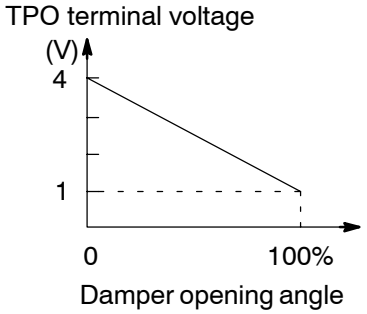
DTC	B1433/33	AIR OUTLET DAMPER POSITION SENSOR CIRCUIT

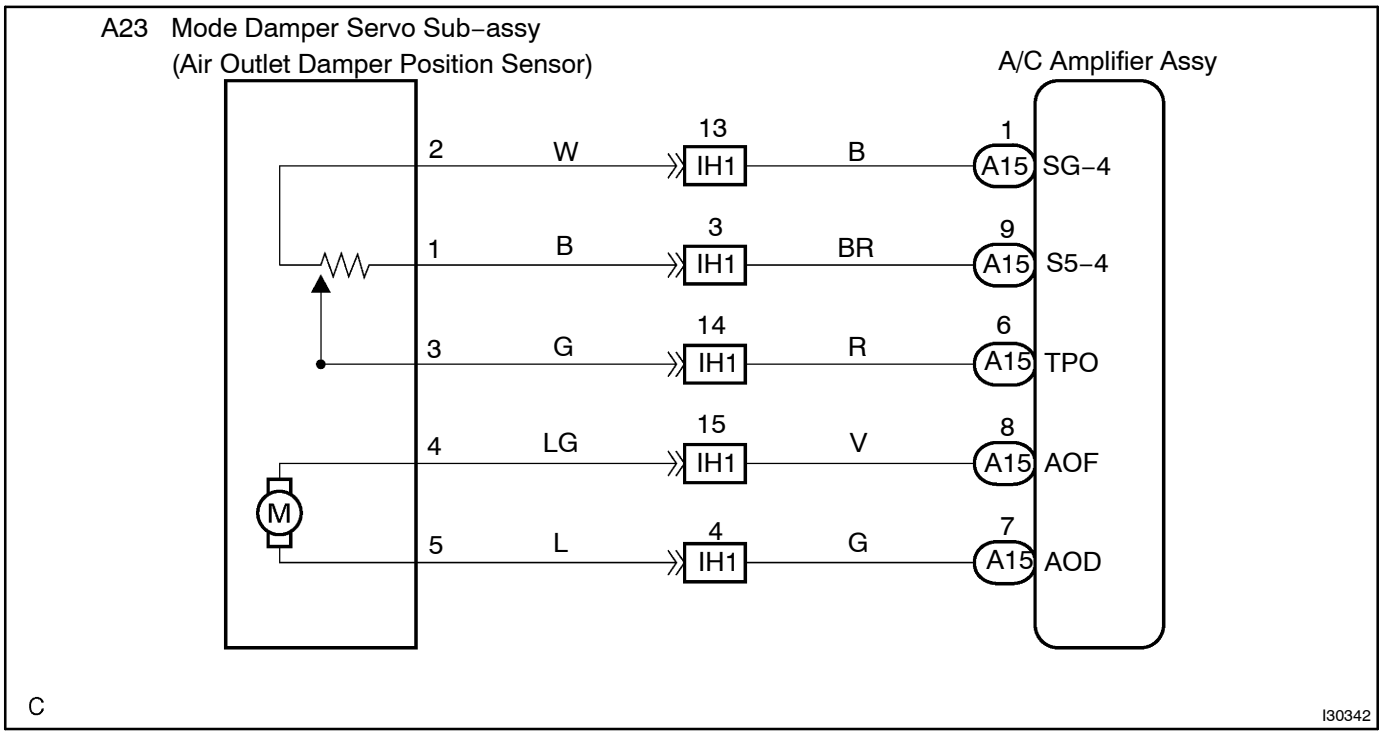
CIRCUIT DESCRIPTION



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

DTC No.	Detection Item	Trouble Area
B1433/33	Short to ground or power source circuit in air outlet damper position sensor circuit.	• Mode damper position sensor (Air outlet damper position sensor) • Harness or connector between mode damper servo sub–assy and A/C amplifier assy • A/C amplifier assy

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
In case of using the intelligent tester II, start the inspection step 1 and in case of not using the intelligent tester II, start from step 2.

1 READ VALUE OF ON INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch ON and push the intelligent tester II main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester II.

A C:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
Air outlet damper position (A/O Damp Pos)	Air outlet damper position /min.: –14% max.: 113.5%	Changes depending on air outlet power position	–
Air outlet damper target position (A/O Damp Targ)	Air outlet damper target position /min.: –14% max.: 113.5%	Changes depending on air outlet power position	–

Result:

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

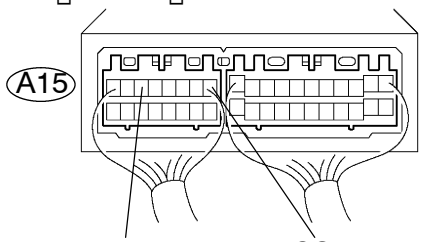
B → **REPLACE AIRCONDITIONER AMPLIFIER ASSY**

C → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–435)**

A

2 INSPECT AIRCONDITIONER AMPLIFIER ASSY(TPO, SG–4)

A/C Amplifier Connector Wire Harness View:



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

Standard:

Tester connection	Condition	Specified condition
A15–6 (TPO) – A15–1 (SG–4)	FACE	3.5 to 4.5 V
A15–6 (TPO) – A15–1 (SG–4)	DEF	0.5 to 1.5 V

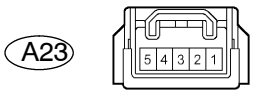
HINT:
As the air outlet servomotor is moved from FACE side to DEF side, the voltage decreases gradually without interruption.

OK → **REPLACE AIRCONDITIONER AMPLIFIER ASSY**

NG

3 INSPECT MODE DAMPER SERVO SUB–ASSY

Mode Damper Servo Sub–assy Connector Wire Harness View:



I30157

(a) Remove the mode damper servo sub–assy.

(b) Measure resistance between terminals 1 and 2 of mode damper servo sub–assy connector.

Standard:

Tester connection	Condition	Specified condition
A23–1 – A23–2	Always	4.2 to 7.8 kΩ

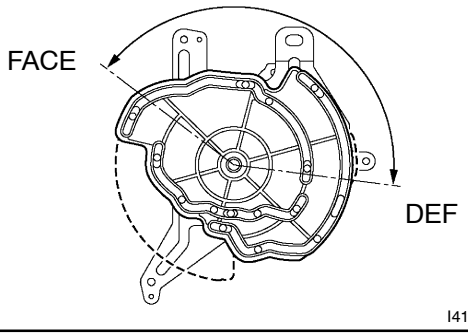
(c) While operating mode damper servo sub–assy as in the procedure on page 05–470, measure resistance between terminals 1 and 3 of mode damper servo sub–assy.

Standard:

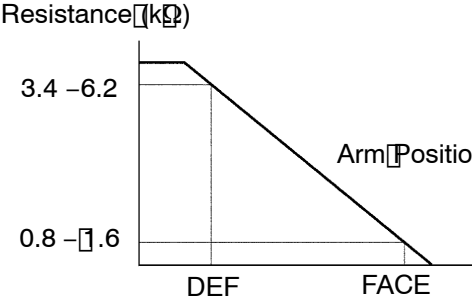
Tester connection	Condition	Specified condition
A23–1 – A23–3	DEF	3.4 to 6.2 kΩ
A23–1 – A23–3	FACE	0.8 to 1.6 kΩ

HINT:

As the mode damper servo sub–assy moves from DEF side to FACE side, the resistance decreases gradually without interruption.



I41038



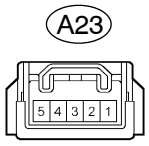
I30161

NG → **REPLACE MODE DAMPER SERVO SUB–ASSY**

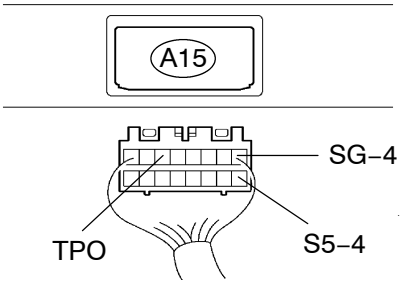
OK

4	CHECK HARNESS AND CONNECTOR(MODE DAMPER SERVO SUB–ASSY – A/C AMPIFIER ASSY)

Mode Damper Servo Sub–assy Wire Harness View:



A/C Amplifier Connector Wire Harness View:



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

Standard:

Tester connection	Condition	Specified condition
A15–1 (SG–4) – A23–2	Always	Below 1 Ω
A15–9 (S5–4) – A23–1	Always	Below 1 Ω
A15–6 (TPO) – A23–3	Always	Below 1 Ω
A15–1 (SG–4) – Body ground	Always	10 kΩ or higher
A15–9 (S5–4) – Body ground	Always	10 kΩ or higher
A15–6 (TPO) – Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE AIRCONDITIONER AMPLIFIER ASSY