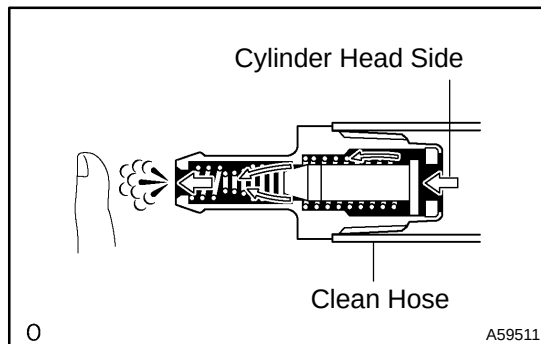


INSPECTION

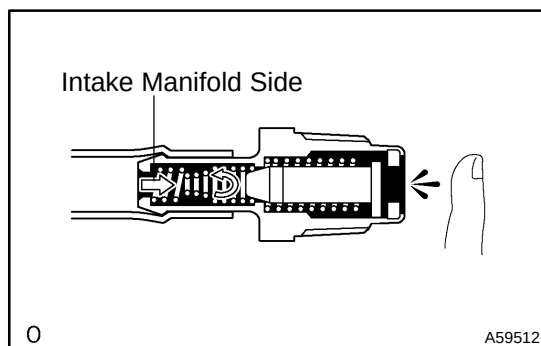


1. INSPECT VENTILATION VALVE SUB-ASSY

- (a) Install a clean hose to the ventilation valve.
- (b) Inspect the ventilation valve operation.
 - (1) Blow air into the cylinder head side, and check that air passes through easily.

CAUTION:

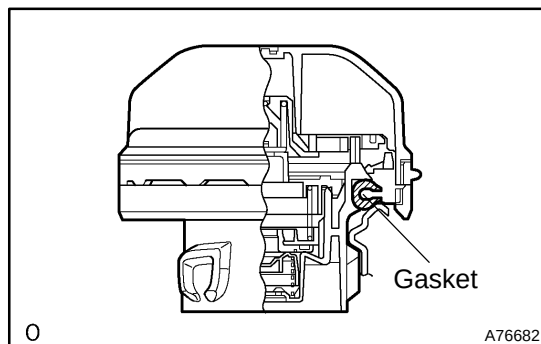
Do not suck air through the valve. Petroleum substances inside the valve are harmful.



- (2) Blow air into the intake manifold side, and check that air passes through with difficulty.

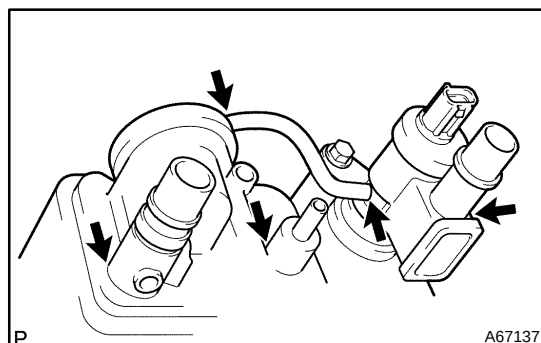
If operation is not as specified, replace the ventilation valve.

- (c) Remove the clean hose from the ventilation valve.



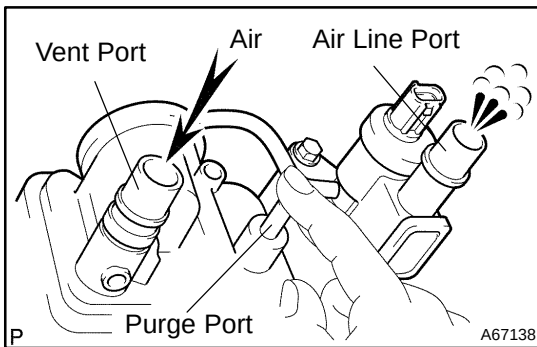
2. INSPECT FUEL TANK CAP ASSY

- (a) Visually check if the cap and/or gasket are deformed or damaged.

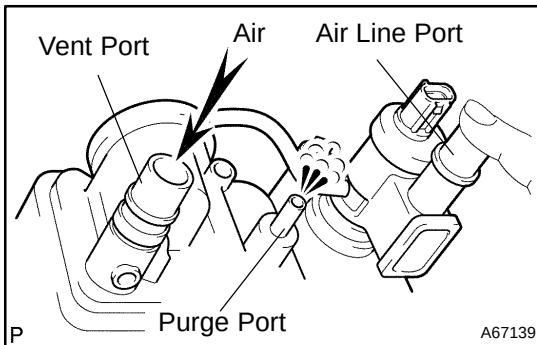


3. INSPECT CHARCOAL CANISTER ASSY

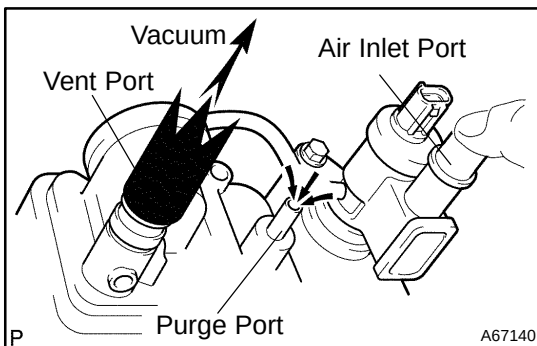
- (a) Visually check the charcoal canister for cracks or damage.



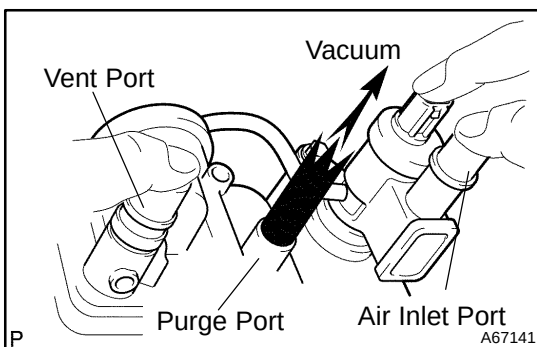
- (b) Inspect the charcoal canister operation.
- (1) With the purge port closed, blow air (0.39 kPa, 4.0 gf/cm², 0.06 psi) into the vent port, and check that air flows from the air inlet port.



- (2) With the air inlet port closed, blow air (0.39 kPa, 4.0 gf/cm², 0.06 psi) into the vent port, and check that air flows from the purge port.



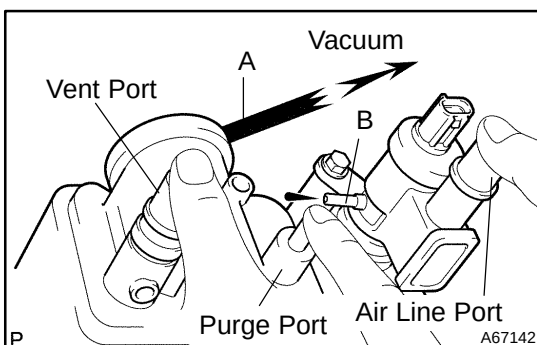
- (3) With the air inlet port closed, apply vacuum (3.43 kPa, 25.7 gf/cm², 1.01 psi) to the vent port, and check that air is sucked in from the purge port.
- If operation is not as specified, replace the charcoal canister.



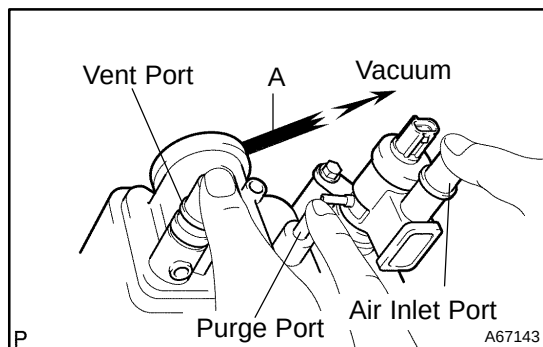
- (c) Inspect the air tightness.
- (1) With the vent and air inlet ports closed, apply vacuum (3.43 kPa, 25.7 gf/cm², 1.01 psi) to the purge port, and check that the vacuum remains stable for 1 minute.

HINT:

In order to maintain air tightness, this operation should be performed with the CCV terminal ports closed by your fingers. If operation is not as specified, replace the charcoal canister.



- (d) Inspect the diaphragm.
- (1) Remove the air hose between ports A and B.
 - (2) With the vent, purge and air inlet ports closed, apply vacuum (1.42 kPa, 11 mmHg, 0.42 in.Hg) into port A, and check that air is sucked in from port B.

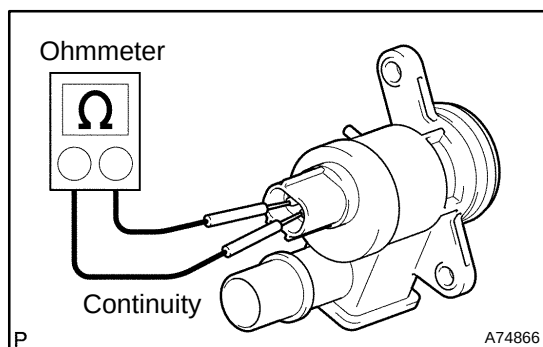


- (3) With the vent, purge and air inlet ports closed, apply vacuum (1.42 kPa, 11 mmHg, 0.42 in.Hg) into port A, and measure how long it takes for vacuum to drop.

Vacuum drop time: 10 sec. or more

If operation is not as specified, replace the charcoal canister.

- (4) Reinstall the air hose between ports A and B.

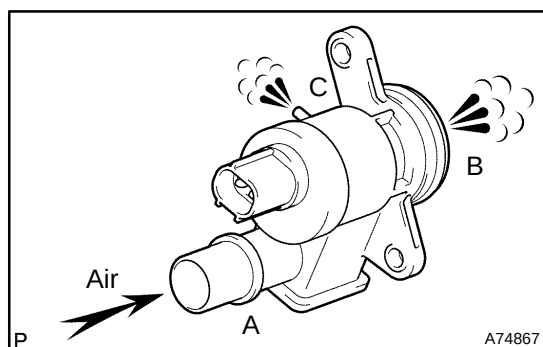


- (e) Inspect VSV for open circuit.
(1) Using an ohmmeter, check the resistance between the terminals.

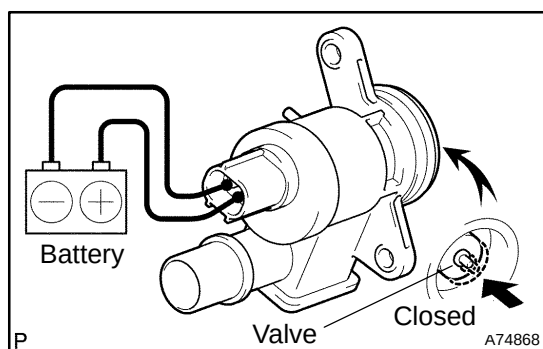
Resistance:

20 °C (68 °F)	25 to 30 Ω
100 °C (212 °F)	32 to 42 Ω

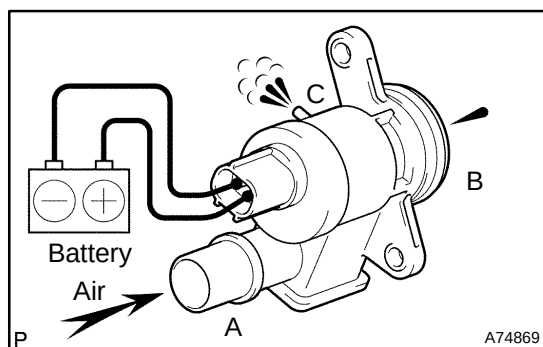
If the resistance is not as specified, replace the charcoal canister.



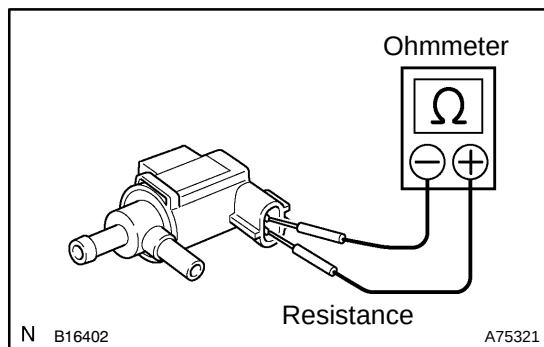
- (f) Inspect VSV operation.
(1) Check that air flows from port A to ports B and C.



- (2) Apply battery positive voltage across the terminals.
(3) Check that the valve is closed.



- (4) Check that air does not flow from port A to port B.
(5) Check that air flows from port A to port C.
If operation is not as specified, replace the charcoal canister.



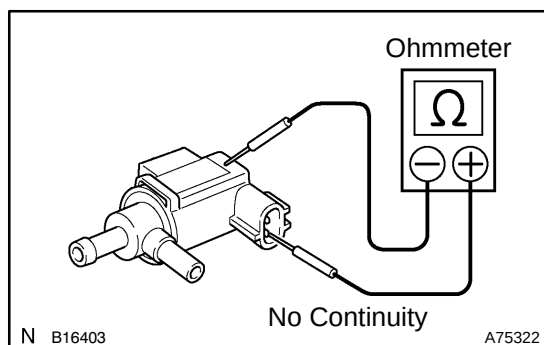
4. INSPECT DUTY VACUUM SWITCHING VALVE

(a) Inspect the VSV for open circuit.

- (1) Using an ohmmeter, check the resistance between the terminals.

Resistance: 26 to 30 Ω at 20 °C (68 °F)

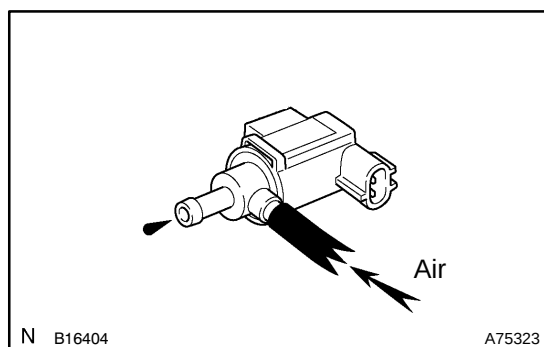
If the resistance is not as specified, replace the VSV.



(b) Inspect the VSV for ground.

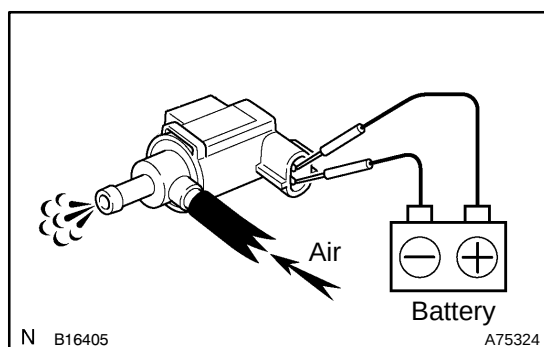
- (1) Using an ohmmeter, check that there is no continuity between each terminal and the body.

If there is continuity, replace the VSV.



(c) Inspect the VSV operation.

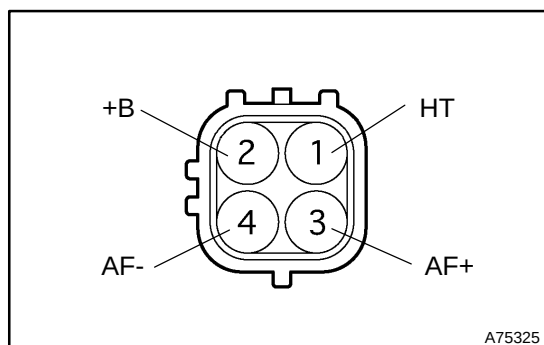
- (1) Check that air does not flow from the part.



- (2) Apply battery positive voltage across the terminals.

- (3) Check that air flows from the port.

If operation is not as specified, replace the VSV.



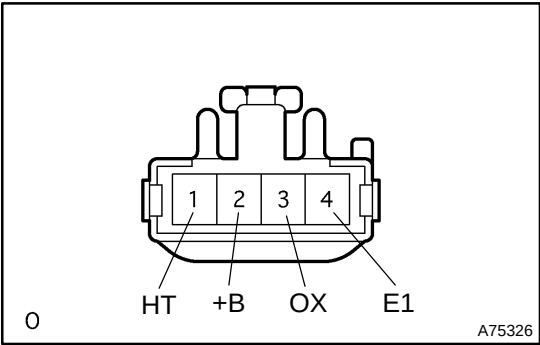
5. INSPECT AIR FUEL RATIO SENSOR

(a) Using an ohmmeter, measure the resistance between the terminals.

Resistance:

Terminal No.	Resistance
1 (HT) - 2 (+B)	0.8 to 1.4 Ω at 20°C (68°F)
1 (HT) - 2 (+B)	1.8 to 3.2 Ω at 800°C (1,472°F)
1 (HT) - 4 (AF-)	No Continuity

If the resistance is not as specified, replace the sensor.



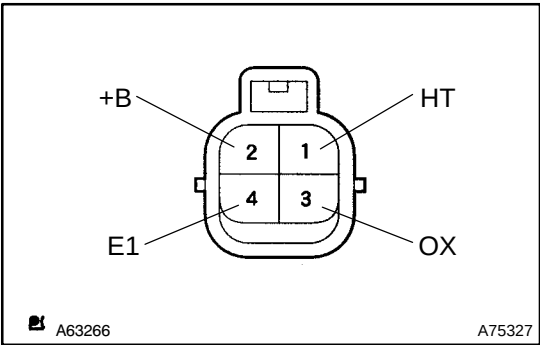
6. INSPECT HEATED OXYGEN SENSOR (BANK1 OXYGEN SENSOR NO.2)

- (a) Using an ohmmeter, measure the resistance between the terminals.

Resistance:

Terminal No.	Resistance
1 (HT) - 2 (+B)	11 to 16 Ω at 20 °C (68 °F)
1 (HT) - 4 (E1)	No Continuity

If the resistance is not as specified, replace the sensor.



7. INSPECT HEATED OXYGEN SENSOR (BANK2 OXYGEN SENSOR NO.2)

- (a) Using an ohmmeter, measure the resistance between the terminals.

Resistance:

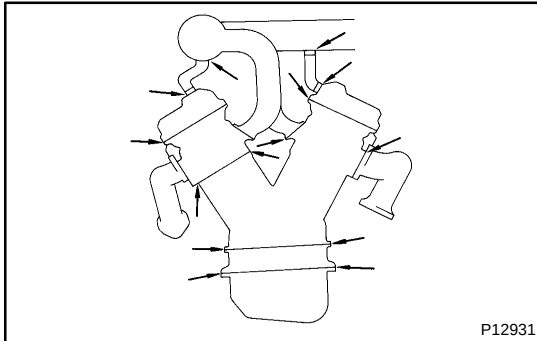
Terminal No.	Resistance
1 (HT) - 2 (+B)	11 to 16 Ω at 20 °C (68 °F)
1 (HT) - 4 (E1)	No Continuity

If the resistance is not as specified, replace the sensor.

EMISSION CONTROL SYSTEM

ON-VEHICLE INSPECTION

1209K-03

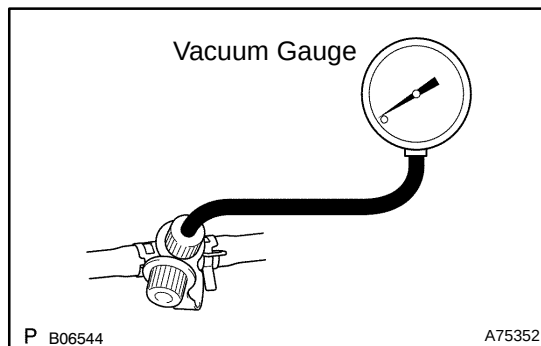


1. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

- (a) Check for cracks, leaks or damage.

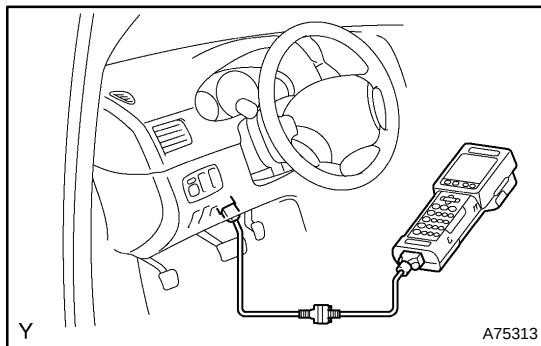
HINT:

Separation of the engine oil dipstick, oil filler cap, PCV hose, etc. may cause the engine to run improperly. Disconnection, looseness or cracks in the parts of the air induction system between the throttle body and the cylinder head will allow air suction and cause the engine to run improperly.

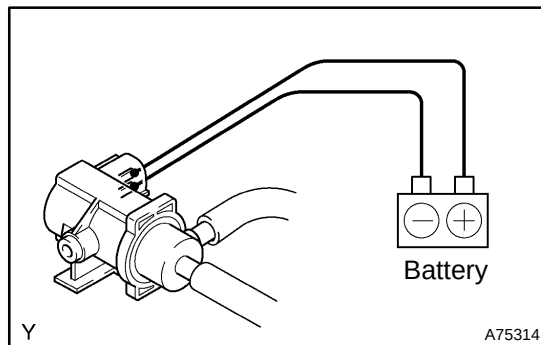


2. INSPECT EVAP SYSTEM LINE

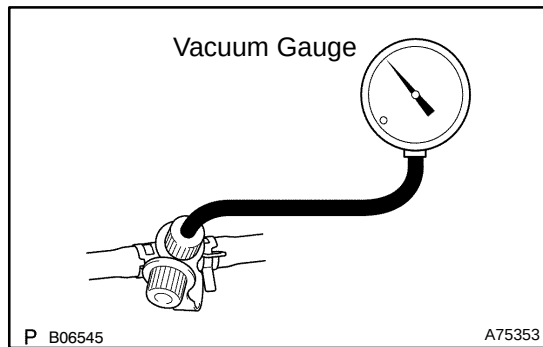
- (a) Warm up the engine to normal operating temperature.
 (b) Turn the engine OFF.
 (c) Connect the vacuum gauge (EVAP control system test equipment vacuum gauge) to the EVAP service port on the purge line.



- (d) If you have the hand-held tester:
 Turn on the VSV for EVAP using the hand-held tester.
 (1) Connect the hand-held tester to the DLC3.
 (2) Start the engine.
 (3) Push the hand-held tester main switch ON.
 (4) Use the ACTIVE TEST mode on the hand-held tester to operate the VSV for EVAP.



- (e) If you have no hand-held tester:
 Turn on the VSV for EVAP using the lead wires.
 (1) Disconnect the VSV for EVAP connector.
 (2) Connect the positive (+) and negative (-) leads from the battery to the VSV for EVAP terminals.
 (3) Start the engine.



- (f) Check the vacuum at idle.

Vacuum:

Maintain at 0.368 to 19.713 in.Hg (5 to 268 in.Aq) for over 5 seconds

HINT:

If the vacuum does not change, you can conclude that the hose connecting the VSV to the service port has become loose or is blocked, or the VSV is malfunctioning.

- (g) If you have the hand-held tester:

Return to normal the VSV for EVAP operation.

- (1) Stop the engine.
- (2) Disconnect the hand-held tester from the DLC3.

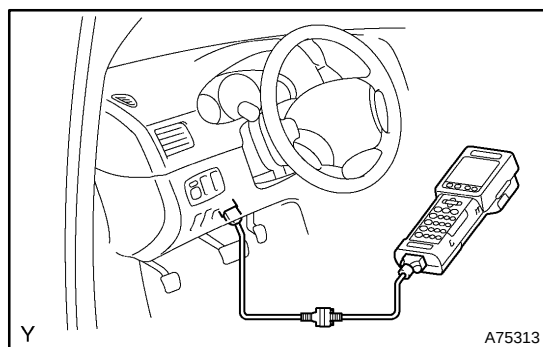
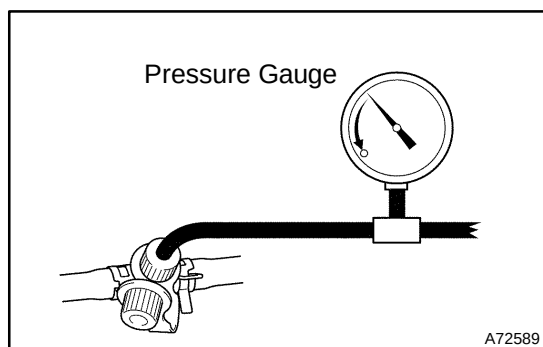
- (h) If you have no hand-held tester:

Return to normal the VSV for EVAP operation.

- (1) Stop the engine.
- (2) Disconnect the positive (+) and negative (-) leads from the VSV for EVAP terminals.
- (3) Reconnect the VSV for EVAP connector.

- (i) Disconnect the vacuum gauge from the EVAP service port on the purge line.

- (j) Connect the pressure gauge to the EVAP service port on the purge line.



- (k) If you have the hand-held tester:

Turn on the VSV for CCV using the hand-held tester.

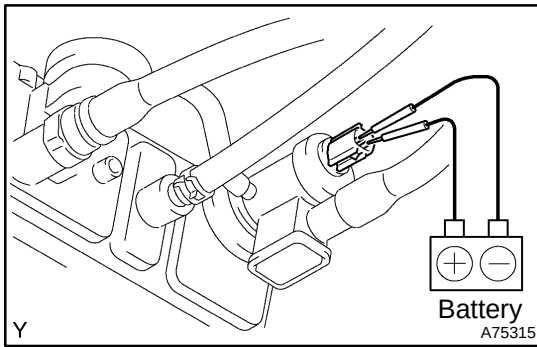
- (1) Connect the hand-held tester to the DLC3.
- (2) Turn the ignition switch ON.
- (3) Push the hand-held tester main switch ON.
- (4) Use the ACTIVE TEST mode on the hand-held tester to operate the VSV for CCV.

NOTICE:

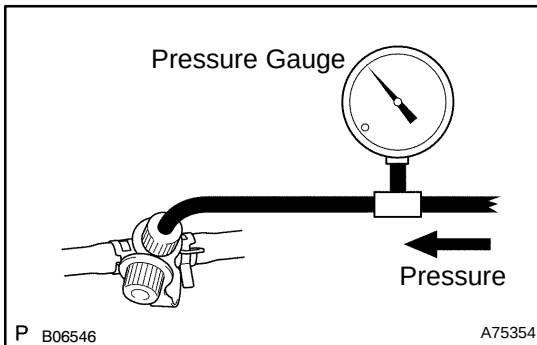
Do not start the engine.

HINT:

If the check is not completed within 10 minutes, the forced close of VSV for CCV will be reset.



- (l) If you have no hand-held tester:
Turn on the VSV for the CCV using the lead wires.
- (1) Disconnect the VSV for CCV connector.
 - (2) Connect the positive (+) and negative (-) leads from the battery to the VSV for CCV terminals.



- (m) Check the pressure.
- (1) Add the pressure (13.5 to 15.5 in.Aq) from the EVAP service port.

Pressure:

2 minutes after the pressure is added, the gauge should be over 7.7 to 8.8 in.Aq.

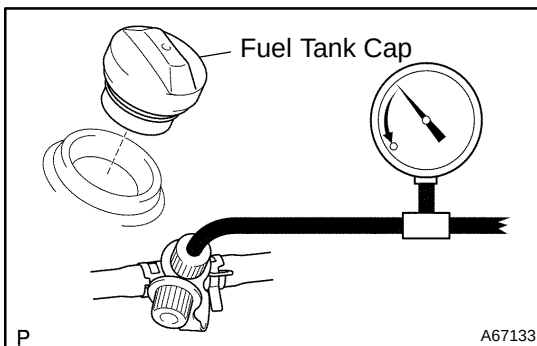
HINT:

If you can not add pressure, you can conclude that the hose connecting the VSV for EVAP canister fuel tank has slipped off or the VSV is open.

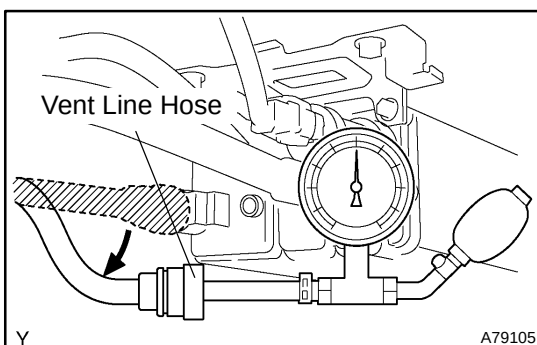
- (2) Check if the pressure decreases when the fuel tank cap is removed while adding pressure.

HINT:

If the pressure does not decrease when the fuel tank cap is removed, you can conclude that the hose connecting the service port to the fuel tank is blocked, etc.



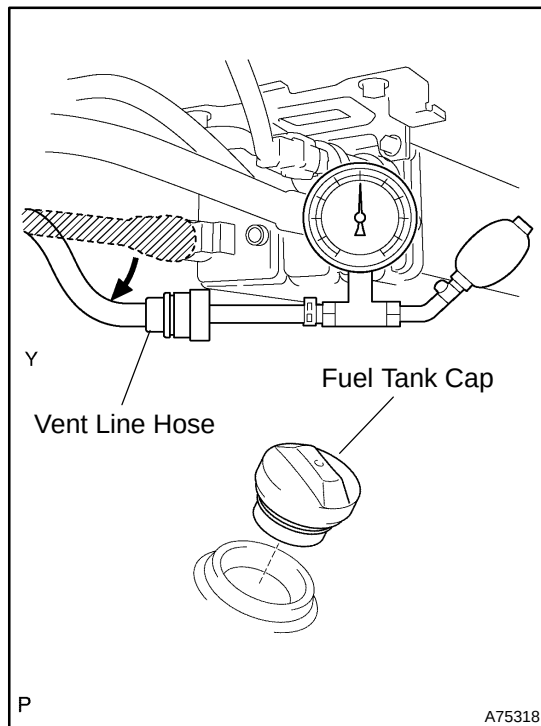
- (n) If you have the hand-held tester:
Turn to normal VSV for CCV operation.
- (1) Turn ignition switch OFF.
- (2) Disconnect the hand-held tester from the DLC3.
- (o) If you have no hand-held tester:
Turn to normal VSV for CCV operation.
- (1) Disconnect the positive (+) and negative (-) leads from the VSV for CCV terminals.
- (2) Reconnect the VSV for CCV connector.
- (p) Disconnect the pressure gauge from the EVAP service port on the purge line.



3. CHECK AIR TIGHTNESS IN FUEL TANK AND FILLER PIPE

- (a) Disconnect the vent line hose from the charcoal canister.
- (b) Apply pressure to fuel tank and make the internal pressure of the fuel tank 4 kPa (41 gf/cm², 0.58 psi).
- (c) Check that the internal pressure of the fuel tank remains stable for 1 minute.
- (d) Check the connected portions of each hose and pipe.

- (e) Check the installed parts on the fuel tank.
If they are OK, replace the fuel tank and filler pipe.
- (f) Reconnect the vent line hose to the fuel tank.



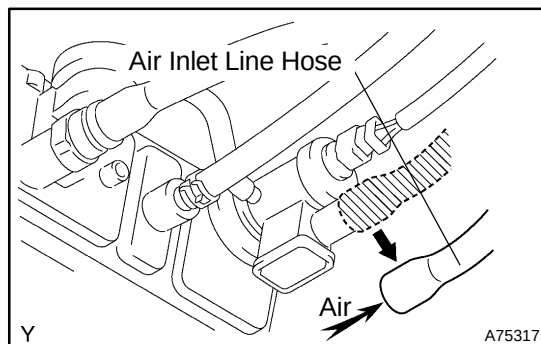
4. INSPECT FUEL CUTOFF VALVE AND FILL CHECK VALVE

- (a) Disconnect the vent line hose from the charcoal canister.
- (b) Apply pressure of 4 kPa (41 gf/cm², 0.58 psi) to the vent port of the fuel tank.

HINT:

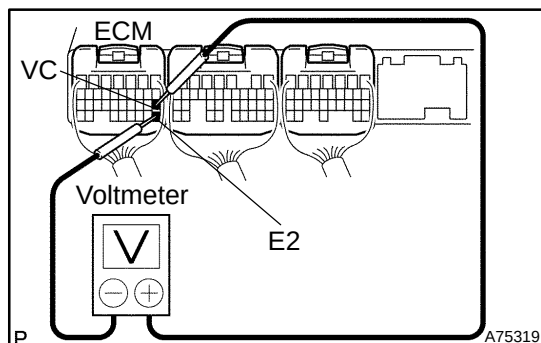
In the condition that the fuel is full, as the float valve of the fill check valve is closed and has no ventilation, it is necessary to check the fuel amount (volume).

- (c) Remove the fuel tank cap, and check that pressure drops.
If pressure does not drop, replace the fuel tank assembly.
- (d) Reconnect the vent line hose to the fuel tank.



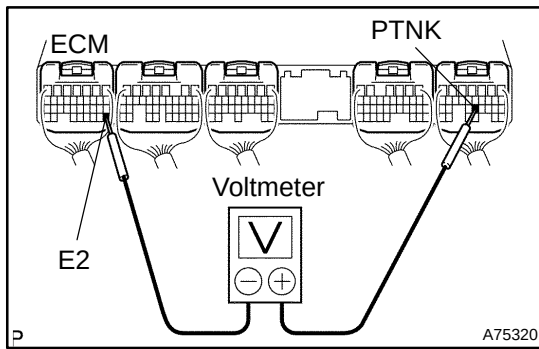
5. CHECK AIR INLET LINE

- (a) Disconnect the air inlet line hose from the charcoal canister.
- (b) Check that there is ventilation in the air inlet line.
- (c) Reconnect the air inlet line hose to the charcoal canister.



6. INSPECT VAPOR PRESSURE SENSOR

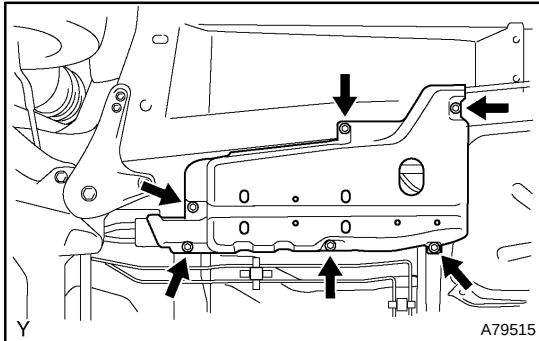
- (a) Inspect power source voltage of the vapor pressure sensor.
 - (1) Turn the ignition switch ON.
 - (2) Using a voltmeter, measure the voltage between connector terminals VC and E2 of the wiring harness side.
- Voltage: 4.5 to 5.5 V**
- (3) Turn the ignition switch OFF.



- (b) Inspect power output of the vapor pressure sensor.
- (1) Turn the ignition switch ON.
 - (2) Remove the fuel tank cap.
 - (3) Using a voltmeter, measure the voltage between connector terminals PTNK and E2 of the wiring harness side.
- Voltage: 3.0 to 3.6 V**
- (4) Reinstall the fuel tank cap.

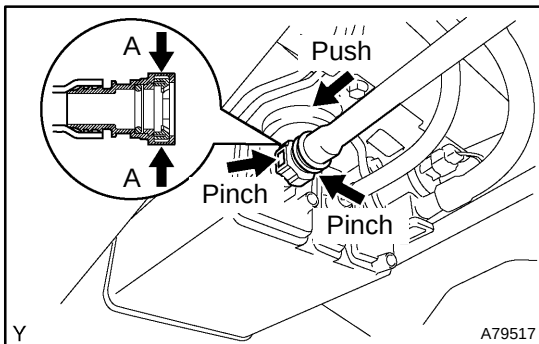
CHARCOAL CANISTER ASSY REPLACEMENT

12095-01



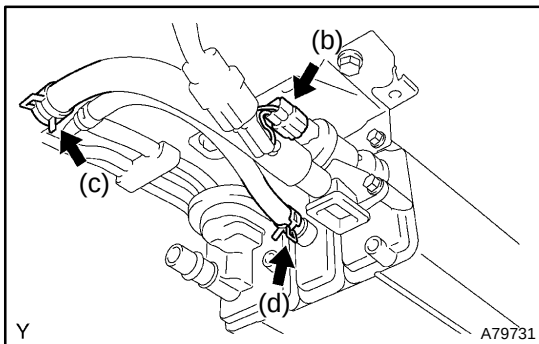
1. REMOVE CHARCOAL CANISTER PROTECTOR

- (a) Remove the 6 bolts and the charcoal canister protector.

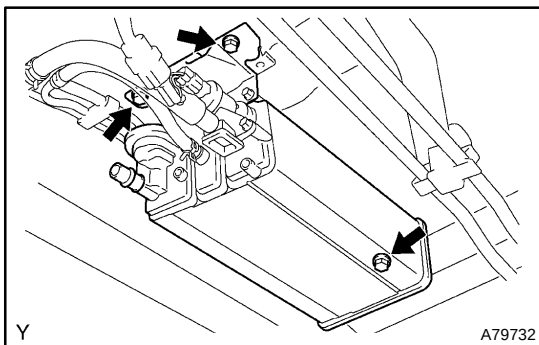


2. REMOVE CHARCOAL CANISTER ASSY

- (a) Disconnect the fuel tank vent hose.
- (1) Deeply push the connector to release the locking tab.
 - (2) Pinch portion A.
 - (3) Pull out the connector.



- (b) Disconnect the VSV (for CCV) connector.
(c) Disconnect the charcoal canister outlet hose No. 1.
(d) Disconnect the main tube No. 1 fuel hose.



- (e) Remove the 3 bolts and the charcoal canister.

3. INSTALL CHARCOAL CANISTER ASSY

Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)

4. INSTALL CHARCOAL CANISTER PROTECTOR

Torque: 5.0 N·m (51 kgf·cm, 44 in·lbf)