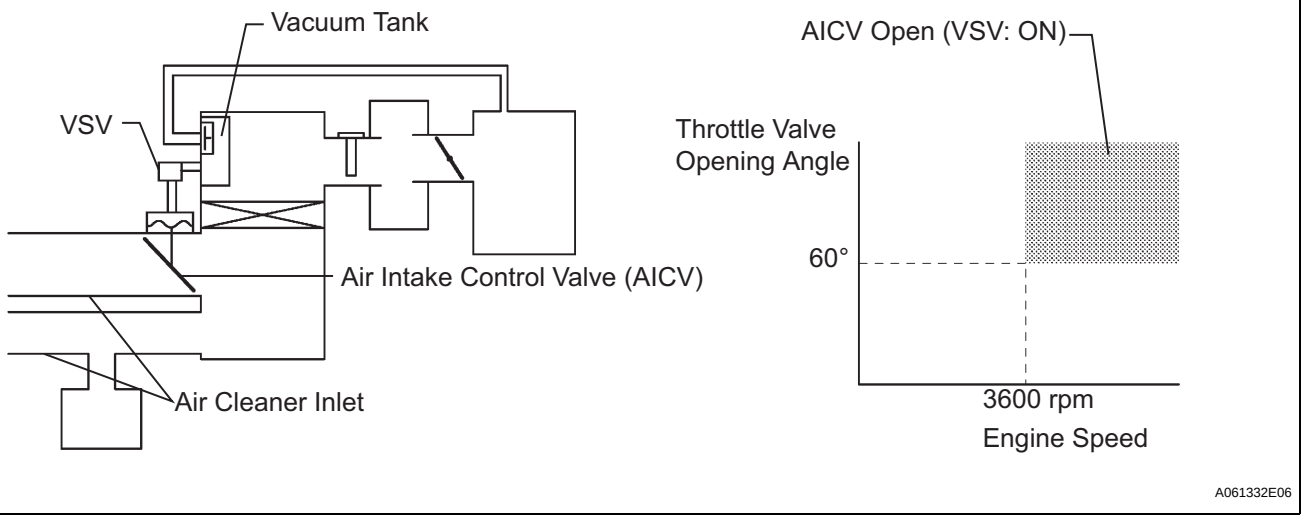
Air Intake Control Circuit

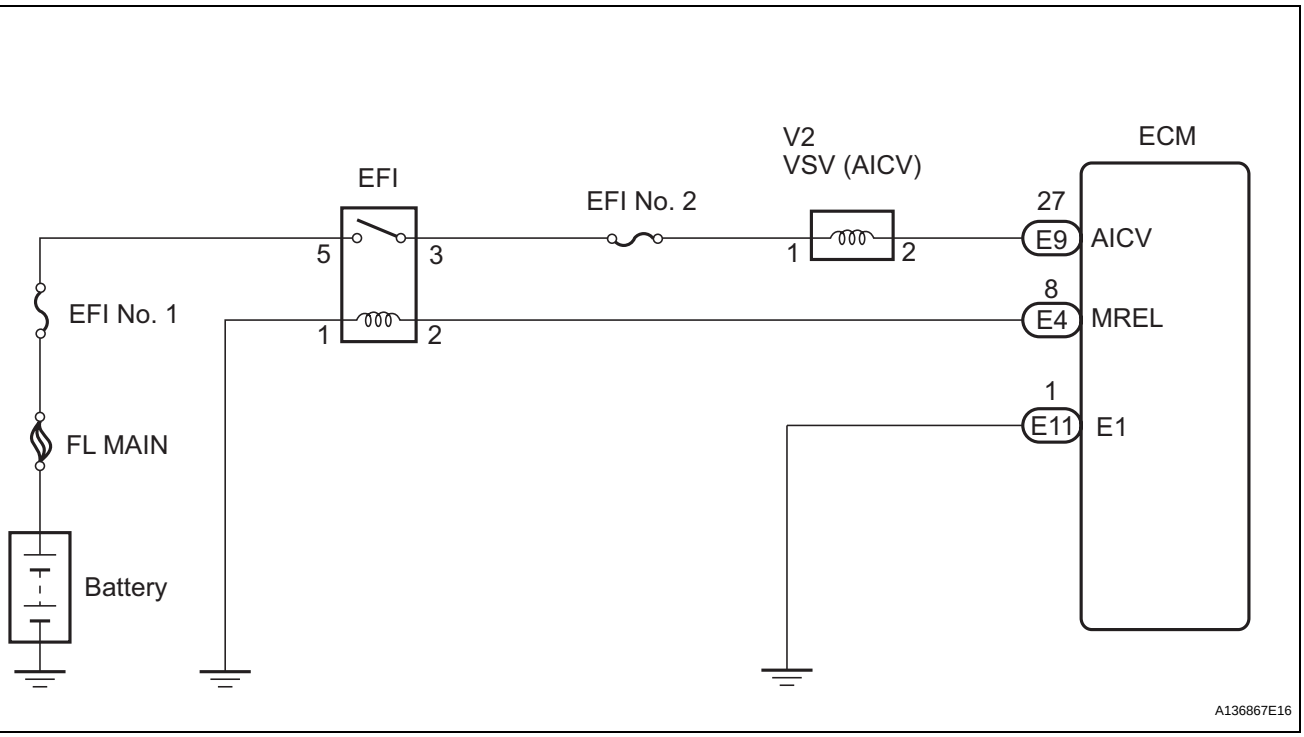
DESCRIPTION

The air cleaner is equipped with two inlets, one of which is opened or closed by the Air Intake Control Valve (AICV). This system reduces intake noise and increases engine power at low-to-high engine speed range.

When the engine is operating in the low-to-mid speed range, this control operates the AICV to close one of the air cleaner inlets. When the engine speed is more than 3600 rpm and the opening angle of the throttle valve is more than 60°, the ECM activates the VSV and opens the AICV.

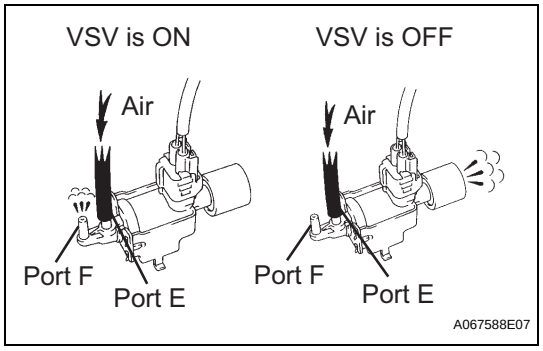


WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER (VSV FOR AICV)



(a) Turn the ignition switch to the ON position and turn the intelligent tester on.
(b) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST / INTAKE CTL VSV1 and operate the VSV for AICV.
(c) Check the operation of the VSV when the VSV is operated by the intelligent tester.

Standard

Tester Operation	Specified Condition
VSV is ON	Air from port E flows out through port F
VSV is OFF	Air from port E flows out through the air filter

ES

OK → **Go to step 6**

NG

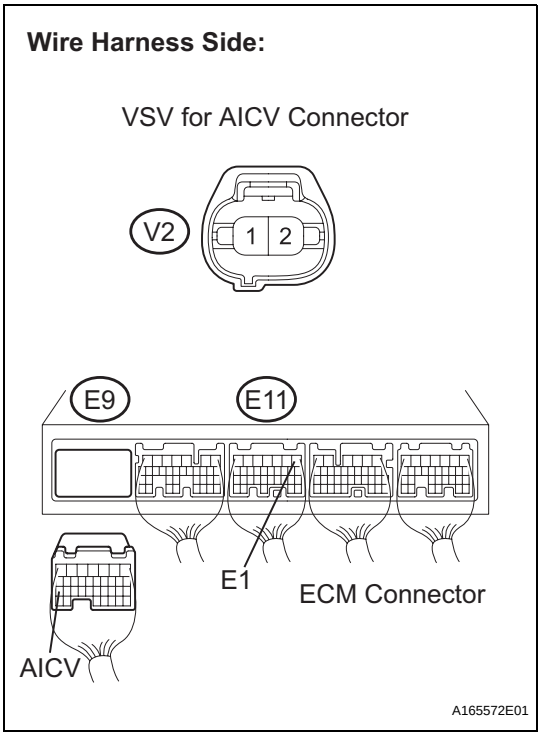
2	CHECK VSV (FOR AICV)

(a) Inspect the intake air control valve assembly (See page IT-8).

NG → **REPLACE INTAKE AIR CONTROL VALVE ASSEMBLY**

OK

3	CHECK HARNESS AND CONNECTOR (VSV FOR AICV - ECM)



(a) Check the wire harness between the VSV for AICV connector and the ECM connector.
  (1) Disconnect the V2 VSV for AICV connector.
  (2) Disconnect the E9 ECM connector.
  (3) Measure the resistance according to the value(s) in the table below.

Standard resistance:

Check for open

Tester Connection	Specified Condition
VSV for AICV (V2-2) - AICV (E9-27)	Below 1 Ω

Check for short

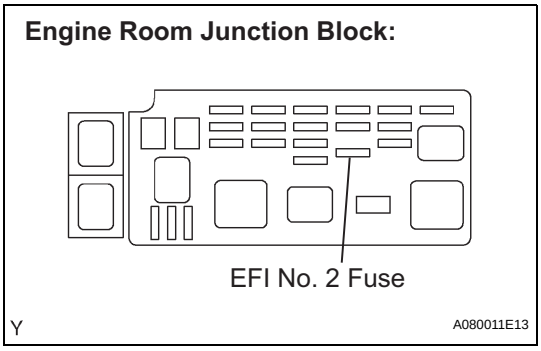
Tester Connection	Specified Condition
VSV for AICV (V2-2) or AICV (E9-27) - Body ground	10 kΩ or higher

  (4) Reconnect the ECM connector.

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (VSV FOR AICV - ECM)**

OK

4	INSPECT FUSE (EFI NO. 2 FUSE)



(a) Check the EFI No. 2 fuse.
  (1) Remove the EFI No. 2 fuse from the engine room junction block.
  (2) Measure the EFI No. 2 fuse resistance.

Standard resistance:

Below 1 Ω

  (3) Reinstall the EFI No. 2 fuse.

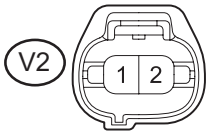
NG → **REPLACE FUSE (EFI NO. 2 FUSE)**

OK

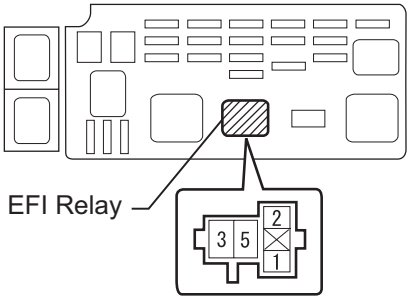
5	CHECK HARNESS AND CONNECTOR (VSV FOR AICV - EFI RELAY)

Wire Harness Side:

VSV for AICV Connector



Engine Room Junction Block:



A165573E02

(a) Check the wire harness between the VSV for AICV and the EFI relay.
  (1) Remove the EFI relay from the engine room junction block.
  (2) Measure the resistance according to the value(s) in the table below.
  Standard resistance :
  Check for open

Tester Connection	Specified Condition
VSV for AICV (V2-1) - EFI relay terminal (3)	Below 1 Ω

  (3) Reconnect the VSV for AICV connector.
  (4) Reinstall the EFI relay.

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (VSV FOR AICV - EFI RELAY)**

OK

6	INSPECT VACUUM TANK

(a) Inspect the vacuum tank (See page IT-6).

NG → **REPAIR OR REPLACE AIR CLEANER CAP**

OK

CHECK ECM POWER SOURCE CIRCUIT

ES