DTC	P0443	EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT

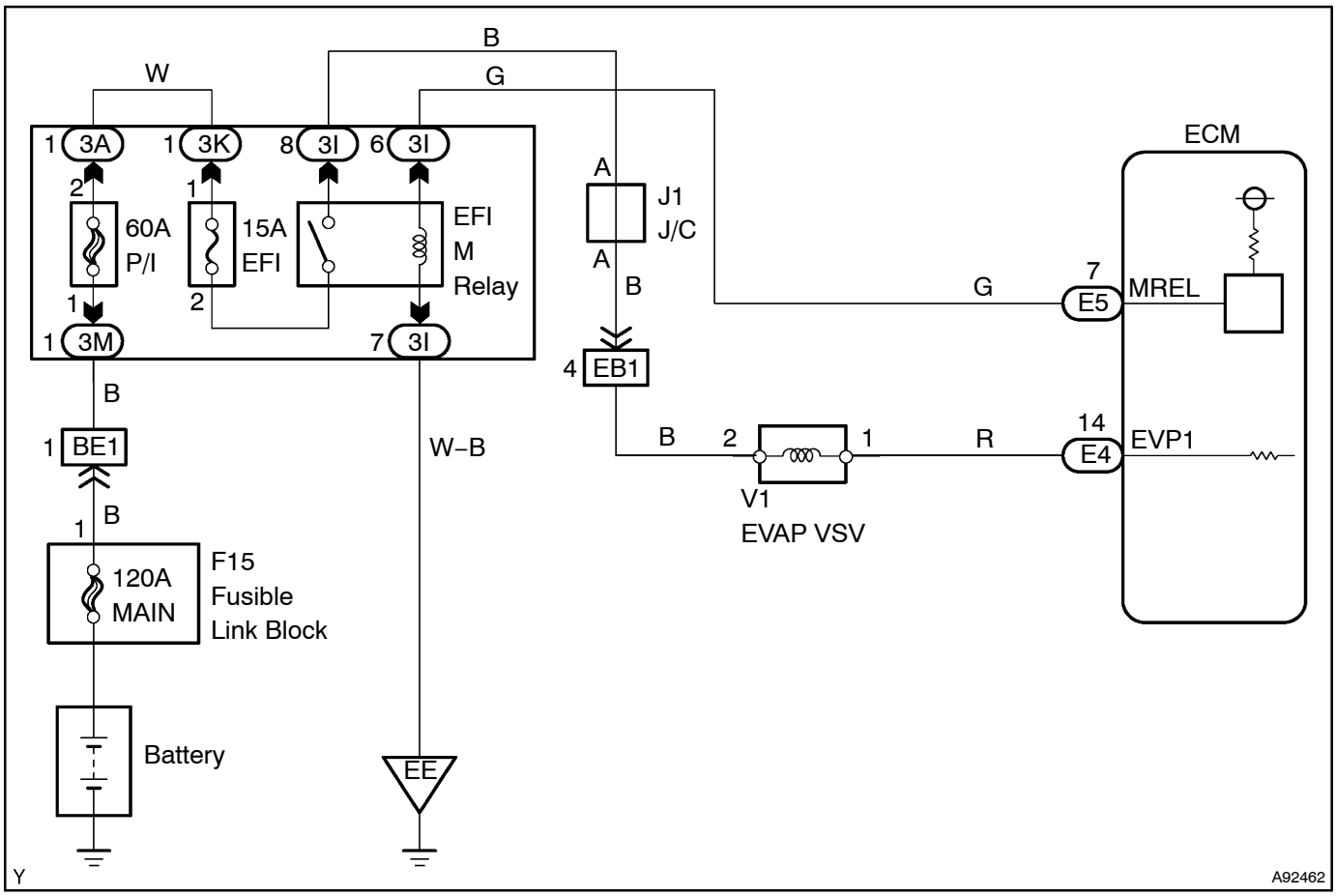
CIRCUIT DESCRIPTION

In order to reduce 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 VSV for EVAP 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 Detecting 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

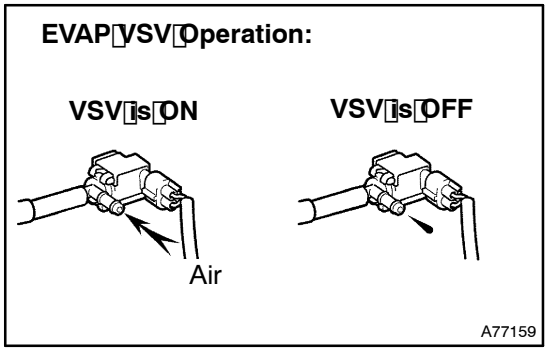


INSPECTION PROCEDURE

HINT:

- Read freeze frame data using the intelligent tester II. Freeze frame data records the engine condition when a malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, 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 BY INTELLIGENT TESTER II (EVAP VSV)



(a) Disconnect the vacuum hose of the EVAP VSV from the charcoal canister.
(b) Put the engine in inspection mode.
(c) Start the engine.
(d) Select the item: Powertrain / Engine and ECT / Active Test / Activate the VSV for Evap Control.
(e) Check if the disconnected hose applies suction to your finger when operating the EVAP VSV using the intelligent tester II.

Standard:

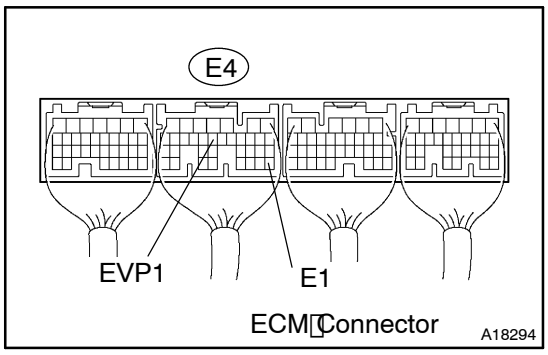
Tester Operation	Specified Condition
VSV is ON	Applies suction to your finger
VSV is OFF	Applies no suction to your finger

(f) Reconnect the vacuum hose.

OK → **CHECK FOR INTERMITTENT PROBLEMS (See page 05–14)**

NG

2	INSPECT ECM (CHECK VOLTAGE)



(a) Turn the power switch ON (IG).
(b) Measure the voltage between the terminals of the E4 ECM connectors.

Standard:

Symbols (Terminal No.)	Specified Condition
EVP1 (E4–14) – E1 (E4–28)	9 to 14 V

OK → **REPLACE ECM (See page 10–24)**

NG

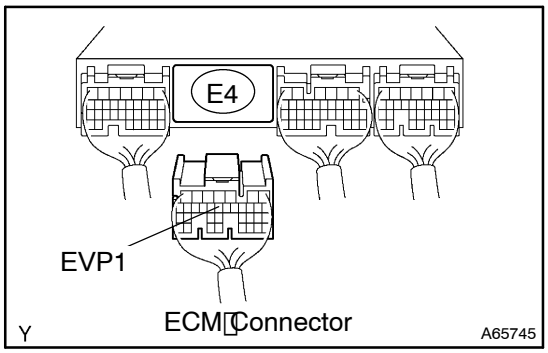
3	INSPECT CHARCOAL CANISTER VACUUM SWITCHING VALVE(OPERATION OF EVAP VSV) (See page 12–7)

OK: Air from port E flows out through port F when applying battery voltage.

NG	REPLACE CHARCOAL CANISTER VACUUM SWITCHING VALVE

OK

4	CHECK HARNESS AND CONNECTOR(ECM – EVAP VSV)



(a) Disconnect the E4 ECM connector.
(b) Disconnect the V1 EVAP VSV connector.
(c) Check the resistance between the wire harness side connector.

Standard (Check for open):

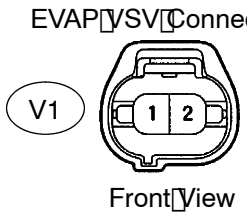
Tester connection	Specified condition
EVAP VSV (V1–1) – EVP1 (E4–14)	Below 1 Ω

Standard (Check for short):

Tester connection	Specified condition
EVAP VSV (V1–1) or EVP1 (E4–14) – Body ground	10 kΩ or higher

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

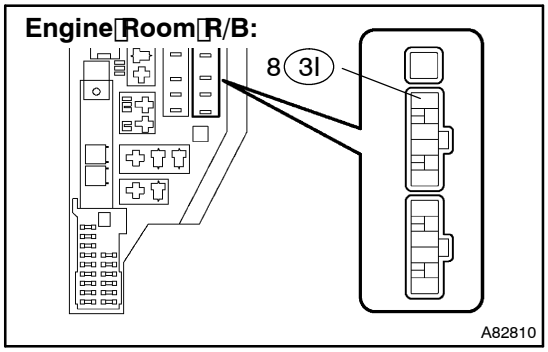
Wire Harness Side:

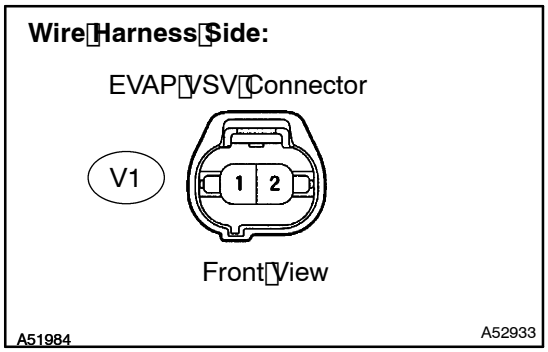


NG	REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

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





(a) Inspect the EFI fuse.
  (1) Remove the EFI fuse from the engine room R/B.
  (2) Check the resistance of the EFI fuse.
  Standard: Below 1 Ω
  (3) Reinstall the EFI fuse.
(b) Remove the integration relay from the engine room R/B.
(c) Disconnect the V1 EVAP VSV connector.
(d) Check the resistance between the wire harness side connector.
  Standard (Check for open):

Tester connection	Specified condition
EVAP VSV (V1–2) – EFI M relay (3I–8)	Below 1 Ω

  Standard (Check for short):

Tester connection	Specified condition
EVAP VSV (V1–2) or EFI M relay (3I–8) – Body ground	10 kΩ or higher

(e) Reinstall the integration relay.
(f) Reconnect the EVAP VSV connector.

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

OK

INSPECT ECM POWER SOURCE CIRCUIT (See page 05–197)