

# Diagnostic Chart for Self-Diagnosis

## HVAC SYSTEM (DIAGNOSTICS)

### 1. A/C CONTROL SYSTEM SELF-DIAGNOSIS

Step	Check	Yes	No
<b>1 SET SELF-DIAGNOSIS MODE BY OPERATING A/C CONTROL PANEL.</b> 1) Turn the ignition switch to OFF. 2) Start the engine while holding down the AUTO switch and FRESH/RECIRC switch. <b>NOTE:</b> Self-diagnosis can also be performed with ignition switch ON, but start the engine because observing the compressor operation is difficult. 3) All the indicators blink four times.	Does the self-diagnosis function operate?	Go to step 2.	<Ref. to AC(diag)-16, A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE, Diagnostics for A/C System Malfunction.>
<b>2 CHECK EACH SENSOR AND POTENTIOMETER.</b> 1) After the indicators stop blinking, automatically change to the Inspection Mode of sensor and potentiometer. <b>NOTE:</b> Display items can be changed each time the A/C switch is pressed. (Step Operation) 2) When malfunction occurs in each sensor and potentiometer, codes are displayed on the screen. When no malfunction occurs in each sensor and potentiometer, code "20" is displayed on the screen. 3) Identify defective sensors according to the sensor check table. <Ref. to AC(diag)-15, SENSOR CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Are other codes except "20" displayed?	Repair the defective sensor.	Go to step 3.
<b>3 CHECK EACH ACTUATOR, BLOWER FAN AND COMPRESSOR.</b> 1) After completing each sensor and potentiometer inspection, change to the Inspection Mode of actuator, blower fan and compressor by pressing the defroster switch. 2) Each mode will change and operate automatically every four seconds. <b>NOTE:</b> Operation mode items can be changed each time the A/C switch is pressed. (Step Operation) 3) Check the operation of actuator, blower fan and compressor in each mode according to the operating mode table. <Ref. to AC(diag)-15, OPERATING MODE TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Do the actuator, blower fan and compressor operate as described in the operating mode table?	A/C control system is normal. Press the OFF switch and complete the self-diagnosis function.	Repair the defective part in accordance with each diagnostic chart. <Ref. to AC(diag)-16, Diagnostics for A/C System Malfunction.>

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## 2. SENSOR CHECK TABLE

NOTE:

When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor with the sun shining on it.

Display screen (Malfunction at present)	Sensor	Trouble contents
21/AUTO blinking	In-vehicle sensor	Open
-21/AUTO blinking		Short
22/AUTO blinking	Ambient sensor	Sensor trouble or communication failure
23/AUTO blinking	Evaporator sensor	Open
-23/AUTO blinking		Short
24/AUTO blinking	Engine coolant temperature sensor	Sensor trouble or communication failure
25 blinking	Sunload sensor	Open *1
-25/AUTO blinking		Short
26/AUTO blinking	Air mix door actuator — potentiometer (driver's)	Open
-26/AUTO blinking	Air mix door actuator — potentiometer (passenger's)	Open
27/AUTO blinking	Air mix door actuator — potentiometer (driver's)	Short
-27/AUTO blinking	Air mix door actuator — potentiometer (passenger's)	Short
28/AUTO blinking	Mode door actuator — potentiometer	Open
29/AUTO blinking		Short
42/AUTO blinking	Pressure sensor	Open *1
-42/AUTO blinking		Short circuit *1
43/AUTO blinking	Flow sensor	Open *1
-43/AUTO blinking		Short circuit *1
44/AUTO blinking		Malfunction
45/AUTO blinking	Sunload sensor	Open
-45/AUTO blinking		Short
46/AUTO blinking	Variable valve	Open or short circuit *1
47/AUTO blinking	Air mix door actuator (driver's)	Lock
48/AUTO blinking	Air mix door actuator (passenger's)	Lock
49/AUTO blinking	Mode door actuator	Lock
53/AUTO blinking	Control panel communication	Faulty*1
54/AUTO blinking	CAN communication	Bus off*1:
55/AUTO blinking	CAN communication	Communication error*1
20 blinking	When all conditions are normal	

\*1: Displays current malfunction only.

## 3. OPERATING MODE TABLE

Display screen	Blower fan	Mode door	FRESH/RECIRC door	A/C compressor	Air mix door
31	LO	FACE	FRESH	OFF	Maximum cool
32	LO	FACE	RECIRC	ON	Maximum cool
33	M1	FACE	RECIRC	ON	Maximum cool
34	M1	B/L	FRESH	ON	50%
35	M1	FOOT	FRESH	ON	50%
36	M3	FOOT	FRESH	ON	Maximum hot
37	M3	F/D	FRESH	ON	Maximum hot
38	HI	DEF	FRESH	ON	Maximum hot