESHOOTING

1. Check the No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

YES -Go to step 2.

NO -Replace the fuse, and recheck.

- 2. Disconnect the recirculation control motor 4P connector.
- 3. Turn the ignition switch ON (II).
- 4. Measure the voltage between the No. 1 terminal of the recirculation control motor 4P connector and body ground.

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RECIRCULATION CONTROL MOTOR 4P CONNECTOR



Wire side of female terminals

G03682690

Fig. 38: Measuring Voltage Between No. 1 Terminal Of Recirculation Control Motor 4P Connector And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 5.

NO -Repair open in the wire between the recirculation control motor and the No. 16 (7.5 A) fuse in the under-dash fuse/relay box.

- 5. Turn the ignition switch OFF.
- 6. Test the recirculation control motor (see <u>**RECIRCULATION CONTROL**</u> <u>**MOTOR TEST**</u>).

Is the recirculation control motor OK?

YES -Go to step 7.

NO -Go to step 12.

7. Disconnect heater control panel connector B (22P).

8. Check for continuity between the No. 18 and No. 19 terminals of heater control panel connector B (22P) and body ground individually.

HEATER CONTROL PANEL CONNECTOR B (22P)



Wire side of female terminals

G03682691

Fig. 39: Checking For Continuity Between No. 18 And No. 19 Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair any short to body ground in the wire(s) between the heater control panel and the recirculation control motor.

NO -Go to step 9.

9. Turn the ignition switch ON (II), and check the same terminals for voltage.

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HEATER CONTROL PANEL CONNECTOR B (22P)



Wire side of female terminals

G03682692

Fig. 40: Checking Terminals For Voltage Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there any voltage?

YES -Repair any short to power in the wire(s) between the heater control panel and the recirculation control motor. This short may also damage the heater control panel. Repair the short to power before replacing the heater control panel.

NO -Go to step 10.

- 10. Turn the ignition switch OFF.
- 11. Check for continuity between the following terminals of heater control panel

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connector B (22P) and the recirculation control motor 4P connector.

TERMINALS FOR CONTINUITY CHECK

22P:	4P:
No. 18	No. 4
No. 19	No. 2



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Fig. 41: Checking For Continuity Between Terminals

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector B (22P) and at recirculation control motor 4P connector. If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Repair any open in the wire(s) between the heater control panel and the recirculation control motor.

- 12. Remove the recirculation contol motor (see <u>**RECIRCULATION CONTROL**</u> <u>**MOTOR TEST**</u>).
- 13. Check the recirculation control linkage and door for smooth movement.

Do the recirculation control linkage and door move smoothly?

YES -Replace the recirculation control motor.

NO -Repair the recirculation control linkage or door.

HEATER CONTROL POWER AND GROUND CIRCUIT TROUBLESHOOTING

Check the No. 16 (30 A) fuse in the under-hood fuse/relay box, and the No. 16 (7.5 A) and No. 18 (7.5 A) fuses in the under-dash fuse/relay box.

Are the fuses OK?

YES -Go to step 2.

NO -Replace the fuse(s), and recheck.

- 2. Disconnect heater control panel connector A (12P).
- 3. Turn the ignition switch ON (II).
- 4. Measure the voltage between the No. 2 terminal of heater control panel connector A (12P) and body ground.

HEATER CONTROL PANEL CONNECTOR A (12P)



Wire side of female terminals

G03682694

Fig. 42: Measuring Voltage Between No. 2 Terminal Of Heater Control Panel Connector A (12P) And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 5.

NO -Repair open in the wire between the No. 16 (7.5 A) fuse in the underdash fuse/relay box and the heater control panel.

- 5. Turn the ignition switch OFF.
- 6. Measure the voltage between the No. 3 terminal of heater control panel connector A (12P) and body ground.

HEATER CONTROL PANEL CONNECTOR A (12P)



Wire side of female terminals

G03682695

Fig. 43: Measuring Voltage Between No. 3 Terminal Of Heater Control Panel Connector A (12P) And Body Ground Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 7.

NO -Repair open in the wire between the No. 18 (7.5 A) fuse in the underdash fuse/relay box and the heater control panel.

7. Check for continuity between the No. 10 terminal of heater control panel connector A (12P) and body ground.

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HEATER CONTROL PANEL CONNECTOR A (12P)



Wire side of female terminals

G03682696

Fig. 44: Checking For Continuity Between No. 10 Terminal Of Heater <u>Control Panel Connector A (12P)</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose wires or poor connections at heater control panel connector A (12P). If the connections are good, substitute a known-good heater control panel, and recheck. If the symptom/indication goes away, replace the original heater control panel.

NO -Check for an open in the wire between the heater control panel and body ground. If the wire is OK, check for poor ground at G404.

AIR MIX CONTROL MOTOR TEST

1. Disconnect the 5P connector from the air mix control motor.

NOTE: Incorrectly applying power and ground to the air mix control motor will damage it. Follow the instructions carefully.

- 2. Connect battery power to the No. 1 terminal of the air mix control motor, and ground the No. 5 terminal; the air mix control motor should run, and stop at Max Hot. If it doesn't, reverse the connections; the air mix control motor should run, and stop at Max Cool.
- 3. If the air mix control motor did not run in step 2, remove it, then check the air mix control linkage and doors for smooth movement.
 - If the linkage and doors move smoothly, replace the air mix control motor.
 - If the linkage or doors stick or bind, repair them as needed.
 - if the air mix control motor runs smoothly, go to step 4.

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AIR MIX CONTROL MOTOR



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Fig. 45: Identifying Air Mix Control Motor Connectors Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 4. Measure the resistance between the No. 2 and No. 3 terminals. It should be between 4.2 to 7.8 kohm.
- 5. Measure the resistance between the No. 2 and No. 4 terminals.

Max Cool-0.58 to 1.09 k ohm

Max Hot-3.52 to 6.55 k ohm

6. If either of the resistance readings are not as specified, replace the air mix control motor.

AIR MIX CONTROL MOTOR REPLACEMENT

1. Disconnect the 5P connector (A) from the air mix control motor (B). Remove the self-tapping screws, the air mix control motor and the flange collar (C) from the heater unit.



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Fig. 46: Disconnecting 5P Connector From Air Mix Control Motor And Removing Self-Tapping Screws, Air Mix Control Motor And Flange <u>Collar</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the motor in the reverse order of removal. Make sure the pin on the motor is properly engaged with the linkage. After installation, make sure the motor runs smoothly.

MODE CONTROL MOTOR TEST

1. Disconnect the 7P connector from the mode control motor.

NOTE: Incorrectly applying power and ground to the mode control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the mode control motor, and ground the No. 7 terminal. To avoid damaging the mode control motor, do not reverse power and ground. Using a jumper wire, connect the No. 7 terminal individually to the No. 2, 3, 4, 5, and 6 terminal in that order. Each time the connection is made, the mode control motor should run smoothly and stop. If the mode control motor does not run when jumping the first terminal, jump that terminal again after jumping the other terminals. The mode control motor is OK if it runs when jumping the first terminal again.

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MODE CONTROL MOTOR



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Fig. 47: Identifying Mode Control Motor Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. If the mode control motor did not run in step 2, remove it, then check the mode control linkage and doors for smooth movement.
 - If the linkage and doors move smoothly, replace the mode control motor.
 - If the linkage or doors stick or bind, repair them as needed.
- 4. If there is no continuity for a moment at each terminal, replace the mode control motor.

MODE CONTROL MOTOR REPLACEMENT

1. Disconnect the 7P connector (A) from the mode control motor (B). Remove the

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rod (C) from the arm (D) of the mode control motor. Remove the self-tapping screws and the mode control motor from the heater unit.



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Fig. 48: Disconnecting 7P Connector From Mode Control Motor Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the motor in the reverse order of removal. After installation, make sure the motor runs smoothly.

RECIRCULATION CONTROL MOTOR TEST

1. Disconnect the 4P connector from the recirculation control motor.

NOTE: Incorrectly applying power and ground to the recirculation control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the recirculation control motor, and ground the No. 2 and No. 4 terminals one at a time; the recirculation control motor should run smoothly. To avoid damaging the recirculation control motor, do not reverse power and ground. Disconnect the No. 2 or No. 4 terminals from ground; the recirculation control motor should stop at Fresh (when the No. 4 terminal is disconnected) or Recirculate (when the No. 2 terminal is disconnected) Don't cycle the recirculation control motor for a long time.

RECIRCULATION CONTROL MOTOR



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Fig. 49: Identifying Recirculation Control Motor Connectors Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. If the recirculation control motor did not run in step 2, remove it, then check the recirculation control linkage and door for smooth movement.
 - If the likage and doors move smoothly, replace the recirculation control motor.
 - If the likage or doors stick or bind, repair them as needed.

RECIRCULATION CONTROL MOTOR REPLACEMENT

- 1. Remove the glove box (see <u>GLOVE BOX REMOVAL/INSTALLATION</u>).
- 2. Remove the wire harness clip (A), then disconnect the 4P connector (B) from the recirculation control motor (C). Remove the self-tapping screws and the recirculation control motor from the blower unit.



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Fig. 50: Removing Wire Harness Clip And Disconnecting 4P Connector From Recirculation Control Motor Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the motor in the reverse order of removal. Make sure the pin on the motor is properly engaged with the linkage. After installation, make sure the motor runs smoothly.

OUTSIDE AIR TEMPERATURE SENSOR TEST

NOTE: If the sensor is not connected, the auto idle stop function will not work with the climate control on.

Dip the sensor in ice water, and measure the resistance. Then pour warm water on the sensor, and check for a change in resistance.

Compare the resistance reading between the No. 1 and No. 2 terminals of the outside air temperature sensor with the specifications shown in the following graph; the resistance should be within the specifications.

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OUTSIDE AIR TEMPERATURE SENSOR





Fig. 51: Checking Resistance Between Terminals Of Outside Air Temperature <u>Sensor</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

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OUTSIDE AIR TEMPERATURE SENSOR REPLACEMENT

1. Remove the outside air temperature sensor (A), then disconnect the 2P connector (B).



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Fig. 52: Removing Outside Air Temperature Sensor And Disconnecting 2P Connector Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the sensor in the reverse order of removal.

HEATER CORE TEMPERATURE SENSOR TEST

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Dip the sensor in ice water, and measure the resistance. Then pour warm water on the sensor, and check for a change in resistance.

Compare the resistance reading between the No. 1 and No. 2 terminals of the heater core temperature sensor with the specifications shown in the following graph; the resistance should be within the specifications.

HEATER CORE TEMPERATURE SENSOR



Terminal side of male terminals

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Fig. 53: Checking Resistance Between Terminals Of Heater Core Temperature Sensor Courtesy of AMERICAN HONDA MOTOR CO., INC.

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Fig. 54: Identifying Resistance And Temperature Graph Courtesy of AMERICAN HONDA MOTOR CO., INC.

POWER TRANSISTOR TEST

- 1. Disconnect the 3P connector from the power transistor.
- 2. Carefully release the lock tab on the No. 2 terminal (BLU/RED) (A) in the 3P connector, then remove the terminal and insulate it from body ground.

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Fig. 55: Releasing Lock Tab On No. 2 Terminal (Blu/Red) Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Connect a 1.2-3.4 W bulb (B) between the No. 1 and the No. 2 cavity on the 3P connector.

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- 4. Reconnect the 3P connector to the power transistor.
- 5. Turn the ignition switch ON (II), and check that the blower motor runs.
 - If the blower motor runs, replace the heater control panel.
 - If the blower motor does not run, replace the power transistor.

HEATER CONTROL PANEL REMOVAL AND INSTALLATION

- 1. Remove the instrument panel with the heater control panel (see **INSTRUMENT PANEL REMOVAL/INSTALLATION**).
- 2. Remove the self-tapping screws and the heater control panel (A) from the instrument panel (B).
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Fig. 56: Removing Self-Tapping Screws And Heater Control Panel Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. Install the control panel in the reverse order of removal, and note these items:
 - Be sure to install the short black self-tapping screw in the position shown. If a longer screw is used, it will damage the instrument panel.

- After installation, operate the control panel controls to see whether it works properly.
- 4. Run the self-diagnostic function to comfirm that there are no problems in the system (see <u>GENERAL TROUBLESHOOTING INFORMATION</u>).

DUST AND POLLEN FILTER REPLACEMENT

The dust and pollen filter should be replaced every 30,000 miles (48,000 km) or 24 months whichever comes first. Replace the filter more often if the airflow is less than usual, or if the vehicle is driven in areas that have high concentrations of soot from industry or diesel powered vehicles.

1. Remove the filter lid (A) from the heater duct, then remove the dust and pollen filter (B) by pulling it down.

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Fig. 57: Removing Filter Lid From Heater Duct Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the filter (A) from the housing (B), and replace the filter.

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Fig. 58: Removing Filter From Housing Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the filter in the reverse order of removal. Make sure that there is no air leaking out of the evaporator.

HEATER DUCT REMOVAL AND INSTALLATION

1. Remove the glove box (see GLOVE BOX REMOVAL/INSTALLATION)

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and the center lower cover (see <u>CENTER LOWER COVER</u> <u>REMOVAL/INSTALLATION</u>).

2. Cut the plastic cross brace in the glove box opening with diagonal cutters in the area shown, and discard it.



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Fig. 59: Identifying Plastic Cross Brace Cutting Area Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the bolts and the glove box frame.

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Fig. 60: Removing Bolts And Glove Box Frame Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the wire harness (A) from the heater duct (B), then remove the self-tapping screws and the heater duct.

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Fig. 61: Removing Wire Harness From Heater Duct Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the duct in the reverse order of removal. Make sure that there is no air leakage.

BLOWER UNIT REMOVAL AND INSTALLATION

- With air conditioning, remove the evaporator (see <u>EVAPORATOR</u> <u>REMOVAL AND INSTALLATION</u>). Without air conditioning, remove the heater duct (see <u>HEATER DUCT REMOVAL AND INSTALLATION</u>).
- 2. Disconnect the connectors (A) from the blower motor, the blower motor high relay, the power transistor and the recirculation control motor, then remove the wire harness clip (B). Remove the mounting bolts, the mounting nut and the blower unit(C).

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Fig. 62: Disconnecting Connectors From Blower Motor And Torque Specifications Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the unit in the reverse order of removal. Make sure that there is no air leakage.

BLOWER UNIT COMPONENT REPLACEMENT

Note these items when overhauling the blower unit:

- The recirculation control motor (A), the blower motor high relay (B), the blower motor (C), and the power transistor (D) can be replaced without removing the blower unit.
- Before reassembly, make sure that the recirculation control linkage and door move smoothly.
- After reassembly, make sure the recirculation control motor runs smoothly (see **<u>RECIRCULATION CONTROL MOTOR TEST</u>**).

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Fig. 63: Identifying Blower Motor Components Courtesy of AMERICAN HONDA MOTOR CO., INC.

HEATER UNIT/CORE REPLACEMENT

SRS components are located in this area. Review the SRS component locations (see <u>COMPONENT LOCATION INDEX</u>), and the precautions and procedures (see <u>PRECAUTIONS AND PROCEDURES</u>) before performing repair or service.

- 1. Make sure you have the anti-theft codes for the radio, then write down the frequencies for the radio's preset buttons.
- 2. Disconnect the negative cable from the battery.
- 3. From under the hood, open the cable clamp (A), then disconnect the heater valve cable (B) from the heater valve arm (C). Turn the heater valve arm to the fully opened position as shown.

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Fig. 64: Disconnecting Heater Valve Cable From Heater Valve Arm Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 4. When the engine is cool, drain the engine coolant from the radiator (see <u>COOLANT REPLACEMENT</u>).
- 5. Remove the mounting bolt from the heater valve. Slide the hose clamps (A) back, then disconnect the inlet heater hose (B) and the outlet heater hose (C) from the heater unit. Engine coolant will run out when the hoses are disconnected; drain it into a clean drip pan. Be sure not to let coolant spill on the electrical parts or the painted surfaces. If any coolant spills, rinse it off immediately.

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Fig. 65: Removing Mounting Bolt From Heater Valve And Torque Specifications Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the mounting nut from the heater unit. Take care not to damage or bend the fuel lines, the brake lines, etc.

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Fig. 66: Removing Mounting Nut From Heater Unit And Torque <u>Specifications</u> **Courtesy of AMERICAN HONDA MOTOR CO., INC.**

- 7. Remove the dashboard (see **DASHBOARD REMOVAL/INSTALLATION**).
- 8. With air conditioning remove the evaporator (see <u>EVAPORATOR</u> <u>REMOVAL AND INSTALLATION</u>). Without air conditioning remove the heater duct (see <u>HEATER DUCT REMOVAL AND INSTALLATION</u>).
- 9. Remove the mounting bolts in the following sequence, then remove the center

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bracket (A), knee bolster (B), and the hanger beam (C).



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Fig. 67: Removing Center Bracket, Knee Bolster, And Hanger Beam In

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Following Sequence With Specified Torques Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Disconnect the connectors (A) from the mode control motor and the air mix control motor, then remove the wire harness clips (B). Remove the mounting bolt and the heater unit (C).



Fig. 68: Disconnecting Connectors From Mode Control Motor And Torque Specifications

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Remove the clips (A), the sensor clamp (B), and the heater core temperature sensor (C). Remove the grommet (D), then remove the self-tapping screw and the pipe bracket (E). Remove the self-tapping screws and the core cover (F). While being careful not to bend the inlet and outlet pipes, pull out the heater core (G).

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Fig. 69: Removing Clips, Sensor Clamp, And Heater Core Temperature <u>Sensor</u> **Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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- 12. Install the heater core in the reverse order of removal. Install the heater core temperature sensor directly against the inlet pipe, and install the sensor clamp securely.
- 13. Remove the No. 15 EPS (40 A) fuse from the under-hood fuse/relay box.
- 14. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 rpm and 4,000 rpm without load (in Park or neutral) until the BAT displays at least three segments.
- 15. Reinstall the No. 15 EPS (40 A) fuse from the under-hood fuse/relay box.
- 16. Install the heater unit in the reverse order of removal, and note these items:
 - Install the grommets of the heater core and the heater valve cable securely.
 - Do not interchange the inlet and outlet heater hoses, and install the hose clamps securely.
 - Refill the cooling system with engine coolant (see <u>COOLANT</u> <u>REPLACEMENT</u>).
 - Adjust the heater valve cable (see <u>HEATER VALVE CABLE</u> <u>ADJUSTMENT</u>).
 - Make sure that there is no coolant leakage.
 - Make sure that there is no air leakage.
 - For evaporator and A/C-related infomation, refer to evaporator removal and installation (see <u>EVAPORATOR REMOVAL AND</u> <u>INSTALLATION</u>).
 - Do the ECM idle learn procedure (see <u>ECM IDLE LEARN</u> <u>PROCEDURE</u>).
 - Enter the anti-theft codes for the radio, then enter the audio presets.

HEATER VALVE CABLE ADJUSTMENT

1. From under the hood, open the cable clamp (A), then disconnect the heater valve cable (B) from the heater valve arm (C).

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Fig. 70: Disconnecting Heater Valve Cable From Heater Valve Arm Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. From under the dash, disconnect the heater valve cable housing from the cable clamp (A), and disconnect the heater valve cable (B) from the air mix control linkage (C).

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Fig. 71: Disconnecting Heater Valve Cable Housing From Cable Clamp Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. Set the temperature control dial on Max Cool with the ignition switch ON (II).
- 4. Attach the heater valve cable (B) to the air mix control linkage (C) as shown. Hold the end of the heater valve cable housing against the stop (D), then snap

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the heater valve cable housing into the cable clamp (A).

5. From under the hood, turn the heater valve arm (C) to the fully closed position as shown, and hold it. Attach the heater valve cable (B) to the heater valve arm, and gently pull on the heater valve cable housing to take up any slack, then install the heater valve cable housing into the cable clamp (A).



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Fig. 72: Installing Heater Valve Cable Housing Into Cable Clamp Courtesy of AMERICAN HONDA MOTOR CO., INC.