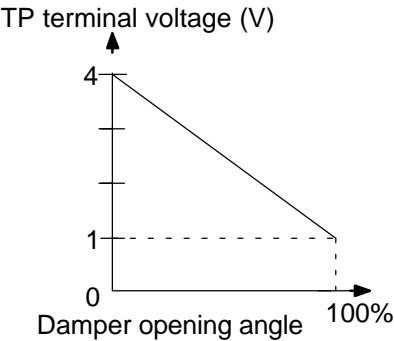


DTC	B1431/31	AIR MIX DAMPER POSITION SENSOR CIRCUIT (PASSENGER SIDE)
-----	----------	---------------------------------------------------------

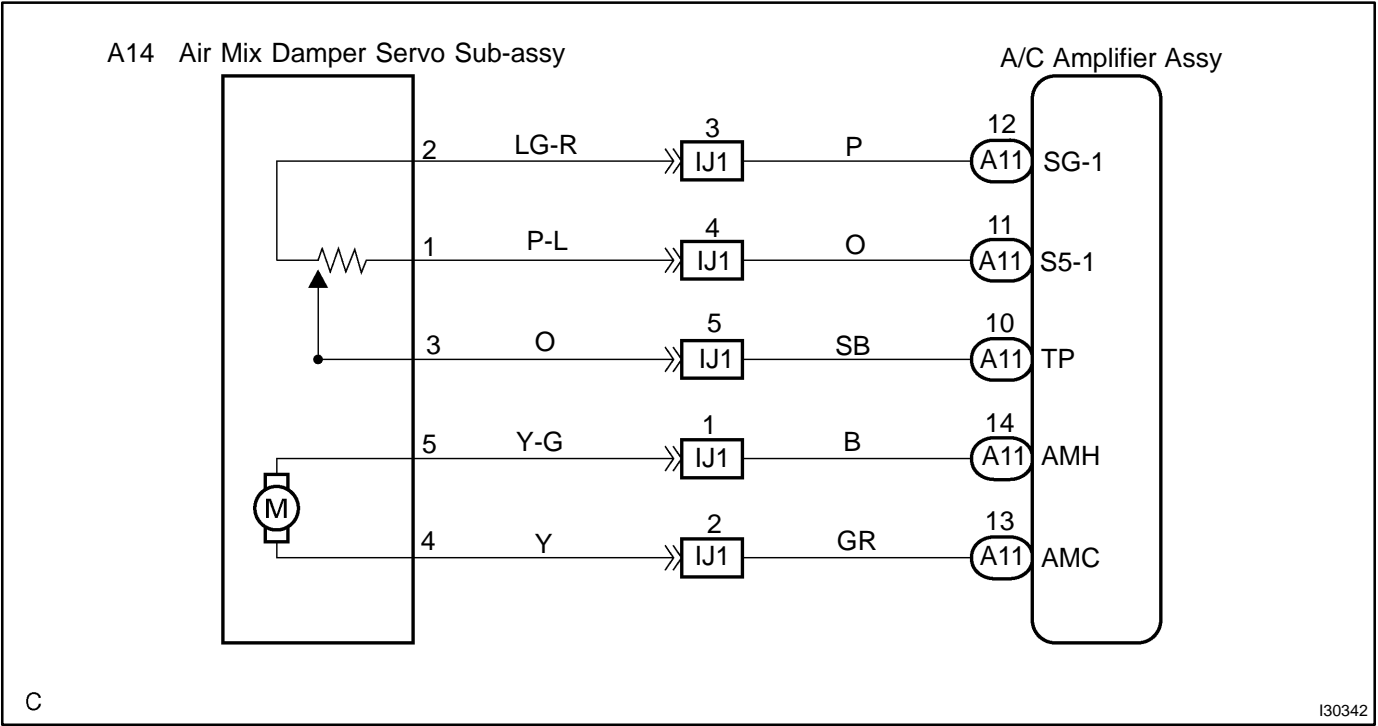
CIRCUIT DESCRIPTION



This sensor detects the position of the air mix damper servo sub-assy and sends the appropriate signals to the A/C amplifier assy. The position sensor is built into the air mix servo sub-assy.

DTC No.	Detection Item	Trouble Area
B1431/31	Short to ground or power source circuit in air mix damper position sensor circuit.	<ul style="list-style-type: none">• Air mix damper position sensor.• Harness or connector between air mix damper servo sub-assy and A/C amplifier assy.• A/C amplifier assy

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

In case of using the hand-held tester, start the inspection step 1 and in case of not using the hand-held tester, start from step 2.

1 READ VALUE OF HAND-HELD TESTER

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and push the hand-held tester main switch ON.
- Select the items below in the DATA LIST, and read the displays on the hand-held tester.

A C:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
A/M DAMP POS-P	Air mix damper position (Passenger side) /min.: -5% max.: 105%	Changes depending on the set temperature (Passenger side)	-
A/M DAMP TARG-P	Air mix damper target position (Passenger side) /min.: -5% max.: 105%	Changes depending on the set temperature (Passenger side)	-

Result:

NG	A
OK (Checking from the DTC)	B
OK (Checking from the PROBLEM SYMPTOM TABLE)	C

B

REPLACE AIRCONDITIONER AMPLIFIER ASSY

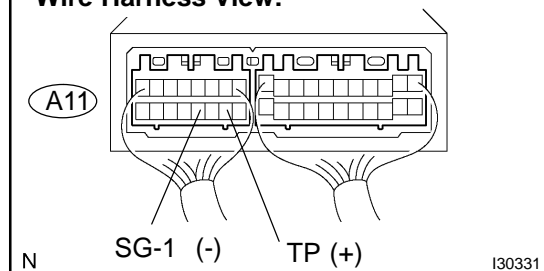
C

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE (SEE
PAGE 05-1 129)**

A

2 INSPECT AIRCONDITIONER AMPLIFIER ASSY(TP, SG-1)

A/C Amplifier Connector Wire Harness View:



- Remove the A/C amplifier assy with connectors still connected.
- Turn the ignition switch to the ON position.
- Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A11-10 (TP) - A11-12 (SG-1)	MAX. COOL	3.5 to 4.5 V
A11-10 (TP) - A11-12 (SG-1)	MAX. WARM	0.5 to 1.8 V

HINT:

As the set temperature increases, the voltage decreases gradually without interruption.

OK

REPLACE AIRCONDITIONER AMPLIFIER ASSY

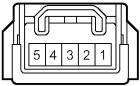
NG

3

INSPECT AIRMIX DAMPER SERVO SUB-ASSY

**Air Mix Damper Servo Sub-assy
Connector Wire Harness View:**

A14



I30157

- (a)
- Remove the air mix damper servo sub-assy.
- (b)
- Measure resistance between terminals 1 and 2 of air mix damper servo sub-assy connector.

Standard:

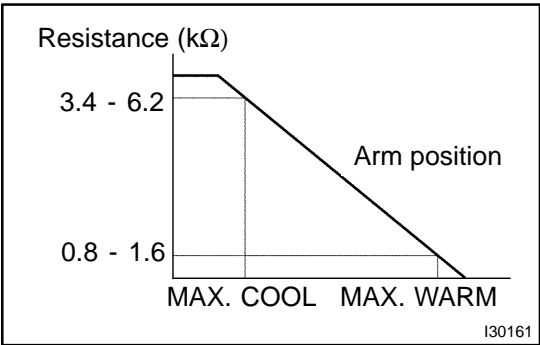
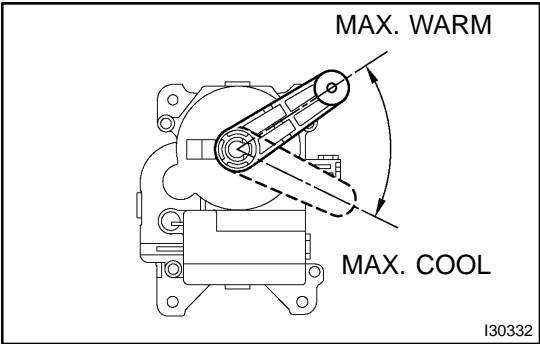
Tester connection	Condition	Specified condition
A14-1 - A14-2	Always	4.2 to 7.8 kΩ

- (c)
- While operating air mix damper servo sub-assy as shown in the procedure on page 05-1 160, measure resistance between terminals 1 and 3 of air mix damper servo sub-assy.

Standard:

Tester connection	Condition	Specified condition
A14-1 - A14-3	MAX. COOL	3.4 to 6.2 kΩ
A14-1 - A14-3	MAX. WARM	0.8 to 1.6 kΩ

HINT:
As the air mix damper servo sub-assy moves from cool side to warm side, the resistance decreases gradually without interruption.



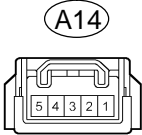
OK

NG REPLACE AIRMIX DAMPER SERVO SUB-ASSY

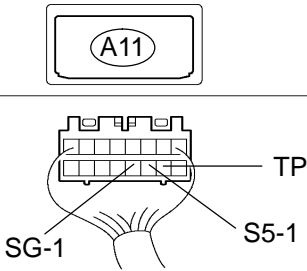
4

CHECK HARNESS AND CONNECTOR(AIR MIX DAMPER SERVO SUB-ASSY - A/C AMPLIFIER ASSY)

Air Mix Damper Servo Sub-assy
Wire Harness View:



A/C Amplifier Connector
Wire Harness View:



I41014

(a) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A11-11 (S5-1) - A14-1	Always	Below 1 Ω
A11-12 (SG-1) - A14-2	Always	Below 1 Ω
A11-10 (TP) - A14-3	Always	Below 1 Ω
A11-11 (S5-1) - Body ground	Always	10 kΩ or higher
A11-12 (SG-1) - Body ground	Always	10 kΩ or higher
A11-10 (TP) - Body ground	Always	10 kΩ or higher

OK

NG

REPAIR OR
CONNECTOR

REPLACE HARNESS OR

REPLACE AIRCONDITIONER AMPLIFIER ASSY