

DTC	B1442	AIR INLET DAMPER CONTROL SERVOMOTOR CIRCUIT
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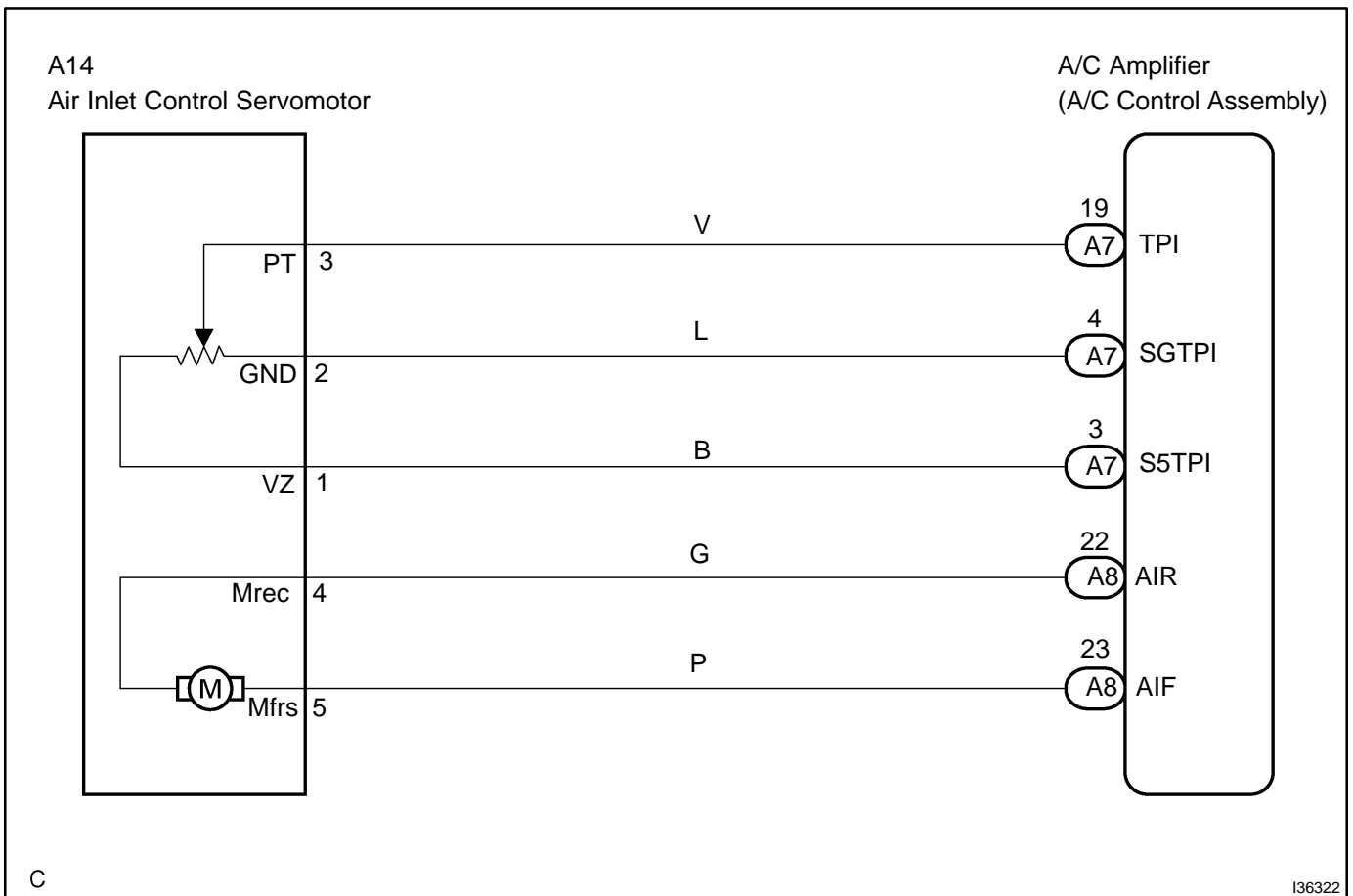
CIRCUIT DESCRIPTION

The air inlet control servomotor is controlled by the A/C amplifier and moves the air inlet control servomotor to the desired position.

The air inlet control servomotor switches between "RECIRCULATION" and "FRESH" by rotating the motor (normal, reverse) with electrical power from the A/C amplifier. This controls intake air and switches "RECIRCULATION", "FRESH" and "HALF-RECIRCULATION".

DTC No.	Detection Item	Trouble Area
B1442	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"> • Air inlet control servomotor • Harness or connector between air inlet control servomotor and A/C amplifier • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE ON HAND-HELD TESTER
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- (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/I DAMP POS	Air inlet damper position / min.: -14% max.: 113.5%	Damper is at "RECIRCULATION": -1.0% Damper is at "HALF-RECIR- CULATION": 20.0 to 102.0%	Open in the circuit: 50.0%
A/I DAMP TARG	Air inlet damper target position / min.: -14% max.: 113.5%	Damper is at "RECIRCULATION": -1.0% Damper is at "HALF-RECIR- CULATION": 20.0 to 102.0%	Open in the circuit: 50.0%

OK:

When the target position is at the "RECIRCULATION" (-1.0%), 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)
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C	REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-47)
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A

2	READ VALUE ON HAND-HELD TESTER
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- (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/I DAMP POS	Air inlet damper position / min.: -14% max.: 113.5%	Damper is at "FRESH": 110.0% Damper is at "HALF-RECIRCULATION": 20.0 to 102.0%	Open in the circuit: 50.0%
A/I DAMP TARG	Air inlet damper target position / min.: -14% max.: 113.5%	Damper is at "FRESH": 110.0% Damper is at "HALF-RECIRCULATION": 20.0 to 102.0%	Open in the circuit: 50.0%

OK:

When the target position is at the "FRESH" (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

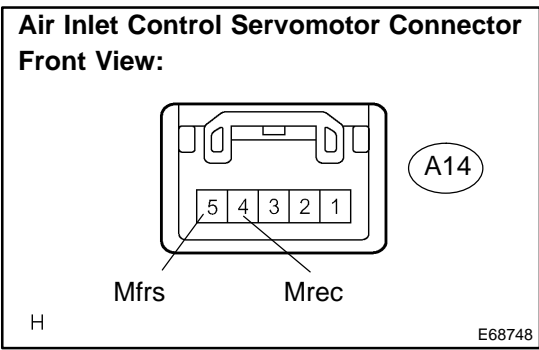
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-1268)

C

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-47)

A

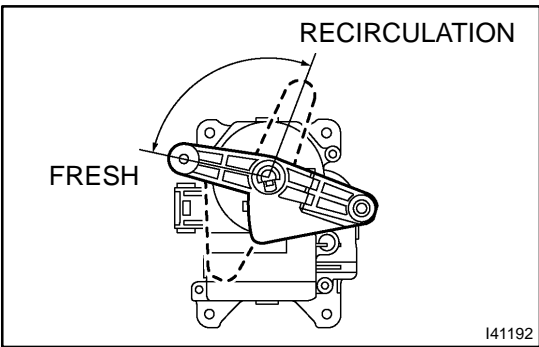
3 INSPECT AIR INLET CONTROL SERVOMOTOR



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

Standard:

Tester connection	Condition	Specified condition
A14-3 (PT) - A14-2 (GND)	FRESH position	0.6 to 1.1 kΩ



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

Standard:

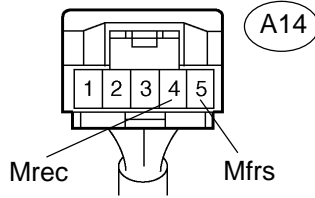
Tester connection	Condition	Specified condition
A14-3 (PT) - A14-2 (GND)	RECIRCULATION position	3.4 to 6.2 kΩ

NG REPLACE AIR INLET CONTROL SERVOMOTOR

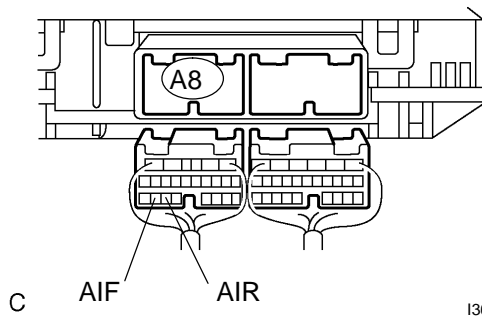
OK

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

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
A8-22 (AIR) – A14-4 (Mrec)	Always	Below 1 Ω
A8-23 (AIF) – A14-5 (Mfrs)	Always	Below 1 Ω
A8-22 (AIR) – Body ground	Always	10 kΩ or higher
A8-23 (AIF) – Body ground	Always	10 kΩ or higher

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-47)