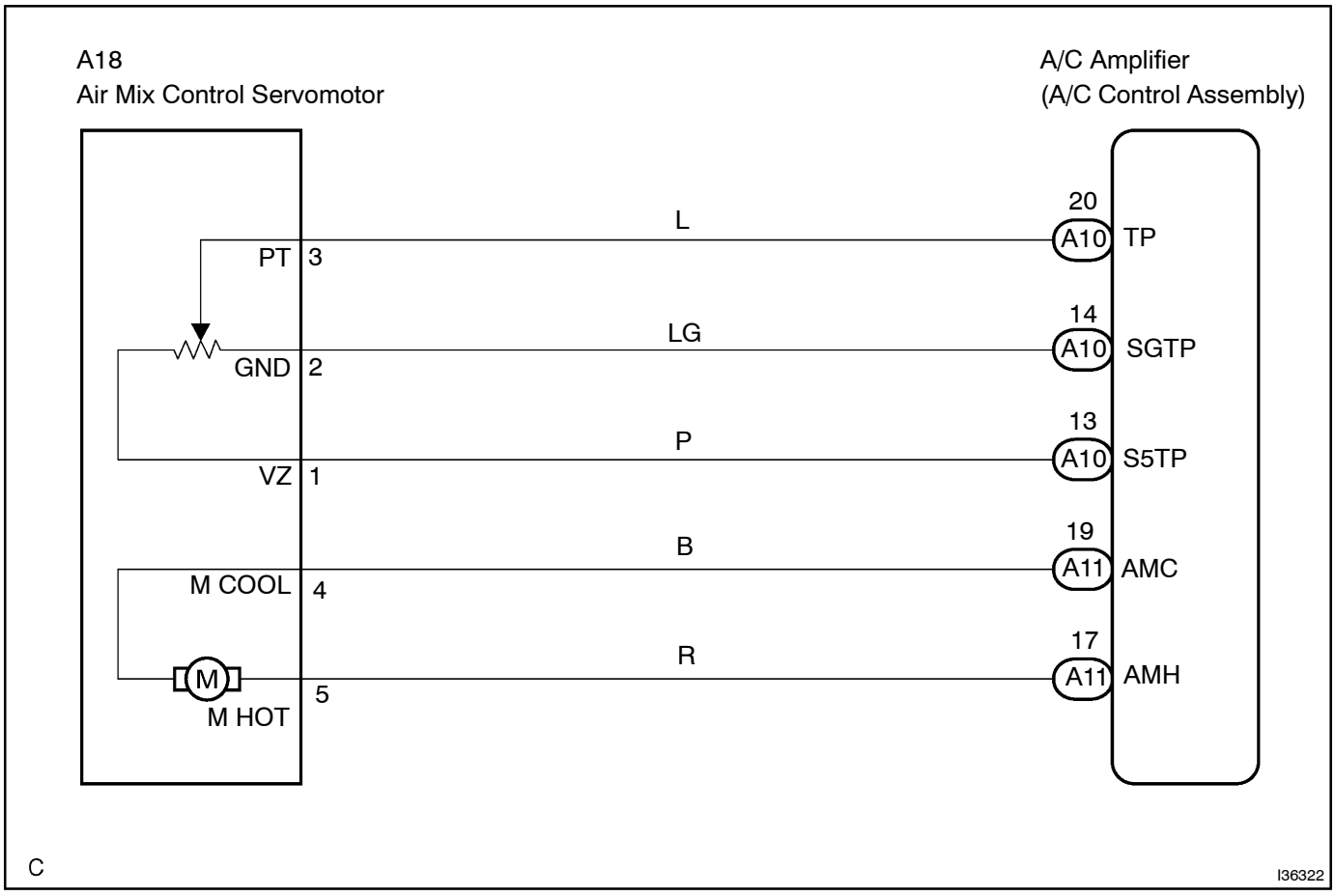
DTC	B1441	AIR MIX DAMPER CONTROL SERVOMOTOR CIRCUIT (PASSENGER SIDE)

CIRCUIT DESCRIPTION

The air mix control servomotor (air mix damper servo sub–assy) is controlled by the A/C amplifier.
The air mix control servomotor moves the air mix damper by rotating (normal, reverse) the motor with electrical power from the A/C amplifier.
This adjusts the mix ratio of the air that passes through the evaporator and heater core and controls the airflow temperature. Air flow temperature changes when moving the air mix damper to the target point. The target point can be detected with the air mix damper position sensor.

DTC No.	Detection Item	Trouble Area
B1441	Air mix damper position sensor value does not change even if air conditioner amplifier assy operates air mix servomotor.	• Air mix control servomotor • Harness or connector between air mix 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 mix damper position (D side) (A/M Damp Pos–D)	Air mix damper position (Driver side) / min.: –14% max.: 113.5%	Damper is at "MAX. COOL": –10.0%	–
Air mix damper target position (D side) (A/M Damp Targ–D)	Air mix damper target position (Driver side) / min.: –14% max.: 113.5%	Damper is at "MAX. COOL": –10.0%	–

OK:

When the target position is at the "MAX. COOL" (–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 05–1035)**

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

A

2	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 mix damper position (D side) (A/M Damp Pos–D)	Air mix damper position (Driver side) / min.: –14% max.: 113.5%	Damper is at ”MAX. HOT”: 100.0% or 71.0%	–
Air mix damper target position (D side) (A/M Damp Targ–D)	Air mix damper target position (Driver side) / min.: –14% max.: 113.5%	Damper is at ”MAX. HOT”: 100.0% or 71.0%	–

OK:

When the target position is at the ”MAX. HOT” (100.0%), 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

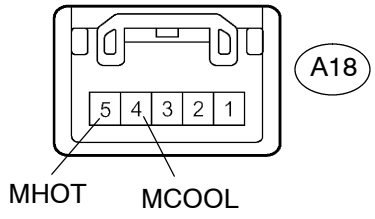
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1035)**

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

A

3 INSPECT AIR MIX CONTROL SERVOMOTOR

Air Mix Control Servomotor Connector Front View:



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

Standard:

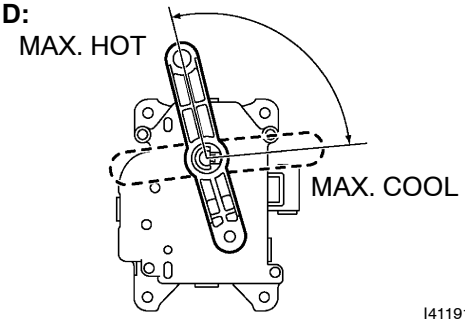
Tester connection	Condition	Specified condition
A18–3 (PT) – A18–2 (GND)	Max. Hot Position	0.8 to 1.6 kΩ

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

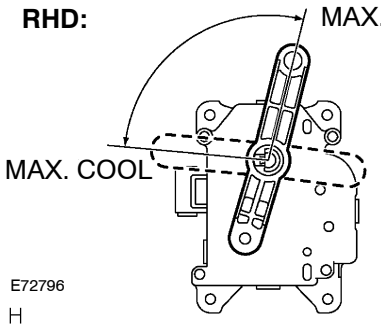
Standard:

Tester connection	Condition	Specified condition
A18–3 (PT) – A18–2 (GND)	Max. Cool Position	3.6 to 6.7 kΩ

LHD:



RHD:

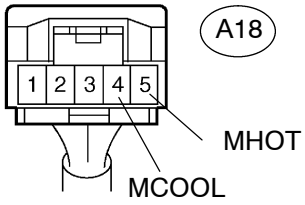


NG → **REPLACE AIR MIX CONTROL SERVOMOTOR**

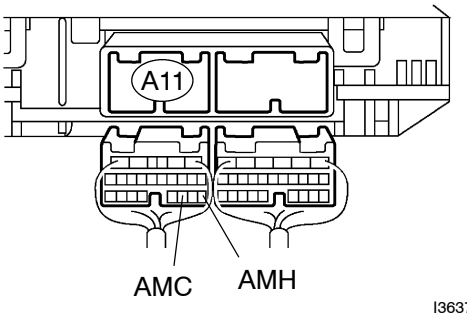
OK

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

Air Mix Control Servomotor Connector Front View:



Air Conditioning Amplifier Connector Wire Harness View:



(a) Disconnect the connector from air mix control servomotor.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A11–19 (AMC) – A18–4 (MCOOL)	Always	Below 1 Ω
A11–17 (AMH) – A18–5 (MHOT)	Always	Below 1 Ω
A11–19 (AMC) – Body ground	Always	10 kΩ or higher
A11–17 (AMH) – Body ground	Always	10 kΩ or higher

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

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–52)