

GENERAL DESCRIPTION

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

2. General Description

A: CAUTION

- 1) Never connect the battery in reverse polarity.
 - The Auto A/C control module will be destroyed instantly.
- 2) Do not disconnect the battery cables while the engine is running.
 - A large counter electromotive force will be generated in the alternator, and this voltage may damage electronic parts such as A/C control module.
- 3) Before disconnecting the connectors of each sensor and the A/C control module, be sure to turn off the ignition switch.
 - Otherwise, the Auto A/C control module may be damaged.
- 4) Every Auto 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 (A/C control module) and junction box.

CAUTION:

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

B: INSPECTION

Before performing 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

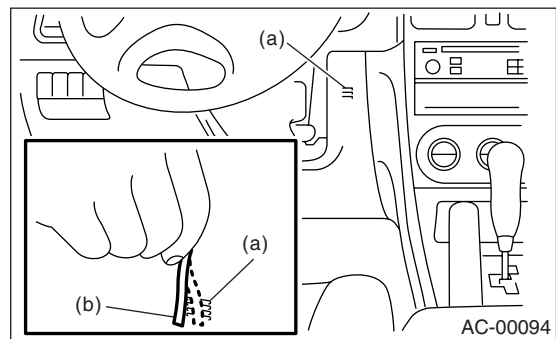
- 2) Check the condition of the fuses for A/C system power supply and other fuses.
- 3) Check the condition of the harnesses and harness connectors connection.

2. ASPIRATOR HOSE

- 1) Turn the ignition switch to ON and push 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) Firmly hold a thin thread (b) in front of the in-vehicle sensor suction port (a) for the auto A/C control unit and check that the thread moves towards the port indicating that air is being sucked into the port.

NOTE:

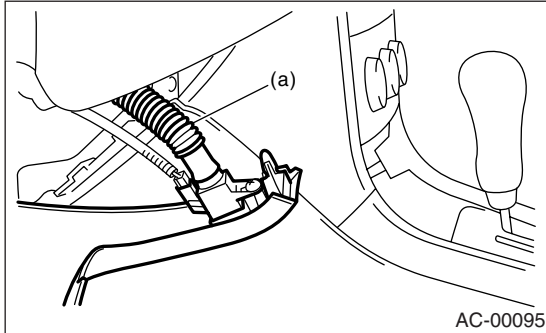
- Ensure the thread does not get sucked into the port.
- Hold the thread approx. 5 mm (0.02 in) away from port when the suction force is not very strong.



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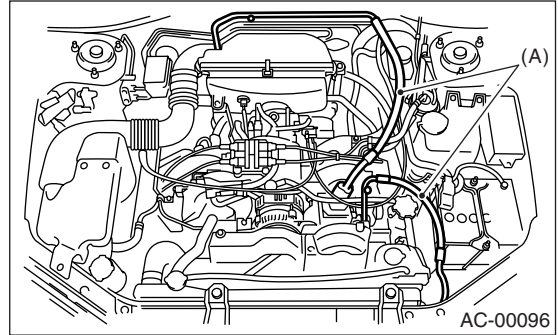
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6) If the thread does not move at all, remove the lower cover <Ref. to AC-29, REMOVAL, Control Unit.> and check for improper connection of the aspirator hose (a), lower cover and heater unit and secure as necessary.



3. REFRIGERANT LINE

Check contact for refrigerant line (A) and high-pressure pipe.



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 intake door linkage.

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5. CONTROL SWITCHES

Start and warm up the engine completely.

1) Inspection using switches.

No.	Point to check	Switch operation	Judgement standard
1	Fan speed control dial	Turn the fan speed control dial to 1st → 2nd → 3rd → 4th.	Fan speed changes 1st → 2nd → 3rd → 4th.
2	AUTO switch and temperature control dial	A. AUTO switch: ON B. Temperature control dial maximum cold position	<ul style="list-style-type: none"> • Outlet air: Cool • Fan speed: 4th • Compressor: AUTO • Outlet: VENT • Inlet: RECIRC
		C. Turn the temperature control dial from maximum cold position to maximum hot position gradually.	<ul style="list-style-type: none"> • Outlet air: Cool → Hot • Fan speed: AUTO • Compressor: AUTO • Outlet: AUTO • Inlet: AUTO
		D. Temperature control dial maximum hot position	<ul style="list-style-type: none"> • Outlet air: Hot • Fan speed: 4th • Compressor: AUTO • Outlet: HEAT • Inlet: FRESH
3	Mode control dial	Turn the mode control dial to VENT → BI-LEVEL → HEAT → DEF/HEAT.	Air flow outlet changes from VENT → BI-LEVEL → HEAT → DEF/HEAT.
4	FRESH/RECIRC switch	Push the FRESH/RECIRC.	Air flow inlet changes from RECIRC → FRESH, or FRESH → RECIRC.
5	DEF switch	Push the DEF.	<ul style="list-style-type: none"> • Outlet air: AUTO • Fan speed: AUTO • Compressor: ON • Outlet: DEF • Inlet: FRE

2) Compressor operation inspection

No.	Point to check	Switch operation	Judgement standard
1	Compressor	A. A/C switch ON B. Turn the fan speed control to 1st — 4th.	Compressor: ON

3) Illumination control inspection

No.	Point to check	Switch operation	Judgement standard
1	Illumination	A. Lighting switch ON	Illumination light illuminates.
		B. Press the OFF switch one second or more.	Illumination dimming is cancelled.