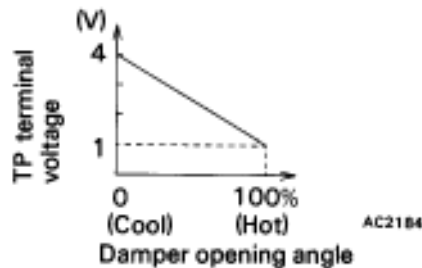


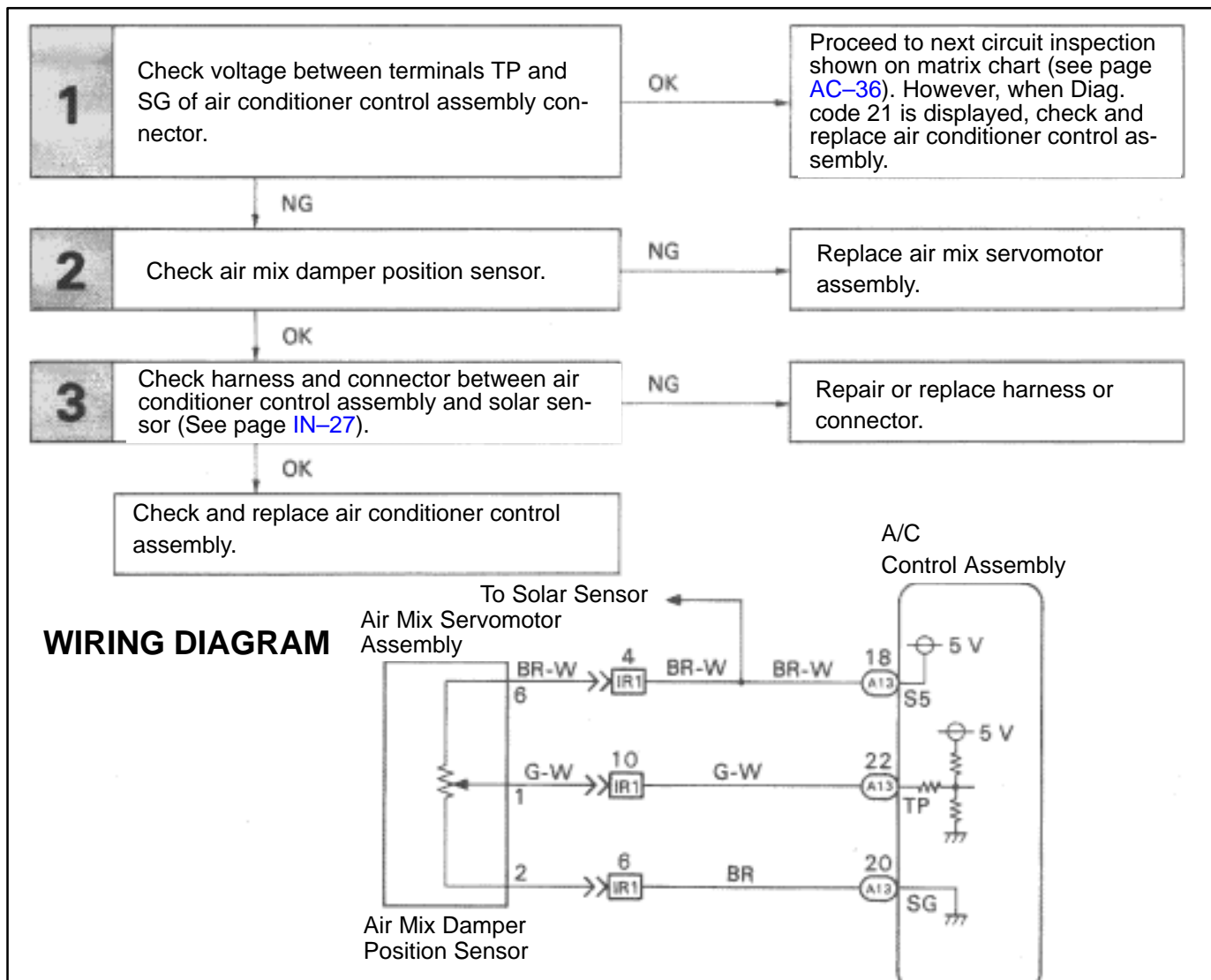
**Diag. Code 31, 41****Air Mix Damper Position Sensor Circuit****— CIRCUIT DESCRIPTION —**

This sensor detects the position of the air mix damper and sends the appropriate signals to the air conditioner control assembly.

The position sensor is built into the air mix servomotor assembly.



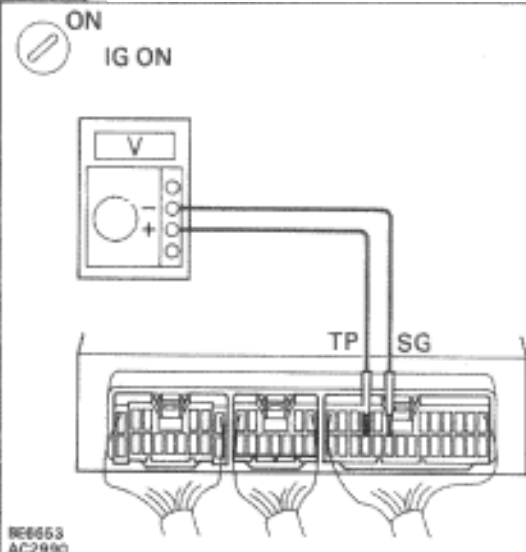
Code No.	Diag. Code Detecting Condition	Trouble area
<b>31</b>	Short to ground or power source circuit in air mix damper position sensor circuit.	<ul style="list-style-type: none"> <li>• Air mix damper position sensor.</li> <li>• Harness or connector between air mix servomotor assembly and A/C control assembly.</li> <li>• A/C control assembly.</li> </ul>
<b>41</b>	Air mix damper position sensor value does not change even if A/C control assembly operates air mix servomotor.	

**— DIAGNOSTIC CHART —**

## INSPECTION PROCEDURE

### 1

Check voltage between terminals TP and SG of air conditioner control assembly connector.



NG

P

1. Remove console upper panel (See page [BO-111](#))

2. Remove A/C control assembly with connectors still connected.

C

3. Turn ignition switch ON.

Change the set temperature to activate the air mix damper, and measure the voltage between terminals TP and SG of air conditioner control assembly connector each time when the set temperature is changed.

OK

Set Temperature	Voltage
Max. cool	3.70 – 4.27 V
Max. hot	0.88 – 1.16 V

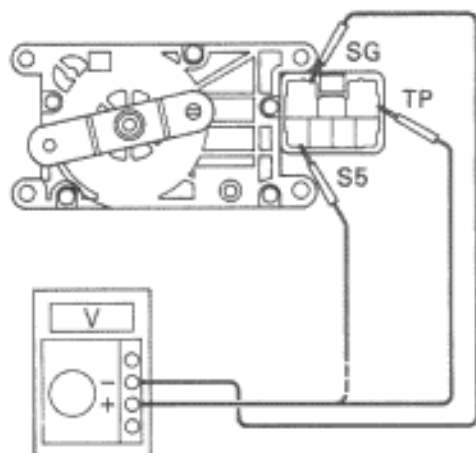
In addition, as the set temperature increases the voltage decreases gradually without interruption.

OK

Proceed to next circuit inspection shown on matrix chart (see page [AC-36](#)). However, when Diag. code 14 is displayed, check and repair air conditioner control assembly.

### 2

Check air mix damper position sensor.



OK

P

1. Remove heater unit. (See page [AC-127](#))

2. Disconnect air mix servomotor assembly connector.

C

Measure resistance between terminals S5 and SG of air mix servomotor assembly connector.

OK

**Resistance: 4.7 7.2 kΩ**

C

While operating air mix servomotor as in the procedure on page [AC-61](#), measure resistance between terminals TP and SG of air mix servomotor assembly connector.

OK

Position	Resistance
Max. cool	3.76 ~ 5.76 kΩ
Max. warm	0.94 ~ 1.44 kΩ

As the air mix servomotor moves from cool side to warm side, the resistance decreases gradually without interruption.

NG

Replace air mix servomotor assembly.

### 3

Check for open and short in harness and connector between air conditioner control assembly and air mix servomotor assembly (See page [IN-27](#))

OK

NG

Repair or replace harness or connector.

Check and replace air conditioner control assembly.