

HVAC (Heating, Ventilation, and Air Conditioning)

HVAC (Heating, Ventilation, and Air Conditioning)

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Climate Control

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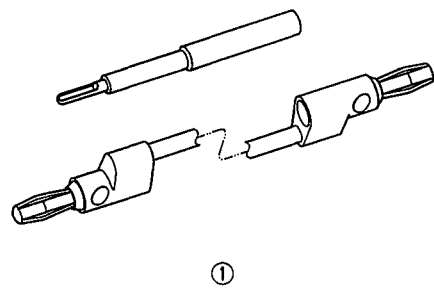
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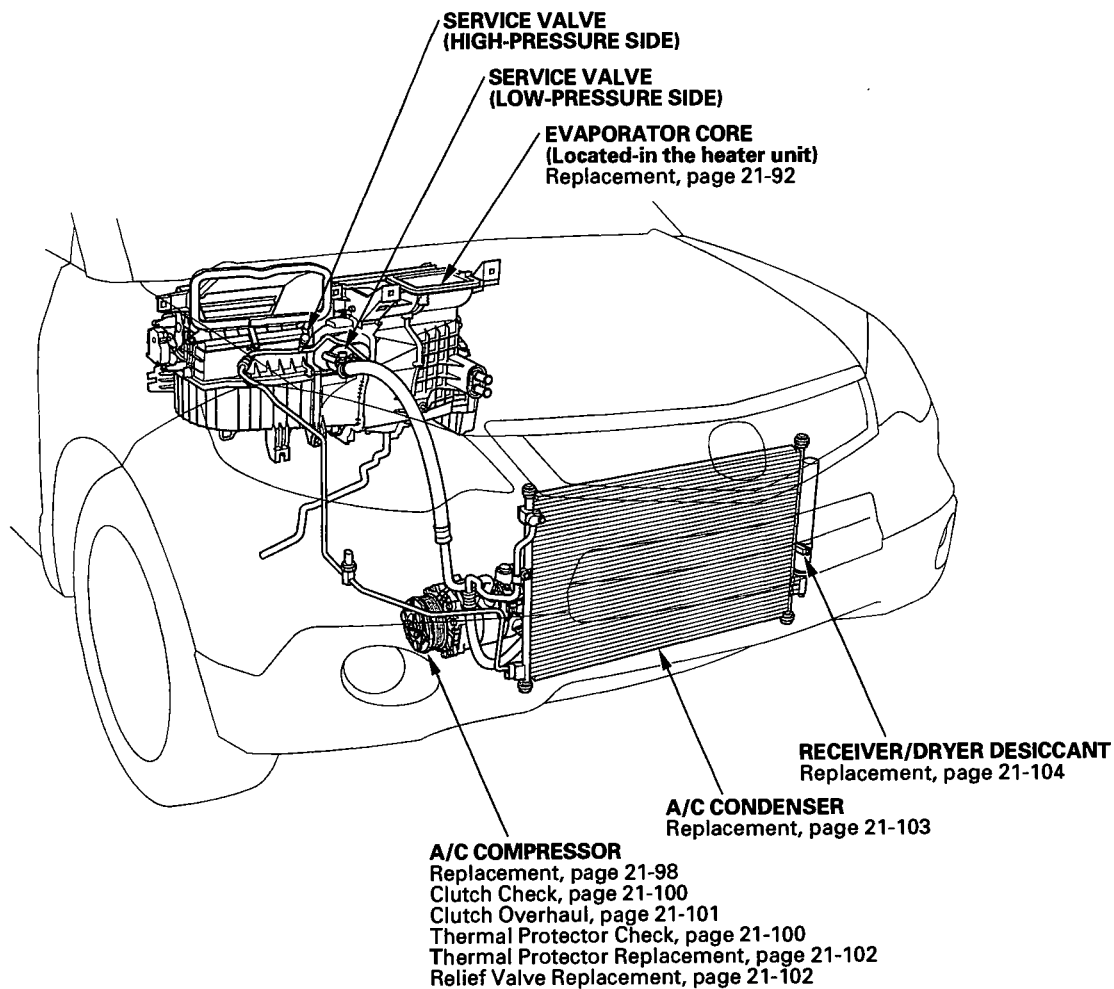
Special Tools

Ref. No.	Tool Number	Description	Qty
①	07SAZ-001000A	Backprobe Set	2





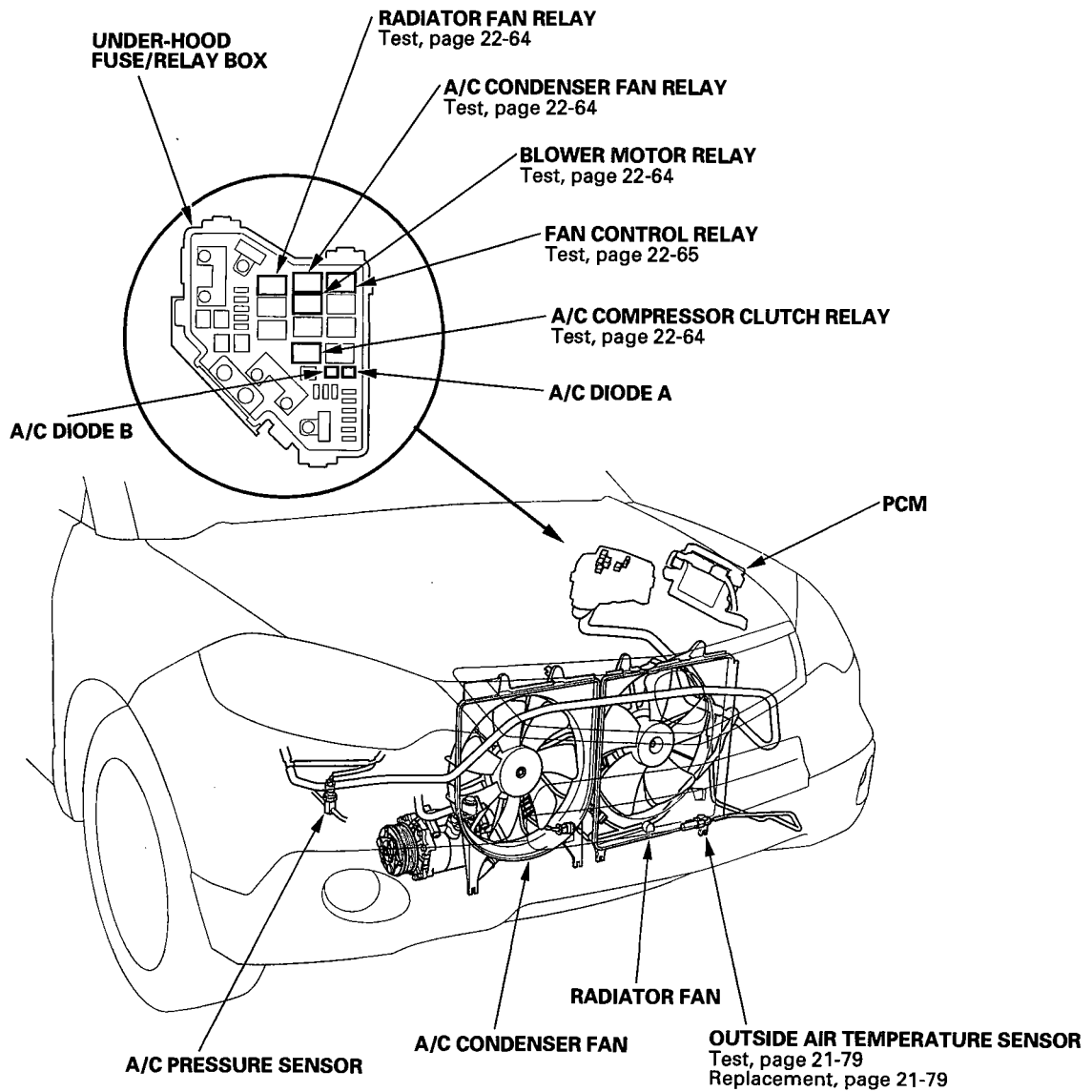
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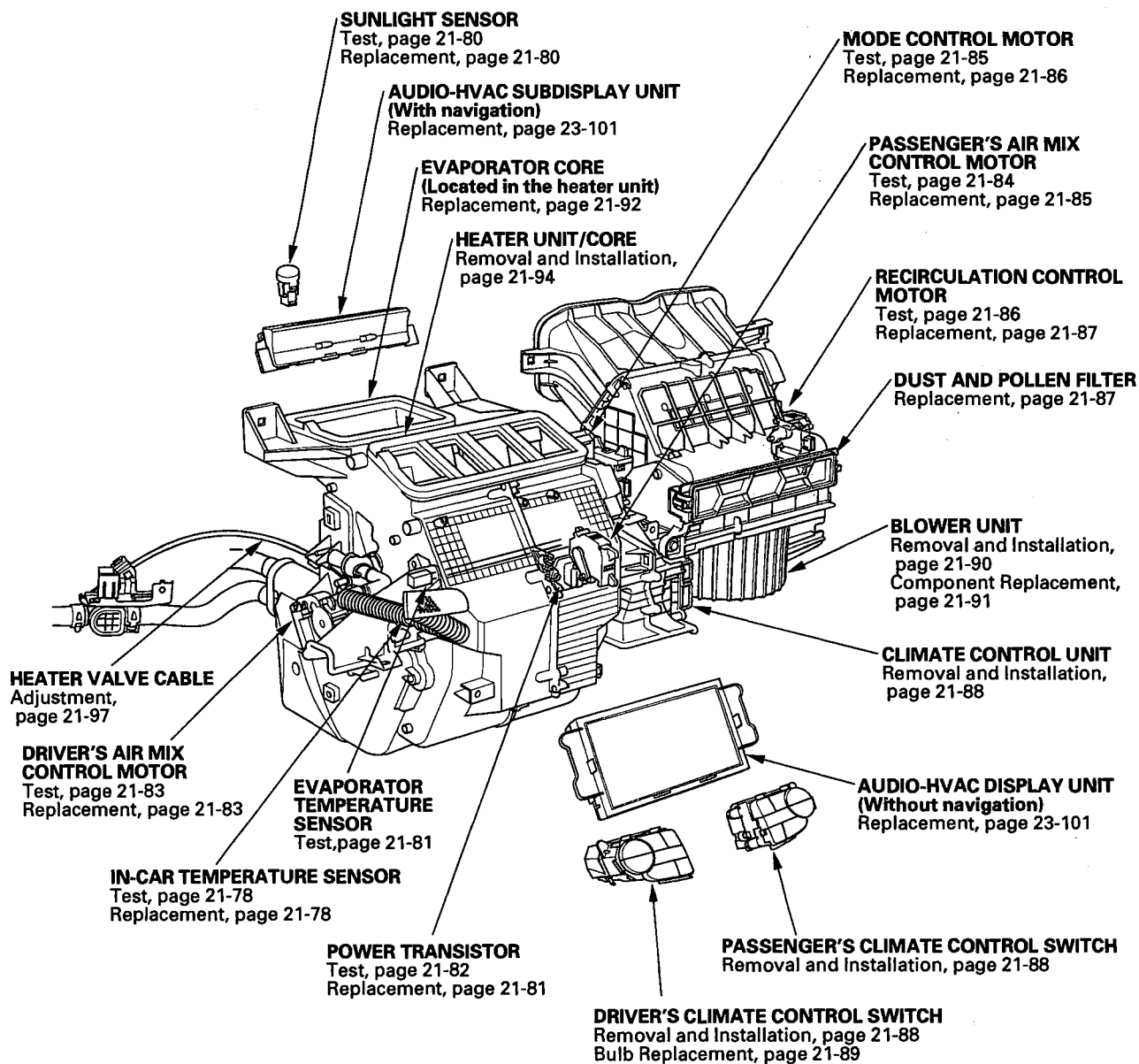
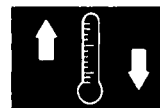


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Climate Control

Component Location Index (cont'd)





A/C Service Tips and Precautions

⚠️ WARNING

- Compressed air mixed with the R-134a forms a combustible vapor.
- The vapor can burn or explode causing serious injury.
- Never use compressed air to pressure test R-134a service equipment or vehicle air conditioning systems.

⚠️ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

The air conditioning system uses HFC-134a (R-134a) refrigerant and polyalkyleneglycol (PAG) refrigerant oil, which are not compatible with CFC-12 (R-12) refrigerant and mineral oil. Do not use R-12 refrigerant or mineral oil in this system, and do not attempt to use R-12 servicing equipment; damage to the air conditioning system or your servicing equipment will result. Use only service equipment that is U.L.-listed and is certified to meet the requirements of SAE J2210 to remove R-134a from the air conditioning system.

If accidental system discharge occurs, ventilate the work area before resuming service.

R-134a service equipment or vehicle air conditioning systems should not be pressure tested or leak tested with compressed air.

Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

- Always disconnect the negative cable from the battery whenever replacing air conditioning parts.
- Keep moisture and dirt out of the system. When disconnecting any lines, plug or cap the fittings immediately; don't remove the caps or plugs until just before you reconnect each line.
- Before connecting any hose or line, apply a few drops of refrigerant oil to the O-ring.
- When tightening or loosening a fitting, use a second wrench to support the matching fitting.
- When discharging the system, use an R-134a refrigerant recovery/recycling/charging station; don't release refrigerant into the atmosphere.

A/C Refrigerant Oil Replacement

Recommended PAG oil: SP-10

- P/N 38897-P13-A01AH: 120 mL (4 fl-oz)
- P/N 38899-P13-A01: 40 mL (1 1/3 fl-oz)

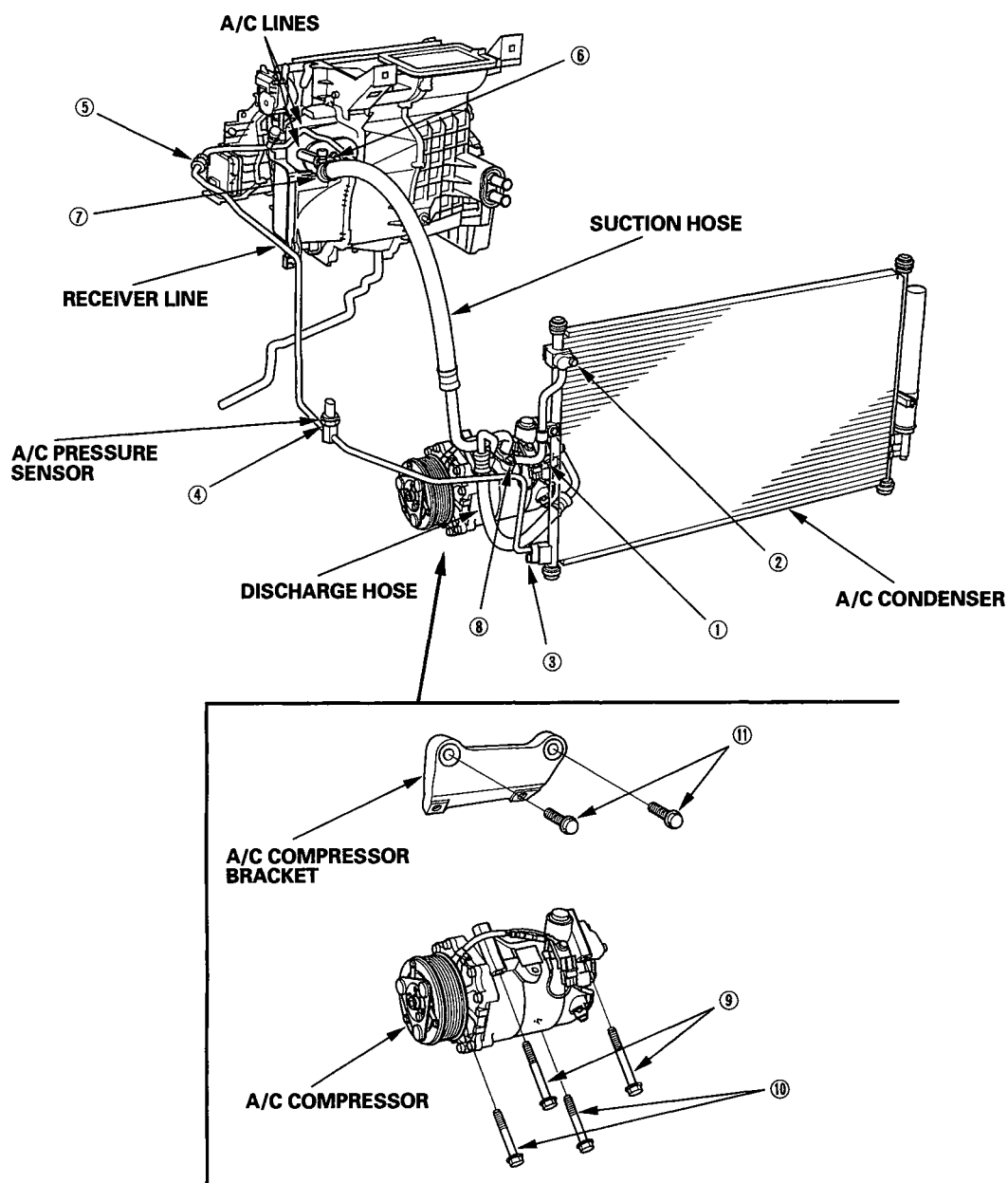
Add the recommended refrigerant oil in the amount listed if you replace any of the following parts.

- To avoid contamination, do not return the oil to the container once dispensed, and never mix it with other refrigerant oils.
- Immediately after using the oil, reinstall the cap on the container, and seal it to avoid moisture absorption.
- Do not spill the refrigerant oil on the vehicle; it may damage the paint; if it gets on the paint, wash it off immediately.

A/C condenser (including Dryer Desiccant)	
Desiccant	50 mL (1 2/3 fl-oz)
Evaporator	40 mL (1 1/3 fl-oz)
Line or hose	10 mL (1/3 fl-oz)
Receiver/Dryer	
Desiccant	10 mL (1/3 fl-oz)
Leakage repair	25 mL (5/6 fl-oz)
A/C compressor	Since the oil separator is equipped inside the compressor for this vehicle, oil drainage is unnecessary at the time of compressor replacement.



A/C Line Replacement



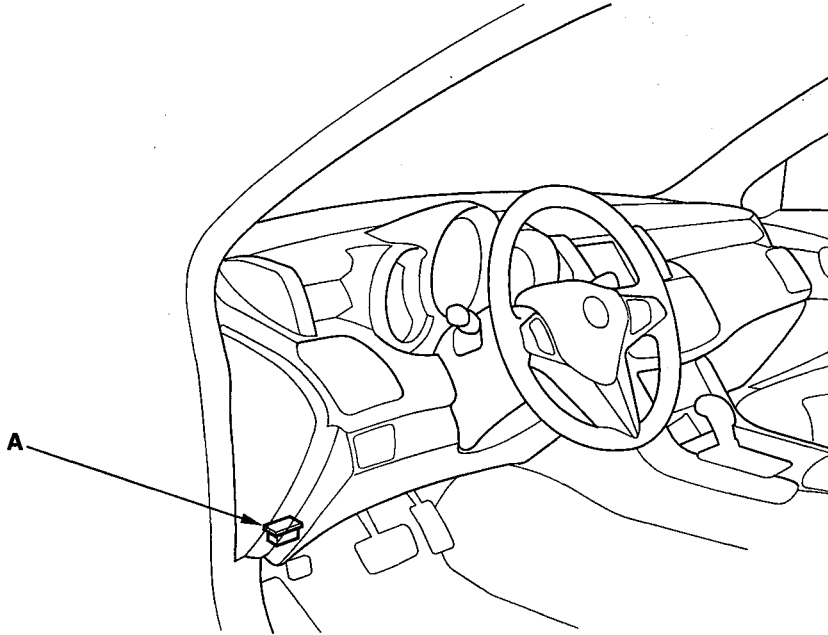
- ① Discharge hose to the A/C compressor (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ② Discharge hose to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ③ Receiver line to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ④ A/C pressure sensor to receiver line (11 x 1.0 mm): 11.3 N·m (1.2 kgf·m, 8.3 lbf·ft)
- ⑤ Receiver line to the A/C line (16 x 1.5 mm): 13.3 N·m (1.4 kgf·m, 9.8 lbf·ft)
- ⑥ A/C lines to the evaporator (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ⑦ A/C line to the suction hose (24 x 1.5 mm): 31.9 N·m (3.2 kgf·m, 23.5 lbf·ft)
- ⑧ Suction hose to the A/C compressor (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ⑨ A/C compressor to the water passage (8 x 1.25 mm): 22 N·m (2.2 kgf·m, 16 lbf·ft)
- ⑩ A/C compressor to the A/C compressor bracket (10 x 1.25 mm): 45 N·m (4.5 kgf·m, 32.5 lbf·ft)
- ⑪ A/C compressor bracket to the engine block (8 x 1.25 mm): 24 N·m (2.4 kgf·m, 17.7 lbf·ft)

Climate Control

General Troubleshooting Information

How to Check for DTCs with the HDS

1. Make sure the ignition switch is OFF.
2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Turn the ignition switch ON (II).
4. Make sure the HDS communicates with the vehicle and the climate control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-229).
5. Select HVAC/CLIMATE CONTROL in the BODY ELECTRICAL menu.
6. Select DTCs in the HVAC/CLIMATE CONTROL menu.
7. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting. If no DTCs are indicated, refer to symptom troubleshooting.

NOTE:

- After troubleshooting, clear the DTCs with the HDS.
- For specific operations, refer to the user's manual that came with the HDS.



How to Use the Self-diagnostic Function with the HDS

1. Make sure the ignition switch is OFF.
2. Connect the HDS to the data link connector (DLC).
3. Turn the ignition switch ON (II).
4. Make sure the HDS communicates with the vehicle and the climate control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-229).
5. Select HVAC/CLIMATE CONTROL in the BODY ELECTRICAL menu.
6. Select INSPECTION in the HVAC/CLIMATE CONTROL menu.
7. Select CLIMATE CONTROL SELF TEST in the INSPECTION menu.
8. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting.

NOTE:

- After troubleshooting, clear the DTCs with the HDS.
- For specific operations, refer to the user's manual that came with the HDS.

Climate Control

General Troubleshooting Information (cont'd)

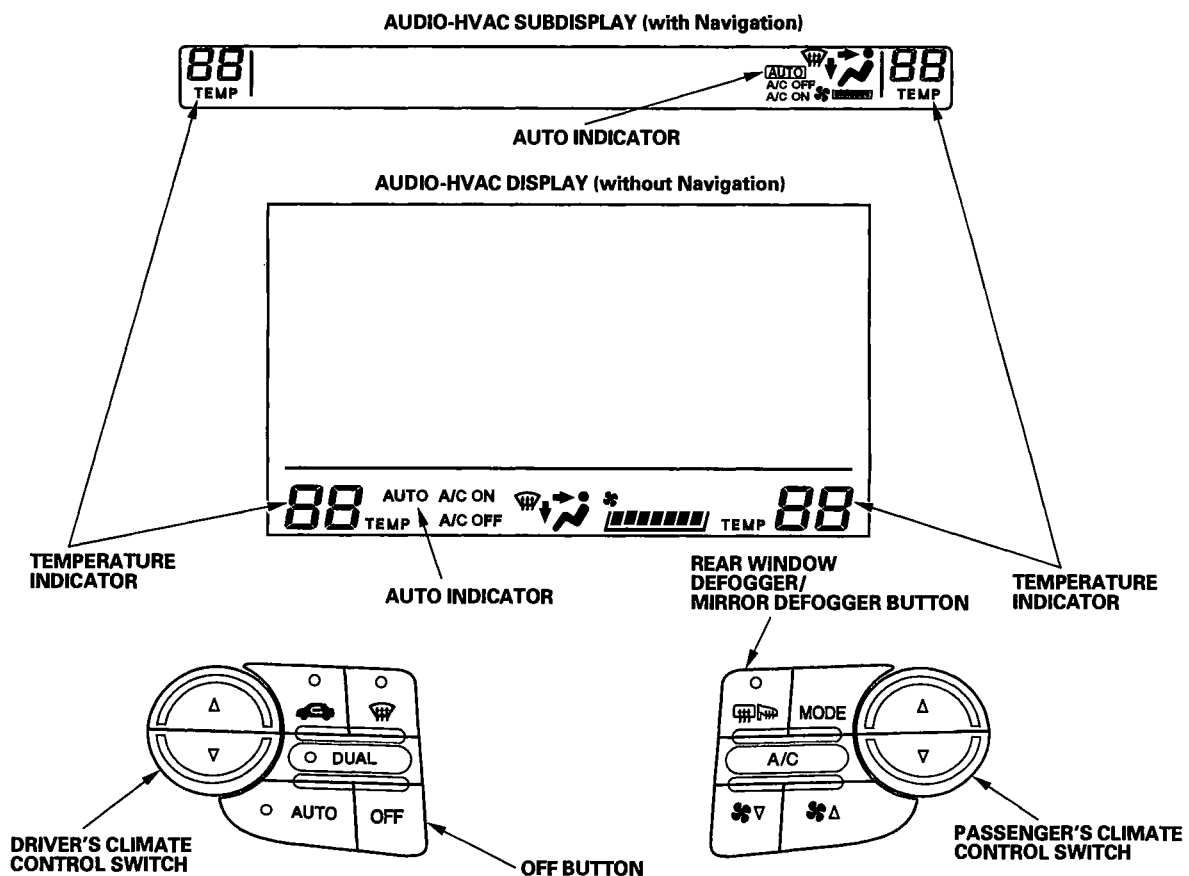
How to Use the Self-diagnostic Function without the HDS

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

1. Turn the ignition switch ON (II).
2. Press and hold the OFF button.
3. While holding the OFF button, press the rear window defogger/mirror defogger button five times within 10 seconds. Release the buttons and the self-diagnostic function will begin.

NOTE:

- It may take up to 20 seconds for the self-diagnostic to begin.
- The blower motor can be run at various speeds regardless of what the panel is displaying.
- If there is any problem in the system, the driver's temperature indicator will light up the segment (A through P) and AUTO indicator corresponding to the error. The temperature indicator will then alternate every second between displaying "88" (all segments lit) and the error code segment (A through P) and AUTO indicator. To determine the meaning of the DTC, refer to checking for DTCs.
- If there are no problems detected, the segments will not illuminate, and the system will appear to be turned off.



Canceling the Self-diagnostic Function

4. 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 DTCs.

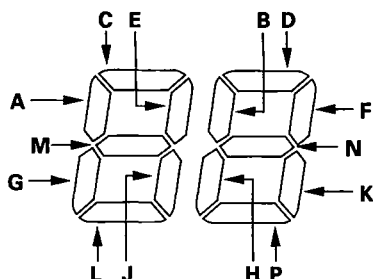


Checking for DTCs

The temperature display indicates single or multiple DTCs. If indicator segments A, C, E and G are on at the same time, there may be an open in the common ground wire. If no DTCs are present, the indicator remains blank.

DRIVER'S TEMPERATURE INDICATOR

AUTO INDICATOR



AUTO

DTC (Driver's Temperature Indicator Segment and AUTO Indicator)	Detection Item
A and AUTO	An open in the in-car temperature sensor circuit (see page 21-29)
B and AUTO	A short in the in-car temperature sensor circuit (see page 21-31)
C and AUTO	An open in the outside air temperature sensor circuit (see page 21-32)
D and AUTO	A short in the outside air temperature sensor circuit (see page 21-33)
E and AUTO	An open in the sunlight sensor circuit (see page 21-34)
F and AUTO	A short in the sunlight sensor circuit (see page 21-35)
G and AUTO	An open in the evaporator temperature sensor circuit (see page 21-36)
H and AUTO	A short in the evaporator temperature sensor circuit (see page 21-38)
J and AUTO	An open in the driver's air mix control motor circuit (see page 21-39)
K and AUTO	A short in the driver's air mix control motor circuit (see page 21-40)
L and AUTO	A problem in the driver's air mix control linkage, door, or motor (see page 21-41)
M and AUTO	A open in the passenger's air mix control motor circuit (see page 21-43)
N and AUTO	A short in the passenger's air mix control motor circuit (see page 21-44)
P and AUTO	A problem in the passenger's air mix control linkage, door, or motor (see page 21-45)
A	An open or short in the mode control motor circuit (see page 21-47)
B	A problem in the mode control linkage, doors, or motor (see page 21-49)
F	A problem in the blower motor circuit (see page 21-51)
G	Climate control unit internal error (see page 21-26)
H	Climate control unit lost communication with gauge control module (VSP/NE message) (see page 21-26)
J	Climate control unit lost communication with gauge control module (ILLMI message) (see page 21-28)
K	Climate control unit lost communication with gauge control module (ECT message) (see page 21-27)
M	Communication bus line error (bus-off) (see page 22-99)

(cont'd)

Climate Control

General Troubleshooting Information (cont'd)

Displaying Sensor Inputs at the Climate Control Unit

The climate control unit has a mode that displays sensor inputs it receives. This mode shows you what the climate control unit is receiving from each of the sensors, one at a time, and it can help you determine if a sensor is faulty.

Check these items before using the sensor input display mode

1. Turn the ignition switch ON (II), and check the recirculation door function; press the recirculation button to switch from FRESH to RECIRC. The air volume and sound should change slightly.
2. Set the temperature control knob to the desired test temperature. When selecting the test temperature, note these items:
 - "Lo" temperature setting will default to MAX COOL, VENT, and RECIRC.
 - "Hi" temperature setting will default to MAX HOT, FLOOR, and FRESH.
 - 58 through 86 °F settings will use the automatic climate control logic.
3. Turn the ignition switch OFF.

To run the sensor input display mode, follow these steps

1. Turn the ignition switch OFF.
2. Press and hold both the AUTO and REC buttons, then start the engine.
3. After the engine starts, release the buttons. The audio-HVAC display panel will flash the sensor number and then the value for that sensor. Record the value displayed.
4. To advance to the next sensor, press the rear window defogger button.

Sensor	Item	Displayed Value
1	Mode Positioning	BIT
2	In-car Temperature	°C
3	Outside Air Temperature	°C
4	Solar Radiation Sensor Value: Dark = 00, Flashlight = 04, Cloudy = 10, Sunny = 65	10 kcal/m ² ·h
5	Evaporator Temperature	°C
6	Driver's Air Mix Opening (Low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
7	Passenger's Air Mix Opening (Low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
8	Recirculation Opening	% of opening
9	Vehicle Speed (Vehicle must be driven to display speed)	10 km/h
A	Engine Coolant Temperature	°C
B	Vent Temperature Air Out (TAO)	°C

NOTE:

- The sensor values will be displayed in degrees Celsius (°C) or an alphanumeric code. Use the chart to convert the value to degrees Fahrenheit (°F).
- If the sensor value displays "Er", this indicates there is an open or short in the circuit or sensor. Check for DTCs using the HDS, or refer to checking DTCs by DTC indication.
- If necessary, compare the sensor input display to a known-good vehicle under the same test conditions.
- If the sensor is out of the normal range, refer to the sensor test or substitute with a known-good sensor, and recheck.

5. To cancel the sensor input display mode, press the AUTO button or turn the ignition switch off.



Celsius to Fahrenheit Conversion Table

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0	32	10	50	20	68	30	86	40	104
1	34	11	52	21	70	31	88	41	106
2	36	12	54	22	72	32	90	42	108
3	37	13	55	23	73	33	91	43	109
4	39	14	57	24	75	34	93	44	111
5	41	15	59	25	77	35	95	45	113
6	43	16	61	26	79	36	97	46	115
7	45	17	63	27	81	37	99	47	117
8	46	18	64	28	82	38	100	48	118
9	48	19	66	29	84	39	102	49	120

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
50	122	60	140	70	158	80	176	90	194
51	124	61	142	71	160	81	178	91	196
52	126	62	144	72	162	82	180	92	198
53	127	63	145	73	163	83	181	93	199
54	128	64	147	74	165	84	183	94	201
55	131	65	149	75	167	85	185	95	203
56	133	66	151	76	169	86	187	96	205
57	135	67	152	77	170	87	188	97	207
58	136	68	154	78	172	88	190	98	208
59	139	69	158	79	174	89	192	99	210

Alphanumeric Conversion Table

Display Reading (Alphanumeric)	°C	°F	%
A1 thru A9	—1 thru —9	30 thru 16	—1 thru —9
B0 thru B9	—10 thru —19	14 thru —2	—10 thru —19
C0 thru C9	—20 thru —29	—4 thru —20	—20 thru —29
D0 thru D9	—30 thru —39	—22 thru —38	—30 thru —39
E0 thru E9	—40 thru —49	—40 thru —58	—40 thru —49
F0 thru F9	—	—	+100 thru +109

Alphanumeric Conversion Table (Mode Positioning)

Display Reading (Alphanumeric)	Mode Position
01	OVER VENT
02	VENT
03	VENT-HEAT/VENT
04	HEAT/VENT
05	HEAT/VENT-HEAT
06	HEAT
07	HEAT-HEAT/DEF
08	HEAT/DEF
09	HEAT/DEF-DEF
10	DEF
11	OVER DEF

Climate Control

DTC Troubleshooting Index

Checking the DTCs by HDS

DTC	Detection Item or Symptom	ECU	DTC type	Page
B1200	Communication bus line error (bus-off)	Climate control unit	Loss of communication	(see page 22-99)
B1205	Climate control unit lost communication with gauge control module (VSP/NE message)	Climate control unit	Loss of communication	(see page 21-26)
B1206	Climate control unit lost communication with gauge control module (ECT message)	Climate control unit	Loss of communication	(see page 21-27)
B1207	Climate control unit lost communication with gauge control module (ILLUMI message)	Climate control unit	Loss of communication	(see page 21-28)
B1225	An open in the in-car temperature sensor circuit	Climate control unit	Signal error	(see page 21-29)
B1226	A short in the in-car temperature sensor circuit	Climate control unit	Signal error	(see page 21-31)
B1227	An open in the outside air temperature sensor circuit	Climate control unit	Signal error	(see page 21-32)
B1228	A short in the outside air temperature sensor circuit	Climate control unit	Signal error	(see page 21-33)
B1229	An open in the sunlight sensor circuit	Climate control unit	Signal error	(see page 21-34)
B1230	A short in the sunlight sensor circuit	Climate control unit	Signal error	(see page 21-35)
B1231	An open in the evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-36)
B1232	A short in the evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-38)
B1233	An open in the driver's air mix control motor circuit	Climate control unit	Signal error	(see page 21-39)
B1234	A short in the driver's air mix control motor circuit	Climate control unit	Signal error	(see page 21-40)
B1235	A problem in the driver's air mix control linkage, door, or motor	Climate control unit	Signal error	(see page 21-41)
B1236	An open in the passenger's air mix control motor circuit	Climate control unit	Signal error	(see page 21-43)
B1237	A short in the passenger's air mix control motor circuit	Climate control unit	Signal error	(see page 21-44)
B1238	A problem in the passenger's air mix control linkage, door, or motor	Climate control unit	Signal error	(see page 21-45)
B1239	An open or short in the mode control motor circuit	Climate control unit	Signal error	(see page 21-47)
B1240	A problem in the mode control linkage, doors, or motor	Climate control unit	Signal error	(see page 21-49)
B1241	A problem in the blower motor circuit	Climate control unit	Signal error	(see page 21-51)



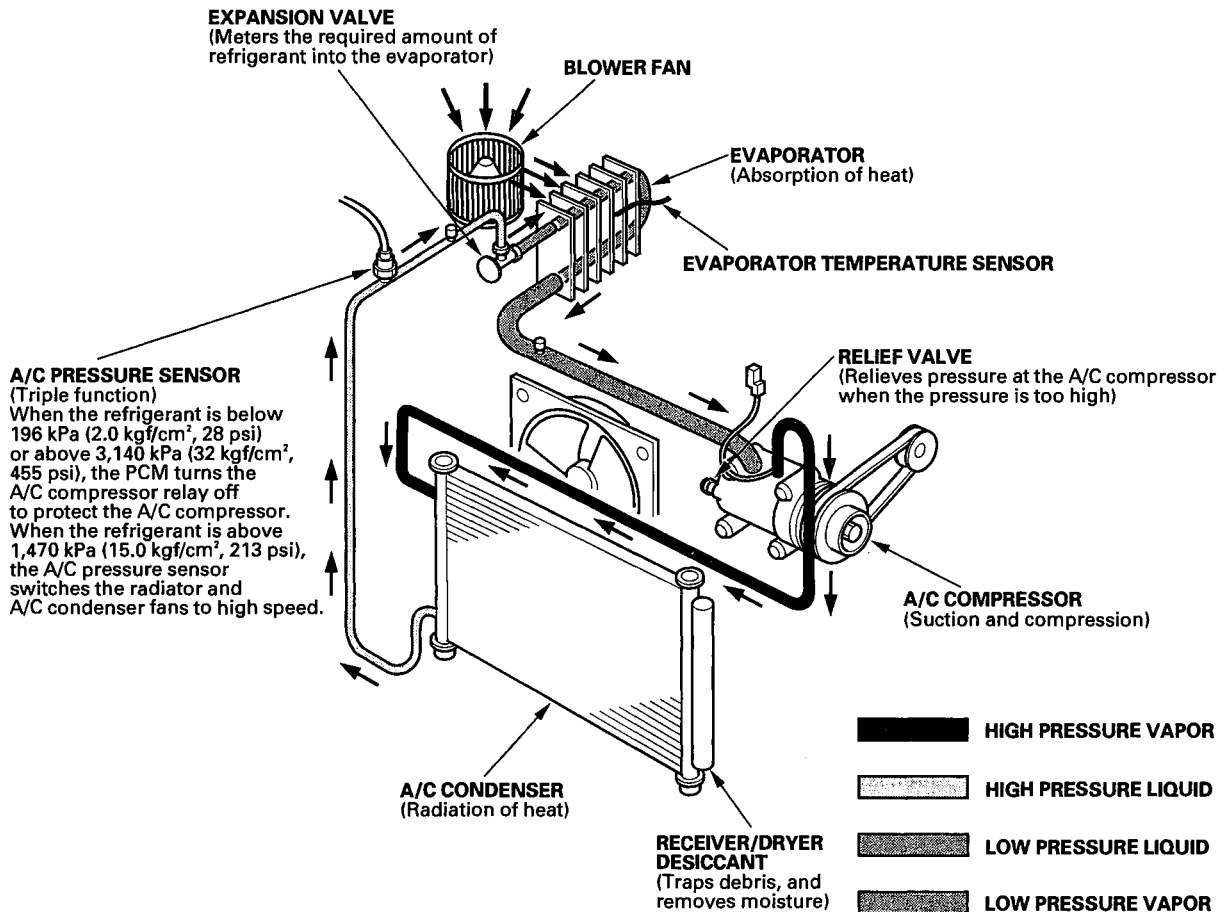
Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Recirculation control doors do not change between Fresh and Recirculate	Recirculation control motor circuit troubleshooting (see page 21-55)	• HVAC DTCs (see page 21-8) • Blown fuse No. 36 (10 A) in the under-dash fuse/relay box • Cleanliness and tightness of all terminals
Blower, heater controls, and A/C do not work	Climate control power and ground circuit troubleshooting (see page 21-57)	• HVAC DTCs (see page 21-8) • Blown fuse No. 36 (10 A) in the under-dash fuse/relay box • Faulty blower motor relay • Poor ground at G571 (see page 22-60) • Cleanliness and tightness of all terminals
Voice communication does not work	Navigation communication line circuit troubleshooting (see page 21-58)	• HVAC DTCs (see page 21-8) • Cleanliness and tightness of all terminals
HVAC display is not indicated	Audio communication line circuit troubleshooting (see page 21-60)	• HVAC DTCs (see page 21-8) • Cleanliness and tightness of all terminals
Climate control switches do not work	Climate control switch communication line circuit troubleshooting (see page 21-61)	• HVAC DTCs (see page 21-8) • Cleanliness and tightness of all terminals
Both fans do not run at low speed with the A/C on (but the A/C compressor runs with the A/C on)	Radiator and A/C condenser fan low speed circuit troubleshooting (see page 21-65)	• HVAC DTCs (see page 21-8) • Blown fuse No. 7 (30 A) in the under-hood fuse/relay box, and No. 36 (10 A) in the under-dash fuse/relay box • Poor ground at G201 (see page 22-60) • Cleanliness and tightness of all terminals
The A/C condenser fan does not run at high speed (but both fans run at low speed and the A/C compressor operates with the A/C on)	A/C condenser fan high speed circuit troubleshooting (see page 21-70)	• HVAC DTCs (see page 21-8) • Poor ground at G202 (see page 22-60) • Cleanliness and tightness of all terminals
Both fans do not run at high speed with the A/C on (but both fans run at low speed and the A/C compressor operates with the A/C on)	A/C pressure sensor troubleshooting: A/C pressure sensor circuit low voltage (see page 11-327), A/C pressure sensor circuit high voltage (see page 11-329) ECT troubleshooting: ECT sensor 2 circuit low voltage (see page 11-188), ECT sensor 2 circuit high voltage (see page 11-190)	• Powertrain DTCs (see page 11-3) • Cleanliness and tightness of all terminals
The A/C compressor clutch does not engage (but both fans run with the A/C on)	A/C compressor clutch circuit troubleshooting (see page 21-73)	• HVAC DTCs (see page 21-8) • Blown fuse No. 20 (7.5 A) in the under-hood fuse/relay box, and No. 36 (10 A) in the under-dash fuse/relay box • Cleanliness and tightness of all terminals
A/C system does not come on (both fans and the A/C compressor do not work); heater is OK	A/C signal circuit troubleshooting (see page 21-76) A/C pressure sensor troubleshooting: A/C pressure sensor circuit low voltage (see page 11-327), A/C pressure sensor circuit high voltage (see page 11-329)	• HVAC DTCs (see page 21-8) • Powertrain DTCs (see page 11-3) • Cleanliness and tightness of all terminals
HDS does not communicate with the climate control unit or the vehicle	Troubleshoot the DLC circuit (see page 11-229)	

Climate Control

System Description

The air conditioning system removes heat from the passenger compartment by transferring heat from the ambient air to the evaporator. The evaporator cools the air with the refrigerant that is circulating through the evaporator. The refrigerant expands in the evaporator, becoming very cold and absorbs the heat from the ambient air. The blower fan pushes air across the evaporator where the heat is absorbed, and then blows the cool air into the passenger compartment.



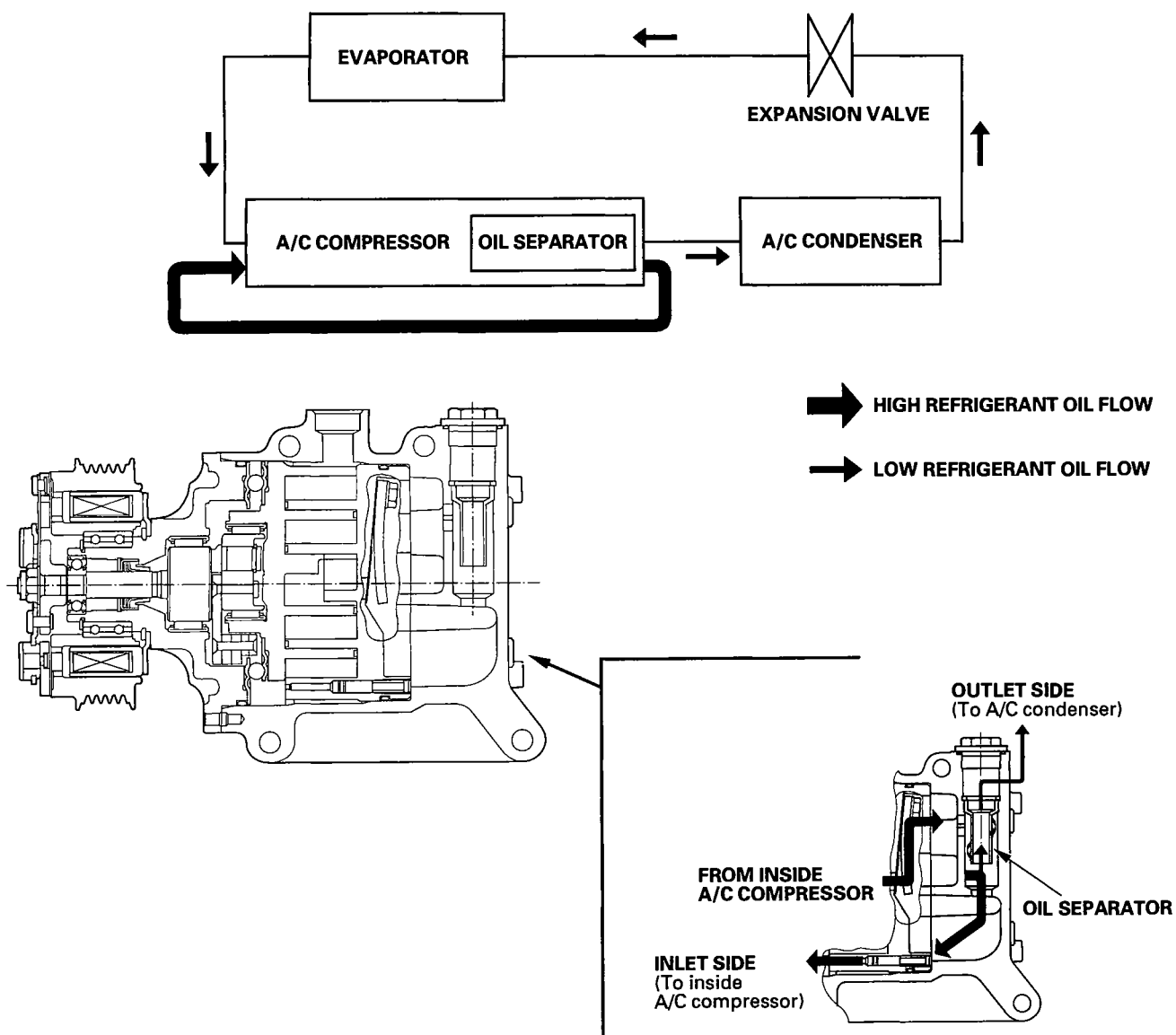
This vehicle uses HFC-134a (R-134a) refrigerant, which does not contain chlorofluorocarbons. Pay attention to the following service items:

- Do not mix refrigerants CFC-12 (R-12) and HFC-134a (R-134a). They are not compatible.
- Use only the recommended polyalkyleneglycol (PAG) refrigerant oil (SP-10) designed for the R-134a A/C compressor. Intermixing the recommended (PAG) refrigerant oil with any other refrigerant oil will result in A/C compressor failure.
- All A/C system parts (A/C compressor, discharge line, suction line, evaporator, A/C condenser, receiver/dryer, expansion valve, O-rings for joints) are designed for refrigerant R-134a. Do not exchange with R-12 parts.
- Use a halogen gas leak detector designed for refrigerant R-134a.
- R-12 and R-134a refrigerant servicing equipment are not interchangeable. Use only a recovery/recycling/charging station that is U.L.-listed and is certified to meet the requirements of SAE J2210 to service the R-134a air conditioning systems.
- Always recover refrigerant R-134a with an approved recovery/recycling/charging station before disconnecting any A/C fitting.



Oil Separator

Oil emission from the A/C compressor to the A/C line is reduced by placing the oil separator in the A/C compressor. This results in a thinner oil film inside of the heat exchanger (A/C condenser and evaporator). Air conditioning efficiency is increased without sacrificing engine performance.



(cont'd)

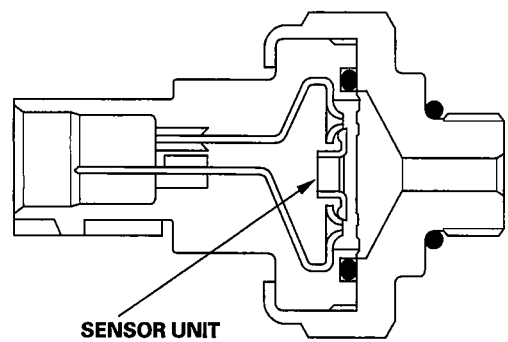
Climate Control

System Description (cont'd)

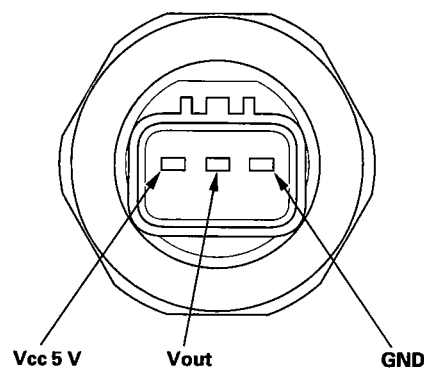
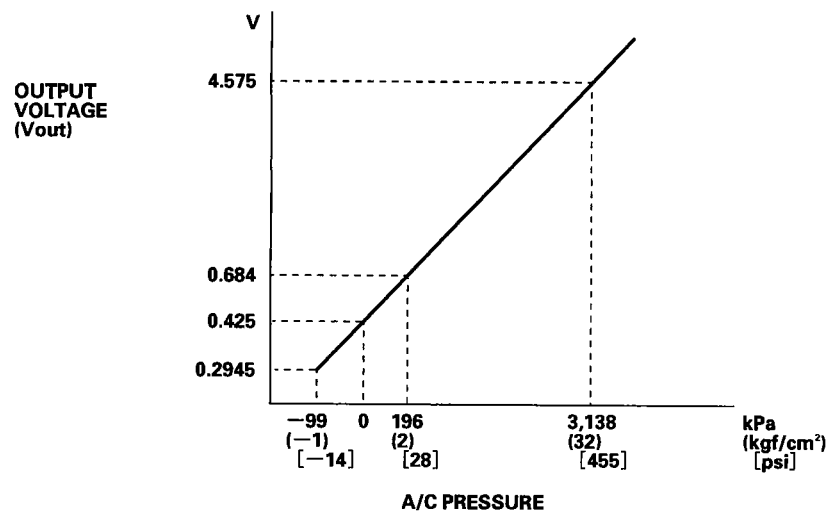
A/C Pressure Sensor

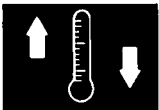
The A/C pressure sensor converts A/C pressure into electrical signals to the PCM.

NOTE: The pressures can be monitored using the HDS PGM-FI Data List.

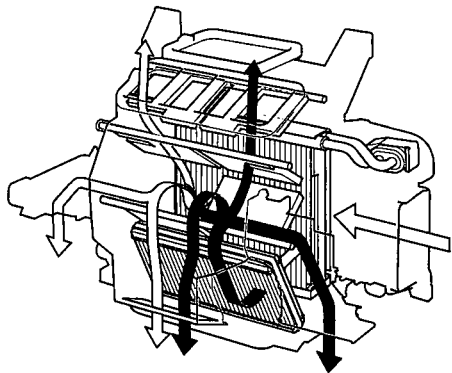
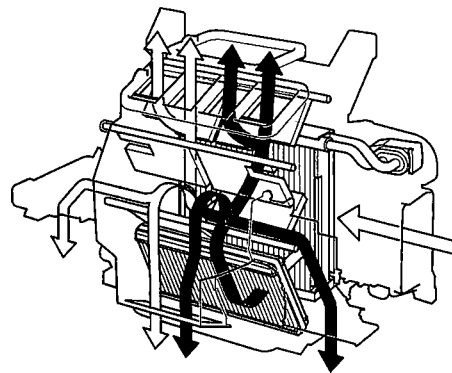
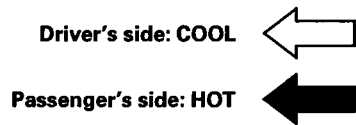
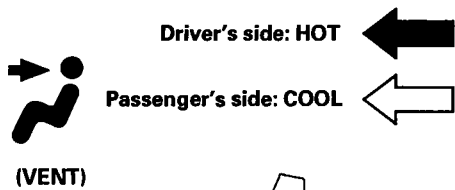


The response of the A/C pressure sensor is shown in the graph.





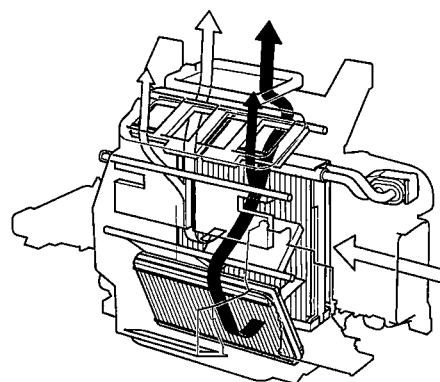
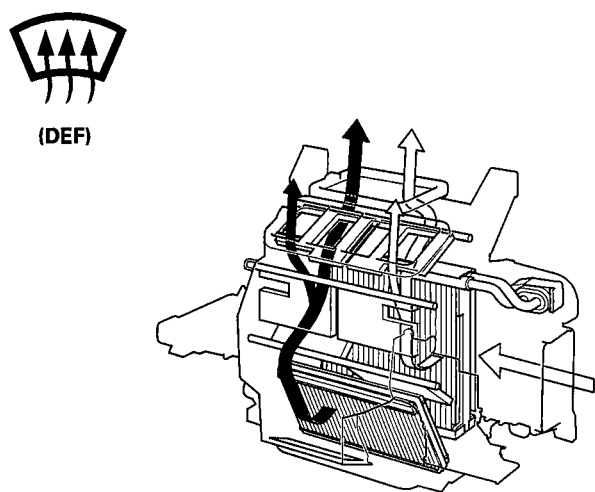
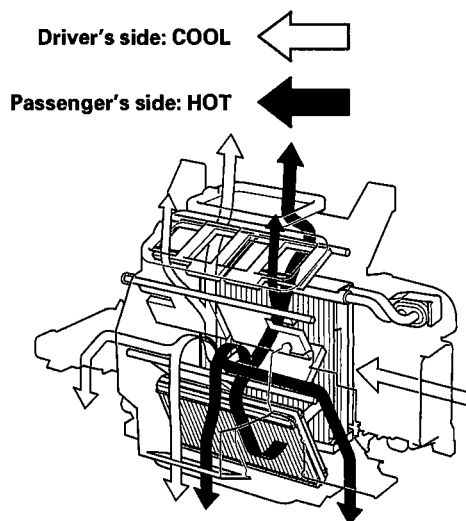
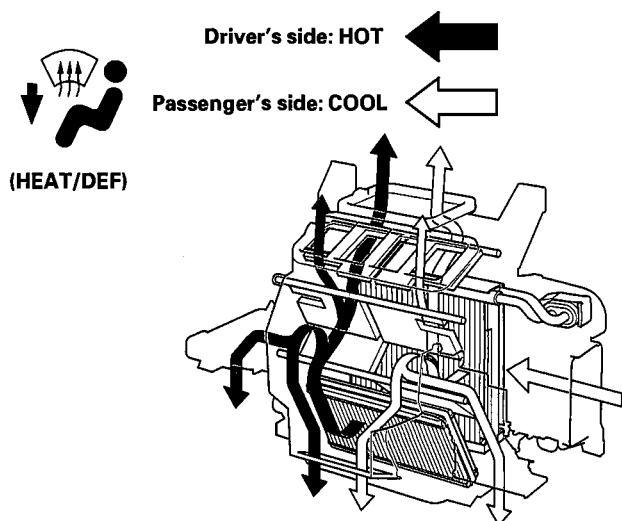
Dual Air Mix Control System



(cont'd)

Climate Control

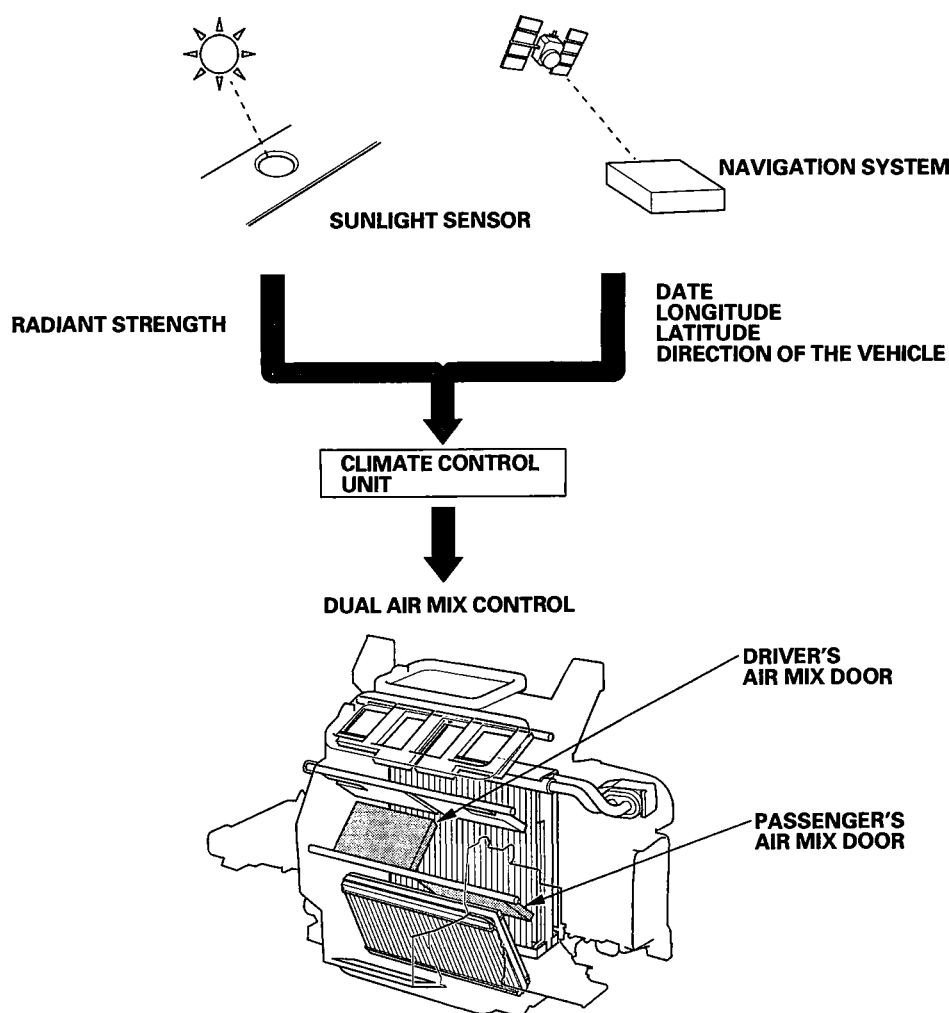
System Description (cont'd)





i-Dual Climate Control System (With navigation system)

This system automatically controls the temperature and the vent mode of the air direction to the driver and passenger's side, depending on the angle of the sun, and the direction of the vehicle. It calculates information such as date, time, longitude, and latitude from the navigation system, as well as the radiant strength of the sun from the sunlight sensor, to determine the appropriate mode position and temperature to be directed to each side.



In the event that the navigation system malfunctions, or when driving in areas where the navigation system cannot determine the vehicle position (non-coverage areas, tunnels, etc.), the climate control system will operate the same as a vehicle without a navigation system.

(cont'd)

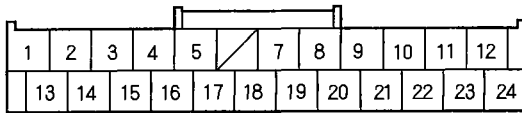
Climate Control

System Description (cont'd)

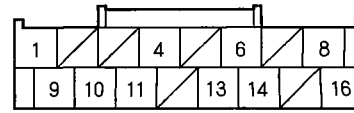
Climate Control Unit Inputs and Outputs

CLIMATE CONTROL UNIT CONNECTORS

CONNECTOR A (24P)



CONNECTOR B (16P)



Wire side of female terminals

CONNECTOR A

Cavity	Wire color	Signal	
1	RED	MODE 1	OUTPUT
2	PNK	MODE 2	OUTPUT
3	PUR	MODE 3	OUTPUT
4	BLU	MODE 4	OUTPUT
5	BRN	AIR MIX POTENTIAL +5 V	OUTPUT
6			
7	GRN	MODE DEF	OUTPUT
8	WHT	MODE VENT	OUTPUT
9	PNK	DRIVER'S AIR MIX HOT	OUTPUT
10	LT BLU	DRIVER'S AIR MIX COOL	OUTPUT
11	ORN	PASSENGER'S AIR MIX HOT	OUTPUT
12	BRN	PASSENGER'S AIR MIX COOL	OUTPUT
13	PUR	EVAPORATOR TEMPERATURE SENSOR	OUTPUT
14	YEL	OUTSIDE AIR TEMPERATURE SENSOR	OUTPUT
15	WHT	PASSENGER'S AIR MIX POTENTIAL	OUTPUT
16	GRY	DRIVER'S AIR MIX POTENTIAL	OUTPUT
17	BLU	A/C SIGNAL	OUTPUT
18	ORN	SENSOR COMMON GROUND 1	INPUT
19	LT BLU	RECIRCULATE	INPUT
20	GRY	FRESH	INPUT
21	LT GRN	REAR WINDOW DEFOGGER RELAY	INPUT
22	RED	BLOWER FEEDBACK	INPUT
23	YEL	POWER TRANSISTOR CONTROL	OUTPUT
24	BLK	GROUND (G571)	OUTPUT

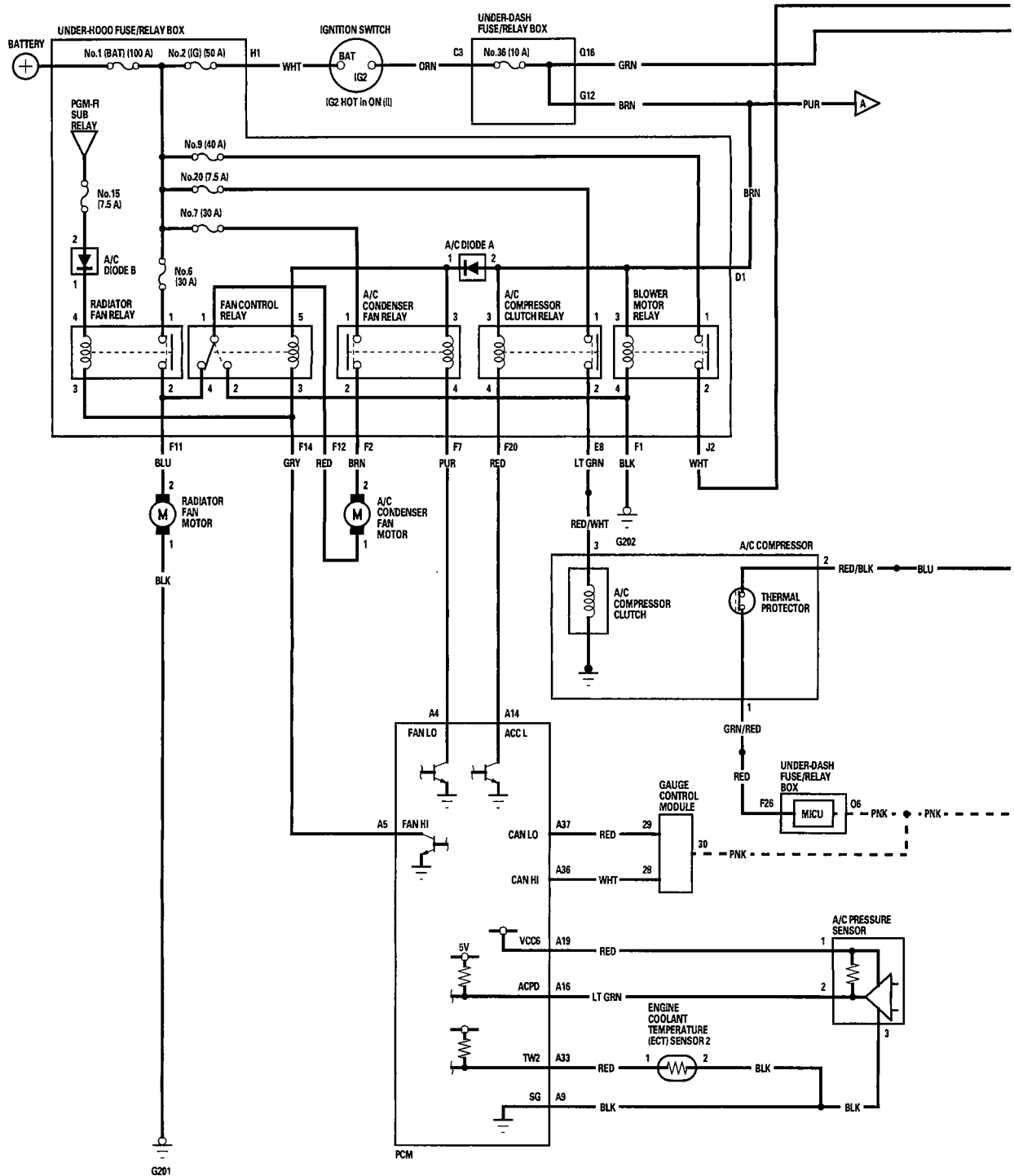
CONNECTOR B

Cavity	Wire color	Signal	
1	RED	NAVIGATION UNIT (SO)	OUTPUT
2			
3			
4	RED	SENSOR COMMON GROUND 2	INPUT
5			
6	GRY	DRIVER'S CLIMATE CONTROL SWITCH (BUS-DATA)	INPUT/OUTPUT
7			
8	PNK	B-CAN	INPUT/OUTPUT
9	BLU	NAVIGATION UNIT (CLK)	OUTPUT
10	YEL	NAVIGATION UNIT (SI)	INPUT
11	LT GRN	AUDIO UNIT (SI)	INPUT
12			
13	PUR	SUNLIGHT SENSOR	OUTPUT
14	LT BLU	IN-CAR TEMPERATURE SENSOR	OUTPUT
15			
16	GRN	IG 2 (POWER)	INPUT

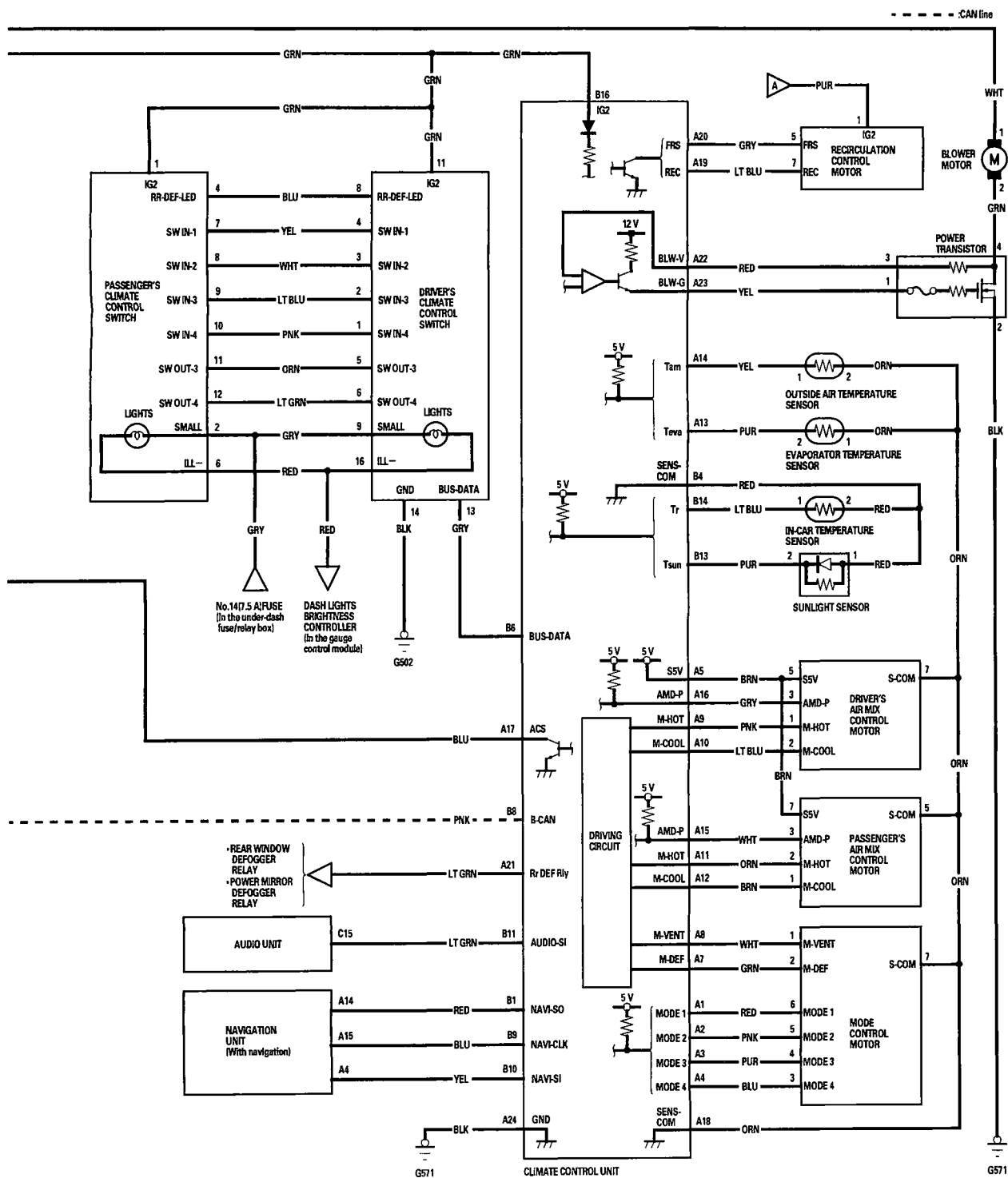


Climate Control

Circuit Diagram



cardiagn.com



Climate Control

DTC Troubleshooting

DTC indicator G: Climate Control Unit Internal Error

NOTE:

- Check the battery condition (see page 22-63) and the charging system (see page 4-26).
- If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-88).

1. Turn the ignition switch OFF, and then ON (II).
2. Do the self-diagnostic with the climate control unit (see page 21-10).
3. Check for DTCs.

Is DTC indicator G indicated?

YES—The climate control unit is faulty, replace the climate control unit (see page 21-88). ■

NO—Intermittent failure, the climate control unit is OK at this time. ■

DTC B1205 or DTC indicator H: Climate Control Unit Lost Communication with Gauge Control Module (VSP/NE message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-88).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Are DTC B1205 or H indicated?

YES—Go to step 5.

NO—The system is OK at this time, check for loose wires or poor connections on the gauge control module and climate control unit circuit. ■

5. Check for DTCs with the HDS.

Are DTC B1008, B1011, B1032, B1906 and B1205 also indicated?

YES—Go to step 6.

NO—The climate control unit is faulty. Replace the climate control unit. ■

6. Select UNIT INFORMATION in the BODY ELECTRICAL menu.
7. Select CONNECTED UNIT in the UNIT INFORMATION menu.

Is gauge control module detected?

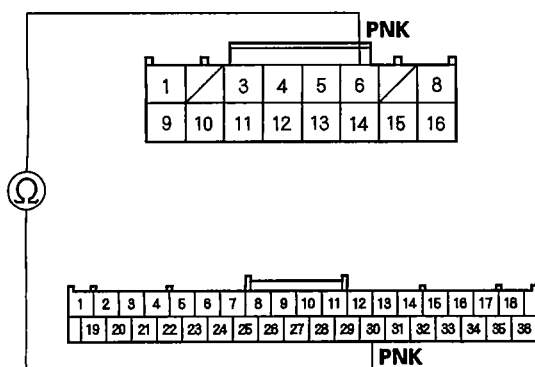
YES—Substitute a known-good gauge control module, and recheck. If the symptom/indication goes away, replace the gauge control module (see page 22-284). ■

NO—Go to step 8.



8. Disconnect under-dash fuse/relay box connector Q (16P).
9. Disconnect the gauge control module 36P connector.
10. Check for continuity between under-dash fuse/relay box connector Q (16P) terminal No. 6 and the gauge control module 36P connector terminal No. 30.

UNDER-DASH FUSE/RELAY BOX CONNECTOR Q (16P)
Wire side of female terminals



GAUGE CONTROL MODULE 36P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to the gauge control module input test (see page 22-282). ■

NO—Repair open in the wire between the MICU and the gauge control module. ■

DTC B1206 or DTC indicator K: Climate Control Unit Lost Communication with Gauge Control Module (TACH) (ECT message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-88).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Are DTC B1206 or K indicated?

YES—Go to step 5.

NO—The system is OK at this time, check for loose wires or poor connections on the gauge control module and climate control unit circuit. ■

5. Check for DTCs with the HDS.

Are DTC B1008, B1011, B1032, B1906 and B1206 also indicated?

YES—Go to step 6.

NO—The climate control unit is faulty. Replace the climate control unit. ■

6. Select UNIT INFORMATION in the BODY ELECTRICAL menu.
7. Select CONNECTED UNIT in the UNIT INFORMATION menu.

Is gauge control module detected?

YES—Substitute a known-good gauge control module, and recheck. If the symptom/indication goes away, replace the gauge control module (see page 22-284). ■

NO—Go to step 8.

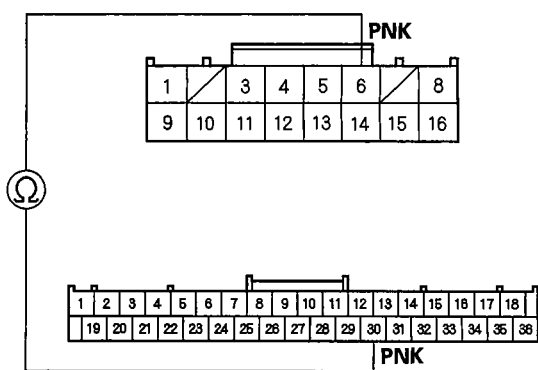
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Disconnect under-dash fuse/relay box connector Q (16P).
9. Disconnect the gauge control module 36P connector.
10. Check for continuity between under-dash fuse/relay box connector Q (16P) terminal No. 6 and the gauge control module 36P connector terminal No. 30.

UNDER-DASH FUSE/RELAY BOX CONNECTOR Q (16P)
Wire side of female terminals



GAUGE CONTROL MODULE 36P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to the gauge control module input test (see page 22-282). ■

NO—Repair open in the wire between the MICU and the gauge control module. ■

DTC B1207 or DTC indicator J: Climate Control Unit Lost Communication with Gauge Control Module (ILLUMI message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-88).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Are DTC B1207 or J indicated?

YES—Go to step 5.

NO—The system is OK at this time, check for loose wires or poor connections on the gauge control module and climate control unit circuit. ■

5. Check for DTCs with the HDS.

Are DTC B1008, B1011, B1032, B1906 and B1207 also indicated?

YES—Go to step 6.

NO—The climate control unit is faulty. Replace the climate control unit. ■

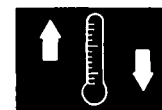
6. Select UNIT INFORMATION in the BODY ELECTRICAL menu.

7. Select CONNECTED UNIT in the UNIT INFORMATION menu.

Is gauge control module detected?

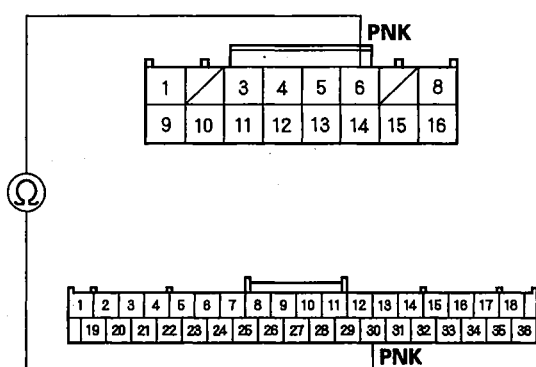
YES—Substitute a known-good gauge control module, and recheck. If the symptom/indication goes away, replace the gauge control module (see page 22-284). ■

NO—Go to step 8.



8. Disconnect under-dash fuse/relay box connector Q (16P).
9. Disconnect the gauge control module 36P connector.
10. Check for continuity between under-dash fuse/relay box connector Q (16P) terminal No. 6 and the gauge control module 36P connector terminal No. 30.

UNDER-DASH FUSE/RELAY BOX CONNECTOR Q (16P)
Wire side of female terminals



GAUGE CONTROL MODULE 36P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to the gauge control module input test (see page 22-282). ■

NO—Repair open in the PNK wire between the MICU and the gauge control module. ■

DTC B1225 or DTC indicator A and AUTO: An Open in the In-car Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1225 or A and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the in-car temperature sensor circuit. ■

5. Turn the ignition switch OFF.
6. Remove the in-car temperature sensor (see page 21-78) and test it (see page 21-78).

Is the in-car temperature sensor OK?

YES—Go to step 7.

NO—Replace the in-car temperature sensor. ■

7. Disconnect the climate control unit connector B (16P).

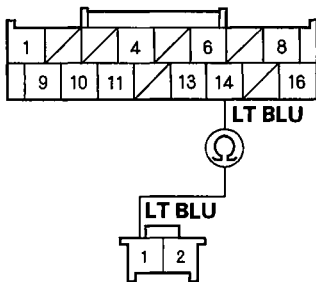
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between the climate control unit connector B (16P) terminal No. 14 and the in-car temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals



IN-CAR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

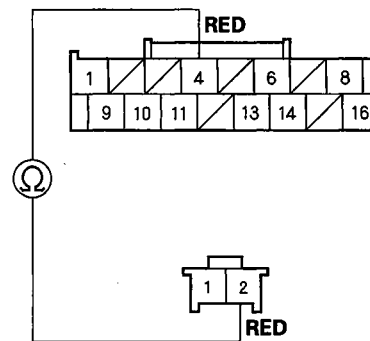
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the climate control unit and the in-car temperature sensor. ■

9. Check for continuity between climate control unit connector B (16P) terminal No. 4 and the in-car temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals

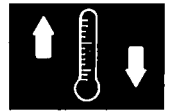


IN-CAR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at the climate control unit connector B (16P) and at the in-car temperature sensor 2P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire between the climate control unit and the in-car temperature sensor. ■



DTC B1226 or DTC indicator B and AUTO: A Short in the In-car Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1226 or B and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Remove the in-car temperature sensor (see page 21-78) and test it (see page 21-78).

Is the in-car temperature sensor OK?

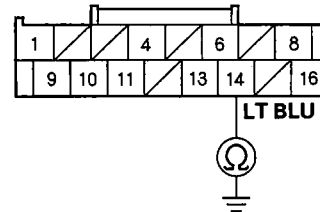
YES—Go to step 7.

NO—Replace the in-car temperature sensor. ■

7. Disconnect the climate control unit connector B (16P).

8. Check for continuity between body ground and the climate control unit connector B (16P) terminal No. 14.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

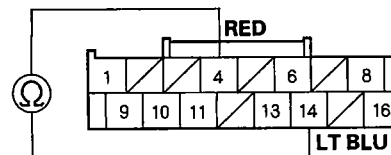
Is there continuity?

YES—Repair short to body ground in the wire between the climate control unit and the in-car temperature sensor. ■

NO—Go to step 9.

9. Check for continuity between the climate control unit connector B (16P) terminals No. 4 and No. 14.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the in-car temperature sensor. ■

NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1227 or DTC indicator C and AUTO: An Open in the Outside Air Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1227 or C and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the outside air temperature sensor circuit. ■

5. Turn the ignition switch OFF.
6. Remove the outside air temperature sensor (see page 21-79) and test it (see page 21-79).

Is the outside air temperature sensor OK?

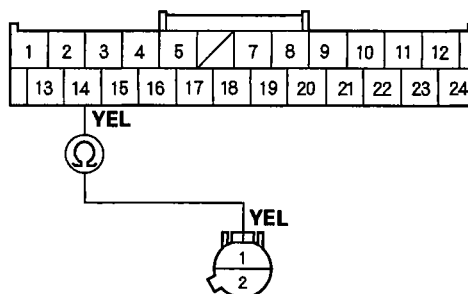
YES—Go to step 7.

NO—Replace the outside air temperature sensor. ■

7. Disconnect the climate control unit connector A (24P).

8. Check for continuity between the climate control unit connector A (24P) terminal No. 14 and the outside air temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



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

Is there continuity?

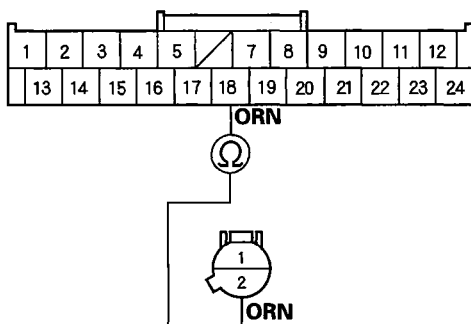
YES—Go to step 9.

NO—Repair open in the wire between the climate control unit and the outside air temperature sensor. ■



9. Check for continuity between the climate control unit connector A (24P) terminal No. 18 and the outside air temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



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

Is there continuity?

YES—Check for loose wires or poor connections at the climate control unit connector A (24P) and at the outside air temperature sensor 2P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire between the climate control unit and the outside air temperature sensor. ■

DTC B1228 or DTC indicator D and AUTO: A Short in the Outside Air Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1228 or D and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Remove the outside air temperature sensor (see page 21-79) and test it (see page 21-79).

Is the outside air temperature sensor OK?

YES—Go to step 7.

NO—Replace the outside air temperature sensor. ■

7. Disconnect the climate control unit connector A (24P).

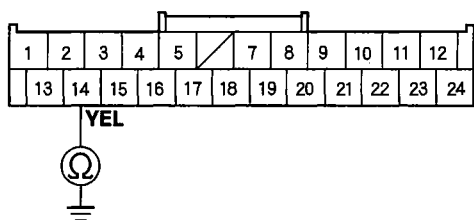
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between body ground and the climate control unit connector A (24P) terminal No. 14.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

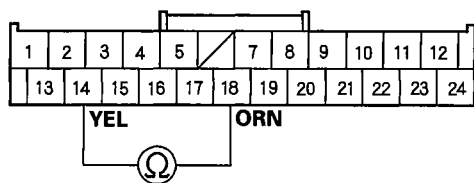
Is there continuity?

YES—Repair short to body ground in the wires between the climate control unit and the outside air temperature sensor. ■

NO—Go to step 9.

9. Check for continuity between the climate control unit connector A (24P) terminals No. 14 and No. 18.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the outside air temperature sensor. ■

NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

DTC B1229 or DTC indicator E and AUTO: An Open in the Sunlight Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B1229 or E and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the sunlight sensor circuit. ■

5. Turn the ignition switch OFF.
6. Test the sunlight sensor (see page 21-80).

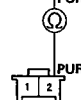
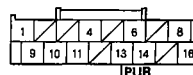
Is the sunlight sensor OK?

YES—Go to step 7.

NO—Replace the sunlight sensor (see page 21-80). ■

7. Disconnect the sunlight sensor 2P connector.
8. Disconnect the climate control unit connector B (16P).
9. Check for continuity between the climate control unit connector B (16P) terminal No. 13 and the sunlight sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals



SUNLIGHT SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

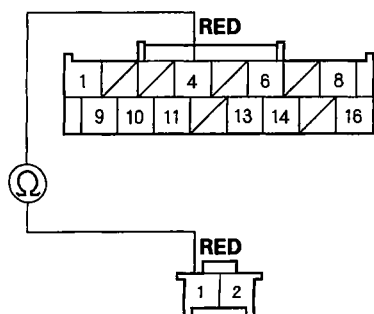
YES—Go to step 10.

NO—Repair open in the wire between the climate control unit and the sunlight sensor. ■



10. Check for continuity between the climate control unit connector B (16P) terminal No. 4 and the sunlight sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals



SUNLIGHT SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at the climate control unit connector B (16P) and at the sunlight sensor 2P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire between the climate control unit and the sunlight sensor. ■

DTC B1230 or DTC indicator F and AUTO: A Short in the Sunlight Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1230 or F and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Test the sunlight sensor (see page 21-80).

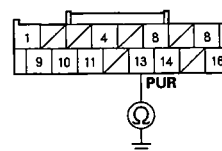
Is the sunlight sensor OK?

YES—Go to step 7.

NO—Replace the sunlight sensor (see page 21-80). ■

7. Disconnect the sunlight sensor 2P connector.
8. Disconnect the climate control unit connector B (16P).
9. Check for continuity between body ground and the climate control unit connector B (16P) terminal No. 13.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between the climate control unit and the sunlight sensor. ■

NO—Go to step 10.

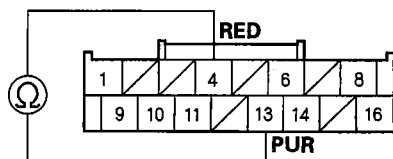
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between the climate control unit connector B (16P) terminals No. 4 and No. 13.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the sunlight sensor. ■

NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

DTC B1231 or DTC indicator G and AUTO: An Open in the Evaporator Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1231 or G and AUTO indicated?

YES—Go to step 5.

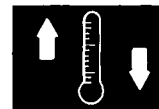
NO—Intermittent failure, check for loose wires or poor connections on the evaporator temperature sensor circuit. ■

5. Turn the ignition switch OFF.
6. Test the evaporator temperature sensor (see page 21-81).

Is the evaporator temperature sensor OK?

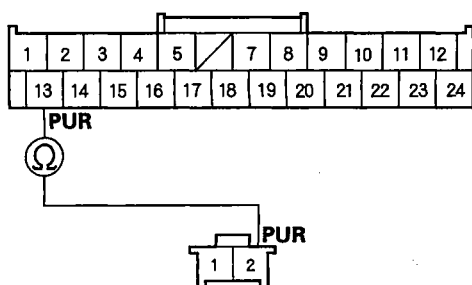
YES—Go to step 7.

NO—Replace the evaporator temperature sensor. ■



7. Disconnect the climate control unit connector A (24P).
8. Check for continuity between the climate control unit connector A (24P) terminal No. 13 and the evaporator temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



EVAPORATOR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

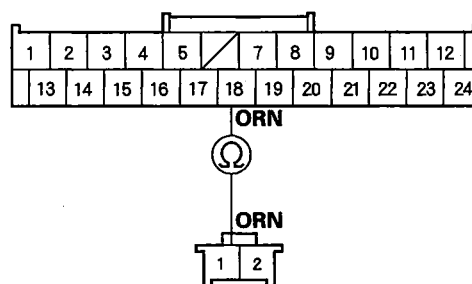
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the climate control unit and the evaporator temperature sensor. ■

9. Check for continuity between the climate control unit connector A (24P) terminal No. 18 and the evaporator temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



EVAPORATOR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at the climate control unit connector A (24P) and at the evaporator temperature sensor 2P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire between the climate control unit and the evaporator temperature sensor. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1232 or DTC indicator H and AUTO: A Short in the Evaporator Temperature Sensor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1232 or H and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Test the evaporator temperature sensor (see page 21-81).

Is the evaporator temperature sensor OK?

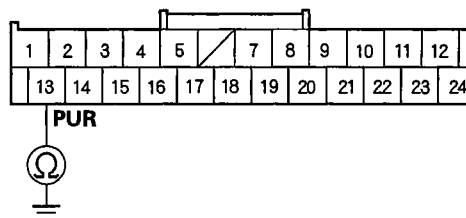
YES—Go to step 7.

NO—Replace the evaporator temperature sensor. ■

7. Disconnect the climate control unit connector A (24P).

8. Check for continuity between body ground and the climate control unit connector A (24P) terminal No. 13.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

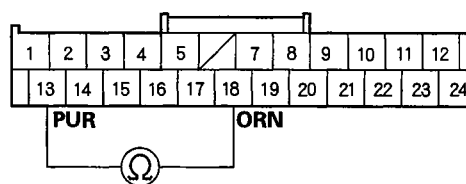
Is there continuity?

YES—Repair short to body ground in the wire between the climate control unit and the evaporator temperature sensor. ■

NO—Go to step 9.

9. Check for continuity between the climate control unit connector A (24P) terminals No. 13 and No. 18.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the evaporator temperature sensor. ■

NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■



DTC B1233 or DTC indicator J and AUTO: An Open in the Driver's Air Mix Control Motor Circuit

1. Start the engine.
2. Turn on the A/C, then set the driver's climate control switch to max hot.
3. Turn the ignition switch OFF.
4. Clear the DTC with the HDS.
5. Turn the ignition switch OFF, and then ON (II).
6. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
7. Check for DTCs.

Is DTC B1233 or J and AUTO indicated?

YES—Go to step 8.

NO—Intermittent failure, check for loose wires or poor connections on the driver's air mix control motor circuit. ■

8. Turn the ignition switch OFF.
9. Test the driver's air mix control motor (see page 21-83).

Is the driver's air mix control motor OK?

YES—Go to step 10.

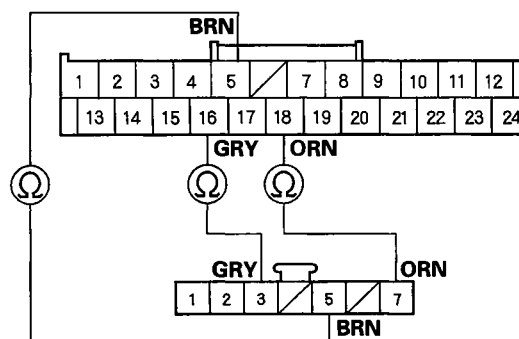
NO—Replace the driver's air mix control motor (see page 21-83). ■

10. Disconnect the driver's air mix control motor 7P connector.
11. Disconnect climate control unit connector A (24P).

12. Check for continuity between the following terminals of climate control unit connector A (24P) and the driver's air mix control motor 7P connector.

24P:	7P:
No. 5	No. 5
No. 16	No. 3
No. 18	No. 7

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



DRIVER'S AIR MIX CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wire or poor connections at climate control unit connector A (24P) and at the driver's air mix control motor 7P connector. If the connections are good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire(s) between the climate control unit and the driver's air mix control motor. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1234 or DTC indicator K and AUTO: A Short in the Driver's Air Mix Control Motor Circuit

- 1. Clear the DTC with the HDS.
- 2. Turn the ignition switch OFF, and then ON (II).
- 3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
- 4. Check for DTCs.

Is DTC B1234 or K and AUTO indicated?

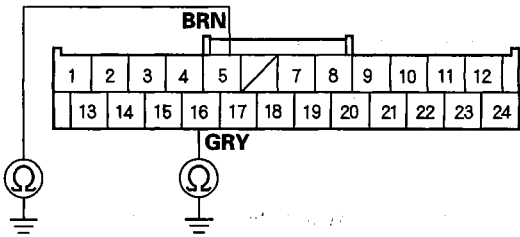
YES—Go to step 5.

NO—Intermittent failure. ■

- 5. Turn the ignition switch OFF.
- 6. Disconnect the driver's air mix control motor 7P connector.
- 7. Disconnect climate control unit connector A (24P).

- 8. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 5 and 16 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair any short to body ground in the wire(s) between the climate control unit and the driver's air mix control motor. ■

NO—Go to step 9.

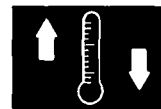
- 9. Check for continuity between the terminals of climate control unit connector A (24P) as follows.

From terminal	To terminals
A5	A16, A18
A16	A18

Is there continuity between any of the terminals?

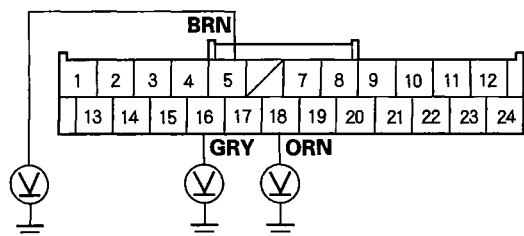
YES—Repair the short in the wires. ■

NO—Go to step 10.



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

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire(s) between the climate control unit and the driver's air mix control motor. ■

NO—Go to step 11.

11. Test the driver's air mix control motor (see page 21-83).

Is the driver's air mix control motor OK?

YES—Check for loose wire or poor connections at climate control unit connector A (24P) and at the driver's air mix control motor 7P connector. If the connections are good, check the driver's air mix control motor operation with the original climate control unit. If the motor is not good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away and the driver's air mix control motor runs, replace the original climate control unit. ■

NO—Replace the driver's air mix control motor (see page 21-83). ■

DTC B1235 or DTC indicator L and AUTO: A Problem in the Driver's Air Mix Control Linkage, Door, or Motor

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1235 or L and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Test the driver's air mix control motor (see page 21-83).

Is the driver's air mix control motor OK?

YES—Go to step 6.

NO—Replace the driver's air mix control motor (see page 21-83), or repair the driver's air mix control linkage or door. ■

7. Disconnect the driver's air mix control motor 7P connector.
8. Disconnect climate control unit connector A (24P).

(cont'd)

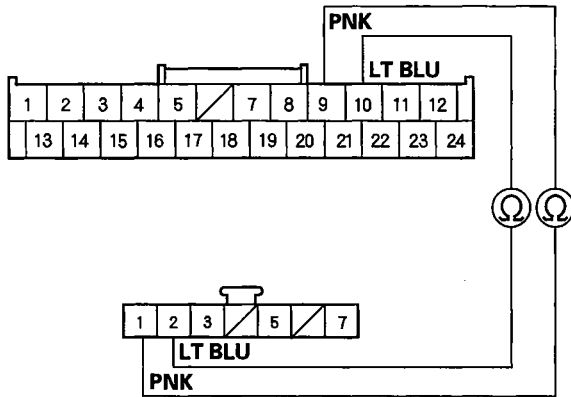
Climate Control

DTC Troubleshooting (cont'd)

9. Check for continuity between the following terminals of the climate control unit connector A (24P) and the driver's air mix control motor 7P connector.

24P: 7P:
No. 9 No. 1
No. 10 No. 2

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



DRIVER'S AIR MIX CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

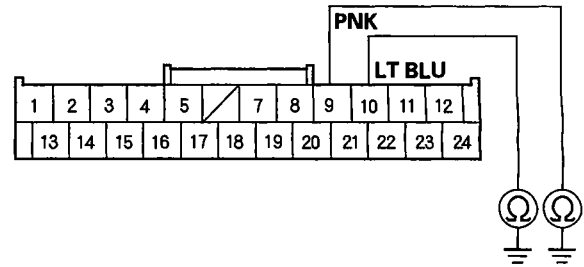
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire(s) between the climate control unit and the driver's air mix control motor. ■

10. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 9 and No. 10 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)

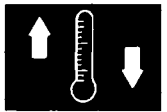


Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the driver's air mix control motor. ■

NO—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■



DTC B1236 or DTC indicator M and AUTO: An Open in the Passenger's Air Mix Control Motor Circuit

1. Start the engine.
2. Turn on the A/C, then set the passenger's climate control switch to max hot.
3. Turn the ignition switch OFF.
4. Clear the DTC with the HDS.
5. Turn the ignition switch OFF, and then ON (II).
6. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
7. Check for DTCs.

Is DTC B1236 or M and AUTO indicated?

YES—Go to step 8.

NO—Intermittent failure. ■

8. Turn the ignition switch OFF.
9. Test the passenger's air mix control motor (see page 21-84).

Is the passenger's air mix control motor OK?

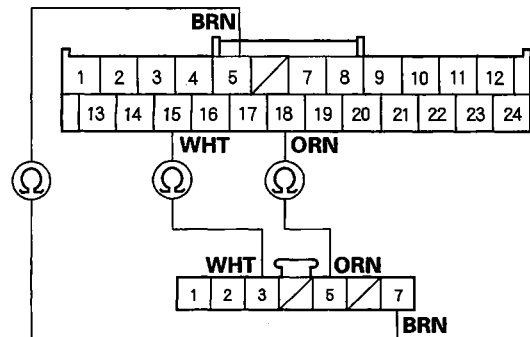
YES—Go to step 10.

NO—Replace the passenger's air mix control motor (see page 21-85). ■
10. Disconnect the passenger's air mix control motor 7P connector.
11. Disconnect climate control unit connector A (24P).

12. Check for continuity between the following terminals of climate control unit connector A (24P) and the passenger's air mix control motor 7P connector.

24P:	7P:
No. 5	No. 7
No. 15	No. 3
No. 18	No. 5

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



PASSENGER'S AIR MIX CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wire or poor connections at climate control unit connector A (24P) and at the passenger's air mix control motor 7P connector. If the connections are good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire(s) between the climate control unit and the passenger's air mix control motor. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1237 or DTC indicator N and AUTO: A Short in the Passenger's Air Mix Control Motor Circuit

- 1. Clear the DTC with the HDS.
- 2. Turn the ignition switch OFF, and then ON (II).
- 3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
- 4. Check for DTCs.

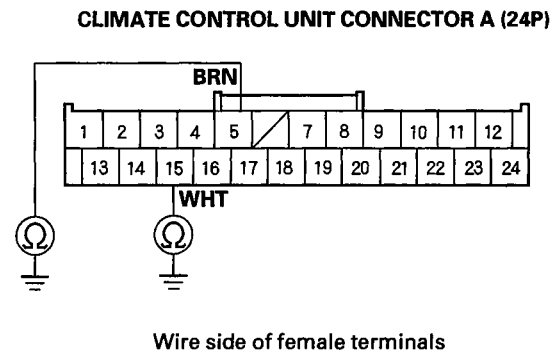
Is DTC B1237 or N and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

- 5. Turn the ignition switch OFF.
- 6. Disconnect the passenger's air mix control motor 7P connector.
- 7. Disconnect climate control unit connector A (24P).

- 8. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 5 and 15 individually.



Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the passenger's air mix control motor. ■

NO—Go to step 9.

- 9. Check for continuity between the terminals of climate control unit connector A (24P) as follows.

From terminal	To terminals
A5	A15, A18
A15	A18

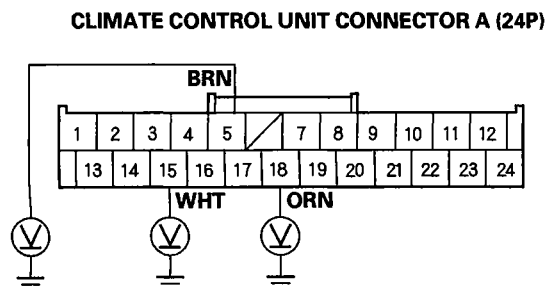
Is there continuity between any of the terminals?

YES—Repair the short in the wires. ■

NO—Go to step 10.



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



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire(s) between the climate control unit and the passenger's air mix control motor. ■

NO—Go to step 11.

11. Test the passenger's air mix control motor (see page 21-84).

Is the passenger's air mix control motor OK?

YES—Check for loose wire or poor connections at climate control unit connector A (24P) and at the passenger's air mix control motor 7P connector. If the connections are good, check the passenger's air mix control motor operation with the original climate control unit. If the motor is not good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away and the passenger's air mix control motor runs, replace the original climate control unit. ■

NO—Replace the passenger's air mix control motor (see page 21-85).

DTC B1238 or DTC indicator P and AUTO: A Problem in the Passenger's Air Mix Control Linkage, Door, or Motor

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1238 or P and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Test the passenger's air mix control motor (see page 21-84).

Is the passenger's air mix control motor OK?

YES—Go to step 6.

NO—Replace the passenger's air mix control motor (see page 21-85), or repair the passenger's air mix control linkage or door. ■

7. Disconnect the passenger's air mix control motor 7P connector.
8. Disconnect climate control unit connector A (24P).

(cont'd)

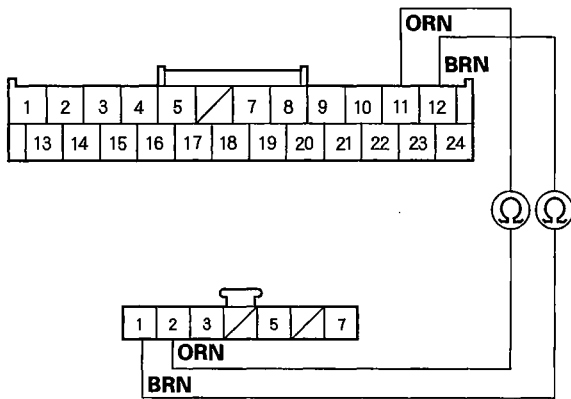
Climate Control

DTC Troubleshooting (cont'd)

9. Check for continuity between the following terminals of the climate control unit connector A (24P) and the passenger's air mix control motor 7P connector.

24P: 7P:
No. 11 No. 2
No. 12 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



PASSENGER'S AIR MIX CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

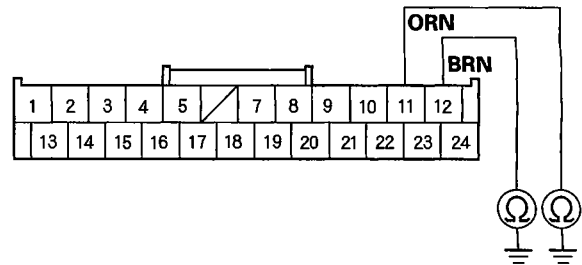
Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire(s) between the climate control unit and the passenger's air mix control motor. ■

10. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 11 and No. 12 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the passenger's air mix control motor. ■

NO—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■



DTC B1239 or DTC indicator A: An Open or Short in the Mode Control Motor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1239 or A indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the mode control motor circuit. ■

5. Turn the ignition switch OFF.
6. Test the mode control motor (see page 21-85).

Is the mode control motor OK?

YES—Go to step 7.

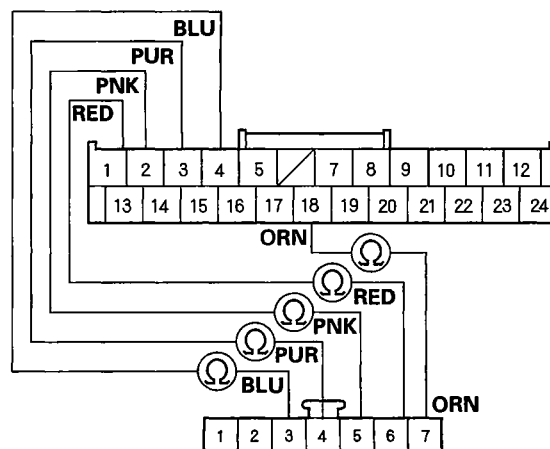
NO—Replace the mode control motor (see page 21-86). ■

7. Disconnect the mode control motor 7P connector.
8. Disconnect climate control unit connector A (24P).

9. Check for continuity between the following terminals of climate control unit connector A (24P) and the mode control motor 7P connector.

24P:	7P:
No. 1	No. 6
No. 2	No. 5
No. 3	No. 4
No. 4	No. 3
No. 18	No. 7

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



MODE CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 10.

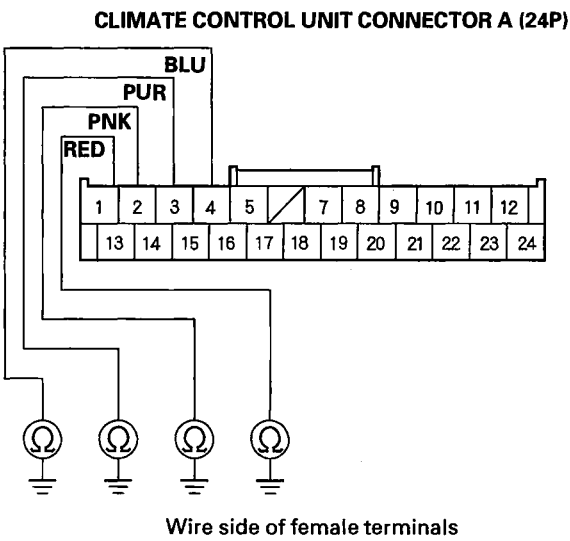
NO—Repair open in the wire(s) between the climate control unit and the mode control motor. ■

(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 1, 2, 3 and 4 individually.



Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the mode control motor. ■

NO—Go to step 11.

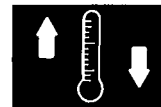
11. Check for continuity between the terminals of climate control unit connector A (24P) as follows.

From terminal	To terminals
A1	A2, A3, A4, A18
A2	A3, A4, A18
A3	A4, A18
A4	A18

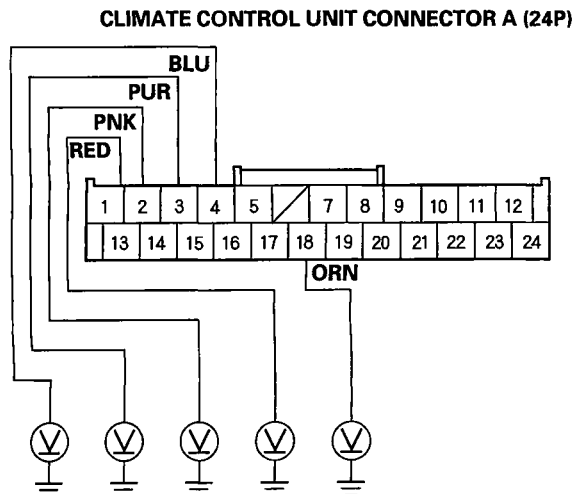
Is there continuity between any of the terminals?

YES—Repair short in the wire(s) between climate control unit and mode control motor. ■

NO—Go to step 12.



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



Is there any voltage?

YES—Repair short to power in the wire(s) between the climate control unit and the mode control motor. ■

NO—Check for loose wire or poor connections at climate control unit connector A (24P) and at the mode control motor 7P connector. If the connections are good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

DTC B1240 or DTC indicator B: A Problem in the Mode Control Linkage, Doors, or Motor

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1240 or B indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Test the mode control motor (see page 21-85).

Is the mode control motor OK?

YES—Go to step 7.

NO—Replace the mode control motor (see page 21-86), or repair the mode control linkage or doors. ■

7. Disconnect the mode control motor 7P connector.
8. Disconnect climate control unit connector A (24P).

(cont'd)

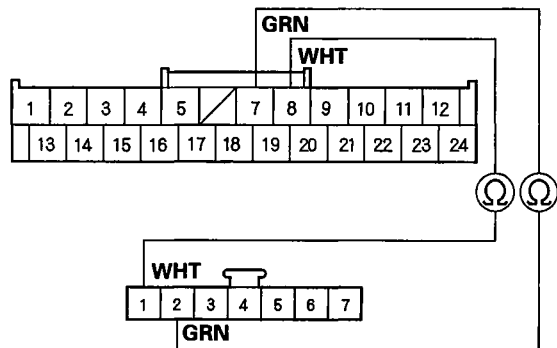
Climate Control

DTC Troubleshooting (cont'd)

9. Check for continuity between the following terminals of climate control unit connector A (24P) and the mode control motor 7P connector.

24P: 7P:
No. 7 No. 2
No. 8 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



MODE CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

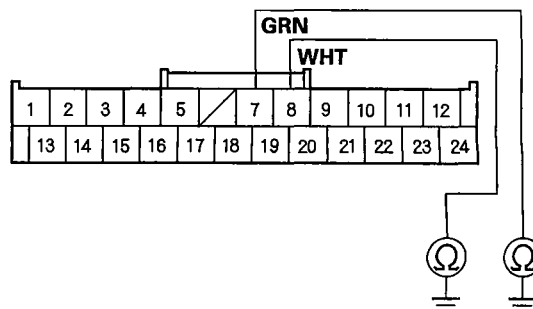
Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire(s) between the climate control unit and the mode control motor. ■

10. Check for continuity between body ground and climate control unit connector A (24P) terminals No. 7 and No. 8 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)

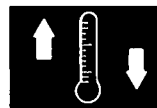


Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the mode control motor. ■

NO—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■



DTC B1241 or DTC indicator F: A Problem in the Blower Motor Circuit

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1241 or F indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the blower motor circuit. ■

5. Turn the ignition switch OFF.
6. Check the No. 9 (40 A) fuse in the under-hood fuse/relay box, and the No. 36 (10 A) fuse in the under-dash fuse/relay box.

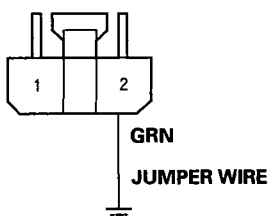
Are the fuses OK?

YES—Go to step 7.

NO—Replace the fuses, and recheck. ■

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

BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

8. Turn the ignition switch ON (II).

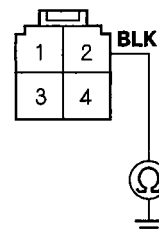
Does the blower motor run?

YES—Go to step 9.

NO—Go to step 25.

9. Turn the ignition switch OFF.
10. Disconnect the jumper wire.
11. Disconnect the power transistor 4P connector.
12. Check for continuity between the No. 2 terminal of the power transistor 4P connector and body ground.

POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals

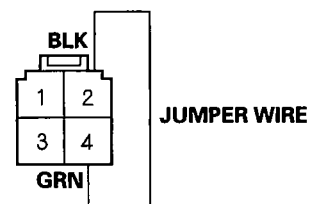
Is there continuity?

YES—Go to step 13.

NO—Check for an open in the BLK wire between the power transistor and body ground. If the wire is OK, check for poor ground at G571. ■

13. Connect the No. 2 and No. 4 terminals of the power transistor 4P connector with a jumper wire.

POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals

(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

14. Turn the ignition switch ON (II).

Does the blower motor run at high speed?

YES—Go to step 15.

NO—Repair open in the GRN wire between the power transistor and the blower motor. ■

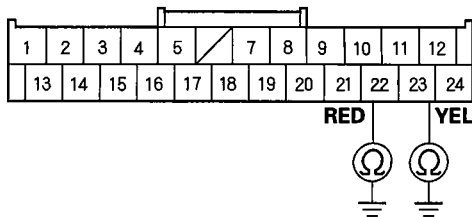
15. Turn the ignition switch OFF.

16. Disconnect the jumper wire.

17. Disconnect the climate control unit connector A (24P).

18. Check for continuity between body ground and the climate control unit connector A (24P) terminals No. 22 and No. 23 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

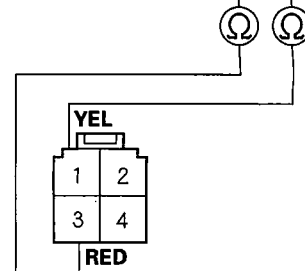
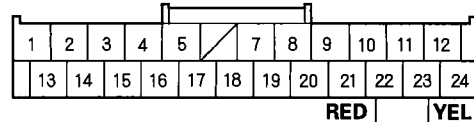
YES—Repair short to body ground in the wire(s) between the climate control unit and the power transistor. ■

NO—Go to step 19.

19. Check for continuity between the following terminals of the climate control unit connector A (24P) and the power transistor 4P connector.

24P: 4P:
No. 22 No. 3
No. 23 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



POWER TRANSISTOR 4P CONNECTOR
Wire side of female terminals

Is there continuity?

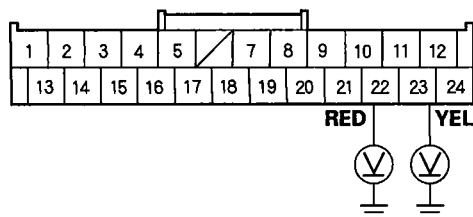
YES—Go to step 20.

NO—Repair open in the wire(s) between the climate control unit and the power transistor. ■



20. Turn the ignition switch ON (II).
21. Measure the voltage between body ground and the climate control unit connector A (24P) terminals No. 22 and No. 23 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there voltage?

YES—Repair short to power in the wire(s). ■

NO—Go to step 22.

22. Turn the ignition switch OFF.
23. Reconnect the climate control unit connector A (24P).
24. Test the power transistor (see page 21-82).

Is the power transistor OK?

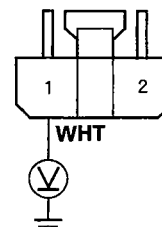
YES—Check for loose wires or poor connections at the climate control unit connector A (24P) and at the power transistor 4P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the power transistor. ■

25. Disconnect the jumper wire.
26. Disconnect the blower motor 2P connector.

27. Measure the voltage between the blower motor 2P connector terminal No. 1 and body ground.

BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Replace the blower motor. ■

NO—Go to step 28.

28. Turn the ignition switch OFF.
29. Remove the blower motor relay from the under-hood fuse/relay box, and test it (see page 22-64).

Is the relay OK?

YES—Go to step 30.

NO—Replace the blower motor relay. ■

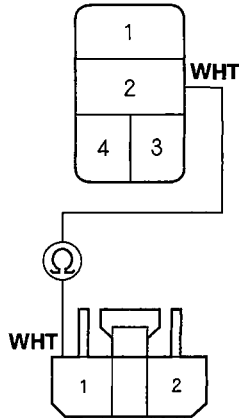
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

30. Check for continuity between the blower motor relay 4P socket terminal No. 2 and blower motor 2P connector terminal No. 1.

BLOWER MOTOR RELAY 4P SOCKET



BLOWER MOTOR 2P CONNECTOR
Wire side of female terminals

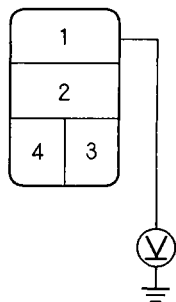
Is there continuity?

YES—Go to step 31.

NO—Repair open in the wire between the blower motor relay and blower motor. ■

31. Measure the voltage between the blower motor relay 4P socket terminal No. 1 and body ground.

BLOWER MOTOR RELAY 4P SOCKET



Wire side of female terminals

Is there battery voltage?

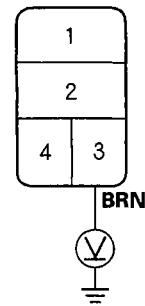
YES—Go to step 32.

NO—Replace the under-hood fuse/relay box (see page 22-61). ■

32. Turn the ignition switch ON (II).

33. Measure the voltage between blower motor relay 4P socket terminal No. 3 and body ground.

BLOWER MOTOR RELAY 4P SOCKET



Is there battery voltage?

YES—Check for an open in the wire between the blower motor relay 4P socket terminal No. 4 and body ground. If the wire is OK, check for poor ground at G202 (see page 22-60). ■

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and blower motor relay 4P socket. ■



Recirculation Control Motor Circuit Troubleshooting

1. Check the No. 36 (10 A) fuse in the under-dash fuse/relay box.

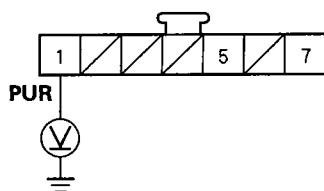
Is the fuse OK?

YES—Go to step 2.

NO—Replace the fuse, and recheck. If the fuse blows again, check for a short in the No. 36 (10 A) fuse circuit. ■

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

RECIRCULATION CONTROL MOTOR 7P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 5.

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and the recirculation control motor. ■

5. Turn the ignition switch OFF.
6. Test the recirculation control motor (see page 21-86).

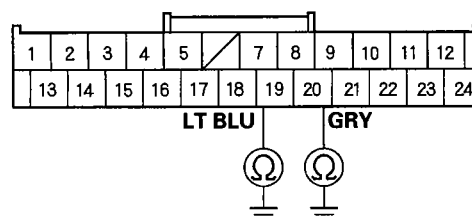
Is the recirculation control motor OK?

YES—Go to step 7.

NO—Replace the recirculation control motor (see page 21-87), or repair the recirculation control linkage or door. ■

7. Disconnect the climate control unit connector A (24P).
8. Check for continuity between body ground and the climate control unit connector A (24P) terminals No. 19 and No. 20 individually.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the climate control unit and the recirculation control motor. ■

NO—Go to step 9.

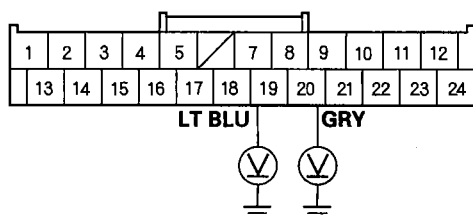
(cont'd)

Climate Control

Recirculation Control Motor Circuit Troubleshooting (cont'd)

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

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire(s) between the climate control unit and the recirculation control motor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

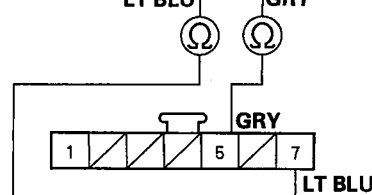
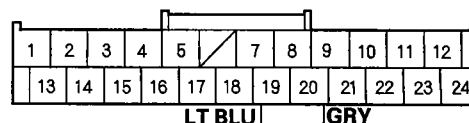
NO—Go to step 10.

10. Turn the ignition switch OFF.

11. Check for continuity between the following terminals of the climate control unit connector A (24P) and the recirculation control motor 7P connector.

24P: 7P:
No. 19 No. 7
No. 20 No. 5

CLIMATE CONTROL UNIT CONNECTOR A (24P)
Wire side of female terminals



RECIRCULATION CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at the climate control unit connector A (24P) and at the recirculation control motor 7P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Repair open in the wire(s) between the climate control unit and the recirculation control motor. ■



Climate Control Power and Ground Circuit Troubleshooting

1. Check the No. 36 (10 A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

YES—Go to step 2.

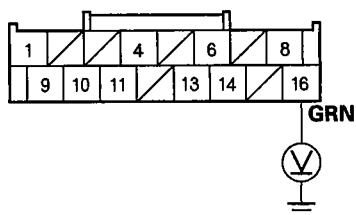
NO—Replace the fuse, and recheck. If the fuse blows again, check for a short in the No. 36 (10 A) fuse circuit. ■

2. Disconnect the climate control unit connector B (16P).

3. Turn the ignition switch ON (II).

4. Measure the voltage between the climate control unit connector B (16P) terminal No. 16 and body ground.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

Is there battery voltage?

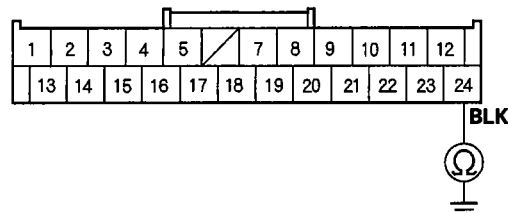
YES—Go to step 5.

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and the climate control unit. ■

5. Turn the ignition switch OFF.

6. Check for continuity between the climate control unit connector A (24P) terminal No. 24 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Check for loose wires and poor connections at the climate control unit connector A (24P). If connections are good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Check for an open in the wire between the climate control unit and body ground. If the wire is OK, check for poor ground at G571 (see page 22-60). ■

Climate Control

Navigation Communication Line Circuit Troubleshooting

1. Operate the climate control system in several modes.

Is the climate control system OK?

YES—Go to step 2.

NO—Do the self-diagnostic with the HDS (see page 21-8) or climate control unit (see page 21-10). ■

2. Do the Navi system link (see page 23-170).

Is the Air-Con or TALK/BACK icon red?

YES—

- If Air-con icon is red, go to step 3.
- If TALK/BACK icon is red, go to "voice control does not work/respond" in the navigation system symptom troubleshooting (see page 23-158). ■

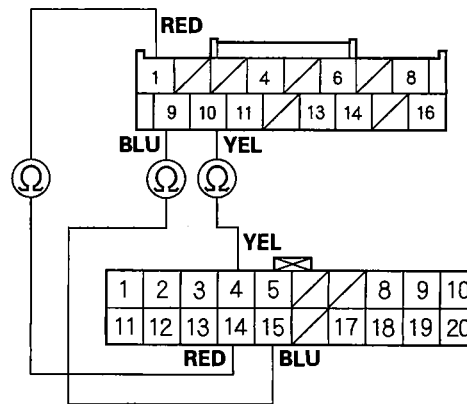
NO—Go to step 9.

3. Turn the ignition switch OFF.
4. Disconnect navigation unit connector A (20P).
5. Disconnect the climate control unit connector B (16P).

6. Check for continuity between the following terminals of the climate control unit connector B (16P) and navigation unit connector A (20P).

16P: 20P:
No. 1 No. 14
No. 9 No. 15
No. 10 No. 4

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals

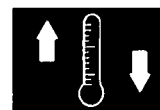


NAVIGATION UNIT CONNECTOR A (20P)
Wire side of female terminals

Is there continuity?

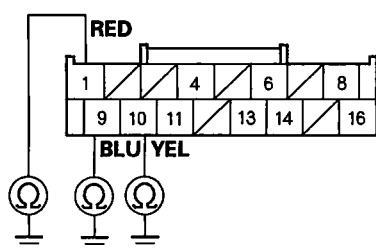
YES—Go to step 7.

NO—Repair open in the wire(s) between the climate control unit and the navigation unit. ■



7. Check for continuity between body ground and the climate control unit connector B (16P) terminals No. 1, 9, and No. 10 individually.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

Is there continuity?

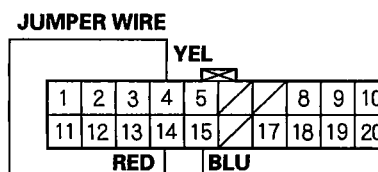
YES—Repair short to body ground in the wire(s) between the climate control unit and the navigation unit. ■

NO—Go to step 8.

8. Reconnect the climate control unit connector B (16P).
9. Disconnect navigation unit connector A (20P).

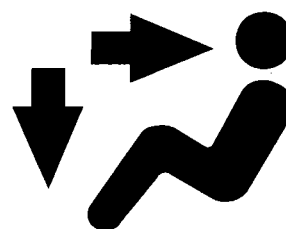
10. Connect the navigation unit connector A (20P) terminals No. 4, 14 and No. 15 with a jumper wire.

NAVIGATION UNIT CONNECTOR A (20P)



Wire side of female terminals

11. Turn the ignition switch ON (II).
12. Press and hold the AUTO button, then press and hold the OFF button.



Is the HEAT/VENT indicator solid with the remaining icons blinking?

YES—Do the Unit check with the navigation system (see page 23-169). ■

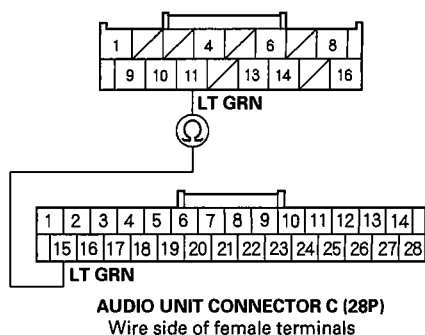
NO—Substitute a known-good climate control unit, and recheck. If the symptom goes away, replace the original climate control unit. ■

Climate Control

Audio Communication Line Circuit Troubleshooting

1. Turn the ignition switch OFF.
2. Disconnect the climate control unit connector B (16P) and audio unit connector C (28P).
3. Check for continuity between the climate control unit connector B (16P) terminal No. 11 and the audio unit connector C (28P) terminal No. 15.

CLIMATE CONTROL UNIT CONNECTOR B (16P)
Wire side of female terminals



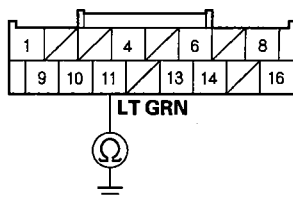
Is there continuity?

YES—Go to step 4.

NO—Repair open in the wire between the climate control unit connector B (16P) and the audio unit connector C (28P). ■

4. Check for continuity between the body ground and the climate control unit connector B (16P) terminal No. 11.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

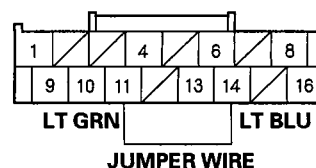
Is there continuity?

YES—Repair short to body ground in the wire between the climate control unit connector B (16P) and the audio unit connector C (28P). ■

NO—Go to step 5.

5. Reconnect the climate control unit connector B (16P).
6. Disconnect the in-car temperature sensor 2P connector (see page 21-78).
7. Connect the climate control unit connector B (16P) terminal No. 11 and terminal No. 14 with a jumper wire.

CLIMATE CONTROL UNIT CONNECTOR B (16P)



Wire side of female terminals

8. Turn the ignition switch ON (II).
9. Press and hold the DEF button and OFF button.

Is the DEF button LED blinking?

YES—Audio unit is faulty, replace the audio unit (see page 23-99).

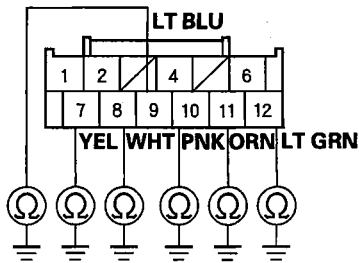
NO—Climate control unit is faulty, replace the climate control unit (see page 21-88).

Climate Control

Climate Control Switch Communication Line Circuit Troubleshooting (cont'd)

10. Check for continuity between body ground and the passenger's climate control switch 12P connector terminals as shown.

PASSENGER'S CLIMATE CONTROL SWITCH 12P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the driver's climate control switch and the passenger's climate control switch. ■

NO—Substitute a known-good passenger's climate control switch, and recheck. If the symptom goes away, replace the original passenger's climate control switch (see page 21-88). ■

11. Press and hold the FAN UP switch, then press the OFF switch.

Is the REC button LED blinking?

YES—Substitute a known-good driver's climate control switch, and recheck the function. If the symptom is still present, replace the climate control unit. ■

NO—Go to step 12.

12. Check the driver's climate control switch LEDs.

Are the REC button and AUTO button LEDs blinking?

YES—Driver's climate control switch is faulty, replace the driver's climate control switch (see page 21-88). ■

NO—Go to step 13.

13. Check the driver's climate control switch LEDs.

Are the REC button and DUAL button LEDs blinking?

YES—Substitute a known-good driver's climate control switch, and recheck the function. If the symptom is still present, replace the climate control unit. ■

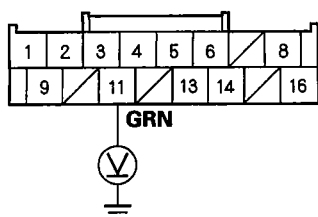
NO—Go to step 14.

14. Turn the ignition switch OFF.



15. Disconnect the driver's climate control switch 16P connector.
16. Turn the ignition switch ON (II).
17. Measure the voltage between body ground and the driver's climate control switch 16P connector terminal No. 11.

DRIVER'S CLIMATE CONTROL SWITCH 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

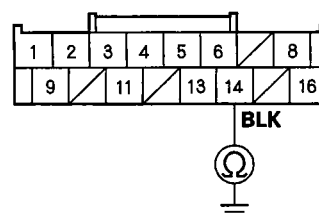
YES—Go to step 18.

NO—Repair open in the wire between the driver's climate control switch and the No. 36 (10 A) fuse in the under-dash fuse/relay box. If wires are OK, replace the under-hood fuse/relay box (see page 22-61). ■

18. Turn the ignition switch OFF.

19. Check for continuity between body ground and the driver's climate control switch 16P connector terminal No. 14

DRIVER'S CLIMATE CONTROL SWITCH 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 20.

NO—Check for an open in the wire between the driver's climate control switch and body ground. If the wire is OK, check for poor ground at G502 (see page 22-60). ■

(cont'd)

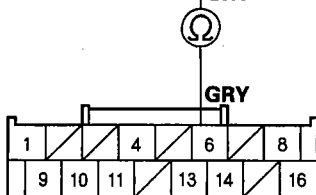
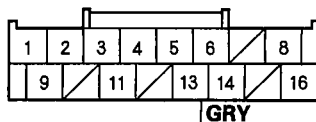
Climate Control

Climate Control Switch Communication Line Circuit Troubleshooting (cont'd)

20. Disconnect the climate control unit connector B (16P).
21. Check for continuity between climate control unit connector B (16P) terminal No. 6 and the driver's climate control switch 16P connector No. 13.

DRIVER'S CLIMATE CONTROL SWITCH 16P CONNECTOR

Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR B (16P)

Wire side of female terminals

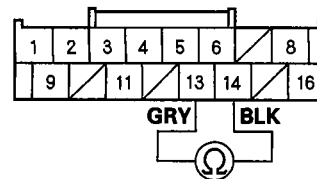
Is there continuity?

YES—Go to step 22.

NO—Repair open in the wire(s) between the driver's climate control switch and the climate control unit. ■

22. Check for continuity between driver's climate control switch 16P terminal No. 13 and terminal No.14.

DRIVER'S CLIMATE CONTROL SWITCH 16P CONNECTOR

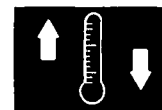


Wire side of female terminals

Is there continuity?

YES—Repair short to another wire. ■

NO—Substitute a known-good driver's climate control switch and recheck. If the symptom is still present, replace the climate control unit. ■



Radiator and A/C Condenser Fan Low Speed Circuit Troubleshooting

NOTE:

- Do not use this troubleshooting procedure if the A/C compressor is inoperative. Refer to the symptom troubleshooting index.
- Before performing symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 7 (30 A) fuse in the under-hood fuse/relay box, and the No. 36 (10 A) fuse in the under-dash fuse/relay box.

Are the fuses OK?

YES—Go to step 2.

NO—Replace the fuses, and recheck. If the fuses blow again, check for a short in the No. 7 (30 A) and No. 36 (10 A) fuses circuit. ■

2. Remove the A/C condenser fan relay from the under-hood fuse/relay box, and test it (see page 22-64).

Is the relay OK?

YES—Go to step 3.

NO—Replace the A/C condenser fan relay. ■

3. Connect the HDS to the DLC (see page 21-8).
4. Turn the ignition switch ON (II).
5. Turn on the A/C.
6. Check the FAN LOW CTRL in the PGM-FI Data List with the HDS.

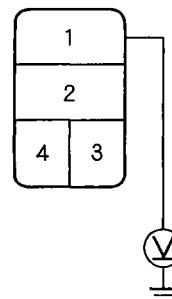
Is the FAN LOW CTRL on?

YES—Go to step 7.

NO—Substitute a known-good PCM (see page 11-8), and retest. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-252). ■

7. Measure the voltage between the A/C condenser fan relay 4P socket terminal No. 1 and body ground.

A/C CONDENSER FAN RELAY 4P SOCKET



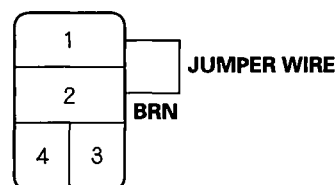
Is there battery voltage?

YES—Go to step 8.

NO—Replace the under-hood fuse/relay box (see page 22-61). ■

8. Connect the A/C condenser fan relay 4P socket terminals No. 1 and No. 2 with a jumper wire.

A/C CONDENSER FAN RELAY 4P SOCKET



Does the A/C condenser and radiator fans run on low?

YES—Go to step 9.

NO—Go to step 18.

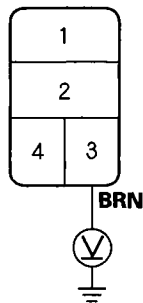
(cont'd)

Climate Control

Radiator and A/C Condenser Fan Low Speed Circuit Troubleshooting (cont'd)

9. Disconnect the jumper wire.
10. Turn the ignition switch ON (II).
11. Measure the voltage between the A/C condenser fan relay 4P socket terminal No. 3 and body ground.

A/C CONDENSER FAN RELAY 4P SOCKET



Is there battery voltage?

YES—Go to step 12.

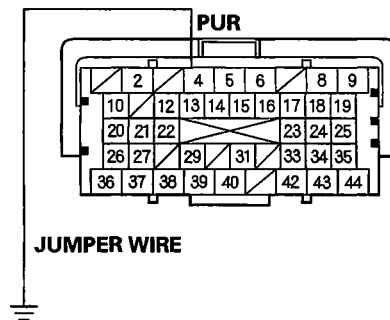
NO—Go to step 36.

12. Turn the ignition switch OFF.
13. Reinstall the A/C condenser fan relay.
14. Jump the SCS line with the HDS.

NOTE: This step must be done to protect the powertrain control module (PCM) from damage.

15. Disconnect PCM connector A (44P).
16. Connect the PCM connector A (44P) terminal No. 4 to body ground with a jumper wire.

PCM CONNECTOR A (44P)



Terminal side of female terminals

17. Turn the ignition switch ON (II).

Do the A/C condenser and radiator fans run on low?

YES—Check for loose wires or poor connections at PCM connector A (44P) terminal No. 4. If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-252). ■

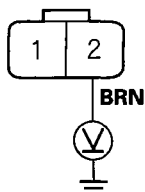
NO—Repair open in the wire between the A/C condenser fan relay and the PCM. ■

18. Disconnect the jumper wire.
19. Reinstall the A/C condenser fan relay.
20. Disconnect the A/C condenser fan 2P connector.
21. Turn the ignition switch ON (II), then set the A/C button and fan control button ON.



22. Measure the voltage between the A/C condenser fan 2P connector terminal No. 2 and body ground.

A/C CONDENSER FAN 2P CONNECTOR



Wire side of female terminals

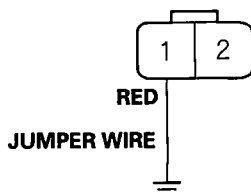
Is there battery voltage?

YES—Go to step 23.

NO—Repair open in the wire between the A/C condenser fan relay and the A/C condenser fan. ■

23. Set the A/C button and fan control dial OFF, then turn the ignition switch OFF.
24. Reconnect the A/C condenser fan 2P connector.
25. Connect the A/C condenser fan 2P connector terminal No. 1 to body ground with a jumper wire.

A/C CONDENSER FAN 2P CONNECTOR



Wire side of female terminals

26. Turn the ignition switch ON (II), then set the A/C button and fan control button ON.

Does the A/C condenser fan run?

YES—Go to step 26.

NO—Replace the A/C condenser fan motor (see page 10-16). ■

27. Set the A/C button and fan control dial to OFF, then turn the ignition switch OFF.

28. Disconnect the jumper wire.

29. Remove the fan control relay from the under-hood relay box, and test it (see page 22-64).

Is the relay OK?

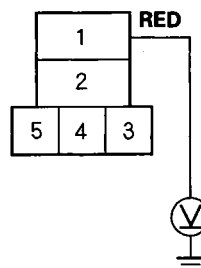
YES—Go to step 30.

NO—Replace the fan control relay. ■

30. Turn the ignition switch ON (II), then set the A/C button and fan control button ON.

31. Measure the voltage between the fan control relay 5P socket terminal No. 1 and body ground.

FAN CONTROL RELAY 5P SOCKET



Is there battery voltage?

YES—Go to step 32.

NO—Repair open in the wire between the A/C condenser fan and the fan control relay. ■

32. Set the A/C button and fan control button OFF, then turn the ignition switch OFF.

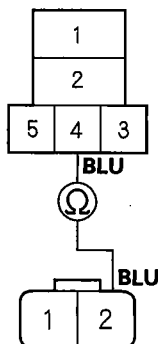
(cont'd)

Climate Control

Radiator and A/C Condenser Fan Low Speed Circuit Troubleshooting (cont'd)

33. Disconnect the radiator fan 2P connector.
34. Check for continuity between the fan control relay 5P socket terminal No. 4 and the radiator fan 2P connector terminal No. 2.

FAN CONTROL RELAY 5P SOCKET



RADIATOR FAN 2P CONNECTOR
Wire side of female terminals

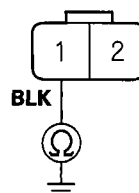
Is there continuity?

YES—Go to step 35.

NO—Repair open in the wire between the fan control relay and the radiator fan. ■

35. Check for continuity between the radiator fan 2P connector terminal No. 1 and body ground.

RADIATOR FAN 2P CONNECTOR



Wire side of female terminals

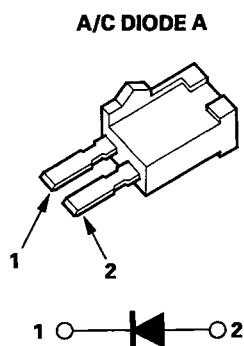
Is there continuity?

YES—Replace the radiator fan motor (see page 10-16). ■

NO—Check for an open in the wire between the radiator fan and body ground. If the wire is OK, check for poor ground at G201 (see page 22-60). ■



36. Turn the ignition switch OFF.
37. Remove A/C diode A from the under-hood fuse/relay box.
38. Using the diode setting ($\rightarrow| \leftarrow$) on a DVOM, check for current flow in both directions between the A/C diode A terminals No. 1 and No. 2.



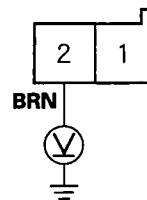
Is there current flow in only one direction?

YES—Go to step 39.

NO—Replace A/C diode A. ■

39. Turn the ignition switch ON (II).
40. Measure the voltage between the A/C diode A 2P socket terminal No. 2 and body ground.

A/C DIODE A 2P SOCKET



Is there battery voltage?

YES—Replace the under-hood fuse/relay box (see page 22-65). ■

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and A/C diode A. ■

Climate Control

A/C Condenser Fan High Speed Circuit Troubleshooting

NOTE:

- Do not use this troubleshooting procedure if the radiator fan and/or the A/C compressor is inoperative. Refer to the symptom troubleshooting index.
- Before performing symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 36 (10 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. Remove the fan control relay from the under-hood relay box, and test it (see page 22-65).

Is the relay OK?

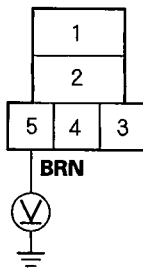
YES—Go to step 3.

NO—Replace the fan control relay. ■

3. Turn the ignition switch ON (II).

4. Measure the voltage between the fan control relay 5P socket terminal No. 5 and body ground.

FAN CONTROL RELAY 5P SOCKET



Is there battery voltage?

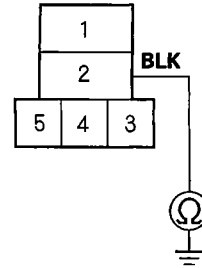
YES—Go to step 5.

NO—Go to step 12.

5. Turn the ignition switch OFF.

6. Check for continuity between the fan control relay 5P socket terminal No. 2 and body ground.

FAN CONTROL RELAY 5P SOCKET



Is there continuity?

YES—Go to step 7.

NO—Check for an open in the wire between the fan control relay and body ground. If the wire is OK, check for poor ground at G202. ■



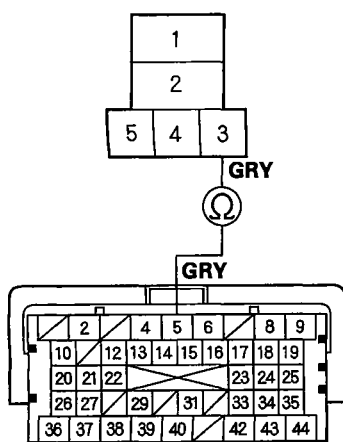
7. Jump the SCS line with the HDS.

NOTE: This step must be done to protect the powertrain control module (PCM) from damage.

8. Disconnect PCM connector A (44P).

9. Check for continuity between the fan control relay 5P socket terminal No. 3 and PCM connector A (44P) terminal No. 5.

FAN CONTROL RELAY 5P SOCKET



PCM CONNECTOR A (44P)

Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the fan control relay and the PCM. ■

10. Reconnect PCM connector A (44P).

11. Check the DTCs by selecting the DTC MENU (DTCs) from the HDS (see page 11-3).

Is DTC P0532, P0533, P2184 and/or P2185 indicated?

YES—

- DTC P0532 indicated: Go to A/C pressure sensor circuit low voltage troubleshooting (see page 11-327). ■
- DTC P0533 indicated: Go to A/C pressure sensor circuit high voltage troubleshooting (see page 11-329). ■
- DTC P2184 indicated: Go to ECT 2 sensor circuit low voltage troubleshooting (see page 11-188). ■
- DTC P2185 indicated: Go to ECT 2 sensor circuit high voltage troubleshooting (see page 11-190). ■

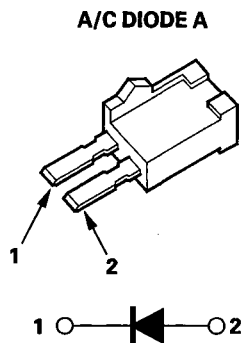
NO—Check for loose wires or poor connections at PCM connector A (44P). If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-252). ■

(cont'd)

Climate Control

A/C Condenser Fan High Speed Circuit Troubleshooting (cont'd)

12. Turn the ignition switch OFF.
13. Remove A/C diode A from the under-hood fuse/relay box.
14. Using the diode setting ($\rightarrow \leftarrow$) on a DVOM, check for current flow in both directions between the A/C diode A terminals No. 1 and No. 2.



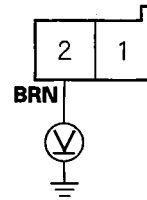
Is there current flow in only one direction?

YES—Go to step 15.

NO—Replace A/C diode A. ■

15. Turn the ignition switch ON (II).
16. Measure the voltage between the A/C diode A 2P socket terminal No. 2 and body ground.

A/C DIODE A 2P SOCKET



Is there battery voltage?

YES—Replace the under-hood fuse/relay box (see page 22-61). ■

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and A/C diode A. ■



A/C Compressor Clutch Circuit Troubleshooting

NOTE:

- The PCM can turn the A/C compressor OFF under certain conditions, such as low idle, high engine coolant temperature, or hard acceleration.
- Do not use this troubleshooting procedure if the fans are also inoperative with the A/C on. Refer to the symptom troubleshooting index.
- Before doing any symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 20 (7.5 A) fuse in the under-hood fuse/relay box, and the No. 36 (10 A) fuse in the under-dash fuse/relay box.

Are the fuses OK?

YES—Go to step 2.

NO—Replace the fuse(s), and recheck. ■

2. Connect the HDS to the DLC.
3. Check for these PGM-FI DTCs: P0117, P0118, P0506, P0507, P0532, and P0533.

Are any of these DTCs indicated?

YES—Go to the appropriate troubleshooting section.

NO—Go to step 4.

4. Start the engine.
5. Turn on the A/C.
6. Check the A/C CLUTCH in the PGM-FI Data List with the HDS.

Is the A/C CLUTCH on?

YES—Go to step 8.

NO—Go to step 7.

7. Using the HDS, confirm the following values in the PGM-FI Data List at idle.

TP SENSOR	About 0.5 V
RPM	650±50—720±50
A/C TEMPERATURE	39—230 Degrees °F
A/C SWITCH	ON
A/C CLUTCH	ON
A/C PRESSURE SENSOR	196—3,138 kPa (2—32 kgf/cm ²) [28—455 psi]

Are all the values within specifications?

YES—Go to step 8.

NO—Troubleshoot the value that is not within the specifications. ■

(cont'd)

Climate Control

A/C Compressor Clutch Circuit Troubleshooting (cont'd)

8. Remove the A/C compressor clutch relay from the under-hood fuse/relay box, and test it (see page 22-64).

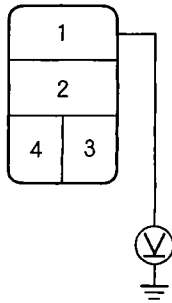
Is the relay OK?

YES—Go to step 9.

NO—Replace the A/C compressor clutch relay. ■

9. Measure the voltage between the A/C compressor clutch relay 4P socket terminal No. 1 and body ground.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



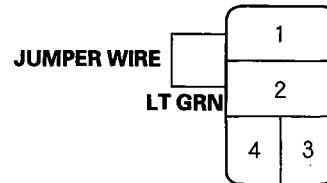
Is there battery voltage?

YES—Go to step 10.

NO—Replace the under-hood fuse/relay box (see page 22-61). ■

10. Connect the A/C compressor clutch relay 4P socket terminals No. 1 and No. 2 with a jumper wire.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Does the A/C compressor clutch click?

YES—Go to step 11.

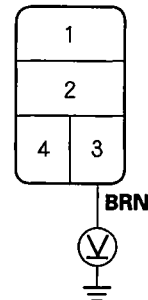
NO—Go to step 20.

11. Disconnect the jumper wire.

12. Turn the ignition switch ON (II).

13. Measure the voltage between the A/C compressor clutch relay 4P socket terminal No. 3 and body ground.

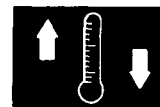
A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Is there battery voltage?

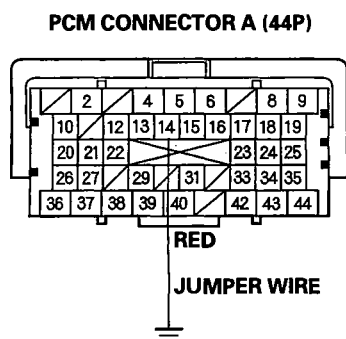
YES—Go to step 14.

NO—Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and the A/C compressor clutch relay. ■



14. Turn the ignition switch OFF.
15. Reinstall the A/C compressor clutch relay.
16. Jump the SCS line with the HDS.

NOTE: This step must be done to protect the powertrain control module (PCM) from damage.
17. Disconnect PCM connector A (44P).
18. Connect the PCM connector A (44P) terminal No. 14 to body ground with a jumper wire.



Terminal side of female terminals

19. Turn the ignition switch ON (II).

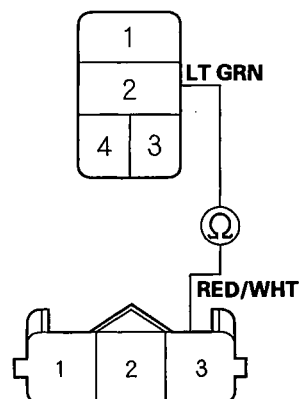
Does the A/C compressor click?

YES—Check for loose wires or poor connections at PCM connector A (44P). If the connections are good, check the PCM grounds. If the grounds are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-252). ■

NO—Repair open in the wire between the A/C compressor clutch relay and the PCM. ■

20. Disconnect the jumper wire.
21. Disconnect the A/C compressor clutch 3P connector.
22. Check for continuity between the A/C compressor clutch relay 4P socket terminal No. 2 and the A/C compressor clutch 3P connector terminal No. 3.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



A/C COMPRESSOR CLUTCH 3P CONNECTOR

Terminal side of male terminals

Is there continuity?

YES—Check the A/C compressor clutch clearance, A/C compressor clutch field coil, and the A/C compressor thermal protector (see page 21-102). Repair as needed. ■

NO—Repair open in the wire between the A/C compressor clutch relay and the A/C compressor clutch. ■

Climate Control

A/C Signal Circuit Troubleshooting

NOTE:

- Do not use this troubleshooting procedure if any of the following items are operative: A/C condenser fan, radiator fan, A/C compressor. Refer to the symptom troubleshooting index.
- Before doing any symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Connect the HDS to the DLC.
2. Start the engine.
3. Turn on the A/C.
4. Check the blower motor operates at all speeds.

Does the blower motor operate at all speeds?

YES—Go to step 5.

NO—Repair the problem in the blower motor circuit (see page 21-51). ■

5. Check the A/C SWITCH in the PGM-FI Data List with the HDS.

Is the A/C SWITCH on?

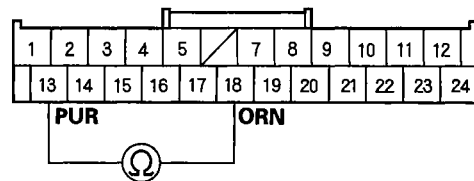
YES—The A/C signal is OK at this time. ■

NO—Go to step 6.

6. Turn the ignition switch OFF.
7. Disconnect the climate control unit connector A (24P).

8. Measure the evaporator temperature sensor resistance between the climate control unit connector A (24P) terminals No. 13 and No. 18.

CLIMATE CONTROL UNIT CONNECTOR A (24P)

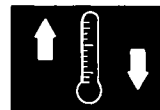


Wire side of female terminals

Is the resistance less than 24 k Ω ?

YES—Go to step 9.

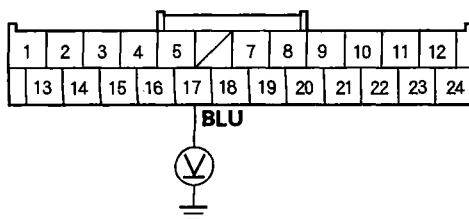
NO—Test the evaporator temperature sensor (see page 21-81). ■



9. Turn the ignition switch ON (II).

10. Measure the voltage between the climate control unit connector A (24P) terminal No. 17 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 11.

NO—Repair open in the wire between the climate control unit and the MICU. ■

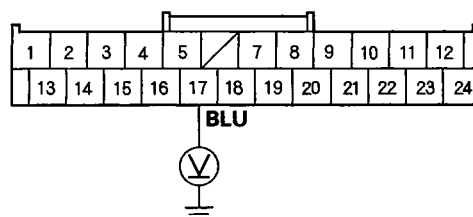
11. Turn the ignition switch OFF.

12. Reconnect the climate control unit connector A (24P).

13. Set the A/C button and fan control switch to ON, then turn the ignition switch ON (II).

14. Measure the voltage between the climate control unit connector A (24P) terminal No. 17 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there 0.5 V or less?

YES—Replace the MICU (see page 22-62). ■

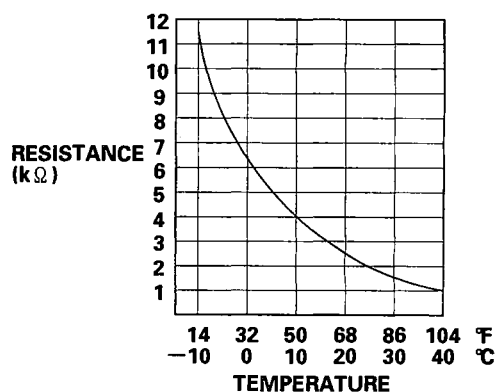
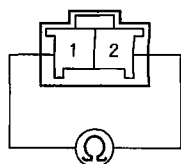
NO—Check for loose wires or poor connections at the climate control unit connector A (24P). If the connections are good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

Climate Control

In-car Temperature Sensor Test

1. Remove the in-car temperature sensor (see page 21-78).
2. Test the in-car temperature sensor while holding it in front of the dashboard center vent
 - Measure the resistance with the system set to Max Cool.
 - Measure the resistance with the system set to Max Hot.
3. Compare the resistance reading between the No. 1 and No. 2 terminals of the in-car temperature sensor with the specifications shown in the graph; the resistance should be within the specifications for whatever the ambient temperature is.

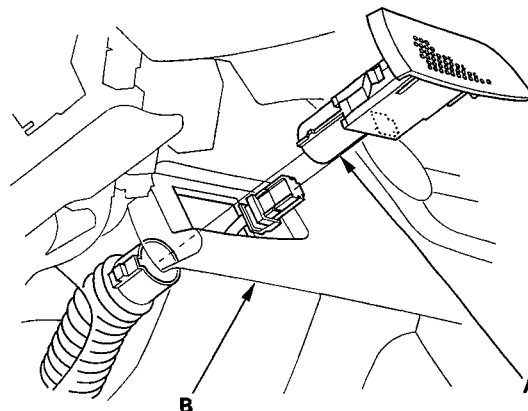
IN-CAR TEMPERATURE SENSOR



4. If the resistance is not as specified, replace the in-car temperature sensor (see page 21-78).

In-car Temperature Sensor Replacement

1. Remove the driver's dashboard undercover (see page 20-102).
2. Remove the self-tapping screw and the in-car temperature sensor (A) from the instrument panel (B).



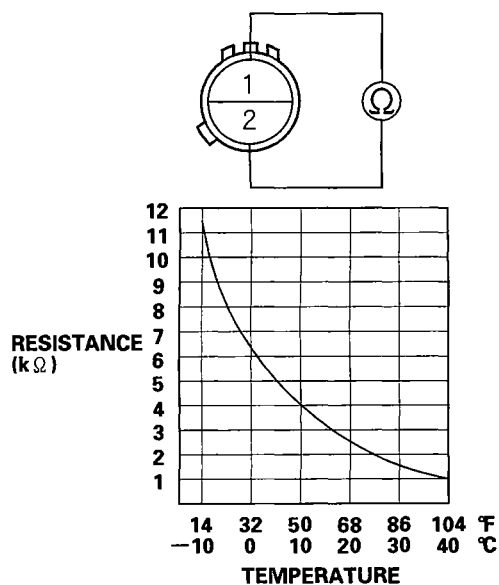
3. Install the sensor in the reverse order of removal. Be sure to connect the air hose securely.



Outside Air Temperature Sensor Test

1. Remove the outside air temperature sensor (see page 21-79).
2. Dip the sensor in ice water, and measure the resistance. Then pour warm water on the sensor, and check for a change in resistance.
3. Compare the resistance reading between the No. 1 and No. 2 terminals of the outside air temperature sensor with the specifications shown in the graph; the resistance should be within the specifications.

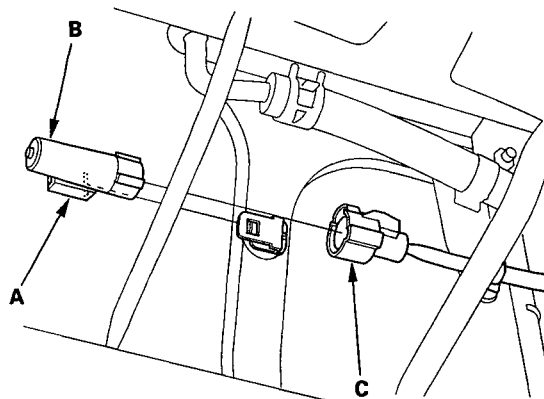
OUTSIDE AIR TEMPERATURE SENSOR



4. If the resistance is not as specified, replace the outside air temperature sensor (see page 21-79).

Outside Air Temperature Sensor Replacement

1. Remove the front bumper (see page 20-146).
2. Lift the tab (A) to release the lock, then remove the outside air temperature sensor (B) from the front bumper beam. Disconnect the 2P connector (C) from the outside air temperature sensor.

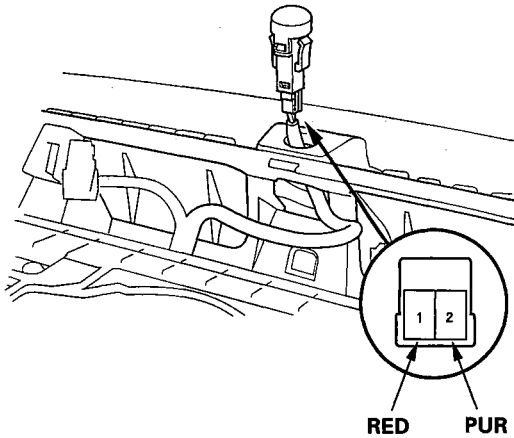


3. Install the sensor in the reverse order of removal.

Climate Control

Sunlight Sensor Test

1. Remove the sunlight sensor (see page 21-80).



2. Turn the ignition switch ON (II). Measure the voltage between the terminals with the (+) probe on the No. 1 terminal and the (−) probe on the No. 2 terminal with the connector connected.

NOTE: The voltage readings will not change under the light of a flashlight or a fluorescent lamp.

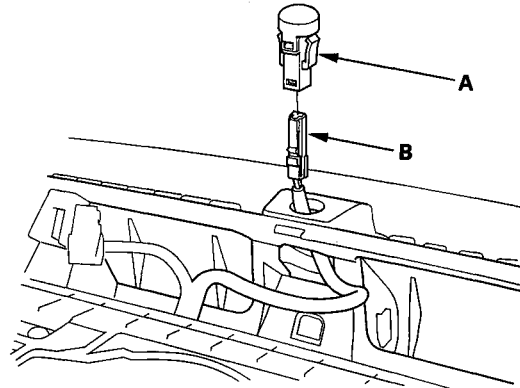
Voltage should be:

- 3.6—3.7 V or more with the sensor out of direct sunlight.
- 3.3—3.5 V or less with the sensor in direct sunlight.

3. If the voltage is not as specified, replace the sunlight sensor (see page 21-80).

Sunlight Sensor Replacement

1. Remove the dashboard center upper panel (see page 20-105). With navigation, remove the audio-HVAC subdisplay unit (see page 23-101).
2. Remove the sunlight sensor (A) from the dashboard, then disconnect the connector (B). Be careful not to damage the sensor and the dashboard.



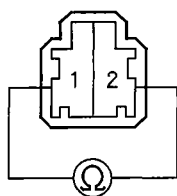
3. Install the sensor in the reverse order of removal.



Evaporator Temperature Sensor Test

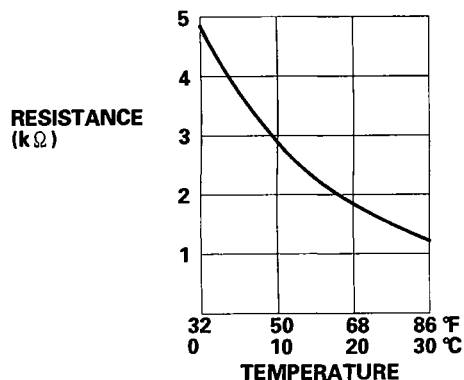
1. Remove the evaporator temperature sensor (see page 21-92).
2. Dip the sensor in ice water, and measure the resistance between its terminals.

EVAPORATOR TEMPERATURE SENSOR



Terminal side of male terminals

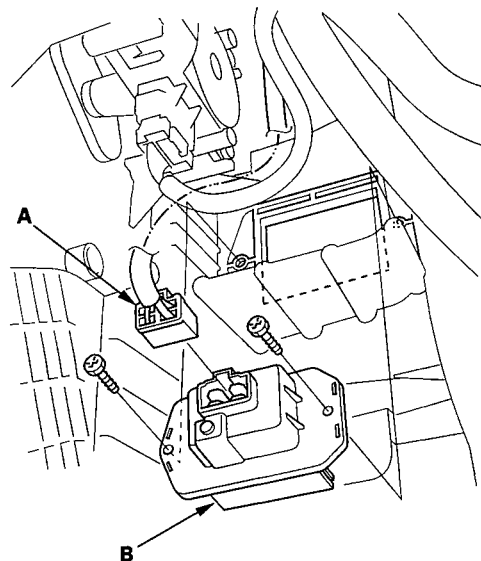
3. Then pour warm water on the sensor, and check for a change in resistance.
4. Compare the resistance readings with the specifications shown in the graph; the resistance should be within the specifications.



5. If the resistance is not as specified, replace the evaporator temperature sensor (see page 21-92).

Power Transistor Replacement

1. Remove the passenger's dashboard undercover (see page 20-103).
2. Remove the glove box (see page 20-104).
3. Disconnect the 4P connector (A) from the power transistor (B), then remove the screws.



4. Pull out the power transistor from the expansion valve cover.
5. Install the power transistor in the reverse order of removal.

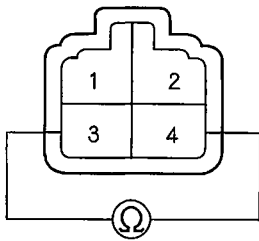
Climate Control

Power Transistor Test

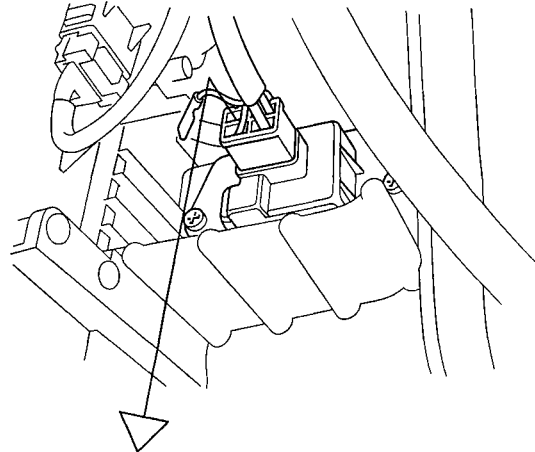
1. Disconnect the 4P connector from the power transistor.
2. Measure the resistance between the No. 3 and No. 4 terminals of the power transistor. It should be about $1.5\text{ k}\Omega$.
 - If the resistance is within the specifications, go to step 3.
 - If the resistance is not within the specifications, replace the power transistor.

NOTE: Also check the blower motor. Power transistor failure can be caused by a defective blower motor.

POWER TRANSISTOR



3. Carefully release the lock tab on the No. 1 terminal (YEL) (A) in the 4P connector, then remove the terminal and insulate it from body ground.

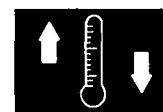


(To 12V power source on vehicle)

4. Reconnect the 4P connector to the power transistor.
5. Make sure the YEL wire is completely isolated, then supply 12 V to the No. 1 cavity with a jumper wire.
6. Turn the ignition switch ON (II), and check that the blower motor runs.
 - If the blower motor does not run, replace the power transistor.

NOTE: A faulty blower motor can cause the power transistor to fail. If the power transistor is replaced, also check the blower motor for binding, and replace it if necessary.

- If the blower motor runs, the power transistor is OK.



Driver's Air Mix Control Motor Test

Special Tools Required

Backprobe Set 07SAZ-001000A

NOTE: Before testing, check for HVAC DTCs (see page 21-8).

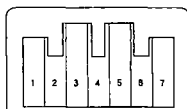
1. Disconnect the 7P connector from the driver's air mix control motor.

NOTICE

Incorrectly applying power and ground to the driver's air mix control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the driver's air mix control motor, and ground the No. 2 terminal; the driver's air mix control motor should run, and stop at Max Cool. If it doesn't, reverse the connections; the driver's air mix control motor should run, and stop at Max Hot. When the driver's air mix control motor stops running, disconnect battery power immediately.
3. If the driver's air mix control motor did not run in step 2, remove it, then check the driver's air mix control linkage and the door for smooth movement.
 - If the linkage and door move smoothly, replace the driver's air mix control motor (see page 21-83).
 - If the linkage or door sticks or binds, repair them as needed.
 - If the driver's air mix control motor runs smoothly, go to step 4.
4. Measure the resistance between the No. 5 and No. 7 terminals. It should be between 4.2 to 7.8 k Ω .

DRIVER'S AIR MIX CONTROL MOTOR



5. Reconnect the driver's air mix control motor 7P connector, then turn the ignition switch ON (II).
6. Using the backprobe set, measure the voltage between the No. 3 and No. 7 terminals.

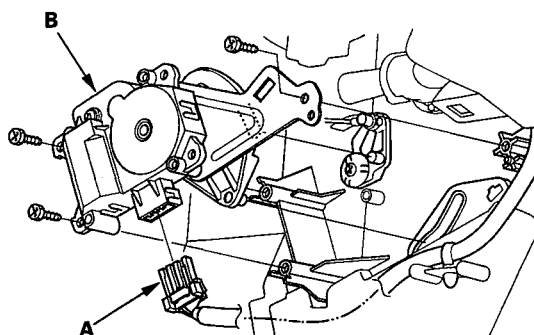
Max Cool—about 1.5 V

Max Hot—about 4.5 V

7. If either the resistance or voltage readings are not as specified, replace the driver's air mix control motor (see page 21-83).

Driver's Air Mix Control Motor Replacement

1. Remove the driver's dashboard lower cover, then remove the driver's dashboard undercover (see page 20-102).
2. Disconnect the 7P connector (A) from the driver's air mix control motor (B). Remove the self-tapping screws and the driver's air mix control motor from the heater unit.



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.

Climate Control

Passenger's Air Mix Control Motor Test

Special Tools Required

Backprobe Set 07SAZ-001000A

NOTE: Before testing, check for HVAC DTCs (see page 21-8).

1. Disconnect the 7P connector from the passenger's air mix control motor.

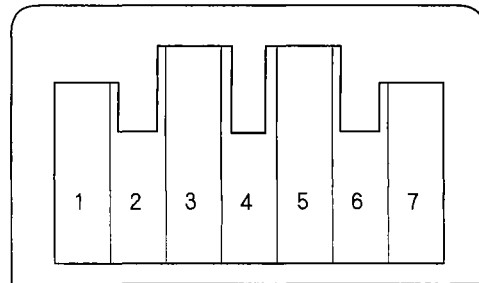
NOTICE

Incorrectly applying power and ground to the passenger's air mix control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the passenger's air mix control motor, and ground the No. 2 terminal; the passenger's air mix control motor should run, and stop at Max Cool. If it doesn't, reverse the connections; the passenger's air mix control motor should run, and stop at Max Hot. When the passenger's air mix control motor stops running, disconnect battery power immediately.
3. If the passenger's air mix control motor did not run in step 2, remove it, then check the passenger's air mix control linkage and door for smooth movement.
 - If the linkage and door move smoothly, replace the passenger's air mix control motor (see page 21-85).
 - If the linkage or door sticks or binds, repair them as needed.
 - If the passenger's air mix control motor runs smoothly, go to step 4.

4. Measure the resistance between the No. 5 and No. 7 terminals. It should be between 4.2 to 7.8 k Ω .

PASSENGER'S AIR MIX CONTROL MOTOR

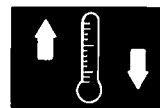


5. Reconnect the passenger's air mix control motor 7P connector, then turn the ignition switch ON (II).
6. Using the backprobe set, measure the voltage between the No. 3 and No. 5 terminals.

Max Cool—about 1.5 V

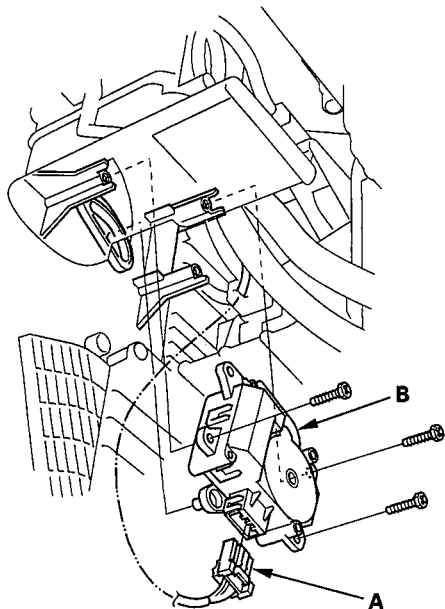
Max Hot—about 4.5 V

7. If either the resistance or the voltage readings are not as specified, replace the passenger's air mix control motor (see page 21-85).



Passenger's Air Mix Control Motor Replacement

1. Remove the glove box. (see page 20-104).
2. Remove the climate control unit (see page 21-88).



3. Disconnect the connector (A) from the passenger's air mix control motor, then remove the self-tapping screws and the passenger's air mix control motor (B) from the heater unit.
4. 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

NOTE: Before testing, check for HVAC DTCs (see page 21-8).

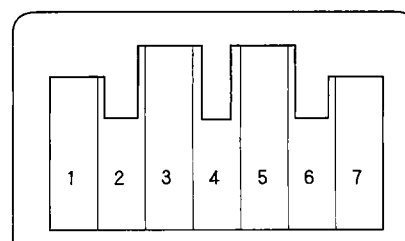
1. Disconnect the 7P connector from the mode control motor.

NOTICE

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. 2 terminal; the mode control motor should run smoothly, and stop at Defrost. If it doesn't, reverse the connections; the mode control motor should run smoothly, and stop at Vent. When the mode control motor stops running, disconnect battery power immediately.

MODE CONTROL MOTOR

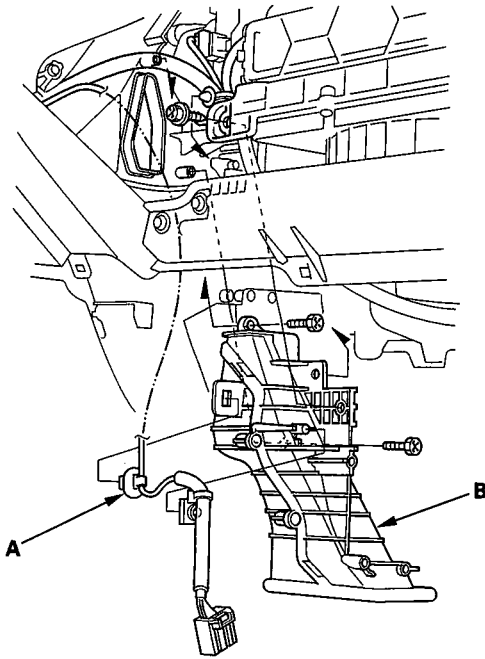


3. If the mode control motor did not run in step 2, remove it, then check the mode control linkage and doors for smooth movement.
 - If the linkage and doors move smoothly, replace the mode control motor (see page 21-86).
 - If the linkage or doors stick or bind, repair them as needed.
 - If the mode control motor runs smoothly, go to step 4.
4. Use a digital multimeter with an output of 1 mA or less at the 20 k Ω range. With the mode control motor running as in step 2, check for continuity between the No. 3, 4, 5, and 6 terminals and the No. 7 terminal individually. There should be continuity for a moment at each terminal as the motor moves past the switch's terminal.
5. If there is no continuity for a moment at each terminal, replace the mode control motor (see page 21-86).

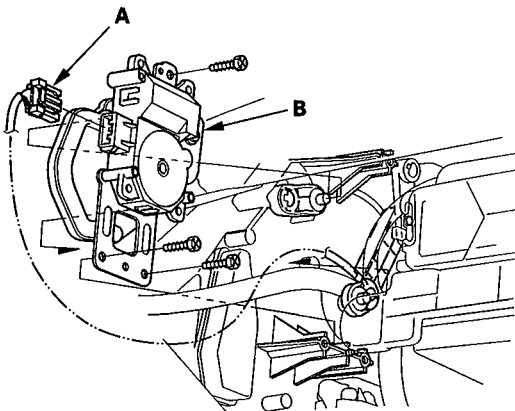
Climate Control

Mode Control Motor Replacement

1. Remove the glove box (see page 20-104).
2. Remove the climate control unit (see page 21-88).
3. Remove the harness clip (A), the self-tapping screws and the passenger's heater duct (B).



4. Disconnect the 7P connector (A) from the mode control motor (B). Remove the self-tapping screws and the mode control motor from the heater unit.



5. 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.

Recirculation Control Motor Test

NOTE: Before testing, check for HVAC DTCs (see page 21-8).

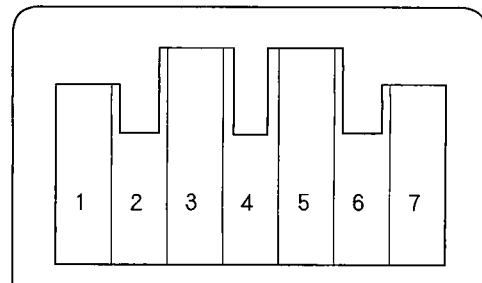
1. Disconnect the 7P connector from the recirculation control motor.

NOTICE

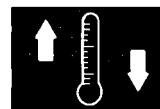
Incorrectly applying power and ground to the recirculation control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the recirculation control motor, and ground the No. 5 or No. 7 terminals; the recirculation control motor should run smoothly. To avoid damaging the recirculation control motor, do not reverse power and ground. Disconnect the No. 5 or No. 7 terminal from ground; the recirculation control motor should stop at Fresh (when the No. 7 terminal is disconnected) or Recirculate (when the No. 5 terminal is disconnected). Don't cycle the recirculation control motor for a long time.

RECIRCULATION CONTROL MOTOR

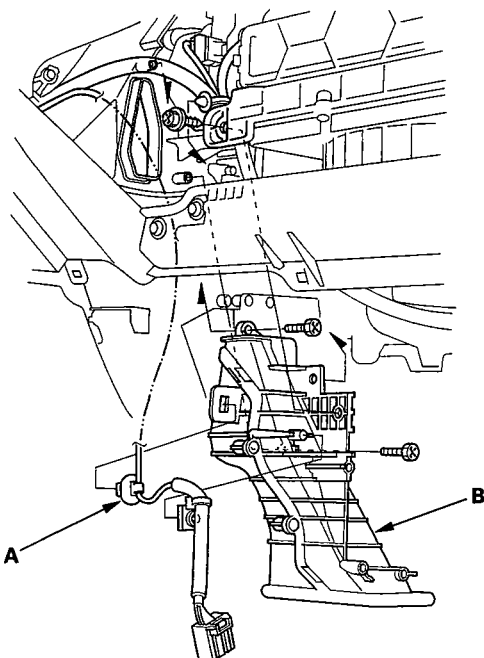


3. If the recirculation control motor did not run in step 2, remove it, then check the recirculation control linkage and doors for smooth movement.
 - If the linkage and doors move smoothly, replace the recirculation control motor (see page 21-87).
 - If the linkage or doors stick or bind, repair them as needed.

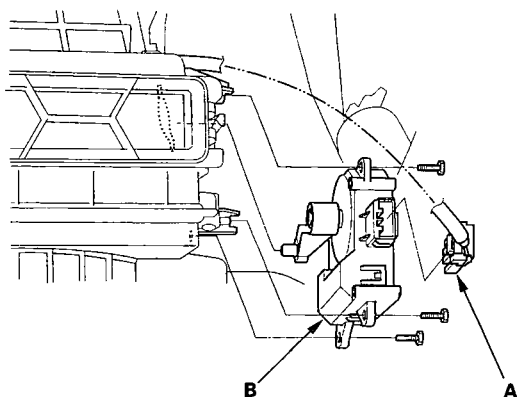


Recirculation Control Motor Replacement

1. Remove the glove box (see page 20-104).
2. Remove the climate control unit (see page 21-88).
3. Remove the harness clip (A), the self-tapping screws and the passenger's heater duct (B).



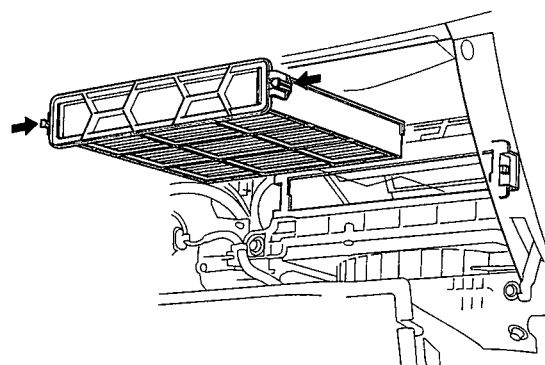
4. Disconnect the 7P connector (A) from the recirculation control motor (B). Remove the self-tapping screws and the recirculation control motor from the blower unit.



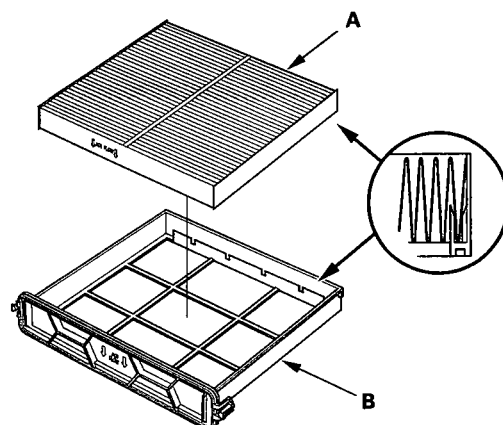
5. Install the motor in the reverse order of removal. Make sure the pin on the motor is properly engaged with the linkage. After installation, make sure the motor runs smoothly.

Dust and Pollen Filter Replacement

1. Open the glove box. Remove the damper from the glove box then let the glove box hang down (see page 20-104).
2. Remove the dust and pollen filter assembly from the evaporator case.



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

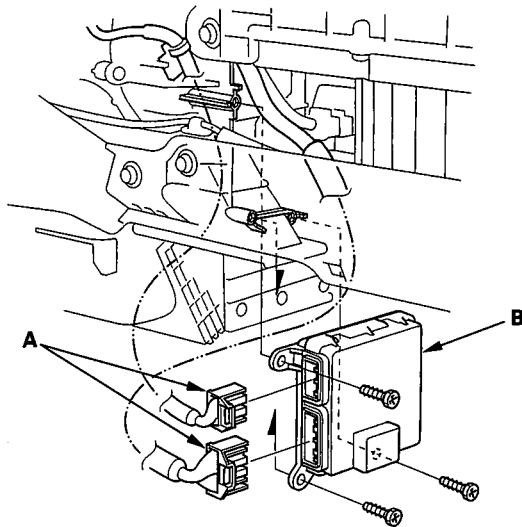


4. Install the filter in the reverse order of removal. Make sure that there is no air leaking out of the evaporator.

Climate Control

Climate Control Unit Removal and Installation

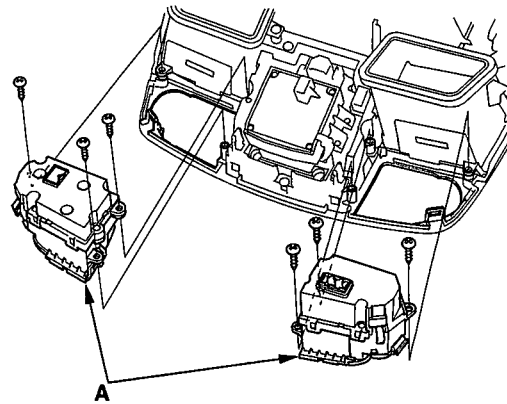
1. Remove the passenger's dashboard undercover (see page 20-103).
2. Disconnect the connector (A).



3. Remove the self-tapping screws and climate control unit (B).
4. Install the control unit in the reverse order of removal. After installation, operate the various functions to see whether works properly.
5. Run the self-diagnostic function to confirm that there are no problems in the system (see page 21-10).

Climate Control Switch Removal/Installation

1. Remove the center panel (see page 20-101).
2. Remove the self-tapping screws and the climate control switches (A).

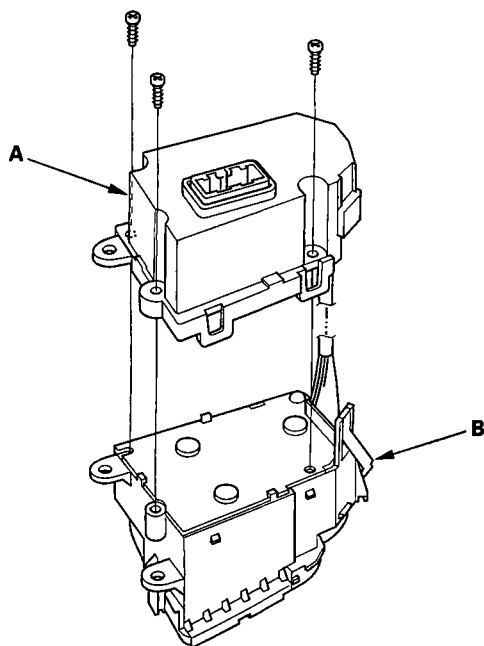


3. Install the switches in the reverse order of removal.

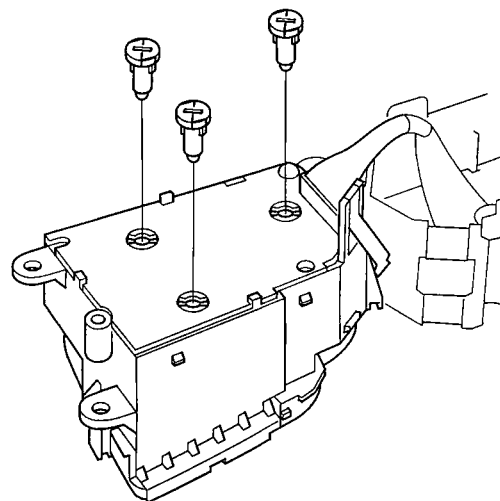


Climate Control Switch Bulb Replacement

1. Remove the climate control switch (see page 21-88).
2. Remove the screws and cover (A) from the driver's climate control switch (B).



3. Remove the bulb(s) with a flat-tip screwdriver.

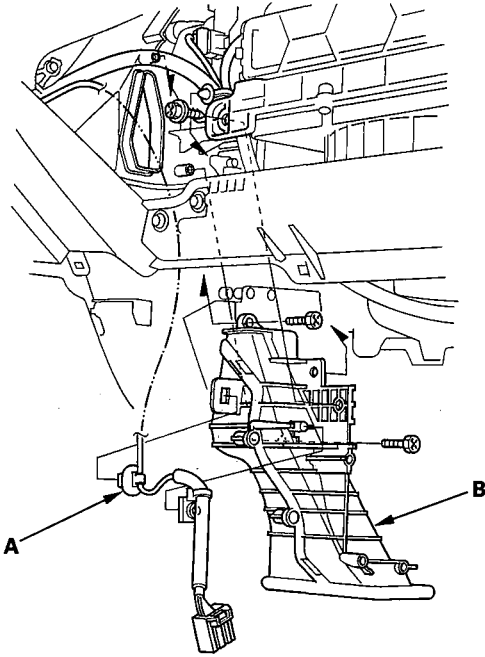


4. Install the bulb(s) in the reverse order of removal. After installation, operate the various functions to see whether it works properly.

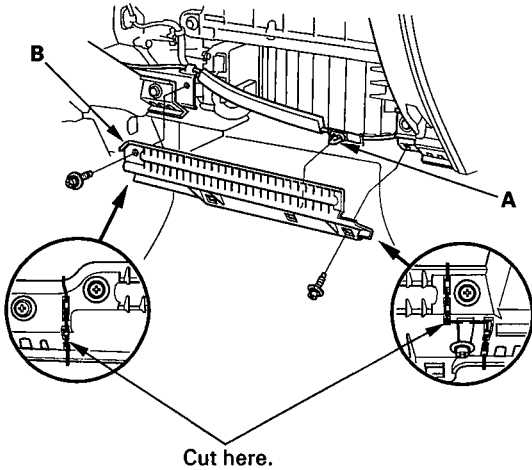
Climate Control

Blower Unit Removal and Installation

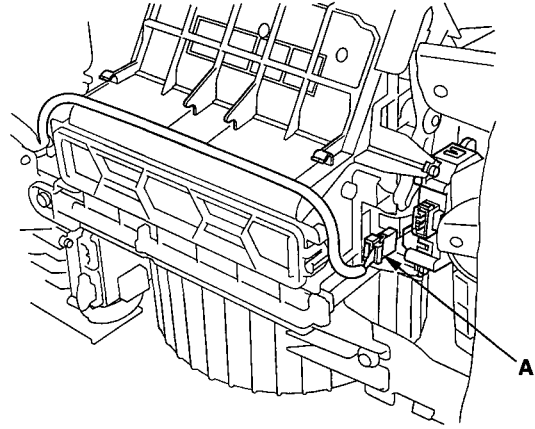
1. Remove the glove box (see page 20-104).
2. Remove the climate control unit (see page 21-88).
3. Remove the harness clip (A), the self-tapping screws, and the passenger's heater duct (B).



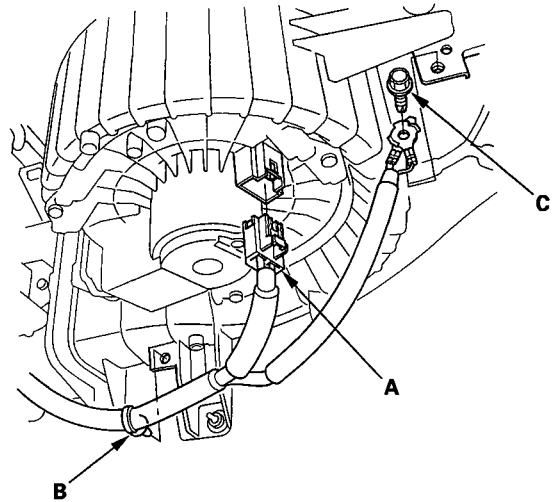
4. Remove the harness clip (A), and bolts. Cut the plastic cross brace (B) in the glove box opening with diagonal cutters in the area shown. Retain these parts to be reinstalled later.

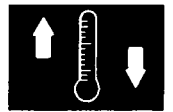


5. Disconnect the connector (A) from the recirculation control motor.

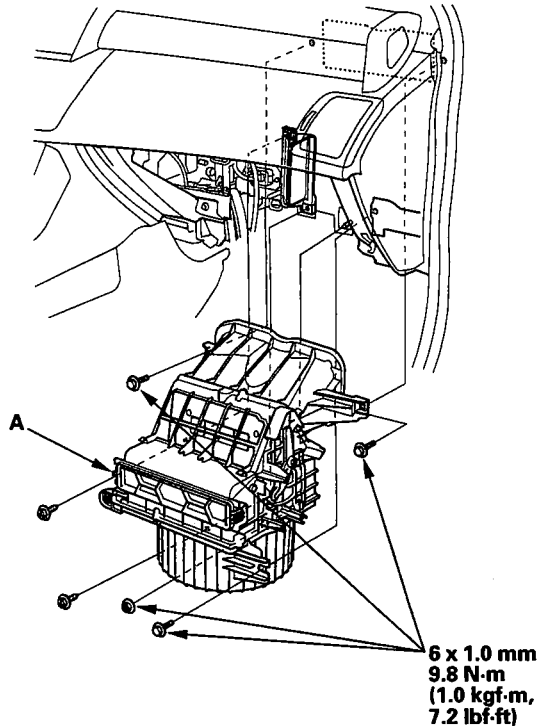


6. Disconnect the connector (A) from the blower motor, then remove the wire harness clip (B) and ground terminal bolt (C).





7. Remove the self-tapping screws, the bolt, the mounting nuts, and the blower unit (A).

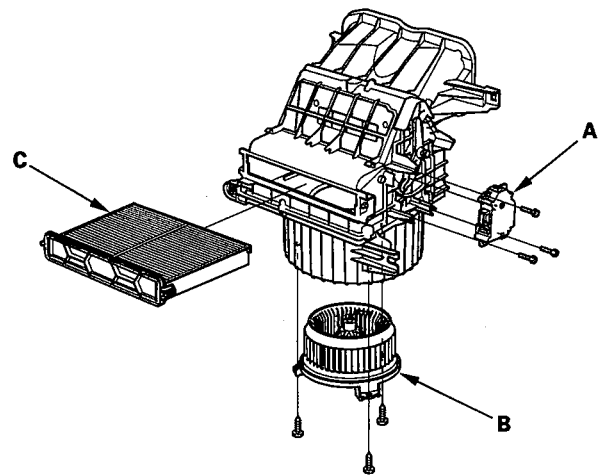


8. Install the unit in the reverse order of removal. Make sure that there is no air leakage.

Blower Unit Component Replacement

Note these items when overhauling the blower unit:

- The recirculation control motor (A), blower motor (B) and the dust and pollen filter (C) can be replaced without removing the blower unit.
- Before reassembly, make sure that the recirculation control linkage and door move smoothly without binding.
- After reassembly, make sure the recirculation control motor runs smoothly (see page 21-86).

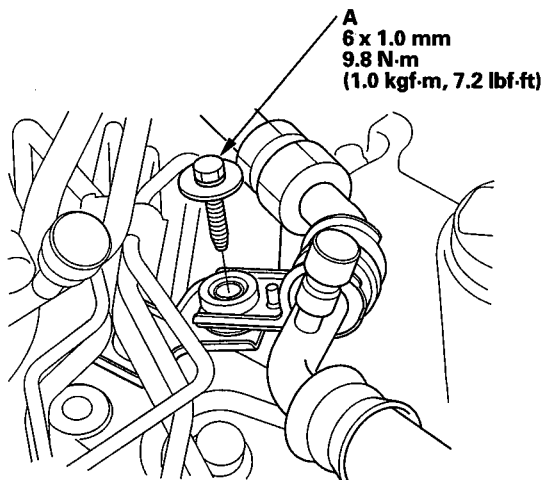


Climate Control

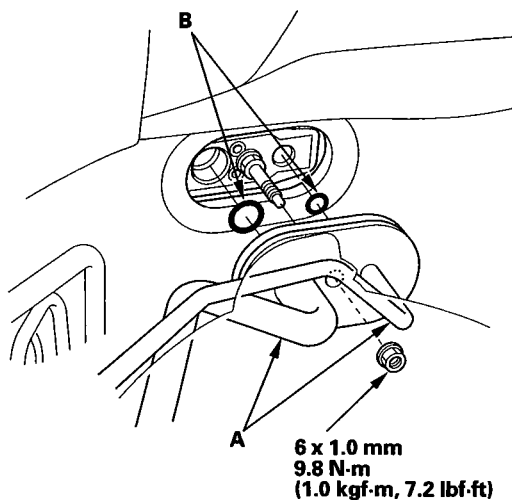
Evaporator Core Replacement

1. Recover the refrigerant with a recovery/recycling/charging station (see page 21-105).

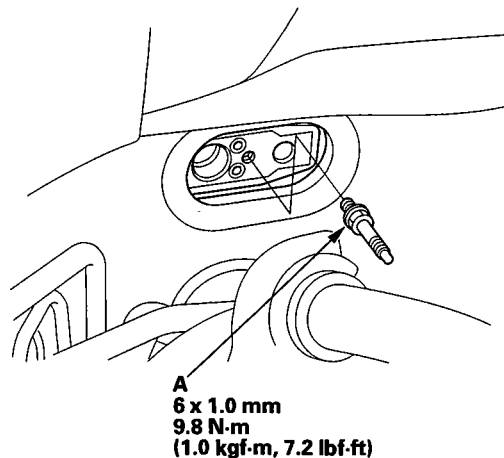
2. Remove the bolt (A).



3. Remove the nut, then disconnect the A/C lines (A) and remove the O-rings (B) from the evaporator core.

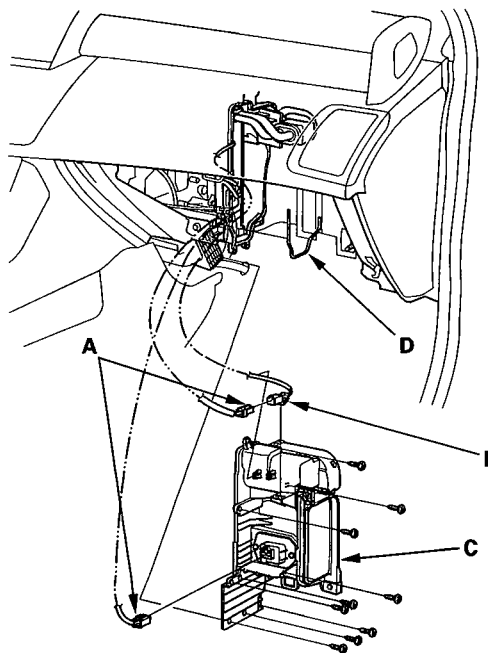


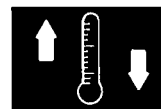
4. Remove the stud bolt (A).



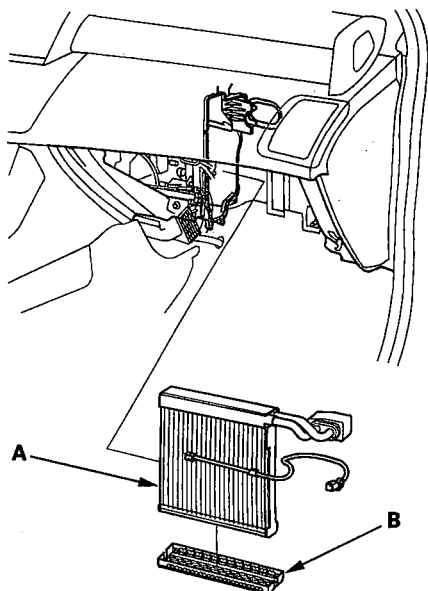
5. Remove the blower unit (see page 21-90).

6. Disconnect the connectors (A) from the evaporator temperature sensor and the power transistor, then remove the connector clip (B). Remove the self-tapping screws, the expansion valve cover (C), and the seal (D).



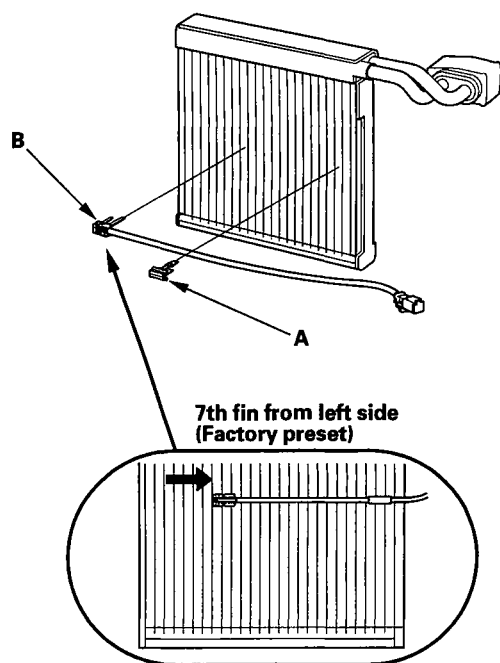


7. Carefully pull out the evaporator core (A) without bending the lines, then remove the plate (B).

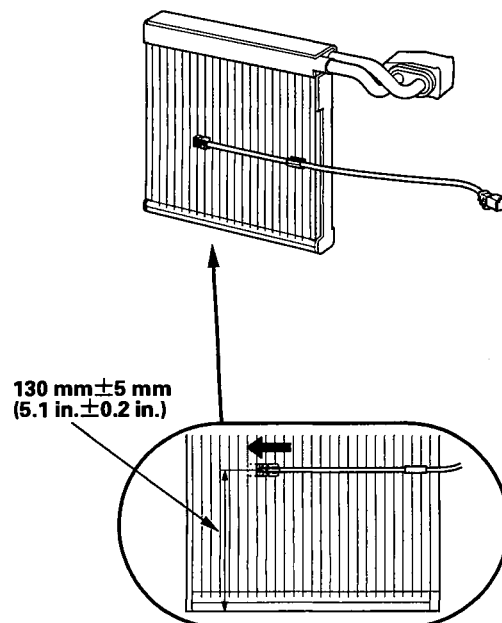


8. Remove the clip (A) and the evaporator temperature sensor (B).

NOTE: The evaporator temperature sensor is installed in the fin at the 7th fin from the left side by the factory preset.



9. When the evaporator temperature sensor is re-installed, set the evaporator temperature sensor in the fin at the left side by the previous position.



10. Install the core in the reverse order of removal and note these items:

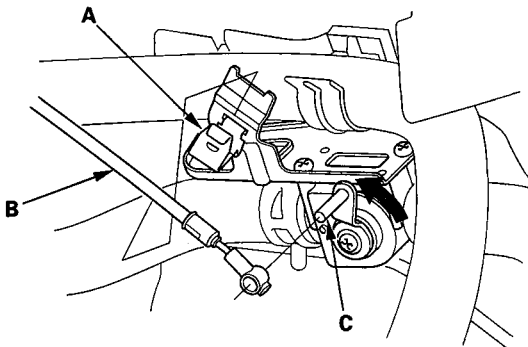
- If you're installing a new evaporator core, add refrigerant oil (SP-10) (see page 21-6).
- Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.
- Immediately after using the oil, reinstall the cap on the container, and seal it to avoid moisture absorption.
- Do not spill the refrigerant oil on the vehicle; it may damage the paint; if the refrigerant oil contacts the paint, wash it off immediately.
- Make sure that there is no air leakage.
- Charge the system (see page 21-107).

Climate Control

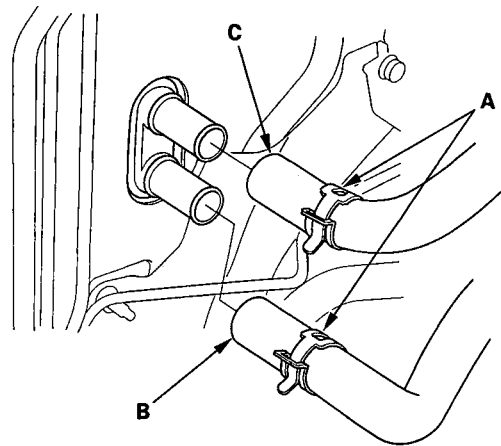
Heater Unit/Core Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-12), and the precautions and procedures (see page 24-14) before doing repairs or service.

1. Make sure you have the anti-theft code for the audio system and the navigation system (if equipped), then write down the audio presets.
2. Make sure the ignition is OFF, then disconnect the negative cable from the battery.
3. Disconnect the A/C line from the evaporator core (see page 21-92).
4. Remove the air cleaner housing assembly (see page 11-394).
5. 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.

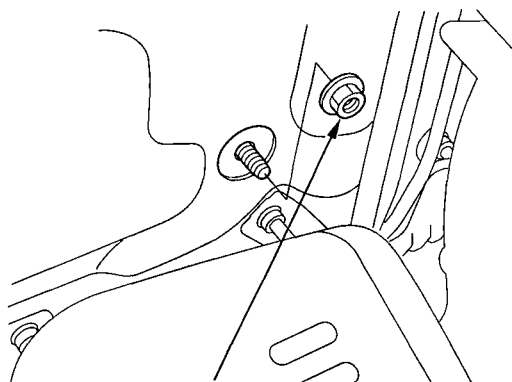


6. When the engine is cool, drain the engine coolant from the radiator (see page 10-7).
7. From under the hood, slide the hose clamps (A) back. Disconnect the inlet heater hose (B) and the outlet heater hose (C) from the heater unit. Note the orientation of the hose.
Engine coolant will run out when 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.



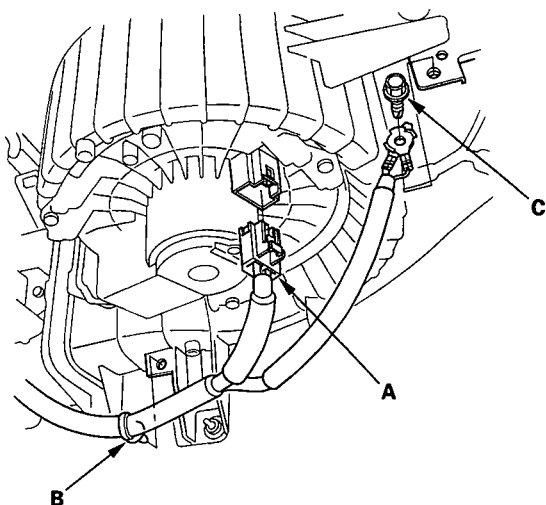


8. Remove the mounting nut from the heater unit. Take care not to damage or bend the fuel lines or brake lines, etc.

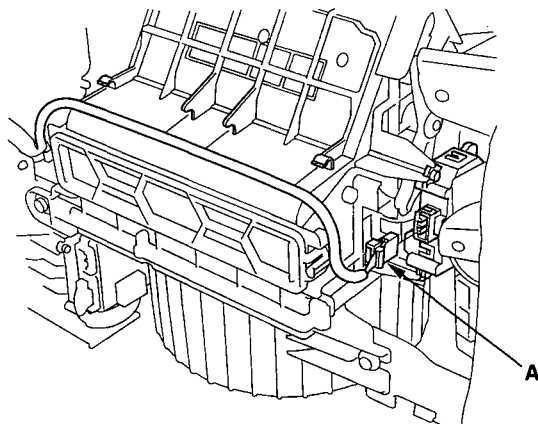


8 x 1.25 mm
12.3 N·m
(1.3 kgf-m, 9.0 lbf-ft)

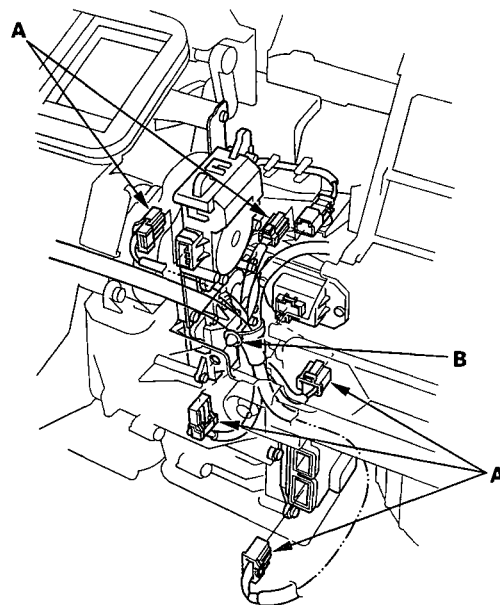
9. Remove the dashboard (see page 20-108).
10. Disconnect the connector (A) from the blower motor. Remove the wire harness clip (B) and ground terminal bolt (C).



11. Disconnect the connector (A) from the recirculation control motor.



12. Disconnect the connectors (A) from the climate control unit, mode control motor, passenger's air mix motor, the evaporator temperature sensor, and the power transistor. Remove the wire harness clip (B).

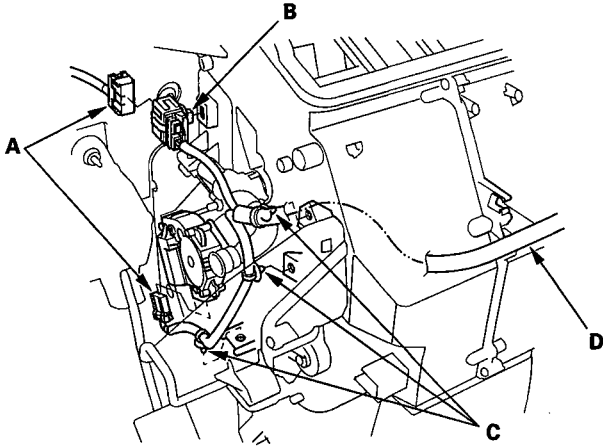


(cont'd)

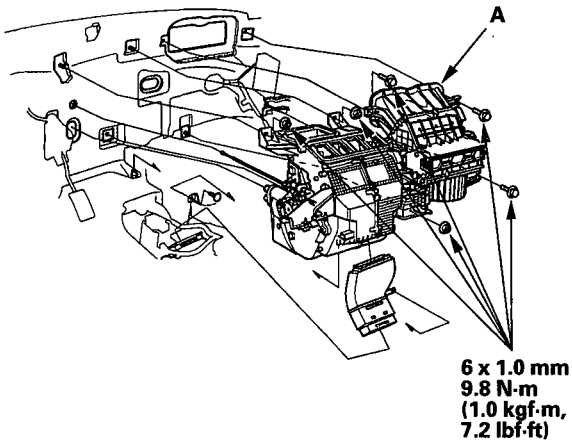
Climate Control

Heater Unit/Core Replacement (cont'd)

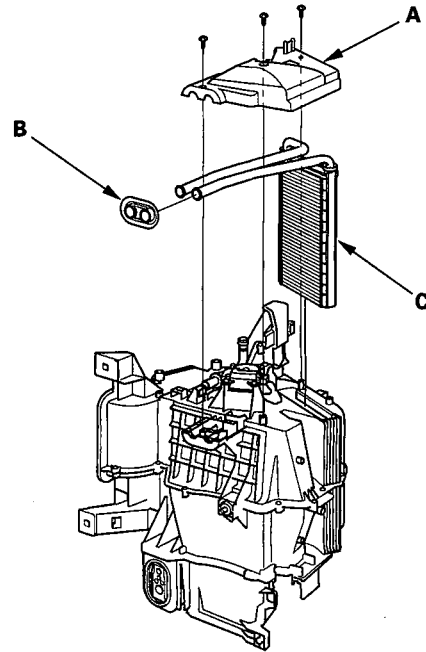
13. Disconnect the connectors (A) from the driver's air mix control motor and A/C wire harness. Remove the connector clip (B), the wire harness clips (C), and the wire harness (D).



14. Remove the mounting bolt, mounting nuts, and blower-heater unit (A).



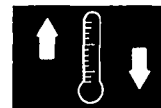
15. Remove the self-tapping screws, the heater core cover (A), the grommet (B), and carefully pull out the heater core (C).



16. Install the heater core and the evaporator core in the reverse order of removal.

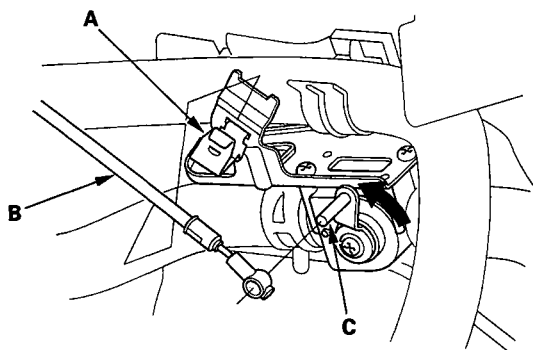
17. Install the heater unit in the reverse order of removal, and note these items:

- Do not interchange the inlet and outlet heater hoses, and install the hose clamps securely.
- Refill the cooling system with engine coolant (see page 10-7).
- Make sure that there is no coolant leakage.
- Make sure that there is no air leakage.
- Refer to evaporator core replacement (see page 21-92).
- Enter the anti-theft code for the audio system and navigation system (if equipped), then enter the audio presets.
- Set the clock.

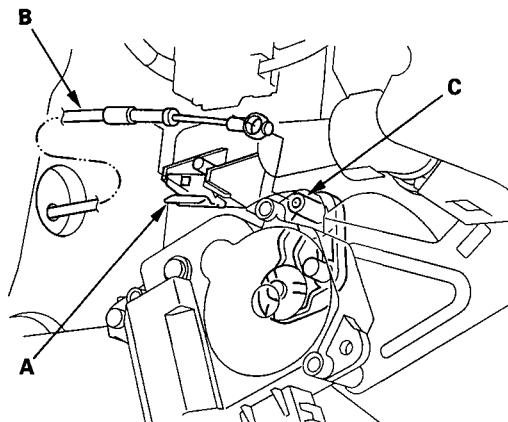


Heater Valve Cable Adjustment

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



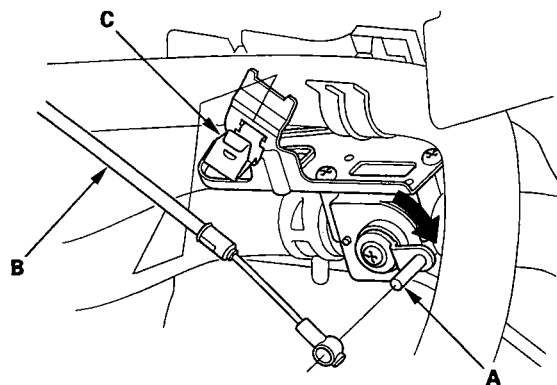
2. From under the dash, disconnect the heater valve cable housing from the cable clamp (A), and disconnect the heater valve cable (B) from the air mix control linkage (C).



3. Set the temperature control button to Max Cool (Lo) with the ignition switch ON (II).
4. Attach the heater valve cable (B) to the air mix control linkage (C) as shown in step 2. Hold the end of the heater valve cable housing against the stop (D), then snap the heater valve cable housing into the cable clamp (A).

NOTE: Make sure the ring-end of the cable is pushed all the way to the base of the pin on air mix control linkage.

5. From under the hood, turn the heater valve arm (A) 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 (C).



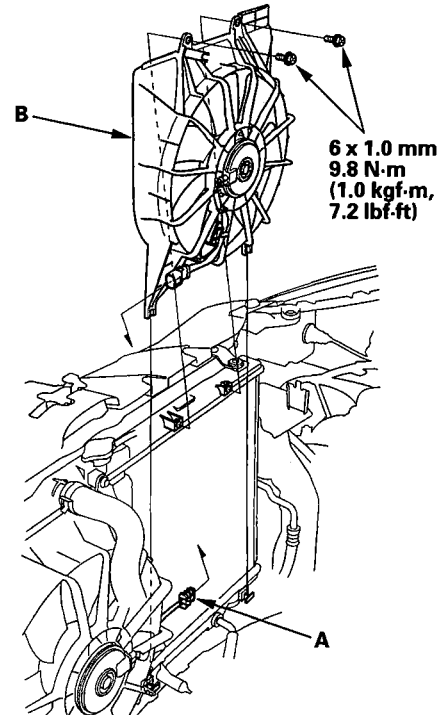
Climate Control

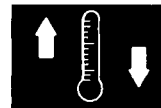
A/C Compressor Replacement

NOTE: Do not install an A/C compressor into a system unless you are completely sure that the system is free of contamination. Installing the A/C compressor into a contaminated system can result in premature A/C compressor failure.

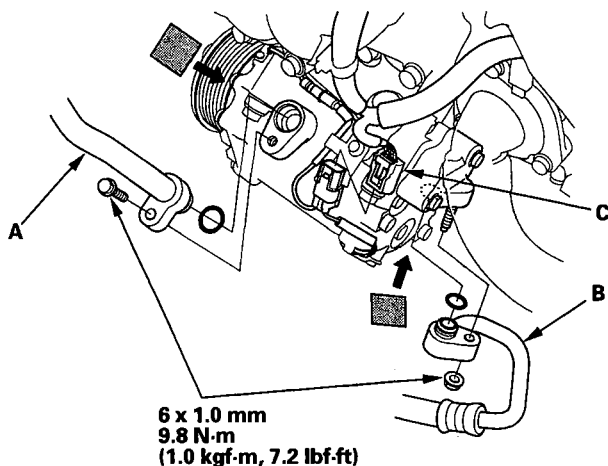
1. If the A/C compressor is marginally operable, run the engine at idle speed, and let the air conditioning work for a few minutes, then shut the engine off.
2. Recover the refrigerant with a recovery/recycling/charging station (see page 21-105).
3. Make sure you have the anti-theft code for the audio system and navigation system (if equipped), then write down the audio presets.
4. Remove the front bumper (see page 20-146) and the alternator (see page 4-34).

5. Disconnect the connector (A) from the A/C condenser fan motor. Then remove the upper mounting bolts, and the A/C condenser fan shroud (B). Be careful not to damage the radiator fins when removing the A/C condenser fan shroud.

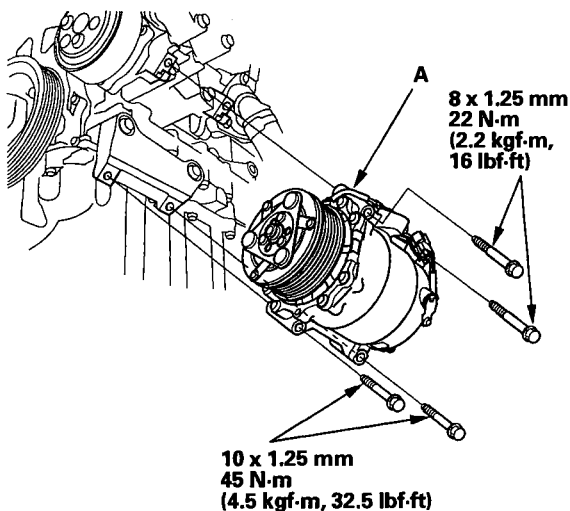




6. Remove the bolt and the nut, then disconnect the suction hose (A), discharge hose (B) and connector (C) from the A/C compressor. After the hoses are disconnected, remove the O-rings and plug or cap the lines immediately after disconnecting them to avoid moisture and dust contamination.



7. Remove the mounting bolts and the A/C compressor (A). Be careful not to damage the radiator fins when removing the A/C compressor.



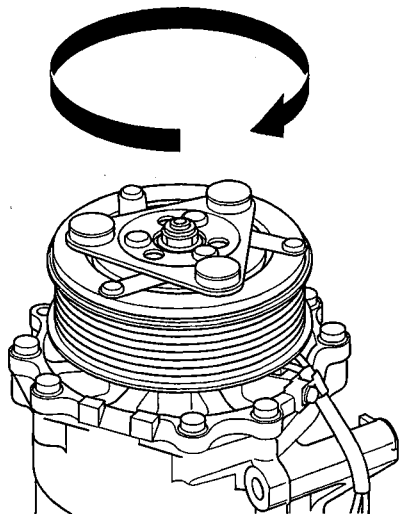
8. Install the compressor in the reverse order of removal, and note these items:

- Inspect the A/C lines for any signs of contamination.
- If you're installing a new A/C compressor, you must calculate the amount of refrigerant oil to be removed from it (see page 21-6). A new A/C compressor comes with a full charge of oil.
- Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.
- Use refrigerant oil (SP-10) for HFC-134a SANDEN spiral type A/C compressor only.
- To avoid contamination, do not return the oil to the container once dispensed, and never mix it with other refrigerant oils.
- Immediately after using the oil, reinstall the cap on the container, and seal it to avoid moisture absorption.
- Do not spill the refrigerant oil on the vehicle; it may damage the paint; if the refrigerant oil contacts the paint, wash it off immediately.
- Charge the system (see page 21-107).
- Enter the anti-theft code for the audio system and navigation system (if equipped), then enter the audio presets.
- Set the clock.

Climate Control

A/C Compressor Clutch Check

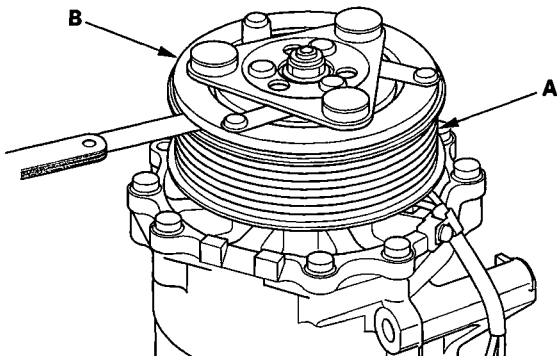
1. Check the armature plate for discoloration, peeling, or other damage. If there is damage, replace the clutch set (see page 21-101).
2. Check the rotor pulley bearing play and drag by rotating the rotor pulley by hand. Replace the clutch set with a new one if it is noisy or has excessive play/drag (see page 21-101).



3. Measure the clearance between the rotor pulley (A) and the armature plate (B) all the way around. If the clearance is not within specified limits, remove the armature plate (see page 21-101) and add or remove shims as needed to increase or decrease clearance.

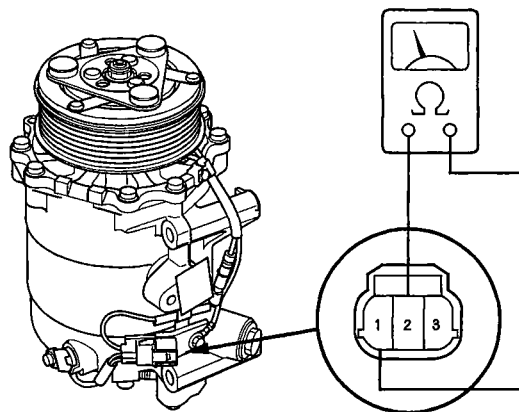
Clearance: 0.35—0.65 mm (0.014—0.026 in.)

NOTE: The shims are available in four thicknesses: 0.1 mm, 0.2 mm, 0.4 mm, and 0.5 mm.



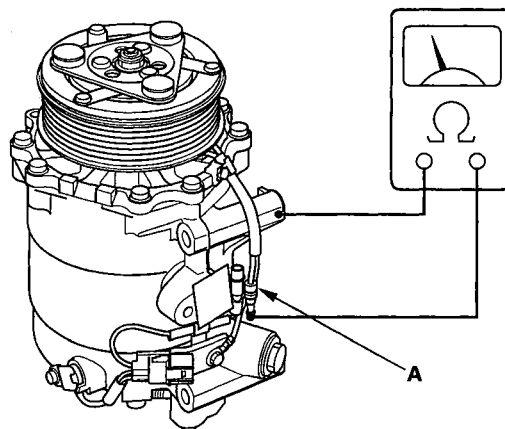
4. Check for continuity between the A/C compressor clutch connector No. 1 and No. 2. If there is no continuity, replace the thermal protector (see page 21-102).

NOTE: The thermal protector will have no continuity above about 252 to 262 °F (122 to 128 °C). When the temperature drops below about 241 to 219 °F (116 to 104 °C), the thermal protector will have continuity.



5. Disconnect the field coil connector (A). Check resistance of the field coil. If resistance is not within specifications, replace the field coil (see page 21-101).

Field Coil Resistance: 3.15—3.45 Ω 68 °F (20 °C)



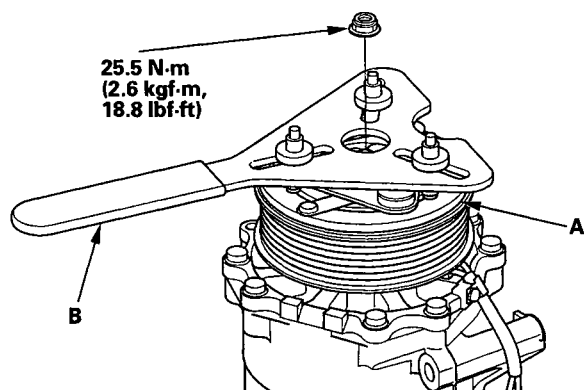


A/C Compressor Clutch Overhaul

Special Tools Required

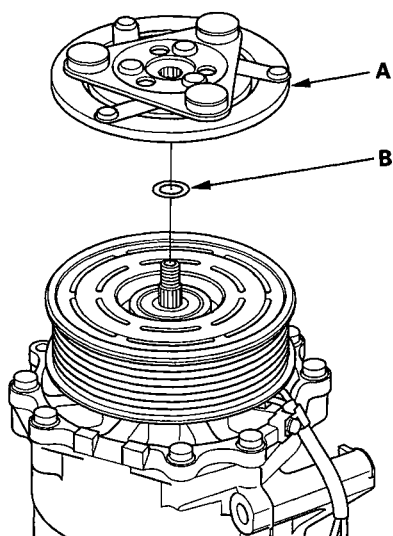
A/C clutch holder, Robinair 10204 or Kent-Moore J37872, or Honda Tool and Equipment KMT-J33939, or commercially available

1. Remove the center nut while holding the armature plate (A) with a commercially available A/C clutch holder (B).

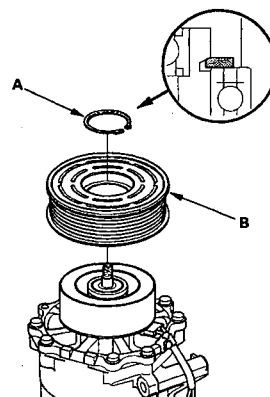


2. Remove the armature plate (A) and shim(s) (B), taking care not to lose the shim(s). If the clutch needs adjustment, increase or decrease the number and thickness of shims as necessary, then reinstall the armature plate, and recheck its clearance (see page 21-100).

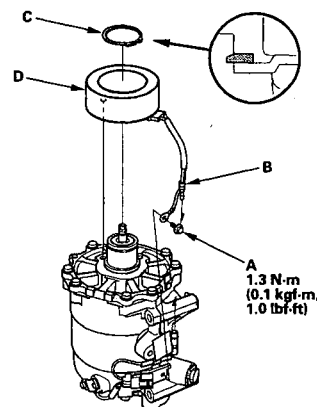
NOTE: The shims are available in four thicknesses: 0.1 mm, 0.2 mm, 0.4 mm, and 0.5 mm.



3. If you are replacing the field coil, remove the snap ring (A) with snap ring pliers, then remove the rotor pulley (B). Be careful not to damage the rotor pulley and A/C compressor.



4. Remove the bolt (A), then disconnect the field coil connector (B). Remove the snap ring (C) with snap ring pliers, then remove the field coil (D). Be careful not to damage the field coil and A/C compressor.



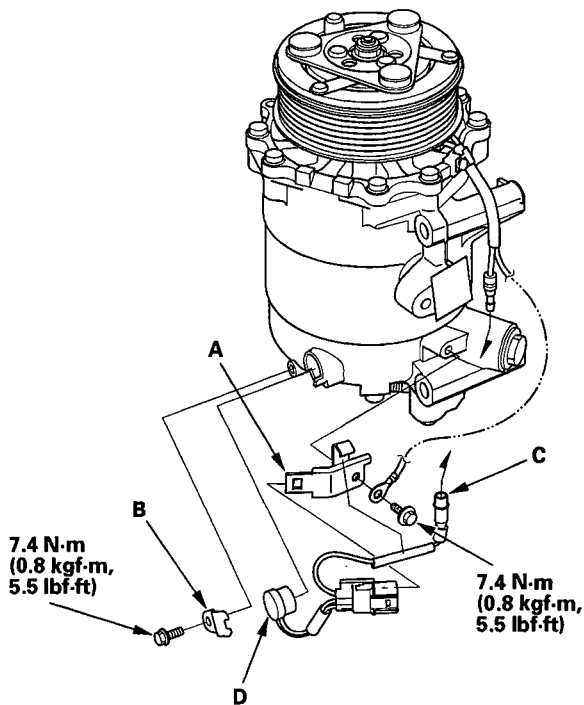
5. Reassemble the clutch in the reverse order of disassembly, and note these items:

- Install the field coil with the wire side facing down, and align the boss on the field coil with the hole in the A/C compressor.
- Clean the rotor pulley and A/C compressor sliding surfaces with contact cleaner or other non-petroleum solvent.
- Install new snap rings, note the installation direction, and make sure they are fully seated in the groove.
- Make sure that the rotor pulley turns smoothly after it's reassembled.
- Route and clamp the wires properly or they can be damaged by the rotor pulley.

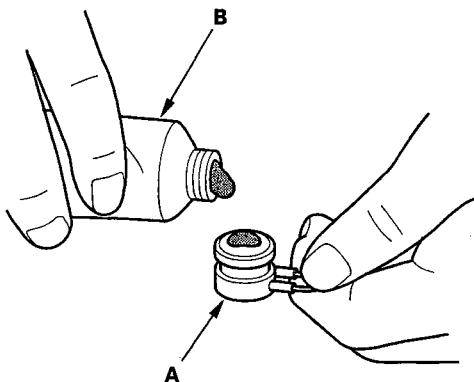
Climate Control

A/C Compressor Thermal Protector Replacement

1. Remove the bolt and the stay (A), and remove the bolt and the holder (B). Disconnect the field coil connector (C), then detach the harness clip and remove the thermal protector (D).



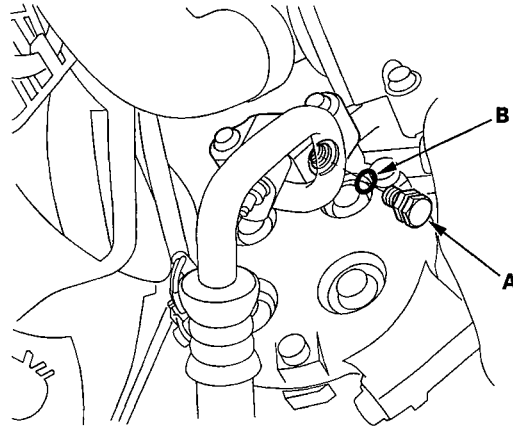
2. Replace the thermal protector (A) with a new one, and apply silicone sealant (B) to the bottom of the thermal protector.



3. Install the thermal protector in the reverse order of removal.

A/C Compressor Relief Valve Replacement

1. Recover the refrigerant with a recovery/recycling/charging station (see page 21-105).
2. Remove the relief valve (A), and the O-ring (B). Plug the opening to keep foreign matter from entering the system and the A/C compressor oil from running out.

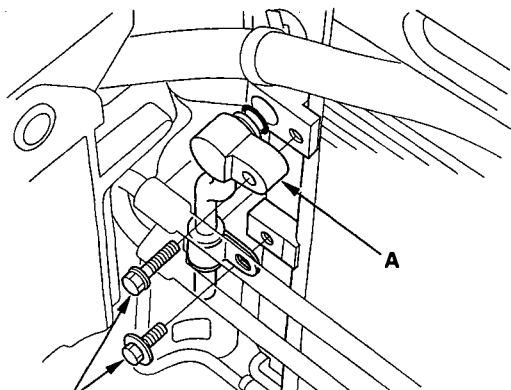


3. Clean the mating surfaces.
4. Replace the O-ring with a new one at the relief valve, and apply a thin coat of refrigerant oil before installing it.
5. Remove the plug, and install and tighten the relief valve.
6. Charge the system (see page 21-107).



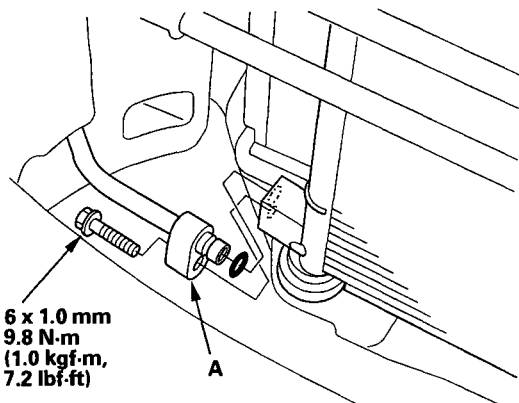
A/C Condenser Replacement

1. Recover the refrigerant with a recovery/recycling/charging station (see page 21-105).
2. Remove the front bumper (see page 20-146).
3. Remove the bolts, then disconnect the discharge hose (A) from the A/C condenser.



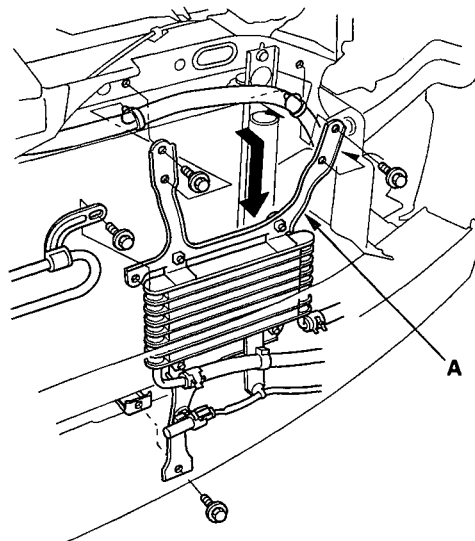
6 x 1.0 mm
9.8 N·m
(1.0 kgf·m, 7.2 lbf·ft)

4. Remove the bolt, then disconnect the receiver line (A) from the A/C condenser.



6 x 1.0 mm
9.8 N·m
(1.0 kgf·m, 7.2 lbf·ft)

5. Remove the bolts, then pull the bracket (A) down slightly.

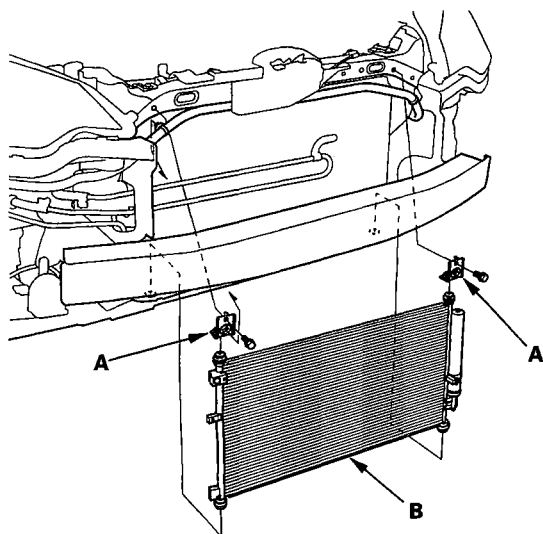


(cont'd)

Climate Control

A/C Condenser Replacement (cont'd)

6. Remove the bolts and brackets (A), then remove the A/C condenser (B). Be careful not to damage the radiator and A/C condenser fins when removing the A/C condenser.



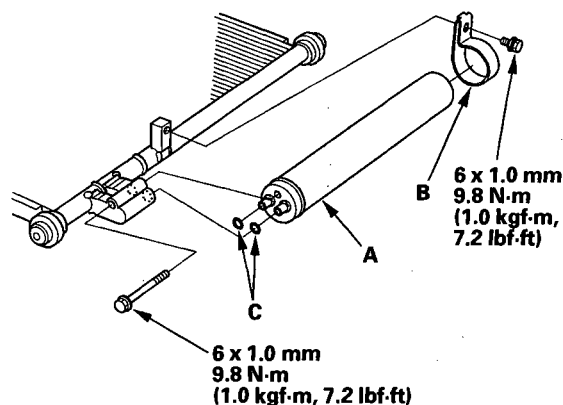
7. Install the A/C condenser in the reverse order of removal, and note these items:

- If you're installing a new A/C condenser, add refrigerant oil (SP-10) (see page 21-6).
- Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.
- Immediately after using the oil, reinstall the cap on the container, and seal it to avoid moisture absorption.
- Do not spill the refrigerant oil on the vehicle; it may damage the paint; if the refrigerant oil contacts the paint, wash it off immediately.
- Charge the system (see page 21-107).

Receiver/Dryer Desiccant Replacement

NOTE: Install the receiver/dryer as quickly as possible to prevent the system from absorbing moisture from the air.

1. Remove the A/C condenser (see page 21-103).
2. Remove the bolts from the A/C condenser, then remove the receiver/dryer (A), the bracket (B), and the O-rings (C).



3. Install the receiver/dryer in the reverse order of removal. Replace the O-rings with new ones, and apply a thin coat of refrigerant oil (SP-10) before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.



Refrigerant Recovery

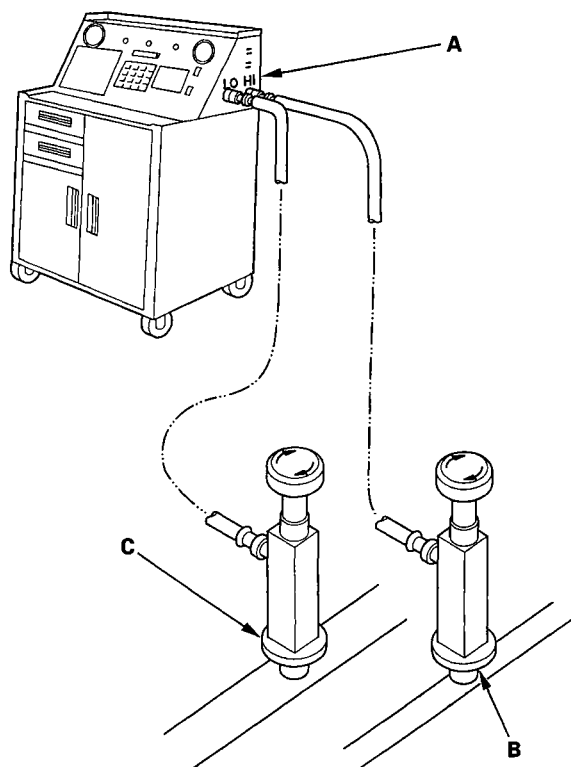
⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

NOTE:

- If accidental system discharge occurs, ventilate the work area before resuming service.
- Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1. Connect an R-134a refrigerant recovery/recycling/charging station (A) to the high-pressure service port (B) and the low-pressure service port (C), as shown, following the equipment manufacturer's instructions.



2. Measure the amount of refrigerant oil removed from the A/C system after the recovery process is completed. Be sure to put the same amount of new refrigerant oil back into the A/C system before charging.

Climate Control

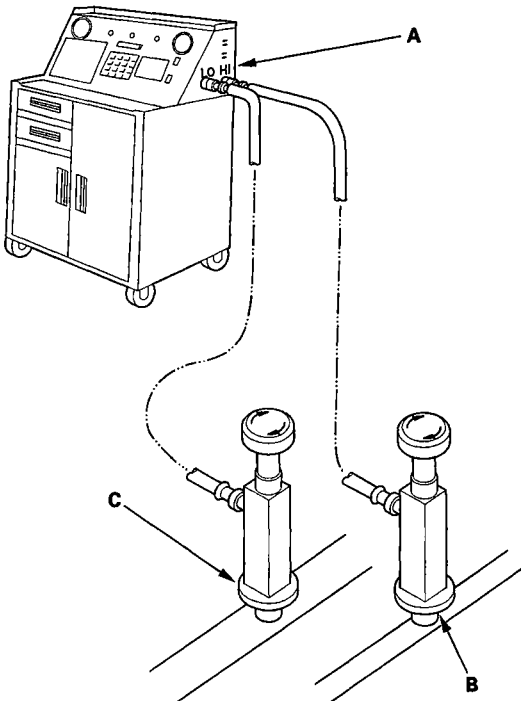
System Evacuation

⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

NOTE:

- If accidental system discharge occurs, ventilate the work area before resuming service.
 - Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.
1. When an A/C System has been opened to the atmosphere, such as during installation or repair, it must be evacuated using an R-134a refrigerant recovery/recycling/charging station. If the system has been open for several days, the receiver/dryer should be replaced, and the system should be evacuated for several hours.
 2. Connect an R-134a refrigerant recovery/recycling/charging station (A) to the high-pressure service port (B) and the low-pressure service port (C), as shown, following the equipment manufacturer's instructions. Evacuate the system.



3. If the low-pressure does not reach more than 93.3 kPa (700 mmHg, 27.6 in.Hg) in 15 minutes, there is probably a leak in the system. Partially charge the system, and check for leaks (see step 3 on page 21-108).



System Charging

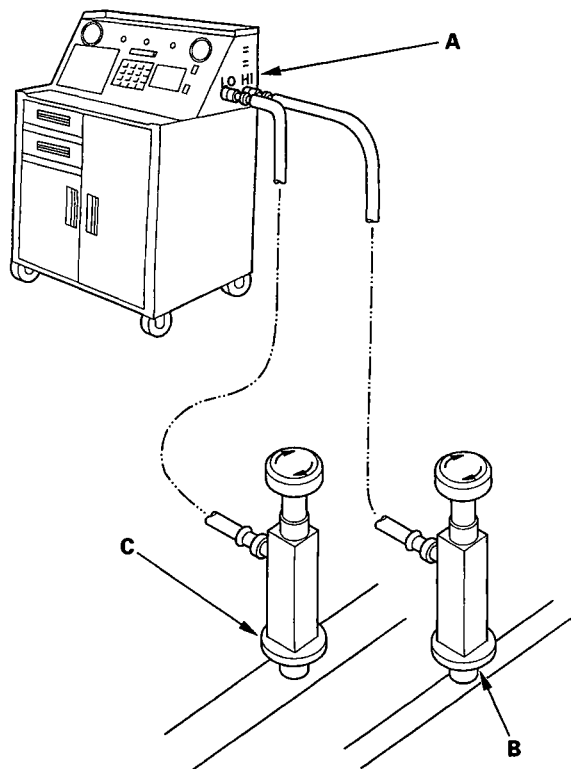
⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

NOTE:

- If accidental system discharge occurs, ventilate work area before resuming service.
- Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1. Connect an R-134a refrigerant recovery/recycling/charging station (A) to the high-pressure service port (B) and the low-pressure service port (C), as shown, following the equipment manufacturer's instructions.



2. Evacuate the system (see page 21-106).
3. Add the same amount of new refrigerant oil to the system that was removed during recovery. Use only SP-10 refrigerant oil.
4. Charge the system with the specified amount of R-134a refrigerant. Do not overcharge the system; the A/C compressor will be damaged.

Select the appropriate units of measure for your refrigerant charging station.

Refrigerant Capacity:

450 to 500 g
0.45 to 0.50 kg
1.0 to 1.1 lbs
15.9 to 17.6 oz

5. Check for refrigerant leaks (see page 21-108).
6. Check the system performance (see page 21-109).

Climate Control

Refrigerant Leak Test

Special Tools Required

Leak detector, Honda Tool and Equipment YGK-H-10PM or commercially available

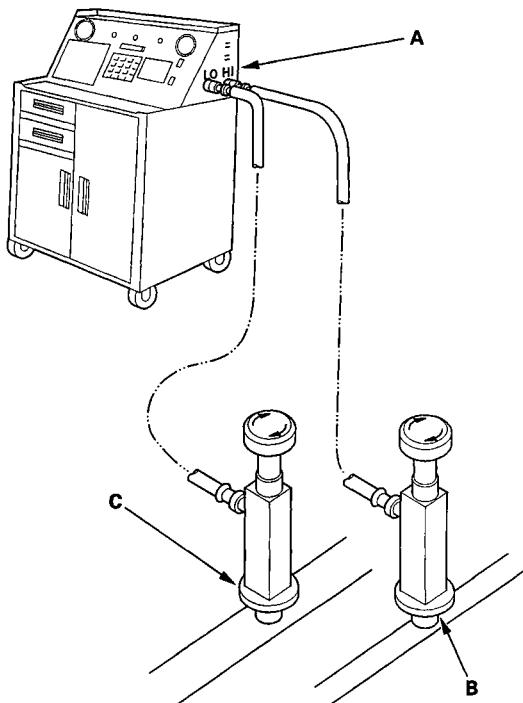
⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

NOTE:

- If accidental system discharge occurs, ventilate the work area before resuming service.
- Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1. Connect an R-134a refrigerant recovery/recycling/charging station (A) to the high-pressure service port (B) and the low-pressure service port (C), as shown, following the equipment manufacturer's instructions.



2. Open the high pressure valve to charge the system to the specified capacity, then close the supply valve, and disconnect the charging station fittings.

Select the appropriate units of measurement for your refrigerant charging station.

Refrigerant Capacity:

450 to 500 g
0.45 to 0.50 kg
1.0 to 1.1 lbs
15.9 to 17.6 oz

3. Check the system for leaks using an R-134a refrigerant leak detector with an accuracy of 14 g (0.5 oz) per year or better.
4. If you find leaks that require the system to be opened (to repair or replace hoses, fittings, etc.), do a recovery of the system.
5. After checking and repairing leaks, the system must be evacuated.



A/C System Test

Performance Test

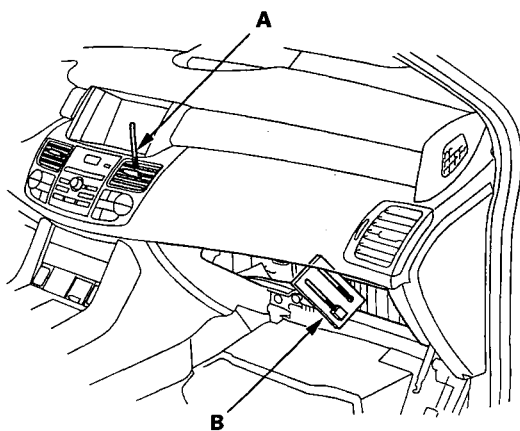
⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

The performance test will help determine if the A/C system is operating within specifications.

NOTE:

- If accidental system discharge occurs, ventilate the work area before resuming service.
 - Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.
1. Connect an R-134a refrigerant recovery/recycling/charging station to the high-pressure service port and the low-pressure service port, following the equipment manufacturer's instructions.
 2. Determine the relative humidity and air temperature.
 3. Open the glove box. Remove the glove box stop on each side, then let the glove box hang down (see page 20-104).
 4. Insert a thermometer (A) in the center vent.



5. Place a thermometer (B) near the blower unit's recirculation inlet duct.

6. Test conditions:

- Avoid direct sunlight.
- Open hood.
- Open front doors.
- Set the temperature control switch to Max Cool, the mode control switch to Vent, and the recirculation control switch to Recirculate.
- Turn the A/C switch ON and the fan switch to Max.
- Hold the engine speed at 1,500 rpm.
- No driver or passengers in vehicle.

7. After running the air conditioning for 10 minutes under the above test conditions, read the delivery temperature from the thermometer in the center vent, the intake temperature near the blower unit, and the discharge (high) and suction (low) pressures on the A/C gauges.

(cont'd)

Climate Control

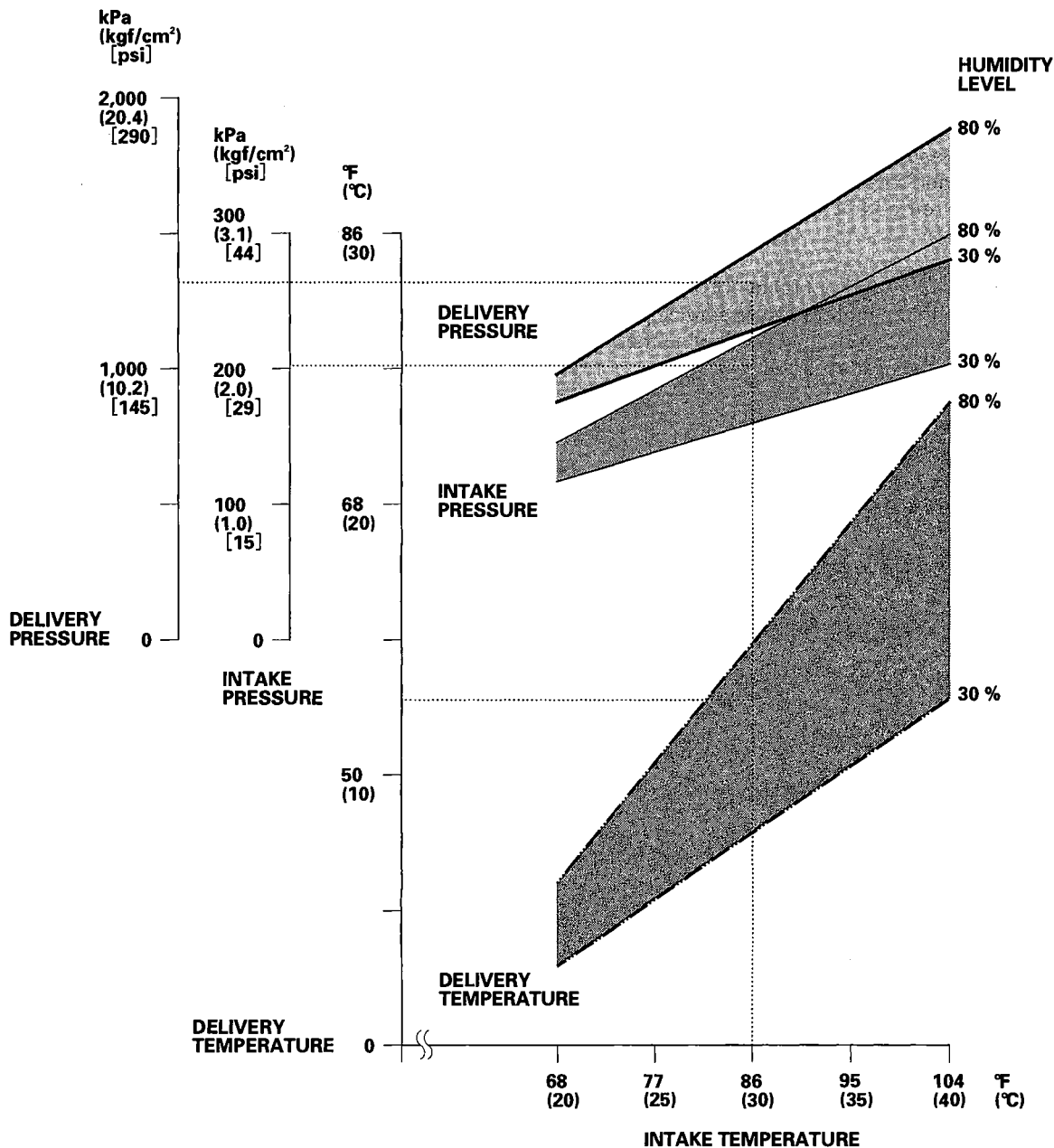
A/C System Test (cont'd)

8. Refer to the inspection data.

Inspection data

Example Intake temperature (dry): 86 °F (30 °C) Humidity level 70 %
 Intake temperature (wet): 81.9 °F (27.7 °C)
 Delivery temperature: 55.8 °F (13.2 °C)
 Intake pressure: 201 kPa (2.0 kgf/cm²) (29 psi)
 Delivery pressure: 1,380 kPa (14.1 kgf/cm²) (200 psi)

Results: Within normal range





Pressure Test

Test results	Related symptoms	Probable cause	Remedy
Discharge (high) pressure abnormally high	After stopping A/C compressor, pressure drops to about 196 kPa (2.0 kgf/cm ² , 28 psi) quickly, and then falls gradually.	Air in system	Recover, evacuate (see page 21-106), and recharge with specified amount (see page 21-107).
	Reduced or no airflow through A/C condenser	• Clogged A/C condenser or radiator fins • A/C condenser or radiator fan not working properly	• Clean. • Check voltage and fan rpm. • Check fan direction.
	Line to A/C condenser is excessively hot.	Restricted flow of refrigerant in system	Restricted lines.
Discharge pressure abnormally low	High and low-pressures are balanced soon after stopping A/C compressor. Low side is higher than normal.	• Faulty A/C compressor discharge valve • Faulty A/C compressor seal	Replace the A/C compressor.
	Outlet of expansion valve is not frosted, low-pressure gauge indicates vacuum.	• Faulty expansion valve • Moisture in system	• Replace. • Recover, evacuate, and recharge with specified amount.
Suction (low) pressure abnormally low	Expansion valve is not frosted, and low-pressure line is not cold. Low-pressure gauge indicates vacuum.	• Frozen expansion valve (Moisture in system) • Faulty expansion valve	• Recover, evacuate, and recharge with specified amount. • Replace the expansion valve.
	Discharge temperature is low, and the airflow from vents is restricted.	Frozen evaporator	Run the fan with A/C compressor off, then check the evaporator temperature sensor.
	Expansion valve is frosted.	Clogged expansion valve	Clean or replace.
Suction pressure abnormally high	Low-pressure hose and check joint are cooler than the temperature around evaporator.	Expansion valve open too long	Repair or replace.
	Suction pressure is lowered when A/C condenser is cooled by water.	Excessive refrigerant in system	Recover, evacuate, and recharge with specified amount.
	High and low-pressures are equalized as soon as the A/C compressor is stopped, and both gauges fluctuate while running.	• Faulty gasket • Faulty high-pressure valve • Foreign particle stuck in high-pressure valve	Replace the A/C compressor.
Suction and discharge pressures abnormally high	Reduced airflow through A/C condenser.	• Clogged A/C condenser or radiator fins • A/C condenser or radiator fan not working properly	• Clean. • Check voltage and fan rpm. • Check fan direction.
Suction and discharge pressures abnormally low	Low-pressure hose and metal end areas are cooler than evaporator.	Clogged or kinked low-pressure hose parts	Repair or replace.
	Temperature around expansion valve is too low compared with that around receiver/dryer.	Clogged high-pressure line	Repair or replace.
Refrigerant leaks	A/C compressor clutch is dirty.	A/C compressor shaft seal leaking	Replace the A/C compressor.
	A/C compressor bolt(s) are dirty.	Leaking around bolt(s)	Tighten bolt(s) or replace the A/C compressor.
	A/C compressor gasket is wet with oil.	Gasket leaking	Replace the A/C compressor.
	A/C fitting is dirty.	Leaking O-ring	Clean the A/C fitting and replace the O-ring.

BACK

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If electrical maintenance is required)

The RDX SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, driver's seat belt buckle tensioner in the driver's seat belt lower anchor, front passenger's seat belt buckle tensioners in the front passenger's seat belt lower anchor, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items require special precautions and tools, and should be done only by an authorized Acura dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work must be performed by an authorized Acura dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags and/or side airbags.
- Do not bump or impact the SRS unit, front impact sensors, or side impact sensors when the ignition switch is ON (II), or for at least 3 minutes after the ignition switch is turned OFF; otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

