

General Description

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

2. General Description

A: CAUTION

- 1) Never connect the battery in reverse polarity.
 - Doing so may immediately damage the auto A/C control module.
- 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 sensors and the auto A/C control module, be sure to turn off the ignition switch.
 - 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:

- Do not use electrical test equipment on the airbag system wiring harness and connector.
- 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 may cause problems in the A/C system.

1. BATTERY

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

Standard voltage:
12 V

Specific gravity:
1.260 or more

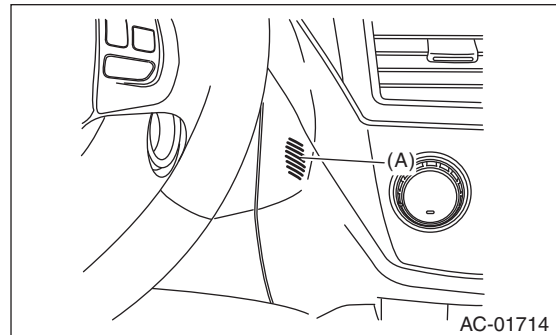
- 2) Check the condition of the fuses for A/C system power supply and other fuses.
- 3) Check the condition of harness and harness connector connections.

2. ASPIRATOR HOSE

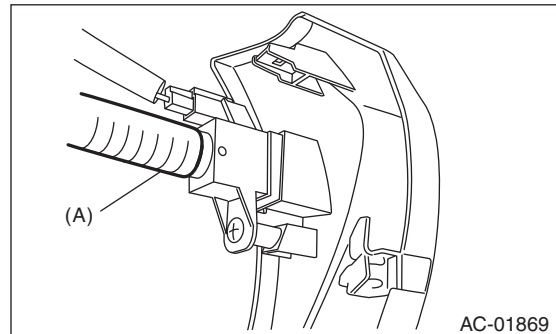
- 1) Turn the ignition switch to ON, and press the A/C switch.
- 2) Turn the temperature control dial to maximum hot position.
- 3) Set the outlet opening to the defroster position.
- 4) Turn the fan switch to MAX.
- 5) Put a thin strip of paper close to the front side of in-vehicle sensor suction port (A) at the instrument panel lower cover, and check whether the strip becomes drawn towards the port, indicating that air is being drawn in at the port.

NOTE:

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

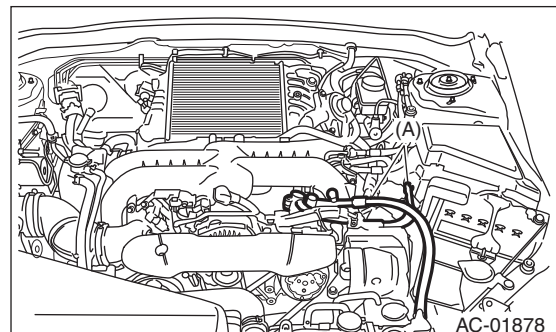


- 6) If the paper strip does not move at all, remove the center console <Ref. to EI-49, INSTRUMENT PANEL LOWER, REMOVAL, Center Console.>, and check for improper connection of the aspirator hose (A), in-vehicle sensor and heater unit, and repair them if necessary.



3. A/C LINE

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



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4. CONTROL LINKAGE

- 1) Check the state of mode door linkage.
- 2) Check the state of air mix door linkage.
- 3) Check the state of FRESH/RECIRC door linkage.

5. CONTROL SWITCHES

Start the engine and warm-up completely.

1) Inspection using switches

No.	Point to check	Switch operation	Judgement standard
1	Air flow control dial	Turn the dial to the right.	Outlet opening (mode) switches AUTO → VENT → BI-LEVEL → HEAT → DEF/HEAT → DEF each time turning the dial.
2	Fan speed control dial	Turn the dial to the right.	Fan speed switches OFF → AUTO → 1st → 2nd → 3rd → 4th → 5th → 6th → 7th each time the dial is turned.
3	FRESH/RECIRC switch	Press the FRESH/RECIRC switch.	Inlet opening switches RECIRC → FRESH → RECIRC each time pressing the switch. (LED illuminates at RECIRC)
		Set both of the air flow control dial and the fan dial to AUTO position.	The system switches to AUTO.
4	A/C switch	Turn the A/C switch to ON with the fan speed control dial set to except for OFF position.	The LED lights and the compressor operates.
		Set both of the air flow control dial and the fan dial to AUTO position.	The system switches to AUTO.
5	Auto function Operate in order starting from 1).	1) Set the following dial and switch to AUTO. • Air flow control dial • Fan speed control dial • FRESH/RECIRC switch • A/C switch 2) Turn the temperature control dial completely to the left, and set to the maximum cool position.	• Outlet air temperature: COOL • Fan speed: Max. • Outlet opening: VENT • Inlet opening: RECIRC • Compressor: AUTO
		3) Turn the temperature control dial to the right slowly up to the maximum hot position.	• Outlet air temperature: COOL → HOT • Fan speed: AUTO • Outlet opening: AUTO • Inlet opening: AUTO • Compressor: AUTO
		4) Turn the temperature control dial fully to the right, to the maximum hot position.	• Outlet air temperature: HOT • Fan speed: Max. • Outlet opening: HEAT • Inlet opening: FRESH • Compressor: AUTO
6	Defroster Interlock Function	Set the air flow control dial to the DEF or the DEF/HEAT position.	• Outlet air temperature: AUTO • Fan speed: AUTO • Outlet opening: DEF or DEF/HEAT • Inlet opening: FRESH • Compressor: ON
7	Rear defogger switch	Press the rear defogger switch.	LED illuminates

2) Compressor operation inspection

No.	Point to check	Switch operation	Judgement 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	Judgement standard
1	Illumination	Turn the lighting switch to ON.	Illumination becomes lit. If the LED is lit, the LED will dim.