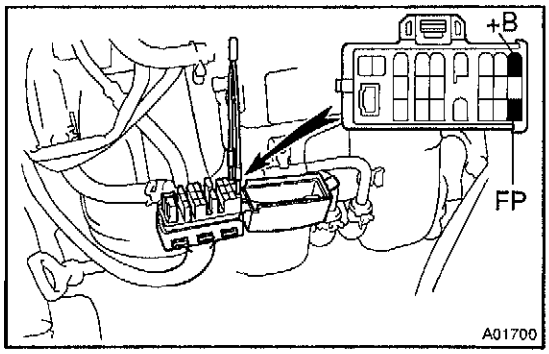
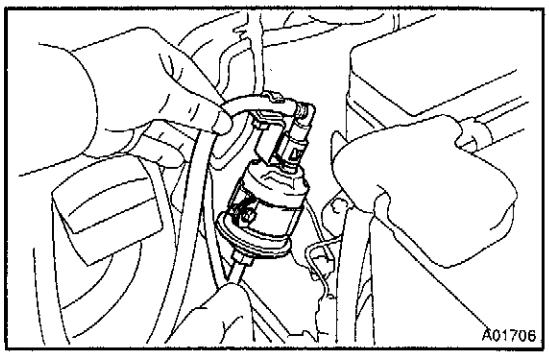




FUEL PUMP

ON–VEHICLE INSPECTION

F100O–01

1. 1RZ–E:

CHECK FUEL PUMP OPERATION

(a) Using SST, connect terminals +B and FP of the check connector.
SST 09843–18020

(b) Turn the ignition switch ON.

NOTICE:

Do not start the engine.

(c) Check that these is pressure in the hose from the fuel filter.

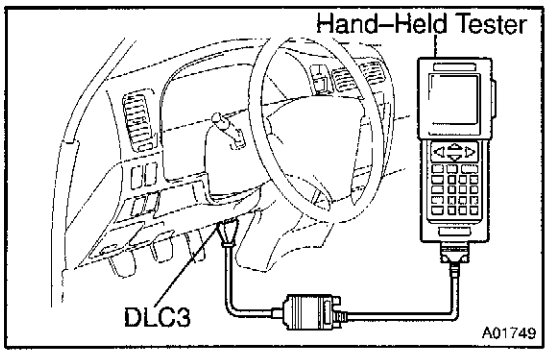
HINT:

If these is fuel pressure, you will hear the sound of fuel flowing.
If these is no pressure, check the following parts:

- H–fuse
- Fuses
- EFI main relay
- Circuit opening relay
- Fuel pump
- Fuel pump wiring connections

(d) Turn the ignition switch OFF.

(e) Remove the SST from the check connector.
SST 09843–18020



2. 2RZ–FE, 3RZ–FE:

CHECK FUEL PUMP OPERATION

(a) Connect the hand–held tester to the DLC3.

(b) Turn the ignition switch ON and hand–held tester main switch ON.

NOTICE:

Do not start the engine.

(c) Select the active test mode on the hand–held tester.

(d) Please refer to the hand–held tester operator's manual for further details.

(e) If you have no hand–held tester, connect the positive (+) and negative (–) leads of the battery to the fuel pump connector. (See page FI–6)

FI

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

HINT:

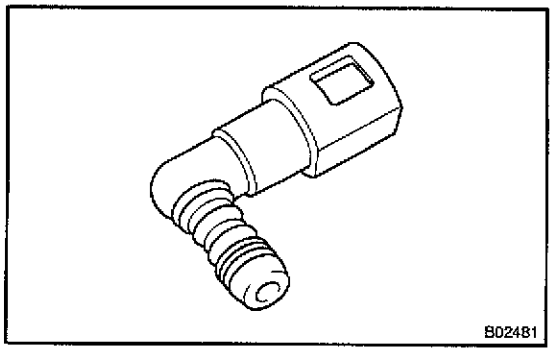
At this time, you will hear fuel return noise.

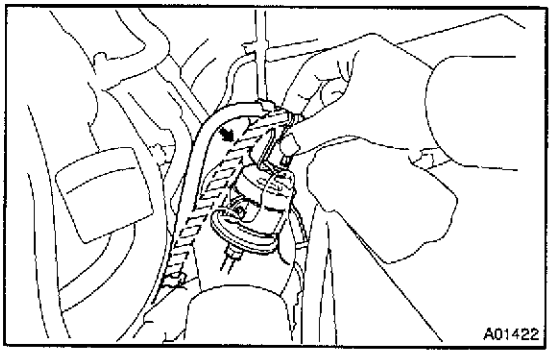
If there is no pressure, check these parts:

- H–fuse
- Fuses
- EFI main relay
- Circuit opening relay
- Fuel pump
- Fuel pump wiring connections

(g) Turn the ignition switch to OFF.

(h) Remove the hand–held tester.





3. CHECK FUEL PRESSURE

(a) Check the battery positive voltage is above 12 V.

(b) Disconnect the negative (–) terminal cable from the battery.

(c) Purchase the new fuel pipe and take out the fuel tube connector from its pipe.

Part No.

1RZ–FE: 23801–75060

2RZ–FE: 23801–75070

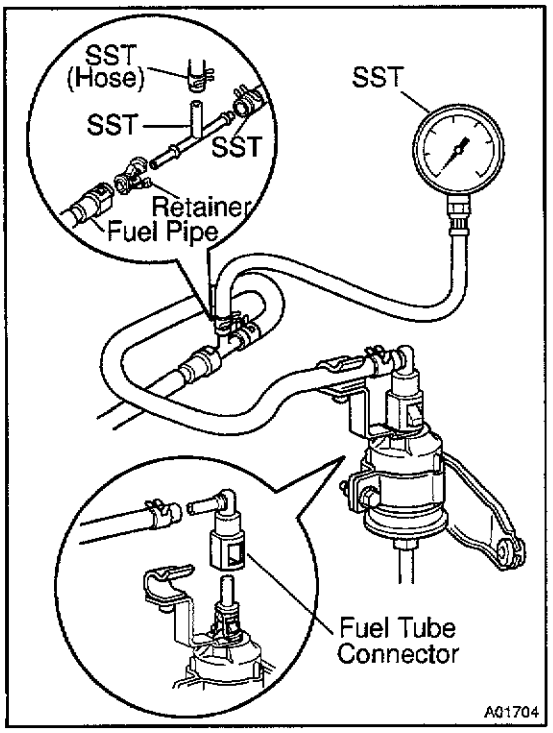
3RZ–FE: 23801–75080

(d) Remove the fuel hose from the clamp.

(e) Disconnect the fuel pipe (fuel tube connector) from the fuel filter outlet.

CAUTION:

- **Perform disconnecting operations of the fuel tube connector (quick type) after observing the precautions.**
- **As there is retained pressure in the fuel pipe line, prevent it from splashing inside the engine compartment.**



(f) Install SST (pressure gauge) as shown in the illustration by using SST and fuel tube connector.
SST 09268–41046, 09268–41250, 09268–45012
(g) Wipe off any splattered gasoline.
(h) Reconnect the negative (–) terminal cable to the battery.
(i) 1RZ–E:
Using SST, connect terminals +B and FP of the check connector.
SST 09843–18020
(j) 2RZ–FE:, 3RZ–FE:
Connect the hand–held tester to the DLC3.
(See step 2 check fuel pump operation (a) to (e))
(k) Measure the fuel pressure
Fuel pressure:
265 – 304 kPa (2.7 – 3.1 kgf/cm^2, 38 – 44psi)

If pressure is high, replace the fuel pressure regulator.
If pressure is low, check these parts:

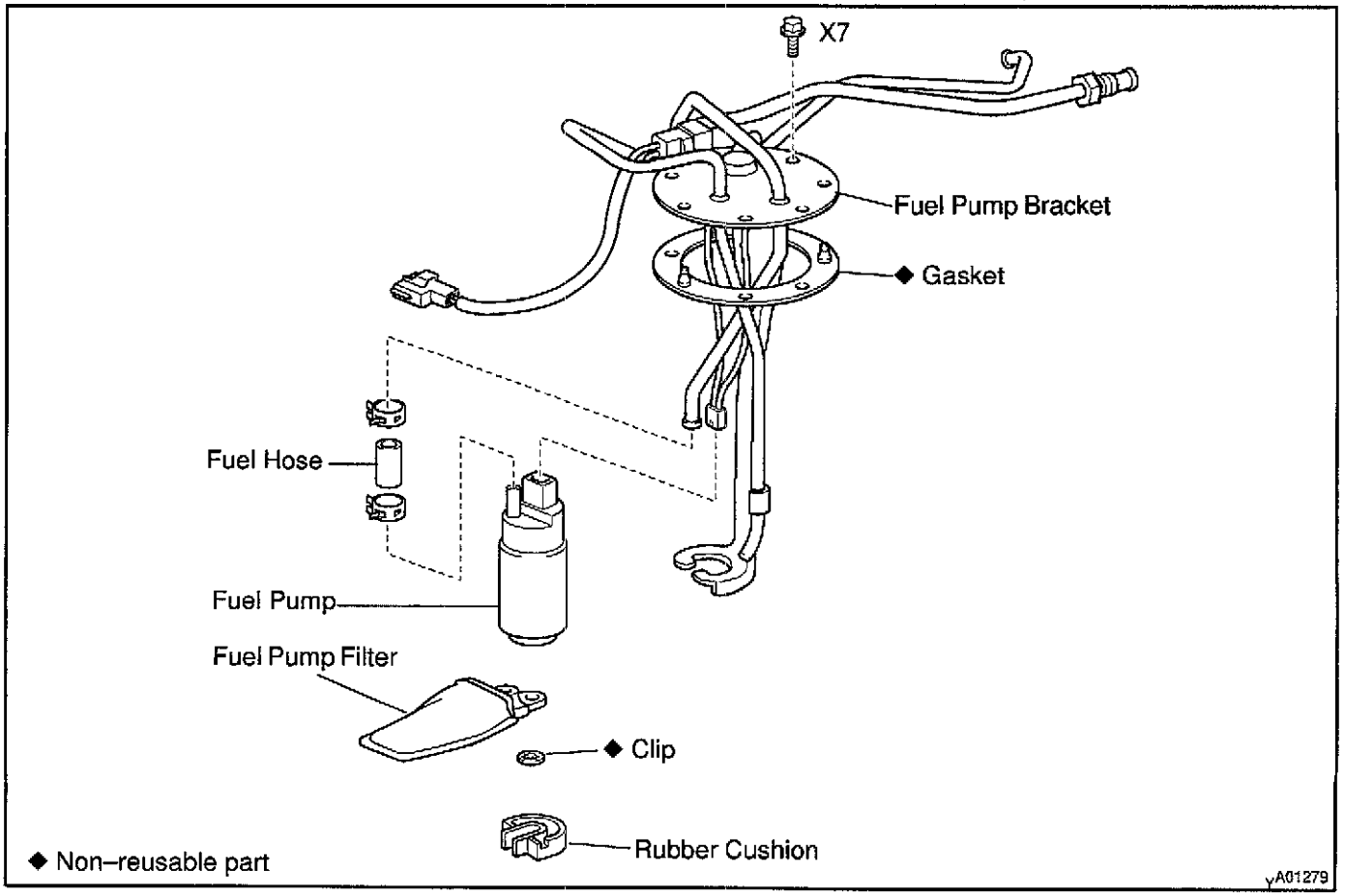
- Fuel hose and connections
- Fuel pump
- Fuel filter
- Fuel pressure regulator

(l) 2RZ–FE:, 3RZ–FE:
Disconnect the hand held tester from the DLC3.
(m) 1RZ–E:
Reconnect the SST from the check connector.
SST 09843–18020
(n) Start the engine.
(o) Measure the fuel pressure at idle.
Fuel pressure:
206 – 255 kPa (2.1 – 2.6 kgf/cm^2, 31 – 37psi)
(p) Stop the engine.
(q) Check that the fuel pressure remains as specified 5 minutes after the engine has stopped.
Fuel pressure:
147 kPa (1.5 kgf/cm^2, 21psi) or more

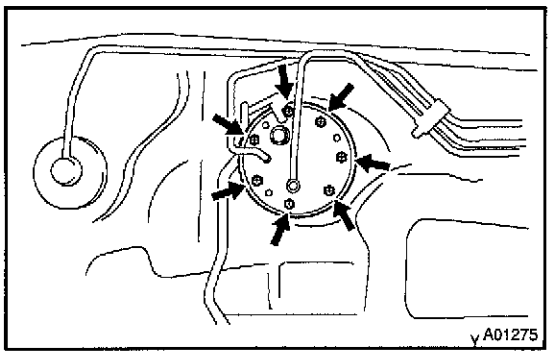
If pressure is not as specified, check the fuel pump, pressure regulator and/ or injectors.
(r) After checking fuel pressure, disconnect the negative (–) terminal cable from the battery and carefully remove the SST and fuel tube connector to prevent gasoline from splashing.
SST 09268–41046, 09268–41250, 09268–45012
(s) Reconnect the negative (–) terminal cable to the battery.
(t) Check for fuel leaks.

FI00R-01

COMPONENTS



FI035-01



REMOVAL

CAUTION:

Do not smoke or work near an open flame when working on the fuel pump.

1. **REMOVE FUEL TANK**
2. **REMOVE FUEL PUMP BRACKET ASSEMBLY FROM FUEL TANK**

(a) Remove the 7 bolts.
Torque: 4 N·m (35 kgf·cm, 40 in.·lbf)

(b) Pull out the pump bracket assembly.

(c) Remove the gasket from the pump bracket.

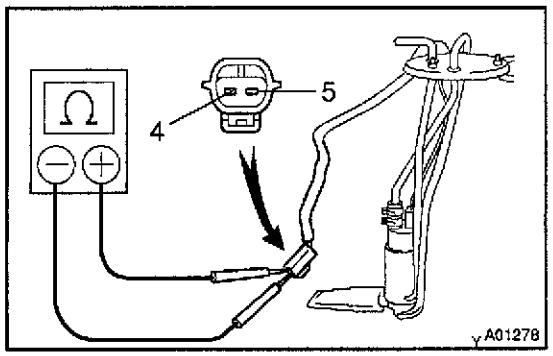
HINT:

At the time of assembly, please refer to the following items.
Install the pump bracket with a new gasket.

FI

FI00T–01

DISASSEMBLY

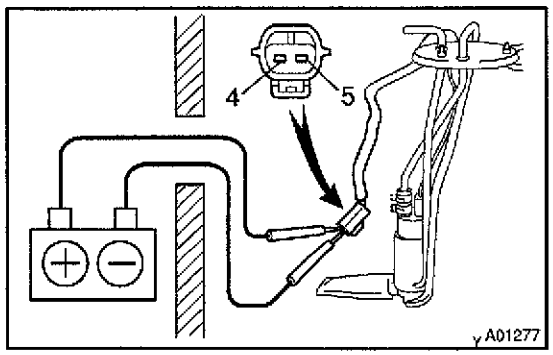


1. INSPECT FUEL PUMP RESISTANCE

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

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

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



2. INSPECT FUEL PUMP OPERATION

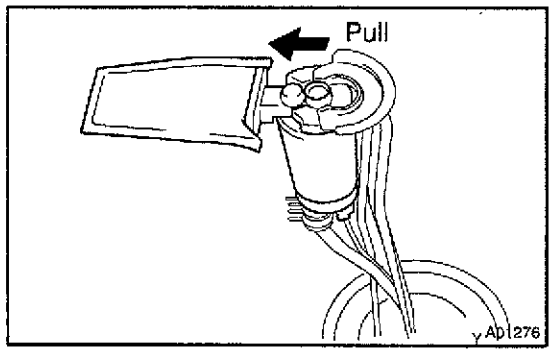
Connect the positive (+) lead from the battery to terminal 4 of the connector, and the negative (–) lead to terminal 5. Check that the fuel pump operates.

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 the switching at the battery side.**

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

3. REMOVE FUEL PUMP LEAD WIRE

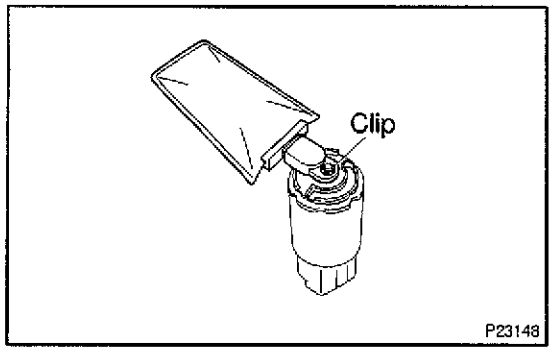


4. REMOVE FUEL PUMP FROM FUEL PUMP BRACKET

(a) Pull off the lower side of the fuel pump from the pump bracket.

(b) Disconnect the fuel hose from the fuel pump, and remove the fuel pump.

(c) Remove the rubber cushion from the fuel pump.



5. REMOVE FUEL PUMP FILTER FROM FUEL PUMP

(a) Using a small screwdriver, remove the clip.

(b) Pull out the pump filter.

HINT:

At the time of assembly, please refer to the following items.

Install the pump filter with the new clip.

FK00U–01

REASSEMBLY

Reassembly is in the reverse order of disassembly.

(See page FI–11)

F00V-01

INSTALLATION

Installation is in the reverse order of removal.
(See page FI–10)