

The diagram illustrates the fuel system components and their connections. A Pressure Regulator is connected to the Fuel Tank (Return) and the Intake Manifold. The VSV (Variable Speed Valve) is controlled by the ECM (Engine Control Module) and is connected to the Intake Manifold. The Fuel Tank (Return) is connected to the Intake Manifold. The Intake Manifold is connected to the Delivery Pipe. The ECM is connected to the VSV.

The ECM turns on a VSV (Vacuum Switching Valve) to draw the air into the diaphragm chamber of the pressure regulator if it detects that the temperature of the engine coolant is too high during engine starting.

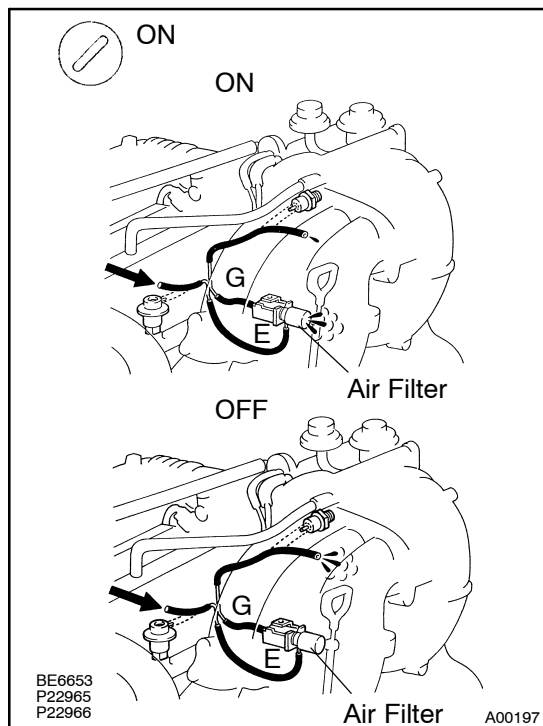
Fuel pressure control ends approx. 120 sec. after the engine is started.

[illegible]

INSPECTION PROCEDURE

LEXUS hand-held tester

- | | |
|---|--|
| 1 | Connect the LEXUS hand-held tester and check operation of VSV for fuel pressure control. |
|---|--|

**PREPARATION:**

- (a) Remove the fuse cover on the instrument panel.
- (b) Connect the LEXUS hand-held tester to the DLC3.
- (c) Turn the ignition switch ON and LEXUS hand-held tester main switch ON.
- (d) Select the ACTIVE TEST mode on the LEXUS hand-held tester.

CHECK:

Check operation of VSV when VSV is operated by the LEXUS hand-held tester.

OK:

VSV is ON:

Air from pipe E is flowing out through the air filter.

VSV is OFF:

Air from pipe E is flowing out through pipe G.

OK

Check and repair fuel pressure regulator
(See page [SF-17](#)).

NG

- | | |
|---|--|
| 2 | Check VSV for fuel pressure control (See page SF-55). |
|---|--|

NG

Replace VSV for fuel pressure control.

OK

- 3** Check for open and short in harness and connector between EFI main relay and ECM (See page [IN-27](#)).

NG

Repair or replace harness or connector.

OK

Check and replace ECM (See page [IN-27](#)).

OBD II scan tool (excluding LEXUS hand-held tester)

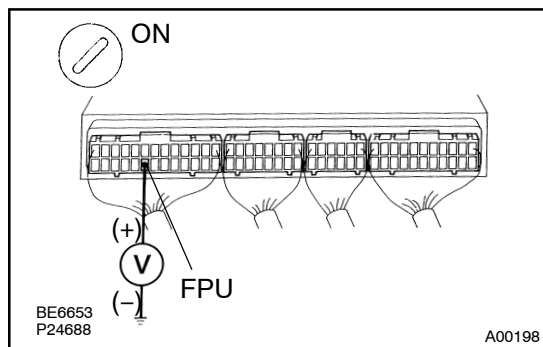
- 1** Check VSV for fuel pressure control (See page [DI-108](#), step 2).

NG

Replace VSV for fuel pressure control.

OK

- 2** Check voltage between terminal FPU of ECM connector and body ground.



PREPARATION:

- (a) Remove instrument panel speaker No.1 panel (See page [SF-63](#)).
- (b) Turn the ignition switch ON.

CHECK:

Measure the voltage between terminal FPU of ECM connector and body ground.

OK:

Voltage: 9 – 14 V

NG

Check for open and short in harness and connector between EFI main relay (marking: EFI) and ECM (See page [IN-27](#)).

OK

3	Check fuel pressure regulator (See page SF-17).
---	--

NG

Repair or replace.

OK

Check and replace ECM (See page [IN-27](#)).