How to Troubleshoot the Climate Control System

How to Check for DTCs With the HDS

NOTE:

- There are three methods used to check for DTCs. The recommended method is to use the Honda Diagnostic System (HDS) with the appropriate software, plugged into the data link connector (DLC).
- The second method is to run the self-diagnostic function built into the climate control unit.
- The third method is to use B-CAN system diagnosis test mode A.

1. Make sure the vehicle ignition is OFF mode.

2. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.

3. Press the engine start/stop button to select the ON mode.

4. Make sure the HDS communicates with the vehicle and the climate control unit. If it does not, go to the DLC circuit troubleshooting.

5. Select BODY ELECTRICAL in the System Selection Menu.

6. Select HVAC/Climate Control in the Body Electrical System Select.

7. Select DTCs in the HVAC/Climate Control Mode Menu.

8. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting. If no DTCs are indicated, do all system scan, then 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

NOTE: This method is only available if the HDS can communicate with the climate control unit.

1. Make sure the vehicle ignition is OFF mode.
2. Connect the HDS to the DLC.
3. Press the engine start/stop button to select the ON mode.
4. Make sure the HDS communicates with the vehicle and the climate control unit. If it does not, go to the DLC circuit troubleshooting.
5. Select BODY ELECTRICAL in the System Selection Menu.
6. Select HVAC/Climate Control in the Body Electrical System Select.
7. Select Inspection in the HVAC/Climate Control Mode Menu.
8. Select Climate Control Unit Self Test in the Inspection Menu.
9. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting.

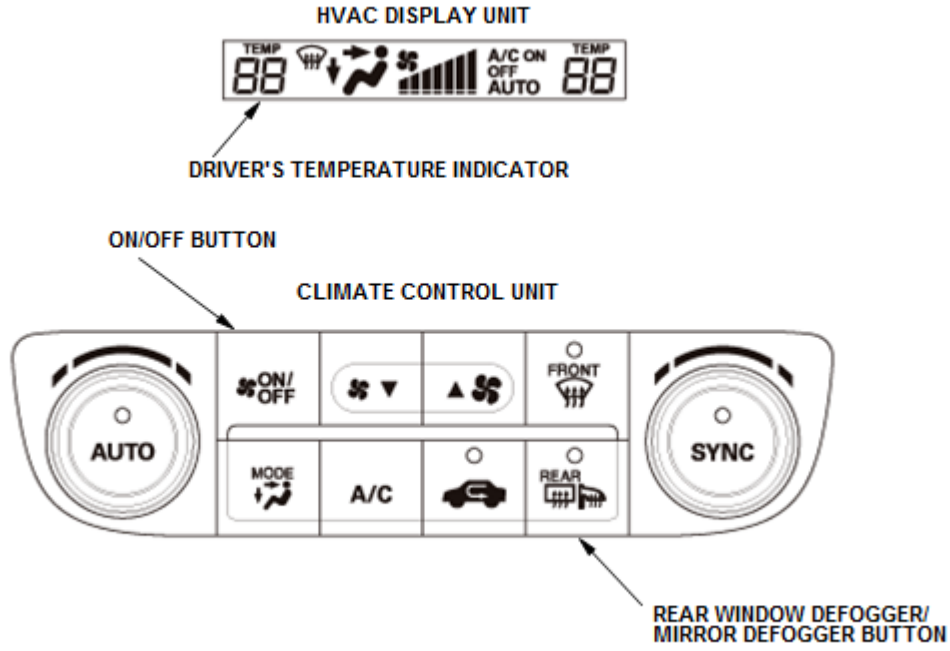
   NOTE:
   - After troubleshooting, clear the DTCs with the HDS.
   - For specific operations, refer to the user's manual that came with the HDS.

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. Press the engine start/stop button to select the OFF mode and then the ON mode.
2. Press and hold the ON/OFF button, then within 10 seconds press and release the REAR WINDOW DEFOGGER/MIRROR DEFOGGER button five times. Release the ON/OFF button.
3. ALL LCD segments come on for 2 seconds, then the self-diagnostic function 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 driver's temperature indicator flashes 88. Refer to checking for DTCs.
   - If there is more than one DTC, they are displayed one at a time in sequence followed by a pause (all the display indicator segments illuminate) between the DTCs.
   - If there are no problems detected, the system will flash no.



Canceling the Self-Diagnostic Function

4. Press the engine start/stop button to select the OFF mode 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.

How to Check the History DTCs

The climate control unit can record history DTCs. How to read the history DTC is as following:

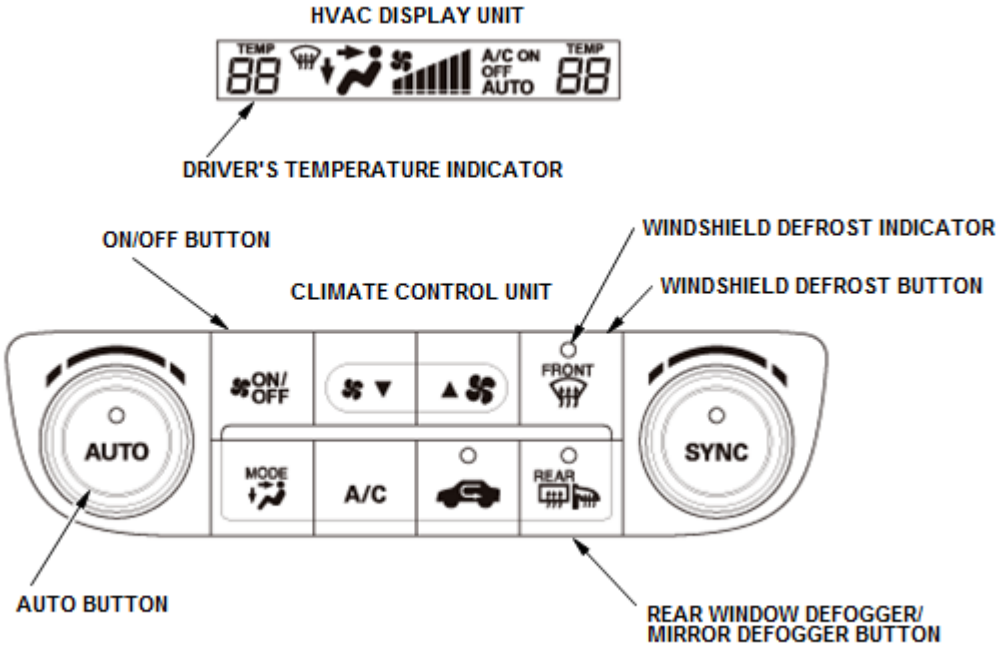
1. Press the engine start/stop button to select the OFF mode and then the ON mode.

2. Press and hold both the AUTO and ON/OFF buttons.

3. During press and hold both the AUTO and ON/OFF buttons, the history DTCs will be indicated.

   NOTE:

   - If there is any problem in the system, the driver's temperature indicator flashes 88. Refer to checking for DTCs.
   - If there is more than one DTC, they are displayed one at a time in sequence followed by a pause (all the display indicator segments illuminate) between the DTCs.
   - If there are no problems detected, the system will flash no.



Canceling the Read History DTCs

4. Press the engine start/stop button to select the OFF mode to cancel the read history DTCs. After completing the repair work, clear the DTCs.

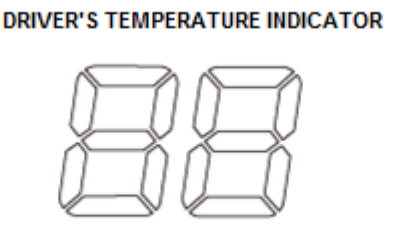
How to Clear the History DTCs

1. Press the engine start/stop button to select the OFF mode.
2. Press and hold both the AUTO and WINDSHIELD DEFROST buttons, then press the engine start/stop button to select the ON mode.
3. After about 5 seconds the windshield defrost indicator starts to blink, release the buttons.
4. Do the How to check the history DTCs to verify DTCs have been cleared.

Checking for DTCs

The driver's temperature indicator display indicates single or multiple DTCs. If no DTCs are present, the indicator remains will flash no.

NOTE: If the driver's temperature indicator segments 03, 05, 07, 09, 40, 43, 49, and 55 indicator are on at the same time, there may be an open in the sensor common ground wire.



DTC (Temperature Indicator Segments)	DTC	Detection Item
03	B1225	An open in the in-car temperature sensor circuit
04	B1226	A short in the in-car temperature sensor circuit
05	B1227	An open in the outside air temperature sensor circuit
06	B1228	A short in the outside air temperature sensor circuit
07	B1229	An open in the sunlight sensor circuit
08	B1230	A short in the sunlight sensor circuit
09	B1231	An open in the evaporator temperature sensor circuit
0A	B1232	A short in the evaporator temperature sensor circuit
40	B1233	An open in the air mix control motor circuit (driver's)
41	B1234	A short in the air mix control motor circuit (driver's)
42	B1235	A problem in the air mix control motor circuit, linkage, door, or motor (driver's)
43	B1236	An open in the passenger's air mix control motor circuit
44	B1237	A short in the passenger's air mix control motor circuit
45	B1238	A problem in the passenger's air mix control motor circuit, linkage, door, or motor
49	B121A	An open in the mode control motor circuit
4A	B121B	A short in the mode control motor circuit
4B	B1240	A problem in the mode control motor circuit, linkage, door, or motor
55	B2986	An open in the recirculation control motor circuit
56	B1220	A short in the recirculation control motor circuit
57	B2983	A problem in the recirculation control motor circuit, linkage, door, or motor
59	B1241	A problem in the blower motor circuit
80	U1280	Communication bus line error (BUS-OFF)
81	U128D	Climate control unit lost communication with gauge control module (ECT message)
83	U128D	Climate control unit lost communication with gauge control module (VSP message)
91	U1281	Lost communication with MICU (climate control unit)
C0	———	Climate control unit internal error

Displaying Sensor Inputs at the Climate Control Unit

The climate control unit has a mode that displays the 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.

Checks Before Using the Sensor Input Display Mode

1. Press the engine start/stop button to select the ON mode, and check the recirculation door function; press the RECIRCULATION button to switch from FRESH to RECIRC. The air volume and sound should change slightly.

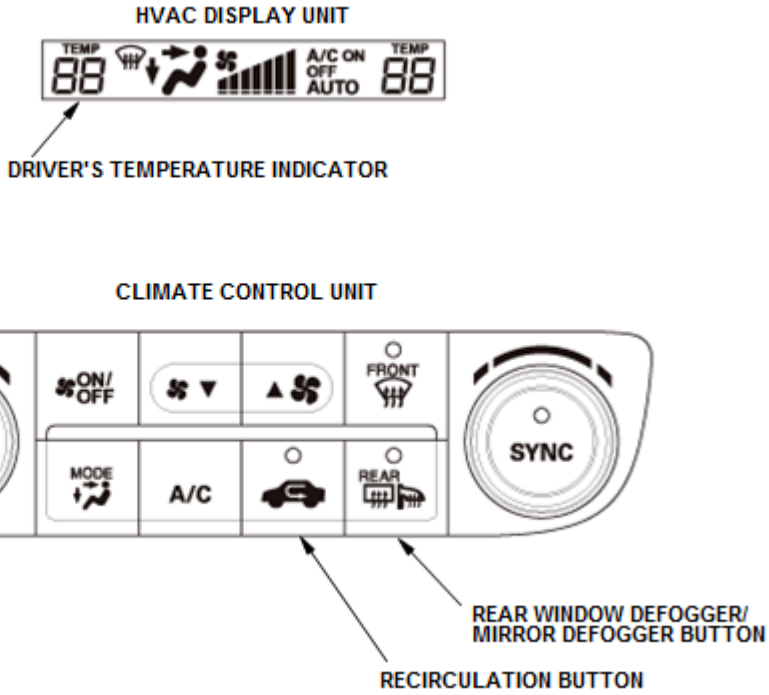
2. Set the TEMPERATURE CONTROL dial to the desired test temperature:

   - “Lo” temperature setting will default to MAX COOL, VENT, and RECIRC (A/C on) or FRESH (A/C off).
   - “Hi” temperature setting will default to MAX HOT, HEAT, HEAT/DEF, and FRESH.
   - 58 through 86 °F (14 through 30 °C) settings will use the automatic climate control logic.

3. Press the engine start/stop button to select the OFF mode.

Run the Sensor Input Display Mode

1. Press and hold both the AUTO and RECIRCULATION buttons, then start the engine.



2. Release both buttons. The driver's temperature indicator will flash the sensor number and then the value for that sensor. Record the value displayed.

3. To advance to the next sensor, press the REAR WINDOW DEFOGGER/MIRROR DEFOGGER button.

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 use the climate control self-diagnostic function.
- If necessary, compare the sensor input display to a known-good vehicle under the same test conditions.
- If the sensor displayed value is out of the normal range, refer to the sensor test or substitute a known-good sensor, and recheck.

Sensor	Item	Displayed Value
1	Mode positioning	%
2	In-car temperature	°C
3	Outside air temperature	°C
4	Solar radiation sensor value	10 kcal/m^2·h
5	Evaporator outlet air temperature	°C
6	Driver's air mix opening (low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
7	Passenger's air mix opening (low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
8	Recirculation control opening	% of opening
9	Vehicle speed (vehicle must be driven to display speed)	10 km/h
A	Engine coolant temperature	°C
b	Vent temperature air out (TAO) (driver's)	°C
d	Illumination duty	Step
H	Software version	—

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	129	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	153	77	170	87	189	97	207
58	136	68	154	78	172	88	190	98	208
59	138	69	156	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 -10
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 -56	-40 thru -49
E9	-50 or less	-58 or less	-50 or less

Alphanumeric Conversion Table (Mode Positioning)

Display Reading (Alphanumeric)	Mode Position
0	VENT
18	HEAT/VENT-1
33	HEAT/VENT-2
50	HEAT
66	HEAT/DEF-1
80	HEAT/DEF-2
F0	DEF

4. To cancel the sensor input display mode, press the AUTO button or press the engine start/stop button to select the OFF mode.