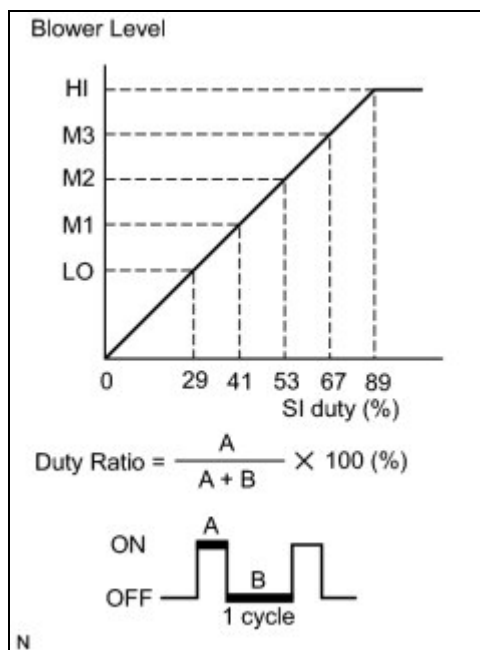


<b>Last Modified:</b> 10-12-2011	6.4 J	<b>From:</b> 200511
<b>Model Year:</b> 2006	<b>Model:</b> Prius	<b>Doc ID:</b> RM000001W9L000X
<b>Title:</b> AIR CONDITIONING: AIR CONDITIONING SYSTEM: Blower Motor Circuit (2006 Prius)		

## Blower Motor Circuit

## DESCRIPTION



The blower motor is operated by signals from the air conditioning amplifier. Blower motor speed signals are transmitted by changes in the duty ratio.

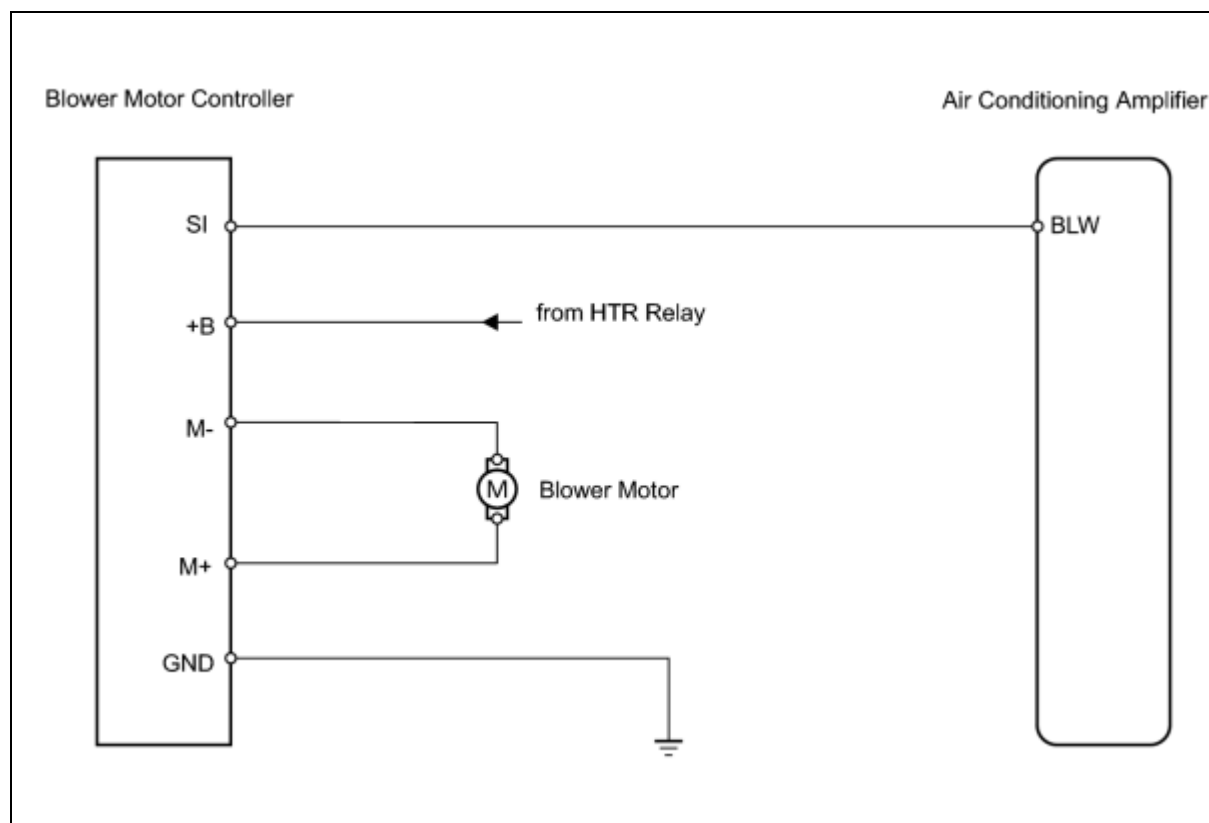
### Duty Ratio

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 air conditioning amplifier and controls rotation and speed.

## WIRING DIAGRAM



## INSPECTION PROCEDURE

### PROCEDURE

#### 1. PERFORM ACTIVE TEST BY INTELLIGENT TESTER (BLOWER MOTOR)

- (a) Connect the intelligent tester (with CAN VIM) to DLC3.
- (b) Turn the power switch ON (IG) and push the intelligent tester main switch ON.
- (c) Select the item below in the ACTIVE TEST and then check that the relay operates.

#### **Air conditioning amplifier**

ITEM	TEST DETAILS / DISPLAY (RANGE)	DIAGNOSTIC NOTE
BLOWER MOTOR	Blower motor / min.: 0 max.: 31	-

#### **Result**

RESULT	PROCEED TO
NG (Blower motor does not operate)	A
NG (Blower motor operate but does not change speed)	B
OK	C

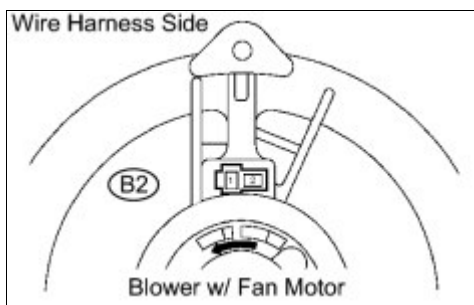
**B** ► **CHECK WIRE HARNESS (BLOWER MOTOR CONTROLLER - AIR CONDITIONING AMPLIFIER)**

**C** ► **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

**A**  
▼

**2. INSPECT BLOWER W/ FAN MOTOR SUB-ASSEMBLY**

- (a) Remove the cooling unit motor w/ fan.
- (b) Connect the battery's positive (+) lead to terminal 1 of blower motor and negative (-) lead to terminal 2.

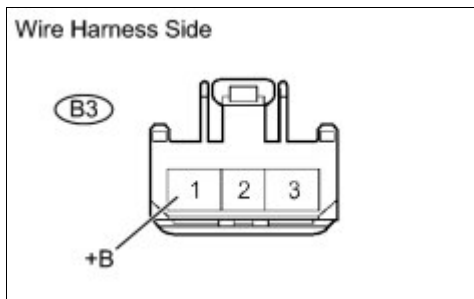


OK:  
Blower motor operates smoothly.

**NG** ► **REPLACE BLOWER W/ FAN MOTOR SUB-ASSEMBLY**

**OK**  
▼

**3. CHECK WIRE HARNESS (BLOWER MOTOR CONTROLLER - BATTERY)**



- (a) Disconnect the B3 controller connector.
- (b) Measure the voltage of the wire harness side connector.
- Standard voltage:

TESTER CONNECTION	SPECIFIED CONDITION
B3-1 (+B) - Body ground	10 to 14 V

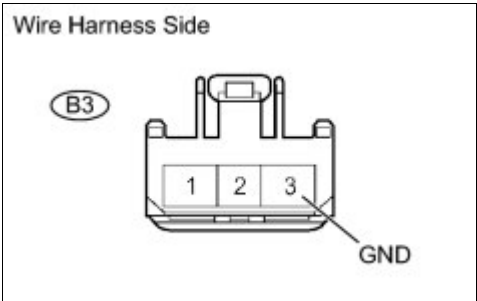
**NG**  **REPAIR OR  
REPLACE  
HARNESS AND  
CONNECTOR**

**OK**  


4.

CHECK WIRE HARNESS (BLOWER MOTOR CONTROLLER - BODY GROUND)

- (a) Disconnect the B3 controller connector.
- (b) Measure the resistance of the wire harness side connector.
- Standard resistance:



TESTER CONNECTION	SPECIFIED CONDITION
B3-3 (GND) - Body ground	Below 1 Ω

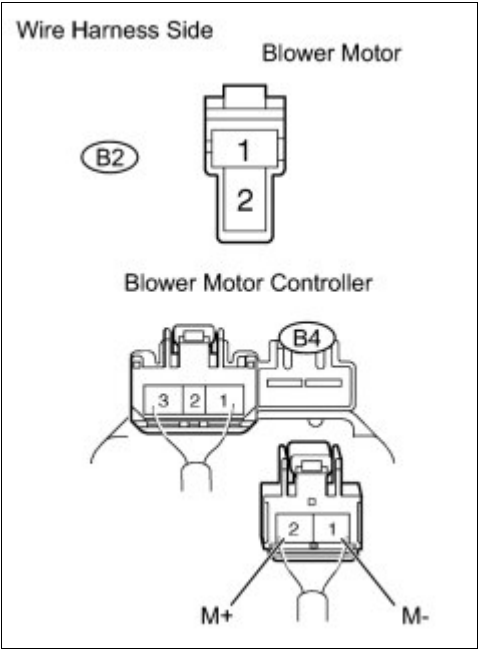
**NG**  **REPAIR OR  
REPLACE  
HARNESS AND  
CONNECTOR**

**OK**  


5.

CHECK WIRE HARNESS (BLOWER MOTOR - BLOWER MOTOR CONTROLLER)

- (a) Disconnect the B2 motor connector.
- (b) Disconnect the B4 controller connector.
- (c) Measure the resistance of the wire harness side connectors.
- Standard resistance:



TESTER CONNECTION	SPECIFIED CONDITION
B4-1 (M-) - B2-2	Below 1 $\Omega$
B4-2 (M+) - B2-1	Below 1 $\Omega$
B4-1 (M-) - Body ground	10 k $\Omega$ or higher
B4-2 (M+) - Body ground	10 k $\Omega$ or higher

**NG**  **REPAIR OR  
REPLACE  
HARNESS AND  
CONNECTOR**

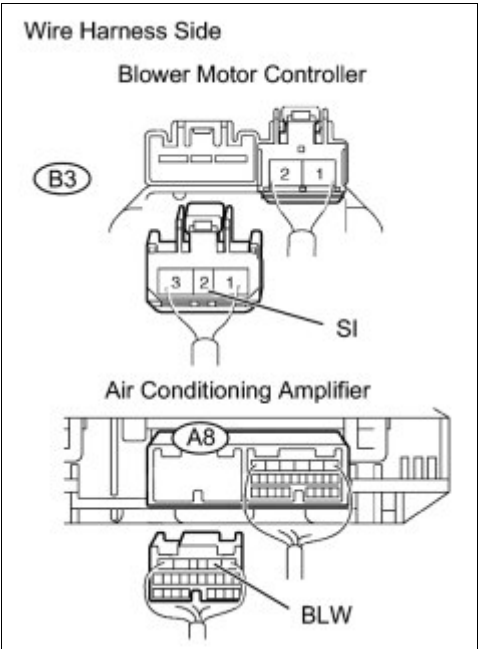
**OK**  


6.	<b>CHECK WIRE HARNESS (BLOWER MOTOR CONTROLLER - AIR CONDITIONING AMPLIFIER)</b>
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- (a) Disconnect the B3 controller connector.
- (b) Disconnect the A8 amplifier connector.
- (c) Measure the resistance of the wire harness side connectors.

Standard resistance:

TESTER CONNECTION	SPECIFIED CONDITION
A8-2 (BLW) - B3-2 (SI)	Below 1 $\Omega$
A8-2 (BLW) - Body ground	10 k $\Omega$ or higher

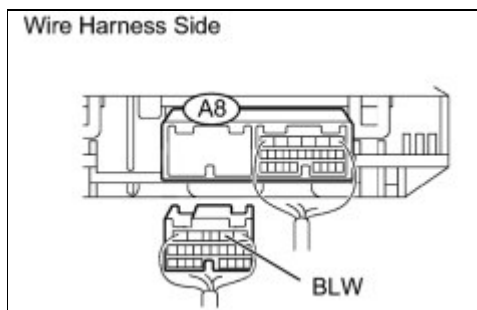


**NG**  **REPAIR OR  
REPLACE  
HARNESS AND  
CONNECTOR**

**OK**  


**7. CHECK BLOWER MOTOR CONTROLLER (BLW VOLTAGE)**

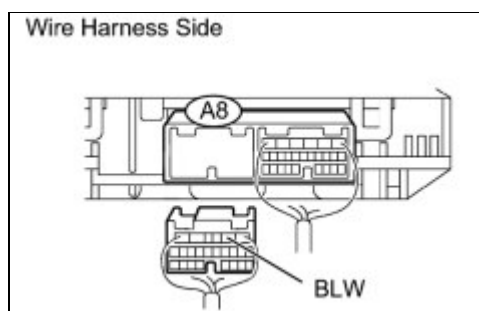
- (a) Disconnect the A8 amplifier connector.
- (b) Measure the voltage of the wire harness side connector.
- Standard voltage:



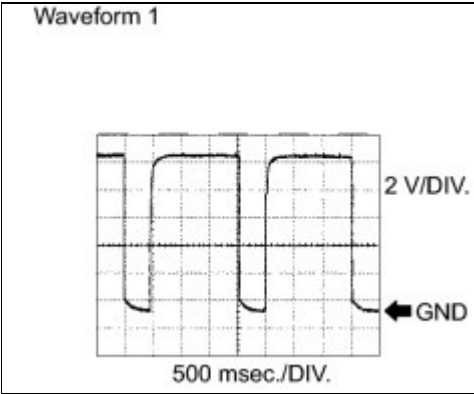
TESTER CONNECTION	SPECIFIED CONDITION
B3-1 (+B) - Body ground	10 to 14 V

**NG**  **REPLACE  
BLOWER  
MOTOR  
CONTROLLER**

**OK**

**8. CHECK AIR CONDITIONING AMPLIFIER (BLW - BODY GROUND)**

- (a) Remove the air conditioning amplifier with its connectors still connected.
- (b) Turn the power switch ON (IG).
- (c) Turn the blower switch ON (Lo).
- (d) Using an oscilloscope, measure the waveform of the amplifier.
- OK:  
Waveform is as shown in the illustration.



ITEM	CONTENT
Tester Connection	A8-2 (BLW) - Body ground
Tool Setting	2 V/DIV., 500 msec./DIV.
Condition	Blower switch ON (Lo)

**HINT:**  
Waveform varies depending on the blower switch setting.

**NG** ▶ REPLACE AIR CONDITIONING AMPLIFIER

**OK** ▶ REPLACE BLOWER MOTOR CONTROLLER

