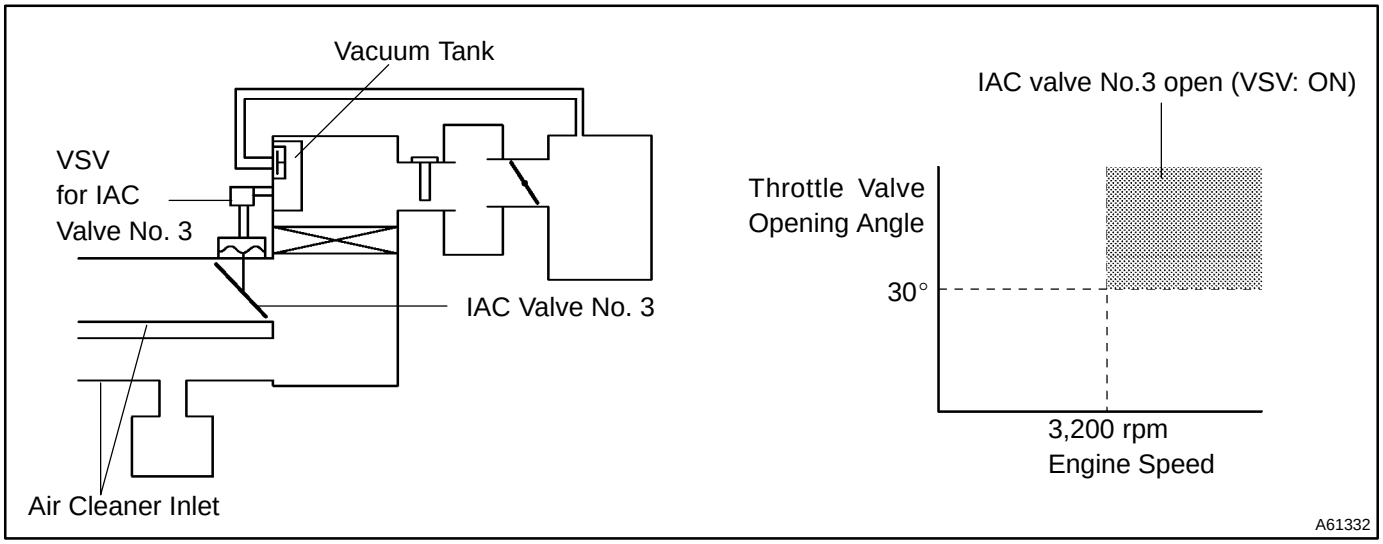
AIR INTAKE CONTROL CIRCUIT

CIRCUIT DESCRIPTION

The air cleaner is equipped with two inlets, one of which is opened or closed by the Intake Air Control (IAC) valve No.3. This system reduces intake noise and increases engine power at low to high speed engine speeds.

When the engine is operating at low to mid speeds, this system operates the IAC valve to close one of the air cleaner inlets. When the engine speed is more than 3,200 rpm and the opening angle of the throttle valve is more than 30°, the ECM activates the VSV and opens the IAC valve No. 3.



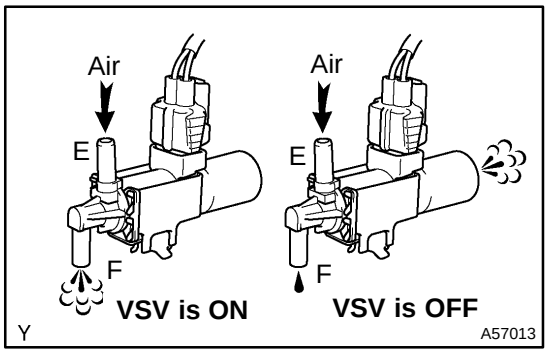
WIRING DIAGRAM

Refer to ACIS CONTROL CIRCUIT on page 05−802.

INSPECTION PROCEDURE

Hand−held Tester:

1	READ VALUE OF HAND−HELD TESTER (VSV (AICV))



(a) Turn the ignition switch ON and push the hand−held tester main switch ON.
(b) Enter the following menus: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST / INTAKE CTL VSV1. Operate the VSV.
(c) Check the operation of the VSV when the VSV is operated by the hand−held 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

OK → **Go to step 4**

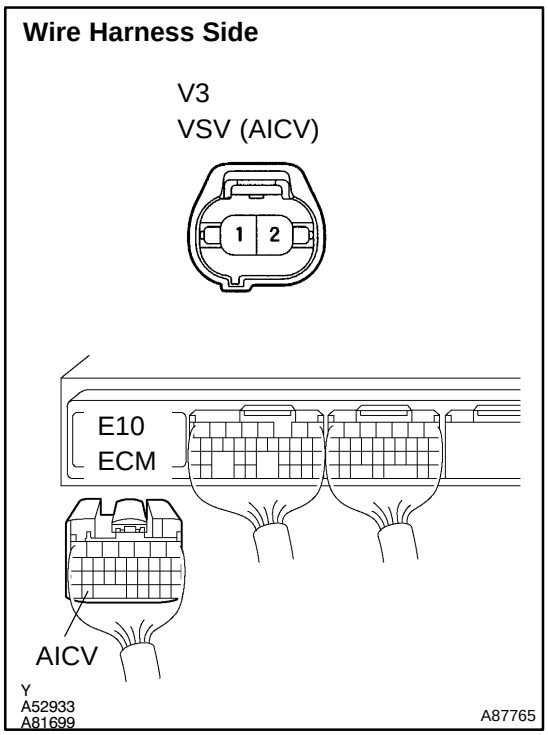
NG

2	CHECK VSV (See page 13−9)

NG → **REPLACE INTAKE AIR CONTROL VALVE ASSY NO.3**

OK

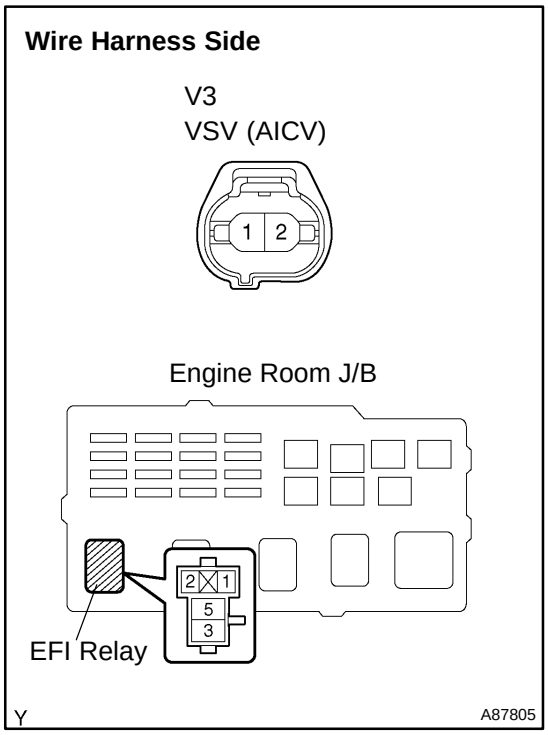
3	CHECK WIRE HARNESS (VSV (AICV) − ECM, VSV FOR IAC VALVE NO. 3 − EFI RELAY)



(a) Check the wire harness between the VSV and ECM.
(1) Disconnect the V3 VSV connector for AICV.
(2) Disconnect the E10 ECM connector.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
V3−1 − E10−33 (AICV)	Below 1 Ω
V3−1 or E10−33 (AICV) − Body ground	10 kΩ or higher



(b) Check the wire harness between the VSV and EFI relay.
(1) Disconnect the V3 VSV connector for AICV.
(2) Remove the EFI relay from the engine room J/B.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
VSV for AICV (V3−2) − J/B EFI relay terminal 3	Below 1 Ω

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

OK

4	INSPECT VACUUM TANK (See page 13−9)

NG → REPAIR OR REPLACE

OK

REPLACE ECM (See page 10−25)

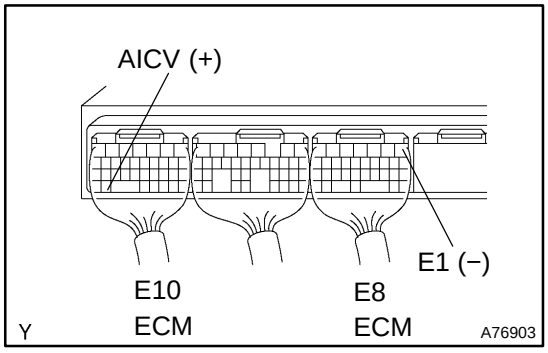
OBDII scan tool (excluding Hand−held tester):

1	CHECK VSV FOR AICV (See page 13−9)

NG → REPLACE INTAKE AIR CONTROL VALVE ASSY NO.3

OK

2	INSPECT ECM



(a) Turn the ignition switch ON.
(b) Measure the voltage of the ECM connectors.

Standard:

Tester Connection	Specified Condition
E10−33 (AICV) − E8−1 (E1)	9 to 14 V

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

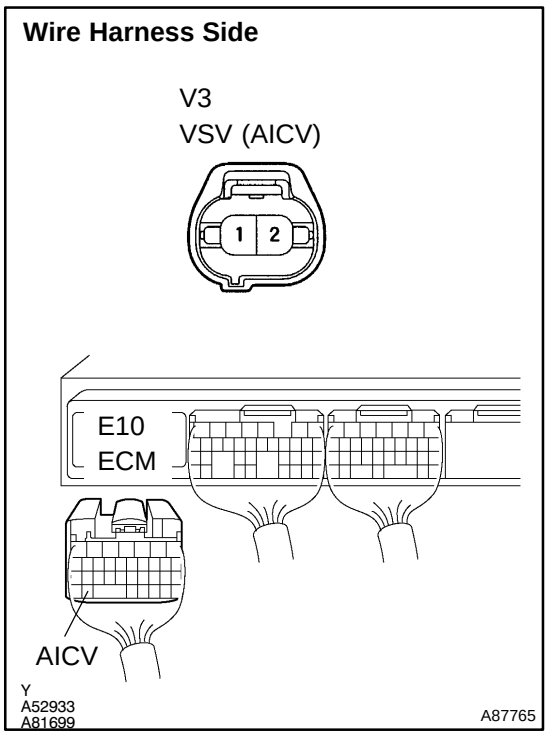
OK

3	INSPECT VACUUM TANK (See page 13−9)

NG → REPAIR OR REPLACE

OK

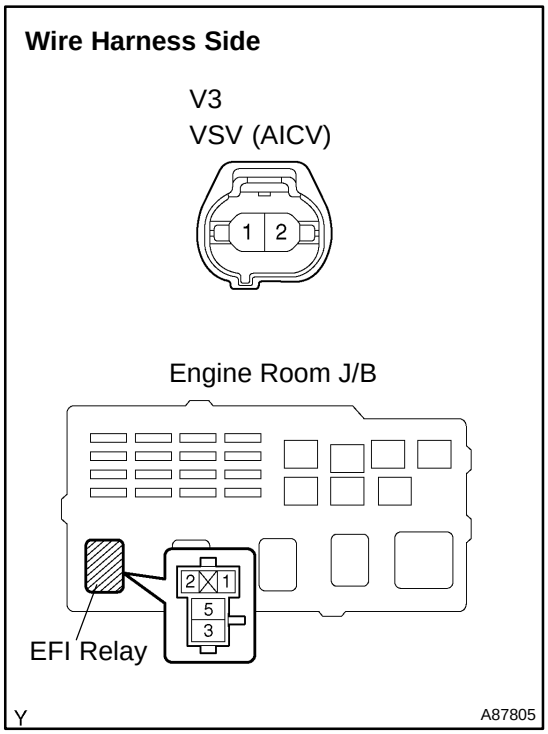
4	CHECK WIRE HARNESS (VSV (AICV) − ECM, VSV FOR IAC VALVE NO. 3 − EFI RELAY)



(a) Check the wire harness between the VSV and ECM.
(1) Disconnect the V3 VSV connector.
(2) Disconnect the E10 ECM connector.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
V3−1 − E10−33 (AICV)	Below 1 Ω
V3−1 or E10−33 (AICV) − Body ground	10 kΩ or higher



(b) Check the wire harness between the VSV and EFI relay.
(1) Disconnect the V3 VSV connector.
(2) Remove the EFI relay from the engine room J/B.
(3) Check the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
V3−2 − J/B EFI relay terminal 3	Below 1 Ω

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

OK

REPLACE ECM (See page 10−25)