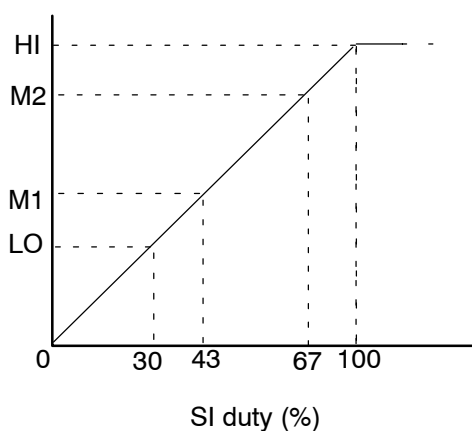
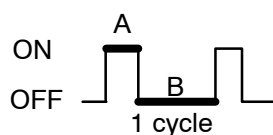


BLOWER MOTOR CIRCUIT

Blower Level



$$\text{Duty Ratio} = \frac{A}{A + B} \times 100 (\%)$$



CIRCUIT DESCRIPTION

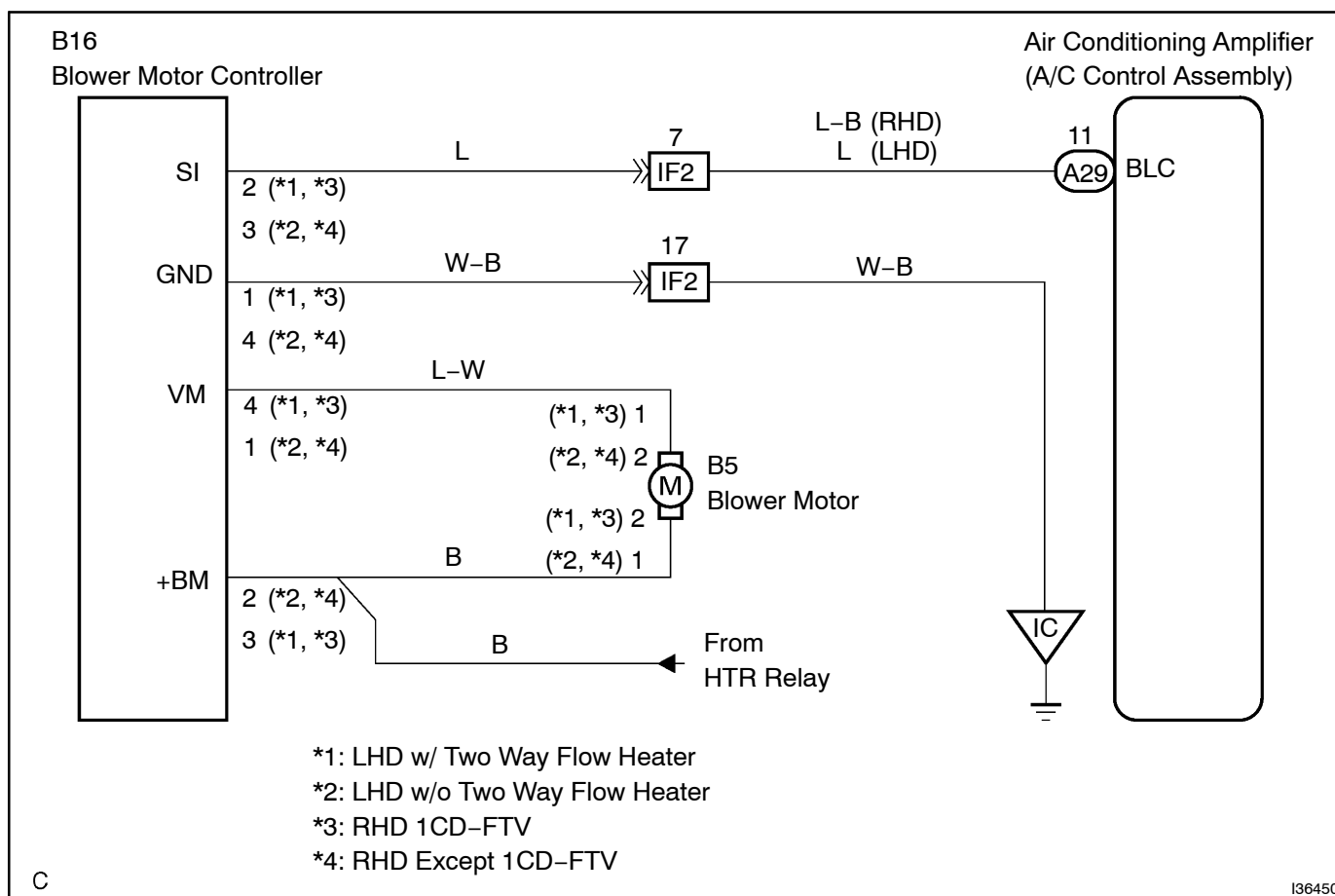
The blower motor is operated by signals from the A/C amplifier assy. Blower motor speed signals are transmitted by changes in the duty ratio.

Duty Ratio

The duty ratio is the ratio of the period of continuity in one cycle. For example, A is the period of continuity in one cycle, and B is the period of non-continuity.

The blower motor controller controls the blower motor speed. The blower motor controller reads the signal from the A/C amplifier and controls rotation and speed.

WIRING DIAGRAM



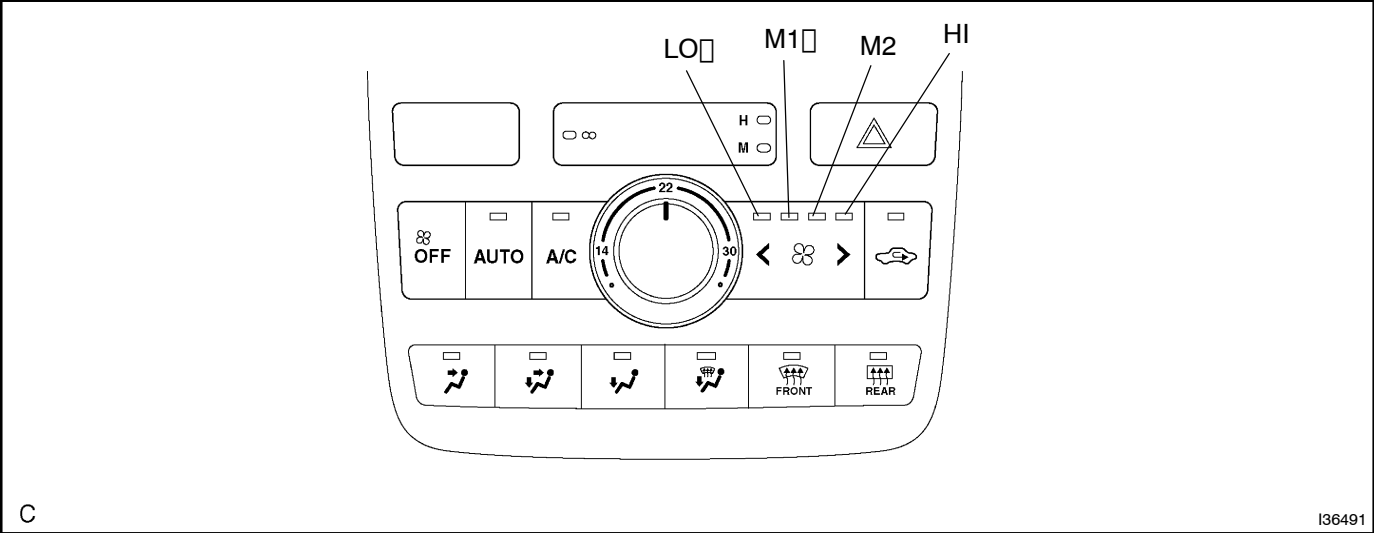
C

I36450

INSPECTION PROCEDURE

1 | PERFORM ACTUATOR CHECK

- (a) Set to the actuator check mode (see page 05-850).
- (b) Press the FACE switch to change to the step operation.
- (c) Check the air flow level by hand.



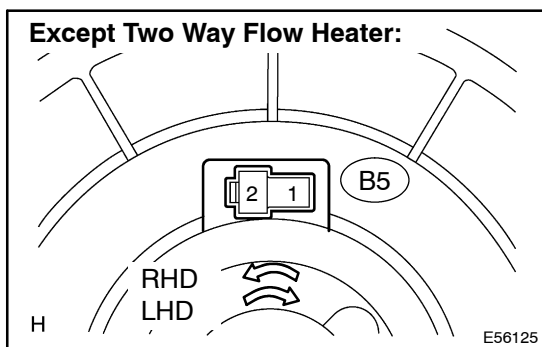
The number of indicated blower speed indicator	Blower level
0	0
1 (LO)	10
2 (M1)	17
3 (M2)	23
4 (HI)	31

OK:
Blower level changes in accordance with each display code.

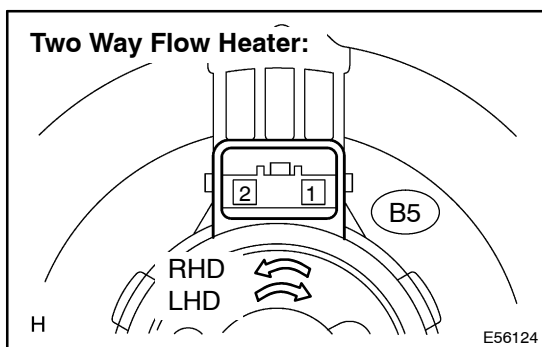
NG | Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-862)

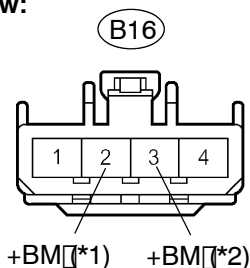
2 INSPECT BLOWER MOTOR**Except Two Way Flow Heater:**

- (a) Remove the blower motor.
 - (b) Connect the positive (+) lead to terminal 1, and the negative (-) lead to terminal 2 of the blower motor connector.
- OK: Blower motor operates smoothly.**

Two Way Flow Heater:**NG****REPLACE BLOWER MOTOR****OK**

3 CHECK HARNESS AND CONNECTOR (BLOWER MOTOR CONTROLLER - BATTERY) (SEE PAGE 01-32)

Blower Motor Controller Connector Front View:



E69146

- Disconnect the connector from the blower motor controller.
- Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
B16-2(+BM) - Body ground(*1)	Ignition switch: ON A/C switch: ON	10 to 14 V
B16-2(+BM) - Body ground(*1)	Ignition switch: ON A/C switch: OFF	Below 1 V
B16-3(+BM) - Body ground(*2)	Ignition switch: ON A/C switch: ON	10 to 14 V
B16-3(+BM) - Body ground(*2)	Ignition switch: ON A/C switch: OFF	Below 1 V

*1: Two way flow heater models

*2: Except two way flow heater models

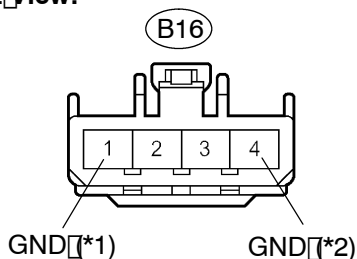
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 CHECK HARNESS AND CONNECTOR (BLOWER MOTOR CONTROLLER - BODY GROUND) (SEE PAGE 01-32)

Blower Motor Controller Connector Front View:



E69146

- Disconnect the connector from the blower motor controller.
- Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
B16-1 (GND)*1 - Body ground	Always	Below 1 Ω
B16-4 (GND)*2 - Body ground	Always	Below 1 Ω

*1: Two way flow heater models

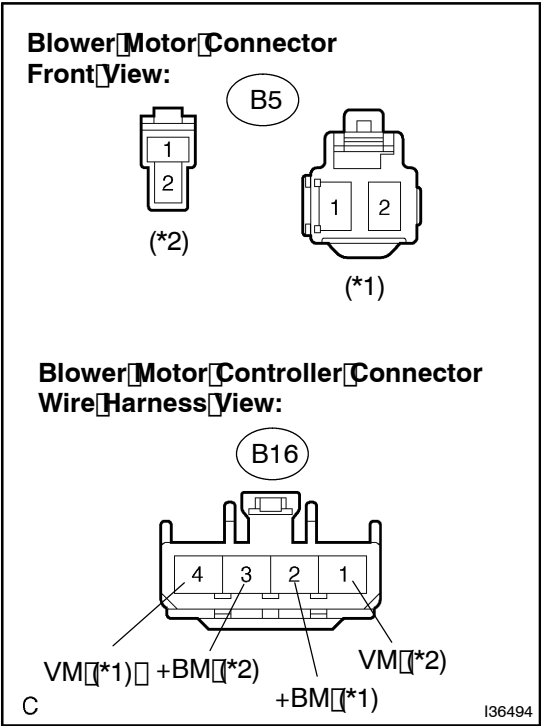
*2: Except two way flow heater models

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5 CHECK HARNESS AND CONNECTOR (BLOWER MOTOR - BLOWER MOTOR CONTROLLER) (SEE PAGE 01-32)



- (a) Disconnect the connectors from the blower motor and blower motor controller.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

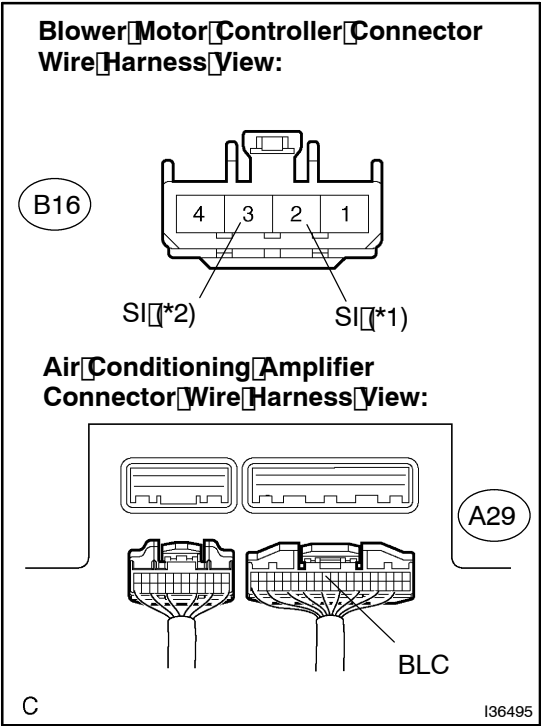
Tester connection	Condition	Specified condition
B5-1 - B16-4(*1)	Always	Below 1 Ω
B5-2 - B16-2(*1)	Always	Below 1 Ω
B5-1 - B16-3(*2)	Always	Below 1 Ω
B5-2 - B16-1(*2)	Always	Below 1 Ω
B5-1 - Body ground	Always	10 kΩ or higher
B5-2 - Body ground	Always	10 kΩ or higher

- *1: Two way flow heater models
- *2: Except two way flow heater models

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

6 CHECK HARNESS AND CONNECTOR (BLOWER MOTOR CONTROLLER - AIR CONDITIONING AMPLIFIER) (SEE PAGE 01-32)



- (a) Disconnect the connectors from the blower motor controller and A/C amplifier.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
B16-2 (SI) - A29-11 (BLC) (*1)	Always	Below 1 Ω
B16-3 (SI) - A29-11 (BLC) (*2)	Always	Below 1 Ω
A29-11 (BLC) - Body ground	Always	10 kΩ or higher

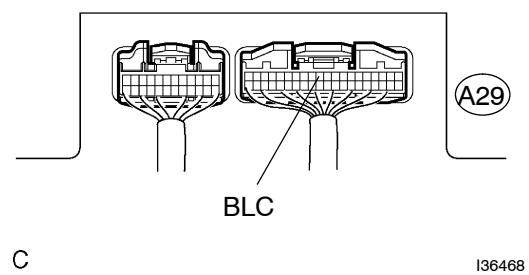
- *1: Two way flow heater models
- *2: Except two way flow heater models

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

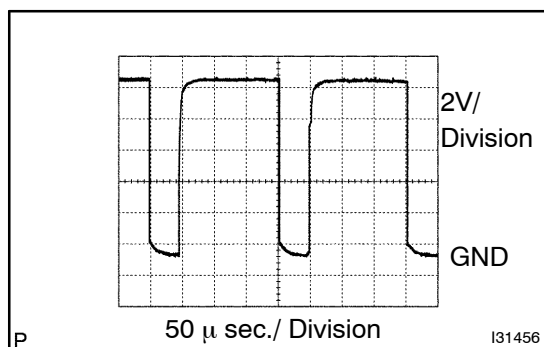
OK

7 INSPECT AIR CONDITIONING AMPLIFIER(BLW - BODY GROUND)

Air Conditioning Amplifier Connector
Wire Harness View:



- (a) Remove the A/C amplifier with the connectors still connected.
- (b) Turn the ignition switch to the ON position.
- (c) Turn the blower switch on (Lo).



- (d) Measure the waveform between terminal BLC (A29-11) of the A/C amplifier and body ground.

OK:

A waveform should be output as shown in the illustration.

HINT:

Waveform varies with the blower level.

NG

**REPLACE AIR CONDITIONING AMPLIFIER
(SEE PUB. NO. RM864E ON PAGE 55-96)**

OK

REPLACE BLOWER MOTOR CONTROLLER