

FUEL PUMP ON-VEHICLE INSPECTION

SF17B-03

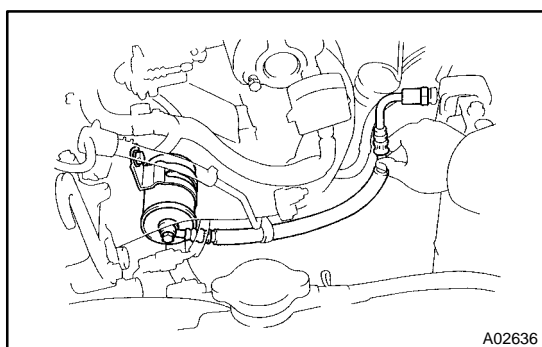
1. INSPECT FUEL PUMP OPERATION

- (a) Connect the TOYOTA hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the TOYOTA hand-held tester main switch ON.

NOTICE:

Do not start the engine.

- (c) Select the active test mode on the TOYOTA hand-held tester.
- (d) Please refer to the TOYOTA hand-held tester operator's manual for further details.
- (e) If you have no TOYOTA hand-held tester, connect the positive (+) and negative (-) leads from the battery to the fuel pump connector.



- (f) Check that there is pressure in the inlet hose from the fuel filter.

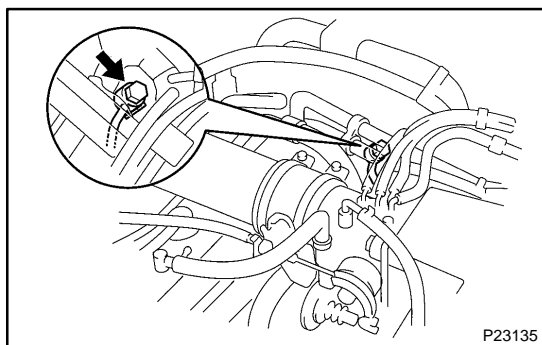
HINT:

If there is fuel pressure, you will hear the sound of fuel flowing. If there is no pressure, check the M-fuse, fuses, EFI main relay, fuel pump, ECM and wiring connections.

- (g) Turn the ignition switch OFF.
- (h) Disconnect the TOYOTA hand-held tester.

2. CHECK FUEL PRESSURE

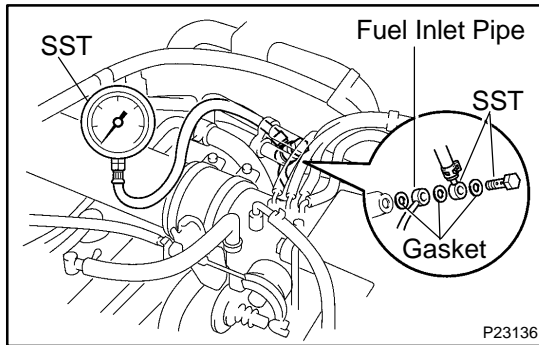
- (a) Check that the battery positive voltage is above 12V.
- (b) Disconnect the negative (-) terminal cable from the battery.



- (c) Remove the union bolt and 2 gaskets, and disconnect the fuel inlet pipe from the delivery pipe.

CAUTION:

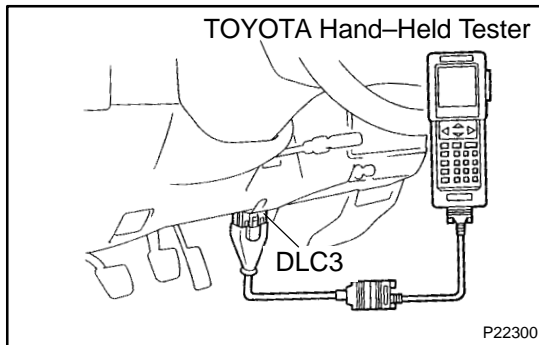
- Put a suitable container or shop rag under the delivery pipe.
- Slowly loosen the union bolt.



- (d) Install the fuel inlet pipe and SST (pressure gauge) to the delivery pipe with the 3 gaskets and SST (union bolt).
SST 09268-45014

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

- (e) Wipe off any splattered gasoline.



- (f) Connect the TOYOTA hand-held tester to the DLC3.
(g) Turn the ignition switch ON and push the TOYOTA hand-held tester main switch ON.

NOTICE:

Do not start the engine.

- (h) Select the active test mode on the TOYOTA hand-held tester.
(i) Please refer to the TOYOTA hand-held tester operator's manual for further details.
(j) If you have no TOYOTA hand-held tester, connect the positive (+) and negative (-) leads from the battery to the fuel pump connector.
(k) Reconnect the negative (-) terminal cable to the battery.
(l) Turn the ignition switch ON.
(m) Measure the fuel pressure.

Fuel pressure:

265 – 304 kPa (2.7 – 3.1 kgf/cm², 38 – 44 psi)

If pressure is high, replace the fuel pressure regulator.

If pressure is low, check the fuel hoses, fuel hose connections, fuel pump, fuel filter and fuel pressure regulator.

- (n) Remove the TOYOTA hand-held tester.
(o) Start the engine.
(p) Measure the fuel pressure at idle.

Fuel pressure:

206 – 255 kPa (2.1 – 2.6 kgf/cm², 31 – 37 psi)

If pressure is not as specified, check the vacuum sensing hose and fuel pressure regulator.

- (q) Stop the engine.
(r) Check that the fuel pressure remains as specified for 5 minutes after the engine has stopped.

Fuel pressure: 147 kPa (1.5 kgf/cm², 21 psi) or more

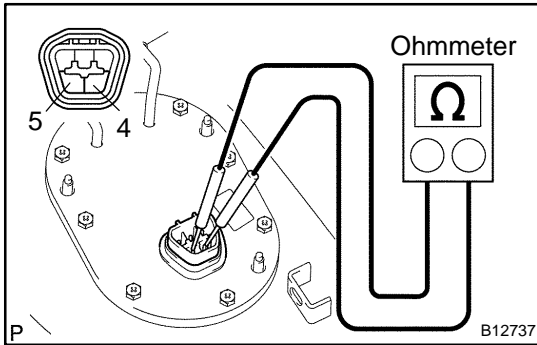
If pressure is not as specified, check the fuel pump, pressure regulator and/or injector.

- (s) After checking fuel pressure, disconnect the negative (-) terminal cable from the battery and carefully remove the SST to prevent gasoline from splashing.
SST 09268-45014

- (t) Reconnect the fuel inlet pipe to the delivery pipe with 2 new gaskets and the union bolt.

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

- (u) Reconnect the negative (-) terminal cable to the battery.
- (v) Check for fuel leakage.

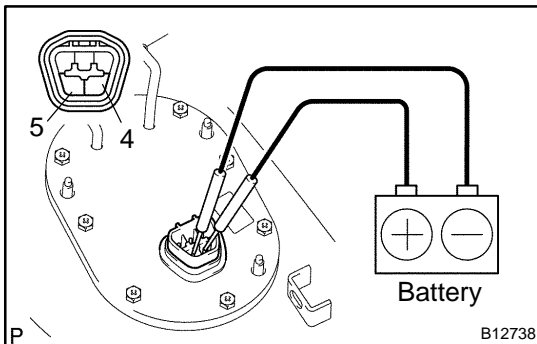


3. INSPECT FUEL PUMP RESISTANCE

Using an ohmmeter, measure the resistance between terminals 4 and 5.

Resistance: 0.2 – 3.0 Ω at 20°C (68°F)

If the resistance is not specified, replace the fuel pump and/or lead wire.



4. INSPECT FUEL PUMP RESISTANCE

Connect the positive (+) lead from the battery to terminal 4 of the connector, and the negative (-) lead to terminal 5. Check that the fuel pump operates.

NOTICE:

- **These tests must be done quickly (within 10 seconds) to prevent the coil from burning out.**
- **Keep the fuel pump as far away from the battery as possible.**
- **Always do switching at the battery side.**

If operation is not as specified, replace the fuel pump and/or lead wire.