

<b>DTC</b>	<b>B1443</b>	<b>AIR OUTLET DAMPER CONTROL SERVOMOTOR CIRCUIT</b>
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### CIRCUIT DESCRIPTION

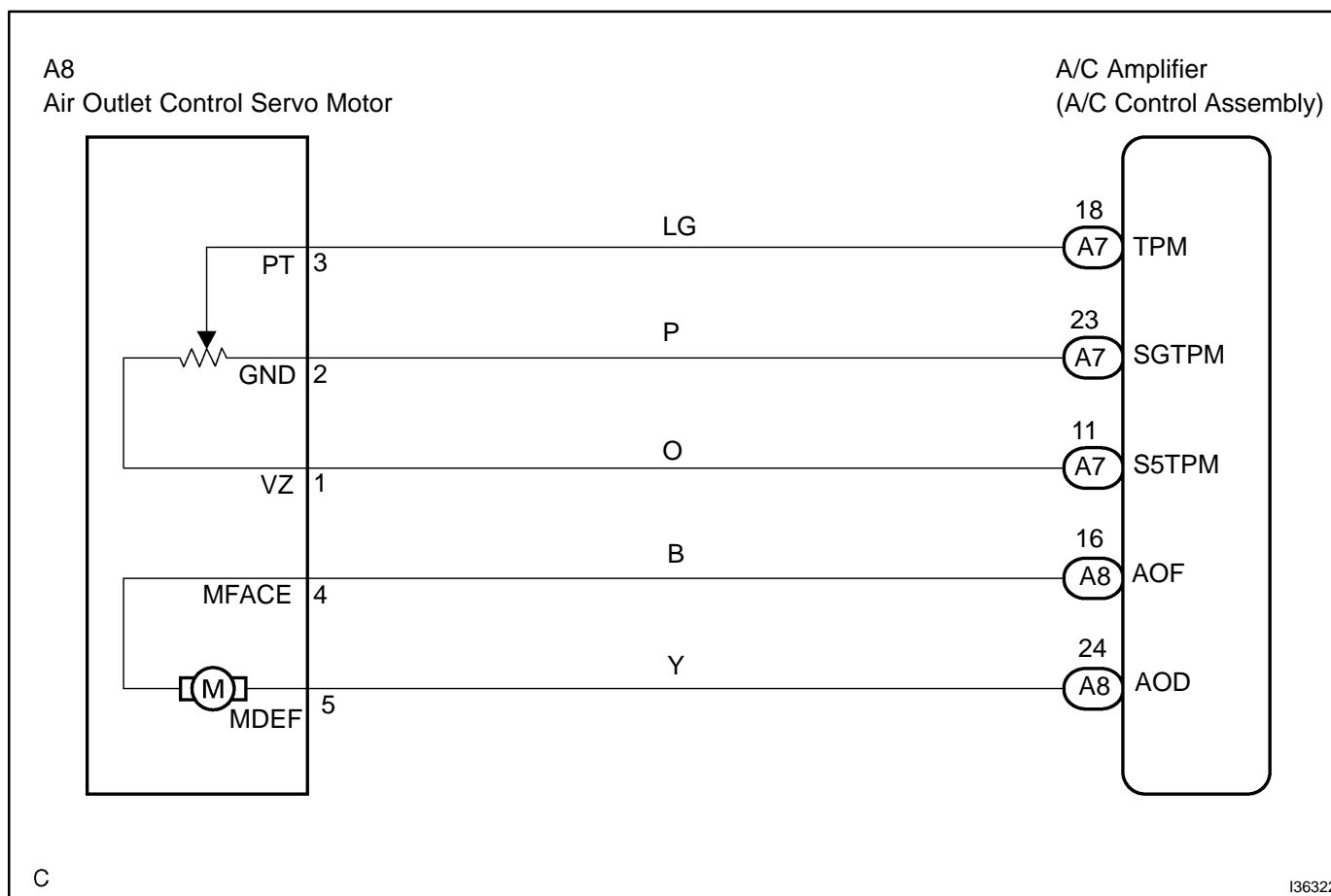
This circuit turns the servomotor and changes each damper position by receiving the signals from the A/C amplifier assy.

The air outlet damper servo switches the air outlet by rotating the motor (normal, reverse) with electrical power from the A/C amplifier.

When the AUTO switch is on, the A/C amplifier changes the mode between "FACE", "BI-LEVEL" and "FOOT" according to the temperature setting.

DTC No.	Detection Item	Trouble Area
B1443	Air outlet damper position sensor valve does not change even if air conditioner amplifier operated air outlet damper control servo motor.	<ul style="list-style-type: none"> <li>• Air outlet control servomotor</li> <li>• Harness or connector between air outlet control servomotor and A/C amplifier</li> <li>• A/C amplifier</li> </ul>

### WIRING DIAGRAM



## INSPECTION PROCEDURE

### 1 READ VALUE ON HAND-HELD TESTER

- (a) Connect the hand-held tester to DLC3.  
 (b) Turn the power switch ON and push the hand-held tester main switch ON.  
 (c) Select the item below in the DATA LIST, and read the display on the hand-held tester.

#### DATA LIST / AIR CONDITIONER:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
A/O DAMP POS	Air outlet damper position / min.: -14% max.: 113.5%	Damper is at "FACE": -10.0% Damper is at "FACE/FOOT": 12.0% Damper is at "FOOT" (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at "FOOT" (Auto): 49.0% or 69.0 % Damper is at "FACE/DEF": 69.0% or 95.0%	Open in the circuit: 50.0%
A/O DAMP TARG	Air outlet damper target position / min.: -14% max.: 113.5%	Damper is at "FACE": -10.0% Damper is at "FACE/FOOT": 12.0% Damper is at "FOOT" (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at "FOOT" (Auto): 49.0% or 69.0 % Damper is at "FACE/DEF": 69.0% or 95.0%	Open in the circuit: 50.0%

#### OK:

When the target position is at the "FACE" (-10.0%), the actual opening angle is 19.0% or less.

#### Result:

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

**B**

**PROCEED TO NEXT CIRCUIT INSPECTION  
SHOWN IN PROBLEM SYMPTOMS TABLE  
(SEE PAGE 05-1268)**

**C**

**REPLACE AIR CONDITIONING AMPLIFIER  
(SEE PAGE 55-47)**

**A**

**2 READ VALUE ON HAND-HELD TESTER**

- (a) Connect the hand-held tester to DLC3.
- (b) Turn the power switch ON and push the hand-held tester main switch ON.
- (c) Select the item below in the DATA LIST, and read the display on the hand-held tester.

**DATA LIST / AIR CONDITIONER:**

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
A/O DAMP POS	Air outlet damper position / min.: -14% max.: 113.5%	Damper is at "FACE/FOOT": 12.0% Damper is at "FOOT" (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at "FOOT" (Auto): 49.0% or 69.0 % Damper is at "FACE/DEF": 69.0% or 95.0% Damper is at "DEF": 110.0%	Open in the circuit: 50.0%
A/O DAMP TARG	Air outlet damper target position / min.: -14% max.: 113.5%	Damper is at "FACE/FOOT": 12.0% Damper is at "FOOT" (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at "FOOT" (Auto): 49.0% or 69.0 % Damper is at "FACE/DEF": 69.0% or 95.0% Damper is at "DEF": 110.0%	Open in the circuit: 50.0%

**OK:**

**When the target position is at the "DEF" (110.0%), the actual opening angle is 81.0% or more.**

**Result:**

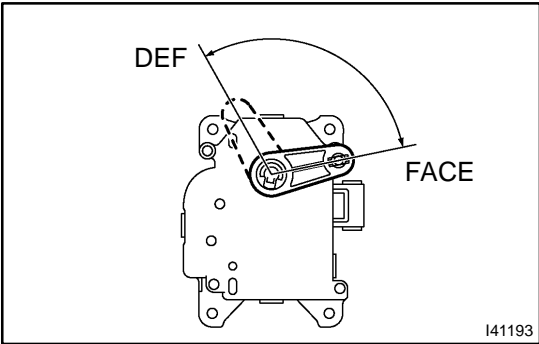
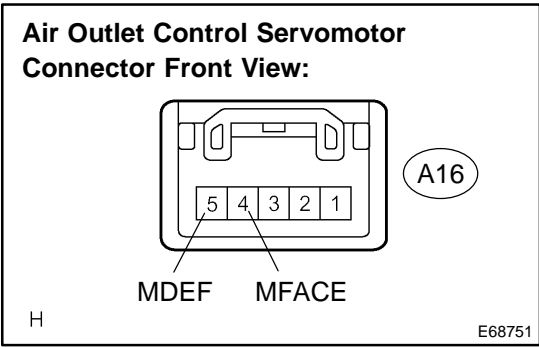
NG	A
OK (Checking from the PROBLEM SYMPTOM TABLE)	B
OK (Checking from the DTC)	C

**B** → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-1268)**

**C** → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-47)**

**A**

**3 INSPECT AIR OUTLET CONTROL SERVOMOTOR**



- (a) Remove the air outlet control servomotor.
- (b) Disconnect the connector from air outlet control servomotor.
- (c) Connect the positive (+) lead from the battery to terminal 4 and negative (-) lead to terminal 5 then check that the lever turns to "FACE" position smoothly.
- (d) Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester connection	Condition	Specified condition
A8-3 (PT) - A8-2 (GND)	FACE position	3.6 to 6.7 kΩ

- (e) Connect the positive (+) lead from the battery to terminal 5 and negative (-) lead to terminal 4 then check that the lever turn to "DEF" position smoothly.
- (f) Measure the resistance according to the value(s) in the table below.

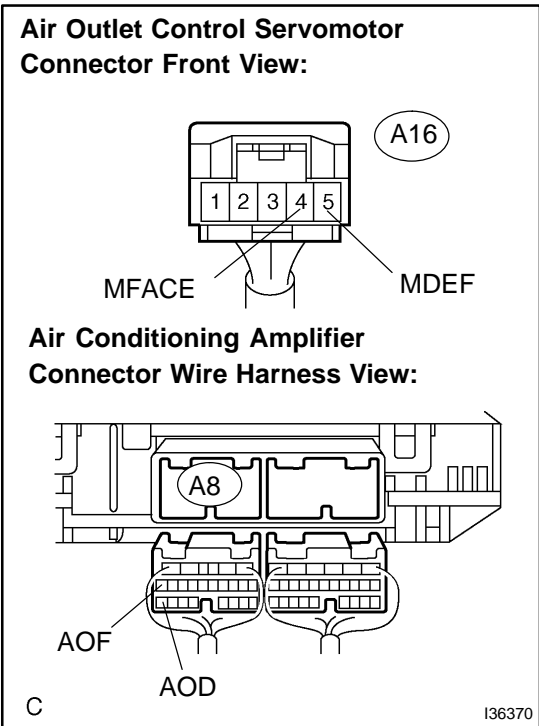
**Standard:**

Tester connection	Condition	Specified condition
A8-3 (PT) - A8-2 (GND)	DEF position	0.6 to 1.1 kΩ

**NG** REPLACE AIR OUTLET CONTROL SERVOMOTOR

**OK**

**4 CHECK HARNESS AND CONNECTOR(AIR OUTLET CONTROL SERVOMOTOR - AIR CONDITIONING AMPLIFIER) (SEE PAGE 01-47)**



- (a) Disconnect the connector from air outlet control servomotor and air conditioning amplifier.
- (b) Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester connection	Condition	Specified condition
A8-16 (AOF) - A16-4 (MFACE)	Always	Below 1 Ω
A8-24 (AOD) - A16-5 (MDEF)	Always	Below 1 Ω
A8-16 (AOF) - Body ground	Always	10 kΩ or higher
A8-24 (AOD) - Body ground	Always	10 kΩ or higher

**NG** REPAIR OR REPLACE HARNESS OR CONNECTOR

**OK**

**REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-47)**