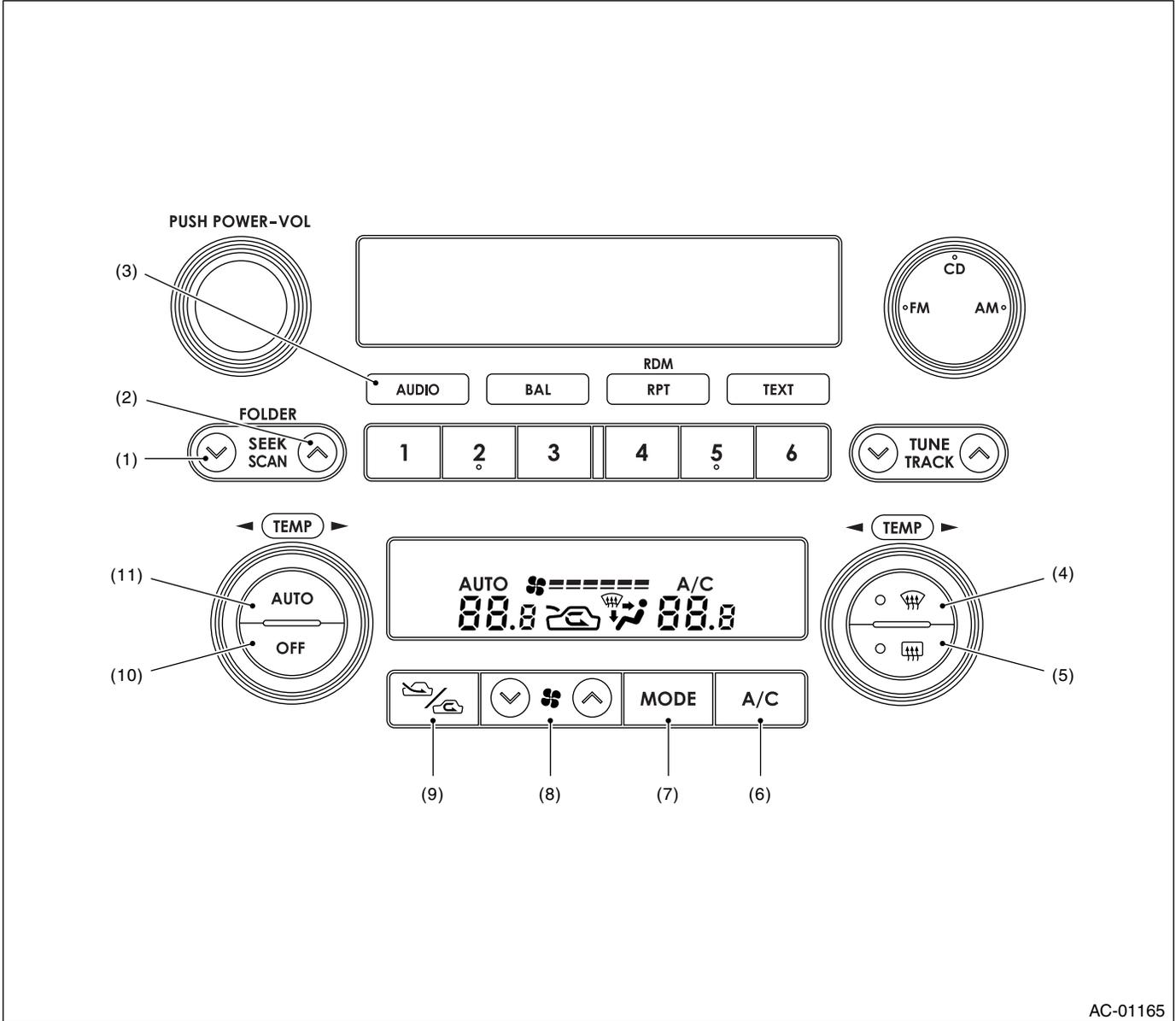


Diagnostic Chart for Self-Diagnosis

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

5. Diagnostic Chart for Self-Diagnosis

A: OPERATION



- | | | |
|----------------------|---------------------------------|-------------------------|
| (1) SEEK DOWN switch | (5) Rear window defogger switch | (9) FRESH/RECIRC switch |
| (2) SEEK UP switch | (6) A/C switch | (10) OFF switch |
| (3) AUDIO switch | (7) Air flow control switch | (11) AUTO switch |
| (4) Defroster switch | (8) Fan switch | |

NOTE:

For A/C system self-diagnosis, there is one that checks the control panel, and the other that checks the whole control system (sensor, actuator, blower motor, etc.). Perform the self-diagnosis for control panel first, and then perform the self-diagnosis for control system.

Diagnostic Chart for Self-Diagnosis

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

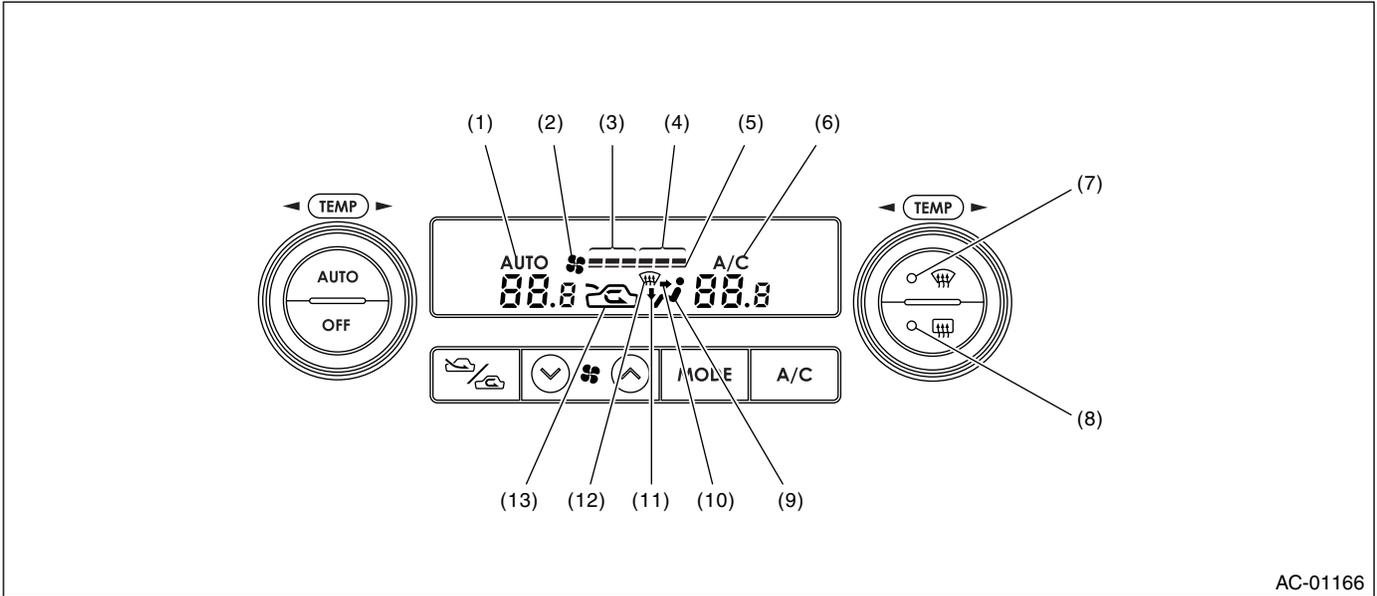
1. A/C CONTROL PANEL SELF-DIAGNOSIS

| Step | Check | Yes | No |
|---|---|--|--|
| 1 SET SELF-DIAGNOSIS MODE BY OPERATING A/C CONTROL PANEL. 1) Turn the ignition switch from OFF to ACC, and wait for 2 seconds. 2) Turn the ignition switch to ON with the AUDIO switch and SEEK UP switch pressed. 3) The screen display and indicator illuminate. | Does the self-diagnosis mode operate? | Go to step 2. | <Ref. to AC(diag)-15, A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE, Diagnostics for A/C System Malfunction.> |
| 2 CHECK DISPLAY AND INDICATOR. Check if all the screen display and indicators come on and then go off. NOTE: "11" — "14" is displayed in the screen when malfunction occurs. | Do all the screen display and indicators come on and then go off? | Go to step 3. | Replace the A/C control panel. |
| 3 CHECK SWITCH AND TEMPERATURE CONTROL DIAL INPUT. According to the switch check table, press each switch or turn the temperature control dial, and check the relative screen display and indicators illuminate. <Ref. to AC(diag)-12, SWITCH CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.> | Does the screen display related to each switch and dial input illuminate? | Go to step 4. | Replace the A/C control panel. |
| 4 CHECK A/C CONTROL PANEL COMMUNICATION. 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C control module harness connector. 3) Using a suitable lead wire, short the terminal No. 15 and No. 16 of auto A/C control module harness connector (B283). 4) Turn the ignition switch from OFF to ACC, and wait for 2 seconds. 5) Turn the ignition switch to ON with the AUDIO switch and SEEK SOWN switch pressed. 6) When no malfunction occurs in the control panel communication, "CL" is displayed in the screen; and when malfunction occurs, "OP" is displayed. | Is "CL" displayed in the screen? | A/C control panel is normal. Turn the ignition switch to OFF, and connect the auto A/C control module harness connector. | Replace the A/C control panel. |

Diagnostic Chart for Self-Diagnosis

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

2. SWITCH CHECK TABLE



AC-01166

| Switch | Display screen | Switch | Display screen |
|-------------------------|----------------|---|----------------|
| A/C switch | (6) | FAN switch (+) | (4) |
| AUTO switch | (1) | FAN switch (-) | (3) |
| Air flow control switch | (9) | Driver's side temperature control dial | (10) (12) |
| FRESH/RECIRC | (13) | Passenger's side temperature control dial | (11) (12) |
| Defroster switch | (7) | OFF switch | (2) (5) |
| Rear defogger switch | (8) | | |

Diagnostic Chart for Self-Diagnosis

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

3. A/C CONTROL SYSTEM SELF-DIAGNOSIS

| Step | Check | Yes | No |
|---|---|--|--|
| <p>1 SET SELF-DIAGNOSIS MODE BY OPERATING A/C CONTROL PANEL.</p> <p>1) Turn the ignition switch from OFF to ACC, and wait for 2 seconds.</p> <p>2) Start the engine with the auto switch and FRESH/RECIRC switch pressed.</p> <p>NOTE: Self-diagnosis can also be performed with ignition switch ON, but start the engine because telling the magnet clutch operation is difficult.</p> <p>3) All the indicator blinks four times.</p> | Does the self-diagnosis mode operate? | Go to step 2. | <Ref. to AC(diag)-15, A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE, Diagnostics for A/C System Malfunction.> |
| <p>2 CHECK EACH SENSOR AND POTENTIOMETER</p> <p>1) After the indicators are completed to blink, automatically change to the inspection mode of sensor and potentiometer.</p> <p>NOTE: Display items can be changed each time the A/C switch is pressed. (Step Operation)</p> <p>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.</p> <p>3) Identify the defective sensor according to the sensor check table. <Ref. to AC(diag)-14, SENSOR CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.></p> | Are other codes except "20" displayed? | Repair the defective sensor. <Ref. to AC(diag)-31, Diagnostic Procedure for Sensors.> | Go to step 3. |
| <p>3 CHECK EACH ACTUATOR, BLOWER FAN AND MAGNET CLUTCH.</p> <p>1) After completing each sensor and potentiometer inspection, change to the inspection mode of actuator, blower fan and magnet clutch by pressing the defroster switch.</p> <p>2) Each mode will change and operate automatically every four seconds.</p> <p>NOTE: Operation mode items can be changed each time the A/C switch is pressed. (Step Operation)</p> <p>3) Check the operation of actuator, blower fan and magnet clutch in each mode according to the operating mode table. <Ref. to AC(diag)-14, OPERATING MODE TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.></p> | Do the actuator, blower fan and magnet clutch operate along the operating mode table? | A/C control system is normal. Press the OFF switch and complete the self-diagnosis mode. | Repair the malfunction part in accordance with each diagnostic chart. <Ref. to AC(diag)-15, Diagnostics for A/C System Malfunction.> or <Ref. to AC(diag)-24, Diagnostic Procedure for Actuators.> |

Diagnostic Chart for Self-Diagnosis

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

4. SENSOR CHECK TABLE

NOTE:

When the sunload sensor check is conducted indoors or in the shade, open circuit might be indicated. Always check the sunload sensor at the place where the sun shines directly on it.

| Display screen (Malfunction at present) *1 | SENSOR | Trouble contents |
|--|--|---|
| 21/AUTO Blink | In-vehicle sensor | Open |
| -21/AUTO Blink | | Short |
| 22/AUTO Blink | Ambient sensor | Sensor trouble or communication malfunction |
| 23/AUTO Blink | Evaporator sensor | Open |
| -23/AUTO Blink | | Short |
| 24/AUTO Blink | Engine coolant temperature sensor | Sensor trouble or communication malfunction |
| 25 Blink | Sunload sensor | Open *2 |
| -25/AUTO Blink | | Short |
| 26/AUTO Blink | Driver's side air mix door actuator potentiometer | COOL |
| 27/AUTO Blink | | HOT |
| -26/AUTO Blink | Passenger's side air mix door actuator potentiometer | COOL |
| -27/AUTO Blink | | HOT |
| 28/AUTO Blink | Mode door actuator potentiometer | FACE |
| 29/AUTO Blink | | DEF |
| 20 Blink | When all conditions are normal | |

*1: "AUTO" display does not blink when past malfunction occurred. Past malfunction means that abnormal signal had input for a certain time continuously in the past.

*2: Present malfunction only is displayed for sunload sensor open circuit.

5. OPERATING MODE TABLE

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

*: Same opening angle for both driver's and passenger's side.