

# AMPLIFIERS

## INSPECTION OF A/C AMPLIFIER

### INSPECT AMPLIFIER CIRCUIT

Disconnect the amplifier and inspect the connector on the wire harness side as shown in the chart below.

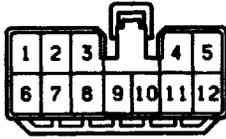
Test conditions:

- (1) Ignition switch: ON
- (2) Temperature control lever: MAX COOL
- (3) Blower switch: HI

Check for	Tester connection	Condition		Specified value
Continuity	15 - ground	Constant		Continuity
Continuity	10 - ground	3S-GTE	Constant	No continuity
		5S-FE	Constant	Continuity
Resistance	* 5 - ground	Constant		Approx. 12 Ω
	9-14	Constant		Approx. 115Ω
	16-14	Constant		Approx. 15 kΩ at 25°C (77°F)
Voltage	1 - ground	Turn A/C switch on.		No voltage
		Turn A/C switch off.		No voltage
	3 - ground	Turn A/C switch on.		Battery positive voltage
		Turn A/C switch off.		No voltage
	6 - ground	Turn A/C switch on.		No voltage
		Turn A/C switch off.		Battery positive voltage
	8 - ground	Turn A/C switch on.		No voltage
		Turn A/C switch off.		Battery positive voltage
	13 - ground	Turn A/C switch on.		Battery positive voltage
		Turn A/C switch off.		No voltage
	18 - ground	Start the engine.		Approx. 10 to 14 V
		Stop the engine.		No voltage

\*1: with Variable Volume Control Mechanism Compressor

Wire Harness Side



S-12-1

## INSPECTION OF SYSTEM AMPLIFIER

### INSPECT AMPLIFIER CIRCUIT

- (a) Disconnect the amplifier and inspect connector on the wire harness side as shown in the chart below.

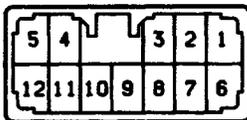
Test conditions:

- (1) Ignition switch: ON
- (2) Temperature control switch: MAX COOL

Check for	Tester connection	Condition	Specified value
Continuity	1 - 6	Constant	Continuity
	9 - ground	Constant	Continuity
Resistance'	5 - 2	Constant	Approx. 3 kΩ
	5 - 10	Constant	Approx. 6 kΩ
	11 - 10	Constant	1.2 - 4.8 kΩ
	12 - 2	Temperature control switch turned to MAX COOL	Approx. 3 kΩ
Voltage	7 - ground	Constant	Battery positive voltage

\*1: without AUTO A/C models

From Back Side



S-12-2

HINT: Perform the following check only for vehicles with AUTO A/C.

- (b) Connect the connector to the amplifier and inspect connector from back side as shown in the chart below.

Test conditions:

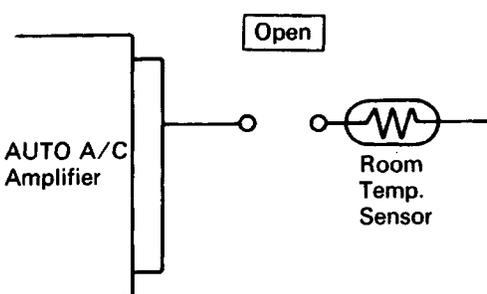
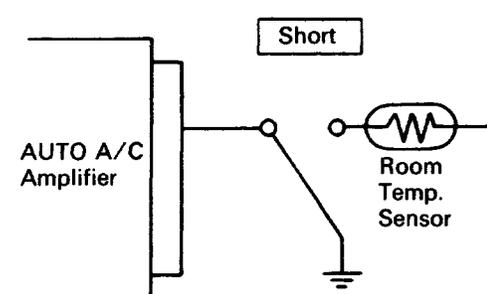
- (1) Engine running
- (2) A/C switch: ON
- (3) Blower switch: HI

Check for	Tester connection	Condition	Specified value
Voltage	3 - ground	Temp. control switch turned to MAX HOT	Approx. 0 V*
		Temp. control switch turned to MAX COOL	Approx. 5 V
	4 - ground	Temp. control switch turned to MAX HOT	Approx. 5 V
		Temp. control switch turned to MAX COOL	Approx. 0 V'

\*1: Voltage becomes 0 V when switch is turned, then soon returns to 5 V.

# INSPECTION OF AUTO A/C AMPLIFIER

## 1. False Signal Input to Auto A/C Amplifier

False Signal	A	B
Condition	Interior room temperature is very low.  Open AUTO A/C Amplifier Room Temp. Sensor AC1370	Interior room temperature is very high.  Short AUTO A/C Amplifier Room Temp. Sensor AC1371
Your Work	Remove in-car sensor connector.	Remove room temp. sensor, and ground the number 2 pin of room temp. sensor female connector.

## 2. System Operation when Input False Signal

Condition: Setting Temperature is at 25°C (77°F)

System Main Parts	False Signal	Motion			
Air Mix Control Servomotor	A	Air mix control servo motor shaft moves towards max-hot side.			
	B	Air mix control servo motor shaft moves towards max-cool side.			
Air Flow Mode Control Servomotor		Air Vent Mode Damper			
		VENT	BI-LEVEL	H EAT	DEF
	A	Close	Close	Open	Close
	B	Open	Close	Close	Close

## 3. System Operation when Input False Signal (Cont'd)

System Main Parts	False Signal	Motion
Blower Motor	A	Blower motor rotates at high speed.
	B	
Water Valve	A	OPEN
	B	CLOSE
FRE/REC Control Servomotor	FRE Switch ON	Fresh air is ventilated.
	REC Switch ON	Recirculation air is ventilated.

If necessary, replace the system amplifier.