

General Description

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

2. General Description

A: CAUTION

- 1) Never connect the battery in reverse polarity.
 - Auto A/C control module may be destroyed instantly.
- 2) Do not disconnect the battery terminals while the engine is running.
 - A large counter electromotive force will be generated in the generator, and this voltage may damage electronic parts such as auto A/C control module etc.
- 3) Before disconnecting the connectors of each sensor and the auto A/C control module, be sure to turn the ignition switch to OFF.
 - Auto A/C control module may be damaged.
- 4) Every A/C-related part is a precision part. Do not drop them.
- 5) Airbag system wiring harness is routed near the A/C control panel and junction box.

CAUTION:

- For airbag system, yellow-colored wiring harness and connectors are all used. Do not use the electrical test equipment on these circuits.
- Be careful not to damage the airbag system wiring harness when servicing the A/C control panel and junction box.

B: INSPECTION

Before performing the diagnosis, check the following items which might affect A/C system problems.

1. BATTERY

- 1) Measure the battery voltage and specific gravity of electrolyte.

Standard voltage: 12 V

Specific gravity: Above 1.260

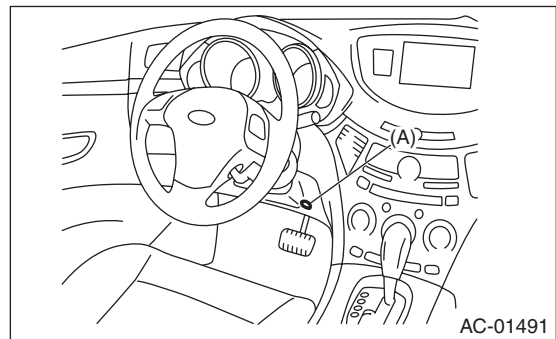
- 2) Check the condition of the fuses for A/C system power supply and other fuses.
- 3) Check the condition of harness and harness connector connections.

2. ASPIRATOR HOSE

- 1) Turn the ignition switch to ON, and press the A/C switch.
- 2) Turn the temperature control dial to maximum hot position.
- 3) Turn the air flow control dial to "DEF" position.
- 4) Turn the fan speed control dial to 4th position.
- 5) Put a strip of paper close to the front side of in-vehicle sensor suction port (A) located in the driver's side console side panel, and check that air is being sucked into the port by seeing the paper moving towards the port.

NOTE:

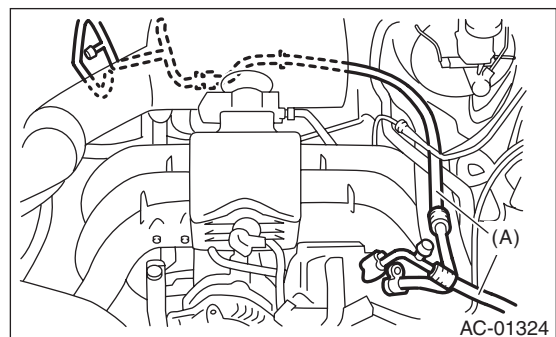
Be careful not to let the paper get sucked into the port.



- 6) If the paper does not move at all, remove the driver's side console side panel <Ref. to EI-39, REMOVAL, Center Console.> and check for improper connection of the aspirator hose, in-vehicle sensor and heater unit, and repair them if necessary.

3. A/C LINE

Check the connection for A/C line (A) and lower side high-pressure pipe.



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4. CONTROL SWITCHES

Start the engine and warm-up completely.

1) Inspection using switches

| No. | Point to check | Switch operation | Judgment standard |
|-----|---|---|---|
| 1 | OFF switch | Press the OFF switch. | Setting temperature display goes out. •Blower fan: OFF •Inlet opening: FRESH •Compressor: OFF |
| 2 | AUTO switch, driver's side temperature control dial and passenger's side temperature control dial | 1) Press the AUTO switch. 2) Turn the temperature control dial to the left fully, and set to 18°C (65°F) (maximum cool position). | AUTO display illuminates. •Outlet air temperature: COOL •Blower fan: HI (AUTO) •Outlet opening: FACE •Inlet opening: AUTO •Compressor: AUTO |
| | | 3) Turn the temperature control dial to the right slowly, and change the setting from 18°C (65°F) (maximum cool position) to 32°C (85°F). | •Outlet air temperature: COOL → HOT •Blower fan: AUTO •Outlet opening: FACE → B/L → FOOTHEAT •Inlet opening: AUTO •Compressor: AUTO |
| | | 4) Turn the temperature control dial to the right fully, and set to 32°C (85°F) (maximum hot position). | •Outlet air temperature: HOT •Blower fan: HI (AUTO) •Outlet opening: HEAT •Inlet opening: FRESH (AUTO) •Compressor: AUTO |
| 3 | Defroster switch | Press the defroster switch. | Defroster switch indicator illuminates. •Outlet air temperature: AUTO •Blower fan: AUTO •Outlet opening: DEF •Inlet opening: FRESH •Compressor: ON |
| 4 | FRESH/RECIRC switch | Press the FRESH/RECIRC switch. | Inlet opening switches RECIRC → FRESH or FRESH → RECIRC each time pressing the switch. |
| 5 | MODE switch | Press the MODE switch. | Outlet opening switches FACE → B/L → HEAT → D/H each time pressing the switch. |
| 6 | FAN switch | Turn the FAN switch. | Blower fan switches OFF → LO → M1 → M2 → M3 → M4 → HI each time turning the switch and it switches in reverse order when turned backward. |

2) Compressor operation inspection

| No. | Point to check | Switch operation | Judgment standard |
|-----|----------------|---|-------------------|
| 1 | Compressor | 1) Turn the A/C switch to ON. 2) Set the FAN switch between LO and HI. | Compressor: ON |

3) Inspection of illumination control

| No. | Point to check | Switch operation | Judgment standard |
|-----|----------------|---------------------------------|------------------------|
| 1 | Illumination | Turn the lighting switch to ON. | Illumination comes on. |

4) Inspection of the rear cooler switch

| No. | Point to check | Switch operation | Judgment standard |
|-----|----------------|----------------------|---|
| 1 | FAN switch | Turn the FAN switch. | Blower fan switches OFF → LO → ML → MH → HI each time turning the switch and it switches in reverse order when turned backward. |

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5) Inspection of rear cooler

| No. | Point to check | Switch operation | Judgment standard |
|-----|----------------|----------------------|---|
| 1 | Roof grill | Turn the FAN switch. | Front A/C ON (compressor operating): COOL Front A/C OFF (compressor not operating): Blower ON |

6) Inspection of illumination control

| No. | Point to check | Switch operation | Judgment standard |
|-----|----------------|---------------------------------|------------------------|
| 1 | Illumination | Turn the lighting switch to ON. | Illumination comes on. |