DTC	P0443	EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT

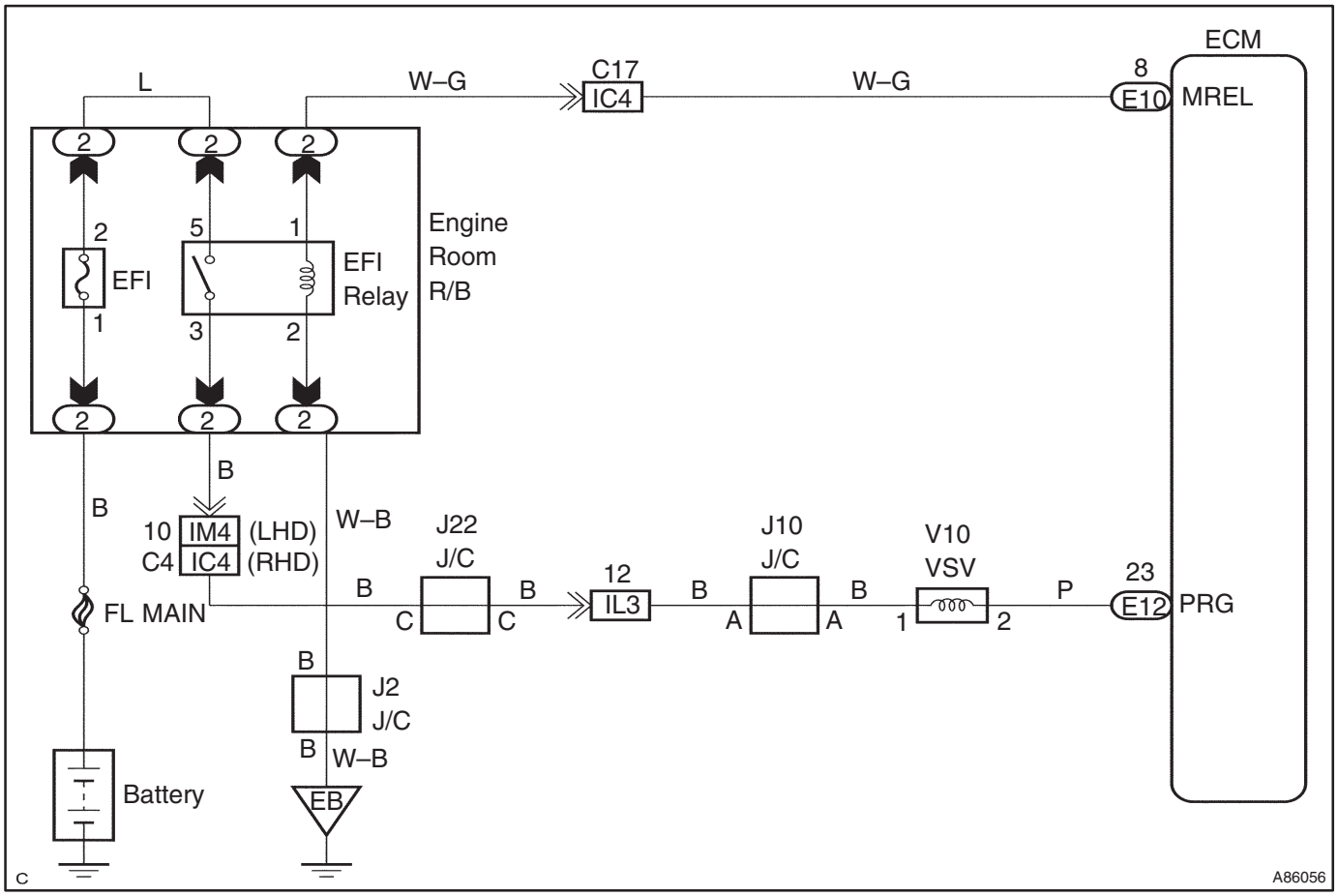
CIRCUIT DESCRIPTION

In order to reduce hydrocarbon (HC) emissions, evaporated fuel from the fuel tank is routed through the charcoal canister to the intake manifold for combustion in the cylinders.

The ECM changes the duty signal to the EVAP VSV so that the intake of HC emissions is appropriate for the driving conditions (engine load, engine speed, vehicle speed, etc.) after the engine is warmed up.

DTC No.	DTC Detection Condition	Trouble Area
P0443	Proper response to ECM command does not occur (1 trip detection logic)	• Open or short in EVAP VSV circuit • EVAP VSV • ECM

WIRING DIAGRAM

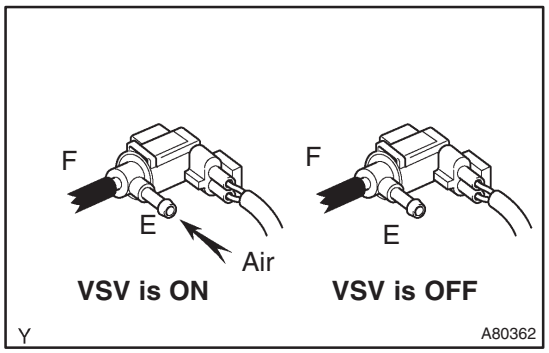


INSPECTION PROCEDURE

HINT:

Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, if the air–fuel ratio was lean or rich, and other data from the time the malfunction occurred.

1	PERFORM ACTIVE TEST USING INTELLIGENT TESTER II(EVAP VSV)



(a) Disconnect the vacuum hose of the EVAP VSV.
(b) Connect the intelligent tester II to the DLC3.
(c) Start the engine and turn the intelligent tester II ON.
(d) Select the following menu items: Powertrain / Engine and ECT / Active Test / Activate the VSV for EVAP Control.
(e) Check if the disconnected port applies suction to your finger when operating the EVAP VSV using the intelligent tester II.

Standard:

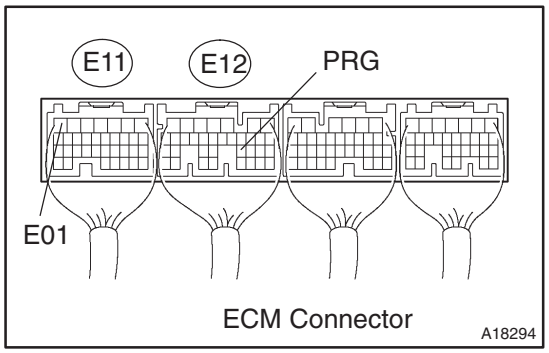
Tester Operation	Specified Condition
VSV is ON	Applies suction to your finger
VSV is OFF	Applies no suction to your finger

(f) Reconnect the vacuum hose.

OK → **CHECK FOR INTERMITTENT PROBLEMS (See page 05–8)**

NG

2	INSPECT ECM(CHECK VOLTAGE)



(a) Turn the ignition switch to ON.
(b) Measure the voltage according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
PRG (E12–23) – E01 (E11–7)	9 to 14 V

OK → **REPLACE ECM (See page 10–12)**

NG

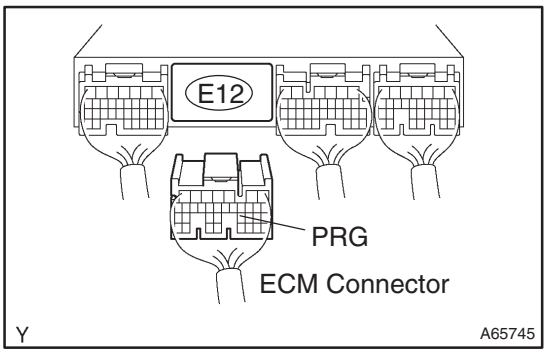
3	INSPECT VACUUM SWITCHING VALVE(OPERATION OF EVAP VSV) (See page 12–5)

OK: Air flows when the battery voltage is applied to the EVAP VSV.

NG → **REPLACE VACUUM SWITCHING VALVE**

OK

4 CHECK HARNESS AND CONNECTOR(ECM – EVAP VSV)



(a) Disconnect the E12 ECM connector.
(b) Disconnect the V10 EVAP VSV connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard (Check for open):

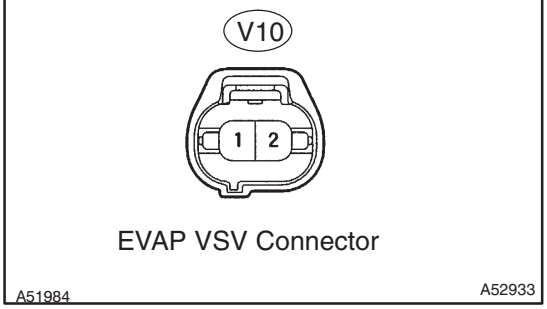
Tester Connection	Specified Condition
EVAP VSV (V10–2) – PRG (E12–23)	Below 1 Ω

Standard (Check for short):

Tester Connection	Specified Condition
EVAP VSV (V10–2) or PRG (E12–23) – Body ground	10 kΩ or higher

(d) Reconnect the ECM connector.
(e) Reconnect the EVAP VSV connector.

Wire Harness Side:

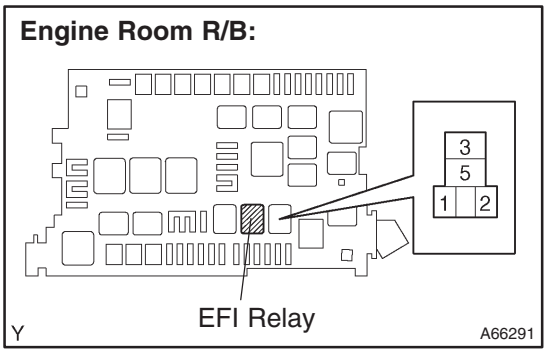


NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5 CHECK HARNESS AND CONNECTOR(EFI RELAY – EVAP VSV)

Engine Room R/B:



(a) Remove the EFI relay from the engine room R/B.
(b) Disconnect the V10 EVAP VSV connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard (Check for open):

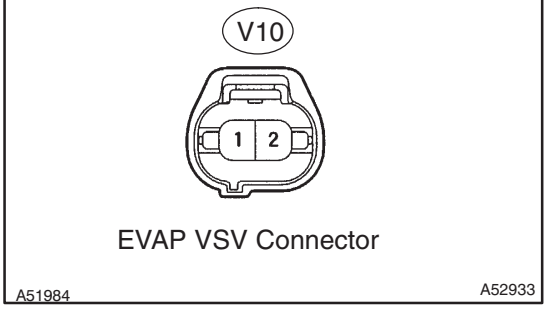
Tester Connection	Specified Condition
EVAP VSV (V10–1) – EFI relay (3)	Below 1 Ω

Standard (Check for short):

Tester Connection	Specified Condition
EVAP VSV (V10–1) or EFI relay (3) – Body ground	10 kΩ or higher

(d) Reinstall the EFI relay.
(e) Reconnect the EVAP VSV connector.

Wire Harness Side:



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

OK

INSPECT ECM POWER SOURCE CIRCUIT (See page 05–168)