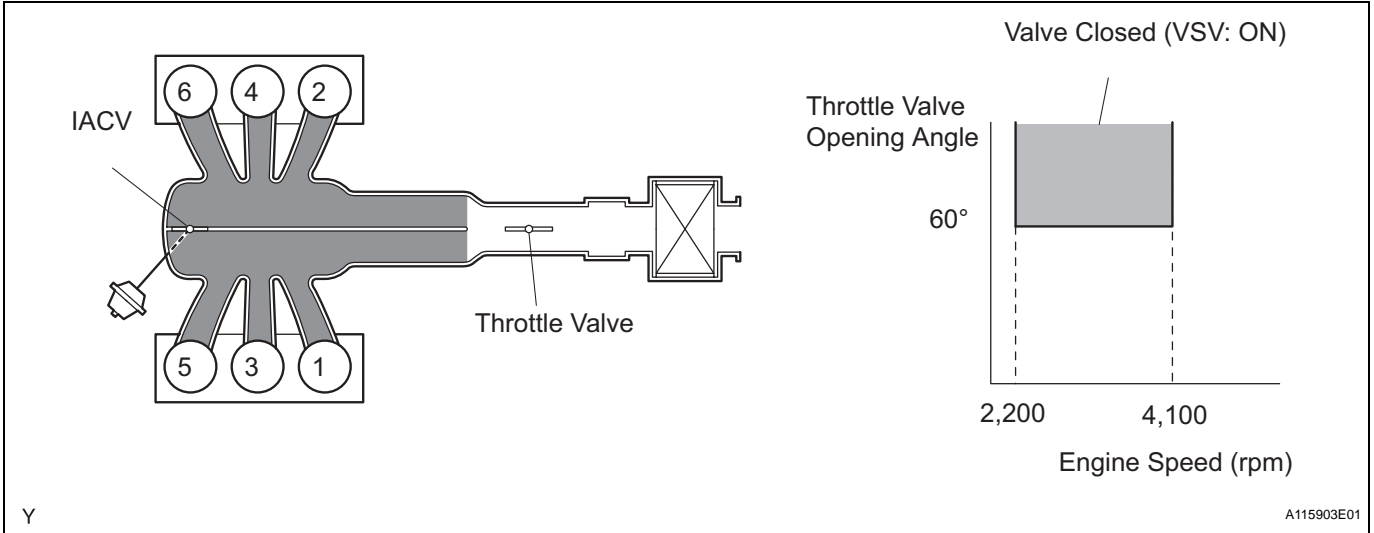


# ACIS Control Circuit

## DESCRIPTION

This circuit opens and closes the Intake Air Control Valve (IACV) in response to changes in the engine load in order to increase the intake efficiency (ACIS: Acoustic Control Induction System).

When the engine speed is between 2,200 rpm and 4,100 rpm and the throttle valve opening angle is 60° or more, the ECM supplies current to the VSV (ON status), to close the IACV. Under other conditions, the VSV is usually OFF and the IACV is open.

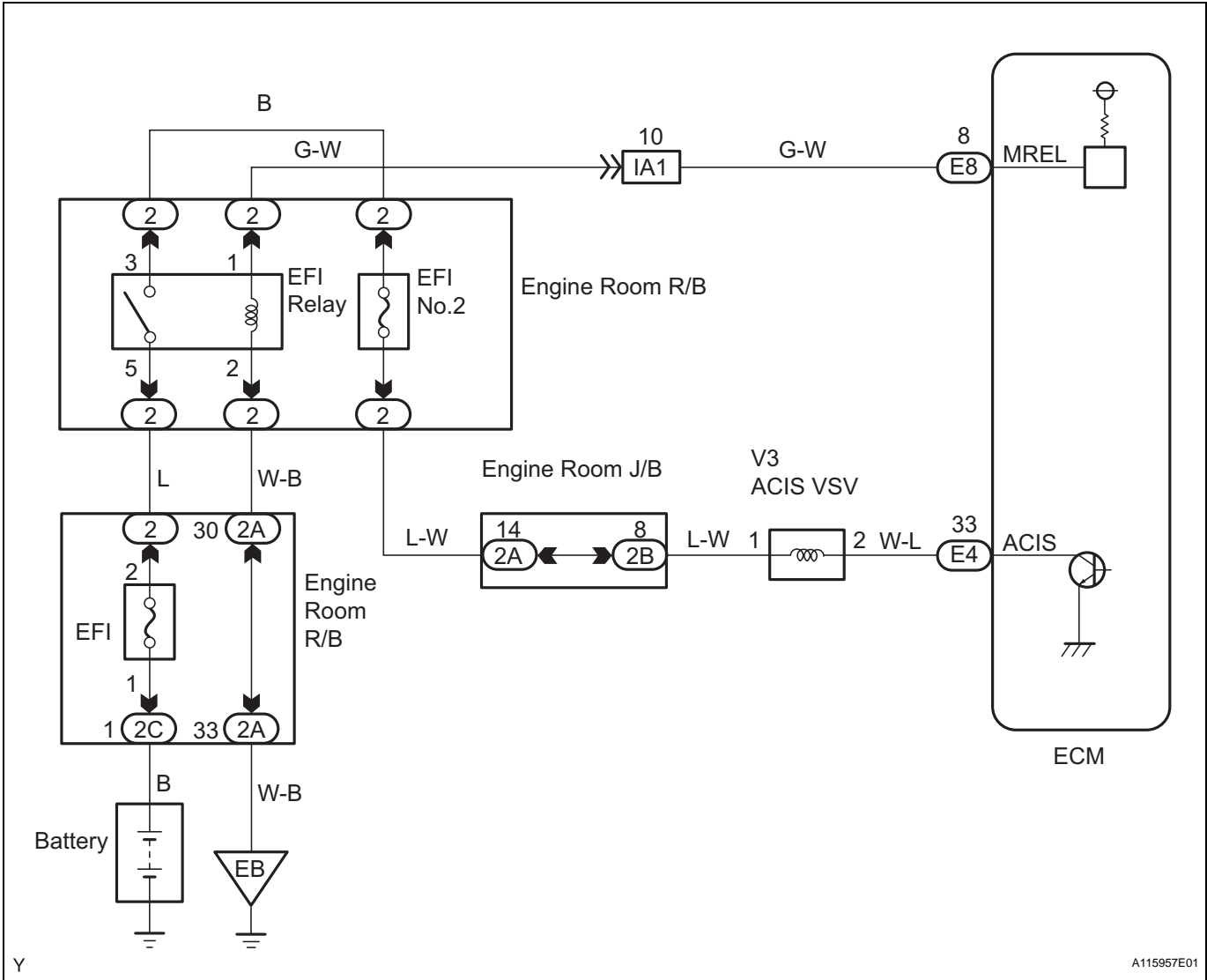


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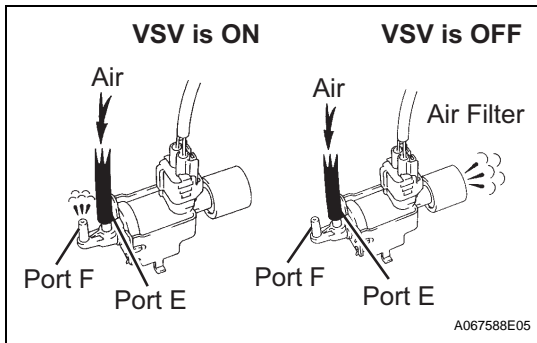
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WIRING DIAGRAM



ES

**1 PERFORM ACTIVE TEST USING INTELLIGENT TESTER (OPERATE VSV FOR ACIS)**



- Disconnect the vacuum hose.
- Connect an intelligent tester to the DLC3.
- Turn the ignition switch ON and turn the tester ON.
- Select the following menu items: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST / INTAKE CTL VSV1. Operate the VSV for ACIS.
- Check the VSV operation when it is operated using an intelligent tester.

**OK**

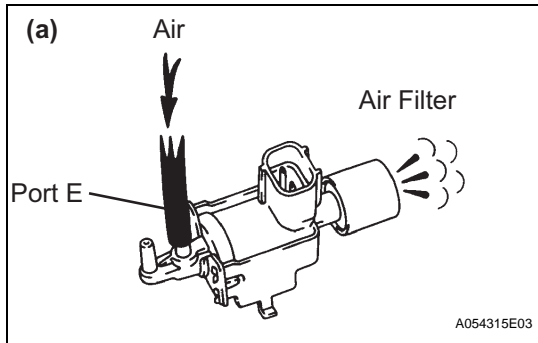
Tester Operations	Specified Conditions
VSV ON	Air from port E flows out through port F
VSV OFF	Air from port E flows out through air filter

- Reconnect the vacuum hose.

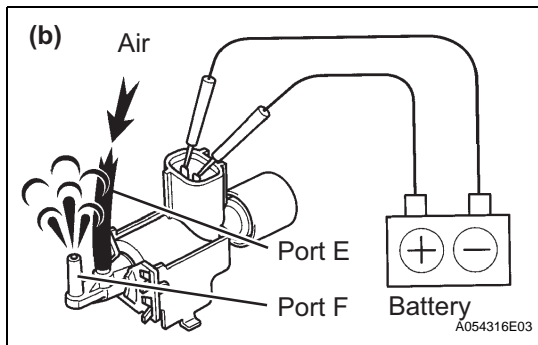
**OK** Go to step 4

NG

**2 CHECK VSV FOR ACIS (OPERATION)**



(a) Check that air flows from port E to the air filter.



(b) Apply positive battery voltage across the terminals.  
 (c) Check that air flows from port E to port F.

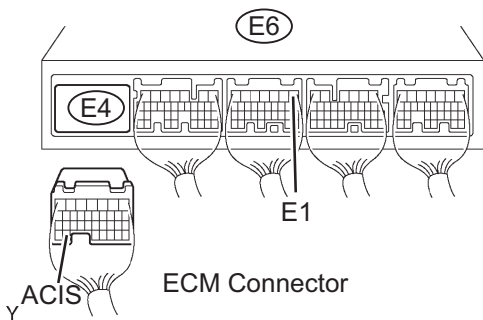
NG **REPLACE VSV FOR ACIS**

OK

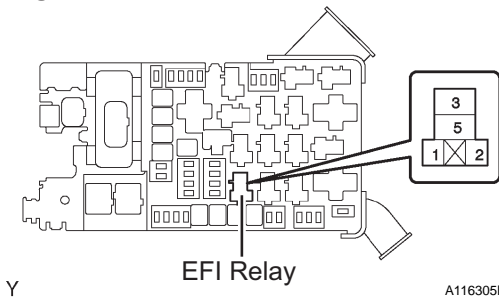
ES

**3 CHECK HARNESS AND CONNECTOR (VSV FOR ACIS - ECM, VSV FOR ACIS - EFI RELAY)**

Wire Harness Side:



Engine Room R/B:



(a) Check the wire harness and connectors between the VSV for ACIS and ECM.

- (1) Disconnect the V3 VSV for ACIS connector.
- (2) Disconnect the E4 ECM connector.
- (3) Check the resistance.

**Standard Resistance (Check for open)**

Tester Connections	Specified Conditions
VSV for ACIS (V3-2) - ACIS (E4-33)	Below 1 Ω

**Standard Resistance (Check for short)**

Tester Connections	Specified Conditions
VSV for ACIS (V3-2) or ACIS (E4-33) - E1 (E6-1)	10 kΩ or higher

- (4) Reconnect the VSV for ACIS connector.
- (5) Reconnect the ECM connector.

(b) Check the wire harness between the VSV for ACIS and EFI relay.

- (1) Disconnect the V3 VSV for ACIS connector.
- (2) Remove the EFI relay from the engine room R/B.
- (3) Check the resistance.

**Standard Resistance (Check for open)**

Tester Connections	Specified Conditions
VSV for ACIS (V3-1) - EFI relay terminal 3 of R/B	Below 1 Ω

- (4) Reconnect the VSV for ACIS connector.
- (5) Reinstall the EFI relay.

NG

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

**4 CHECK VACUUM HOSES (INTAKE MANIFOLD - INTAKE AIR CONTROL VALVE, INTAKE AIR CONTR)**

- (a) Check that the vacuum hose is connected correctly.
- (b) Check the vacuum hose for looseness and disconnection.
- (c) Check the vacuum hose for cracks, holes and damage.

NG

**REPAIR OR REPLACE VACUUM HOSES**

OK

ES

5

INSPECT INTAKE AIR CONTROL VALVE (INTAKE AIR SURGE TANK)

NG

REPLACE INTAKE AIR CONTROL VALVE  
(INTAKE AIR SURGE TANK)

OK

REPLACE ECM