

FUEL PUMP ON-VEHICLE INSPECTION

SF107-02

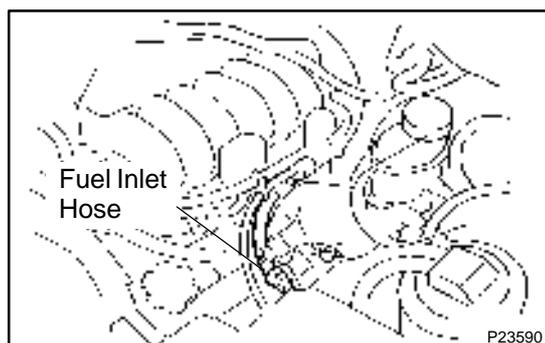
1. CHECK FUEL PUMP OPERATION

- (a) Connect a TOYOTA hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push 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. (See step 4)



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

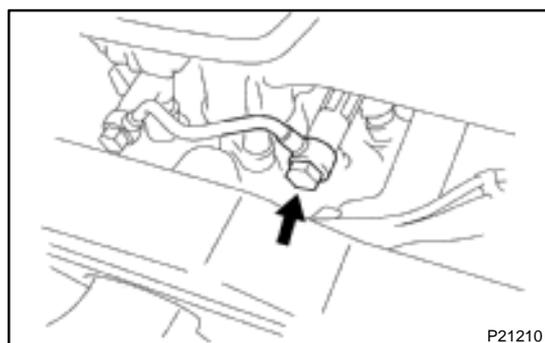
HINT:

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 from the DLC3.

2. CHECK FUEL PRESSURE

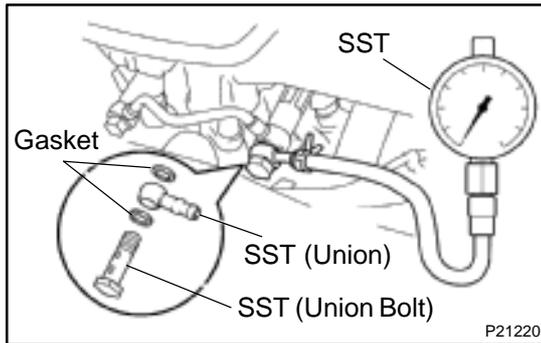
- (a) Check the battery positive voltage is above 12 V.
- (b) Disconnect the negative (-) terminal cable from the battery.
- (c) Remove the 6 bolts, and disconnect the No.2 timing belt cover.



- (d) Remove the union bolt holding the fuel pipe to the delivery pipe and gasket.

CAUTION:

- Put a shop towel under the delivery pipe.
- Slowly loosen the union bolt.



- (e) Install SST (pressure gauge) to the delivery pipe with the 2 gaskets and SST (union and union bolt).
SST 09268-45012
Torque: 34.3 N·m (350 kgf·cm, 25 ft·lbf)
- (f) Wipe off any splattered gasoline.
- (g) Connect a TOYOTA hand-held tester to the DLC3.
(See step 1)
- (h) Reconnect the negative (-) terminal cable to the battery.
- (i) Turn the ignition switch ON.
- (j) 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.

- (k) Disconnect the TOYOTA hand-held tester from the DLC3.
- (l) Reinstall the No.2 timing belt cover with the 6 bolts.
Torque: 9 N·m (90 kgf·cm, 80 in.-lbf)

(m) Start the engine.

(n) Disconnect the vacuum sensing hose from the fuel pressure regulator, and plug the hose end.

(o) Measure the fuel pressure at idle.

Fuel pressure:**265 – 304 kPa (2.7 – 3.1 kgf/cm², 38 – 44 psi)**

(p) Reconnect the vacuum sensing hose to the fuel pressure regulator.

(q) Measure the fuel pressure at idle.

Fuel pressure:**226 – 265 kPa (2.3 – 2.7 kgf/cm², 33 – 38 psi)**

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

(r) Stop the engine.

(s) 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 injectors.

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

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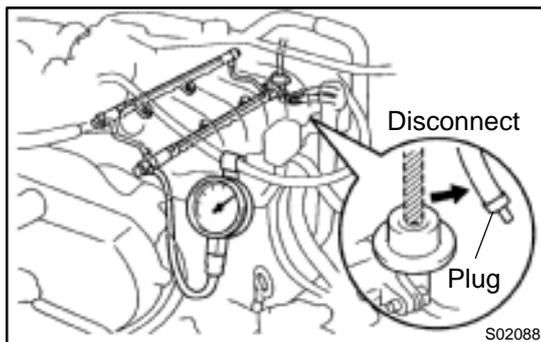
(u) Remove the other union bolt, 3 gaskets and fuel pipe from the delivery pipes.

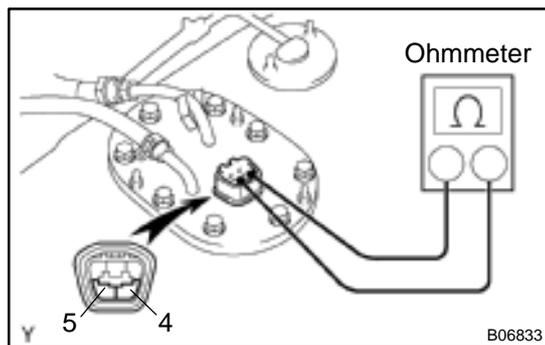
(v) Reinstall the fuel pipe with 4 new gaskets and the 2 union bolts.

Torque: 34.3 N·m (350 kgf·cm, 25 ft·lbf)

(w) Reconnect the negative (-) terminal cable to the battery.

(x) Check for fuel leaks. (See page SF-1)



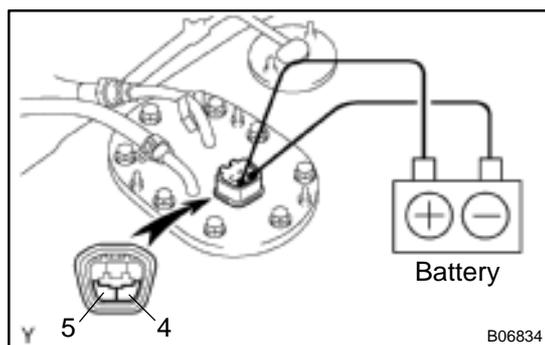


3. INSPECT FUEL PUMP RESISTANCE

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.