

HVAC (Heating, Ventilation, and Air Conditioning)

HVAC (Heating, Ventilation, and Air Conditioning)

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Climate Control

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Rear Climate Control

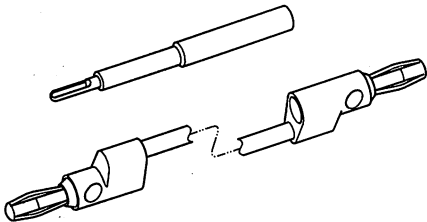
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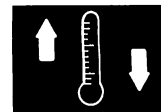
HVAC (Heating, Ventilation, and Air Conditioning)

Special Tools

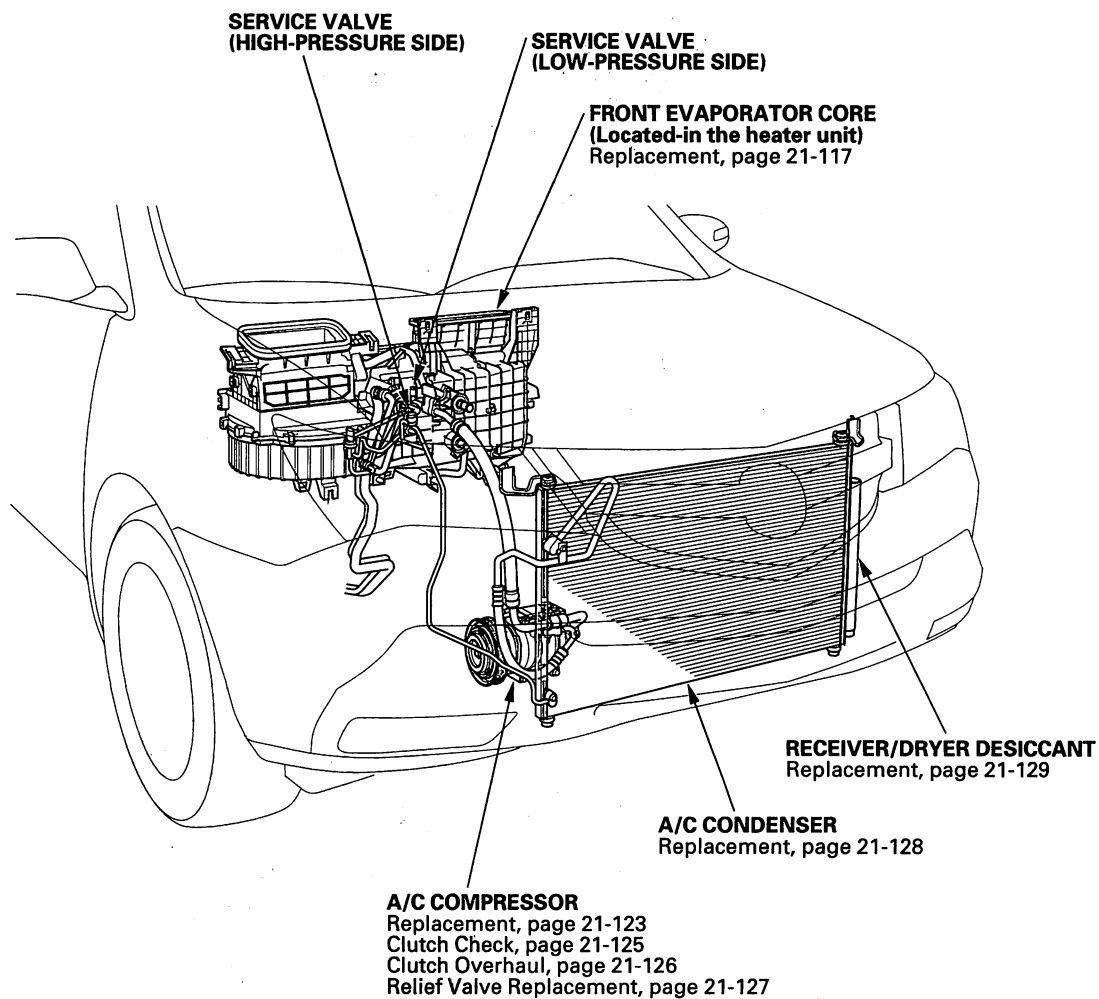
Ref. No.	Tool Number	Description	Qty
①	07SAZ-001000A	Backprobe Set	2



①



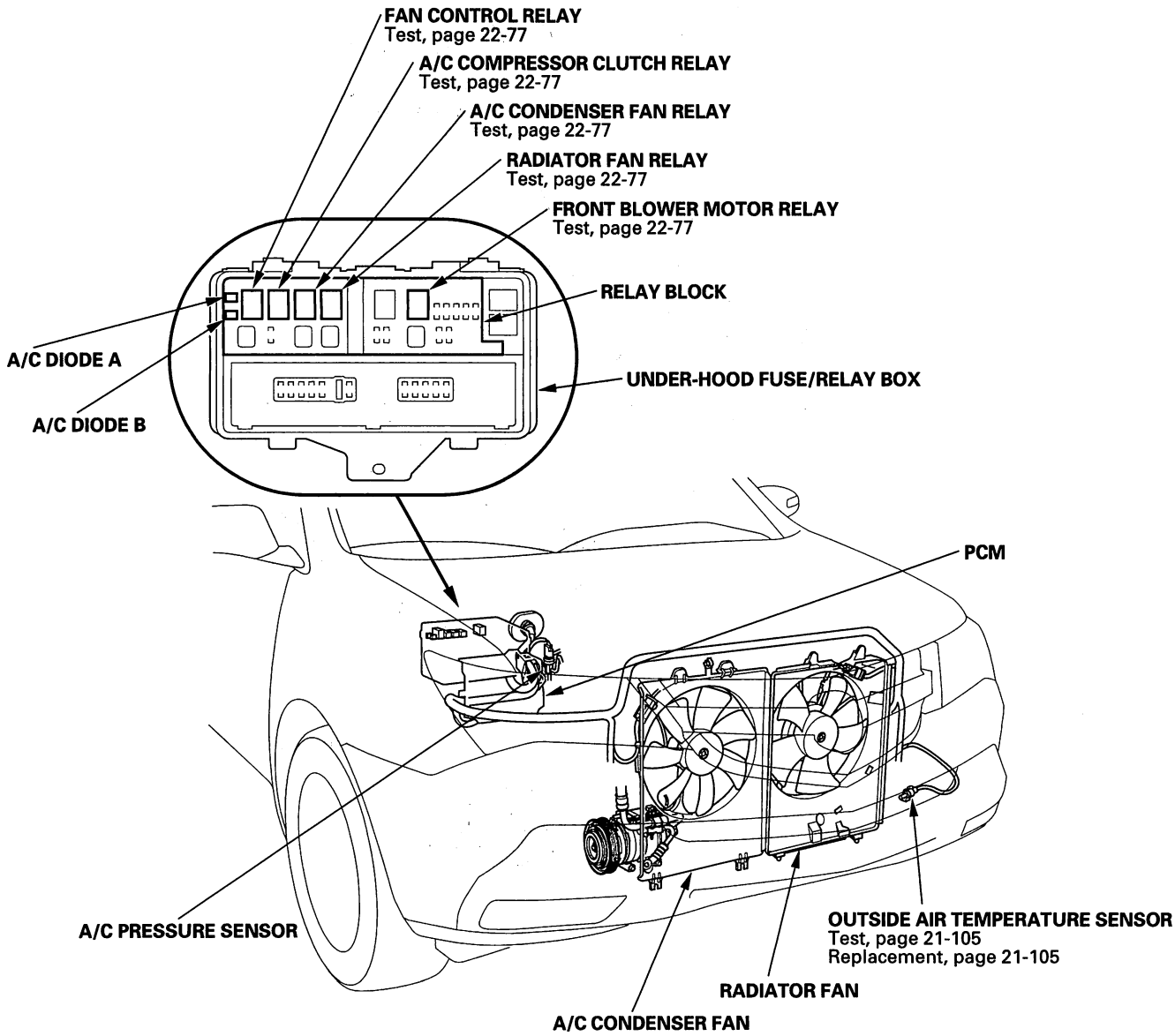
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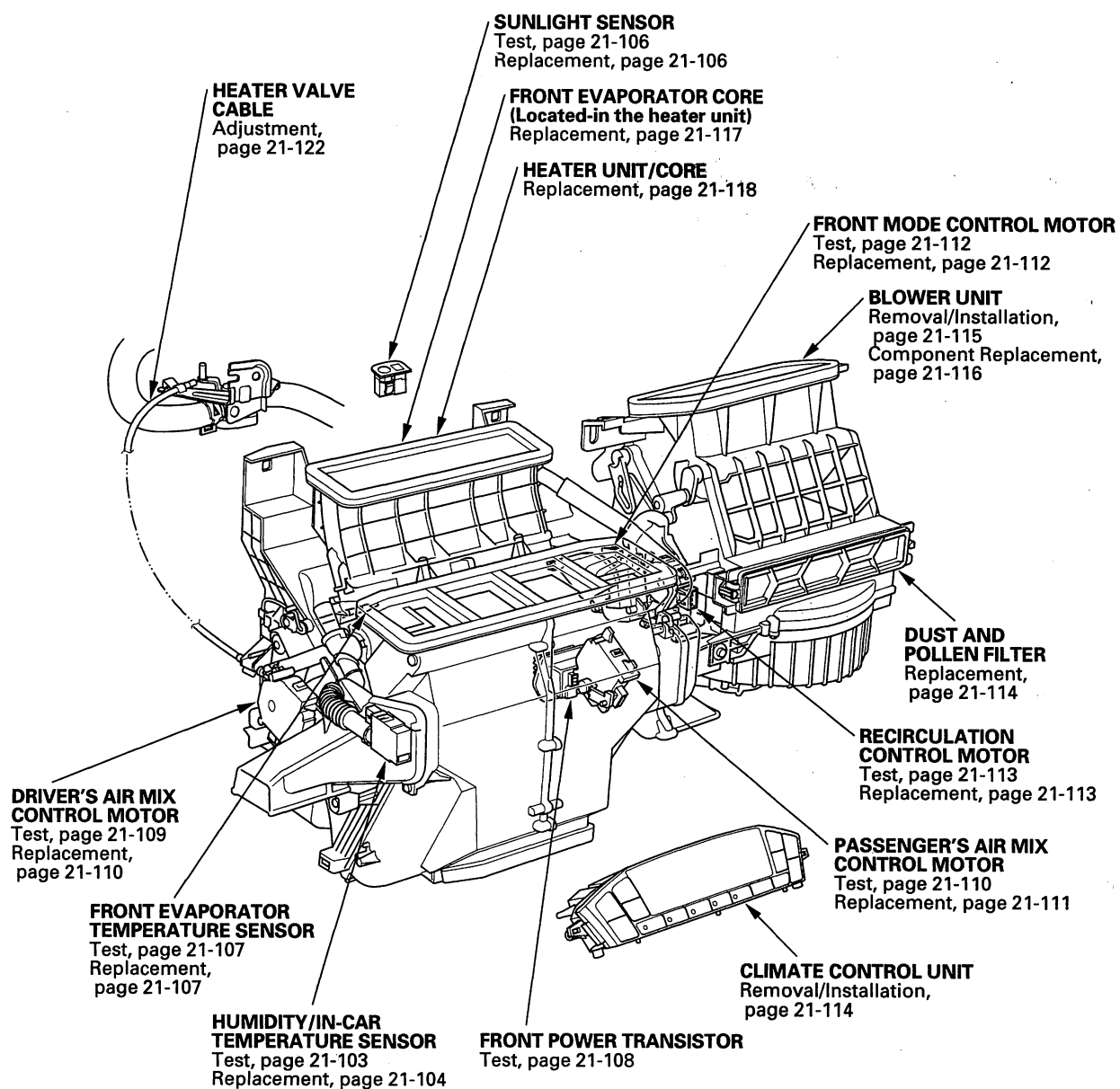
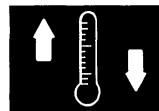
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Climate Control

Component Location Index (cont'd)



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Climate Control

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 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: DENSO ND-OIL 8

- P/N 38897-PR7-A01AH: 120 mL (4 fl-oz)
- P/N 38899-PR7-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) 50 mL (1 2/3 fl-oz)

Front Evaporator 40 mL (1 1/3 fl-oz)

Rear Evaporator 30 mL (1 fl-oz)

Line or hose 10 mL (1/3 fl-oz)

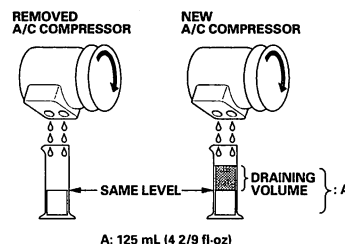
Receiver/Dryer

Desiccant 10 mL (1/3 fl-oz)

Leakage repair 25 mL (5/6 fl-oz)

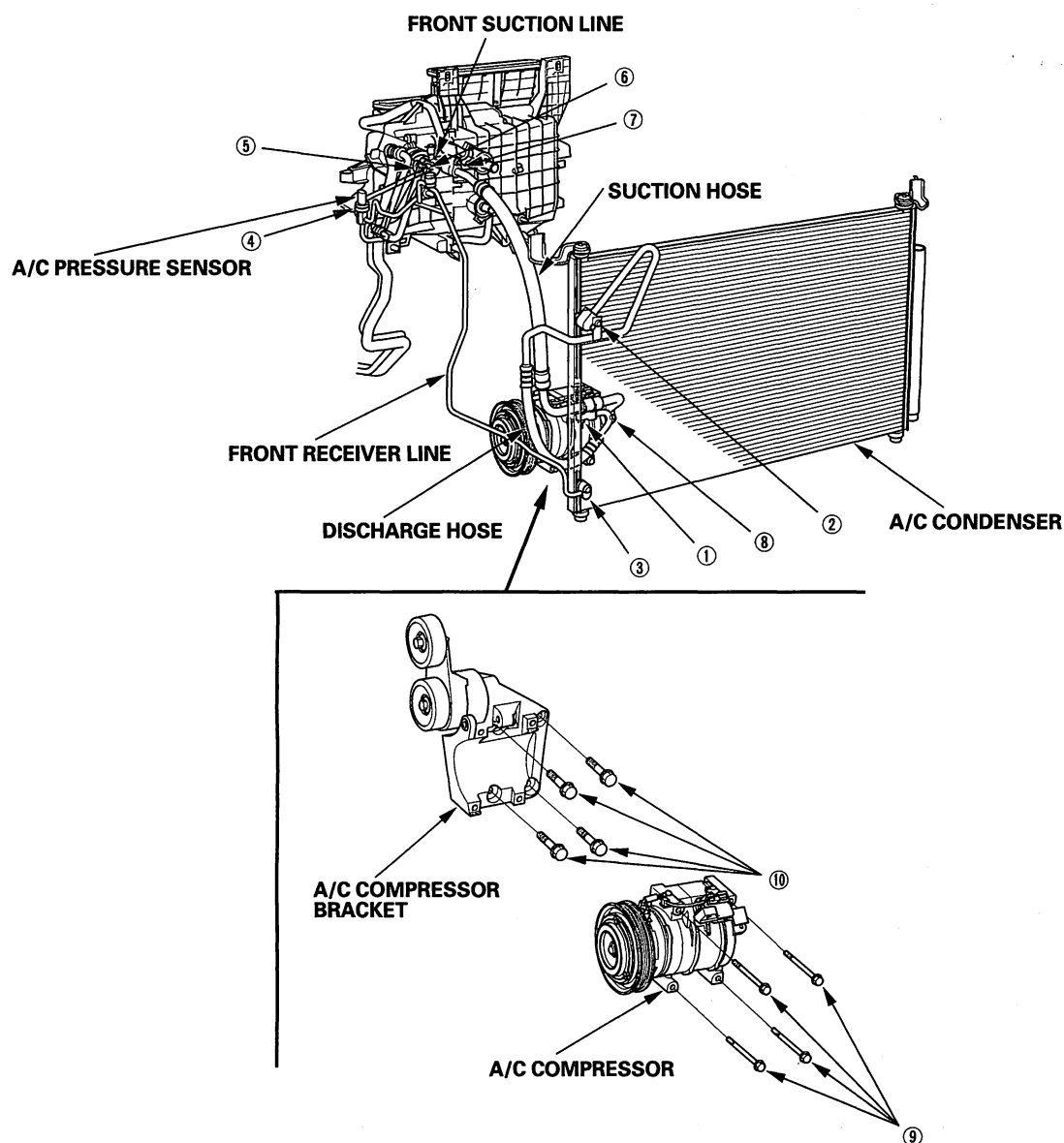
A/C compressor For A/C compressor replacement, subtract the volume of oil drained from the removed A/C compressor from 125 mL (4 2/9 fl-oz), and drain the calculated volume of oil from the new A/C compressor: 125 mL (4 2/9 fl-oz) — Volume of removed A/C compressor = Volume to drain from new A/C compressor.

NOTE: Even if no oil is drained from the removed A/C compressor, don't drain more than 50 mL (1 2/3 fl-oz) from the new A/C compressor.





Front A/C Line Replacement



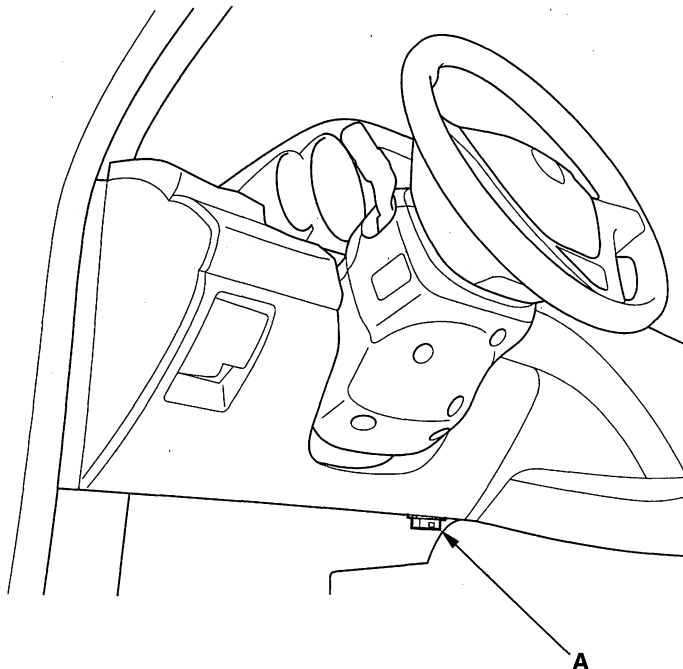
- ① Discharge hose to the A/C compressor (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ② Discharge hose to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ③ Front receiver line to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ④ A/C pressure sensor to the front receiver line (11 x 1.0 mm): 10.8 N·m (1.1 kgf·m, 8.0 lbf·ft)
- ⑤ Front receiver line to the front evaporator (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ⑥ Front suction line to the front evaporator (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ⑦ Front suction line to the suction hose (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 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 A/C compressor bracket (8 x 1.25 mm): 22 N·m (2.2 kgf·m, 16.2 lbf·ft)
- ⑩ A/C compressor to the engine block (10 x 1.25 mm): 45 N·m (4.6 kgf·m, 33.2 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 11-223).
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 11-223).
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)

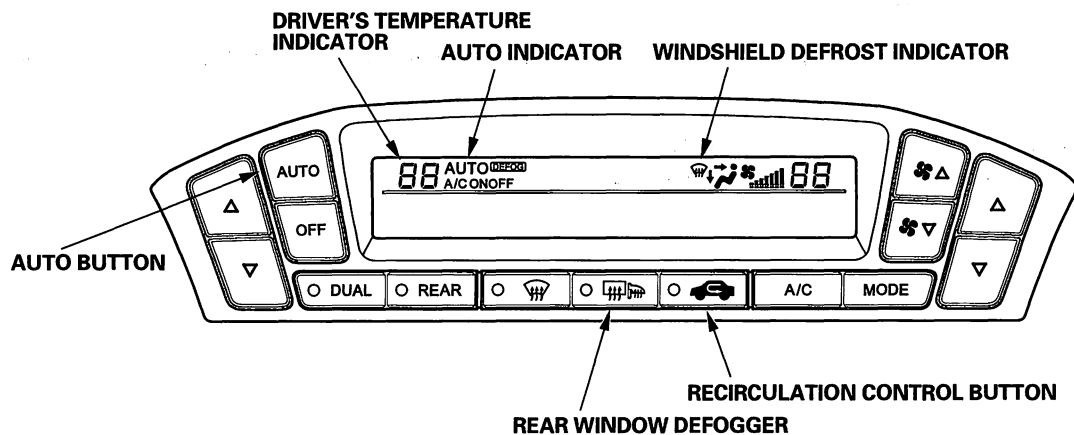
How to Use the Self-diagnostic Function without the HDS

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

1. Turn the ignition switch OFF and then ON (II).
2. Press and hold the OFF button, then press the RECIRCULATION CONTROL button five times within 10 seconds. Release the OFF and RECIRCULATION CONTROL buttons; then the self-diagnostic begins.

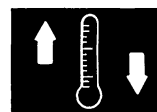
NOTE:

- The blower motor will run at various speeds regardless of what the panel is displaying.
- If there is any problem in the system, the system flashes "88 AUTO WINDSHIELD DEFROST" or alternately flashes "88 AUTO WINDSHIELD DEFROST" and one or more of the 14 segments (A through P). 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

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



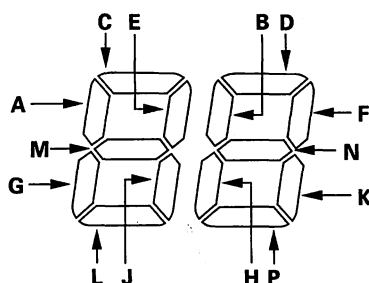
Checking for DTCs

The temperature display indicates single or multiple DTCs. If indicator segments A, B, C, E, G, J, M, N, AUTO, and WINDSHIELD DEFROST 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

WINDSHIELD DEFROST INDICATOR



AUTO



DTC (Driver's Temperature Indicator Segment, AUTO, and WINDSHIELD DEFROST Indicator)	Detection Item
A and AUTO	An open in the in-car temperature sensor circuit (see page 21-41)
B and AUTO	A short in the in-car temperature sensor circuit (see page 21-43)
C and AUTO	An open in the outside air temperature sensor circuit (see page 21-44)
D and AUTO	A short in the outside air temperature sensor circuit (see page 21-45)
E and AUTO	An open in the sunlight sensor circuit (see page 21-46)
F and AUTO	A short in the sunlight sensor circuit (see page 21-47)
G and AUTO	An open in the front evaporator temperature sensor circuit (see page 21-48)
H and AUTO	A short in the front evaporator temperature sensor circuit (see page 21-50)
J and AUTO	An open in the driver's air mix control motor circuit (see page 21-51)
K and AUTO	A short in the driver's air mix control motor circuit (see page 21-52)
L and AUTO	A problem in the driver's air mix control linkage, door, or motor circuit (see page 21-55)
M and AUTO	An open in the passenger's air mix control motor circuit (see page 21-56)
N and AUTO	A short in the passenger's air mix control motor circuit (see page 21-57)
P and AUTO	A problem in the passenger's air mix control linkage, door, or motor circuit (see page 21-60)

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BACK

21-11

Climate Control

General Troubleshooting Information (cont'd)

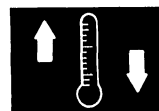
DTC (Driver's Temperature Indicator Segment, AUTO, and WINDSHIELD DEFROST Indicator)	Detection Item
AUTO	Climate control unit lost communication with gauge control module (ECT message) (see page 21-32)
A	An open or short in the front mode control motor circuit (see page 21-62)
B	A problem in the front mode control linkage, doors, or motor circuit (see page 21-64)
C	A problem in the front blower motor circuit (see page 21-65)
F	An open in the rear air mix control motor circuit (see page 21-69)
G	A short in the rear air mix control motor circuit (see page 21-70)
H	A problem in the rear air mix control linkage, door, or motor circuit (see page 21-73)
J	An open or short in the recirculation control motor circuit (see page 21-36)
K	A problem in the recirculation control linkage, door, or motor circuit (see page 21-88)
M	A problem in the rear blower motor circuit (see page 21-38)
N	An open in the rear evaporator temperature sensor circuit (see page 21-33)
P	A short in the rear evaporator temperature sensor circuit (see page 21-34)
A and WINDSHIELD DEFROST	An open in the humidity sensor circuit (see page 21-76), a short in the humidity sensor circuit (see page 21-77)
B and WINDSHIELD DEFROST	An open in the A/C pressure sensor circuit (see page 21-81), a short in the A/C pressure sensor circuit (see page 21-83)

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 RECIRCULATION CONTROL buttons, then start the engine.
3. After the engine starts, release both buttons. The display panel control unit 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	In-car Temperature	°C
2	Outside Air Temperature	°C
3	Solar Radiation Sensor Value: Dark = 00, Flashlight = 04, Cloudy = 10, Sunny = 65	kcal/m ² .h
4	Front Evaporator Outlet Air Temperature	°C
5	Driver's and Passenger's Air Mix Opening (Low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
6	Vent Temperature Air Out (TAO)	°C
7	Vehicle Speed (Vehicle must be driven to display speed)	km/h
8	A/C Pressure	10kPa
9	Rear Air Mix Opening	% of opening
A	Rear Vent Temperature Air Out (TAO)	°C
B	Rear Evaporator Outlet Air Temperature	°C
C	Humidity Sensor Value	% rh
D	Fog Margin	°C
E	Solar Radiation azimuth (With navigation system)	10°
F	Solar Radiation angle of elevation (With navigation system)	10°

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 a known-good sensor, and recheck.

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

(cont'd)

Climate Control

General Troubleshooting Information (cont'd)

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



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 22-129)
B1202	Climate control unit internal error	Climate control unit	Internal error	(see page 21-32)
B1205	Climate control unit lost communication with gauge control module (VSP/NE message)	Climate control unit	Loss of communication	(see page 21-32)
B1206	Climate control unit lost communication with gauge control module (ECT message)	Climate control unit	Loss of communication	(see page 21-32)
B1207	Climate control unit lost communication with gauge control module (ILLUMI message)	Climate control unit	Loss of communication	(see page 21-32)
B1213	An open in the rear evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-33)
B1214	A short in the rear evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-34)
B1215	An open or short in the recirculation control motor circuit	Climate control unit	Signal error	(see page 21-36)
B1223	A problem in the rear blower motor circuit	Climate control unit	Signal error	(see page 21-38)
B1225	An open in the in-car temperature sensor circuit	Climate control unit	Signal error	(see page 21-41)
B1226	A short in the in-car temperature sensor circuit	Climate control unit	Signal error	(see page 21-43)
B1227	An open in the outside air temperature sensor circuit	Climate control unit	Signal error	(see page 21-44)
B1228	A short in the outside air temperature sensor circuit	Climate control unit	Signal error	(see page 21-45)
B1229	An open in the sunlight sensor circuit	Climate control unit	Signal error	(see page 21-46)
B1230	A short in the sunlight sensor circuit	Climate control unit	Signal error	(see page 21-47)
B1231	An open in the front evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-48)
B1232	A short in the front evaporator temperature sensor circuit	Climate control unit	Signal error	(see page 21-50)
B1233	An open in the driver's air mix control motor circuit	Climate control unit	Signal error	(see page 21-51)
B1234	A short in the driver's air mix control motor circuit	Climate control unit	Signal error	(see page 21-52)
B1235	A problem in the driver's air mix control linkage, door, or motor circuit	Climate control unit	Signal error	(see page 21-55)
B1236	An open in the passenger's air mix control motor circuit	Climate control unit	Signal error	(see page 21-56)
B1237	A short in the passenger's air mix control motor circuit	Climate control unit	Signal error	(see page 21-57)
B1238	A problem in the passenger's air mix control linkage, door, or motor circuit	Climate control unit	Signal error	(see page 21-60)

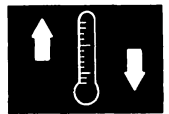
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Climate Control

DTC Troubleshooting Index (cont'd)

Checking the DTCs by HDS

DTC	Detection Item or Symptom	ECU	DTC type	Page
B1239	An open or short in the front mode control motor circuit	Climate control unit	Signal error	(see page 21-62)
B1240	A problem in the front mode control linkage, doors, or motor circuit	Climate control unit	Signal error	(see page 21-64)
B1241	A problem in the front blower motor circuit	Climate control unit	Signal error	(see page 21-65)
B1244	An open in the rear air mix control motor circuit	Climate control unit	Signal error	(see page 21-69)
B1245	A short in the rear air mix control motor circuit	Climate control unit	Signal error	(see page 21-70)
B1246	A problem in the rear air mix control linkage, door, or motor circuit	Climate control unit	Signal error	(see page 21-73)
B2965	Climate control unit lost communication with rear climate control panel	Climate control unit	Loss of communication	(see page 21-74)
B2967	An open in the humidity sensor circuit	Climate control unit	Signal error	(see page 21-76)
B2968	A short in the humidity sensor circuit	Climate control unit	Signal error	(see page 21-77)
B2969	Climate control unit lost communication with combination switch control unit (WIPSW message)	Climate control unit	Loss of communication	(see page 21-80)
B2970	Climate control unit lost communication with relay control module (RM message)	Climate control unit	Loss of communication	(see page 21-81)
B2979	An open in the A/C pressure sensor circuit	Climate control unit	Signal error	(see page 21-81)
B2980	A short in the A/C pressure sensor circuit	Climate control unit	Signal error	(see page 21-83)
B2981	Climate control unit lost communication with navigation unit	Climate control unit	Loss of communication	(see page 21-86)
B2983	A problem in the recirculation control linkage, door, or motor circuit	Climate control unit	Signal error	(see page 21-88)
B2991	Climate control unit lost communication with audio unit	Climate control unit	Loss of communication	(see page 21-89)



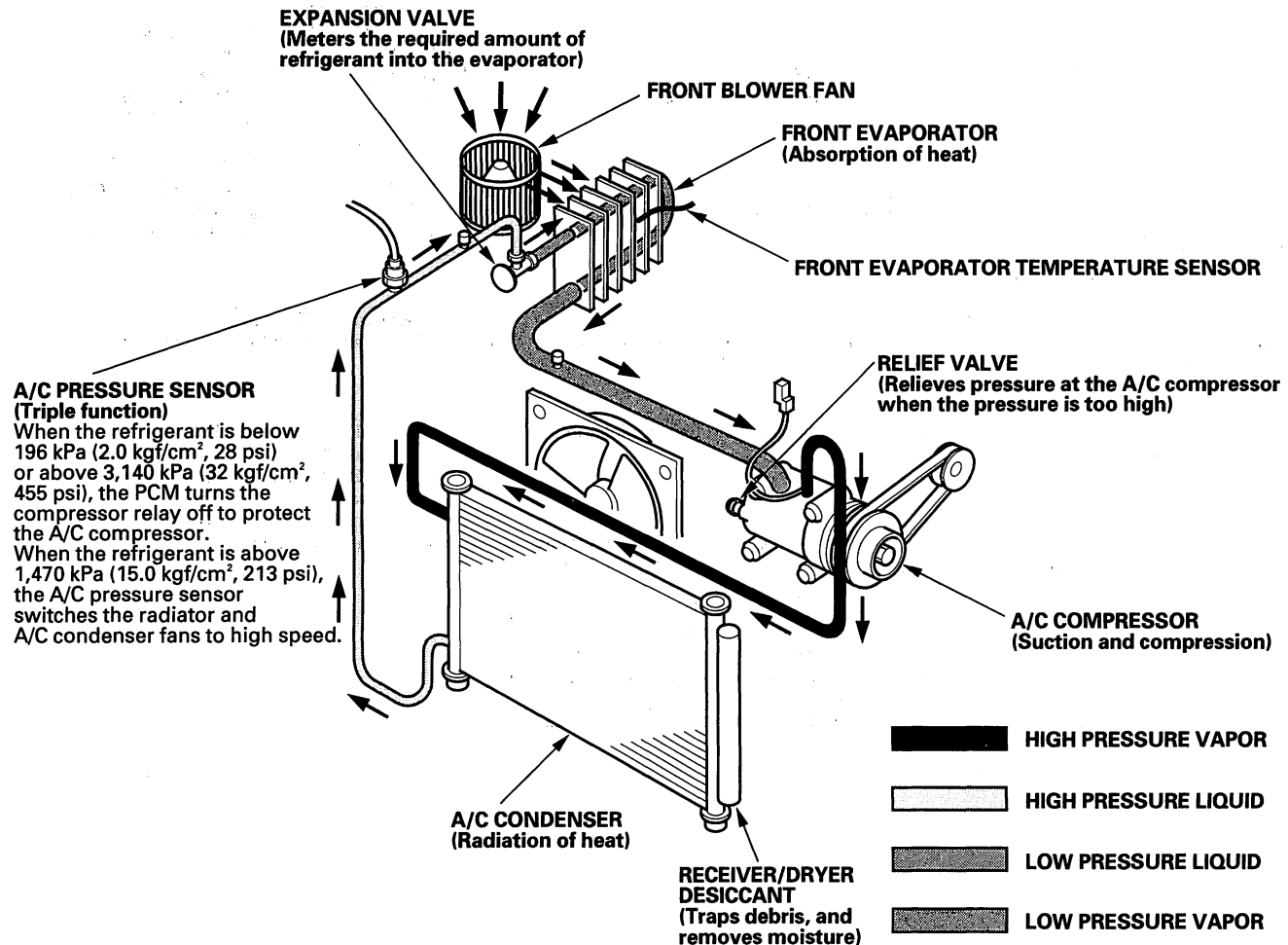
Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Rear mode control doors do not change between ceiling vents (cool) and floor vents (hot)	Rear mode control motor circuit troubleshooting (see page 21-91)	• HVAC DTCs (see page 21-8) • Blown fuse No. 30 (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 unit troubleshooting (see page 21-93)	• HVAC DTCs (see page 21-8) • Blown fuse No. 30 (10 A) in the under-dash fuse/relay box • Poor ground at G506 (see page 22-67) • 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 21-94)	• HVAC DTCs (see page 21-8) • Blown fuse No. 15 (30 A) in the relay block, and No. 30 (10 A) in the under-dash fuse/relay box • Poor ground at G301 (see page 22-67) • 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 21-98)	• HVAC DTCs (see page 21-8) • 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)	ECT troubleshooting: ECT sensor 2 circuit low voltage (see page 11-175), ECT sensor 2 circuit high voltage (see page 11-177)	• 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 21-100)	• HVAC DTCs (see page 21-8) • Blown fuse No. 7 (7.5 A) in the relay block, and No. 30 (10 A) in the under-dash fuse/relay box • Cleanliness and tightness of all terminals
Blower fan(s) runs slower than expected in cold weather	ECT troubleshooting: ECT sensor 2 circuit low voltage (see page 11-175), ECT sensor 2 circuit high voltage (see page 11-177) NOTE: It is normal for the blower(s) to run slowly until the engine coolant temperature begins to rise. If the blower continues to run slowly for an abnormal length of time, continue to troubleshoot the problem.	Powertrain DTCs (see page 11-3)
HDS does not communicate with the climate control unit or the vehicle	Troubleshoot the DLC circuit (see page 11-223)	

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, and the evaporator becomes 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 it blows the cool air into the passenger compartment.



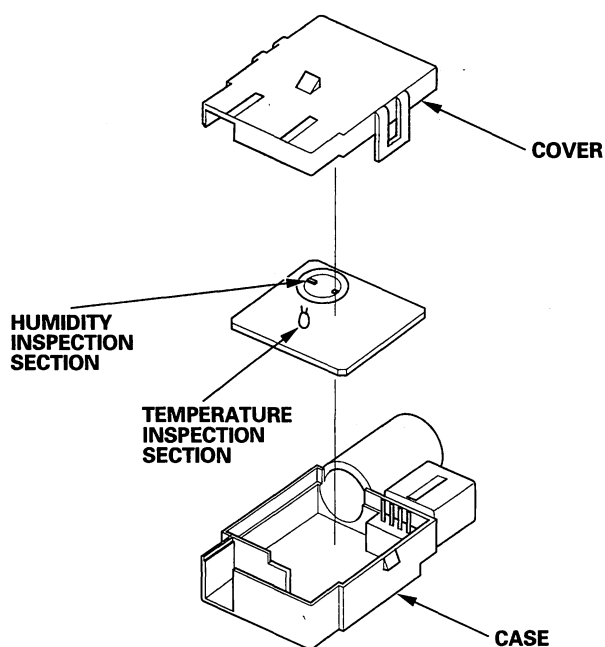
This vehicle uses HFC-134a (R-134a) refrigerant, which does not contain chlorofluorocarbons. Pay attention to the following service items:

- 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 (DENSO ND-OIL 8) 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.



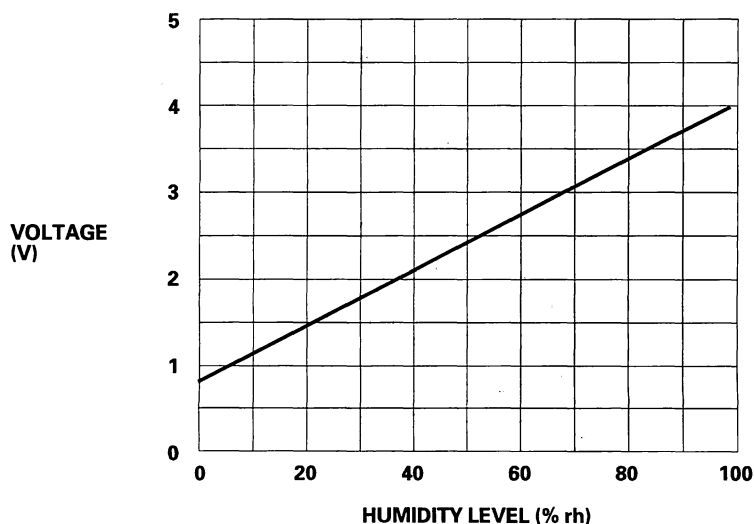
Humidity/In-car Temperature Sensor

The humidity sensor consists of two sensors. One is the humidity detection part and the other is the in-car temperature detection part. When the climate control unit receives the signals of the in-car condition from the humidity sensor, and judges that the humidity in the vehicle is very low, the climate control unit adjusts the compressor. Engine power loss is kept to a minimum.



Humidity/In-car Temperature Sensor Quality

The capacitance of the humidity sensor changes by the adsorption and the evaporation of moisture. The resistance change of the humidity sensor changes the output voltage.



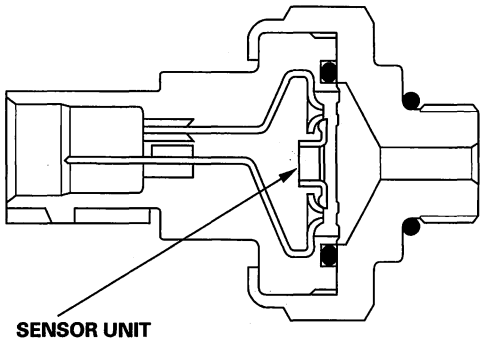
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System Description (cont'd)

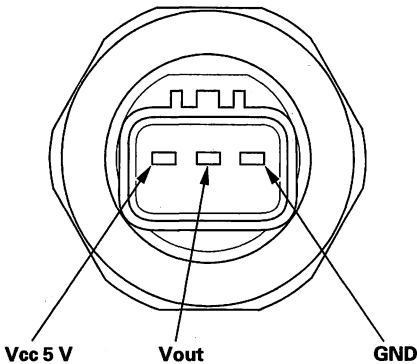
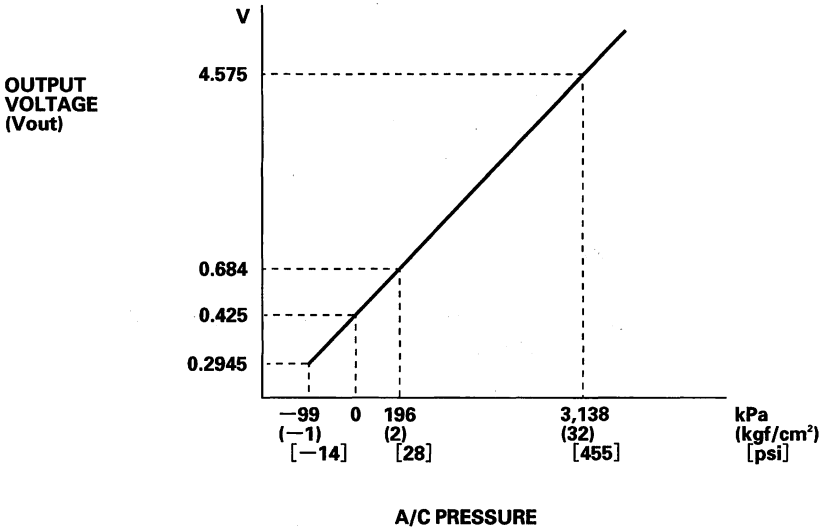
A/C Pressure Sensor

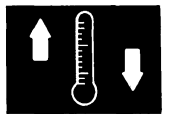
The A/C pressure sensor converts A/C pressure into electrical signals to the PCM.

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

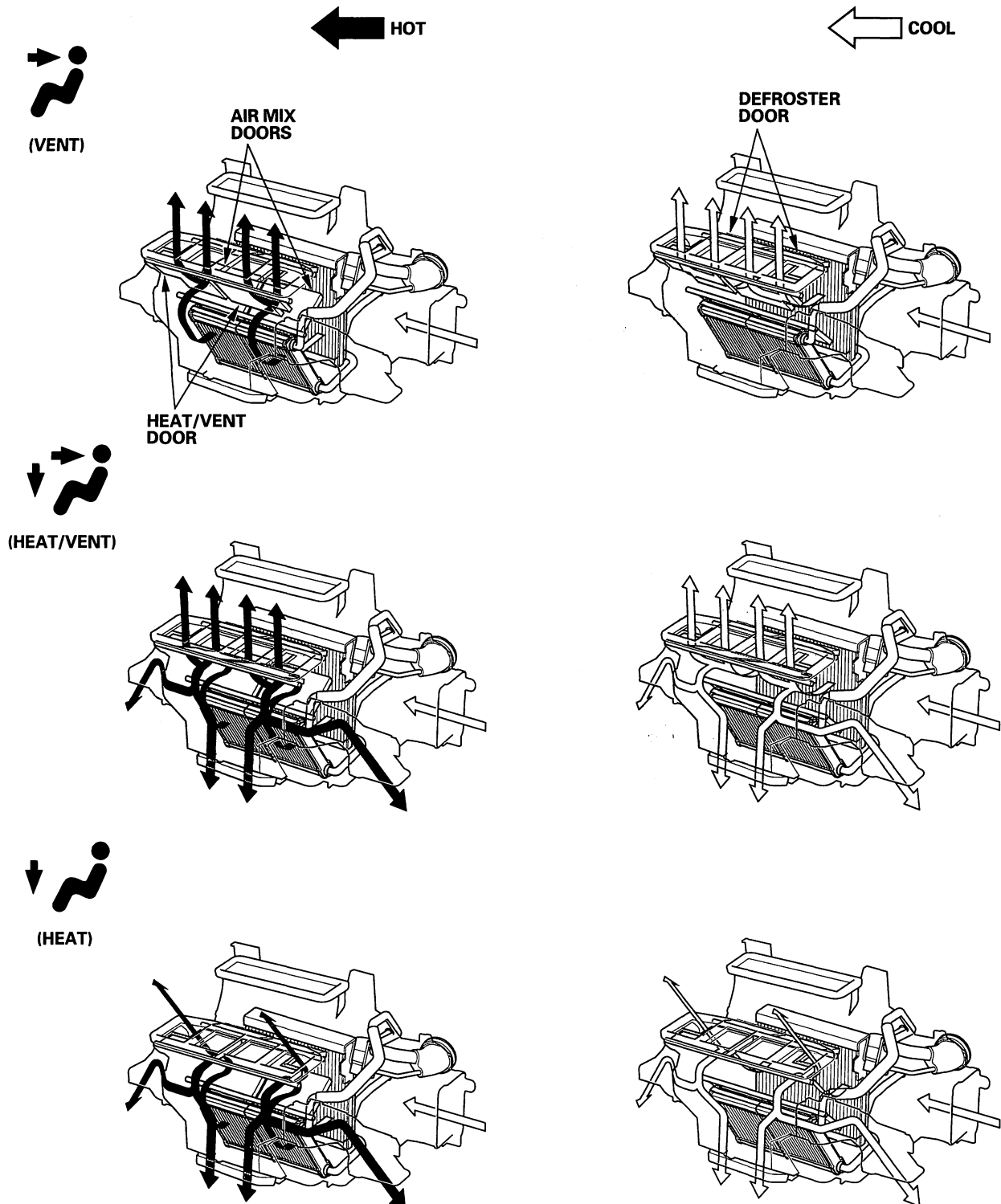


The response of the A/C pressure sensor is shown in the graph.





Climate Control Door Positions



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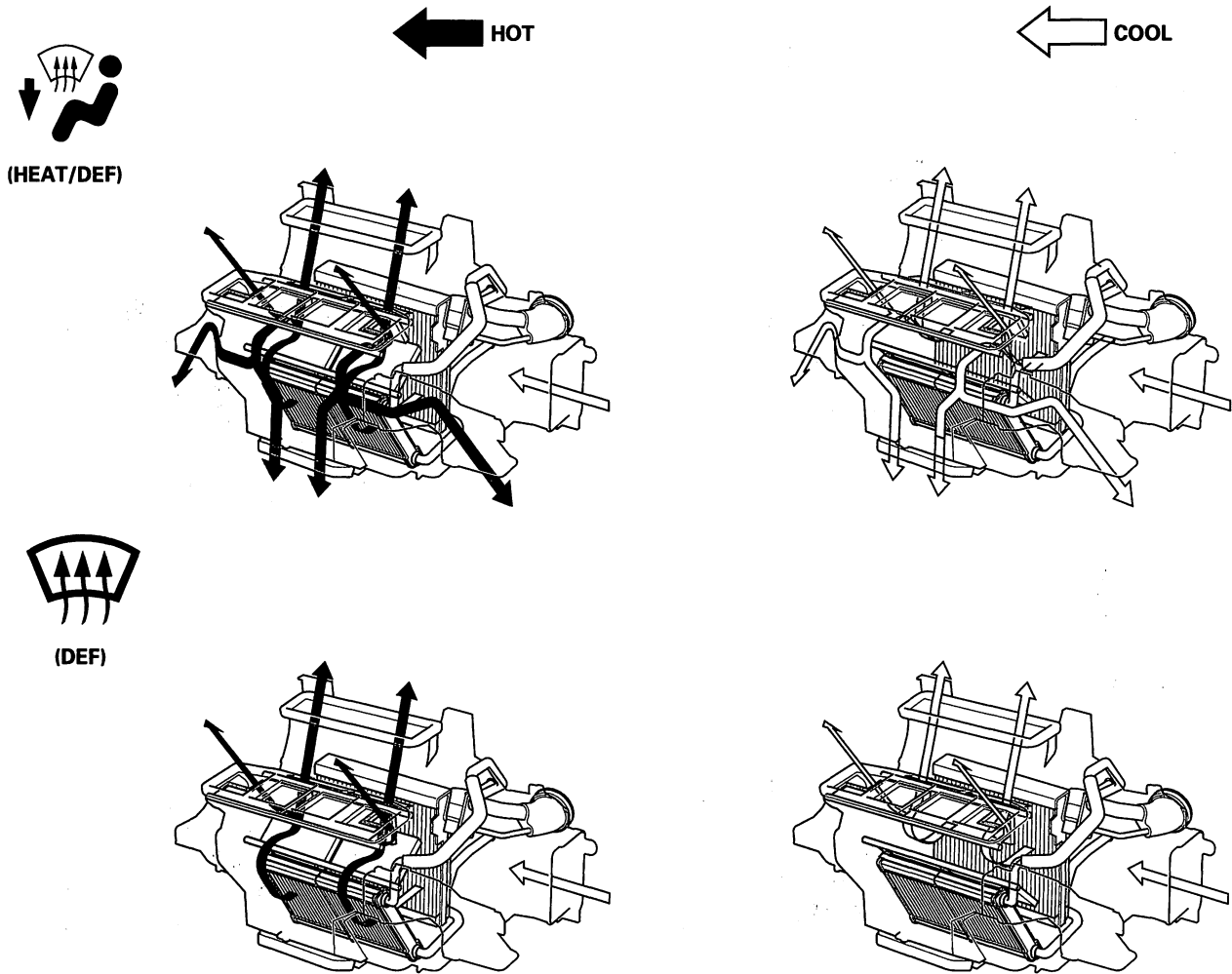
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BACK

21-21

Climate Control

System Description (cont'd)

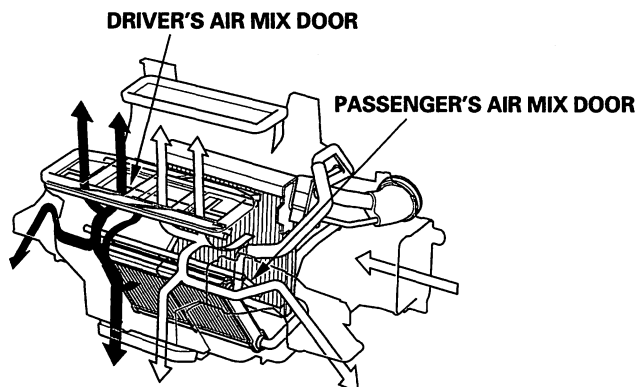


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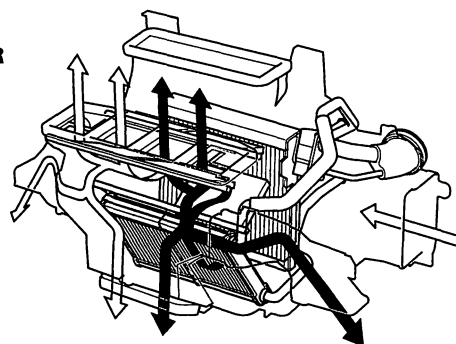


Dual Air Mix Control System

Driver's side: HOT
Passenger's side: COOL



Driver's side: COOL
Passenger's side: HOT



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(cont'd)

BACK

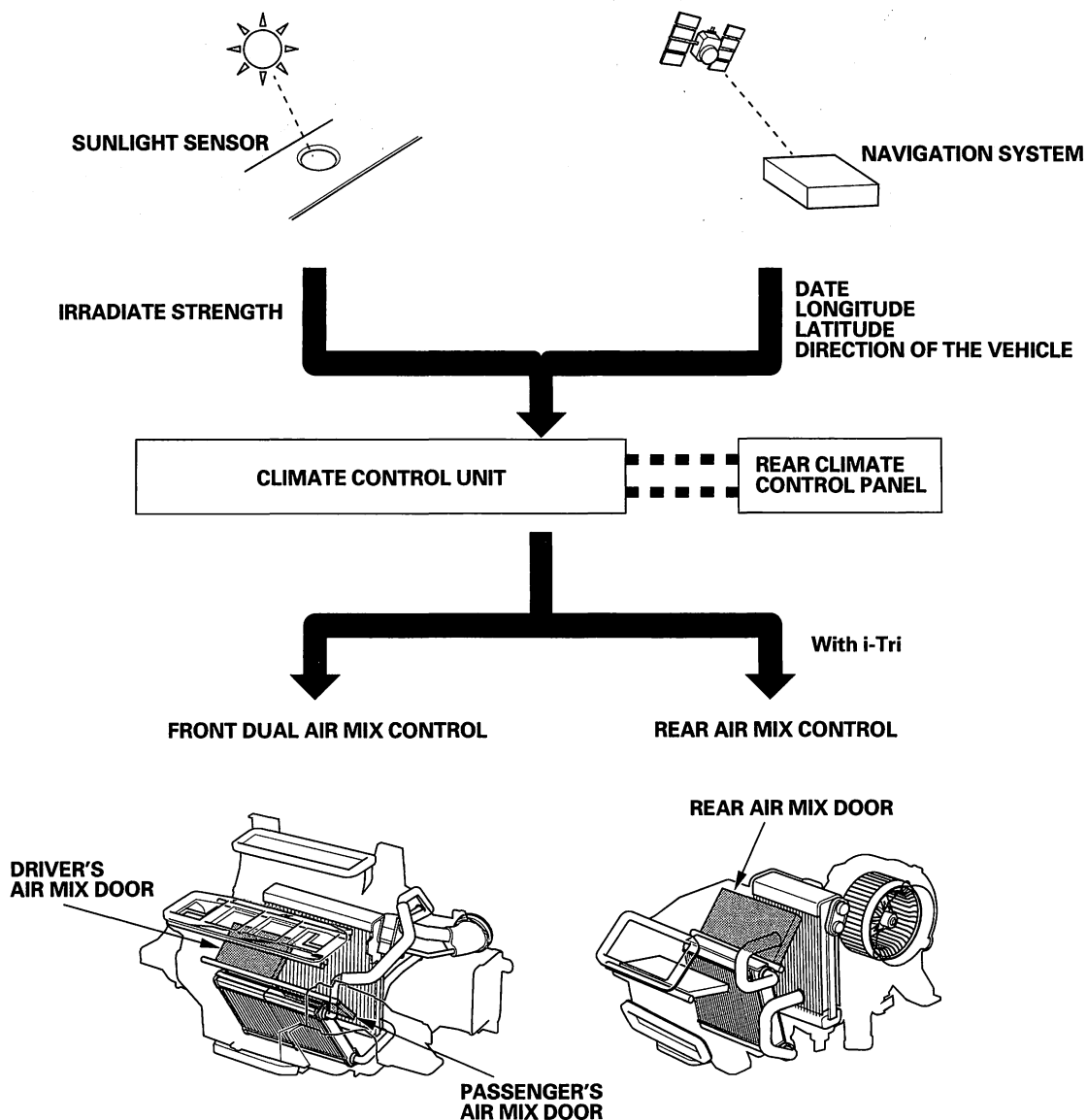
21-23

Climate Control

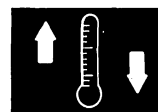
System Description (cont'd)

i-Dual and i-Tri Climate Control System (With navigation system)

The "i-Dual" climate control system automatically controls the temperature and the vent mode of the air direction to the driver's 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. The "i-Tri" climate control system is an addition of the automatic controls with the temperature and the vent mode of the air direction to the rear section to the "i-Dual" climate control system.

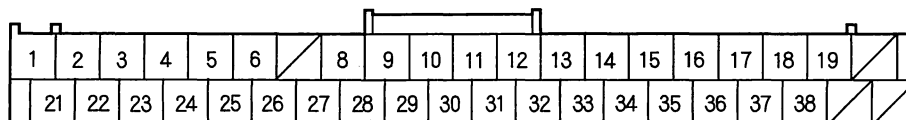


In the event that the navigation system malfunctions, or when driving in areas where the navigation system cannot determine the vehicle position (non-coverage areas, tunnels, etc.), the climate control system will operate the same as a vehicle without a navigation system.



Climate Control Unit Inputs and Outputs

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

CONNECTOR A

Cavity	Wire color	Signal	
1	WHT	BACK UP	INPUT
2	YEL	NAVIGATION UNIT (SI)*	INPUT
3	YEL	IG2 (Power)	INPUT
4	LT GRN	B-CAN	INPUT/OUTPUT
5	LT BLU	IN-CAR TEMPERATURE SENSOR	OUTPUT
6	GRY	COMMON POTENTIAL 5V	OUTPUT
8	RED	SENSOR COMMON GROUND	INPUT
9	BLU	FRONT BLOWER FEEDBACK	INPUT
10	RED	FRONT POWER TRANSISTOR CONTROL	OUTPUT
11	PUR	DRIVER'S AIR MIX POTENTIAL	OUTPUT
12	PNK	DRIVER'S AIR MIX HOT	OUTPUT
13	LT BLU	DRIVER'S AIR MIX COOL	OUTPUT
14	LT GRN	PASSENGER'S AIR MIX HOT	OUTPUT
15	YEL	PASSENGER'S AIR MIX COOL	OUTPUT
16	GRN	FRONT MODE DEF	OUTPUT
17	ORN	FRONT MODE VENT	OUTPUT
18	YEL	FRESH	OUTPUT
19	ORN	RECIRCULATE	OUTPUT
21	BLU	NAVIGATION UNIT (CLK)*	OUTPUT
22	RED	NAVIGATION UNIT (SO)*	OUTPUT
23	LT BLU	ILLUMI (+)	INPUT
24	BRN	FRONT EVAPORATOR TEMPERATURE SENSOR	OUTPUT
25	PUR	ACC	INPUT
26	LT GRN	A/C PRESSURE SENSOR	OUTPUT
27	YEL	HUMIDITY SENSOR	OUTPUT
28	PNK	OUTSIDE AIR TEMPERATURE SENSOR	OUTPUT
29	PUR	SUNLIGHT SENSOR	OUTPUT
30	BLU	PASSENGER'S AIR MIX POTENTIAL	OUTPUT
31	WHT	FRONT MODE CONTROL MODE 1	OUTPUT
32	LT GRN	FRONT MODE CONTROL MODE 2	OUTPUT
33	PUR	FRONT MODE CONTROL MODE 3	OUTPUT
34	BLU	FRONT MODE CONTROL MODE 4	OUTPUT
35	WHT	RECIRCULATION CONTROL MODE 1	OUTPUT
36	BLK	RECIRCULATION CONTROL MODE 2	OUTPUT
37	BLK	GROUND (G506)	OUTPUT
38	GRN	RECIRCULATION CONTROL MODE 3	OUTPUT

* : With navigation system

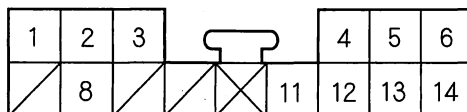
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Climate Control

System Description (cont'd)

Climate Control Unit Inputs and Outputs

CLIMATE CONTROL UNIT CONNECTOR B (14P)



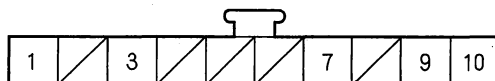
Wire side of female terminals

CONNECTOR B

Cavity	Wire color	Signal	
1	GRN	REAR AIR MIX COOL	OUTPUT
2	PNK	REAR AIR MIX HOT	OUTPUT
3	YEL	REAR MODE HEAT	INPUT
4	BLK	REAR MODE VENT	INPUT
5	PUR	REAR AIR MIX POTENTIAL	OUTPUT
6	LT BLU	REAR EVAPORATOR TEMPERATURE SENSOR	OUTPUT
8	BLU	AUDIO UNIT (HVAC BUS)	INPUT/OUTPUT
11	ORN	REAR CLIMATE CONTROL PANEL (A/C BUS RX)	INPUT/OUTPUT
12	GRN	REAR CLIMATE CONTROL PANEL (A/C BUS TX)	INPUT/OUTPUT
13	RED	REAR BLOWER FEEDBACK	INPUT
14	BLU	REAR POWER TRANSISTOR CONTROL	OUTPUT

Rear Climate Control Unit Inputs and Outputs

REAR CLIMATE CONTROL PANEL 10P CONNECTOR



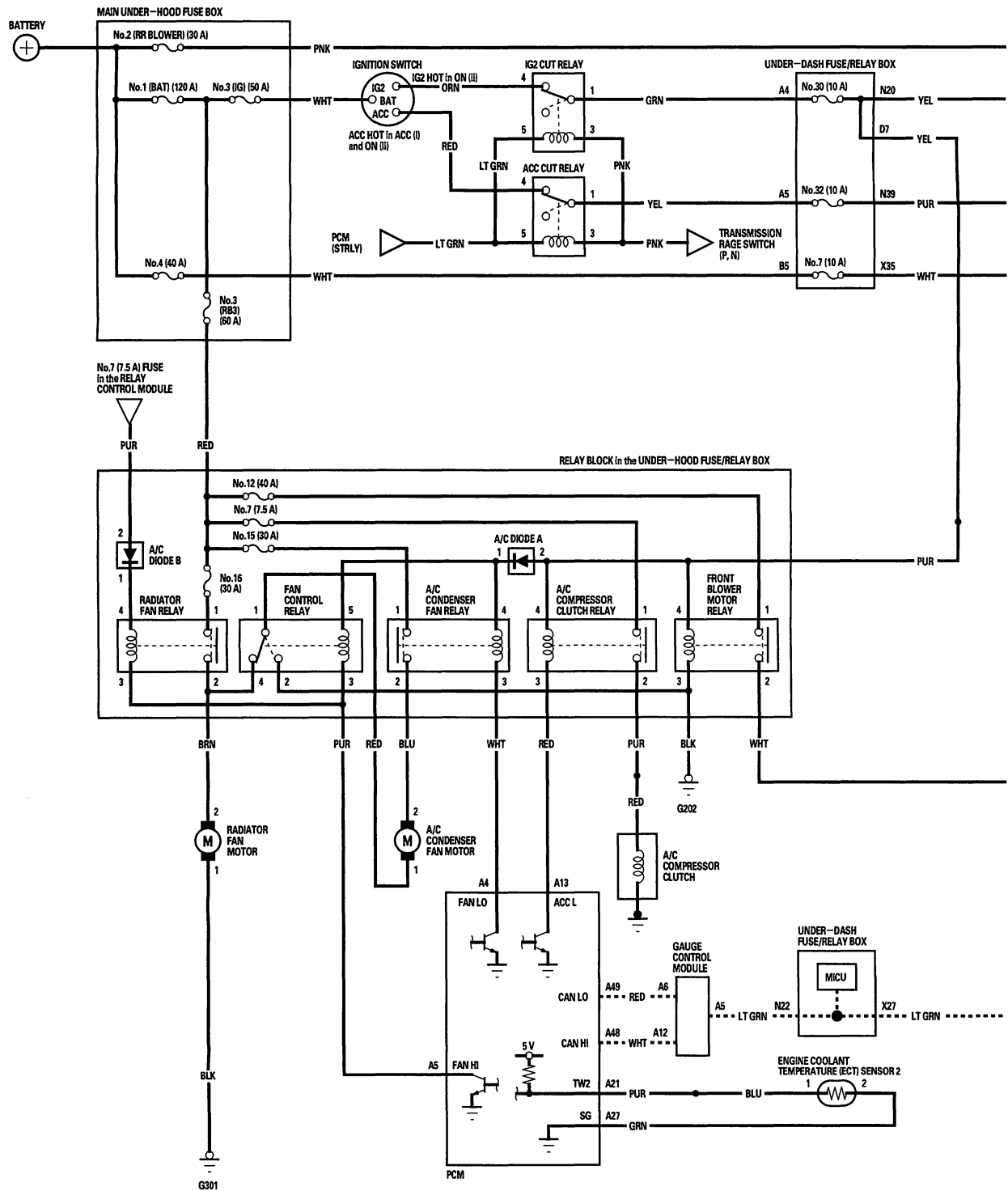
Wire side of female terminals

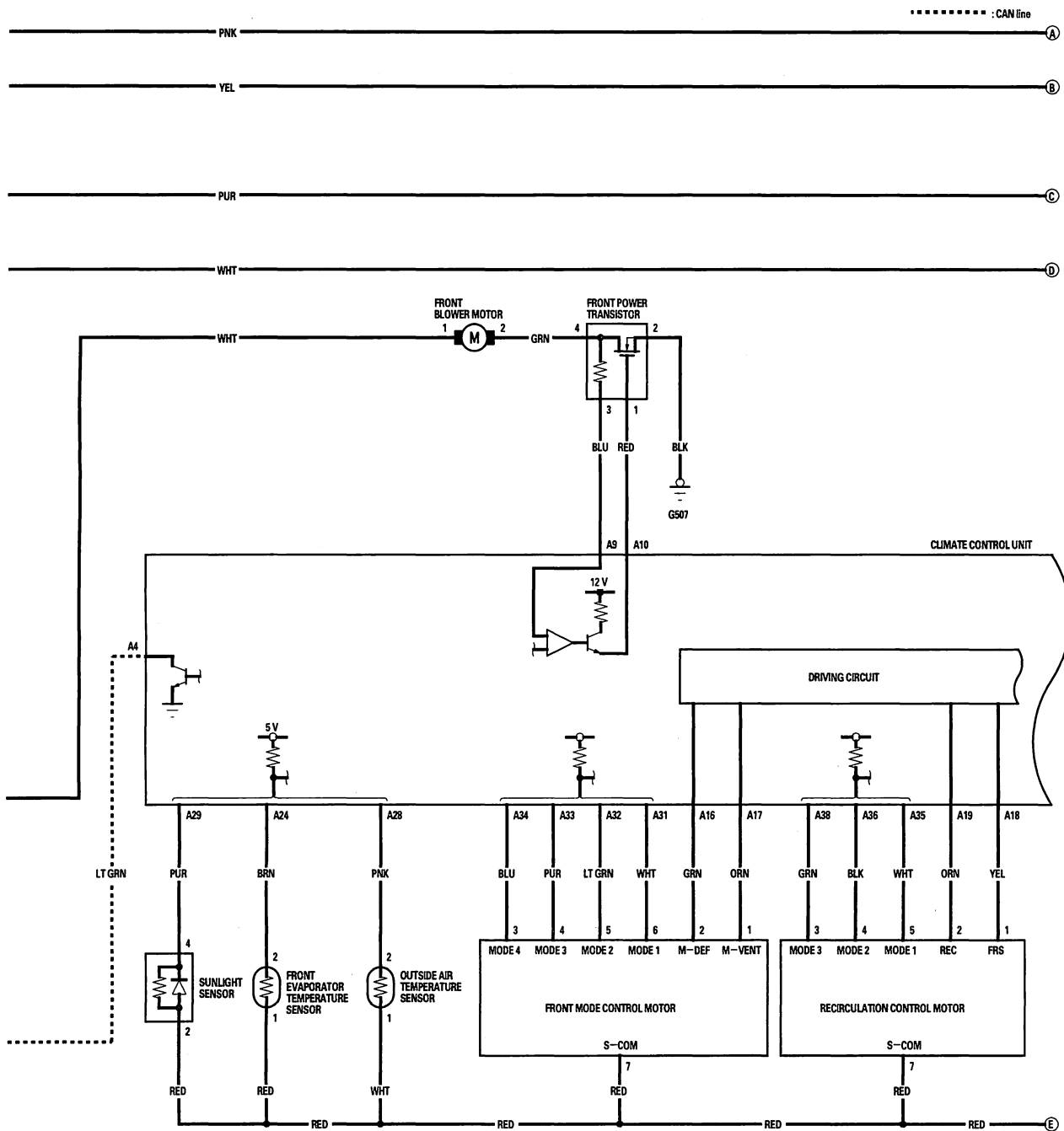
Cavity	Wire color	Signal	
1	YEL	IG2 (Power)	INPUT
3	BLK	GROUND (G506)	OUTPUT
7	LT BLU	ILLUMI (+)	INPUT
9	GRN	CLIMATE CONTROL UNIT (A/C BUS TX)	INPUT/OUTPUT
10	ORN	CLIMATE CONTROL UNIT (A/C BUS RX)	INPUT/OUTPUT



Climate Control

Circuit Diagram

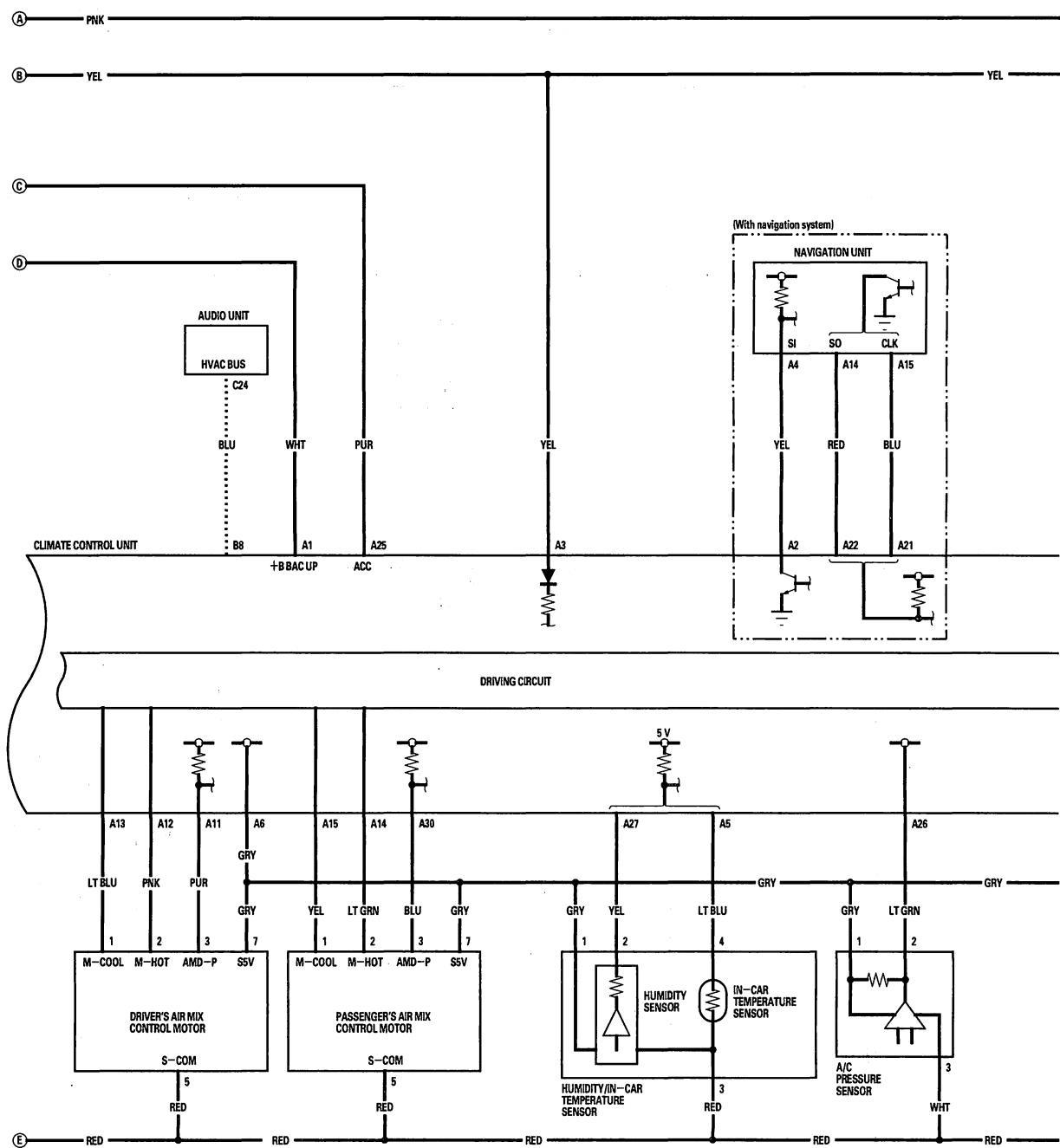


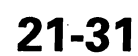


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Climate Control

Circuit Diagram (cont'd)





Climate Control

DTC Troubleshooting

DTC B1202: Climate Control Unit Internal Error

NOTE: Check the battery condition (see page 22-76) and the charging system (see page 4-28).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF and then ON (II).
3. Wait for 6 seconds or more.
4. Do the self-diagnostic with the HDS (see page 21-9).
5. Check for DTCs.

Is DTC B1202 indicated?

YES—The climate control unit is faulty, replace the climate control unit. ■

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

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

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

DTC B1207: 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 diagnosis test mode A (see page 22-112).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF and then ON (II).
3. Wait for 6 seconds or more.
4. Do the self-diagnostic with the HDS (see page 21-9) or climate control unit (see page 21-10).
5. Check the DTCs.

Is DTC B1205, and/or B1206 or AUTO, and/or B1207 indicated?

YES—Go to step 6.

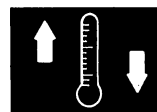
NO—Intermittent failure, check for loose wires or poor connections on the climate control unit connector A (40P). ■

6. Check for DTCs using the HDS.

Are any of the following DTCs indicated; B1011, B1060, B2160, B1357, B1805, B1408, or B2157?

YES—Do the gauge control module input test (see page 22-334). ■

NO—Do the climate control unit troubleshooting (see page 21-93). ■



DTC B1213 or DTC indicator N: An Open in the Rear 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1213 or N indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Remove the rear evaporator temperature sensor (see page 21-141), and test it (see page 21-141).

Is the rear evaporator temperature sensor OK?

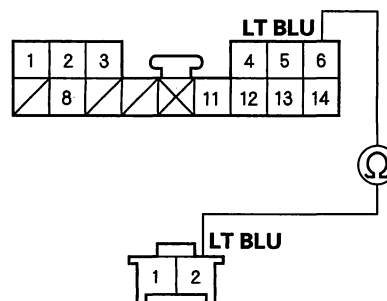
YES—Go to step 7.

NO—Replace the rear evaporator temperature sensor. ■

7. Disconnect climate control unit connector B (14P).

8. Check for continuity between climate control unit connector B (14P) terminal No. 6 and the rear evaporator temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR B (14P)
Wire side of female terminals



REAR 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 rear evaporator temperature sensor. ■

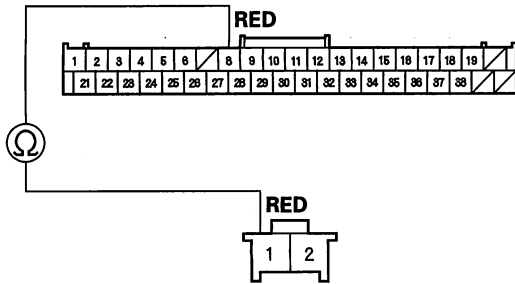
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

9. Check for continuity between climate control unit connector A (40P) terminal No. 8 and the rear evaporator temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



REAR EVAPORATOR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector A (40P), B (14P), and at the rear 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 rear evaporator temperature sensor. ■

DTC B1214 or DTC indicator P: A Short in the Rear 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 21-9) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B1214 or P indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.

6. Remove the rear evaporator temperature sensor (see page 21-141), and test it (see page 21-141).

Is the rear evaporator temperature sensor OK?

YES—Go to step 7.

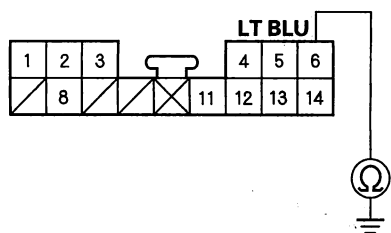
NO—Replace the rear evaporator temperature sensor. ■

7. Disconnect climate control unit connector A (40P) and B (14P).



8. Check for continuity between climate control unit connector B (14P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

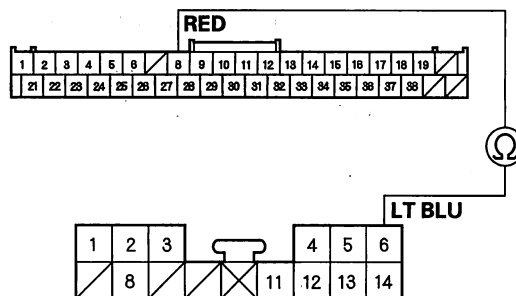
YES—Repair short to body ground in the wire between the climate control unit and the rear evaporator temperature sensor. ■

NO—Go to step 9.

9. Check for continuity between climate control unit connector A (40P) terminal No. 8 and climate control unit connector B (14P) No. 6.

CLIMATE CONTROL UNIT CONNECTOR A (40P)

Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR B (14P)

Wire side of female terminals

Is there continuity?

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

Climate Control

DTC Troubleshooting (cont'd)

DTC B1215 or DTC indicator J: An Open or Short in the Recirculation 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1215 or J indicated?

YES—Go to step 5.

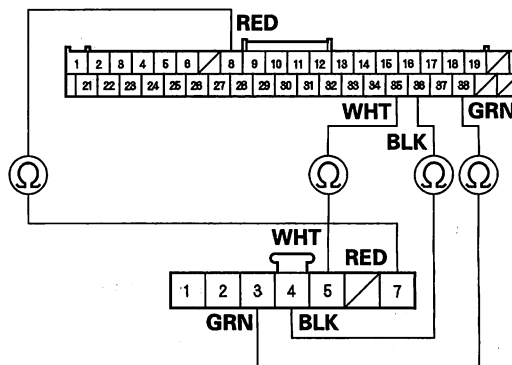
NO—Intermittent failure, check for loose wires or poor connections on the recirculation control motor circuit. ■

5. Turn the ignition switch OFF.
 6. Test the recirculation control motor (see page 21-113).
- Is the recirculation control motor OK?*
- YES**—Go to step 7.
- NO**—Replace the recirculation control motor (see page 21-113). ■
7. Disconnect the recirculation control motor 7P connector.
 8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the recirculation control motor 7P connector.

40P:	7P:
No. 8	No. 7
No. 35	No. 5
No. 36	No. 4
No. 38	No. 3

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals

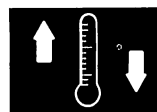


RECIRCULATION CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

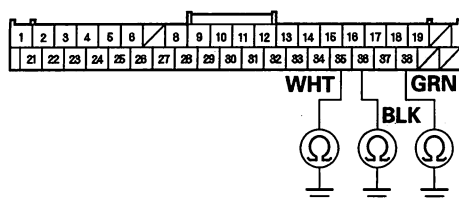
YES—Go to step 10.

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



10. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 35, 36, and 38 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 11.

11. Check for continuity between climate control unit connector A (40P) terminals as follows.

From terminal	To terminals
35	36, 38
36	38

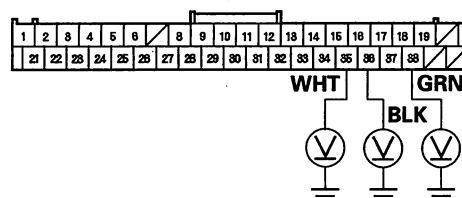
Is there continuity between any of the terminals?

YES—Repair the short in the wires. ■

NO—Go to step 12.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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—Check for loose wires or poor connections at climate control unit connector A (40P) 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. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1223 or DTC indicator M: A Problem in the Rear 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 21-9) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B1223 or M indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Check the No. 2 (RR BLOWER) (30 A) fuse in the under-hood fuse box, and the No. 30 (10 A) fuse in the under-dash fuse/relay box.

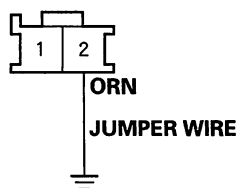
Are the fuses OK?

YES—Go to step 7.

NO—Replace the fuse(s), and recheck. If fuse(s) blow again, check for a short in the No. 2 (RR BLOWER) (30 A) and No. 30 (10 A) fuse(s) circuit. ■

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

REAR BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

8. Turn the ignition switch ON (II).

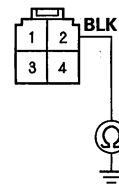
Does the rear blower motor run?

YES—Go to step 9.

NO—Go to step 24.

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

REAR POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 13.

NO—Check for an open in the wire between the rear power transistor and body ground. If the wire is OK, check for poor ground at G503 (see page 22-67). ■

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

REAR POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals



14. Turn the ignition switch ON (II).

Does the rear blower motor run at high speed?

YES—Go to step 15.

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

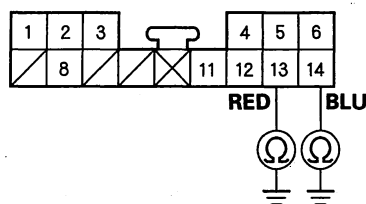
15. Turn the ignition switch OFF.

16. Disconnect the jumper wire.

17. Disconnect climate control unit connector B (14P).

18. Check for continuity between body ground and climate control unit connector B (14P) terminals No. 13 and No. 14 individually.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

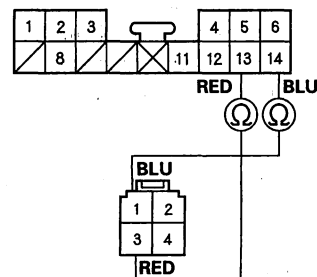
YES—Repair short to body ground in the wire(s) between the climate control unit and the rear power transistor. ■

NO—Go to step 19.

19. Check for continuity between the following terminals of climate control unit connector B (14P) and the rear power transistor 4P connector.

14P: 4P:
No. 13 No. 3
No. 14 No. 1

CLIMATE CONTROL UNIT CONNECTOR B (14P)
Wire side of female terminals



REAR POWER TRANSISTOR 4P CONNECTOR
Wire side of female terminals

Is there continuity?

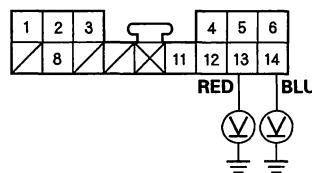
YES—Go to step 20.

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

20. Turn the ignition switch ON (II).

21. Measure the voltage between body ground and climate control unit connector B (14P) terminals No. 13 and No. 14 individually.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there any voltage?

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

NO—Go to step 22.

(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

22. Reconnect climate control unit connector B (14P).
23. Test the rear power transistor (see page 21-142).

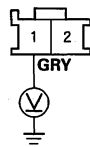
Is the rear power transistor OK?

YES—Check for loose wires or poor connections at climate control unit connector B (14P) and at the rear 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 rear power transistor (see page 21-142). ■

24. Disconnect the jumper wire.
25. Disconnect the rear blower motor 2P connector.
26. Measure the voltage between the rear blower motor 2P connector terminal No. 1 and body ground.

REAR BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Replace the rear blower motor (see page 21-145). ■

NO—Go to step 27.

27. Turn the ignition switch OFF.
28. Remove the rear blower motor relay from the dashboard wire harness, and test it (see page 22-77).

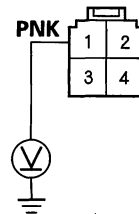
Is the relay OK?

YES—Go to step 29.

NO—Replace the rear blower motor relay. ■

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

REAR BLOWER MOTOR RELAY 4P SOCKET



Wire side of female terminals

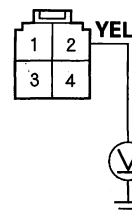
Is there battery voltage?

YES—Go to step 30.

NO—Repair open in the wire between the No. 2 (RR BLOWER) (30 A) in the under-hood fuse box and rear blower motor relay. ■

30. Turn the ignition switch ON (II).
31. Measure the voltage between the rear blower motor relay 4P socket terminal No. 2 and body ground.

REAR BLOWER MOTOR RELAY 4P SOCKET



Wire side of female terminals

Is there battery voltage?

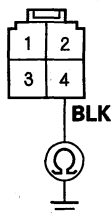
YES—Go to step 32.

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and the rear blower motor relay. ■



32. Turn the ignition switch OFF.
33. Check for continuity between the rear blower motor relay 4P socket terminal No. 4 and body ground.

REAR BLOWER MOTOR RELAY 4P SOCKET



Wire side of female terminals

Is there continuity?

YES—Repair open in the GRY wire between the rear blower motor relay and the blower motor. ■

NO—Check for an open in the wire between the rear blower motor relay and body ground. If the wire is OK, check for poor ground at G503 (see page 22-67). ■

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 21-9) 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 humidity/in-car temperature sensor (see page 21-104), and test it (see page 21-103).

Is the in-car temperature sensor OK?

YES—Go to step 7.

NO—Replace the humidity/in-car temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

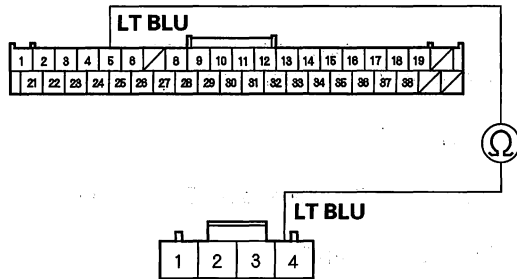
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between climate control unit connector A (40P) terminal No. 5 and the humidity/in-car temperature sensor 4P connector terminal No. 4.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



HUMIDITY/IN-CAR TEMPERATURE SENSOR 4P CONNECTOR
Wire side of female terminals

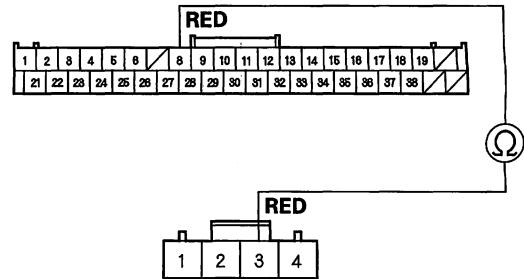
Is there continuity?

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 A (40P) terminal No. 8 and the humidity/in-car temperature sensor 4P connector terminal No. 3.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals

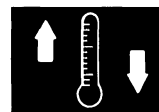


HUMIDITY/IN-CAR TEMPERATURE SENSOR 4P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector A (40P) and at the humidity/in-car temperature sensor 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—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 21-9) 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 humidity/in-car temperature sensor (see page 21-104), and test it (see page 21-103).

Is the in-car temperature sensor OK?

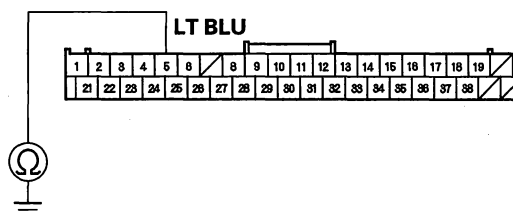
YES—Go to step 7.

NO—Replace the humidity/in-car temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

8. Check for continuity between climate control unit connector A (40P) terminal No. 5 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

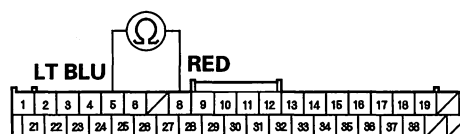
Is there continuity?

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 climate control unit connector A (40P) terminals No. 5 and No. 8.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 21-9) 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 21-105), and test it (see page 21-105).

Is the outside air temperature sensor OK?

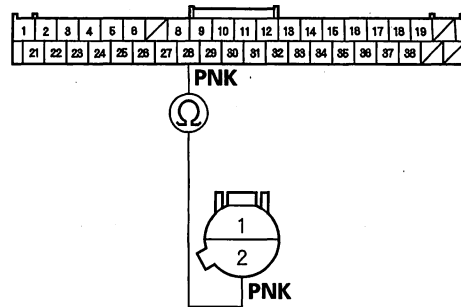
YES—Go to step 7.

NO—Replace the outside air temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

8. Check for continuity between climate control unit connector A (40P) terminal No. 28 and the outside air temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals

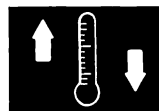


OUTSIDE AIR TEMPERATURE SENSOR 2P CONNECTOR
Wire side of female terminals

Is there continuity?

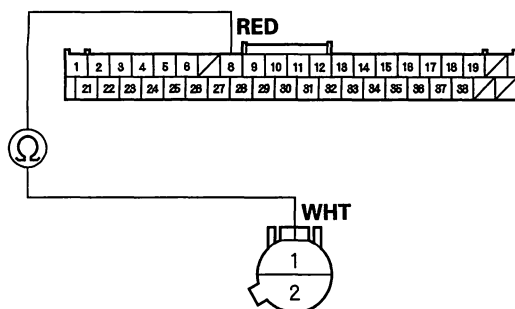
YES—Go to step 9.

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



9. Check for continuity between climate control unit connector A (40P) terminal No. 8 and the outside air temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
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 climate control unit connector A (40P) 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 21-9) 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 21-105), and test it (see page 21-105).

Is the outside air temperature sensor OK?

YES—Go to step 7.

NO—Replace the outside air temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

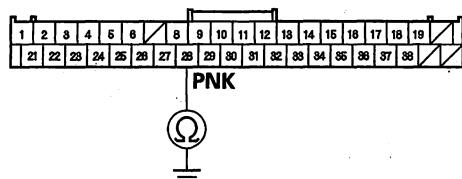
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between climate control unit connector A (40P) terminal No. 28 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

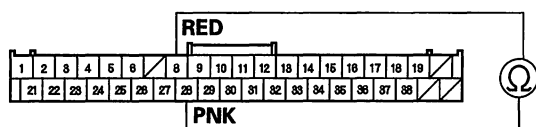
Is there continuity?

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

NO—Go to step 9.

9. Check for continuity between climate control unit connector A (40P) terminals No. 8 and No. 28.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

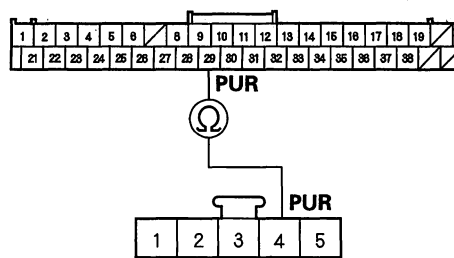
Is DTC B1229 or E and AUTO indicated?

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. Disconnect the sunlight sensor 5P connector.
7. Disconnect climate control unit connector A (40P).
8. Check for continuity between climate control unit connector A (40P) terminal No. 29 and the sunlight sensor 5P connector terminal No. 4.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



SUNLIGHT SENSOR 5P CONNECTOR
Wire side of female terminals

Is there continuity?

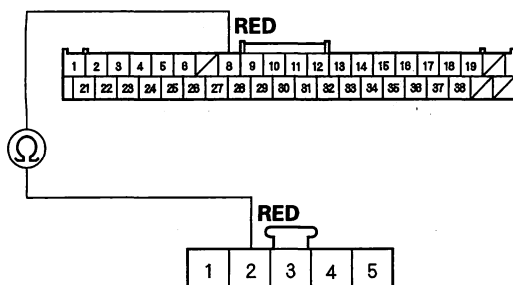
YES—Go to step 9.

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



9. Check for continuity between climate control unit connector A (40P) terminal No. 8 and the sunlight sensor 5P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



SUNLIGHT SENSOR 5P 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. Reconnect the sunlight sensor 5P connector.
11. Reconnect climate control unit connector A (40P).
12. Test the sunlight sensor (see page 21-106).

Is the sunlight sensor OK?

YES—Check for loose wires or poor connections at climate control unit connector A (40P) and at the sunlight sensor 5P 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 sunlight sensor (see page 21-106). ■

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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

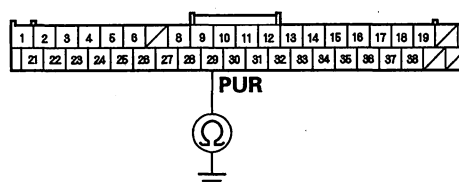
Is DTC B1230 or F and AUTO indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Turn the ignition switch OFF.
6. Disconnect the sunlight sensor 5P connector.
7. Disconnect climate control unit connector A (40P).
8. Check for continuity between climate control unit connector A (40P) terminal No. 29 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 9.

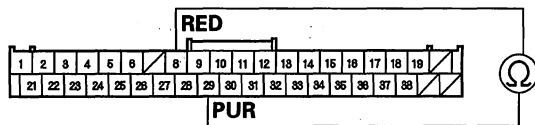
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

9. Check for continuity between climate control unit connector A (40P) terminals No. 8 and No. 29.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there continuity?

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

NO—Go to step 10.

10. Reconnect the sunlight sensor 5P connector.
11. Reconnect climate control unit connector A (40P).
12. Test the sunlight sensor (see page 21-106).

Is the sunlight sensor OK?

YES—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the sunlight sensor (see page 21-106).
■

DTC B1231 or DTC indicator G and AUTO: An Open in the Front 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 21-9) 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 front evaporator temperature sensor circuit. ■

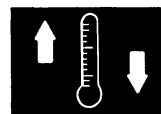
5. Turn the ignition switch OFF.
6. Remove the front evaporator temperature sensor (see page 21-107), and test it (see page 21-107).

Is the front evaporator temperature sensor OK?

YES—Go to step 7.

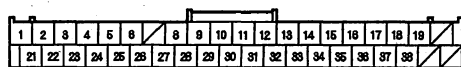
NO—Replace the front evaporator temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

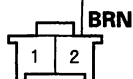


8. Check for continuity between climate control unit connector A (40P) terminal No. 24 and the front evaporator temperature sensor 2P connector terminal No. 2.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



BRN



**FRONT EVAPORATOR TEMPERATURE SENSOR
2P CONNECTOR**

Wire side of female terminals

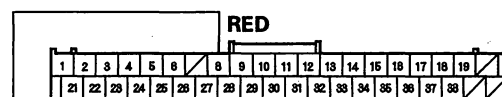
Is there continuity?

YES—Go to step 9.

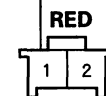
NO—Repair open in the wire between the climate control unit and the front evaporator temperature sensor. ■

9. Check for continuity between climate control unit connector A (40P) terminal No. 8 and the front evaporator temperature sensor 2P connector terminal No. 1.

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



RED



**FRONT EVAPORATOR TEMPERATURE SENSOR
2P CONNECTOR**

Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector A (40P) and at the front 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 front evaporator temperature sensor. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1232 or DTC indicator H and AUTO: A Short in the Front 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 21-9) 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. Remove the front evaporator temperature sensor (see page 21-107), and test it (see page 21-107).

Is the front evaporator temperature sensor OK?

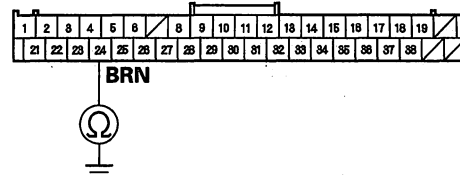
YES—Go to step 7.

NO—Replace the front evaporator temperature sensor. ■

7. Disconnect climate control unit connector A (40P).

8. Check for continuity between climate control unit connector A (40P) terminal No. 24 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

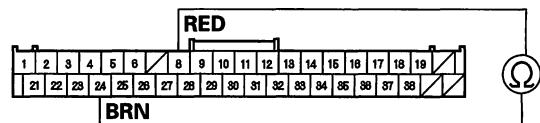
Is there continuity?

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

NO—Go to step 9.

9. Check for continuity between climate control unit connector A (40P) terminals No. 8 and No. 24.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the front 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. 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1233 or J and AUTO indicated?

YES—Go to step 5.

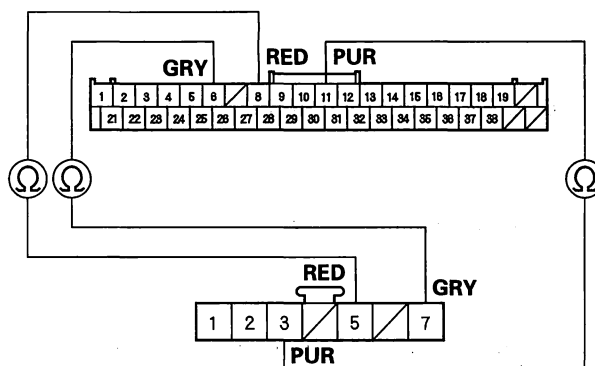
NO—Intermittent failure, check for loose wires or poor connections on the driver's air mix control motor circuit. ■

5. Turn the ignition switch OFF.
 6. Test the driver's air mix control motor (see page 21-109).
- Is the driver's air mix control motor OK?*
- YES**—Go to step 7.
- NO**—Replace the driver's air mix control motor (see page 21-110). ■
7. Disconnect the driver's air mix control motor 7P connector.
 8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the driver's air mix control motor 7P connector.

40P:	7P:
No. 6	No. 7
No. 8	No. 5
No. 11	No. 3

CLIMATE CONTROL UNIT CONNECTOR A (40P)
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 wires or poor connections at climate control unit connector A (40P) 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 21-9) 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. Check for DTCs.

Are these DTCs also present; B1237 or N and AUTO, and/or B1245 or G, and/or B2968 or A and WINDSHIELD DEFROST, and/or B2980 or B and WINDSHIELD DEFROST?

YES—Go to step 13.

NO—Go to step 6.

6. Turn the ignition switch OFF.
7. Test the driver's air mix control motor (see page 21-109).

Is the driver's air mix control motor OK?

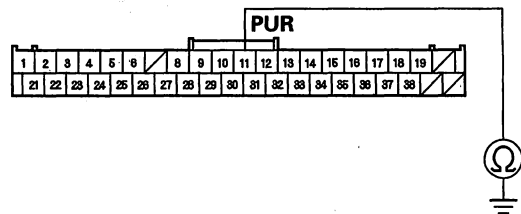
YES—Go to step 8.

NO—Replace the driver's air mix control motor (see page 21-110). ■

8. Disconnect the driver's air mix control motor 7P connector.
9. Disconnect climate control unit connector A (40P).

10. Check for continuity between body ground and climate control unit connector A (40P) terminal No. 11.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

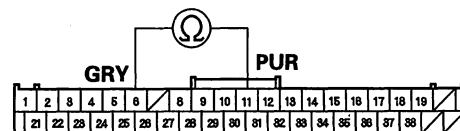
Is there continuity?

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

NO—Go to step 11.

11. Check for continuity between climate control unit connector A (40P) terminals No. 6 and No. 11.

CLIMATE CONTROL UNIT CONNECTOR A (40P)

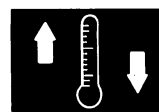


Wire side of female terminals

Is there continuity?

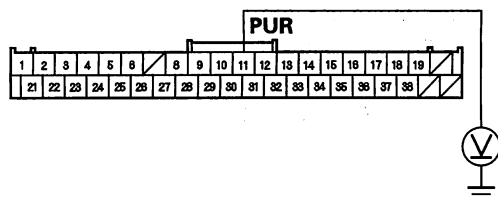
YES—Repair the short in the wires. ■

NO—Go to step 12.



12. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 11 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire between the climate control unit and the driver's air mix control motor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

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

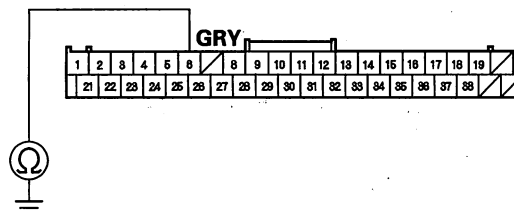
13. Turn the ignition switch OFF, and disconnect the climate control unit.

14. Disconnect these items:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

15. Check for continuity between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

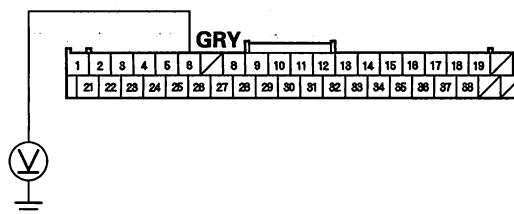
Is there continuity?

YES—Repair short to body ground in the wire. ■

NO—Go to step 16.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire. This short may have also damaged the climate control unit. Repair the short to power before replacing the climate control unit. ■

NO—Go to step 17.

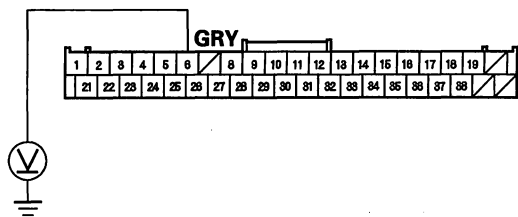
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

- 17. Turn the ignition switch OFF.
- 18. Reconnect climate control unit connector (40P).
- 19. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

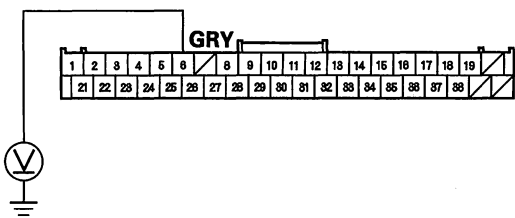
YES—Go to step 20.

NO—Check for a loose wire or poor connection at climate control unit connector A (40P). If the connection is good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

- 20. While checking the same terminal for voltage to ground, reconnect these items individually and note the voltage reading each time:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

CLIMATE CONTROL UNIT CONNECTOR A (40P)

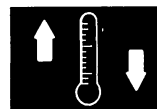


Wire side of female terminals

Does the voltage remain at about 5 volts?

YES—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the component that caused the voltage drop. ■



DTC B1235 or DTC indicator L and AUTO: A Problem in the Driver's Air Mix Control Linkage, Door, or 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 21-9) 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, check for loose wires or poor connections on the driver's air mix control motor circuit. ■

5. Turn the ignition switch OFF.
6. Test the driver's air mix control motor (see page 21-109).

Is the driver's air mix control motor OK?

YES—Go to step 7.

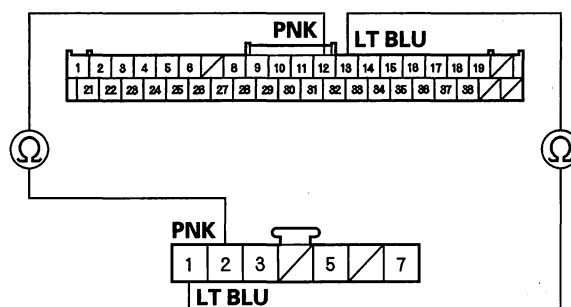
NO—Replace the driver's air mix control motor (see page 21-110), or repair the driver's air mix control linkage or door. ■

7. Disconnect the driver's air mix control motor 7P connector.
8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the driver's air mix control motor 7P connector.

40P: 7P:
No. 12 No. 2
No. 13 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (40P)
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 10.

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

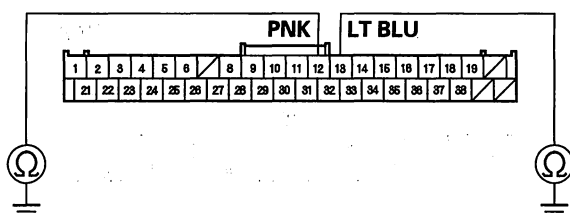
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 12 and No. 13 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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. 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1236 or M and AUTO indicated?

YES—Go to step 5.

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

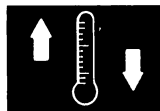
5. Turn the ignition switch OFF.
6. Test the passenger's air mix control motor (see page 21-110).

Is the passenger's air mix control motor OK?

YES—Go to step 7.

NO—Replace the passenger's air mix control motor (see page 21-111). ■

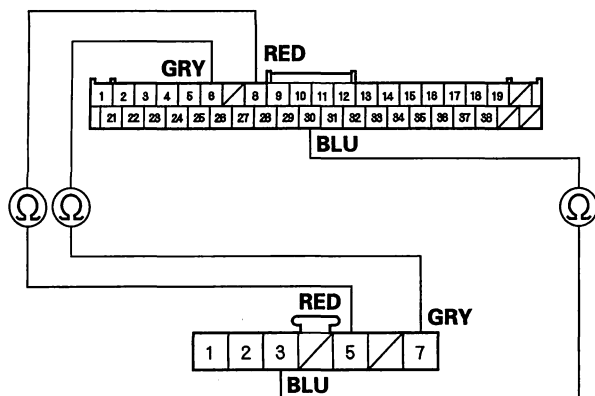
7. Disconnect the passenger's air mix control motor 7P connector.
8. Disconnect climate control unit connector A (40P).



9. Check for continuity between the following terminals of climate control unit connector A (40P) and the passenger's air mix control motor 7P connector.

40P: 7P:
No. 6 No. 7
No. 8 No. 5
No. 30 No. 3

CLIMATE CONTROL UNIT CONNECTOR A (40P)
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 wires or poor connections at climate control unit connector A (40P) 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. ■

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 21-9) 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. Check for DTCs.

Are these DTCs also present; B1234 or K and AUTO, and/or B1245 or G, and/or B2968 or A and WINDSHIELD DEFROST, and/or B2980 or B and WINDSHIELD DEFROST?

YES—Go to step 13.

NO—Go to step 6.

6. Turn the ignition switch OFF.
7. Test the passenger's air mix control motor (see page 21-110).

Is the passenger's air mix control motor OK?

YES—Go to step 8.

NO—Replace the passenger's air mix control motor (see page 21-111). ■

8. Disconnect the passenger's air mix control motor 7P connector.
9. Disconnect climate control unit connector A (40P).

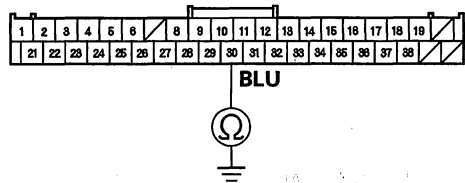
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and climate control unit connector A (40P) terminal No. 30.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

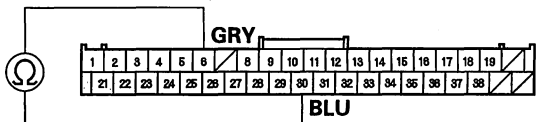
Is there continuity?

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

NO—Go to step 11.

11. Check for continuity between climate control unit connector A (40P) terminals No. 6 and No. 30.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

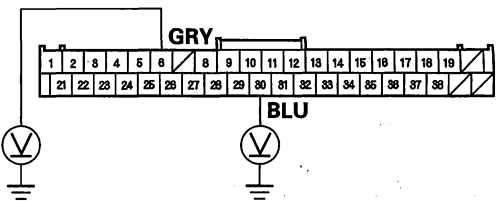
Is there continuity?

YES—Repair the short in the wires. ■

NO—Go to step 12.

12. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 30 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

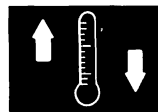
YES—Repair short to power in the wire(s) between the climate control unit and the passenger's air mix control motor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

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

13. Turn the ignition switch OFF, and disconnect the climate control unit.

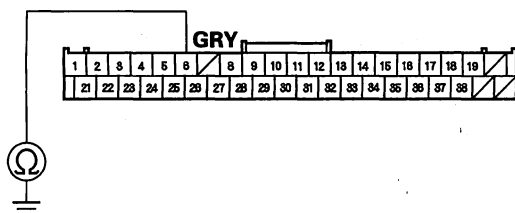
14. Disconnect these items:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor



15. Check for continuity between climate control unit connector A (40P) terminal No. 6 and body ground:

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

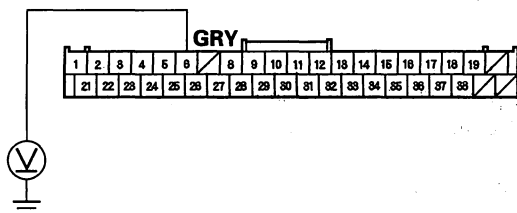
Is there continuity?

YES—Repair short to body ground in the wire. ■

NO—Go to step 16.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire. This short may have also damaged the climate control unit. Repair the short to power before replacing the climate control unit. ■

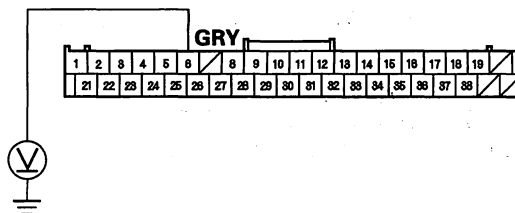
NO—Go to step 17.

17. Turn the ignition switch OFF.

18. Reconnect climate control unit connector (40P).

19. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

YES—Go to step 20.

NO—Check for a loose wire or poor connection at climate control unit connector A (40P). If the connection is good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

(cont'd)

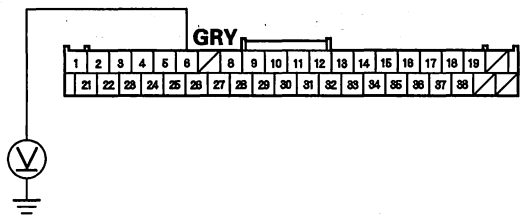
Climate Control

DTC Troubleshooting (cont'd)

20. While checking the same terminal for voltage to ground, reconnect these items individually and note the voltage reading each time:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Does the voltage remain at about 5 volts?

YES—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the component that caused the voltage drop. ■

DTC B1238 or DTC indicator P and AUTO: A Problem in the Passenger's Air Mix Control Linkage, Door, or 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 21-9) 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, check for loose wires or poor connections on the passenger's air mix control motor circuit. ■

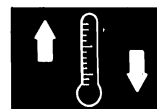
5. Turn the ignition switch OFF.
6. Test the passenger's air mix control motor (see page 21-110).

Is the passenger's air mix control motor OK?

YES—Go to step 7.

NO—Replace the passenger's air mix control motor (see page 21-111), or repair the passenger's air mix control linkage or door. ■

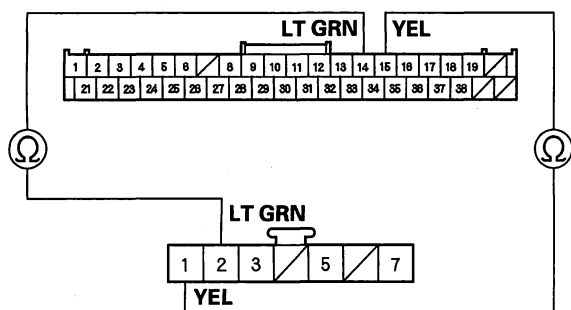
7. Disconnect the passenger's air mix control motor 7P connector.
8. Disconnect climate control unit connector A (40P).



9. Check for continuity between the following terminals of climate control unit connector A (40P) and the passenger's air mix control motor 7P connector.

40P: 7P:
No. 14 No. 2
No. 15 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



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

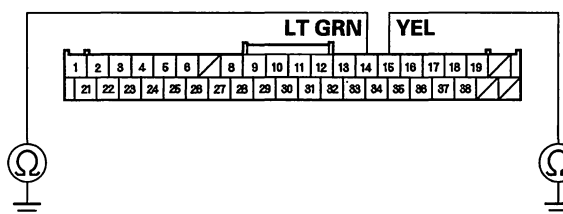
Is there continuity?

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 (40P) terminals No. 14 and No. 15 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1239 or DTC indicator A: An Open or Short in the Front 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 21-9) 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 front mode control motor circuit. ■

5. Turn the ignition switch OFF.
6. Test the front mode control motor (see page 21-112).

Is the front mode control motor OK?

YES—Go to step 7.

NO—Replace the front mode control motor (see page 21-112). ■

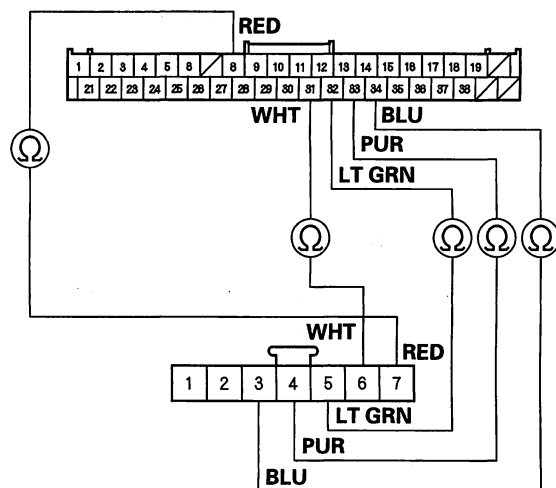
7. Disconnect the front mode control motor 7P connector.
8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the front mode control motor 7P connector.

40P:	7P:
No. 8	No. 7
No. 31	No. 6
No. 32	No. 5
No. 33	No. 4
No. 34	No. 3

CLIMATE CONTROL UNIT CONNECTOR A (40P)

Wire side of female terminals



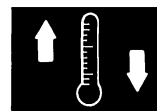
FRONT MODE CONTROL MOTOR 7P CONNECTOR

Wire side of female terminals

Is there continuity?

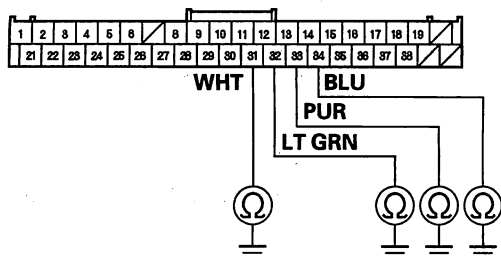
YES—Go to step 10.

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



10. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 31, 32, 33, and 34 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 front mode control motor. ■

NO—Go to step 11.

11. Check for continuity between climate control unit connector A (40P) terminals as follows.

From terminal	To terminals
31	32, 33, 34
32	33, 34
33	34

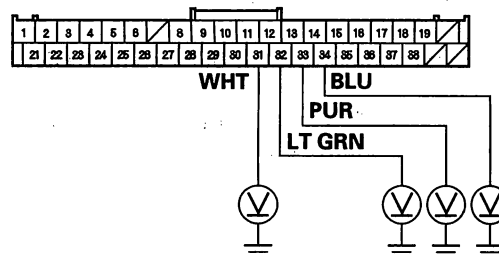
Is there continuity between any of the terminals?

YES—Repair the short in the wires. ■

NO—Go to step 12.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 front mode control motor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

NO—Check for loose wires or poor connections at climate control unit connector A (40P) and at the front 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. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1240 or DTC indicator B: A Problem in the Front Mode Control Linkage, Doors, or 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 21-9) 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, check for loose wires or poor connections on the mode control motor circuit. ■

5. Turn the ignition switch OFF.
6. Test the front mode control motor (see page 21-112).

Is the front mode control motor OK?

YES—Go to step 7.

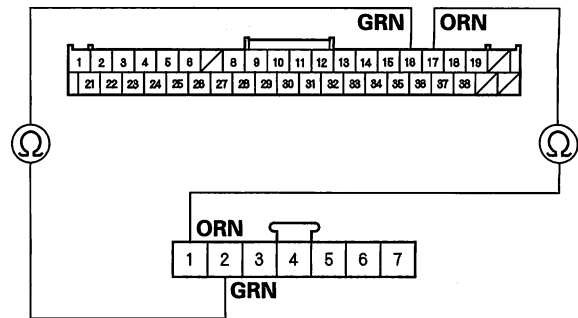
NO—Replace the front mode control motor (see page 21-112), or repair the front mode control linkage or doors. ■

7. Disconnect the front mode control motor 7P connector.
8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the front mode control motor 7P connector.

40P: 7P:
No. 16 No. 2
No. 17 No. 1

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



FRONT MODE CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

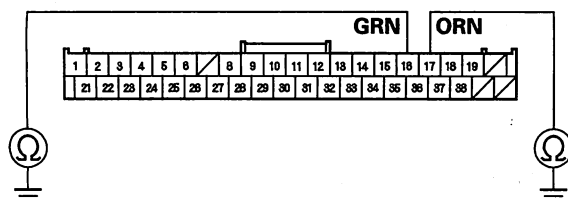
YES—Go to step 10.

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



10. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 16 and No. 17 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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 front 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 C: A Problem in the Front 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1241 or C indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Check the No. 12 (40 A) fuse in the relay block, and the No. 30 (10 A) fuse in the under-dash fuse/relay box.

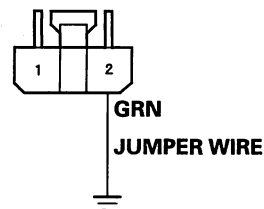
Are the fuses OK?

YES—Go to step 7.

NO—Replace the fuse(s), and recheck. If fuse(s) blow again, check for a short in the No. 12 (40 A) and No. 30 (10 A) fuse(s) circuit. ■

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

FRONT BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Turn the ignition switch ON (II).

Does the front blower motor run?

YES—Go to step 9.

NO—Go to step 24.

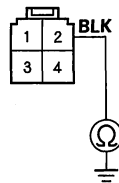
9. Turn the ignition switch OFF.

10. Disconnect the jumper wire.

11. Disconnect the front power transistor 4P connector.

12. Check for continuity between the front power transistor 4P connector terminal No. 2 and body ground.

FRONT POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals

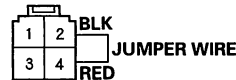
Is there continuity?

YES—Go to step 13.

NO—Check for an open in the wire between the front power transistor and body ground. If the wire is OK, check for poor ground at G507 (see page 22-67). ■

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

FRONT POWER TRANSISTOR 4P CONNECTOR



Wire side of female terminals

14. Turn the ignition switch ON (II).

Does the front blower motor run at high speed?

YES—Go to step 15.

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

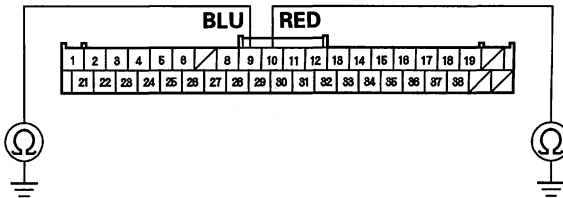
15. Turn the ignition switch OFF.

16. Disconnect the jumper wire.

17. Disconnect climate control unit connector A (40P).

18. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 9 and No. 10 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)

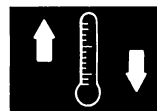


Wire side of female terminals

Is there continuity?

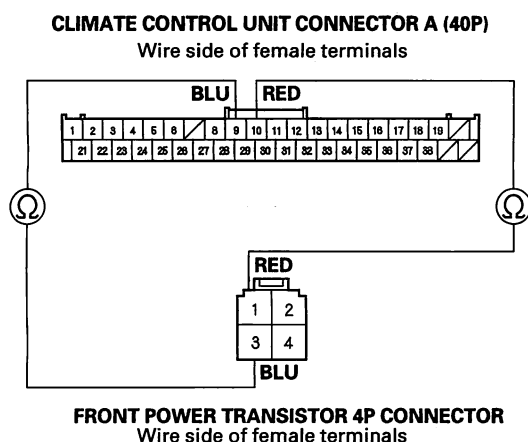
YES—Repair short to body ground in the wire(s) between the climate control unit and the front power transistor. ■

NO—Go to step 19.



19. Check for continuity between the following terminals of climate control unit connector A (40P) and the front power transistor 4P connector.

40P: 4P:
No. 9 No. 3
No. 10 No. 1

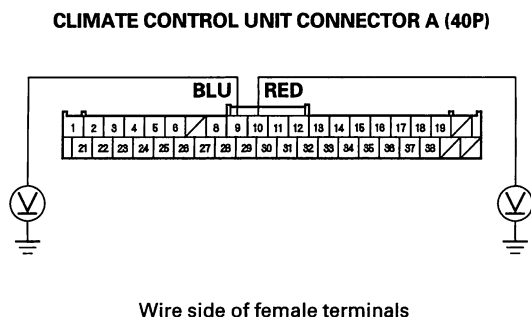


Is there continuity?

YES—Go to step 20.

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

20. Turn the ignition switch ON (II).
21. Measure the voltage between body ground and climate control unit connector A (40P) terminals No. 9 and No. 10 individually.



Is there any voltage?

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

NO—Go to step 22.

22. Reconnect climate control unit connector A (40P).

23. Test the front power transistor (see page 21-108).

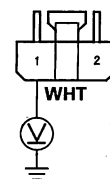
Is the front power transistor OK?

YES—Check for loose wires or poor connections at climate control unit connector A (40P) and at the front 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 front power transistor (see page 21-108). ■

24. Disconnect the jumper wire.
25. Disconnect the front blower motor 2P connector.
26. Measure the voltage between the front blower motor 2P connector terminal No. 1 and body ground.

FRONT BLOWER MOTOR 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Replace the front blower motor (see page 21-116). ■

NO—Go to step 27.

27. Turn the ignition switch OFF.
28. Remove the front blower motor relay from the relay block, and test it (see page 22-77).

Is the relay OK?

YES—Go to step 29.

NO—Replace the front blower motor relay. ■

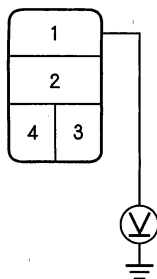
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

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

FRONT BLOWER MOTOR RELAY 4P SOCKET



Is there battery voltage?

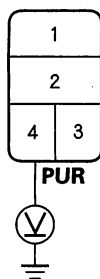
YES—Go to step 30.

NO—Replace the relay block (see page 22-71). ■

30. Turn the ignition switch ON (II).

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

FRONT BLOWER MOTOR RELAY 4P SOCKET



Is there battery voltage?

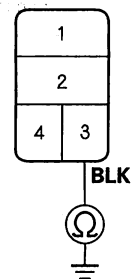
YES—Go to step 32.

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and the front blower motor relay. ■

32. Turn the ignition switch OFF.

33. Check for continuity between the front blower motor relay 4P socket terminal No. 3 and body ground.

FRONT BLOWER MOTOR RELAY 4P SOCKET



Is there continuity?

YES—Repair open in the WHT wire between the front blower motor relay and the blower motor. ■

NO—Check for an open in the wire between the front blower motor relay and body ground. If the wire is OK, check for poor ground at G202 (see page 22-67). ■



DTC B1244 or DTC indicator F: An Open in the Rear 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B1244 or F indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Test the rear air mix control motor (see page 21-143).

Is the rear air mix control motor OK?

YES—Go to step 7.

NO—Replace the rear air mix control motor (see page 21-143). ■

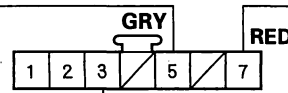
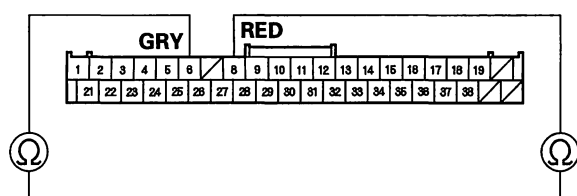
7. Disconnect the rear air mix control motor 7P connector.
8. Disconnect climate control unit connector A (40P) and B (14P).

9. Check for continuity between the following terminals of climate control unit connector A (40P), B (14P), and the rear air mix control motor 7P connector.

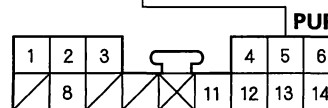
40P:	7P:
No. 6	No. 5
No. 8	No. 7
14P:	7P:
No. 5	No. 3

CLIMATE CONTROL UNIT CONNECTOR A (40P)

Wire side of female terminals



REAR AIR MIX CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR B (14P)

Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector A (40P), B (14P), and at the rear 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 rear air mix control motor. ■

Climate Control

DTC Troubleshooting (cont'd)

DTC B1245 or DTC indicator G: A Short in the Rear 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 21-9) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B1245 or G indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Check for DTCs.

Are these DTCs also present; B1234 or K and AUTO, and/or B1237 or N and AUTO, and/or B2968 or A and WINDSHIELD DEFROST, and/or B2980 or B and WINDSHIELD DEFROST?

YES—Go to step 13.

NO—Go to step 6.

6. Turn the ignition switch OFF.

7. Test the rear air mix control motor (see page 21-143).

Is the rear air mix control motor OK?

YES—Go to step 8.

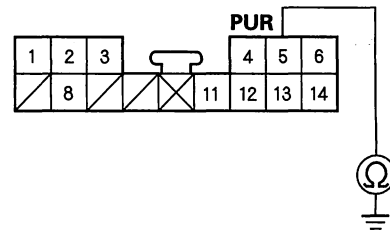
NO—Replace the rear air mix control motor (see page 21-143). ■

8. Disconnect the rear air mix control motor 7P connector.

9. Disconnect climate control unit connector A (40P) and B (14P).

10. Check for continuity between climate control unit connector B (14P) terminal No. 5 and body ground.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

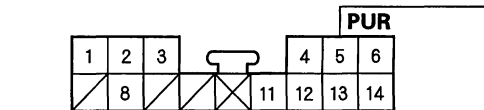
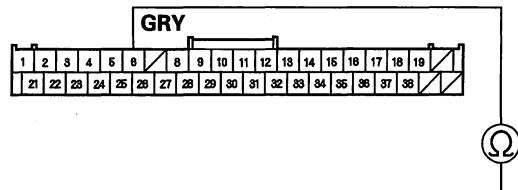
YES—Repair short to body ground in the wire between the climate control unit and the rear air mix control motor. ■

NO—Go to step 11.

11. Check for continuity between climate control unit connector A (40P) terminal No. 6 and climate control unit connector B (14P) terminal No. 5.

CLIMATE CONTROL UNIT CONNECTOR A (40P)

Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR B (14P)

Wire side of female terminals

Is there continuity?

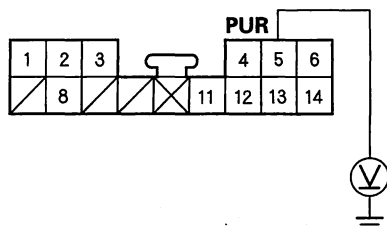
YES—Repair the short in the wires. ■

NO—Go to step 12.



12. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector B (14P) terminal No. 5 and body ground.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire between the climate control unit and the rear air mix control motor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

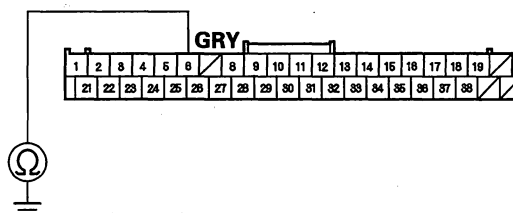
NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

13. Turn the ignition switch OFF, and disconnect the climate control unit.
14. Disconnect these items:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

15. Check for continuity between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

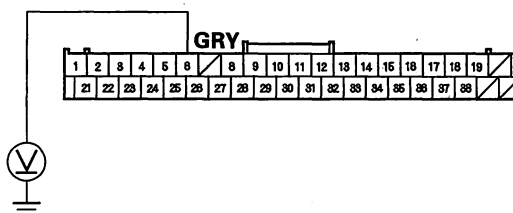
Is there continuity?

YES—Repair short to body ground in the wire. ■

NO—Go to step 16.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire. This short may have also damaged the climate control unit. Repair the short to power before replacing the climate control unit. ■

NO—Go to step 17.

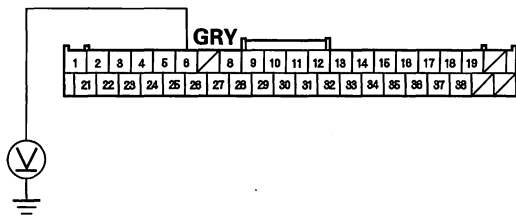
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

- 17. Turn the ignition switch OFF.
- 18. Reconnect climate control unit connector (40P).
- 19. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

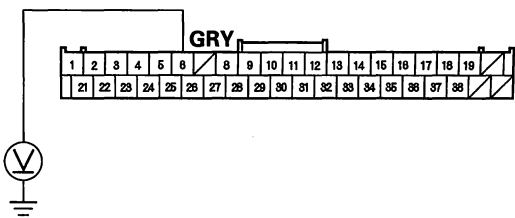
YES—Go to step 20.

NO—Check for a loose wire or poor connection at climate control unit connector A (40P). If the connection is good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

- 20. While checking the same terminal for voltage to ground, reconnect these items individually and note the voltage reading each time:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

CLIMATE CONTROL UNIT CONNECTOR A (40P)

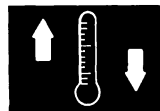


Wire side of female terminals

Does the voltage remain at about 5 volts?

YES—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the component that caused the voltage drop. ■



DTC B1246 or DTC indicator H: A Problem in the Rear Air Mix Control Linkage, Door, or 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 21-9) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B1246 or H indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Test the rear air mix control motor (see page 21-143).

Is the rear air mix control motor OK?

YES—Go to step 7.

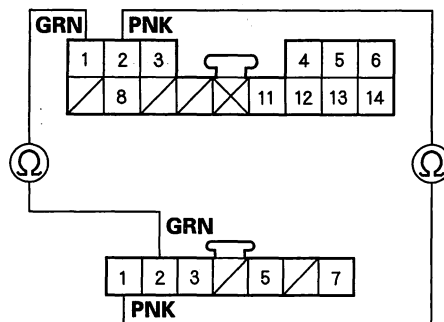
NO—Replace the rear air mix control motor (see page 21-143), or repair the rear air mix control linkage or door. ■

7. Disconnect the rear air mix control motor 7P connector.
8. Disconnect climate control unit connector B (14P).

9. Check for continuity between the following terminals of climate control unit connector B (14P) and the rear air mix control motor 7P connector.

14P: 7P:
No. 1 No. 2
No. 2 No. 1

CLIMATE CONTROL UNIT CONNECTOR B (14P)
Wire side of female terminals



REAR 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 rear air mix control motor. ■

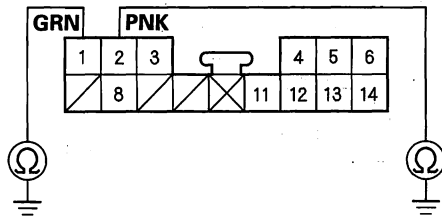
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and climate control unit connector B (14P) terminals No. 1 and No. 2 individually.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



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 rear 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 B2965: Climate Control Unit Lost Communication with Rear Climate Control Panel

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 21-9).
4. Check for DTCs.

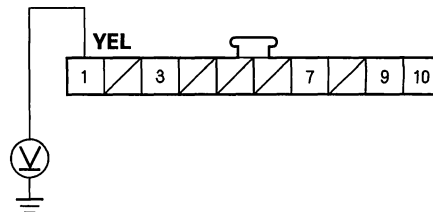
Is DTC B2965 indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the rear climate control panel and climate control unit circuit. ■

5. Turn the ignition switch OFF.
6. Disconnect the rear climate panel 10P connector.
7. Turn the ignition switch ON (II).
8. Measure the voltage between the rear climate control panel 10P connector terminal No. 1 and body ground.

REAR CLIMATE CONTROL PANEL 10P CONNECTOR

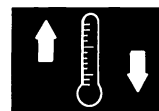


Wire side of female terminals

Is there battery voltage?

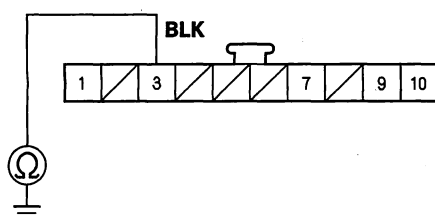
YES—Go to step 9.

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and the rear climate control panel. ■



9. Turn the ignition switch OFF.
10. Check for continuity between the rear climate control panel 10P connector terminal No. 3 and body ground.

REAR CLIMATE CONTROL PANEL 10P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 11.

NO—Check for an open in the wire between the rear climate control panel and body ground. If the wire is OK, check for poor ground at G506 (see page 22-67). ■

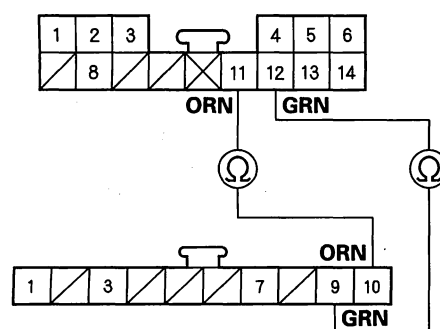
11. Disconnect climate control unit connector B (14P).

12. Check for continuity between the following terminals of climate control unit connector B (14P) and the rear climate control panel 10P connector.

14P: 10P:
No. 11 No. 10
No. 12 No. 9

CLIMATE CONTROL UNIT CONNECTOR B (14P)

Wire side of female terminals



REAR CLIMATE CONTROL PANEL 10P CONNECTOR

Wire side of female terminals

Is there continuity?

YES—Go to step 13.

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

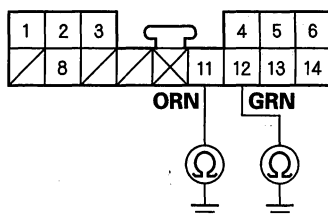
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

13. Check for continuity between body ground and climate control unit connector B (14P) terminals No. 11 and No. 12 individually.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

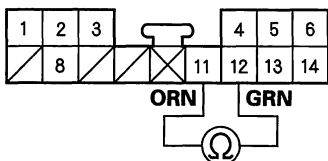
Is there continuity?

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

NO—Go to step 14.

14. Check for continuity between climate control unit connector B (14P) terminals No. 11 and No. 12.

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wires between the climate control unit and the rear climate control panel. ■

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

DTC B2967 or DTC indicator A and WINDSHIELD DEFROST: An Open in the Humidity 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B2967 or A and WINDSHIELD DEFROST indicated?

YES—Go to step 5.

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

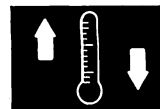
5. Turn the ignition switch OFF.
6. Remove the humidity/in-car temperature sensor (see page 21-104), and test it (see page 21-103).

Is the humidity sensor OK?

YES—Go to step 7.

NO—Replace the humidity/in-car temperature sensor. ■

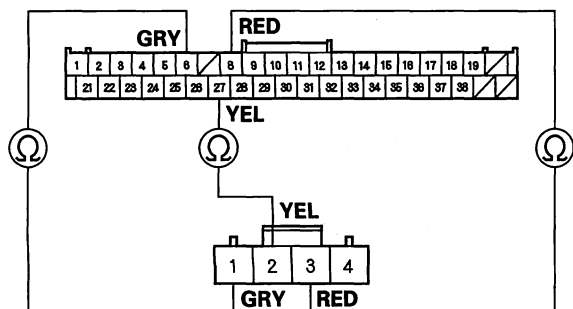
7. Disconnect the humidity/in-car temperature sensor 4P connector.
8. Disconnect climate control unit connector A (40P).



9. Check for continuity between the following terminals of climate control unit connector A (40P) and humidity/in-car temperature sensor 4P connector.

40P: 4P:
No. 6 No. 1
No. 8 No. 3
No. 27 No. 2

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



HUMIDITY/IN-CAR TEMPERATURE SENSOR 4P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector A (40P) and at the humidity/in-car temperature sensor 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—Repair open in the wire(s) between the climate control unit and the humidity sensor. ■

DTC B2968 or DTC indicator A and WINDSHIELD DEFROST: A Short in the Humidity 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 21-9) or climate control unit (see page 21-10).

4. Check for DTCs.

Is DTC B2968 or A and WINDSHIELD DEFROST indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Check for DTCs.

Are these DTCs also present; B1234 or K and AUTO, and/or B1237 or N and AUTO, and/or B1245 or G, and/or B2980 or B and WINDSHIELD DEFROST?

YES—Go to step 13.

NO—Go to step 6.

6. Turn the ignition switch OFF.
7. Remove the humidity/in-car temperature sensor (see page 21-104), and test it (see page 21-103).

Is the humidity sensor OK?

YES—Go to step 8.

NO—Replace the humidity/in-car temperature sensor. ■

8. Disconnect the humidity/in-car temperature sensor 4P connector.
9. Disconnect climate control unit connector A (40P).

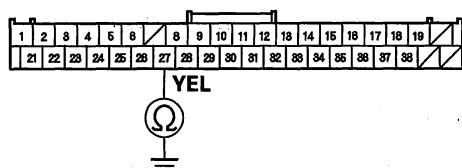
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and climate control unit connector A (40P) terminal No. 27.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

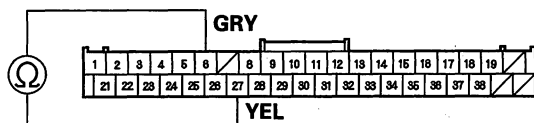
Is there continuity?

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

NO—Go to step 11.

11. Check for continuity between climate control unit connector A (40P) terminals No. 6 and No. 27.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

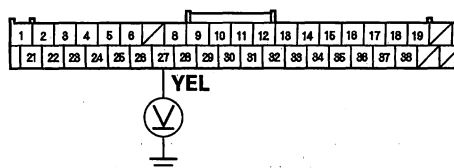
Is there continuity?

YES—Repair the short in the wires. ■

NO—Go to step 12.

12. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 27 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

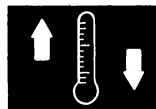
YES—Repair short to power in the wire between the climate control unit and the humidity sensor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

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

13. Turn the ignition switch OFF, and disconnect the climate control unit.

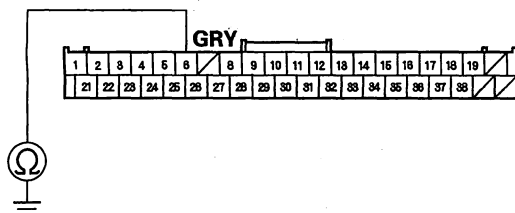
14. Disconnect these items:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor



15. Check for continuity between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

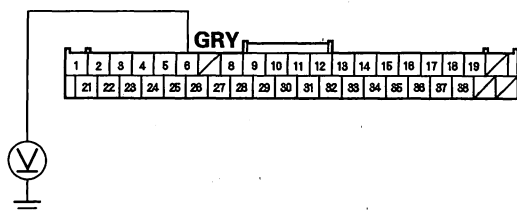
Is there continuity?

YES—Repair short to body ground in the wire. ■

NO—Go to step 16.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire. This short may have also damaged the climate control unit. Repair the short to power before replacing the climate control unit. ■

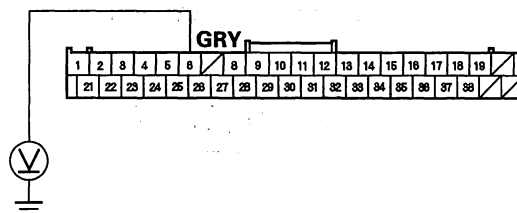
NO—Go to step 17.

17. Turn the ignition switch OFF.

18. Reconnect climate control unit connector (40P).

19. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

YES—Go to step 20.

NO—Check for a loose wire or poor connection at climate control unit connector A (40P). If the connection is good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

(cont'd)

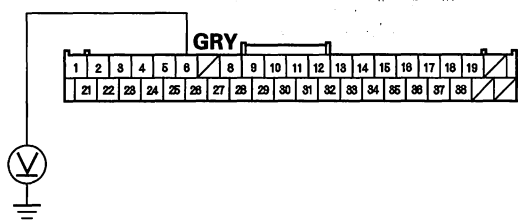
Climate Control

DTC Troubleshooting (cont'd)

20. While checking the same terminal for voltage to ground, reconnect these items individually and note the voltage reading each time:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Does the voltage remain at about 5 volts?

YES—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the component that caused the voltage drop. ■

DTC B2969: Climate Control Unit Lost Communication with Combination Switch Control Unit (WIPSW message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in the B-can system diagnosis test mode A (see page 22-112).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF and then ON (II).
3. Wait for 6 seconds or more.
4. Do the self-diagnostic with the HDS (see page 21-9).
5. Check the DTCs.

Is DTC B2969 indicated?

YES—Go to step 6.

NO—Intermittent failure, check for loose wire or poor connection on the climate control unit connector A (40P). ■

6. Check for DTCs with the HDS.

Are any of the following DTCs indicated; B1958, B1063, or B1156 indicated?

YES—Do the wiper/washer switch (combination switch control unit) input test (see page 22-300). ■

NO—Do the climate control unit troubleshooting (see page 21-93). ■



DTC B2970: Climate Control Unit Lost Communication with Relay Control Module (RM message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in the B-can system diagnosis test mode A (see page 22-112).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF and then ON (II).
3. Wait for 6 seconds or more.
4. Do the self-diagnostic with the HDS (see page 21-9).
5. Check the DTCs.

Is DTC B2970 indicated?

YES—Go to step 6.

NO—Intermittent failure, check for loose wire or poor connection on the climate control unit connector A (40P). ■

6. Check for DTCs with the HDS.

Are any of the following DTCs indicated; B1005, B1959, B2162 or B1158 indicated?

YES—Do the relay control module input test (see page 22-334). ■

NO—Do the climate control unit troubleshooting (see page 21-93). ■

DTC B2979 or DTC indicator B and WINDSHIELD DEFROST: An Open in the A/C Pressure 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B2979 or B and WINDSHIELD DEFROST indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the A/C pressure sensor circuit. ■

5. Turn the ignition switch OFF.
6. Disconnect the A/C pressure sensor 3P connector.
7. Disconnect climate control unit connector A (40P).

(cont'd)

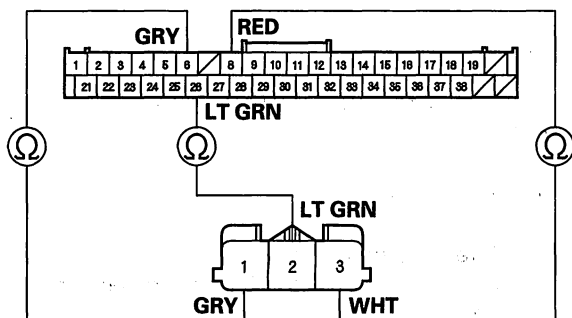
Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between the following terminals of climate control unit connector A (40P) and the A/C pressure sensor 3P connector.

40P: 3P:
No. 6 No. 1
No. 8 No. 3
No. 26 No. 2

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



A/C PRESSURE SENSOR 3P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 9.

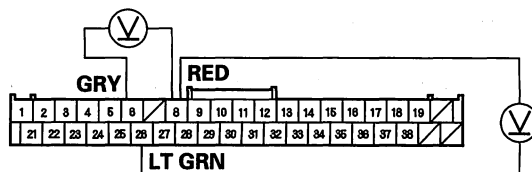
NO—Repair open in the wire(s) between the climate control unit and the A/C pressure sensor. ■

9. Reconnect climate control unit connector A (40P).

10. Turn the ignition switch ON (II).

11. Measure the voltage between climate control unit connector A (40P) terminals No. 6 and No. 8, and between climate control unit connector A (40P) terminals No. 8 and No. 26.

CLIMATE CONTROL UNIT CONNECTOR A (40P)

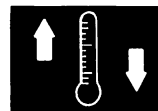


Wire side of female terminals

Is there about 5 volts?

YES—Replace the A/C pressure sensor. ■

NO—Check for loose wires or poor connections at climate control unit connector A (40P) and at the A/C pressure sensor 3P 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 B2980 or DTC indicator B and WINDSHIELD DEFROST: A short in the A/C Pressure 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 21-9) or climate control unit (see page 21-10).
4. Check for DTCs.

Is DTC B2980 or B and WINDSHIELD DEFROST indicated?

YES—Go to step 5.

NO—Intermittent failure. ■

5. Check for DTCs.

Are these DTCs also present; B1234 or K and AUTO, and/or B1237 or N and AUTO, and/or B1245 or G, and/or B2968 or A and WINDSHIELD DEFROST?

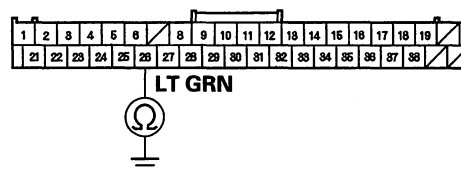
YES—Go to step 16.

NO—Go to step 6.

6. Turn the ignition switch OFF.
7. Disconnect the A/C pressure sensor 3P connector.
8. Disconnect climate control unit connector A (40P).

9. Check for continuity between body ground and climate control unit connector A (40P) terminal No. 26.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between the climate control unit and the A/C pressure sensor. ■

NO—Go to step 10.

10. Check for continuity between climate control unit connector A (40P) terminals No. 6 and No. 26.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there continuity?

YES—Repair the short in the wires. ■

NO—Go to step 11.

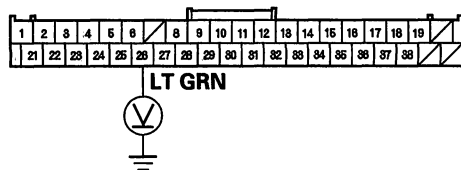
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

11. Turn the ignition switch ON (II), and measure the voltage between body ground and climate control unit connector A (40P) terminal No. 26.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

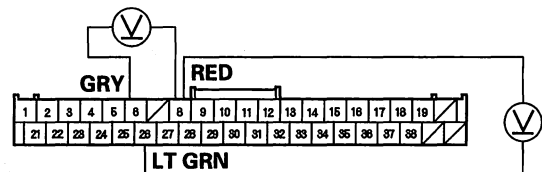
YES—Repair short to power in the wire between the climate control unit and A/C pressure sensor. This short may also damage the climate control unit. Repair the short to power before replacing the climate control unit. ■

NO—Go to step 12.

12. Turn the ignition switch OFF.
13. Reconnect climate control unit connector A (40P).
14. Turn the ignition switch ON (II).

15. Measure the voltage between climate control unit connector A (40P) terminals No. 6 and No. 8, and between climate control unit connector A (40P) terminals No. 8 and No. 26.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

YES—Replace the A/C pressure sensor. ■

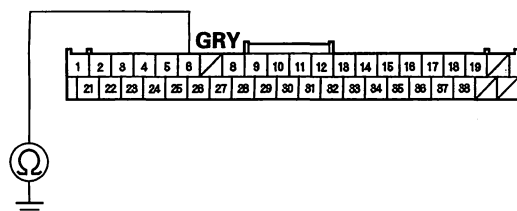
NO—Check for loose wires or poor connections at climate control unit connector A (40P) and at the A/C pressure sensor 3P connector. If the connections are good, substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

16. Turn the ignition switch OFF, and disconnect the climate control unit.
17. Disconnect these items:
- Driver's air mix control motor
 - Passenger's air mix control motor
 - Rear air mix control motor
 - Humidity/in-car temperature sensor
 - A/C pressure sensor



18. Check for continuity between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

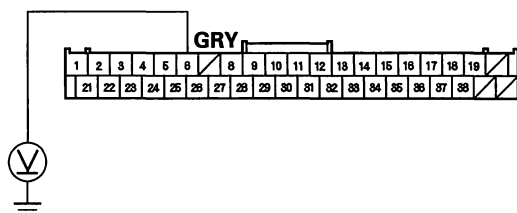
Is there continuity?

YES—Repair short to body ground in the wire. ■

NO—Go to step 19.

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

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire. This short may have also damaged the climate control unit. Repair the short to power before replacing the climate control unit. ■

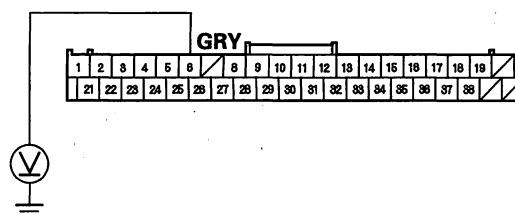
NO—Go to step 20.

20. Turn the ignition switch OFF.

21. Reconnect climate control unit connector (40P).

22. Turn the ignition switch ON (II), and measure the voltage between climate control unit connector A (40P) terminal No. 6 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there about 5 volts?

YES—Go to step 23.

NO—Check for a loose wire or poor connection at climate control unit connector A (40P). If the connection is good, substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

(cont'd)

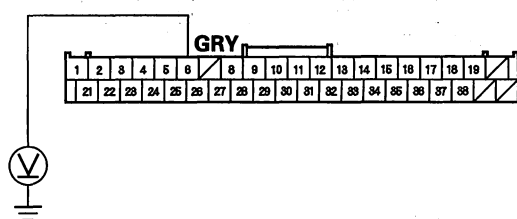
Climate Control

DTC Troubleshooting (cont'd)

23. While checking the same terminal for voltage to ground, reconnect these items individually and note the voltage reading each time:

- Driver's air mix control motor
- Passenger's air mix control motor
- Rear air mix control motor
- Humidity/in-car temperature sensor
- A/C pressure sensor

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Does the voltage remain at about 5 volts?

YES—Substitute a known-good climate control unit and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

NO—Replace the component that caused the voltage drop. ■

DTC B2981: Climate Control Unit Lost Communication with Navigation Unit

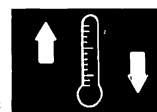
1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF and then ON (II).
3. Do the self-diagnostic with the HDS (see page 21-9).
4. Check the DTCs.

Is DTC B2981 indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the navigation unit and climate control unit circuit. ■

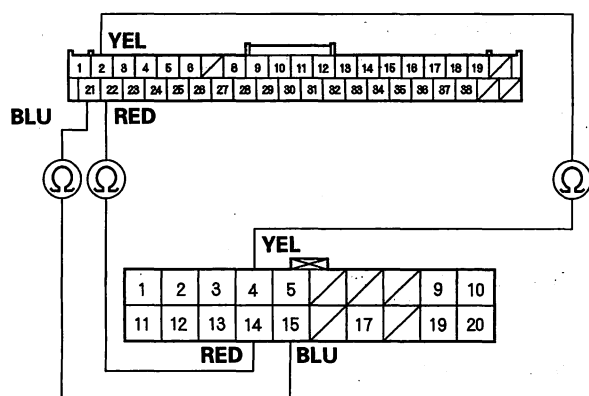
5. Turn the ignition switch OFF.
6. Disconnect navigation unit connector A (20P).
7. Disconnect climate control unit connector A (40P).



8. Check for continuity between the following terminals of climate control unit connector A (40P) and navigation unit connector A (20P).

40P: 20P:
No. 2 No. 4
No. 21 No. 15
No. 22 No. 14

CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



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

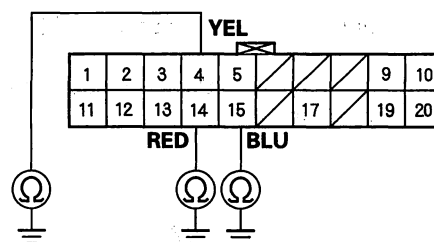
Is there continuity?

YES—Go to step 9.

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

9. Check for continuity between body ground and navigation unit connector A (20P) terminals No. 4, 14, and 15 individually.

NAVIGATION UNIT CONNECTOR A (20P)



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 10.

10. Check for continuity between navigation unit connector A (20P) terminals as follows.

From terminal	To terminals
4	14, 15
14	15

Is there continuity between any of the terminals?

YES—Repair the short in the wires. ■

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

Climate Control

DTC Troubleshooting (cont'd)

DTC B2983 or DTC indicator K: A problem in the Recirculation Control Linkage, Door, or 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 21-9) or climate control unit (see page 21-10).
4. Check the DTCs.

Is DTC B2983 or K indicated?

YES—Go to step 5.

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

5. Turn the ignition switch OFF.
6. Test the recirculation control motor (see page 21-113).

Is the recirculation control motor OK?

YES—Go to step 7.

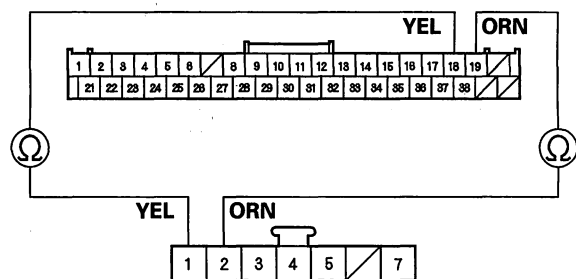
NO—Replace the recirculation control motor (see page 21-113), or repair the recirculation control linkage or door. ■

7. Disconnect the recirculation control motor 7P connector.
8. Disconnect climate control unit connector A (40P).

9. Check for continuity between the following terminals of climate control unit connector A (40P) and the recirculation control motor 7P connector.

40P: 7P:
No. 18 No. 1
No. 19 No. 2

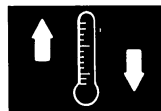
CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals



Is there continuity?

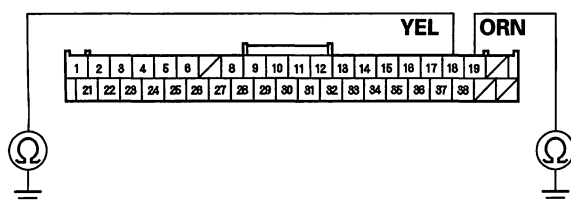
YES—Go to step 10.

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



10. Check for continuity between body ground and climate control unit connector A (40P) terminals No. 18 and 19 individually.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



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—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. ■

DTC B2991: Climate Control Unit Lost Communication with Audio Unit

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 21-9).
4. Check for DTCs.

Is DTC B2991 indicated?

YES—Go to step 5.

NO—Intermittent failure, check for loose wires or poor connections on the rear climate control panel and climate control unit circuit. ■

5. Turn the ignition switch OFF.
6. Disconnect climate control unit connector B (14P).
7. Disconnect audio unit connector C (24P).

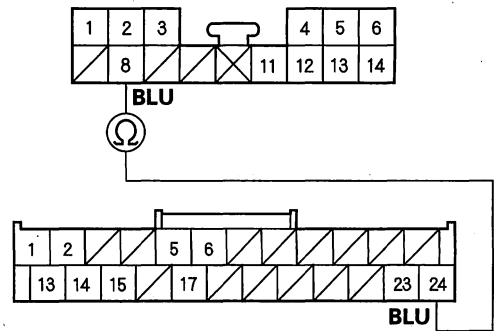
(cont'd)

Climate Control

DTC Troubleshooting (cont'd)

8. Check for continuity between climate control unit connector B (14P) terminal No. 8 and audio unit connector C (24P) terminal No. 24.

CLIMATE CONTROL UNIT CONNECTOR B (14P)
Wire side of female terminals



AUDIO UNIT CONNECTOR C (24P)
Wire side of female terminals

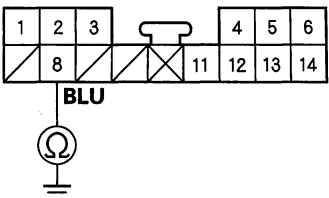
Is there continuity?

YES—Go to step 9.

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

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

CLIMATE CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

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

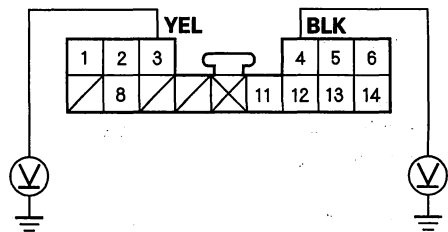
NO—Substitute a known-good climate control unit, and recheck. If the symptom/indication goes away, replace the original climate control unit. If the symptom/indication remains, substitute a known-good audio unit. If the symptom/indication goes away, replace the original audio unit. ■

Climate Control

Rear Mode Control Motor Circuit Troubleshooting (cont'd)

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

CLIMATE CONTROL UNIT CONNECTOR B (14P)



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 rear mode 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.

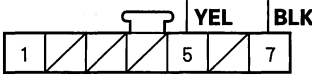
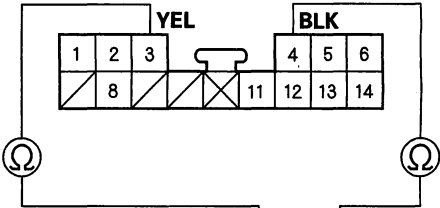
10. Turn the ignition switch OFF.

11. Check for continuity between the following terminals of climate control unit connector B (14P) and the rear mode control motor 7P connector.

14P: 7P:
No. 3 No. 5
No. 4 No. 7

CLIMATE CONTROL UNIT CONNECTOR B (14P)

Wire side of female terminals



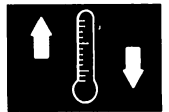
REAR MODE CONTROL MOTOR 7P CONNECTOR

Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at climate control unit connector B (14P) and at the rear 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. ■

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



Climate Control Unit Troubleshooting

1. Check the No. 30 (10 A) fuse in the under-dash fuse/relay box.

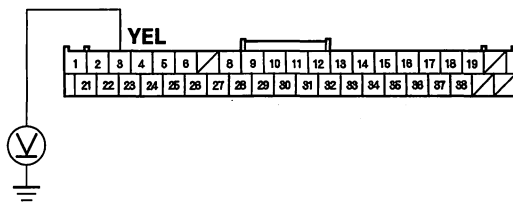
Is the fuse OK?

YES—Go to step 2.

NO—Replace the fuse, and recheck. If the fuse blows again, check for a short in the No. 30 (10 A) fuse circuit. ■

2. Turn the ignition switch ON (II).
3. Measure the voltage between climate control unit connector A (40P) terminal No. 3 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

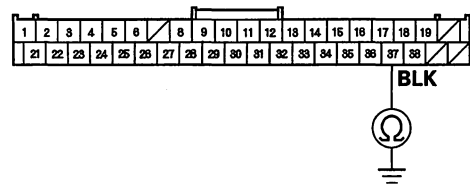
Is there battery voltage?

YES—Go to step 4.

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and the climate control unit. ■

4. Turn the ignition switch OFF.
5. Check for continuity between climate control unit connector A (40P) terminal No. 37 and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (40P)



Wire side of female terminals

Is there continuity?

YES—Go to step 6.

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 G506 (see page 22-67). ■

6. Disconnect climate control unit connector A (40P).
7. Disconnect the under-dash fuse/relay box connector X (39P).

(cont'd)

BACK

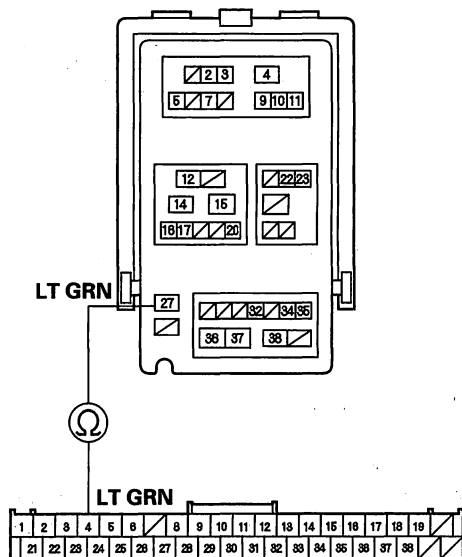
21-93

Climate Control

Climate Control Unit Troubleshooting (cont'd)

8. Check for continuity between under-dash fuse/relay box connector X (39P) terminal No. 27 and climate control unit connector A (40P) terminal No. 4.

UNDER-DASH FUSE/RELAY BOX CONNECTOR X (39P)
Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR A (40P)
Wire side of female terminals

Is there continuity?

YES—Check for loose wires and poor connections at climate control unit connector A (40P). 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—Repair open in the wire between the MICU and 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. 15 (30 A) fuse in the relay block, and the No. 30 (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. If the fuse(s) blow again, check for a short in the No. 15 (30 A) and No. 30 (10 A) fuse(s) circuit. ■

2. Remove the A/C condenser fan relay from the relay block, and test it (see page 22-77).

Is the relay OK?

YES—Go to step 3.

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

3. Connect the HDS to the DLC.

4. Turn the ignition switch ON (II).

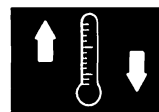
5. Turn on the A/C.

6. Check the FAN LOW CTRL in the PGM-FI Data List with the HDS.

Is the FAN LOW CTRL on?

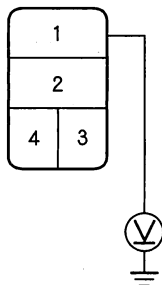
YES—Go to step 7.

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 11-244). ■



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



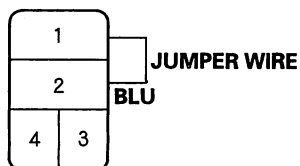
Is there battery voltage?

YES—Go to step 8.

NO—Replace the relay block (see page 22-71). ■

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



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

YES—Go to step 9.

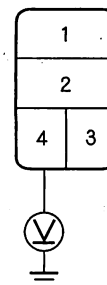
NO—Go to step 18.

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. 4 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.

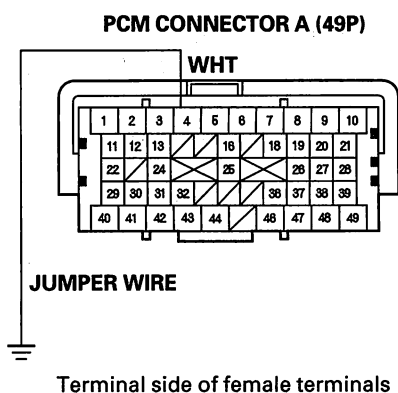
15. Disconnect PCM connector A (49P).

(cont'd)

Climate Control

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

16. Connect the PCM connector A (49P) terminal No. 4 to body ground with a jumper wire.



17. Turn the ignition switch ON (II).

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

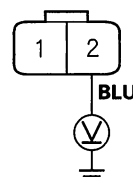
YES—Check for loose wires or poor connections at PCM connector A (49P) terminal No. 4. If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-244). ■

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



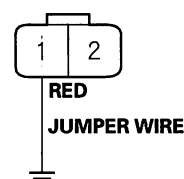
Is there battery voltage?

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 button 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

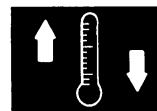


26. Turn the ignition switch ON (II), then set the A/C button and fan control button ON.

Does the A/C condenser fan run?

YES—Go to step 27.

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



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

28. Disconnect the jumper wire.

29. Remove the fan control relay from the relay block, and test it (see page 22-78).

Is the relay OK?

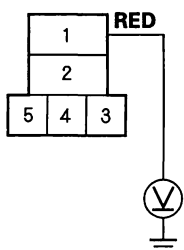
YES—Go to step 30.

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.

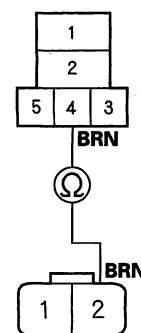
NO—Repair open in the wire between the A/C condenser fan and the fan control relay. ■

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

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

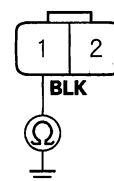
Is there continuity?

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 10-10). ■

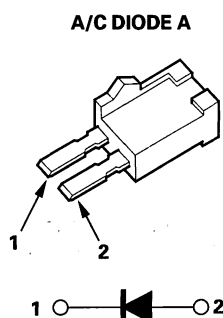
NO—Check for an open in the wire between the radiator fan and body ground. If the wire is OK, check for poor ground at G301 (see page 22-67). ■

(cont'd)

Climate Control

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

36. Turn the ignition switch OFF.
37. Remove A/C diode A from the relay block.
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.



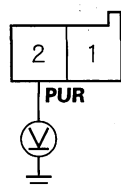
Is there current flow in only one direction?

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 relay block (see page 22-71). ■

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and A/C diode A. ■

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 doing any symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Remove the fan control relay from the relay block, and test it (see page 22-78).

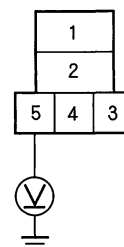
Is the relay OK?

YES—Go to step 2.

NO—Replace the fan control relay. ■

2. Turn the ignition switch ON (II).
3. Measure the voltage between the fan control relay 5P socket terminal No. 5 and body ground.

FAN CONTROL RELAY 5P SOCKET

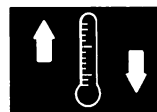


Is there battery voltage?

YES—Go to step 4.

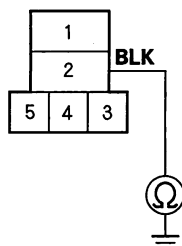
NO—Replace the relay block (see page 22-71). ■

4. Turn the ignition switch OFF.



5. 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 6.

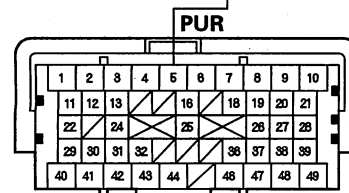
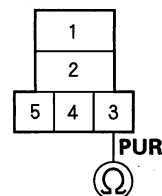
NO—Check for an open in the wire between the fan control relay and body ground. If the wire is OK, check for poor ground at G202 (see page 22-67). ■

6. Jump the SCS line with the HDS.

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

7. Disconnect PCM connector A (49P).
8. Check for continuity between the fan control relay 5P socket terminal No. 3 and PCM connector A (49P) terminal No. 5.

FAN CONTROL RELAY 5P SOCKET



PCM CONNECTOR A (49P)

Terminal side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at PCM connector A (49P) terminal No. 5. If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-244). ■

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

Climate Control

A/C Compressor Clutch Circuit Troubleshooting

NOTE:

- It is normal for the A/C compressor to turn off under certain conditions, such as low idle, high engine coolant temperature, hard acceleration, or high/low pressure.
- 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. 7 (7.5 A) fuse in the relay block, and the No. 30 (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. If the fuse(s) blow again, check for a short in the No. 7 (7.5 A) and No. 30 (10 A) fuse(s) circuit. ■

2. Connect the HDS to the DLC.
3. Start the engine.
4. Turn on the A/C.
5. Check the A/C CLUTCH in the PGM-FI Data List with the HDS.

Is the A/C CLUTCH on?

YES—Go to step 7.

NO—Go to step 6.

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

A/C SWITCH	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 7.

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

7. Remove the A/C compressor clutch relay from the relay block, and test it (see page 22-77).

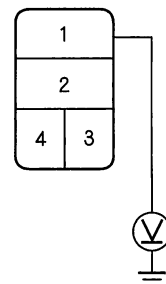
Is the relay OK?

YES—Go to step 8.

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

8. 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?

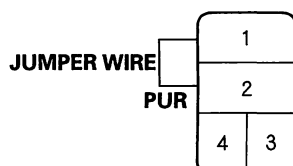
YES—Go to step 9.

NO—Replace the relay block (see page 22-71). ■



9. 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



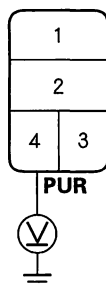
Does the A/C compressor clutch click?

YES—Go to step 10.

NO—Go to step 19.

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

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Is there battery voltage?

YES—Go to step 13.

NO—Repair open in the wire between the No. 30 (10 A) fuse in the under-dash fuse/relay box and the A/C compressor clutch relay. ■

13. Turn the ignition switch OFF.

14. Reinstall the A/C compressor clutch relay.

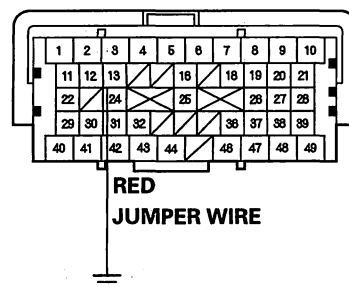
15. Jump the SCS line with the HDS.

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

16. Disconnect PCM connector A (49P).

17. Connect PCM connector A (49P) terminal No. 13 to body ground with a jumper wire.

PCM CONNECTOR A (49P)



Terminal side of female terminals

18. Turn the ignition switch ON (II).

Does the A/C compressor click?

YES—Check for loose wires or poor connections at PCM connector A (49P). 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 11-244). ■

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

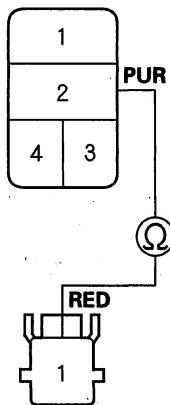
(cont'd)

Climate Control

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

19. Disconnect the jumper wire.
20. Disconnect the A/C compressor clutch 1P connector.
21. Check for continuity between the A/C compressor clutch relay 4P socket terminal No. 2 and the A/C compressor clutch 1P connector terminal No. 1.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET

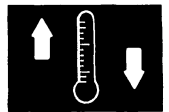


A/C COMPRESSOR CLUTCH 1P CONNECTOR
Wire side of female terminal

Is there continuity?

YES—Check the A/C compressor clutch clearance, and the compressor clutch field coil (see page 21-125). Repair as needed. ■

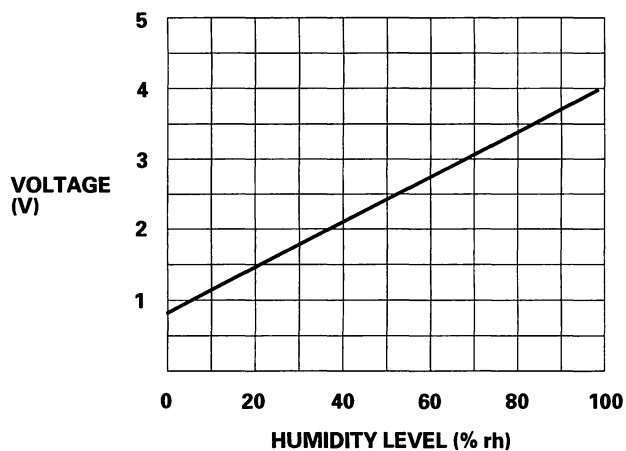
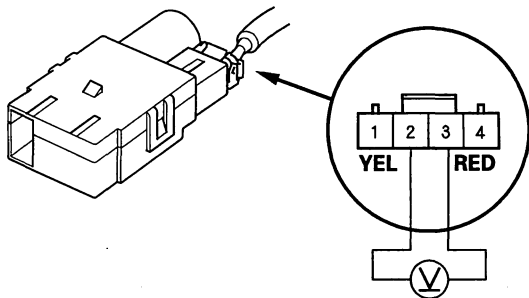
NO—Repair open in the wire between the A/C compressor clutch relay and the A/C compressor clutch. ■



Humidity/In-car Temperature Sensor Test

Humidity Sensor Test

1. Remove the humidity/in-car temperature sensor (see page 21-104).
2. Connect the humidity/in-car temperature sensor 4P connector.
3. Turn the ignition switch ON (II). Measure the voltage between the terminals with the (+) probe on the No. 2 terminal and the (−) probe on the No. 3 terminal with the connector connected.



4. If the voltage is not as specified, replace the humidity/in-car temperature sensor (see page 21-104).

(cont'd)

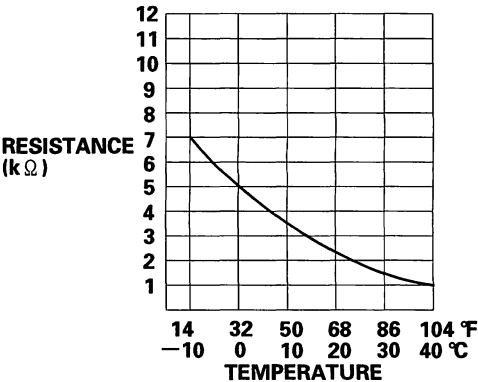
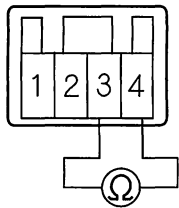
Climate Control

Humidity/In-car Temperature Sensor Test (cont'd)

In-car Temperature Sensor Test

1. Remove the humidity/in-car temperature sensor (see page 21-104).
2. Connect the humidity/in-car temperature sensor 4P connector.
3. Test the humidity/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.
4. Compare the resistance reading between the No. 4 and No. 3 terminals of the humidity/in-car temperature sensor with the specifications shown in the graph; the resistance should be within the specifications.

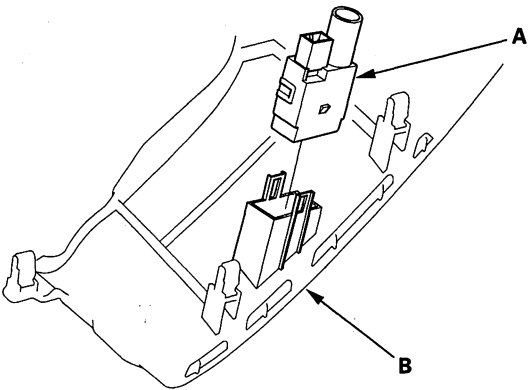
HUMIDITY/IN-CAR TEMPERATURE SENSOR



5. If the resistance is not as specified, replace the humidity/in-car temperature sensor (see page 21-104).

Humidity/In-car Temperature Sensor Replacement

1. Remove the driver's dashboard lower cover (see page 20-119).
2. Remove the humidity/in-car temperature sensor (A) from the driver's dashboard lower cover (B).

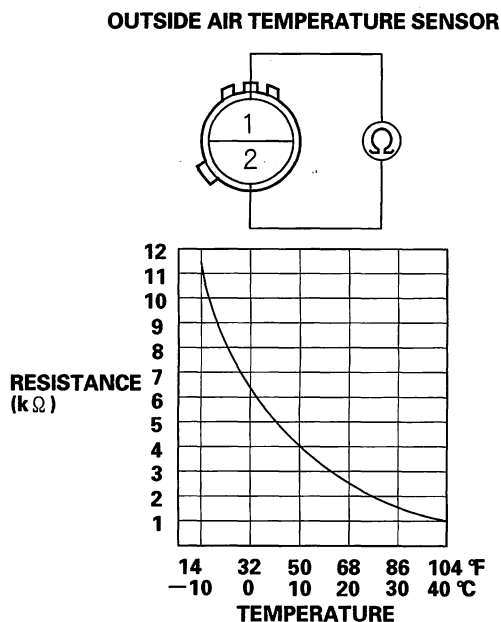


3. Install the sensor in the reverse order of removal. Be sure to connect the air hose securely.



Outside Air Temperature Sensor Test

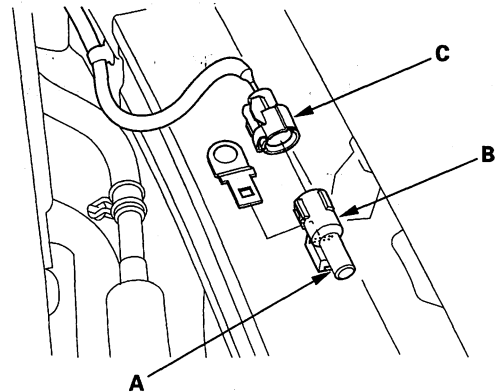
1. Remove the outside air temperature sensor (see page 21-105).
2. Dip the sensor in ice water, and measure the resistance. Then pour warm water on the sensor, and check for a change in resistance.
3. Compare the resistance reading between the No. 1 and No. 2 terminals of the outside air temperature sensor with the specifications shown in the graph; the resistance should be within the specifications.



4. If the resistance is not as specified, replace the outside air temperature sensor (see page 21-105).

Outside Air Temperature Sensor Replacement

1. Remove the bulkhead cover (see page 20-203).
2. Lift the tab (A) to release the lock, then remove the outside air temperature sensor (B) from the back of the front bumper. Disconnect the 2P connector (C) from the outside air temperature sensor.



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

Climate Control

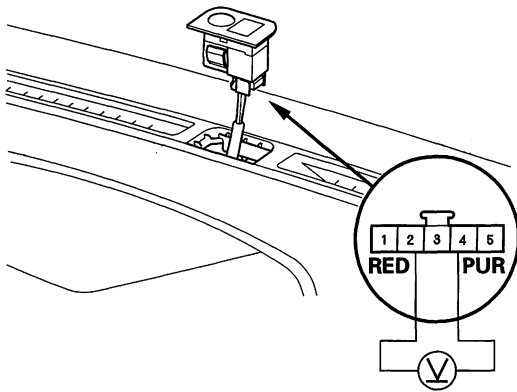
Sunlight Sensor Test

1. Remove the sunlight sensor from the dashboard (see page 21-106).
2. Connect the sunlight sensor 5P connector.
3. Turn the ignition switch ON (II). Measure the voltage between the terminals with the (+) probe on the No. 4 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:

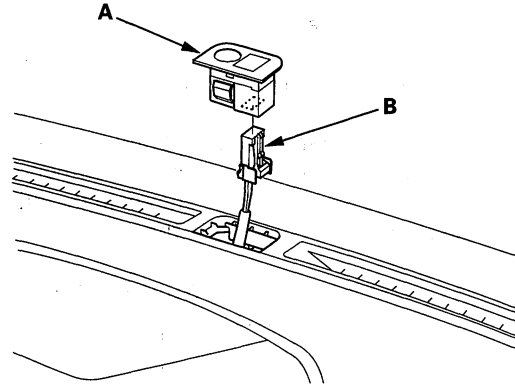
- 3.6—3.7 V or more with the sensor out of direct sunlight.
- 3.3—3.5 V or less with the sensor in direct sunlight.



4. If the voltage is not as specified, replace the sunlight sensor (see page 21-106).

Sunlight Sensor Replacement

1. Remove the sunlight sensor (A) from the dashboard, then disconnect the 5P connector (B). Be careful not to damage the sensor and the dashboard.



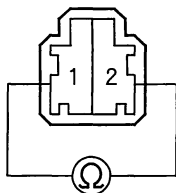
2. Install the sensor in the reverse order of removal.



Front Evaporator Temperature Sensor Test

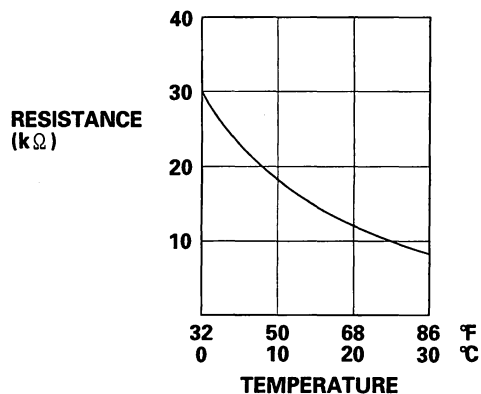
1. Remove the evaporator front temperature sensor (see page 21-107).
2. Dip the sensor in ice water, and measure the resistance between its terminals.

FRONT EVAPORATOR TEMPERATURE SENSOR



Terminal side of male terminals

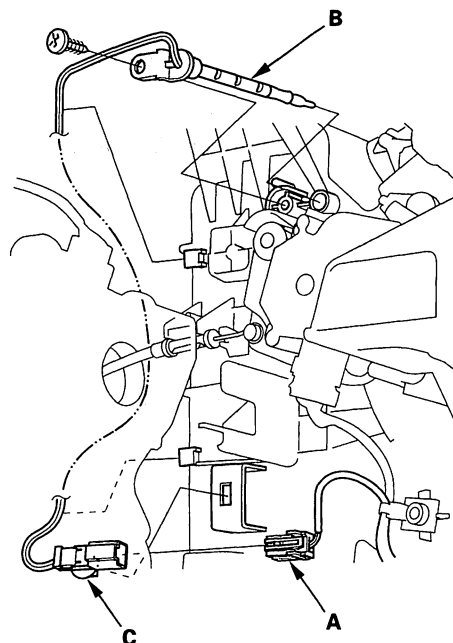
3. Then pour warm water on the sensor, and check for a change in resistance.
4. Compare the resistance readings with the specifications shown in the graph; the resistance should be within the specifications.



5. If the resistance is not as specified, replace the front evaporator temperature sensor (see page 21-107).

Front Evaporator Temperature Sensor Replacement

1. Remove the driver's dashboard undercover (see page 20-120).
2. Remove the TPMS control unit (see page 18-162).
3. Disconnect the connector (A) from the front evaporator temperature sensor (B), then remove the connector clip (C). Remove the self-tapping screw and the front evaporator temperature sensor.



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

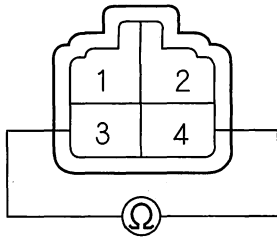
Climate Control

Front Power Transistor Test

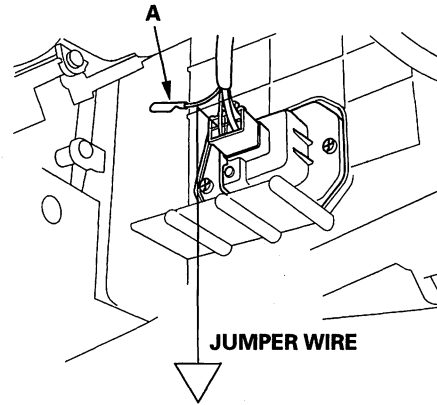
1. Remove the passenger's dashboard undercover (see page 20-127).
2. Disconnect the 4P connector from the front power transistor.
3. Measure the resistance between the No. 3 and No. 4 terminals of the front power transistor. It should be about 1.5 k Ω .
 - If the resistance is within the specifications, go to step 4.
 - If the resistance is not within the specifications, replace the front power transistor.

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

FRONT POWER TRANSISTOR



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



(To 12 V Power source on vehicle)

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

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

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



Driver's Air Mix Control Motor Test

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

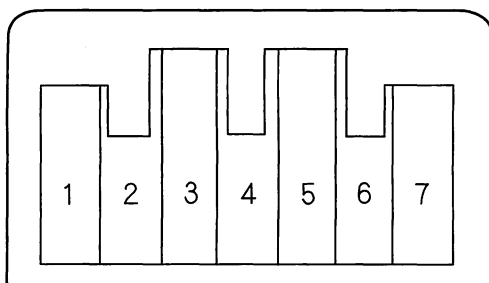
1. Disconnect the 7P connector from the driver's air mix control motor.

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.

DRIVER'S AIR MIX CONTROL MOTOR



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 door for smooth movement.
 - If the linkage and door move smoothly, replace the driver's air mix control motor (see page 21-110).
 - 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 .
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 0.5 V

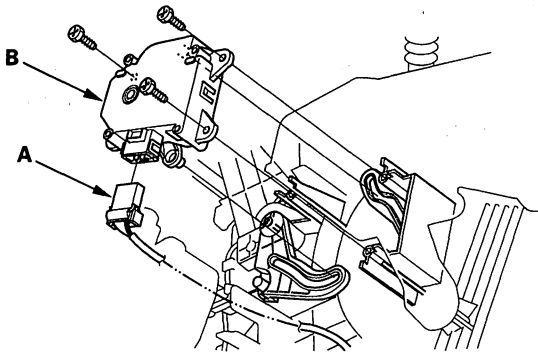
Max Hot: about 4.5 V

7. If either the resistance or voltage readings are not as specified, replace the driver's air mix control motor (see page 21-110).

Climate Control

Driver's Air Mix Control Motor Replacement

1. Remove the driver's dashboard undercover (see page 20-120).
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.

Passenger's Air Mix Control Motor Test

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

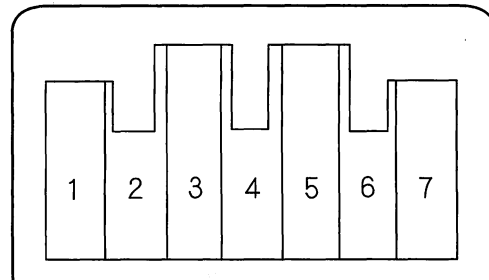
1. Disconnect the 7P connector from the passenger's air mix control motor.

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.

PASSENGER'S AIR MIX CONTROL MOTOR



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 21-111).
 - 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 .
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. 7 terminals.

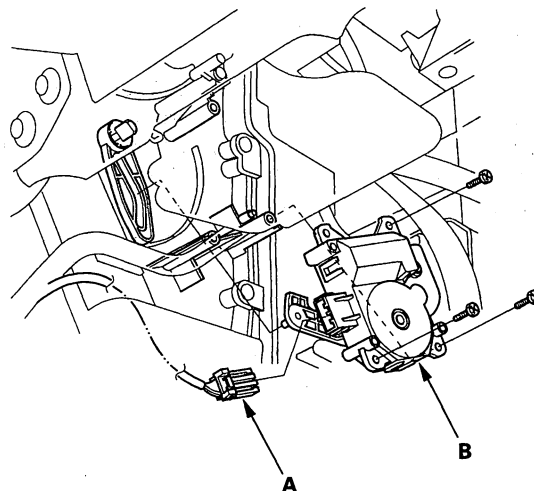
Max Cool: about 1.5 V

Max Hot: about 4.5 V

7. If either the resistance or voltage readings are not as specified, replace the passenger's air mix control motor (see page 21-111).

Passenger's Air Mix Control Motor Replacement

1. Remove the glove box (see page 20-125).
2. Disconnect the 7P connector (A) from the passenger's air mix control motor (B). Remove the self-tapping screws and the passenger'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

Front Mode Control Motor Test

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

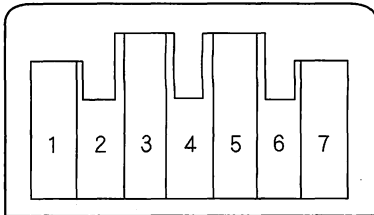
1. Disconnect the 7P connector from the front mode control motor.

NOTICE

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

2. Connect battery power to the No. 1 terminal of the front mode control motor, and ground the No. 2 terminal; the front mode control motor should run smoothly, and stop at Vent. If it doesn't, reverse the connections; the front mode control motor should run smoothly, and stop at Defrost. When the front mode control motor stops running, disconnect battery power immediately.

FRONT MODE CONTROL MOTOR



3. If the front mode control motor did not run in step 2, remove it, then check the front mode control linkage and doors for smooth movement.

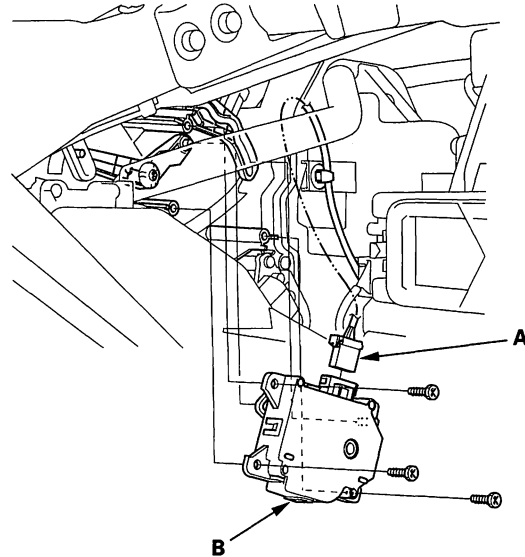
- If the linkage and doors move smoothly, replace the front mode control motor (see page 21-112).
- If the linkage or doors stick or bind, repair them as needed.
- If the front mode control motor runs smoothly, go to step 4.

4. Use a digital multimeter with an output of 1 mA or less at the 20 k Ω range. With the front 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 front mode control motor (see page 21-112).

Front Mode Control Motor Replacement

1. Remove the glove box (see page 20-125).
2. Disconnect the 7P connector (A) from the front mode control motor (B). Remove the self-tapping screws and the front mode 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.



Recirculation Control Motor Test

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

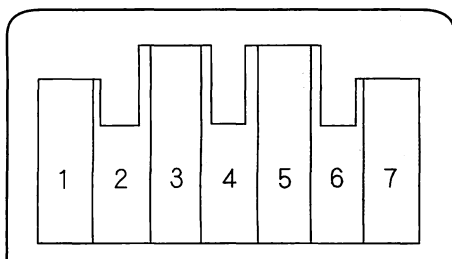
1. Disconnect the 7P connector from the recirculation control motor.

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

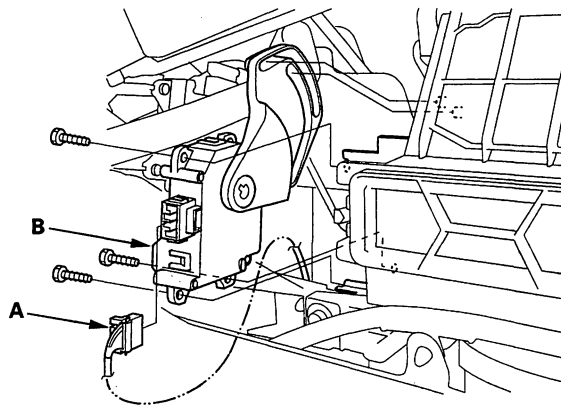
RECIRCULATION CONTROL MOTOR



3. If the recirculation control motor did not run in step 2, remove it, then check the recirculation control linkage and door for smooth movement.
 - If the linkage and door move smoothly, replace the recirculation control motor (see page 21-113).
 - If the linkage or door stick or bind, repair them as needed.
 - If the recirculation 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 recirculation control motor running as in step 2, check for continuity between the No. 3, 4, and 5 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 recirculation control motor (see page 21-113).

Recirculation Control Motor Replacement

1. Remove the glove box (see page 20-125).
2. Disconnect the 7P connector (A) from the recirculation control motor (B). Remove the self-tapping screws and the recirculation control motor from the heater unit.

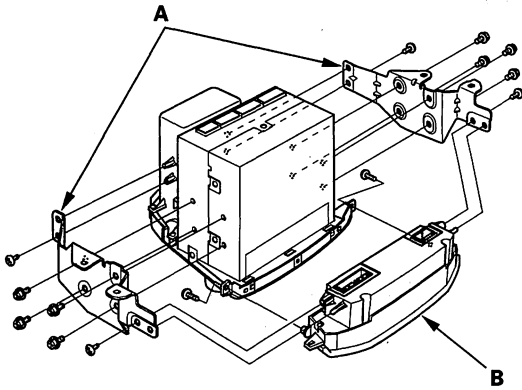


3. Install the motor in the reverse order of removal. Make sure the pin on the motor is properly engaged with the linkage. After installation, make sure the motor runs smoothly.

Climate Control

Climate Control Unit Removal/Installation

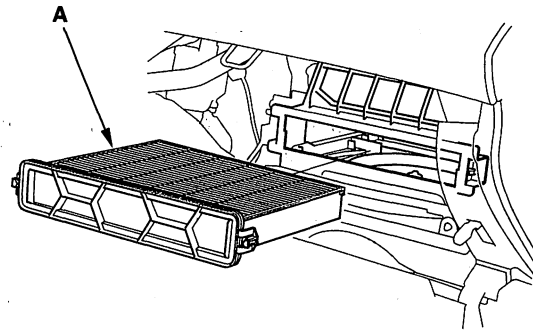
1. Remove the audio unit (see page 23-90).
2. Remove the self-tapping screws, bolt, brackets (A), and the climate control unit (B).



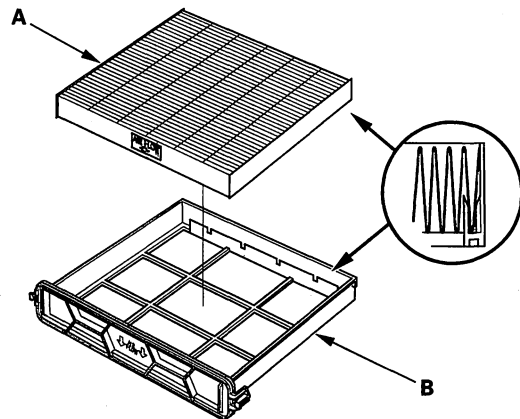
3. Install the control unit in the reverse order of removal. After installation, operate the various functions to see whether works properly.
4. Run the self-diagnostic function to confirm that there are no problems in the system (see page 21-10).

Dust and Pollen Filter Replacement

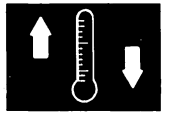
1. Open the glove box. Remove the glove box stop on right side, then let the glove box hang down (see page 20-125).
2. Remove the dust and pollen filter assembly (A) from the evaporator.



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

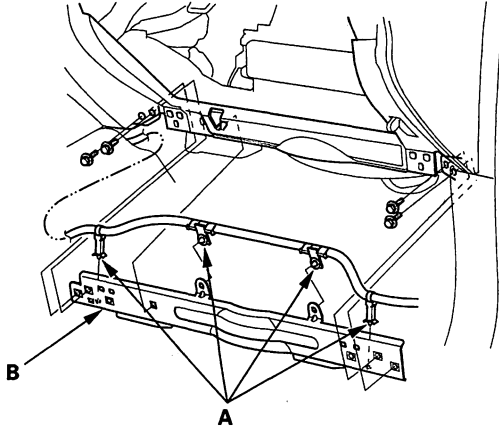


4. Install the filter in the reverse order of removal. Make sure that there is no air leaking out of the blower unit.

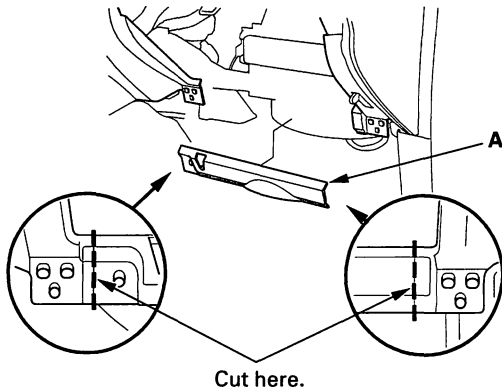


Blower Unit Removal/Installation

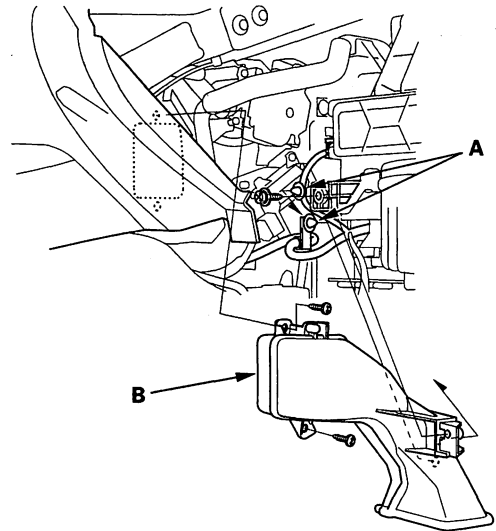
1. Remove the glove box (see page 20-125).
2. Remove the harness clips (A), the bolts, and the glove box frame (B).



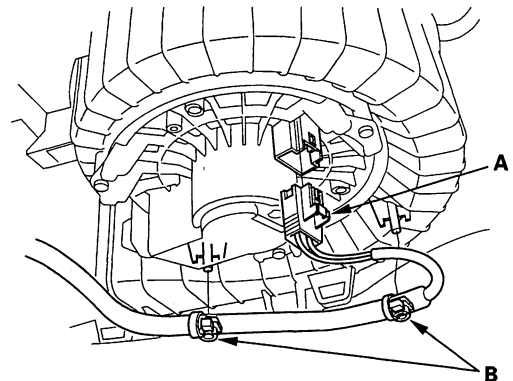
3. Cut the plastic cross brace (A) in the glove box opening with diagonal cutters in the area shown, and discard it.



4. Remove the wire harness clips (A), the self-tapping screws, and the passenger's heater duct (B).



5. Disconnect the connector (A) from the front blower motor. Remove the wire harness clips (B).

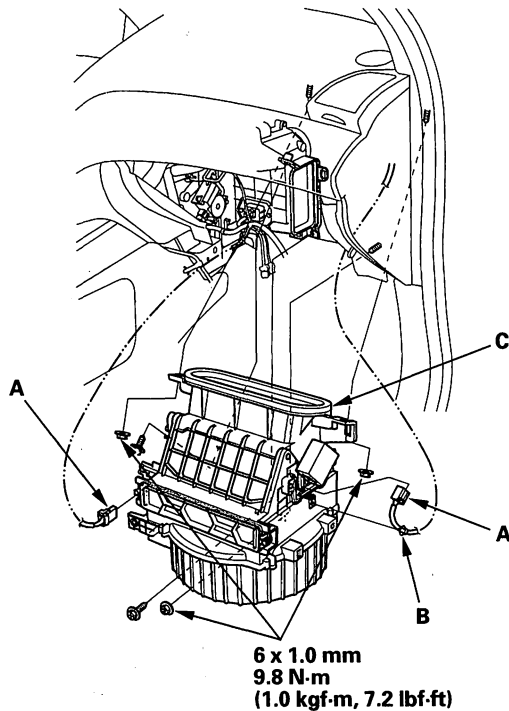


(cont'd)

Climate Control

Blower Unit Removal/Installation (cont'd)

6. Disconnect the connectors (A) from the recirculation control motor and adaptive front lighting control unit, then remove the harness clip (B). Remove the self-tapping screws, the mounting nuts, and the blower unit (C).

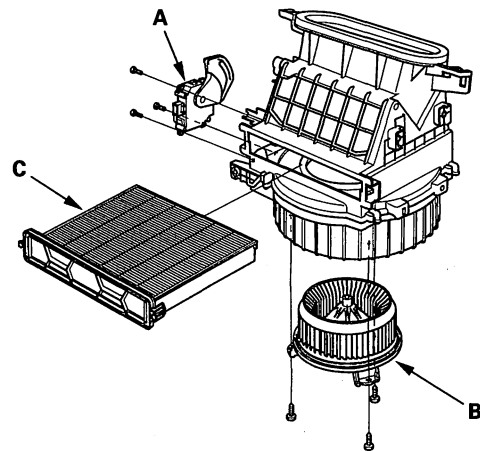


7. Install the unit in the reverse order of removal. Make sure that there is no air leakage.

Blower Unit Component Replacement

Note these items when overhauling the blower unit:

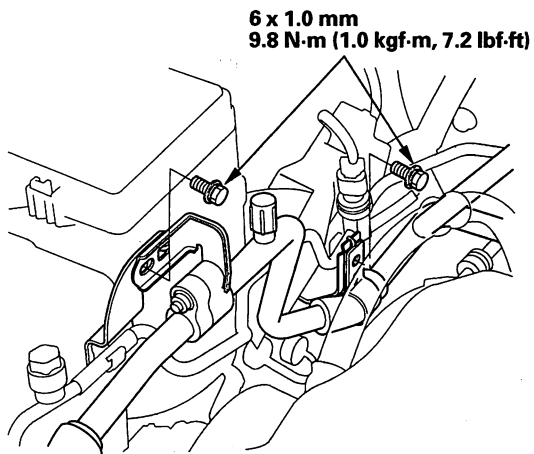
- The recirculation control motor (A), front blower motor (B) and the dust and pollen filter (C) can be replaced without removing the blower unit.
- Before reassembly, make sure that the recirculation control linkage and door move smoothly without binding.
- After reassembly, make sure the recirculation control motor runs smoothly (see page 21-113).



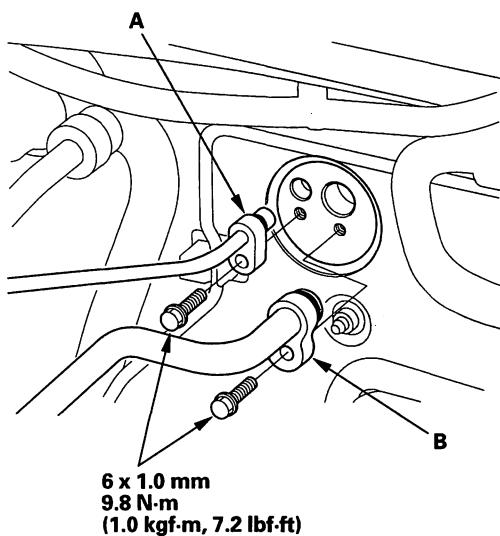


Front Evaporator Core Replacement

1. Recover the refrigerant with a recovery/recycling/charging station (see page 21-130).
2. Remove the bolts.

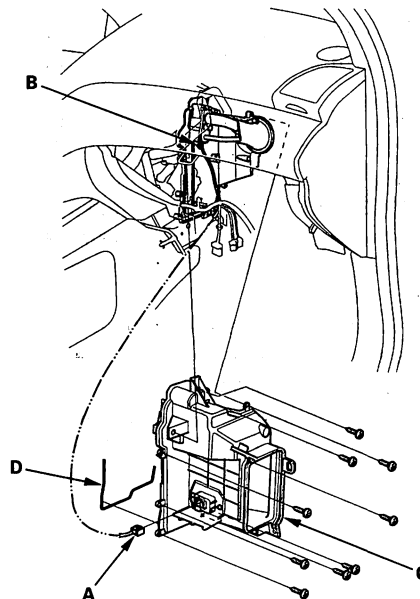


3. Remove the bolts, then disconnect the front receiver line (A) and the front suction line (B) from the front evaporator core.

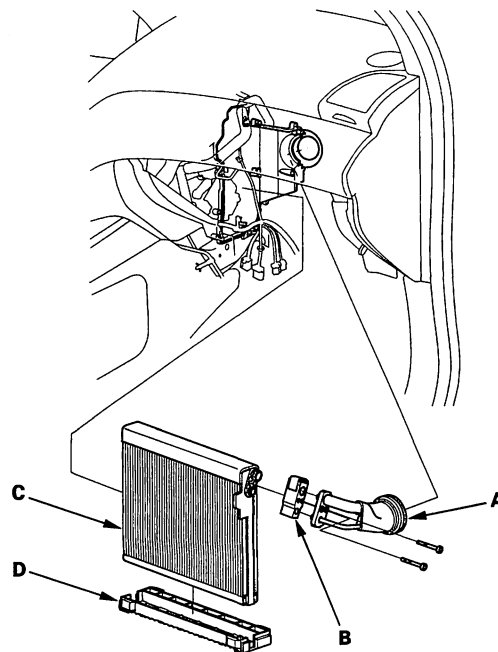


4. Remove the blower unit (see page 21-115).

5. Disconnect the connector (A) from the front power transistor, then remove the harness clip (B). Remove the self-tapping screws, the expansion valve cover (C), and the seal (D).



6. Remove the bolts, the inlet and outlet pipes (A), and expansion valve (B). Carefully pull out the front evaporator core (C), then remove the plate (D).



(cont'd)

Climate Control

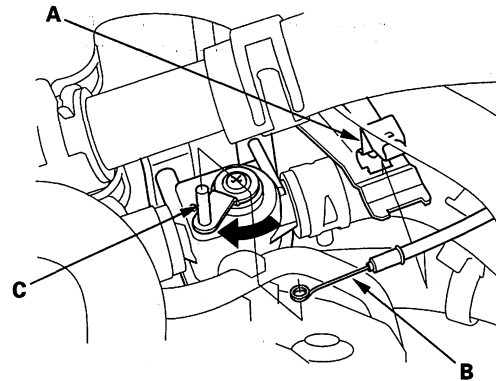
Front Evaporator Core Replacement (cont'd)

7. Install the core in the reverse order of removal, and note these items:
 - If you're installing a new front evaporator core, add refrigerant oil (DENSO ND-OIL 8) (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 21-132).

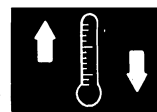
Heater Unit/Core Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

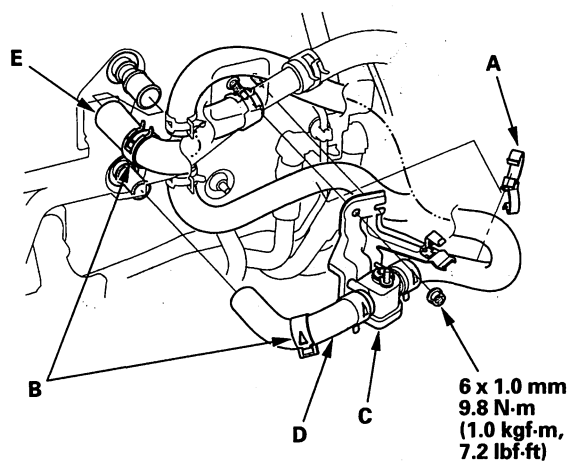
1. Make sure you have the anti-theft codes for the audio system and the navigation system (if equipped).
2. Make sure the ignition is OFF, then disconnect the negative cable from the battery.
3. Disconnect the front receiver line and front suction line from the front evaporator core (see page 21-117).
4. 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.



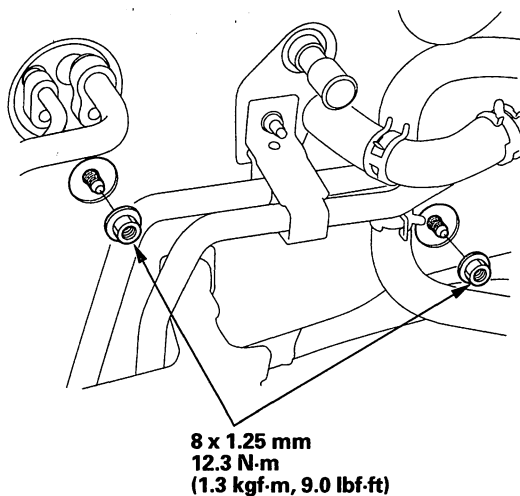
5. When the engine is cool, drain the engine coolant from the radiator (see page 10-6).



6. Remove the clamp (A). Slide the hose clamps (B) back. Remove the nut and the water valve (C), then disconnect the inlet heater hose (D) and the outlet heater hose (E) from the heater unit. Engine coolant will run out when the hoses are disconnected; drain it into a clean drip pan. Be sure not to let coolant spill on the electrical parts or the painted surfaces. If any coolant spills, rinse it off immediately.

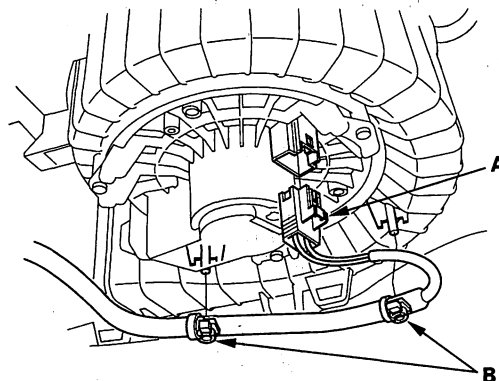


7. Remove the mounting nuts from the heater unit. Take care not to damage or bend the fuel lines or brake lines, etc.

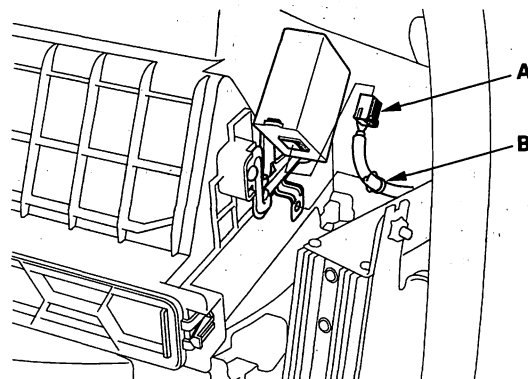


8. Remove the dashboard (see page 20-130).

9. Disconnect the connector (A) from the front blower motor. Remove the wire harness clips (B).



10. Disconnect the connector (A) from the adaptive front lighting control unit, then remove the harness clip (B).

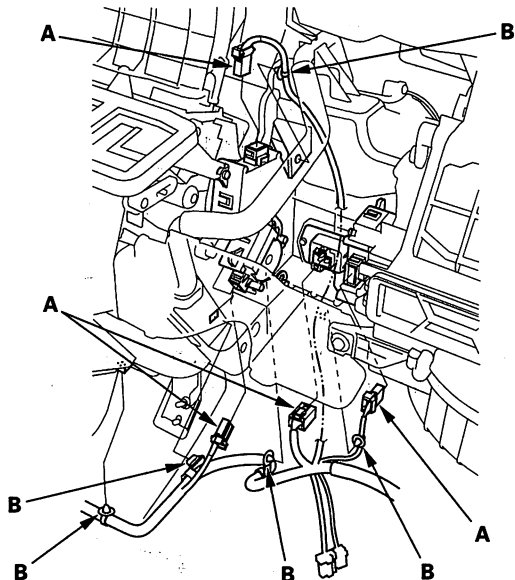


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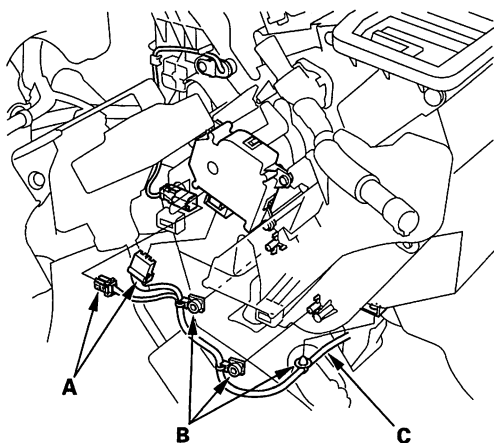
Climate Control

Heater Unit/Core Replacement (cont'd)

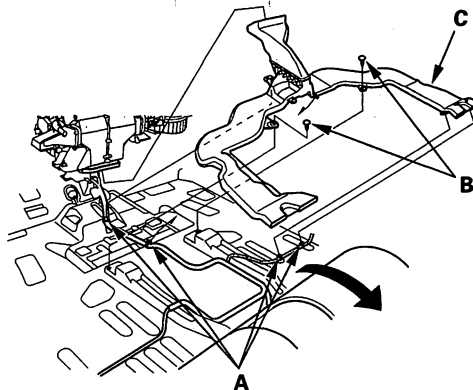
11. Disconnect the connectors (A) from the front mode control motor, the passenger's air mix control motor, the recirculation control motor, and the front power transistor. Remove the wire harness clips (B).



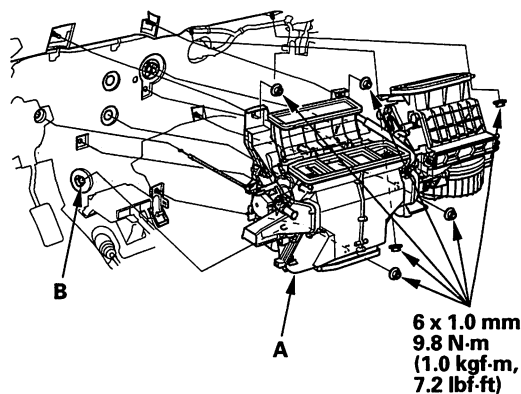
12. Disconnect the connectors (A) from the driver's air mix control motor and the front evaporator temperature sensor. Remove the wire harness clips (B) and the wire harness (C).

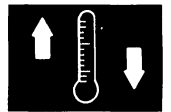


13. Turn over the carpet. Remove the wire harness clips (A), the rear heater duct mounting clips (B), and the rear heater duct (C).

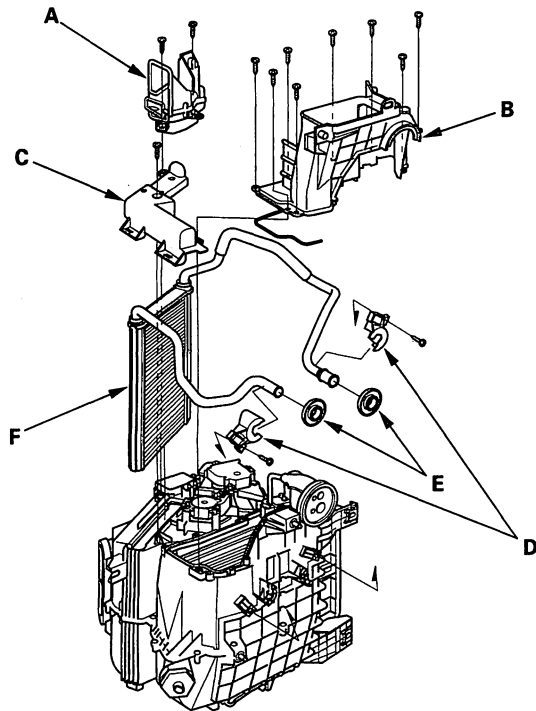


14. Remove the mounting nuts. Slide the blower-heater unit (A), then remove the drain hose (B) and blower-heater unit.





15. Remove the self-tapping screws and the passenger's heater duct (A). Remove the self-tapping screws and the expansion valve cover (B). Remove the self-tapping screw and the front heater core cover (C). Remove the self-tapping screws, the heater pipe brackets (D), the grommets (E), and carefully pull out the front heater core (F).



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

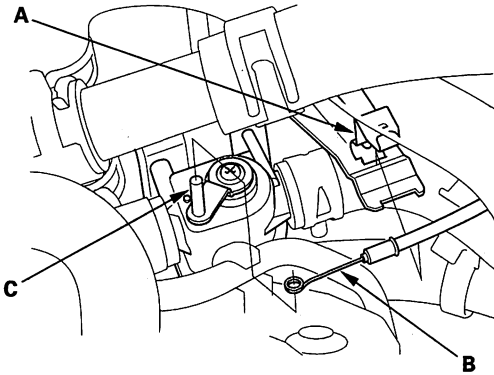
17. Install the heater unit in the reverse order of removal, and note these items:

- Do not interchange the inlet and outlet heater hoses, and install the hose clamps securely.
- Refill the cooling system with engine coolant (see page 10-6).
- Adjust the heater valve cable (see page 21-122).
- Make sure that there is no coolant leakage.
- Make sure that there is no air leakage.
- Refer to the front evaporator core replacement (see page 21-117).
- Reset the power window control unit (see page 22-259).
- Do the steering column position memorization (see page 17-28).
- Enter the anti-theft codes for the audio system and the navigation system (if equipped).
- Set the clock.

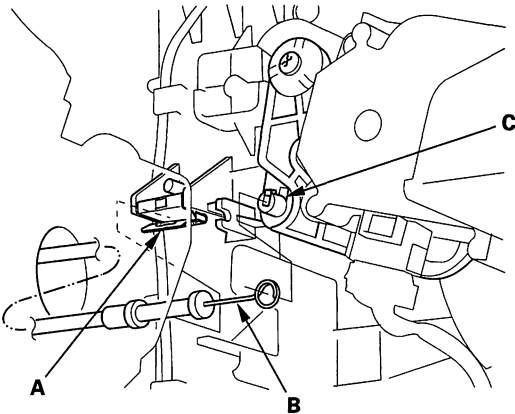
Climate Control

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).



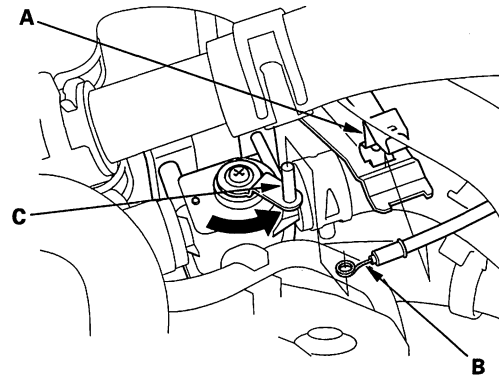
2. From under the dash, disconnect the heater valve cable housing from the cable clamp (A), and disconnect the heater valve cable (B) from the driver's air mix control linkage (C).



3. Set the temperature control dial to Max Cool (Lo) with the ignition switch ON (II).
4. Attach the heater valve cable (B) to the driver's air mix control linkage (C) as shown step 2. 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 driver's air mix control linkage.

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





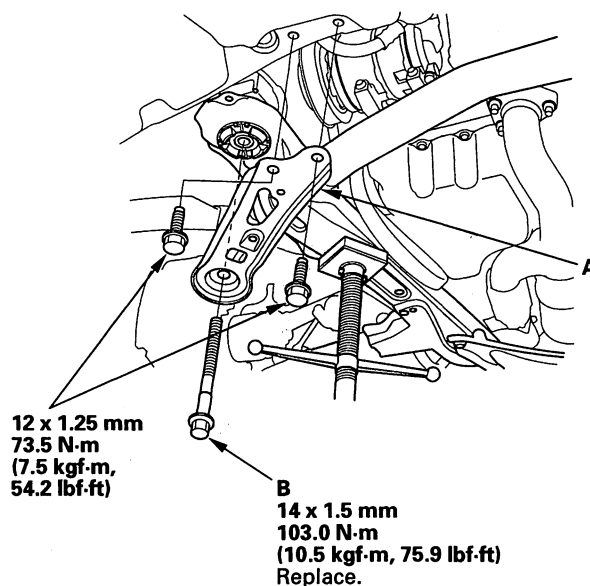
A/C Compressor Replacement

NOTE: Do not install the 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.

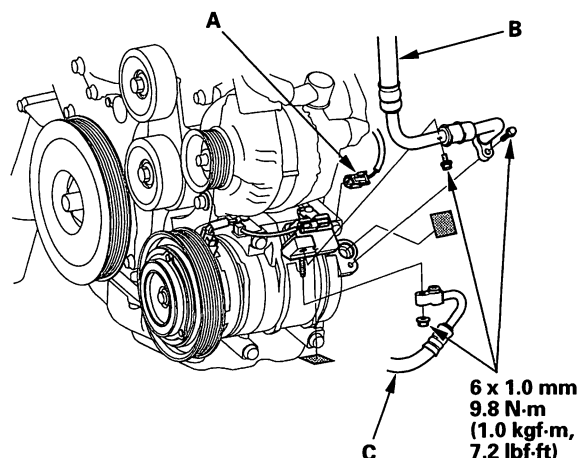
1. If the A/C compressor is marginally operable, run the engine at idle speed, and let the air conditioning work for a few minutes, then shut the engine off.
2. Recover the refrigerant with a recovery/recycling/charging station (see page 21-130).
3. Remove the drive belt (see page 4-33).
4. Remove the front splash shield (see page 20-218).
5. Remove the front undercover (see page 20-219).

6. Support the front subframe with the engine support. Remove the bolts and the front subframe stiffener (A).

NOTE: Install the new front subframe mounting bolt (B).



7. Disconnect the A/C compressor clutch connector (A). Remove the bolts and the nut, then disconnect the suction hose (B) and discharge hose (C) from the A/C compressor. Plug or cap the lines immediately after disconnecting them to avoid moisture and dust contamination.

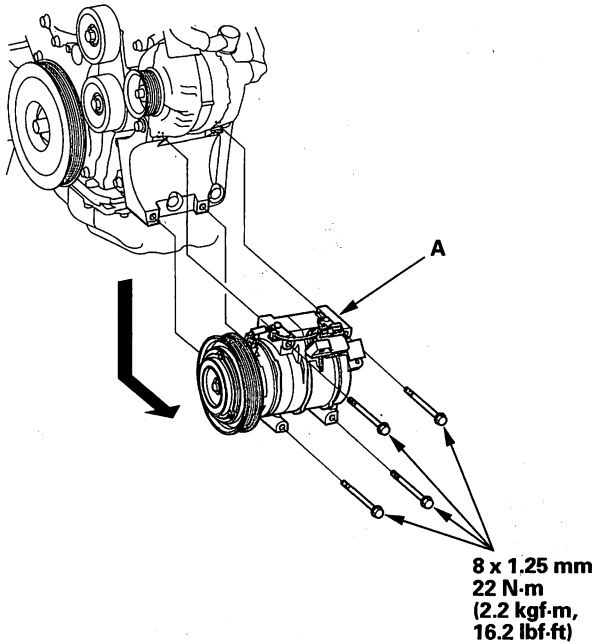


(cont'd)

Climate Control

A/C Compressor Replacement (cont'd)

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



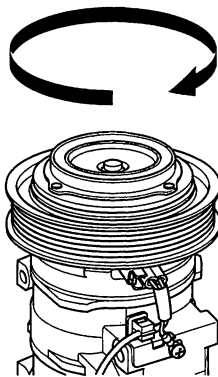
9. Install the A/C compressor in the reverse order of removal, and note these items:

- 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 (DENSO ND-OIL 8) for HFC-134a DENSO piston 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.
- Be careful not to damage the radiator fins when installing the compressor and the A/C condenser fan shroud.
- Charge the system (see page 21-132).



A/C Compressor Clutch Check

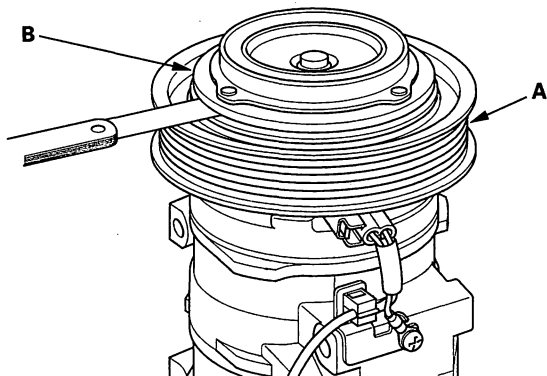
1. Check the pressure plate for discoloration, peeling, or other damage. If there is damage, replace the clutch set (see page 21-126).
2. Check the pulley bearing play and drag by rotating the pulley by hand. Replace the clutch set with a new one if it is noisy or has excessive play/drag (see page 21-126).



3. Measure the clearance between the pulley (A) and the pressure plate (B) all the way around. If the clearance is not within specified limits, remove the pressure plate (see page 21-126) and add or remove shims as needed to increase or decrease clearance.

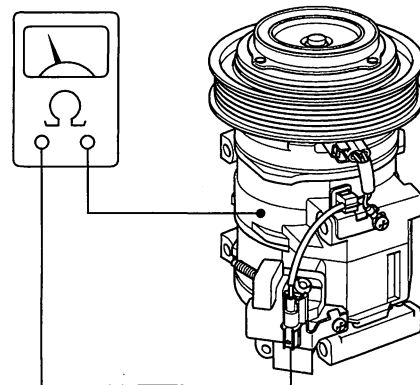
Clearance: 0.30—0.60 mm (0.012—0.024 in.)

NOTE: The shims are available in three thicknesses: 0.1 mm, 0.3 mm, and 0.5 mm.



4. Measure the resistance of the field coil. If the resistance is not within specifications, replace the field coil (see page 21-126).

Field Coil Resistance: 3.9—4.3 Ω at 68° F (20 °C)



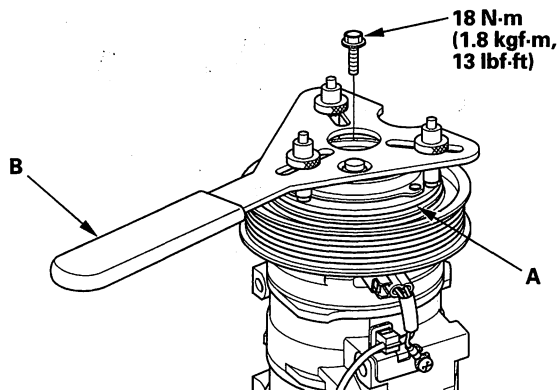
Climate Control

A/C Compressor Clutch Overhaul

Special Tools Required

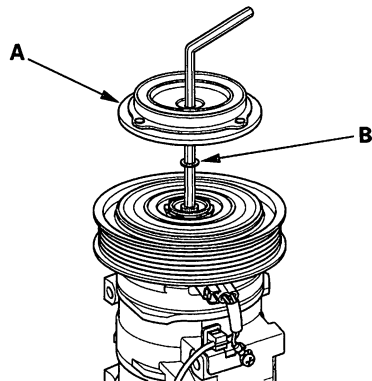
A/C clutch holder, Robinair 10204 or Kent-Moore J37872, or Honda Tool and Equipment KMT-J33939, commercially available

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

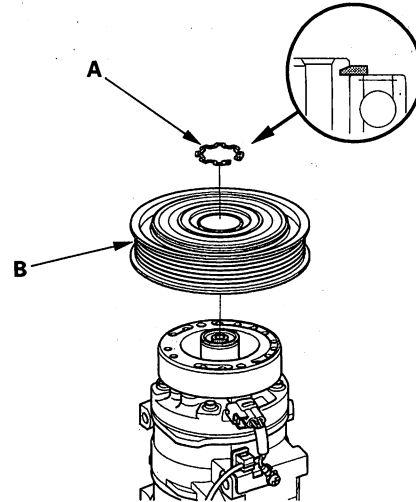


2. Remove the pressure plate (A) and shim(s) (B), taking care not to lose the shim(s). If the clutch needs adjustment, increase or decrease the number and thickness of shims as necessary, then reinstall the pressure plate, and recheck its clearance (see page 21-125).

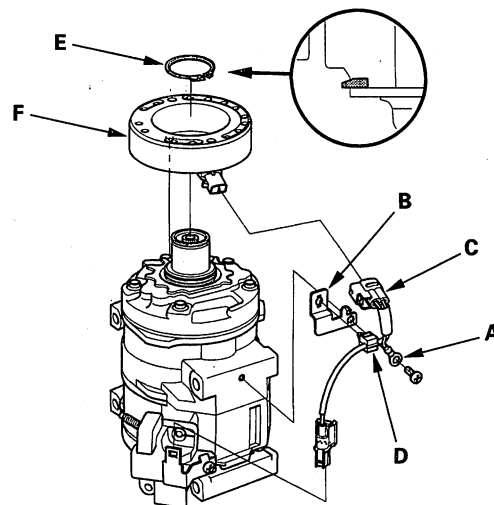
NOTE: The shims are available in three thicknesses: 0.1 mm, 0.3 mm, and 0.5 mm.



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



4. Remove the screw from the field coil ground terminal (A) and bracket (B). Disconnect the connector (C) from the field coil, then remove the wire harness clip (D). Remove the snap ring (E) with snap ring pliers, then remove the field coil (F). Be careful not to damage the field coil or the A/C compressor.



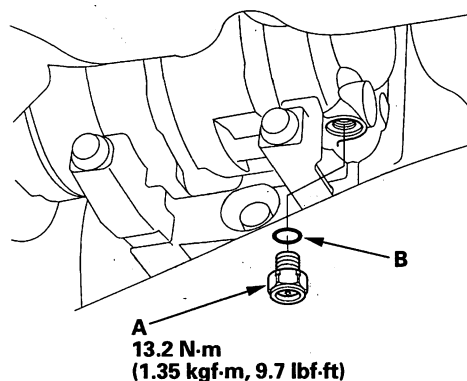


5. Reassemble the clutch in the reverse order of disassembly, and note these items:

- 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 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 pulley turns smoothly after it's reassembled.
- Route and clamp the wires properly or they can be damaged by the pulley.

A/C Compressor Relief Valve Replacement

1. Recover the refrigerant with a recovery/recycling/charging station (see page 21-130).
2. Remove the front splash shield (see page 20-218).
3. Remove the front undercover (see page 20-219).
4. 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.

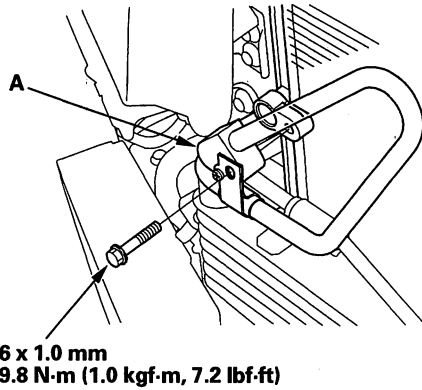


5. Clean the mating surfaces.
6. Replace the O-ring with a new one at the relief valve, and apply a thin coat of refrigerant oil before installing it.
7. Remove the plug, and install and tighten the relief valve.
8. Charge the system (see page 21-132).

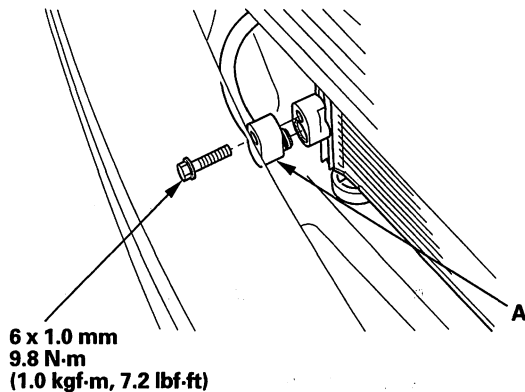
Climate Control

A/C Condenser Replacement

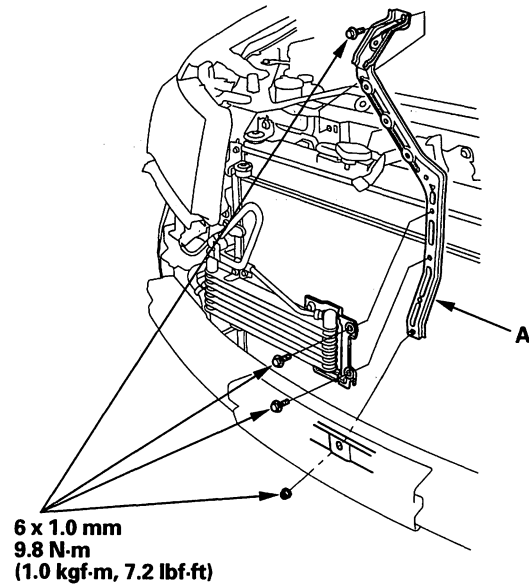
1. Recover the refrigerant with a recovery/recycling charging station (see page 21-130).
2. Remove the front bumper (see page 20-188).
3. Remove the bolt, then disconnect the discharge hose (A) from the A/C condenser.



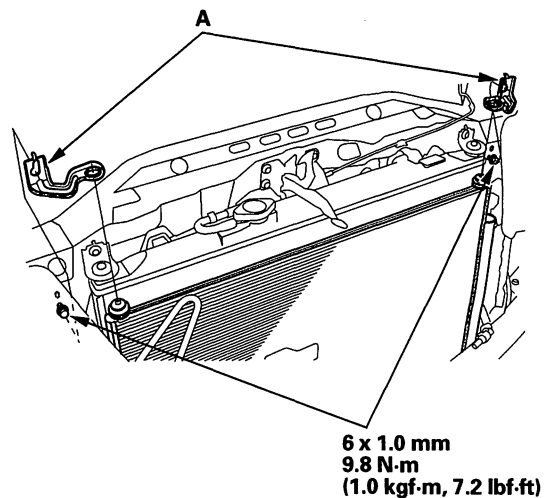
4. Remove the bolt, then disconnect the front receiver line (A) from the A/C condenser.



5. Remove the bolts, nut, and the ATF cooler bracket (A).



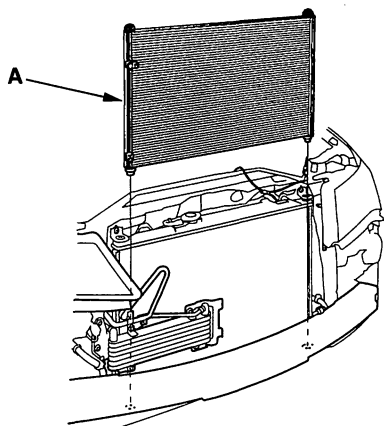
6. Loosen the bolts, then remove the A/C condenser upper mount brackets (A).



7. Remove the hood latch (see page 20-225).



8. Remove the A/C condenser (A) by lifting it up. Be careful not to damage the radiator and A/C condenser fins when removing the A/C condenser.



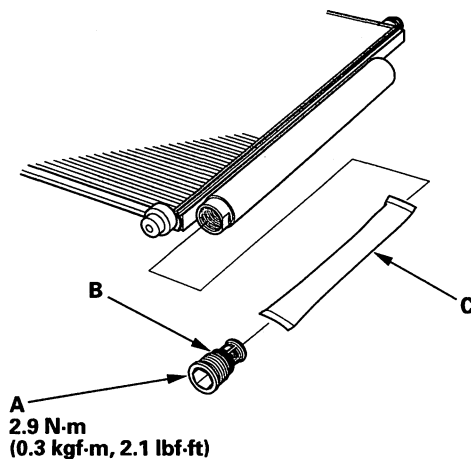
9. Install the A/C condenser in the reverse order of removal, and note these items:

- If you're installing a new A/C condenser, add refrigerant oil (DENSO ND-OIL 8) (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.
- Be careful not to damage the radiator or the A/C condenser fins when installing the A/C condenser.
- Charge the system (see page 21-132).
- Adjust the hood latch (see page 20-194).

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 21-128).
2. Remove the cap (A) from the bottom of the A/C condenser. Remove the O-ring (B) and the desiccant (C).



3. Install the receiver/dryer in the reverse order of removal, and note these items:
- Replace the O-rings with new ones, and apply a thin coat of refrigerant oil (DENSO ND-OIL 8) before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.
 - Install the cap to the specified torque. It is made of resin and can be easily stripped.

Climate Control

Refrigerant Recovery

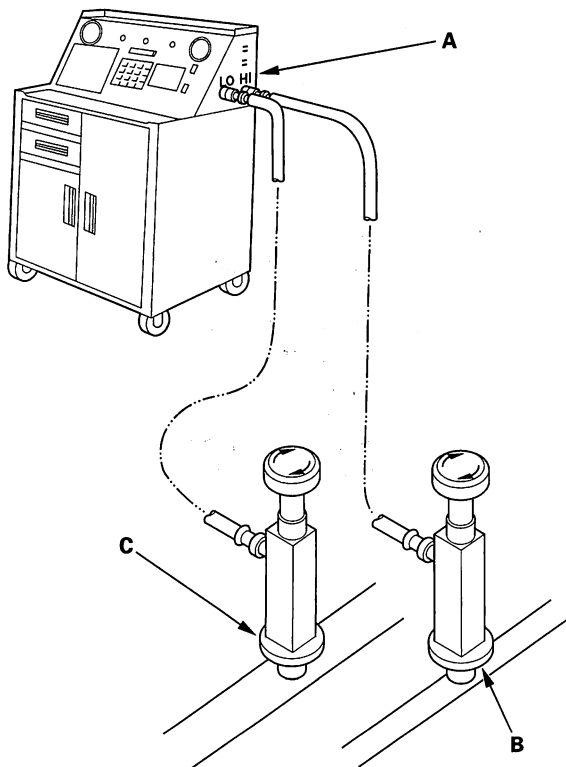
⚠ CAUTION

- 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.



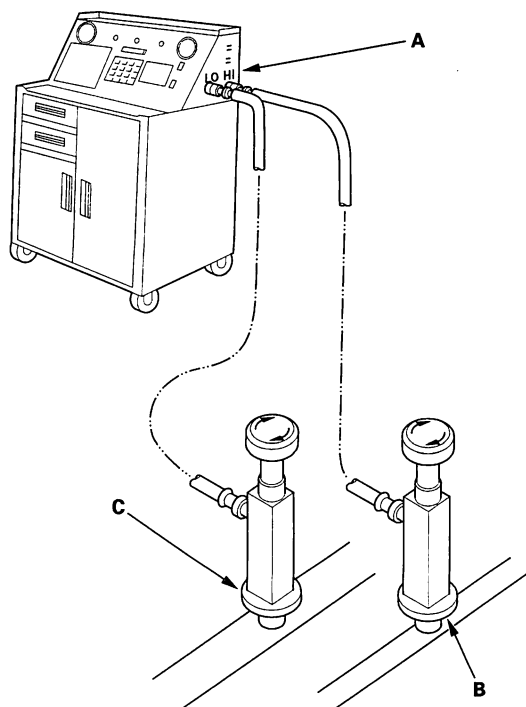
System Evacuation

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 21-133).

Climate Control

System Charging

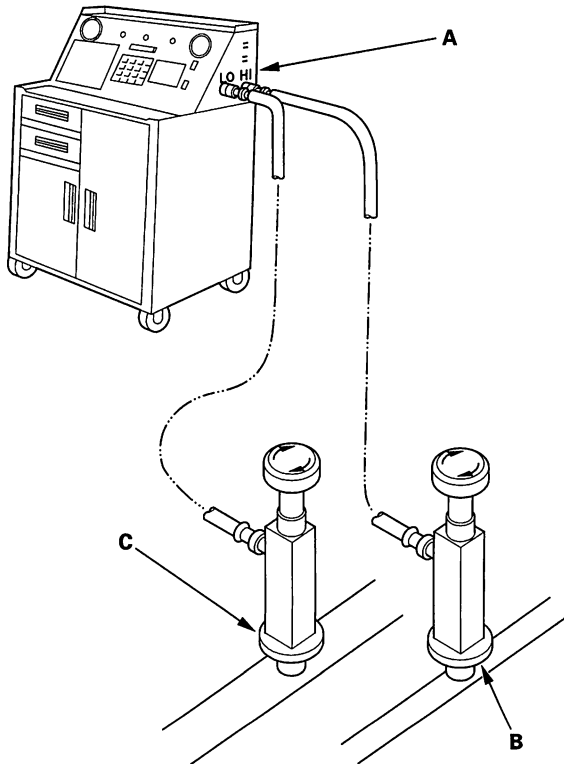
⚠ CAUTION

- 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 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.



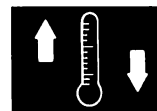
2. Evacuate the system (see page 21-131).
3. Add the same amount of new refrigerant oil to the system that was removed during recovery. Use only DENSO ND-OIL 8 refrigerant oil.
4. Charge the system with the specified amount of R-134a refrigerant. Do not overcharge the system; the A/C compressor will be damaged.

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

Refrigerant Capacity:

600 to 650 g
0.60 to 0.65 kg
1.32 to 1.43 lbs
21.2 to 22.9 oz

5. Check for refrigerant leaks (see page 21-133).
6. Check the system performance (see page 21-134).



Refrigerant Leak Test

Special Tools Required

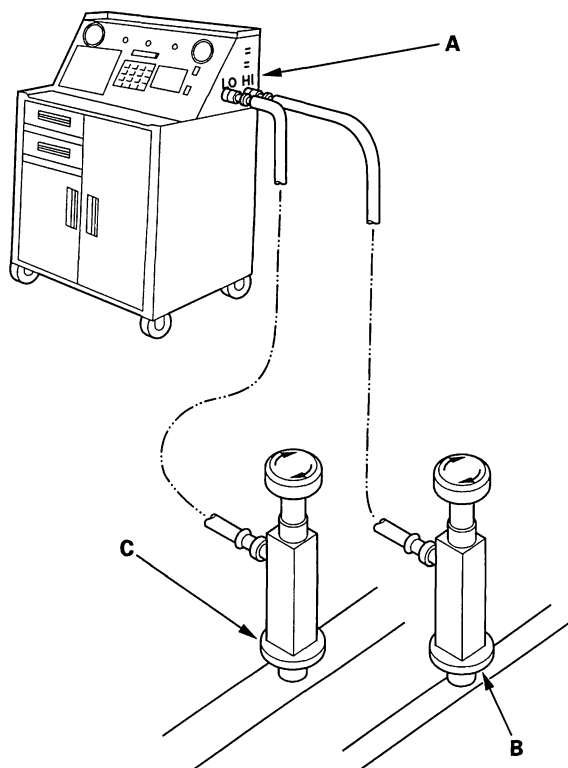
Leak detector, Honda Tool and Equipment YGK-H-10PM or commercially available

⚠ 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:

600 to 650 g
0.60 to 0.65 kg
1.32 to 1.43 lbs
21.2 to 22.9 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.

Climate Control

A/C System Test

Performance Test

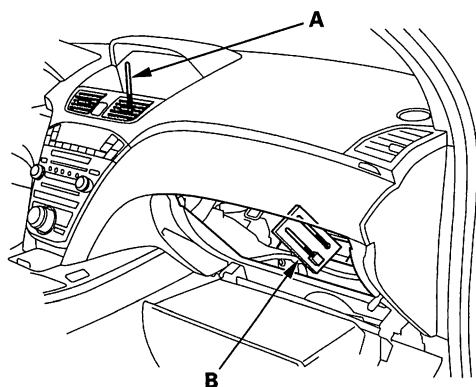
CAUTION

- 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 right side, then let the glove box hang down (see page 20-125).
 4. Insert a thermometer (A) in the center vent.

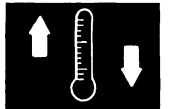


5. Place a thermometer (B) near the blower unit's recirculation inlet duct.

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.
- Run the engine 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.

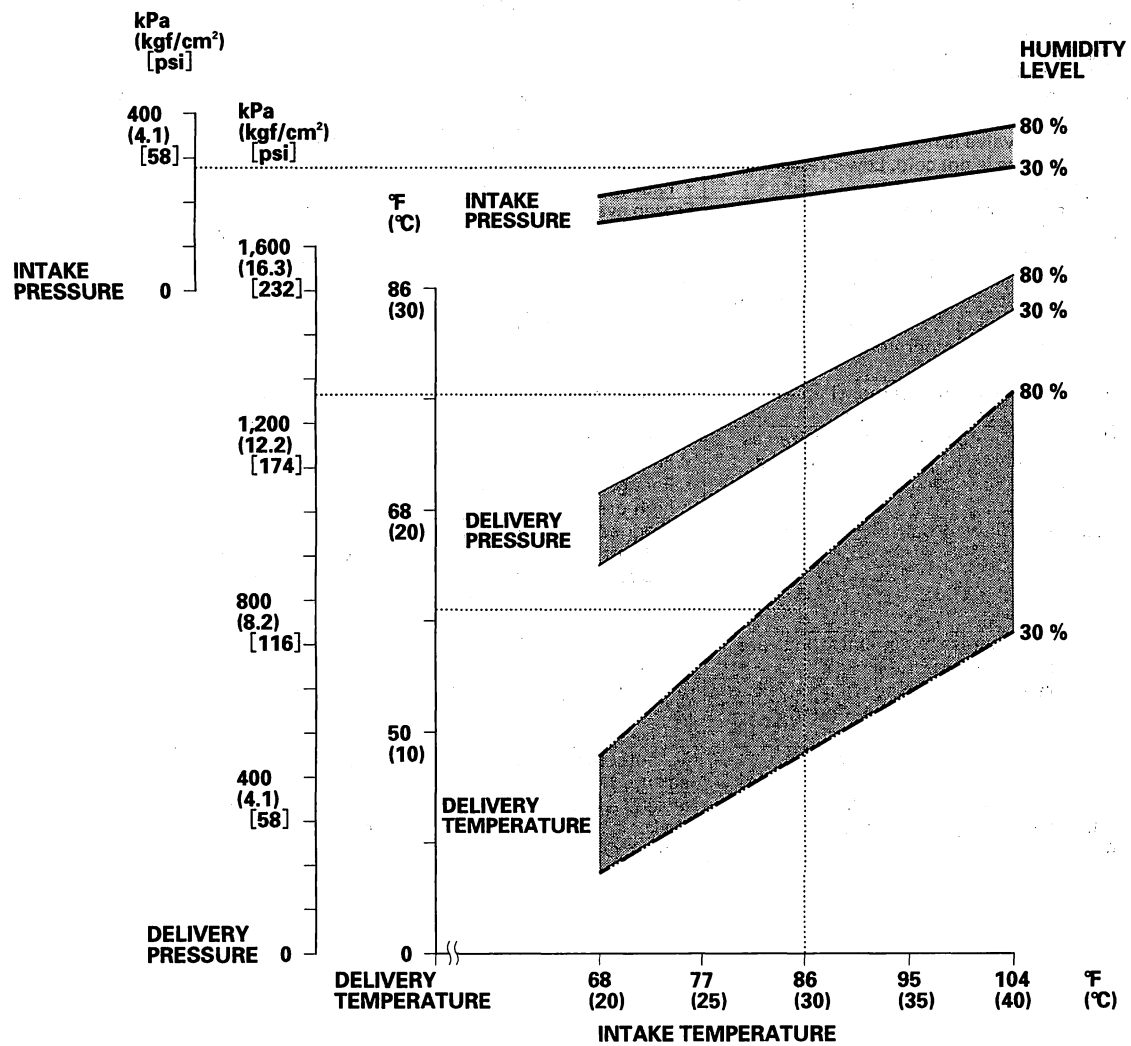


8. Refer to the inspection data.

Inspection data

Example Intake temperature (dry): 86 °F (30 °C) Humidity level 70 %
 Intake temperature (wet): 77.9 °F (25.5 °C)
 Delivery temperature: 59.9 °F (15.5 °C)
 Delivery pressure: 1,265 kPa (12.9 kgf/cm²) (184 psi)
 Intake pressure: 280 kPa (2.9 kgf/cm²) (41 psi)

Results: Within normal range



(cont'd)

BACK

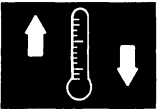
21-135

Climate Control

A/C System Test (cont'd)

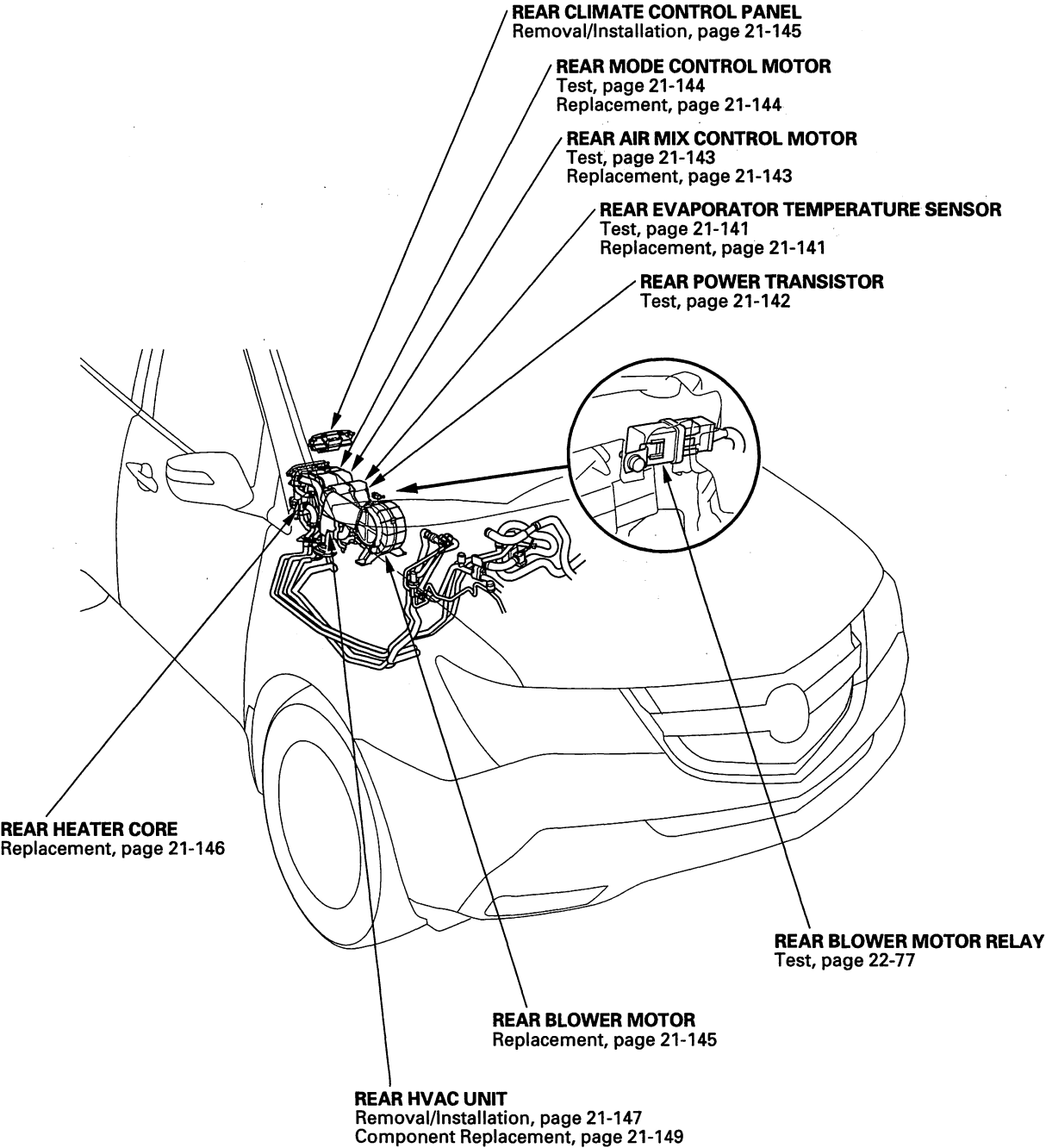
Pressure Test

Test results	Related symptoms	Probable cause	Remedy
Discharge (high) pressure abnormally high	After stopping A/C compressor, pressure drops about 196 kPa (2.0 kgf/cm ² , 28 psi) quickly, and then falls gradually.	Air in system	Recover, evacuate (see page 21-130), and recharge with specified amount (see page 21-132).
	Reduced or no airflow through A/C condenser.	- Clogged 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.
	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.
Suction (low) pressure abnormally low	Discharge temperature is low, and the airflow from vents is restricted.	Frozen evaporator	Run the fan with A/C compressor off, then check evaporator temperature sensor.
	Expansion valve is frosted.	Clogged expansion valve	Clean or replace.
	Receiver/dryer outlet is cool, and inlet is warm (should be warm during operation).	Clogged receiver/dryer	Replace.
	Low-pressure hose and service port are cooler than the temperature around evaporator.	Expansion valve open too long	Repair or replace.
Suction pressure abnormally high	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.
	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 high	Low-pressure hose and metal fittings 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 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.



Rear Climate Control

Component Location Index

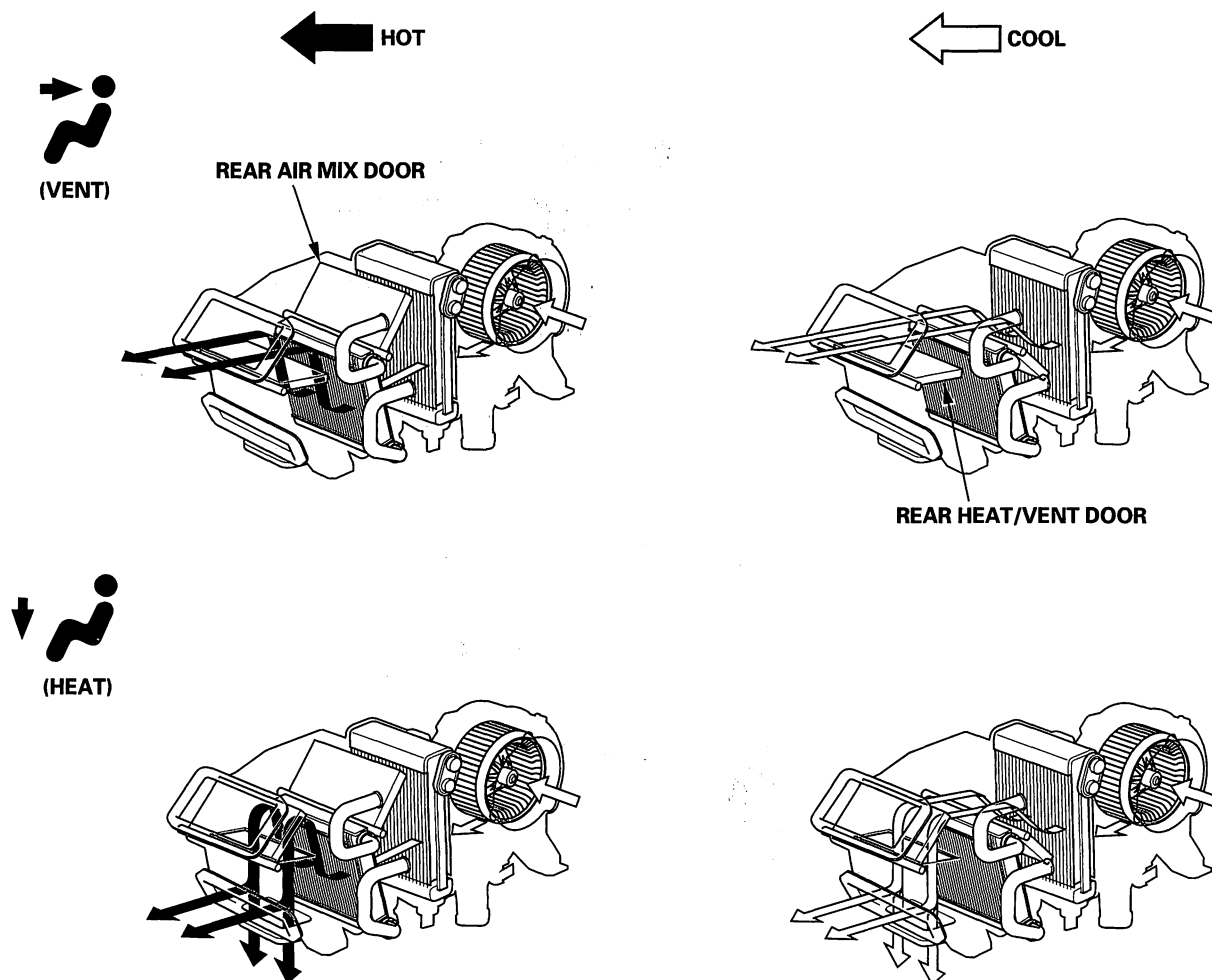


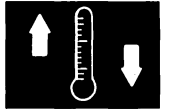
cardiagn.com

Rear Climate Control

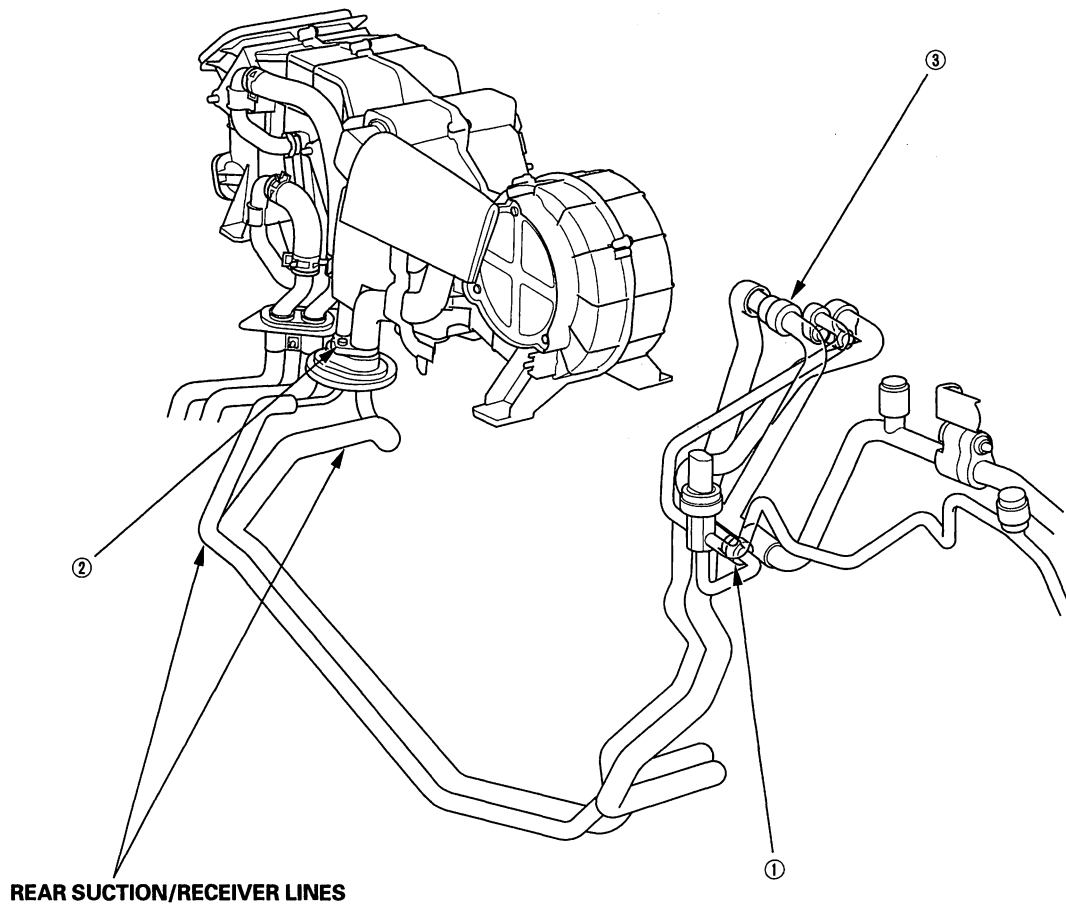
System Description

Rear Climate Control Door Positions





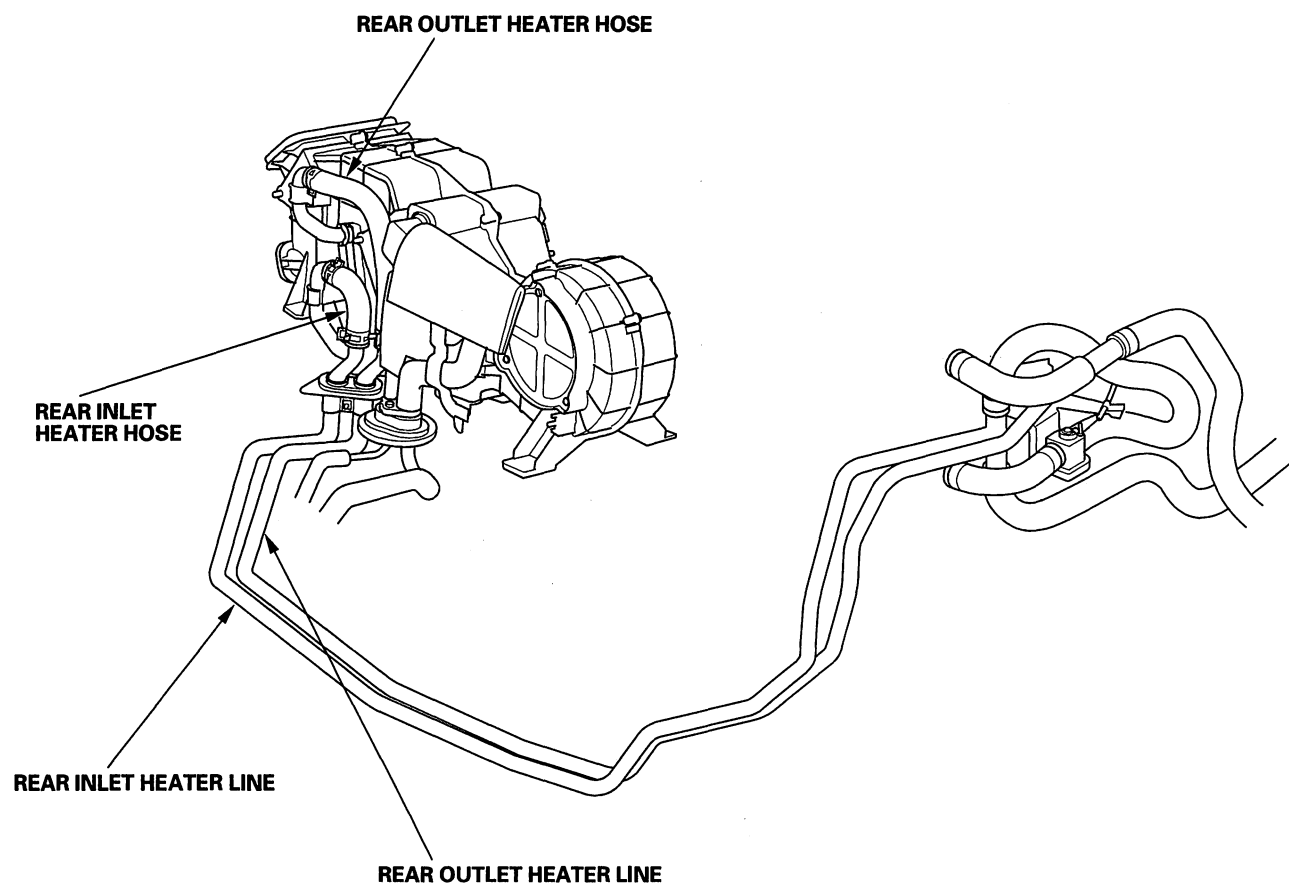
Rear A/C Line Replacement



- ① Front receiver line to the rear receiver line (16 x 1.5 mm): 13.2 N·m (1.4 kgf·m, 9.8 lbf·ft)
- ② Rear suction/receiver lines to rear evaporator (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
- ③ Front suction line to rear suction line (24 x 1.5 mm): 31.9 N·m (3.3 kgf·m, 23.5 lbf·ft)

Rear Climate Control

Rear Heater Line Replacement

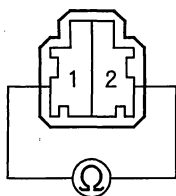




Rear Evaporator Temperature Sensor Test

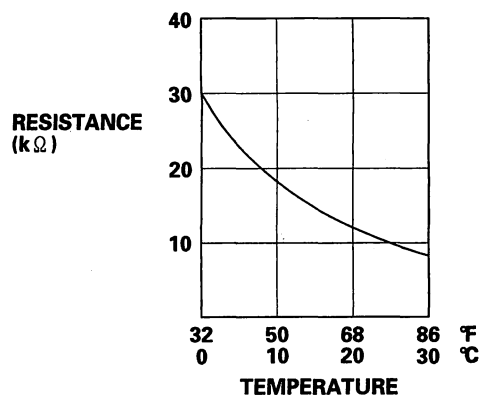
1. Remove the rear evaporator temperature sensor (see page 21-141).
2. Dip the sensor in ice water, and measure the resistance between its terminals.

REAR 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.

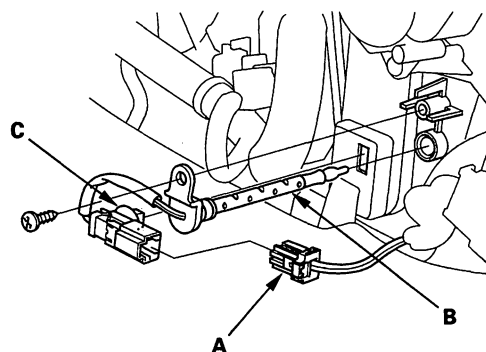


5. If the resistance is not as specified, replace the rear evaporator temperature sensor (see page 21-141).

Rear Evaporator Temperature Sensor Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. Remove the center console (see page 20-107).
2. Disconnect the 2P connector (A) from the rear evaporator temperature sensor (B), then remove the connector clip (C). Remove the self-tapping screw and the rear evaporator temperature sensor from the rear HVAC unit.



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

Rear Climate Control

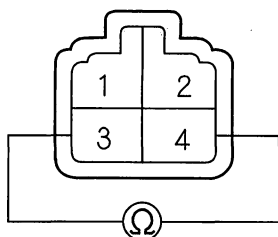
Rear Power Transistor Test

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

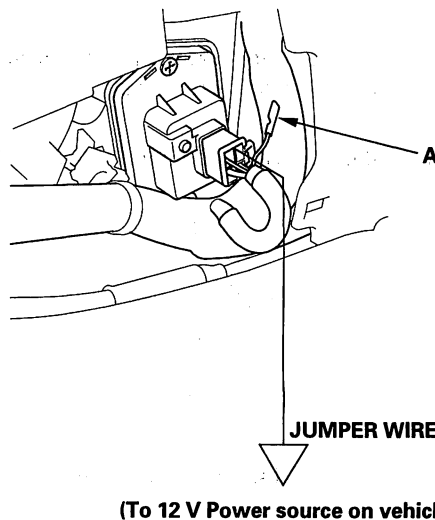
1. Remove the driver's seat (see page 20-141).
2. Remove the driver's center console trim (see page 20-107).
3. Disconnect the 4P connector from the rear power transistor.
4. Measure the resistance between the No. 3 and No. 4 terminals of the rear power transistor. It should be about 1.5 k Ω .
 - If the resistance is within the specifications, go to step 5.
 - If the resistance is not within the specifications, replace the rear power transistor.

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

REAR POWER TRANSISTOR



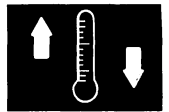
5. Carefully release the lock tab on the No. 1 terminal (BLU) (A) in the 4P connector, then remove the terminal and insulate it from body ground.



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

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

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



Rear Air Mix Control Motor Test

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

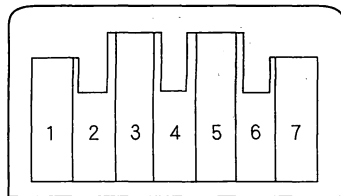
1. Disconnect the 7P connector from the rear air mix control motor.

NOTICE

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

2. Connect battery power to the No. 1 terminal of the rear air mix control motor, and ground the No. 2 terminal; the rear air mix control motor should run, and stop at Max Hot. If it doesn't, reverse the connections; the rear air mix control motor should run, and stop at Max Cool. When the rear air mix control motor stops running, disconnect battery power immediately.

REAR AIR MIX CONTROL MOTOR



3. If the rear air mix control motor did not run in step 2, remove it, then check the rear air mix control linkage and door for smooth movement.
 - If the linkage and door move smoothly, replace the rear air mix control motor (see page 21-143).
 - If the linkage or door sticks or binds, repair them as needed.
 - If the rear 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 .
5. Reconnect the rear 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 0.5 V

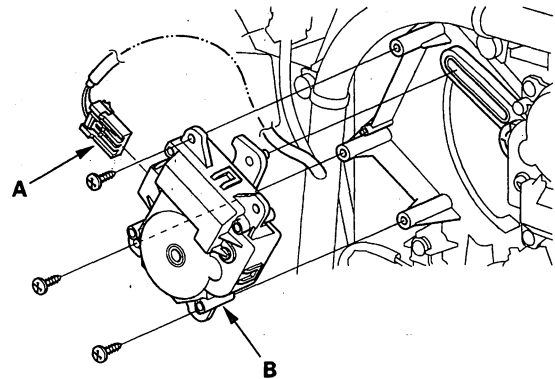
Max Hot: about 4.5 V

7. If either the resistance or voltage readings are not as specified, replace the rear air mix control motor (see page 21-143).

Rear Air Mix Control Motor Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. Remove the center console (see page 20-107).
2. Disconnect the 7P connector (A) from the rear air mix control motor (B). Remove the self-tapping screws and the rear air mix control motor from the HVAC 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.

Rear Climate Control

Rear Mode Control Motor Test

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

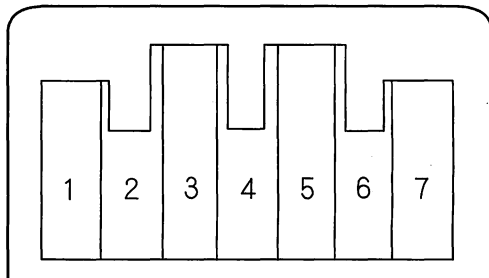
1. Disconnect the 7P connector from the rear mode control motor.

NOTICE

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

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

REAR MODE CONTROL MOTOR

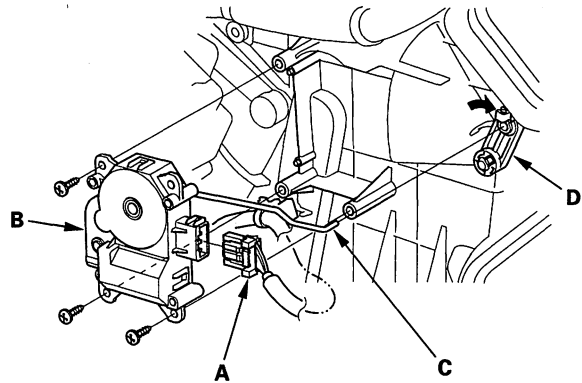


3. If the rear mode control motor did not run in step 2, remove it, then check the rear mode control linkage and door for smooth movement.
 - If the linkage and door move smoothly, replace the rear mode control motor (see page 21-144).
 - If the linkage or door stick or bind, repair them as needed.

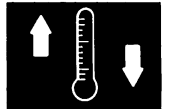
Rear Mode Control Motor Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. Remove the center console (see page 20-107).
2. Disconnect the 7P connector (A) from the rear mode control motor (B). Remove the rod (C) of the rear mode control motor from the rear mode control linkage (D). Remove the self-tapping screws and the rear mode control motor from the rear HVAC unit.



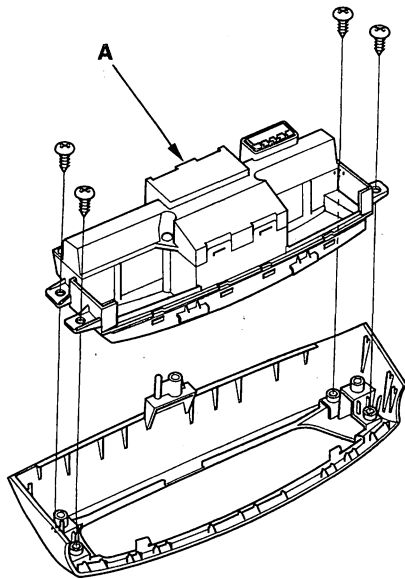
3. Install the motor in the reverse order of removal. Make sure the pin on the motor is properly engaged with the linkage. After installation, make sure the motor runs smoothly.



Rear Climate Control Panel Removal/Installation

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. Remove the HVAC trim (see page 20-110).
2. Remove the self-tapping screws and the rear climate control panel (A).

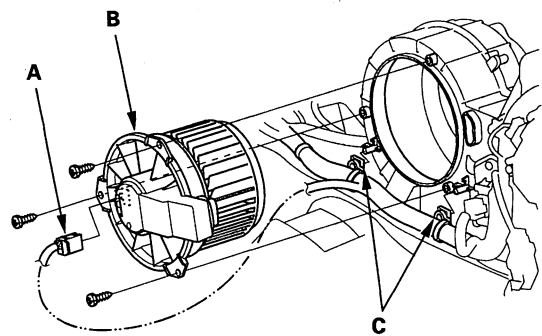


3. Install the control panel in the reverse order of removal. After installation, operate the various functions to see whether works properly.
4. Run the self-diagnostic function to confirm that there are no problems in the system (see page 21-10).

Rear Blower Motor Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. Remove the center console (see page 20-107).
2. Disconnect the 2P connector (A) from the rear blower motor (B), then remove the wire harness clips (C). Remove the self-tapping screws and the rear blower motor from the rear HVAC unit.



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

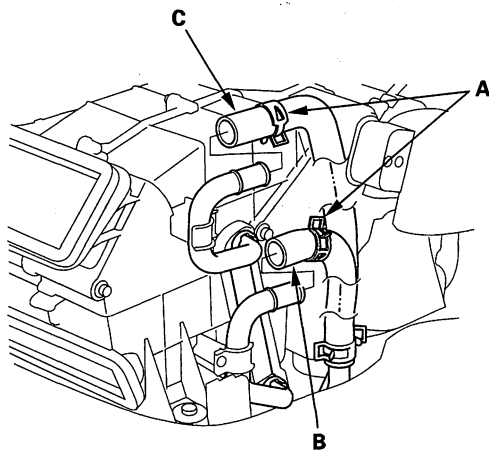
Rear Climate Control

Rear Heater Core Replacement

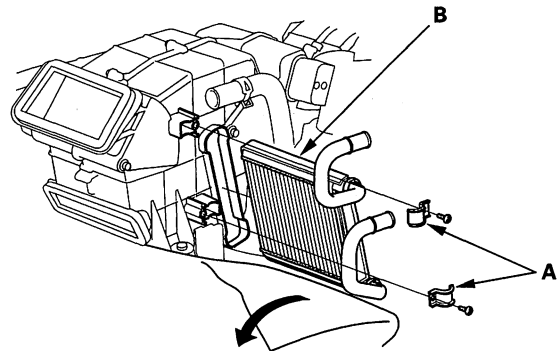
SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. When the engine is cool, drain the engine coolant from the radiator (see page 10-6).
2. Remove the center console (see page 20-107).
3. Slide the hose clamps (A) back, then disconnect the rear inlet heater hose (B) and the rear outlet heater hose (C) from the rear heater core. 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.

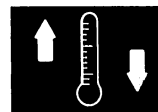


4. Turn over the carpet. Remove the self-tapping screws and the clamps (A). Carefully pull out the rear heater core (B) without bending lines.



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

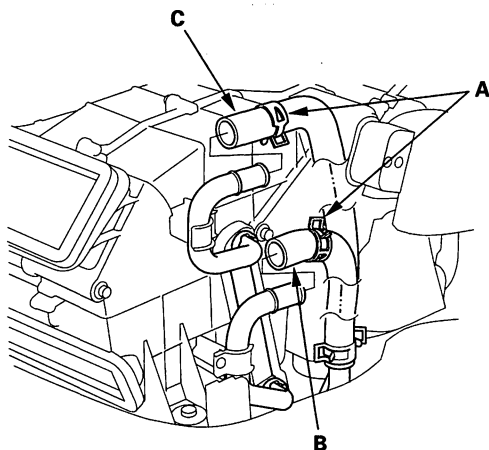
- Do not interchange the inlet and outlet heater hoses, and install the hose clamps securely.
- Refill the cooling system with engine coolant (see page 10-6).
- Make sure that there is no coolant leakage.
- Make sure that there is no air leakage.



Rear HVAC Unit Removal/Installation

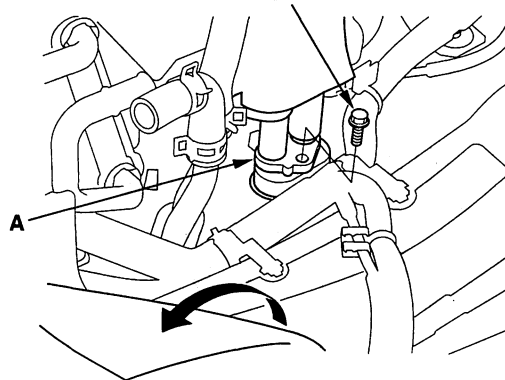
SRS components are located in this area. Review the SRS component locations (see page 24-18) and the precautions and procedures (see page 24-20) before doing repairs or service.

1. When the engine is cool, drain the engine coolant from the radiator (see page 10-6).
2. Recover the refrigerant with a recovery/recycling/charging station (see page 21-130).
3. Remove the center console (see page 20-107).
4. Slide the hose clamps (A) back, then disconnect the rear inlet heater hose (B) and the rear outlet heater hose (C) from the rear heater core. 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.

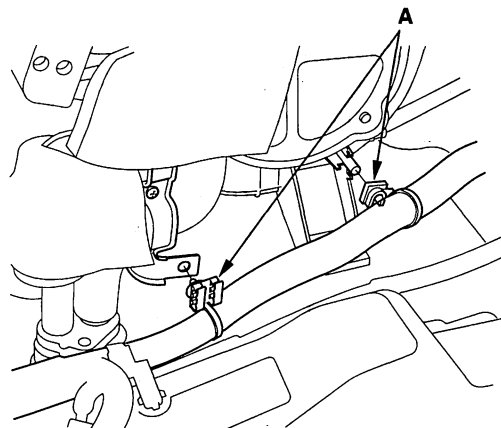


5. Turn over the carpet. Remove the bolt, then disconnect the rear suction/receiver lines (A).

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



6. Remove the harness clips (A).

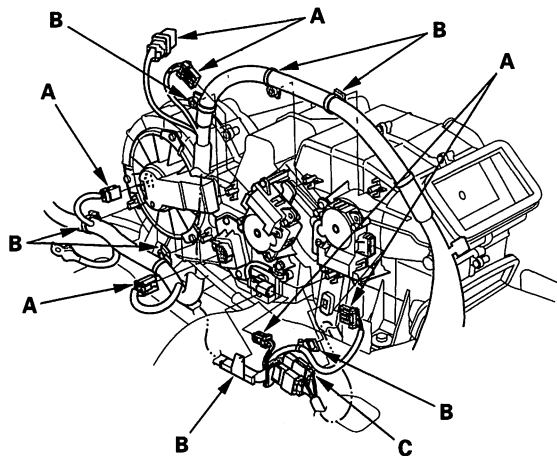


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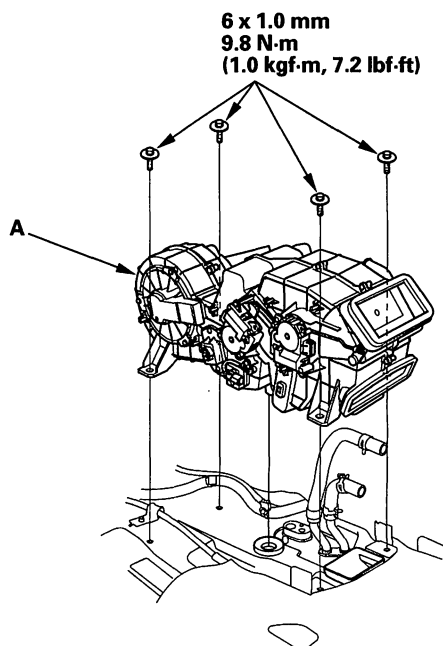
Rear Climate Control

Rear HVAC Unit Removal/Installation (cont'd)

7. Disconnect the connectors (A) from the rear mode control motor, the rear air mix control motor, rear evaporator temperature sensor, rear power transistor, and rear blower motor, then remove the harness clips (B) and connector clip (C).



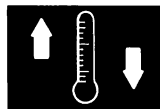
8. Remove the mounting bolts and rear HVAC unit (A). Plug or cap the lines immediately after disconnecting them to avoid moisture and dust contamination.



9. Install the rear heater core, and the rear evaporator core in the reverse order of removal.

10. Install the 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 10-6).
- Make sure that there is no coolant leakage.
- Make sure that there is no air leakage.
- If you're installing a new rear evaporator, add refrigerant oil (DENSO ND-OIL 8) (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, replace 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 21-132).

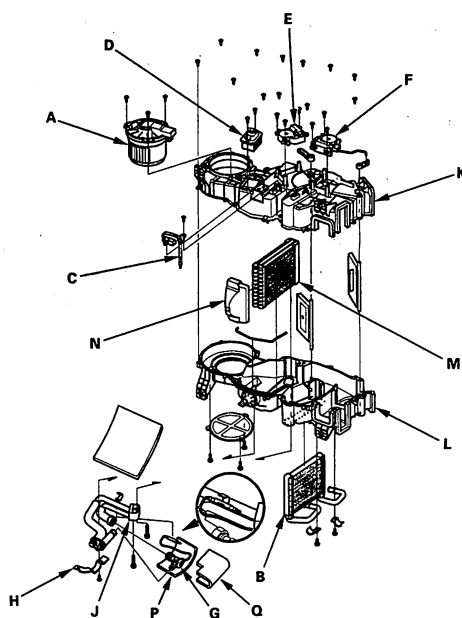


Rear HVAC Unit Component Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-18), and the precautions and procedures (see page 24-20) before doing repairs or service.

NOTE: The rear blower motor (A), the rear heater core (B), the rear evaporator sensor (C), the rear power transistor (D), the rear air mix control motor (E), the rear mode control motor (F), and the rear expansion valve (G) can be replaced without removing the rear HVAC unit.

1. Remove the self-tapping screw and the rear evaporator sensor. Remove the self-tapping screw and the clamp (H), then remove the bolts and the rear evaporator lines (J) with the rear expansion valve. If necessary, remove the rear expansion valve. Use a second wrench to hold the other fitting on the valve so the rear evaporator lines won't twist. Leave the first fitting loosely connected so you can use it to hold the valve while you loosen the second fitting.



2. If necessary, remove the rear blower motor (see page 21-145), the rear heater core (see page 21-146), the rear power transistor, the rear air mix control motor (see page 21-143), and the rear mode control motor (see page 21-144).
3. Remove the self-tapping screws, and carefully separate the left housing (K) from the right housing (L). Remove the rear evaporator core (M) and plate (N).
4. Reassemble the unit in the reverse order of disassembly, and note these items;
 - Replace all 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.
 - Make sure no air is leaking from the left upper housing and the right upper housing fitting and from the upper housings and the lower housing fitting.
 - Install the capillary tube (P) directly against the outlet line, and wrap it with electrical tape (Q).
 - Before reassembly, make sure that the rear air mix control linkage and door move smoothly without binding.
 - Before reassembly, make sure that the rear mode control linkage and door move smoothly without binding.
 - After reassembly, make sure the rear air mix control motor runs smoothly (see page 21-143).
 - After reassembly, make sure the rear mode control motor runs smoothly (see page 21-144).
 - Make sure that there is no coolant leakage.

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

The Acura MDX 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, 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 requires 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 should be done 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, side impact sensors, or roll rate sensor 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.