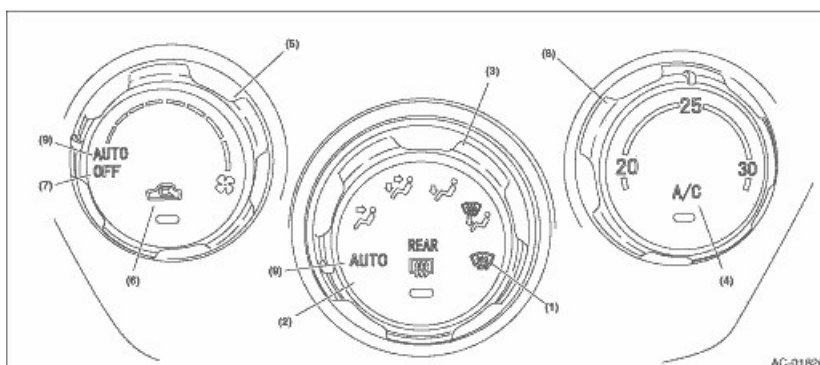







HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS) > Diagnostic Chart for Self-Diagnosis**OPERATION**

- (1) Defroster switch (4) A/C switch (7) OFF switch
 (2) Rear window defogger switch (5) Fan dial (8) Temperature adjustment dial
 (3) Air flow control dial (6) FRESH/RECIRC switch (9) AUTO switch

1. A/C CONTROL PANEL SELF-DIAGNOSIS

| STEP | CHECK | YES | NO |
|---|--|-----|--|
| 1.SELECT SELF-DIAGNOSIS MODE IN THE CONTROL PANEL. 1) Set the air flow control dial and fan speed control dial to the AUTO position. 2) Start the engine with the A/C switch and the FRESH/RECIRC switch pressed. | Does the self-diagnosis mode operate? | | |
| 2.CHECK LIGHTING OF THE LED. Make sure that all switch LEDs on the control panel illuminate. | Do all LEDs blink eight times? | | Replace the control panel. |
| 3.CHECK SENSOR MALFUNCTION. 1) Set the air flow control dial and fan speed control dial to the AUTO position. 2) If the system has trouble for each sensor, the FRESH/RECIRC switch LED blinks or is turned off. 3) If the system has no trouble, the FRESH/RECIRC switch LED illuminates. | Does the FRESH/RECIRC switch LED illuminate? | | |
| 4.CONFIRM MALFUNCTIONING SENSOR. 1) Set the air flow control dial to the AUTO position. 2) Turn the fan speed control dial to each mode position, and check each switch LED illumination according to the sensor check table. | Does the lighting conditions of the LED match the drive signal list? | | Repair the defective sensor. |
| 5.CHECK AIR MIX DOOR AND MODE DOOR POSITION SIGNALS. 1) Set the air flow control dial to the FACE position. 2) Turn the fan dial to AUTO. 3) If there is a system malfunction in the air mix door signal or the mode door position signal, the FRESH/RECIRC switch LED goes off or blinks. 4) If the system has no trouble, the FRESH/RECIRC switch LED illuminates. | Does the FRESH/RECIRC switch LED illuminate? | | Check the mode door actuator circuit. |
| 6.CHECK AIR MIX DOOR POSITION OPERATION SIGNALS. | Does the lighting conditions of the LED | | Check the air mix door actuator circuit. |

| STEP | CHECK | YES | NO |
|---|--|--|---|
| 1) Set the air flow control dial to the FACE position. 2) Set the fan speed control dial to each position, and check the lighting conditions of each LED.  | match the drive signal list? | | |
| 7.CHECK MODE DOOR POSITION DRIVE SIGNALS. 1) Press the A/C switch. 2) Set the fan speed control dial to each position, and check the lighting conditions of each LED.  | Does the lighting conditions of the LED match the drive signal list? |  | Check the mode door actuator circuit.  |
| 8.CHECK OPERATION OF EACH ACTUATOR, BLOWER FAN AND COMPRESSOR CLUTCH. 1) Set the air flow control dial to the B/L position. 2) Set the fan speed control dial to AUTO — 7th position, and select the operating mode. 3) Check the operation of each mode according to operating mode table.  <ul style="list-style-type: none"> • FRESH/RECIRC door • Air flow control door • Air mix door • Blower fan • A/C compressor | Does the operation of each mode match to operating mode table? | Turn the fan speed control dial to OFF or turn the ignition switch to OFF, to complete the self diagnosis. | Repair the malfunctioning part in accordance with each diagnostic chart. |

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 at a location exposed to direct sunlight.

| Air flow control dial position | Fan dial position | Sensor | No trouble | Short circuit | Open circuit | When currently malfunctioning | When having malfunctioned in the past |
|--------------------------------|-------------------|-----------------------------------|---------------------------------------|--|--|---|---|
| AUTO | AUTO | In-vehicle sensor | FRESH/RECIRC switch LED is turned off | FRESH/RECIRC switch LED blinks (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | FRESH/RECIRC switch LED blinks (Illuminates for 1 sec ⇔ turns off for 1 sec.) | Rear window defogger switch LED is turned off | Rear window defogger switch LED illuminates |
| | 1st | Ambient sensor | | FRESH/RECIRC switch LED blinks (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | | | |
| | 2nd | Evaporator sensor | | FRESH/RECIRC switch LED blinks (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | | | |
| | 3rd | Engine coolant temperature sensor | | — | | | |
| | 4th | Sunload sensor | | FRESH/RECIRC switch LED blinks (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | | | |
| | | | | | | | |

| Operation | Fan dial position | | | | | | | |
|--|-------------------|--------|-------|----------------------|----------------------|-------------------|-------------------|-------------------|
| | AUTO | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th |
| Blower fan | 4 V | 4 V | 4.9 V | 5.9 V | 7.0 V | 8.3 V | 9.8 V | 14 V |
| FRESH/RECIRC door | RECIRC | RECIRC | MIX | FRESH | FRESH | FRESH | FRESH | FRESH |
| Air flow control door | FACE | FACE | FACE | B/L | HEAT | HEAT | D/H | DEF |
| Air mix door | 0% | 0% | 0% | 50% | 50% | 100% | 100% | 100% |
| A/C compressor | OFF | ON | ON | ON | ON | ON | ON | ON |
| PTC heater (Diesel engine model only) | OFF | OFF | OFF | ON (mini PTC heater) | ON (mini PTC heater) | ON (PTC heater 1) | ON (PTC heater 2) | ON (PTC heater 2) |

| Air flow control dial position | Fan dial position | Drive signal to check | A/C switch LED | No trouble | Short circuit | Open circuit | When currently malfunctioning | When having malfunctioned in the past |
|--------------------------------|-------------------|-----------------------|--|--|---|---|---|---|
| FACE | AUTO | MIX #1 | Blinking (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | FRESH/RECIRC switch LED is illuminated | FRESH/RECIRC switch LED blinks (Illuminates for 0.2 sec ⇔ turns off for 0.2 sec.) | FRESH/RECIRC switch LED blinks (Illuminates for 1 sec ⇔ turns off for 1 sec.) | Rear window defogger switch LED is turned off | Rear window defogger switch LED illuminates |
| | 1st | MIX #2 | | | | | | |
| | 2nd | MIX #3 | | | | | | |
| | 3rd — 7th | MIX #4 | | | | | | |
| | AUTO | MODE #1 | Blinking (Illuminates for 1 sec ⇔ turns off for 1 sec.) | | | | | |
| | 1st | MODE #2 | | | | | | |
| | 2nd | MODE #3 | | | | | | |
| | 3rd — 7th | MODE #4 | | | | | | |