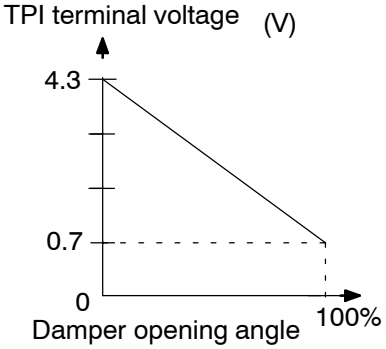
DTC	B1432	AIR INLET DAMPER POSITION SENSOR CIRCUIT

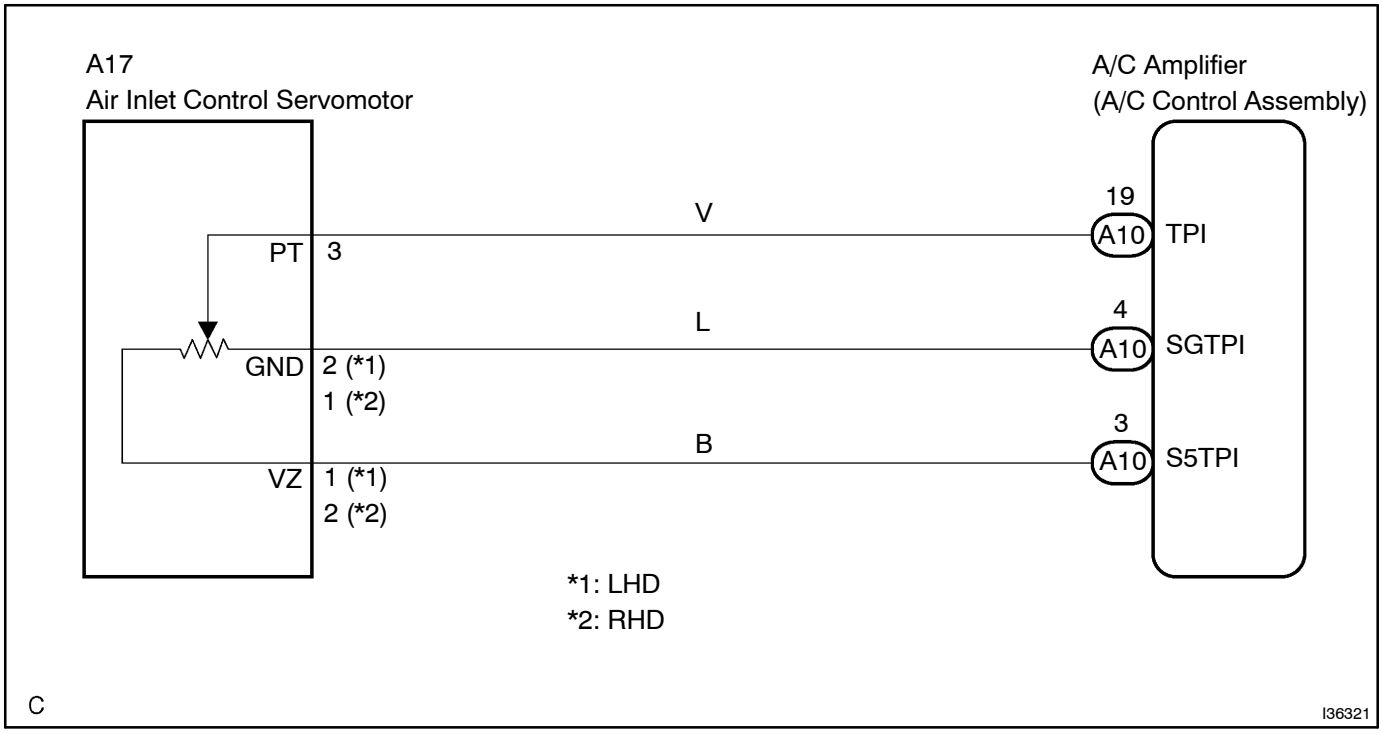
CIRCUIT DESCRIPTION



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

DTC No.	Detection Item	Trouble Area
B1432	Open or short in power source circuit in air inlet damper position sensor circuit.	• Air inlet control servomotor (air inlet damper position sensor) • Harness or connector between air inlet control servomotor and A/C amplifier • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE ON INTELLIGENT TESTER II

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

DATA LIST / AIR CONDITIONER:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
Air inlet damper position (A/I Damp Pos)	Air inlet damper position / min.: –14% max.: 113.5%	Damper is at ”RECIRCULATION”: –1.0% Damper is at ”FRESH”: 110.0% Damper is at ”HALF–RECIR-CULATION”: 20.0 to 102.0%	Open in the circuit: 50.0%
Air inlet damper target position (A/I Damp Targ)	Air inlet damper target position / min.: –14% max.: 113.5%	Damper is at ”RECIRCULATION”: –1.0% Damper is at ”FRESH”: 110.0% Damper is at ”HALF–RECIR-CULATION”: 20.0 to 102.0%	Open in the circuit: 50.0%

OK:

The displayed is as specified in the normal condition.

Result:

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

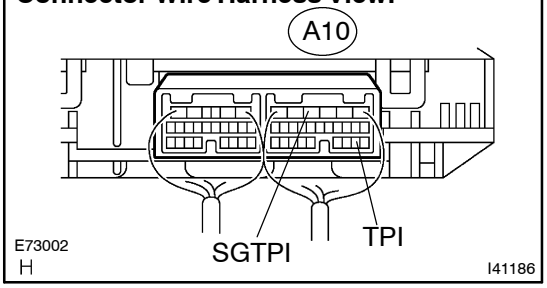
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1035)**

C → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–52)**

A

2 INSPECT AIR CONDITIONING AMPLIFIER(TPI – SGTPI)

Air Conditioning Amplifier Connector Wire Harness View:



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

Standard:

Tester connection	Condition	Specified condition
A10–19 (TPI) – A10–4 (SGTPI)	Power switch ON (ON) RECIRC position	3.5 to 4.5 V
A10–19 (TPI) – A10–4 (SGTPI)	Power switch ON (ON) FRESH position	0.5 to 1.8 V

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

Result:

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

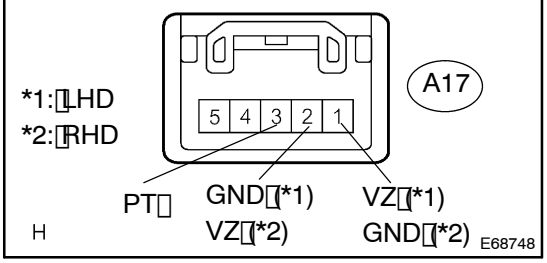
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE** (SEE PAGE 05–1035)

C → **REPLACE AIR CONDITIONING AMPLIFIER** (SEE PAGE 55–52)

A

3 INSPECT AIR INLET CONTROL SERVOMOTOR

Air Inlet Control Servomotor Connector Front View:



(a) Remove the air inlet control servomotor.

(b) Disconnect the connector from air inlet control servomotor.

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

Standard:

Tester connection	Condition	Specified condition
A17–1 (VZ) – A17–2 (GND) (*1)	Always	4.2 to 7.8 kΩ
A17–2 (VZ) – A17–1 (GND) (*2)	Always	4.2 to 7.8 kΩ

HINT:

*1: LHD

*2: RHD

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

HINT:

See page 05–1092 for the operation procedure of the air inlet control servomotor.

Standard:

Tester connection	Condition	Specified condition
A17–3 (PT) – A17–2 (GND) (*1)	RECIRCULATION position	3.4 to 6.2 kΩ
A17–3 (PT) – A17–2 (GND) (*1)	FRESH position	0.6 to 1.1 kΩ
A17–3 (PT) – A17–1 (GND) (*2)	RECIRCULATION position	3.4 to 6.2 kΩ
A17–3 (PT) – A17–1 (GND) (*2)	FRESH position	0.6 to 1.1 kΩ

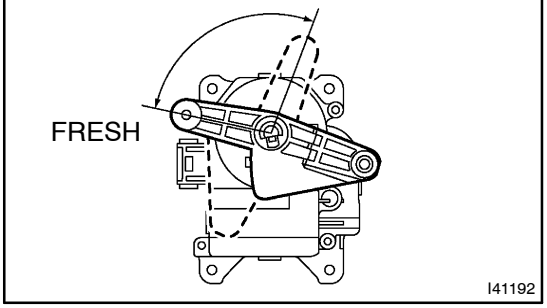
HINT:

*1: LHD

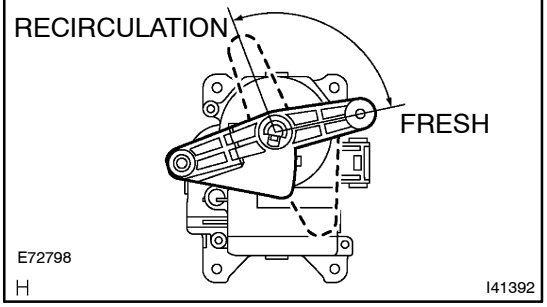
*2: RHD

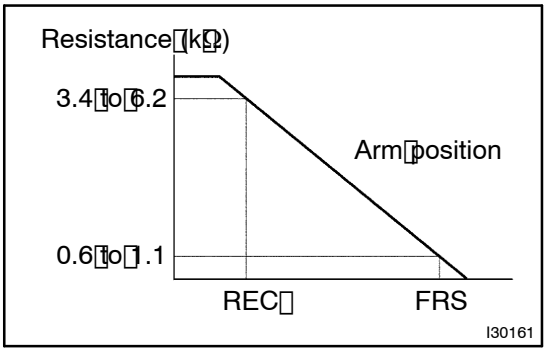
(e) As the air inlet control servomotor moves from fresh to recirculation, the resistance decreases gradually without interruption.

LHD:



RHD:



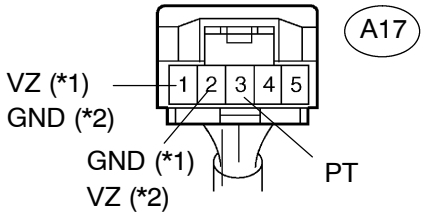


NG → **REPLACE AIR INLET CONTROL SERVOMOTOR**

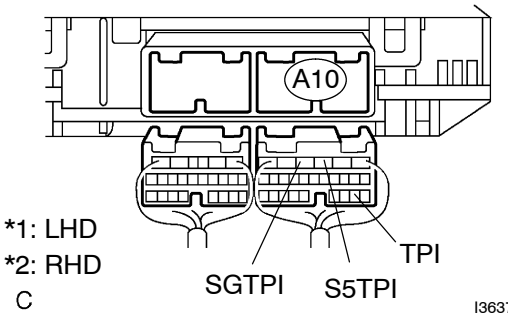
OK

4	CHECK HARNESS AND CONNECTOR(AIR INLET CONTROL SERVOMOTOR – AIR CONDITIONING AMPLIFIER) (SEE PAGE 01–46)

Air Inlet Control Servomotor Connector Front View:



Air Conditioning Amplifier Connector Wire Harness View:



(a) Disconnect the connector from air inlet control servomotor.

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

Standard:

Tester connection	Condition	Specified condition
A10–19 (TPI) – A17–3 (PT)	Always	Below 1 Ω
A10–4 (SGTPI) – A17–2 (GND) (*1)	Always	Below 1 Ω
A10–4 (SGTPI) – A17–1 (GND) (*2)	Always	Below 1 Ω
A10–3 (S5TPI) – A17–1 (VZ) (*1)	Always	Below 1 Ω
A10–3 (S5TPI) – A17–2 (VZ) (*2)	Always	Below 1 Ω
A10–19 (TPI) – Body ground	Always	10 kΩ or higher
A10–4 (SGTPI) – Body ground	Always	10 kΩ or higher
A10–3 (S5TPI) – Body ground	Always	10 kΩ or higher

HINT:
*1: LHD
*2: RHD

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

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–52)