

The diagram shows a fuel system schematic. On the left, a 'Pressure Regulator' is connected to a 'VSV' (Variable Speed Valve) at the top. A line labeled 'To Fuel Tank (Return)' exits the regulator. Below the regulator, an arrow points up from the text 'From Delivery Pipe'. To the right, an 'ECM' (Electronic Control Module) is connected to the VSV. Below the VSV, an arrow points down to the text 'Intake Manifold'. The diagram is labeled 'P222' in the bottom right corner.

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.

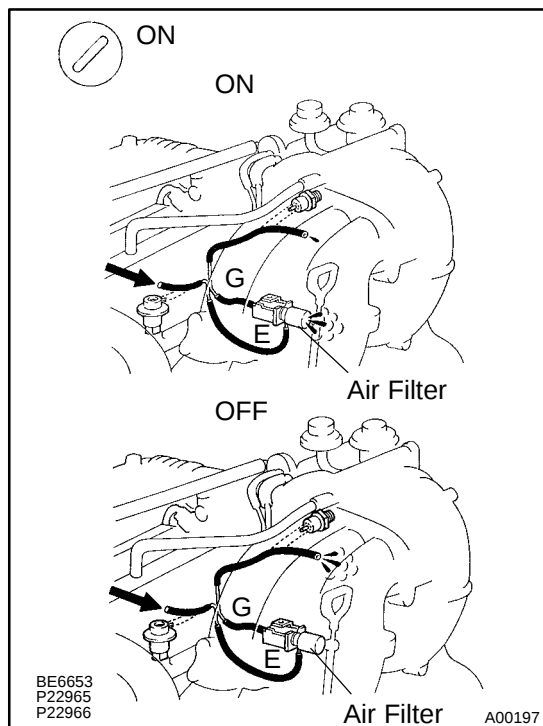
Fuel pressure control ends approx. 120 sec. after the engine is started.

The diagram illustrates the electrical connections for the EFI system. The ECM (Engine Control Module) is connected to the MRLY (Main Relay) and the FPU (Fuel Pressure Unit). The MRLY is connected to the VSV (Vacuum Solenoid Valve) for Fuel Pressure Control. The FPU is connected to the VSV. The VSV is connected to the EZ1 (Electrical Zone 1) relay. The EZ1 relay is connected to the EB1 (Electrical Block 1) relay. The EB1 relay is connected to the EA2 (Electrical Assembly 2) relay. The EA2 relay is connected to the R/B No.2 (Relay/Battery No. 2) relay. The R/B No.2 relay is connected to the EFI Main Relay. The EFI Main Relay is connected to the EFI (Electrical Fuel Injection) solenoid. The EFI solenoid is connected to the battery (From Battery) through the BR (Battery Relay).

INSPECTION PROCEDURE

TOYOTA hand-held tester

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| 1 | Connect the TOYOTA hand-held tester and check operation of VSV for fuel pressure control. |
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**PREPARATION:**

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

CHECK:

Check operation of VSV when VSV is operated by the TOYOTA 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-19](#)).

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|----------|---|
| 2 | Check VSV for fuel pressure control (See page SF-59). |
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NG

Replace VSV for fuel pressure control.

OK

- 3** Check for open and short in harness and connector between EFI main relay (Marking: EFI) and ECM (See page [IN-28](#)).

NG

Repair or replace harness or connector.

OK

Check and replace ECM (See page [IN-28](#)).

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

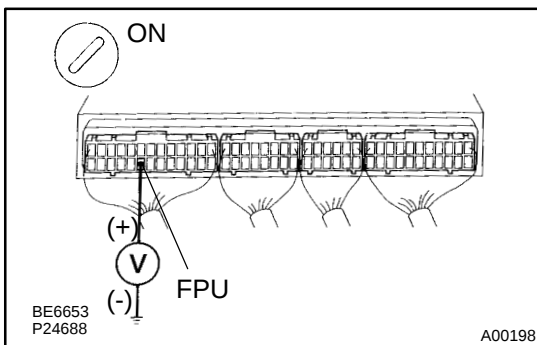
- 1** Check VSV for fuel pressure control (See page [SF-59](#)).

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-65](#)).
- (b) Turn ignition switch ON.

CHECK:

Measure 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-28](#)).

OK

3	Check fuel pressure regulator (See page SF-19).
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NG

Repair or replace fuel pressure regulator.

OK

Check and replace ECM (See page [IN-28](#)).