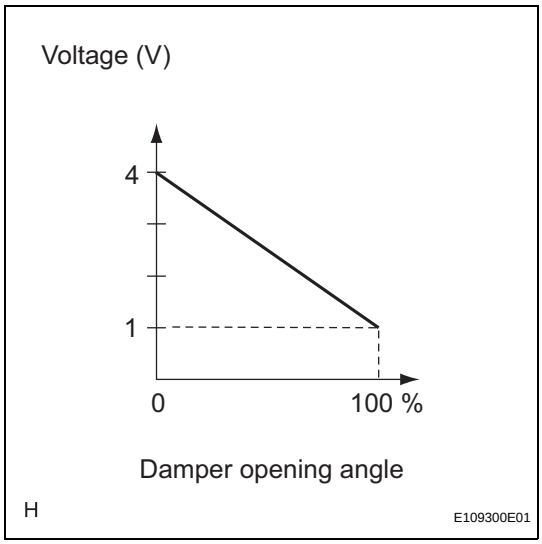
DTC	B1432/32	Air Inlet Damper Position Sensor Circuit

DESCRIPTION

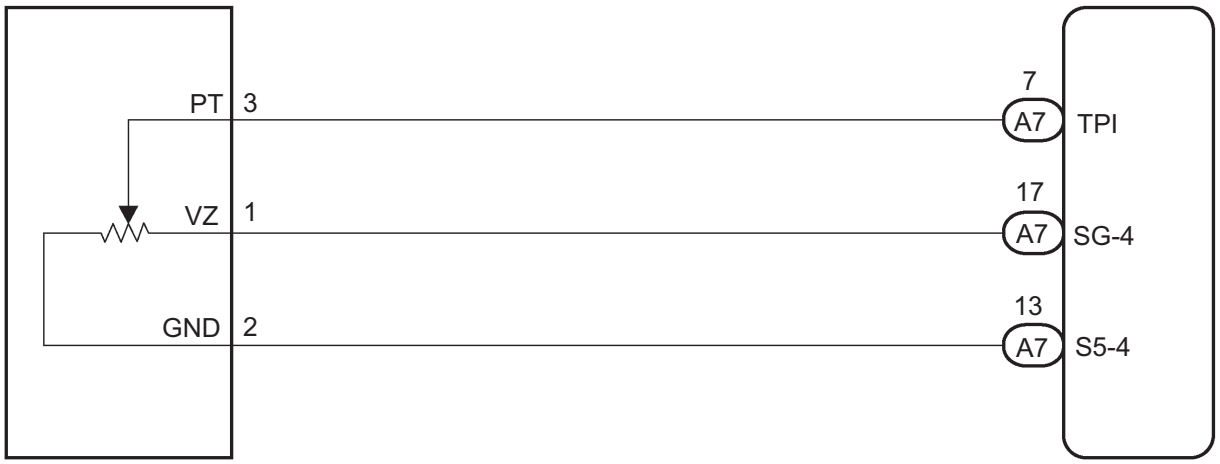


This sensor detects the position of the air inlet control servo motor and sends the appropriate signals to the A/C amplifier assembly. The position sensor is built in the air inlet control servo motor.
The position sensor's resistance changes as the air inlet control servo motor arm moves.
It outputs voltage (5 V) that is input to terminal 1 (VZ) and terminal 3 (PT) via the variable resister, and then to the A/C amplifier assembly.
The A/C amplifier reads the arm position with the input voltage from the position sensor.

DTC No.	DTC Detecting Condition	Trouble Area
B1432/32	Open or short in power source circuit in air inlet damper position sensor circuit	• Air inlet control servo motor (air inlet damper position sensor) • Harness or connector between air inlet control servo motor and A/C amplifier assembly • A/C amplifier assembly

WIRING DIAGRAM

A16 Air Inlet Control Servo Motor



C

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AC

1	READ VALUE OF INTELLIGENT TESTER

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

DATA LIST / AIR CONDITIONER

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
A/I DAMP POS	Air inlet damper position / min.: -14% max.: 113.5%	Damper is at "RECIRCULATION": -9% Damper is at "FRESH": 109% Damper is at "HALF-RECIRCULATION": 35 to 75%	Open in the circuit: 50.0%
A/I DAMP TARG	Air inlet damper target position / min.: -14% max.: 113.5%		

OK:

The display is as specified in the normal condition.

Result

Result	Proceed to
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

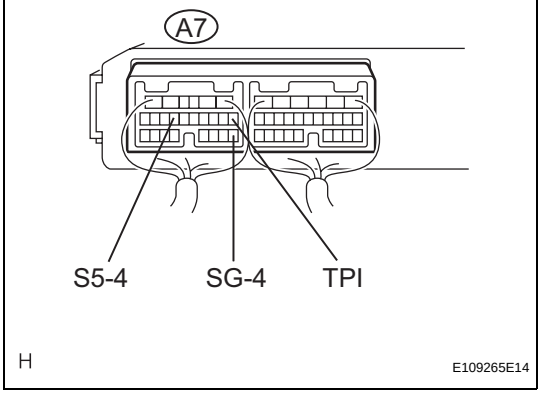
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

C → **REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY**

A

2 INSPECT AIR CONDITIONING AMPLIFIER ASSEMBLY

A/C Amplifier Assembly Connector Wire Harness View:



(a) Remove the A/C amplifier assembly with the connectors still connected.
(b) Change the set REC/FRS to activate the air inlet control servo motor.
(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection (Symbols)	Condition	Specified condition
A7-7 (TPI) - A7-17 (SG-4)	Ignition switch ON RECIRCULATION position	3.8 to 4.8 V
A7-7 (TPI) - A7-17 (SG-4)	Ignition switch ON FRESH position	0.2 to 1.2 V
A7-13 (S5-4) - A7-17 (SG-4)	Ignition switch ON	4.5 to 5.5 V
A7-13 (S5-4) - A7-17 (SG-4)	Ignition switch OFF	Below 1 V

HINT:
As the air inlet control servo motor is moved from REC side to FRS side, the voltage decreases gradually without interruption.

Result

Result	Proceed to
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

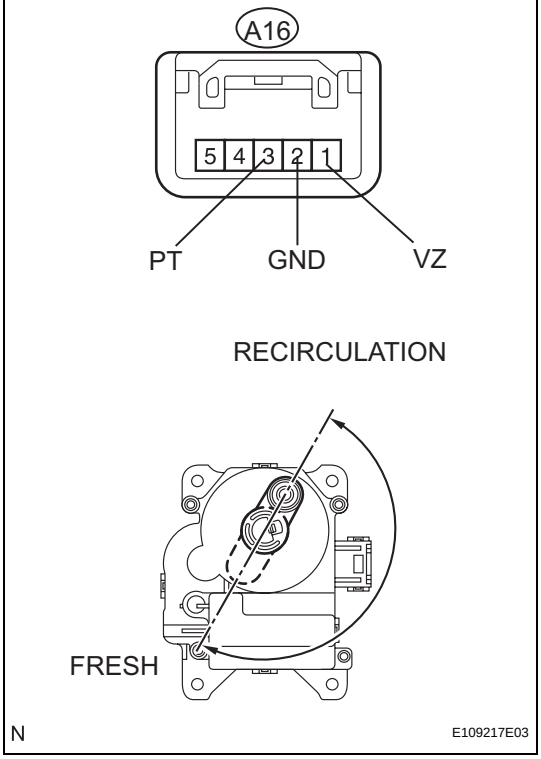
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

C → **REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY**

A

3 INSPECT AIR INLET CONTROL SERVO MOTOR

Air Inlet Control Servo Motor Connector Front View:



(a) Remove the air inlet control servo motor.
(b) Disconnect the connector from the air inlet control servo motor.
(c) Measure the resistance according to the value(s) in the table below.

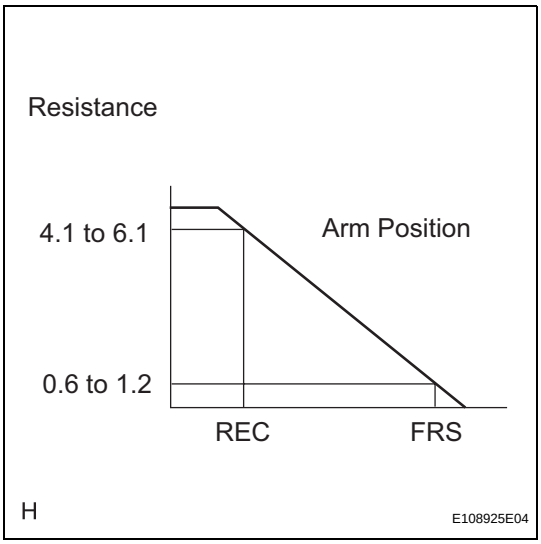
Standard resistance

Tester connection (Symbol)	Condition	Specified condition
A16-1 (VZ) - A16-2 (GND)	Always	4.2 to 7.8 kΩ

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

Standard resistance

Tester connection (Symbols)	Condition	Specified condition
A16-3 (PT) - A16-2 (GND)	RECIRCULATION position	4.1 to 6.1 kΩ
A16-3 (PT) - A16-2 (GND)	FRESH position	0.6 to 1.2 kΩ



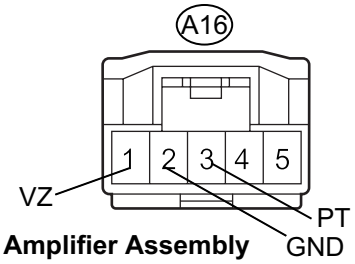
(e) As the air inlet control servo motor moves from fresh to recirculation, the resistance decreases gradually without interruption.
HINT:
For details regarding operation of the servo motor (See page AC-85).

NG → **REPLACE AIR INLET CONTROL SERVO MOTOR**

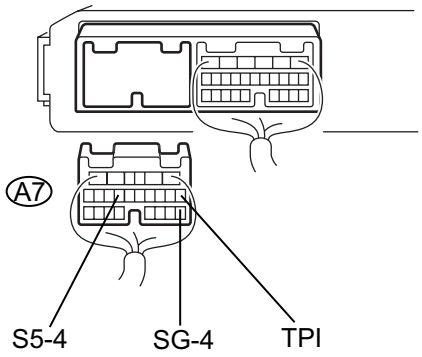
OK

4	CHECK HARNESS AND CONNECTOR (AIR INLET CONTROL SERVO MOTOR - A/C AMPLIFIER ASSEMBLY)

Air Inlet Control Servo Motor Connector Front View:



A/C Amplifier Assembly Connector Wire Harness View:



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(a) Disconnect the connector from the A/C amplifier assembly.

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

Standard resistance

Tester connection (Symbols)	Condition	Specified condition
A7-7 (TPI) - A16-3 (PT)	Always	Below 1 Ω
A7-17 (SG-4) - A16-1 (VZ)	Always	Below 1 Ω
A7-13 (S5-4) - A16-2 (GND)	Always	Below 1 Ω
A7-7 (TPI) - Body ground	Always	10 kΩ or higher
A7-17 (SG-4) - Body ground	Always	10 kΩ or higher
A7-13 (S5-4) - Body ground	Always	10 kΩ or higher

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

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY

AC