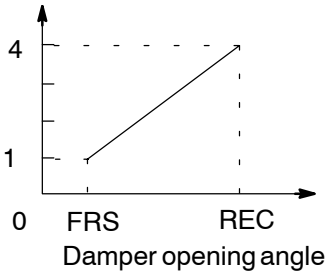
DTC	B1432	AIR INLET DAMPER POSITION SENSOR CIRCUIT

CIRCUIT DESCRIPTION

This sensor detects the position of the air inlet servomotor and sends the appropriate signals to the A/C amplifier. The position sensor is built in the air inlet servomotor.

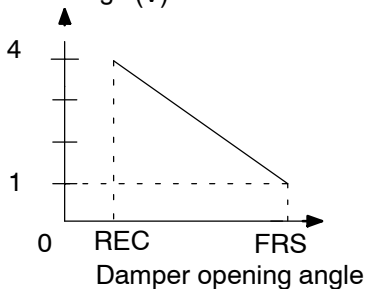
LHD Models:

TPI terminal voltage (V)



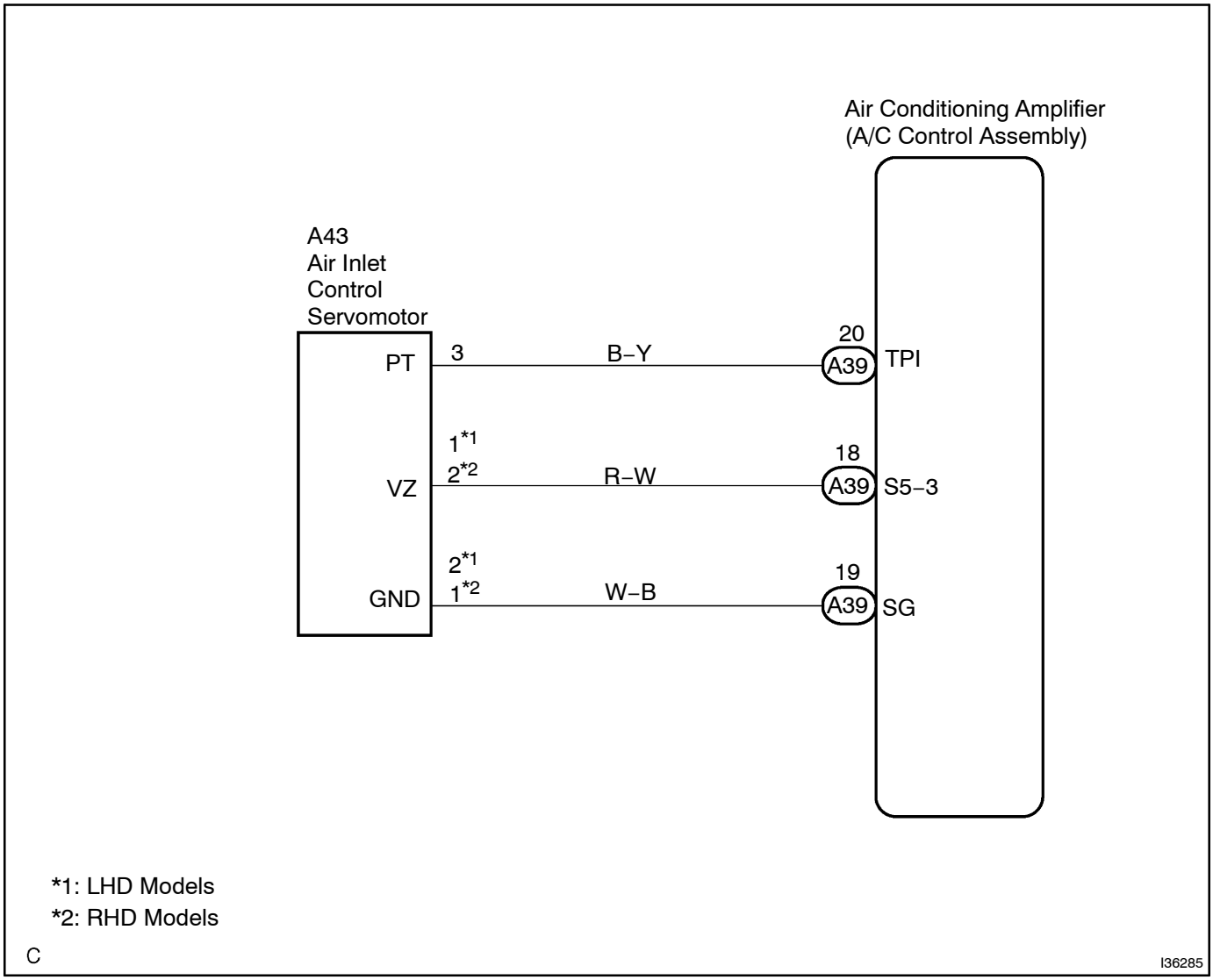
RHD Models:

TPI terminal voltage (V)



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

WIRING DIAGRAM



*1: LHD Models
*2: RHD Models

C

I36285

INSPECTION PROCEDURE

1	READ VALUE ON INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch to the ON position 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	Measure Item/Display (Range)	Normal Condition	Diagnostic Note
Air inlet damper position (A/I Damp Pos)	Air inlet damper position / min.: –14% max.: 113.5%	RECIRCULATION: Approx. 0% FRESH: Approx. 100%	–
Air inlet damper target position (A/I Damp Targ)	Air inlet damper target / min.: –14% max.: 113.5%	RECIRCULATION: Approx. 0% FRESH: Approx. 100% HARF–RECIRCULATION: 43 to 99.5%	–

OK:

The display is as specified in the normal condition.

Result:

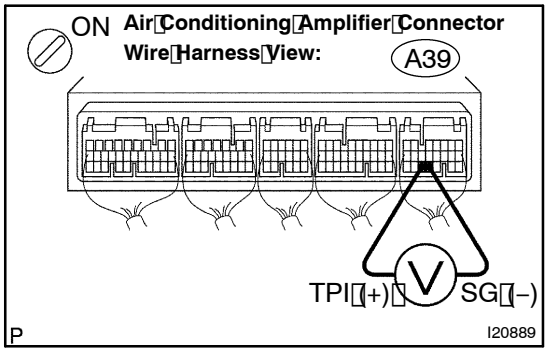
NG	A
OK (Checking from the PROBLEM SYMPTOM TABLE)	B
OK (Checking from the DTC)	C

B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–778)**

C → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–15)**

A

2 INSPECT AIR CONDITIONING AMPLIFIER(TPI – SG)



(a) Remove the A/C amplifier with connectors still connected.
(b) Turn the ignition switch to the ON position.
(c) Change the set RECIRC/FRESH to activate the air inlet servomotor.
(d) Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A39–20 (TPI) – A39–19 (SG)	RECIRC	3.5 to 4.5 V
A39–20 (TPI) – A39–19 (SG)	FRESH	0.5 to 1.5 V

HINT:
LHD:
As the air inlet servomotor moves from the RECIRC side to the FRESH side, the voltage decreases gradually without interruption.
RHD:
As the air inlet servomotor moves from the RECIRC side to the FRESH side, the voltage increase gradually without interruption.

Result:

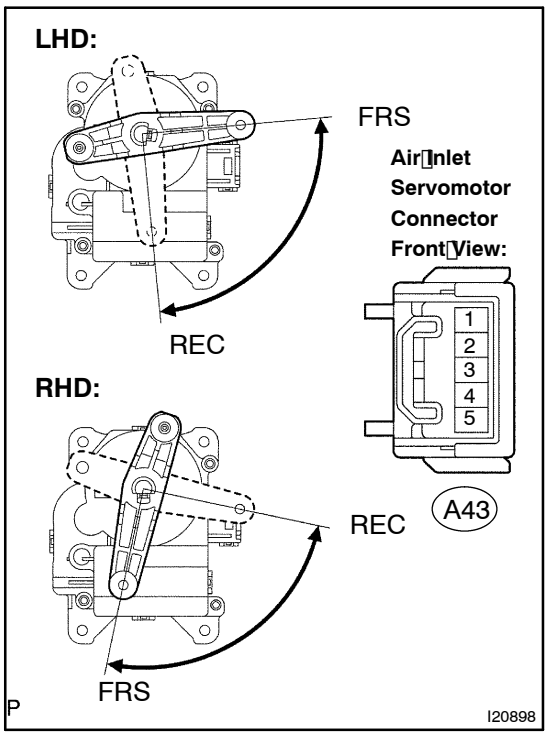
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–778)**

C → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–15)**

A

3 INSPECT AIR INLET SERVOMOTOR



(a) Remove the air inlet servomotor.

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

Standard:

Tester connection	Condition	Specified condition
A43–1 (VZ) – A43–2 (GND) *1	Always	4.2 to 7.8 kΩ
A43–2 (VZ) – A43–1 (GND) *2	Always	4.2 to 7.8 kΩ

HINT:

- *1: LHD
- *2: RHD

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

HINT:

See page 05–863 for operation procedure for the air inlet servomotor.

Standard:

Tester connection	Condition	Specified condition
A43–3 (PT) – A43–2 (GND) *1	RECIRCULATION	3.4 to 6.2 kΩ
A43–3 (PT) – A43–2 (GND) *1	FRESH	0.8 to 1.6 kΩ
A43–3 (PT) – A43–1 (GND) *2	RECIRCULATION	3.4 to 6.2 kΩ
A43–3 (PT) – A43–1 (GND) *2	FRESH	0.8 to 1.6 kΩ

HINT:

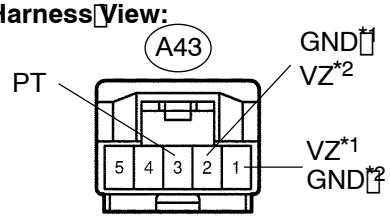
- *1: LHD
- *2: RHD
- LHD:
  As the air inlet servomotor moves from fresh to recirculation, the resistance decreases gradually without interruption.
- RHD:
  As the air inlet servomotor moves from fresh to recirculation, the resistance increase gradually without interruption.
- See page 05–863 for operation procedure for the air inlet servomotor.

NG → **REPLACE AIR INLET SERVOMOTOR**

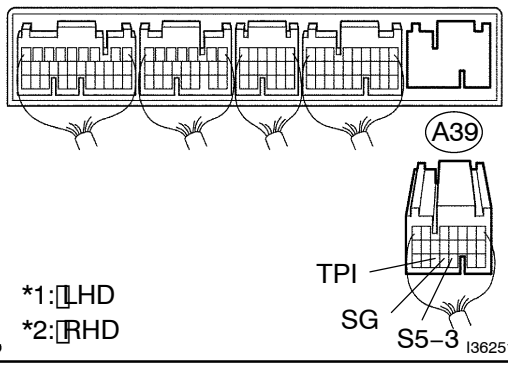
OK

4	CHECK HARNESS AND CONNECTOR(AIR INLET SERVOMOTOR – AIR CONDITIONING AMPLIFIER) (SEE PAGE 01–44)

Air Inlet Servomotor Connector
Wire Harness View:



Air Conditioning Amplifier Connector
Wire Harness View:



*1: LHD
*2: RHD

P

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

Standard:

Tester connection	Condition	Specified condition
A39–20 (TPI) – A43–3 (PT)	Always	Below 1 Ω
A39–18 (S5–3) – A43–1 (VZ)*1	Always	Below 1 Ω
A39–18 (S5–3) – A43–2 (VZ)*2	Always	Below 1 Ω
A39–19 (SG) – A43–2 (GND)*1	Always	Below 1 Ω
A39–19 (SG) – A43–1 (GND)*2	Always	Below 1 Ω
A39–20 (TPI) – Body ground	Always	10 kΩ or higher
A39–18 (S5–3) – Body ground	Always	10 kΩ or higher
A39–19 (SG) – 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 55–16)