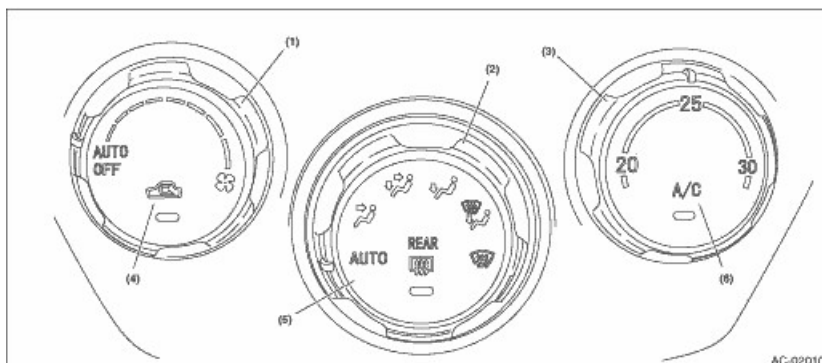


## HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS) > Diagnostic Chart for Self-Diagnosis






### OPERATION



- (1) Fan speed control dial (3) Temperature adjustment dial (5) Rear window defogger switch  
 (2) Air flow control dial (4) FRESH/RECIRC switch (6) A/C switch

#### 1. A/C CONTROL MODULE SELF-DIAGNOSIS

STEP	CHECK	YES	NO
<b>1.SELECT SELF-DIAGNOSIS MODE IN THE CONTROL MODULE.</b> 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?		
<b>2.CHECK THE LIGHTING OF THE LED.</b> Make sure that all switch LEDs on the control module illuminate.	Do all LEDs blink eight times?		Replace the control module.
<b>3.CHECK SENSOR MALFUNCTION.</b> 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 malfunctions, the FRESH/RECIRC switch LED is illuminated.	Does the FRESH/RECIRC switch LED illuminate?		
<b>4.CONFIRM MALFUNCTIONING SENSOR.</b> 1) Set the air flow control dial to AUTO. 2) Turn the fan speed control dial to each mode position, and check each switch LED illumination according to sensor check table.	When turning the fan speed control dial to each mode position, does the FRESH/RECIRC switch LED go off?		Repair the defective sensor.
<b>5.CHECK AIR MIX DOOR AND MODE DOOR POSITION SIGNALS.</b> 1) Set the air flow control dial to FACE. 2) Turn the fan speed control 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 malfunctions, the FRESH/RECIRC switch LED is illuminated.	Does the FRESH/RECIRC switch LED illuminate?		
<b>6.CHECK AIR MIX DOOR POSITION DRIVE SIGNALS.</b>	Do the LEDs illuminate in accordance with operation signal table?		Check the air mix door actuator circuit.

STEP	CHECK	YES	NO
1) Set the air flow control dial to FACE. 2) Place the fan speed control dial in each position and then check each LED illumination conditions. 			
<b>7.CHECK MODE DOOR POSITION DRIVE SIGNAL.</b> 1) Press the A/C switch. 2) Place the fan speed control dial in each position and then check each LED illumination conditions. 	Do the LEDs illuminate in accordance with operation signal table?		Check the mode door actuator circuit. 
<b>8.CHECK OPERATION OF EACH ACTUATOR, BLOWER FAN AND COMPRESSOR CLUTCH.</b> 1) Set the air flow control dial to B/L. 2) Turn the fan speed control dial from AUTO to 7th, and select operating modes. 3) Check the operation of each mode according to operating mode table.  • 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 the ignition switch to OFF in order to complete 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 speed control 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			

Air flow control dial position	Fan speed control dial position	Sensor	No trouble	Short circuit	Open circuit	When currently malfunctioning	When having malfunctioned in the past
				blinks (Illuminates for 0.2 sec. ⇔ turns off for 0.2 sec.)			
	5th — 7th	CAN communication		—			

### 3. OPERATING MODE TABLE

Operation	Fan speed control 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

### 4. DRIVE SIGNAL CHECK TABLE

Air flow control dial position	Fan speed control 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 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	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						