

# FUEL SYSTEM (2UZ-FE)(From November, 2004)

111A0-01

## PRECAUTION

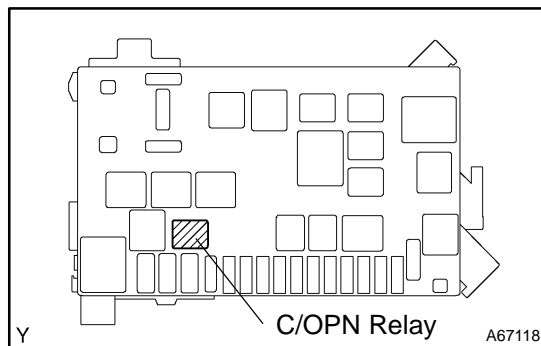
### 1. PRECAUTION

- Before working on the fuel system, disconnect the negative (–) terminal cable from the battery.
- Do not smoke or work near fire when working on the fuel system.
- Keep gasoline away from rubber or leather parts.

### 2. WORK FOR PREVENT GASOLINE FROM SPILLING OUT

#### CAUTION:

- Do not disconnect any part of the fuel system until you have discharged the fuel system pressure.
- Even after discharging the fuel pressure, place a shop rag or piece of cloth over fittings to prevent fuel splashing on yourself or in the engine compartment when separating the fittings.



- Remove the circuit opening relay from the engine room relay block.
- Start the engine. After the engine has stopped on its own, turn the ignition switch OFF.

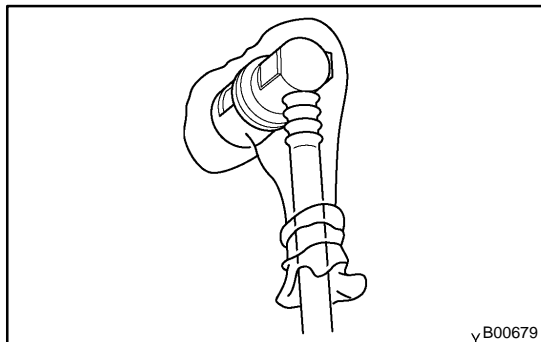
#### HINT:

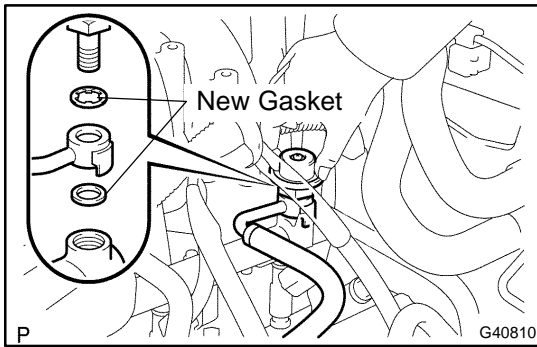
There is a case that DTC P0171 (system too lean) is output.

- Check that the engine does not start.
- Remove the fuel tank cap, and let the air out of the fuel tank.
- Disconnect the negative (–) terminal cable from the battery.
- Reinstall the circuit opening relay.

### 3. FUEL SYSTEM

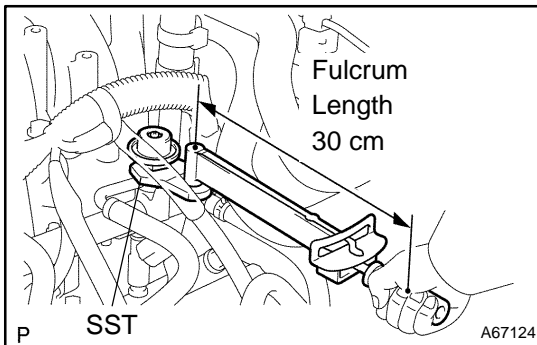
- When disconnecting the high fuel pressure line, a large amount of gasoline will spill out, so observe the following procedures:
  - Disconnect the fuel pump tube.  
(See page 11-16)
  - Drain the fuel remained inside the fuel pump tube.
  - Do not damage the disconnected pipe and connector, and prevent intrusion of foreign objects by covering them with a plastic bag.
  - Place a container under the connection.





- (b) When connecting the union bolt (fuel pressure pulsation damper) on the high pressure pipe union, observe the following procedures:

- (1) Always use new gaskets.
- (2) Tighten the union bolt by hand.



- (3) Using SST, tighten the union bolt to the specified torque.

SST 09612-24014 (09617-24011)

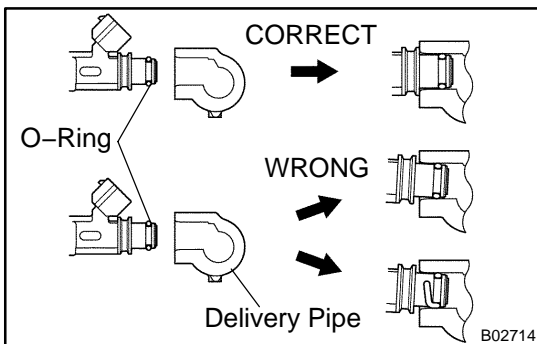
**Torque:**

**33 N·m (340 kgf·cm, 24 ft·lbf) for use with SST**

**39 N·m (400 kgf·cm, 29 ft·lbf)**

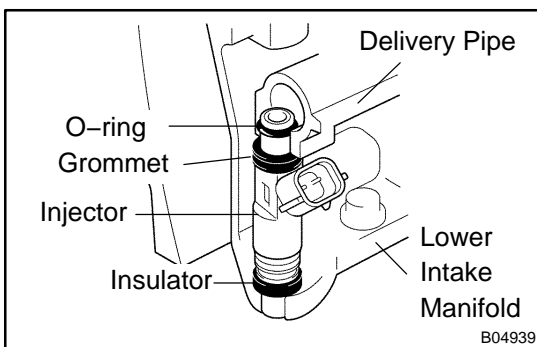
**HINT:**

Use a torque wrench with a fulcrum length of 30 cm (11.81 in.).



- (c) Observe the following precautions when removing and installing the injectors:

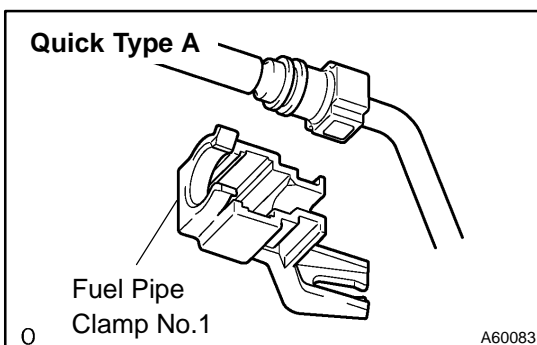
- (1) Never reuse the O-ring.
- (2) When placing a new O-ring on the injector, do not damage the O-ring.
- (3) Coat the new O-ring with spindle oil or gasoline before installing. Do not use engine oil, gear oil or brake fluid.



- (d) Install the injector to the delivery pipe and lower intake manifold, as shown in the illustration.

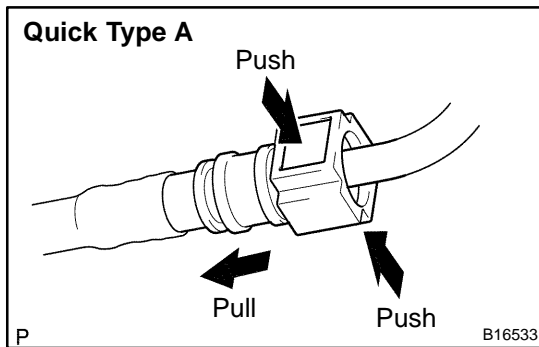
**NOTICE:**

**Before installing the injector, apply spindle oil or gasoline where the delivery pipe or intake manifold contacts the O-ring of the injector.**

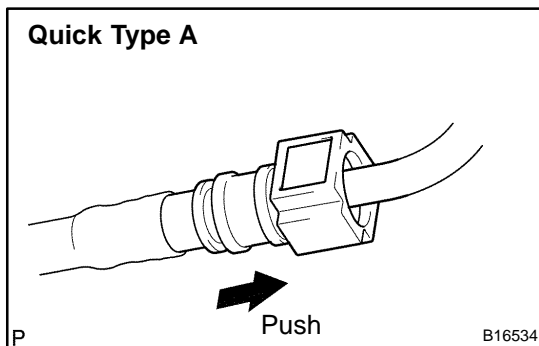


- (e) Observe the following precautions when disconnecting the fuel tube connector (Quick type A):

- (1) Remove the fuel pipe clamp No.1.

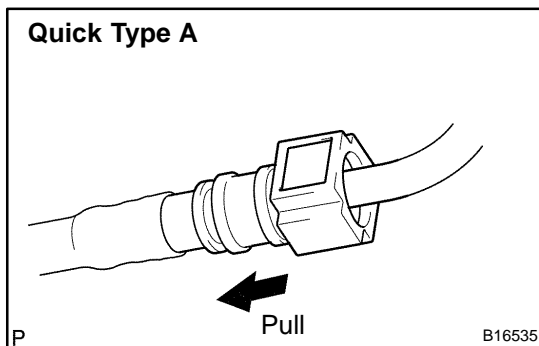


- (2) Check that there is no dirt on the pipe and around the connector before disconnecting them. Clean them if necessary.
- (3) Disconnect them by hand.
- (4) When the connector and the pipe are stuck, pinch the fuel pipe with your fingers and push the fuel tube connector to the fuel pipe by pressing the release buttons, then pull the connector out of the pipe.
- (5) Check that there is no dirt or other foreign objects on the seal surface of the disconnected pipe. Clean it away if necessary.
- (6) Do not damage the disconnected pipe and connector, and prevent intrusion of foreign objects by covering them with a plastic bag.



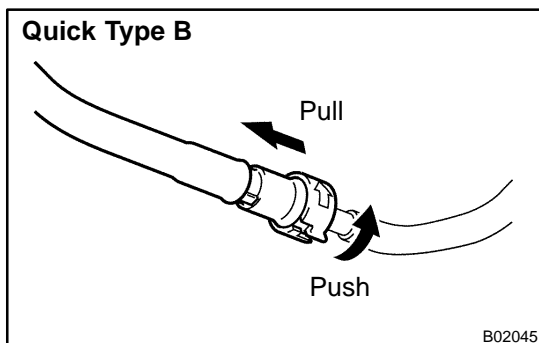
- (f) Observe the following precautions when connecting the fuel tube connector (Quick Type A):

- (1) Check that there is no damage or foreign objects in the connected part of the pipe.
- (2) Match the axis of the connector with the axis of the pipe, and push into the connector until the connector makes a "click" sound. In case that the connection is tight, apply a small amount of fresh engine oil to the tip of the pipe.
- (3) After finishing the connection, check if the pipe and the connector are securely connected by pulling them.
- (4) Check for fuel leaks.

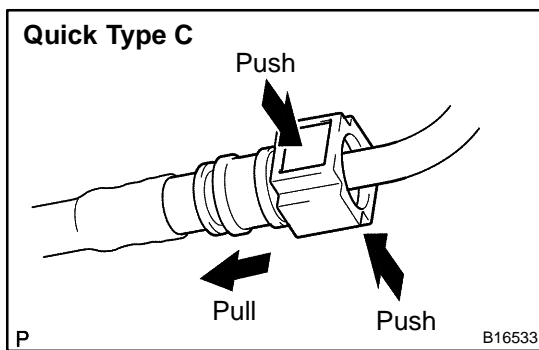
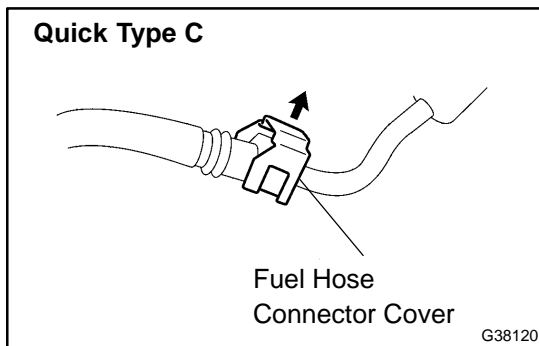
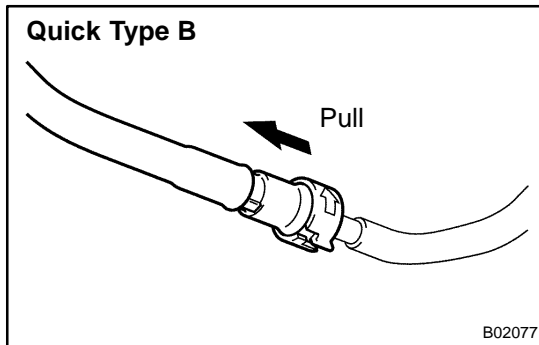
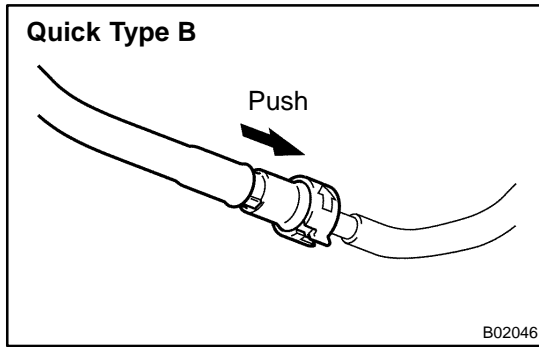


- (g) Observe the following precautions when disconnecting the fuel tube connector (Quick type B):

- (1) Check if there is any dirt on the pipe and around the connector before disconnecting them. Clean the dirt away if necessary.
- (2) Disconnect them by hand.



- (3) When the connector and the pipe are stuck, push and pull the connector. Disconnect and pull it out. Do not use any tool at this time.
- (4) Check if there is any dirt or other foreign objects on the seal surface of the disconnected pipe. Clean it away if necessary.
- (5) Do not damage the disconnected pipe and connector, and prevent intrusion of foreign objects by covering them with a plastic bag.

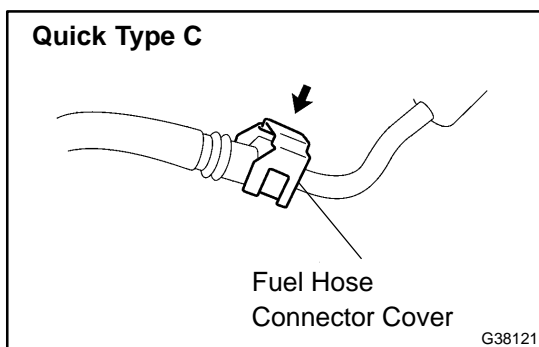
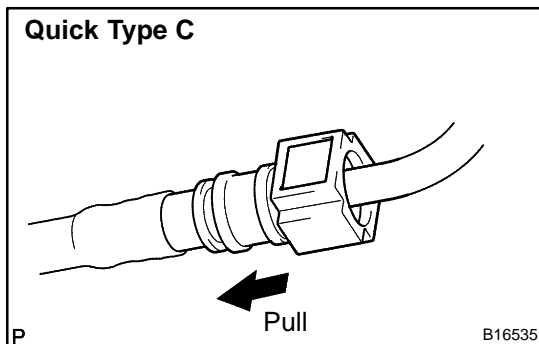
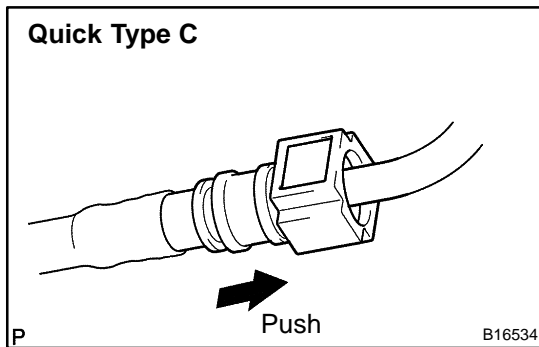


(h) Observe the following precautions when connecting the fuel tube connector (Quick type B):

- (1) Match the axis of the connector with the axis of the pipe, and push in the connector until the connector makes a "click" sound. In case that the connection is tight, apply a small amount of new engine oil to the tip of the pipe.
- (2) After finishing the connection, check if the pipe and the connector are securely connected by pulling them.
- (3) Check for fuel leaks.

(i) Observe the following precautions when disconnecting the fuel tube connector (Quick type C):

- (1) Pull the fuel hose connector cover up to release the lock.
- (2) Check that there is no dirt in the pipe and around the connector before disconnecting them. Clean the dirt away if necessary.
- (3) Be sure to disconnect them by hand.
- (4) When the connector and the pipe are stuck, pinch the fuel pipe between the hands, and push and pull the connector. Disconnect and pull it out. Do not use any tool at this time.
- (5) Check if there is any dirt or other foreign objects on the seal surface of the disconnected pipe. Clean it away if necessary.
- (6) Do not damage the disconnected pipe and connector, and prevent intrusion of foreign objects by covering them with a plastic bag.



(j) Observe the following precautions when connecting the fuel tube connector (Quick Type C):

- (1) Check that there is no damage or foreign objects in the connected part of the pipe.
- (2) Match the axis of the connector with the axis of the pipe, and push into the connector until the connector makes a "click" sound. In case that the connection is tight, apply a small amount of fresh engine oil to the tip of the pipe.

(3) After finishing the connection, check if the pipe and the connector are securely connected by pulling them.

(4) Lock the fuel hose connector cover.

**HINT:**

If the fuel tube is not completely connected, the half connection prevention connector prevents the fuel hose connector cover from being locked.

(5) Check for fuel leaks.

(k) Observe the following precautions when handling a nylon tube:

**CAUTION:**

- Do not twist the connection part of the nylon tube and the quick connector by force when connecting them.
- Do not twist the nylon tube.
- Do not remove the EPDM protector on the outside of the nylon tube.
- Do not close the piping with the nylon tube by bending it.

**4. CHECK FUEL LEAK**

- (a) Check that there are no fuel leaks anywhere on the fuel system after doing maintenance (See page 11-6).

## ON-VEHICLE INSPECTION

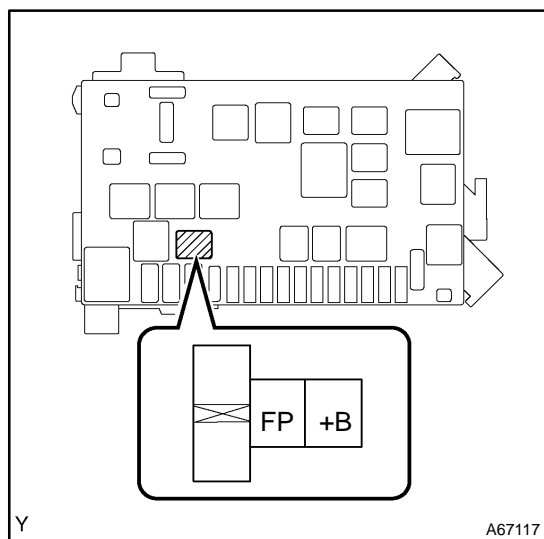
### 1. CHECK FUEL PUMP OPERATION AND FUEL LEAK

- (a) When using the hand-held tester
- (1) Connect the hand-held tester to the DLC3.
  - (2) Turn the ignition switch ON and hand-held tester main switch ON.

**NOTICE:**

**Do not start the engine.**

- (3) Select the ACTIVE TEST mode on the hand-held tester.
- (4) Please refer to the hand-held tester operator's manual for further details.



- (b) When not using hand-held tester
- (1) Remove the circuit opening relay.
  - (2) Using a service wire, connect terminals FP and +B of the relay block.

**NOTICE:**

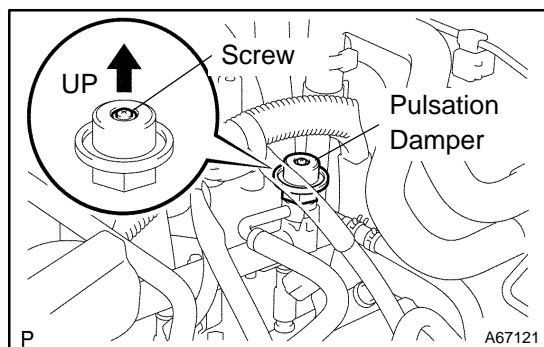
**Pay due attention to the terminal connecting position to avoid a malfunction.**

- (3) Turn the ignition switch ON, and check that the fuel pump operates.

**NOTICE:**

**Do not start the engine.**

- (c) Check that there are no fuel leaks after doing maintenance anywhere on the fuel system.



- (d) Check that the pulsation damper screw rises up when the fuel pump operates.

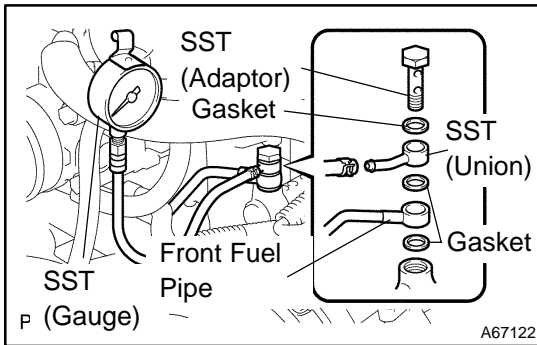
If operation is not as specified, check the following parts:

- Fusible link
- Fuses
- EFI main relay
- Fuel pump
- ECM
- Wiring connections

- (e) Turn the ignition switch OFF.
- (f) Disconnect the 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 front fuel pipe from the LH delivery pipe (See page 11-12).



- (d) Install the front fuel pipe and SST (pressure gauge) to the delivery pipe with the 3 gaskets and another SST (adaptor).

SST 09268-45014 (09268-41200, 09268-41190, 90405-06167, 09268-41210, 90467-11009)

**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

- (e) Wipe off any splattered gasoline.  
 (f) Reconnect the negative (–) terminal cable to the battery.  
 (g) Connect the hand-held tester to the DLC3 (See step 1 in check fuel pump operation).  
 (h) Measure the fuel pressure.

**Fuel pressure:**

**265 to 304 kPa (2.7 to 3.1 kgf/cm<sup>2</sup>, 38 to 44 psi)**

If pressure is high, replace the fuel pressure regulator.

If pressure is low, check the following parts:

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

- (i) Disconnect the hand-held tester from the DLC3.  
 (j) Start the engine.  
 (k) Measure the fuel pressure at idle.

**Fuel pressure:**

**265 to 304 kPa (2.7 to 3.1 kgf/cm<sup>2</sup>, 38 to 44 psi)**

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

**Fuel pressure: 147 kPa (1.5 kgf/cm<sup>2</sup>, 21 psi) or more**

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

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

SST 09268-45014 (09268-41200, 09268-41190, 90405-06167, 09268-41210, 90467-11009)

- (o) Reinstall the front fuel pipe to the LH delivery pipe (See page 11-12).  
 (p) Reconnect the negative (–) terminal cable to the battery.  
 (q) Check for fuel leaks (See step 1 in check fuel pump operation).

## INSPECTION

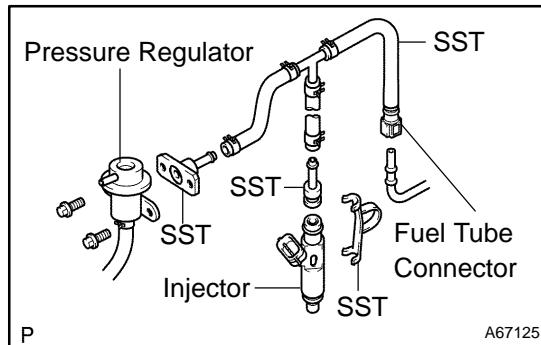
### 1. INSPECT FUEL INJECTOR ASSY

(a) Inspect injector resistance.

- (1) Using an ohmmeter, measure the resistance between the terminals.

**Resistance: 13.4 to 14.2  $\Omega$  at 20°C (68°F)**

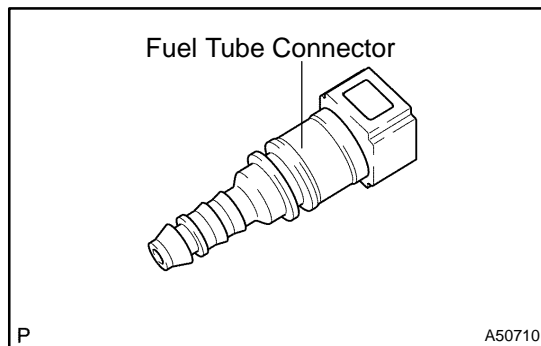
If the resistance is not as specified, replace the injector.



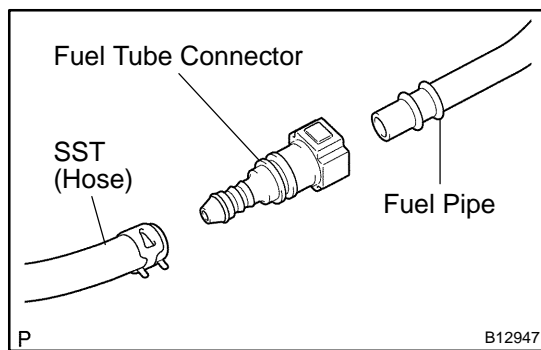
(b) Inspect injector.

#### CAUTION:

**Avoid any sparks or flame during the test.**



- (1) Obtain a new fuel main hose (part No. 23271-50190) and take the fuel tube connector out of the hose.



- (2) Install the fuel tube connector to SST (hose), then connect the tube connector and fuel pipe.

SST 09268-41047 (95336-08070)

#### CAUTION:

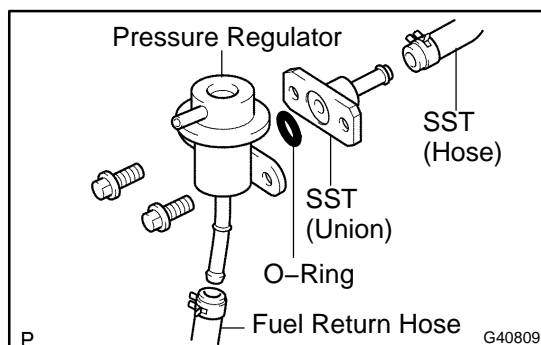
**Observe the precautions when connecting the fuel tube connector (quick type).**

- (3) Remove the pressure regulator from the delivery pipe.  
 (4) Install the O-ring to the fuel inlet of the pressure regulator.  
 (5) Connect the SST (hose) to the fuel inlet of the pressure regulator with another SST (union) and the 2 bolts.

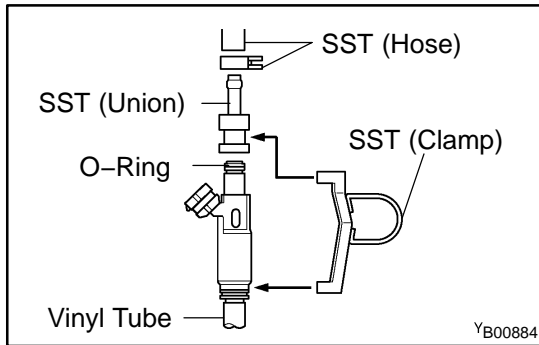
SST 09268-41047 (95336-08070, 09268-41091)

**Torque: 7.5 N·m (80 kgf·cm, 66 in.-lbf)**

- (6) Connect the fuel return hose to the fuel outlet of the pressure regulator.







- (7) Install the O-ring to the injector.
- (8) Connect SSTs (union and hose) to the injector, and hold the injector and union with another SST (clamp).

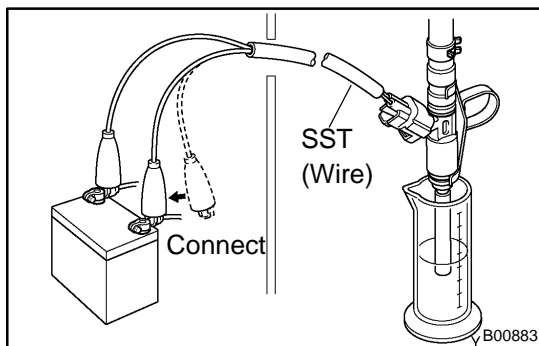
SST 09268-41047 (09268-41110, 09268-41300, 95336-08070)

- (9) Put the injector into a graduated cylinder.

**CAUTION:**

**Install a suitable vinyl tube onto the injector to prevent gasoline from splashing out.**

- (10) Operate the fuel pump (see page 11-6).



- (11) Connect SST (wire) to the injector and battery for 15 seconds, and measure the injection volume with the graduated cylinder. Test each injector 2 or 3 times.

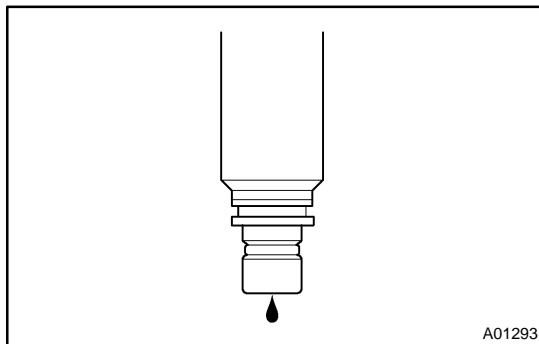
SST 09842-30070

**Volume: 56 to 69 cm<sup>3</sup> (3.4 to 4.2 cu in.) per 15 seconds**

**Difference between each injector:**

**13 cm<sup>3</sup> (0.8 cu in.) or less**

If the injection volume is not as specified, replace the injector.

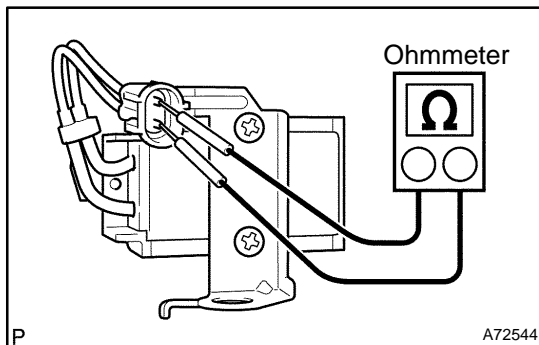


- (c) Check for leakage.

- (1) In the condition above, disconnect the tester probes of the SST (wire) from the battery and check for fuel leakage from the injector.

SST 09842-30070

**Fuel drop: 1 drop or less per 12 minutes**

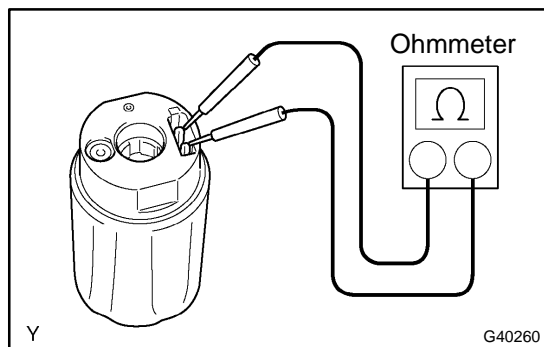


## 2. INSPECT FUEL PUMP RESISTOR

- (a) Inspect fuel pump resistor resistance.

- (1) Using an ohmmeter, measure the resistance between the terminals.

**Resistance: 0.70 to 0.76  $\Omega$  at 20°C (68°F)**



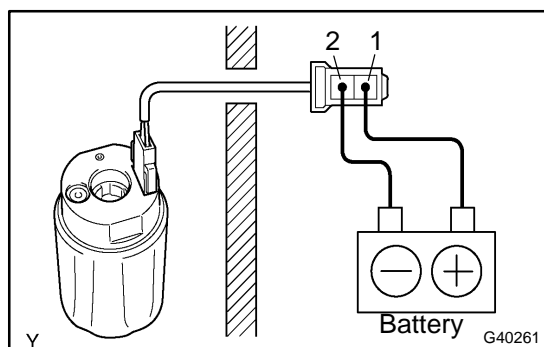
### 3. INSPECT FUEL PUMP

(a) Inspect fuel pump resistance.

- (1) Using an ohmmeter, measure the resistance between terminals 1 and 2.

**Resistance: 0.2 to 3.0  $\Omega$  at 20°C (68°F)**

If the resistance is not as specified, replace the fuel pump.



(b) Inspect fuel pump operation.

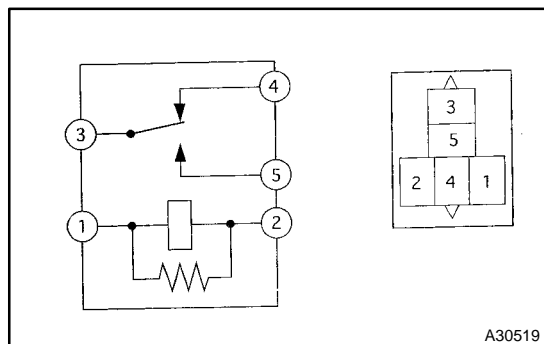
- (1) Connect the lead wire to the fuel pump.  
 (2) Connect the positive (+) lead from the battery to terminal 1 of the connector, and the negative (-) lead to terminal 2. Check that the fuel pump operates.

**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 switch on the battery side.**

If the fuel pump does not operate, replace the fuel pump and/or lead wire.

- (1) Disconnect the lead wire from the fuel pump.



### 4. INSPECT FUEL PUMP RELAY ASSY

(a) Check for continuity.

- (1) Using an ohmmeter, check if there is continuity between each terminal.

**Specified condition:**

| Between terminals | Specified condition |
|-------------------|---------------------|
| 1 – 2<br>3 – 4    | Continuity          |
| 3 – 5             | No continuity       |

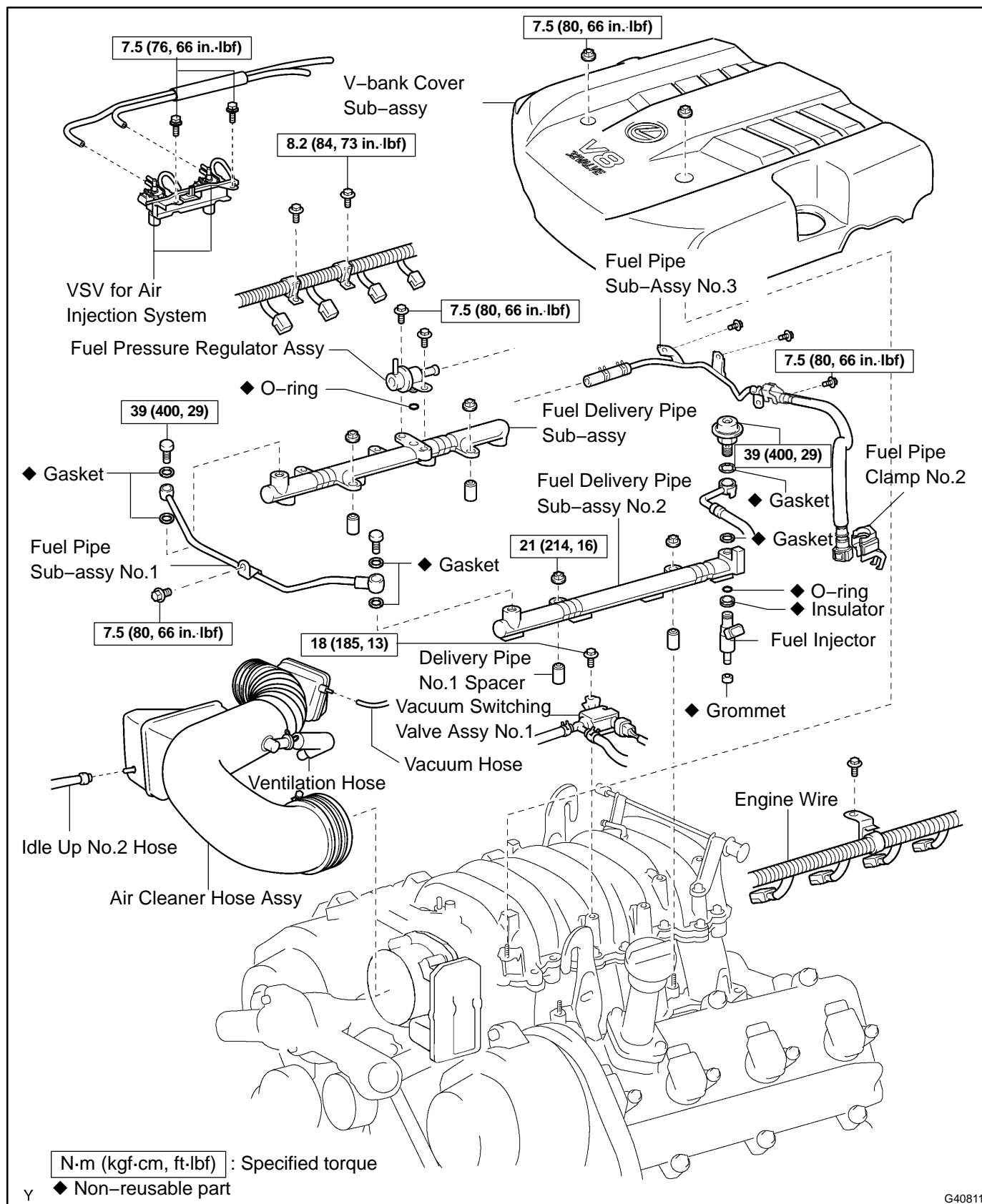
- (2) Using an ohmmeter, check that there is continuity between terminals 3 and 5 when battery voltage is applied across terminals 1 and 2.

**Specified condition: Continuity**

# FUEL INJECTOR ASSY (2UZ-FE)(From November, 2004)

## COMPONENTS

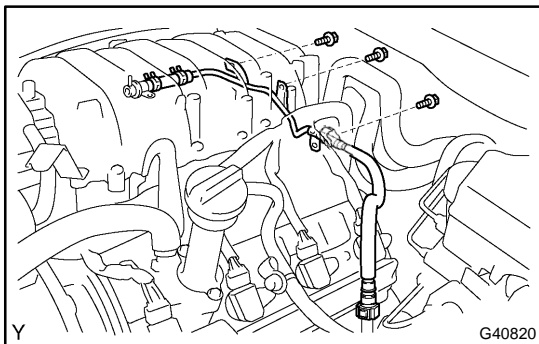
110IG-05



G40811

## REPLACEMENT

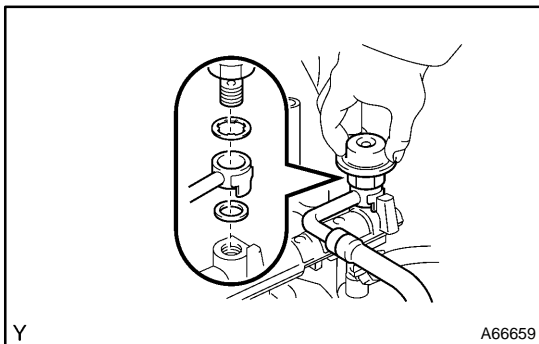
1. **WORK FOR PREVENTING GASOLINE FROM SPILLING OUT (SEE PAGE 11-1)**
2. **REMOVE V-BANK COVER SUB-ASSY**
  - (a) Remove the 2 cap nuts and V-bank cover sub-assy.
3. **REMOVE AIR CLEANER HOSE ASSY**
  - (a) Disconnect the vacuum hoses (for the P/S idle-up and fuel pressure regulator) and ventilation hose.
  - (b) Remove the air cleaner hose assy.
4. **REMOVE FUEL PIPE SUB-ASSY NO.1**
  - (a) Remove the 2 union bolts and 4 gaskets.
  - (b) Remove the bolts and fuel pipe sub-assy.



5. **SEPARATE FUEL PIPE SUB-ASSY NO.3**
  - (a) Remove the fuel pipe clamp No.2.
  - (b) Remove the 3 bolts and disconnect the fuel return pipe sub-assy from the fuel pressure regulator.

**HINT:**

Move it aside to secure more work space.



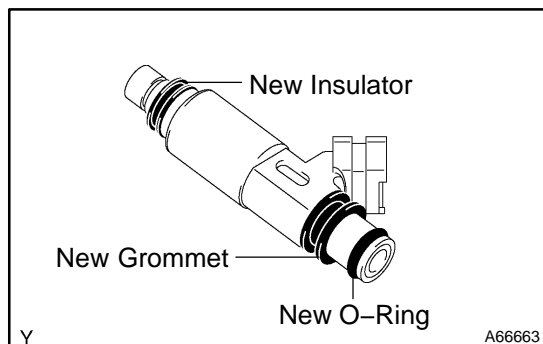
6. **DISCONNECT FUEL HOSE**
  - (a) Remove the pulsation damper and 2 gaskets.
  - (b) Disconnect the fuel hose No.1.

7. **SEPARATE VACUUM SWITCHING VALVE ASSY NO.1**
  - (a) Remove the bolts and separate the vacuum switching valve assy from the intake manifold.
8. **DISCONNECT ENGINE WIRE**
  - (a) Disconnect the 8 fuel injector connectors.
  - (b) Remove the 3 bolts and disconnect the engine wire.
9. **REMOVE FUEL DELIVERY PIPE SUB-ASSY**
  - (a) Remove the 2 nuts, and then the fuel delivery pipe by holding both ends and pulling it straight upward.
10. **REMOVE FUEL DELIVERY PIPE SUB-ASSY NO.2**
  - (a) Remove the 2 nuts, and then the fuel delivery pipe No.2 by holding both ends and pulling it straight upward.
11. **REMOVE FUEL INJECTOR ASSY**
  - (a) Remove the injector from the delivery pipe.

**NOTICE:**

**Do not apply any force to the injector in the horizontal direction because the O-ring might be stuck.**

- (b) Remove the O-ring, grommet and insulator from the injector.

**12. INSTALL FUEL INJECTOR ASSY**

- (a) Install a new grommet and insulator to the injector.
- (b) Check that there is no foreign object or damage to the groove of the O-ring of the injector. Apply gasoline to a new O-ring, and install it to the injector.
- (c) Install the injector to the delivery pipe while turning the injector in both ways.
- (d) Check that the injector can turn smoothly.

**NOTICE:**

**When the injector cannot turn smoothly, the O-ring might be caught in something. In that case, replace the O-ring with a new one.**

**13. INSTALL FUEL DELIVERY PIPE SUB-ASSY NO.2**

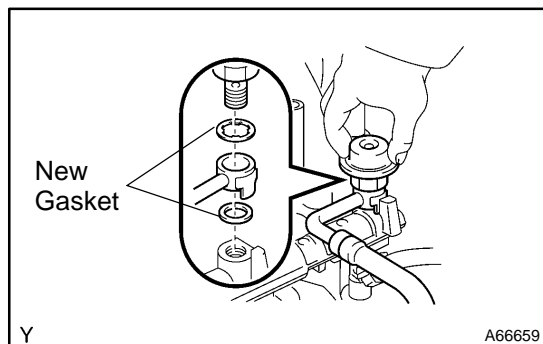
- (a) Install the injector with the delivery pipe to the intake manifold.
- (b) Turn the injector in both ways by approximately 45 degrees.
- (c) Inserting a spacer between the delivery pipe and the intake manifold, install the delivery pipe with the injector with the 2 nuts.

**Torque: 21 N·m (214 kgf·cm, 16 ft·lbf)**

**14. INSTALL FUEL DELIVERY PIPE SUB-ASSY**

- (a) Install the injector with the delivery pipe to the intake manifold.
- (b) Turn the injector in both ways by approximately 45 degrees.
- (c) Inserting a spacer between the delivery pipe and the intake manifold, install the delivery pipe with the injector with the 2 nuts.

**Torque: 21 N·m (214 kgf·cm, 16 ft·lbf)**

**15. INSTALL FUEL HOSE**

- (a) Using 2 new gaskets, install the fuel main hose with the fuel pressure pulsation damper.

**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

**16. INSTALL VACUUM SWITCHING VALVE ASSY NO.1**

**Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)**

**17. INSTALL FUEL PIPE SUB-ASSY NO.3**

**Torque: 7.5 N·m (80 kgf·cm, 66 in·lbf)**

**18. INSTALL FUEL PIPE SUB-ASSY NO.1**

- (a) Install the fuel pipe sub-assy with the bolts.
- (b) Using 4 new gaskets, install the fuel pipe sub-assy No.1 with the 2 union bolts.

**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

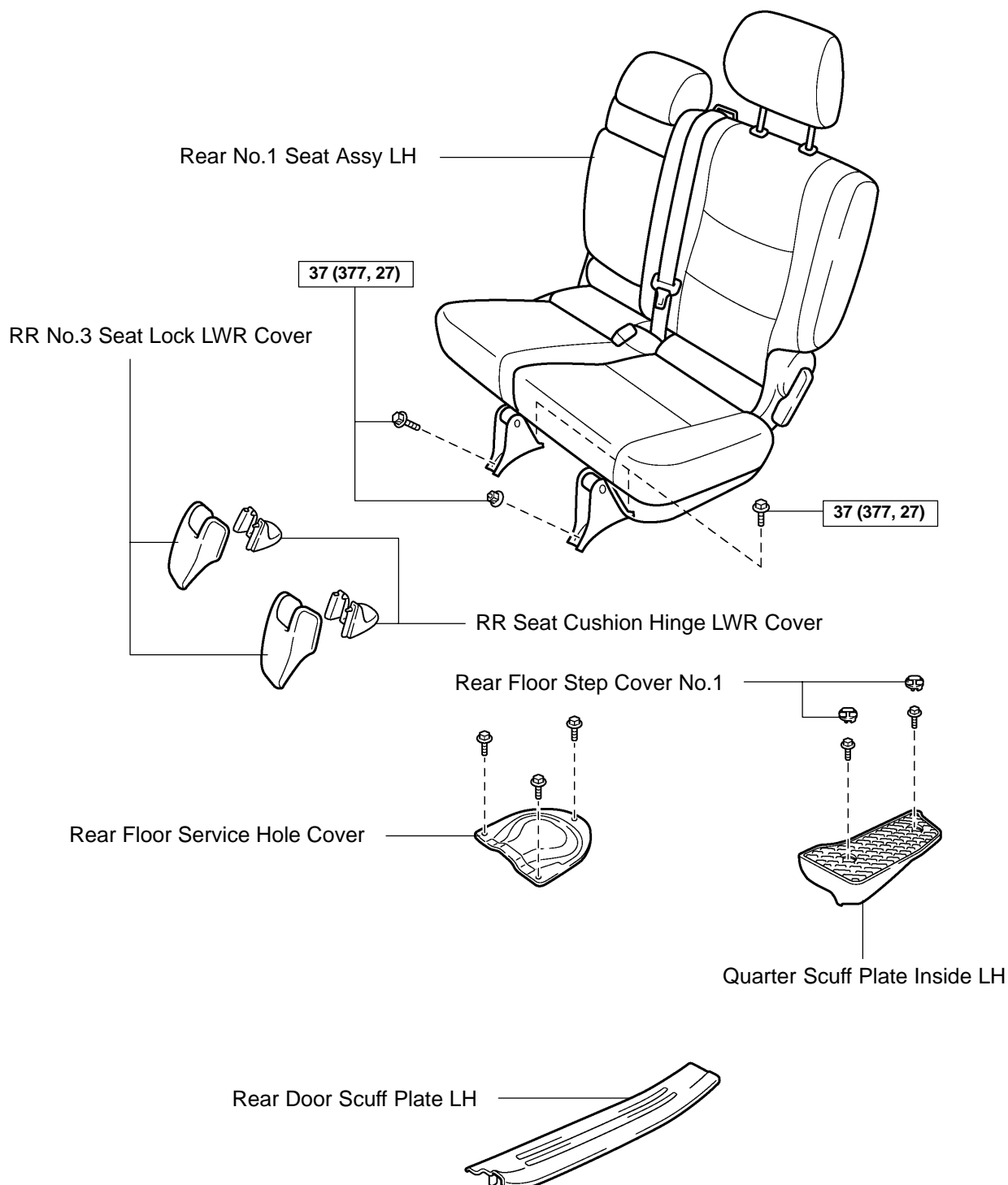
**19. INSTALL AIR CLEANER HOSE ASSY****20. CHECK FUEL LEAK (SEE PAGE 11-6)****21. INSTALL V-BANK COVER SUB-ASSY**

**Torque: 7.5 N·m (80 kgf·cm, 66 in·lbf)**

# FUEL TANK ASSY (2UZ-FE)(From November, 2004)

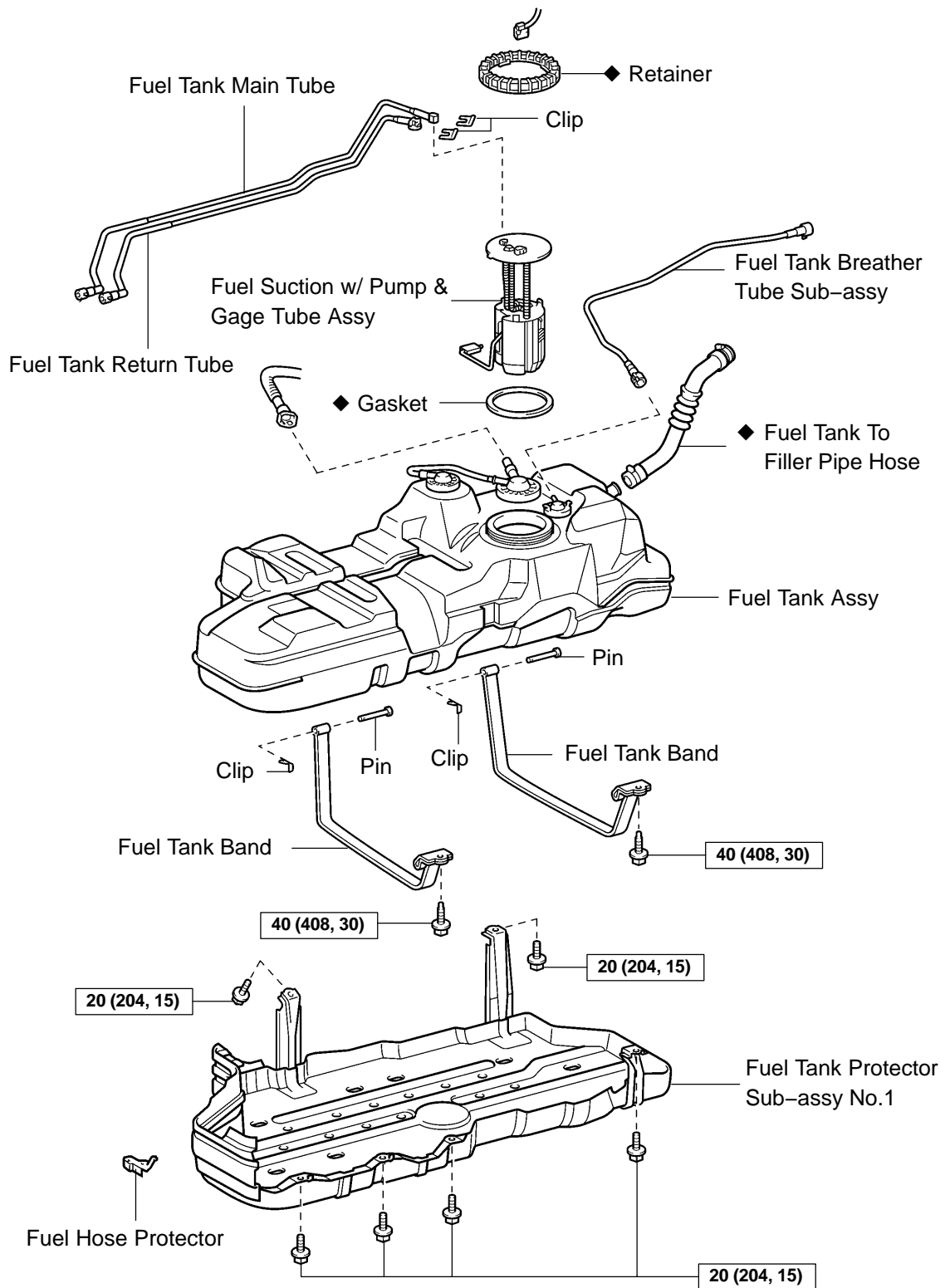
## COMPONENTS

110MN-03



0 **N·m (kgf·cm, ft·lbf)** : Specified torque

A67144



0

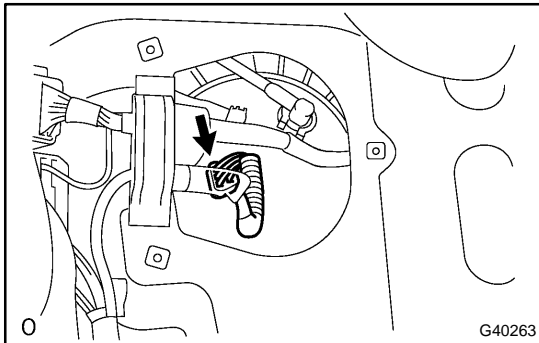
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

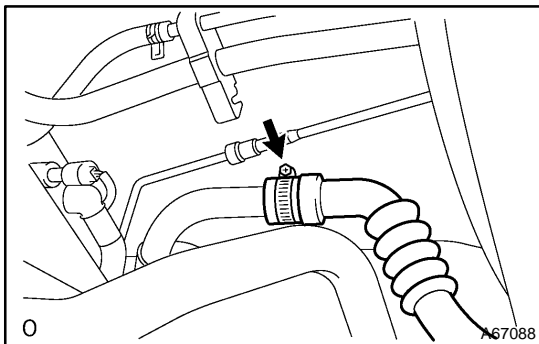
G42316

## Removal & Installation and Disassembly & Reassembly

1. **WORK FOR PREVENTING GASOLINE FROM SPILLING OUT (SEE PAGE 11-1)**
2. **REMOVE REAR NO.1 SEAT ASSY LH (SEE PAGE 72-29)**
3. **REMOVE REAR FLOOR STEP COVER NO.1**
4. **REMOVE QUARTER SCUFF PLATE INSIDE LH**
  - (a) Remove the 2 bolts and quarter scuff plate inside LH.
5. **REMOVE REAR DOOR SCUFF PLATE LH**



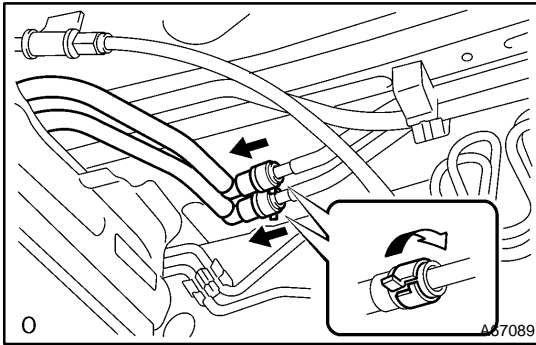
6. **REMOVE REAR FLOOR SERVICE HOLE COVER**
  - (a) Remove the rear floor carpet assy.
  - (b) Remove the 3 screws and rear floor service hole cover.
  - (c) Disconnect the connector.



7. **DISCONNECT FUEL TANK TO FILLER PIPE HOSE**
  - (a) Disconnect the fuel tank to filler pipe hose from the fuel filler pipe.

8. **DRAIN FUEL**
9. **REMOVE FUEL TANK PROTECTOR SUB-ASSY NO.1**
  - (a) Set a transmission jack to the fuel tank protector.
  - (b) Remove the 6 bolts and the fuel tank protector.



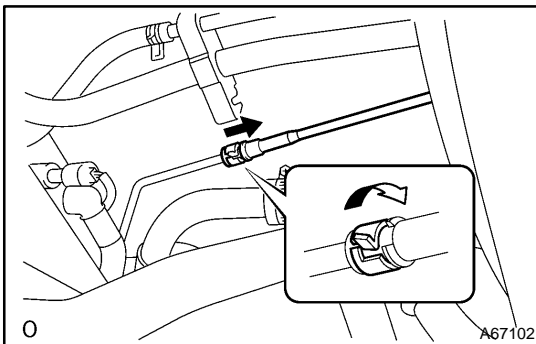
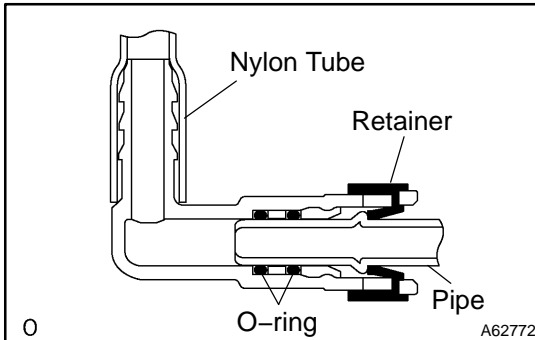


## 10. DISCONNECT FUEL TANK MAIN TUBE AND FUEL TANK RETURN TUBE

- (a) Pinch and turn the projections of the retainers in the direction shown by the arrow to release the lock. Pull out the 2 fuel tank tubes.

### NOTICE:

- Check that there is no dirt or mud around the quick connector before this work. Clean the connector if necessary.
- Do not use any tool in this work.
- Do not bend or twist the nylon tube by force.
- To protect the tube, cover it with a plastic bag after checking.
- When the connector and the pipe are stuck, turn the retainer carefully to release. Disconnect the fuel tank tube.

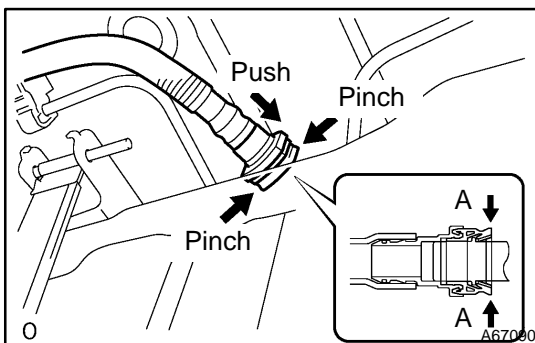
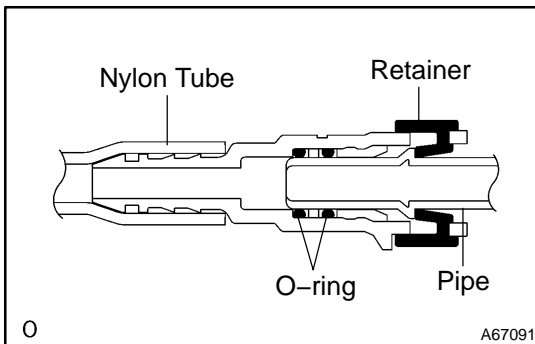


## 11. DISCONNECT FUEL TANK BREATHER TUBE SUB-ASSY

- (a) Pinch and turn the projection of the retainer in the direction shown by the arrow to release the lock. Pull out the fuel tank breather tube.

### NOTICE:

- Check that there is no dirt or mud around the quick connector before this work. Clean the connector if necessary.
- Do not use any tool in this work.
- Do not bend or twist the nylon tube by force.
- To protect the tube, cover it with a plastic bag after checking.
- When the connector and the pipe are stuck, turn the retainer carefully to release. Disconnect the tube.

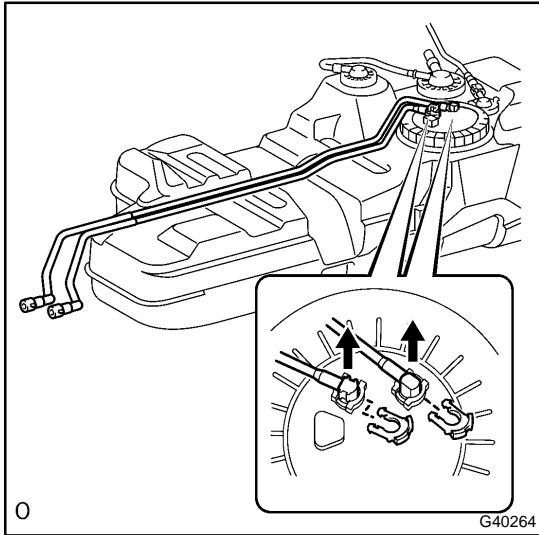


## 12. DISCONNECT FUEL TANK VENT HOSE

- (a) Disconnect the fuel tank breather tube from the fuel tank.
- (1) Push the connector deep inside.
  - (2) Pinch portion A.
  - (3) Pull out the connector.

**13. REMOVE FUEL TANK ASSY**

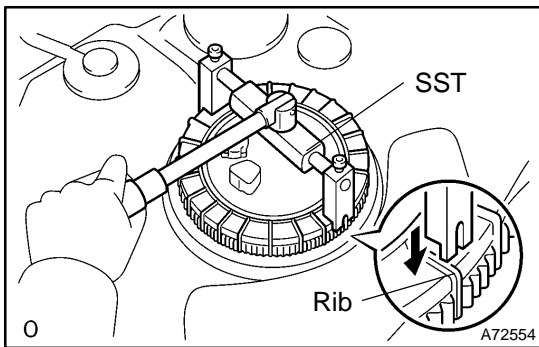
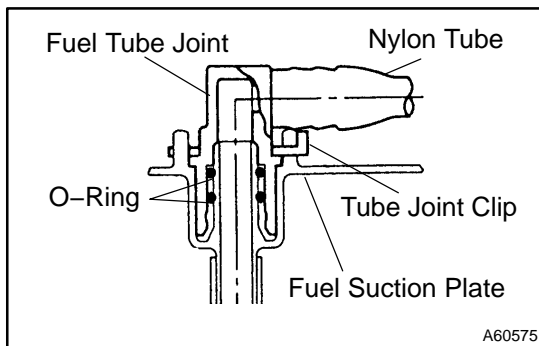
- (a) Set a transmission jack to the fuel tank.
- (b) Remove the 2 bolts, 2 fuel tank bands and fuel tank.

**14. REMOVE FUEL TANK CUSHION****15. REMOVE FUEL TANK MAIN TUBE AND FUEL TANK RETURN TUBE**

- (a) Remove the 2 clips, and pull out the 2 fuel tank tubes.

**NOTICE:**

- Check that there is no dirt or mud around the quick connector before this work. Clean the connector if necessary.
- Do not use any tool in this work.
- Do not bend or twist the nylon tube by force.
- After disconnecting, cover the fuel tube joint with a plastic bag.
- When the fuel tube joint and fuel suction plate are stuck, turn the fuel tank main tube carefully to release and disconnect it. Likewise, disconnect the fuel tank return tube.

**16. REMOVE FUEL SUCTION W/PUMP & GAGE TUBE ASSY****NOTICE:**

Protect a connector and tube joint with masking tape or something in order to prevent sticking foreign objects onto them, and clean dirt and foreign objects from the fuel suction tube assy before removing it.

- (a) Using SST, loosen the retainer.  
SST 09808-14020 (09808-01410, 09808-01430)

**HINT:**

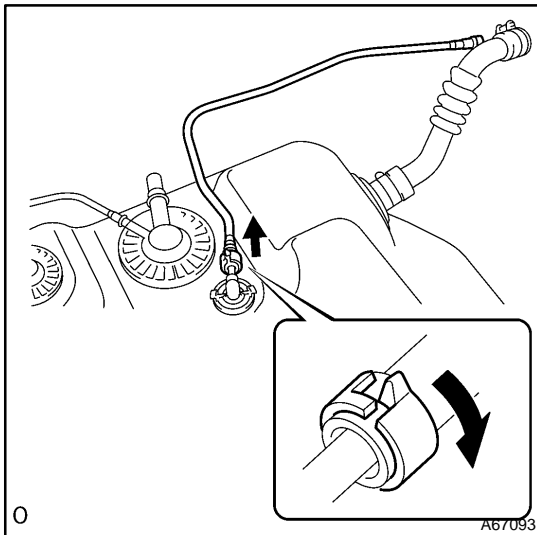
A rib on the retainer can be fitted into the tip of SST.

- (b) Remove the retainer.
- (c) Remove the fuel suction w/ pump & gage tube assy.

**NOTICE:**

Be careful not to bend the arm of the sender gage.

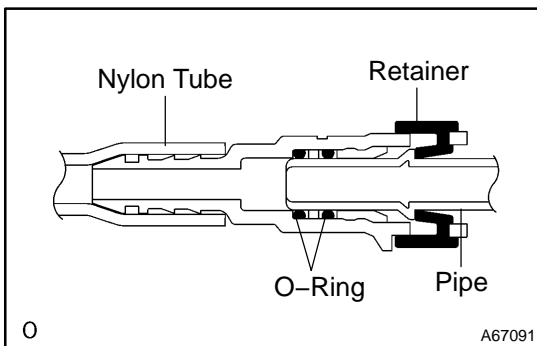
- (d) Remove the gasket from the fuel tank.



- 17. REMOVE FUEL TANK BREATHER TUBE SUB-ASSY**  
 (a) Pinch and turn the projection of the retainer in the direction shown by the arrow to release the lock. Pull out the fuel tank breather tube.

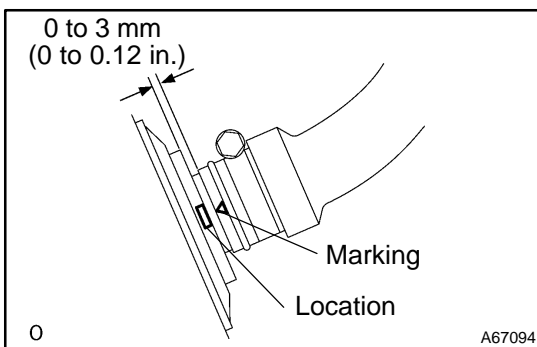
**NOTICE:**

- Check that there is no dirt or mud around the quick connector before this work. Clean the connector if necessary.
- Do not use any tool in this work.
- Do not bend or twist the nylon tube by force.
- To protect the tube, cover it with a plastic bag after checking.
- When the connector and the pipe are stuck, turn the fuel tank breather tube carefully to release. Disconnect the tube.



**18. REMOVE FUEL TANK TO FILLER PIPE HOSE**

- (a) Remove the fuel tank to filler pipe hose from the fuel tank.

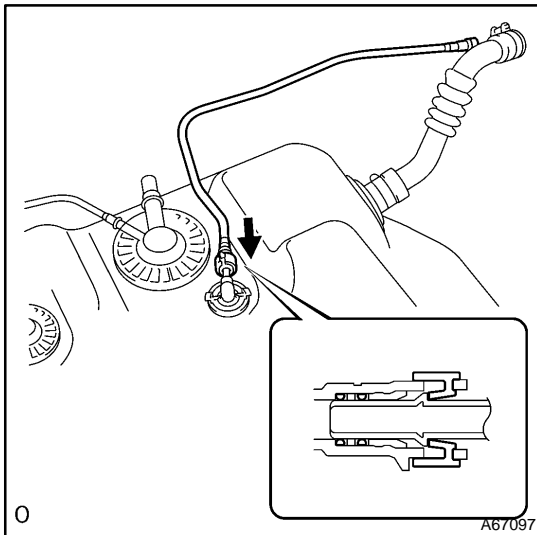


**19. CONNECT FUEL TANK TO FILLER PIPE HOSE**

- (a) Connect a new fuel tank to filler pipe hose to the fuel tank.

**HINT:**

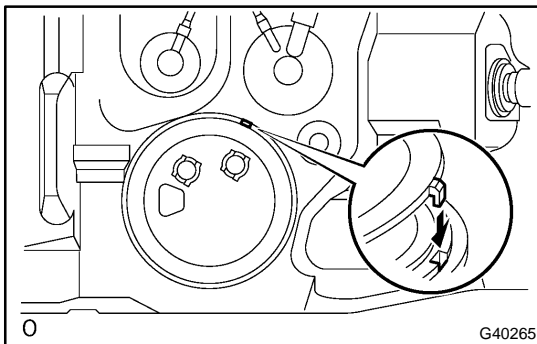
Make sure that the hose and tank are connected as shown in the illustration.



- 20. INSTALL FUEL TANK BREATHER TUBE SUB-ASSY**
- (a) Push in the tube connector to the pipe until the connector makes a "click" sound.

**NOTICE:**

- Check if there is any damage or foreign objects on the connected part of the pipe.
- After connecting, check if the pipe and the connector are securely connected by pulling them.



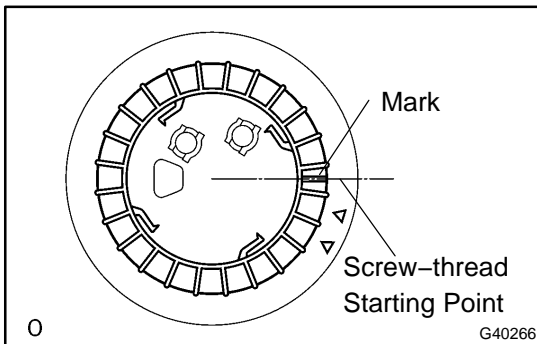
**21. INSTALL FUEL SUCTION W/PUMP & GAGE TUBE ASSY**

- (a) Install a new gasket onto the fuel tank.
- (b) Set the fuel suction w/ pump & gage tube assy to the fuel tank.

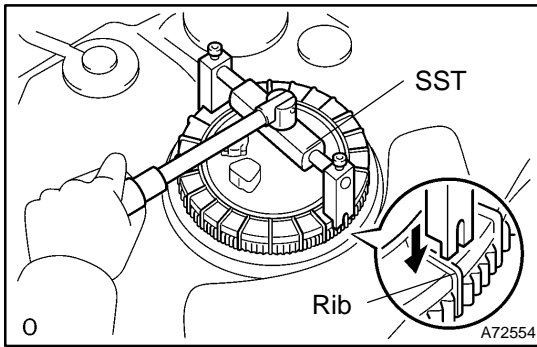
**NOTICE:**

**Be careful not to bend the arm of the fuel sender gage.**

- (c) Fit the spline of the fuel suction w/ pump & gage tube assy into the keyway of the fuel tank.



- (d) Install the retainer.
- (1) Using a new retainer, align the mark on the retainer with the screw-thread starting point of the fuel tank.
  - (2) While holding the fuel suction w/ pump & gage tube assy, tighten the retainer one complete turn by hand.

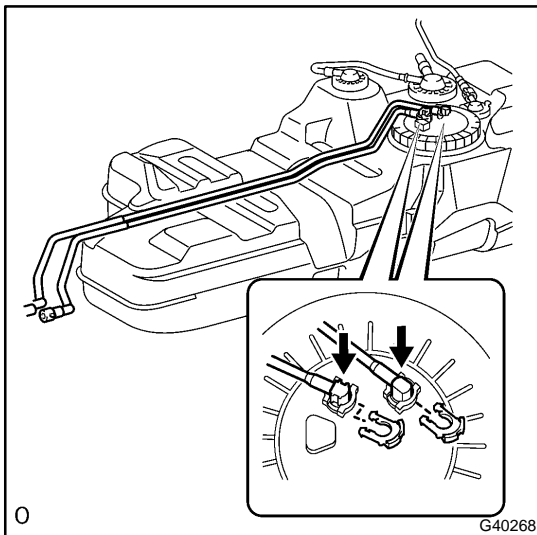
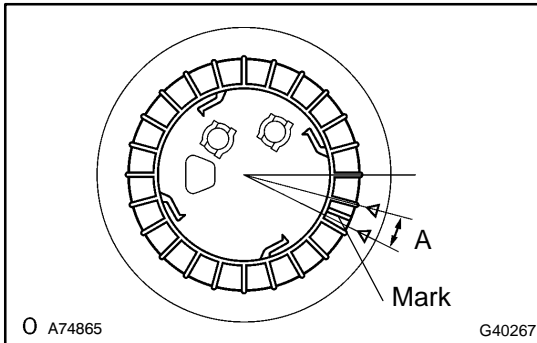


- (e) Using SST, tighten the retainer one more complete turn, and position the mark on the retainer into range A of the fuel tank.

SST 09808-14020 (09808-01410, 09808-01430)

**HINT:**

- Turn the retainer two complete turns and position the mark within range A to install the retainer.
- A rib on the retainer can be fitted into the tip of SST.

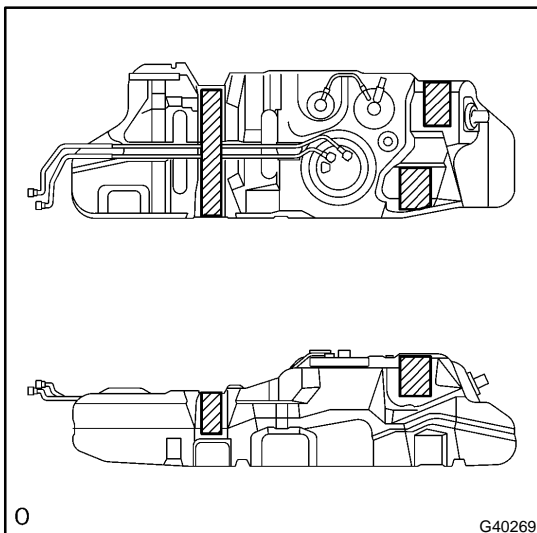


## 22. INSTALL FUEL TANK MAIN TUBE AND FUEL TANK RETURN TUBE

- (a) Connect the 2 fuel tank tubes with the 2 clips.

**NOTICE:**

- Check that there is no scratch or foreign objects on the connecting parts.
- Check that the connector is fully inserted.
- Check that the tube joint clip is on the collar of the connector.
- After installing the tube joint clip, check if the tubes are securely connected by pulling them.



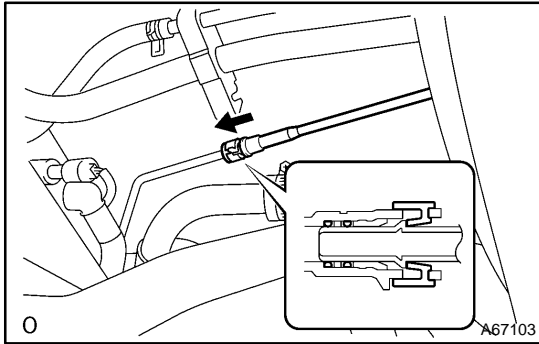
## 23. INSTALL FUEL TANK CUSHION

- (a) Install 3 new fuel tank cushions to the fuel tank.

**24. INSTALL FUEL TANK ASSY**

- (a) Set a transmission jack to the fuel tank.
- (b) Install the fuel tank and 2 fuel tank bands with the 2 bolts.

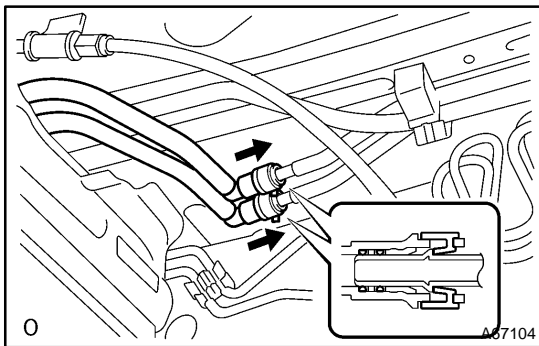
**Torque: 40 N·m (408 kgf·cm, 30 ft·lbf)**

**25. CONNECT FUEL TANK BREATHER TUBE SUB-ASSY**

- (a) Push in the tube connector to the pipe until the connector makes a "click" sound.

**NOTICE:**

- Check that there is no damage or foreign objects on the connected part of the pipe.
- After connecting, check if the pipe and the connector are securely connected by pulling them.

**26. CONNECT FUEL TANK MAIN TUBE AND FUEL TANK RETURN TUBE**

- (a) Push in the tube connector to the pipe until the connector makes a "click" sound.

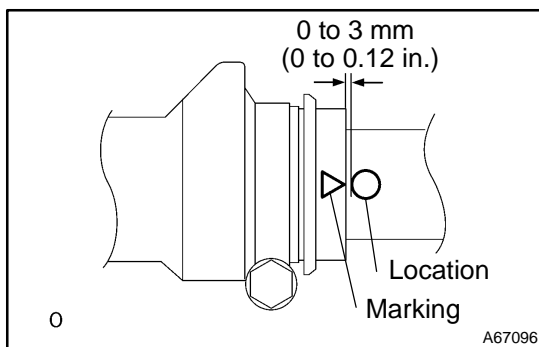
**NOTICE:**

- Check that there is no damage or foreign objects on the connected part of the pipe.
- After connecting, check if the pipe and the connector are securely connected by pulling them.

**27. INSTALL FUEL TANK PROTECTOR SUB-ASSY NO.1**

- (a) Set a transmission jack to the fuel tank protector.
- (b) Install the fuel tank protector with the 6 bolts.

**Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)**

**28. INSTALL FUEL TANK TO FILLER PIPE HOSE**

- (a) Install the fuel tank to filler pipe hose to the fuel filler pipe.

**HINT:**

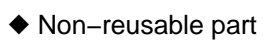
Make sure that the hose and pipe are connected as shown in the illustration.

**29. CHECK FUEL LEAK (SEE PAGE 11-6)****30. INSTALL REAR FLOOR SERVICE HOLE COVER**

- (a) Connect the connector.
- (b) Install the 3 screws and rear floor service hole cover.
- (c) Install the rear floor carpet assy.

**31. INSTALL REAR DOOR SCUFF PLATE LH****32. INSTALL QUARTER SCUFF PLATE INSIDE LH****33. INSTALL REAR FLOOR STEP COVER NO.1****34. INSTALL REAR NO.1 SEAT ASSY LH (SEE PAGE 72-29)**

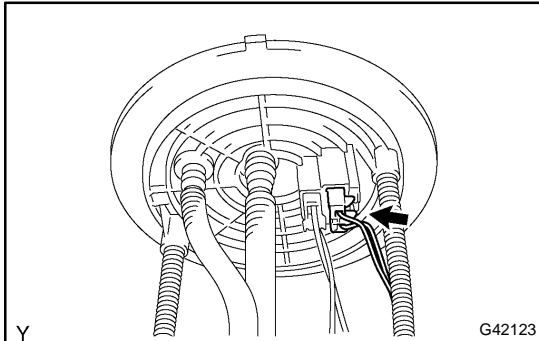
## 110OH-03



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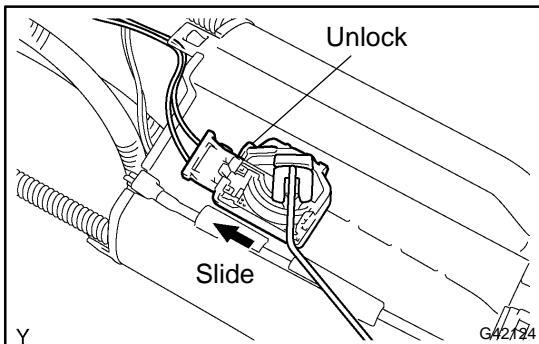
## Removal & Installation and Disassembly & Reassembly

### 1. REMOVE FUEL SUCTION W/PUMP & GAGE TUBE ASSY (SEE PAGE 11-16)

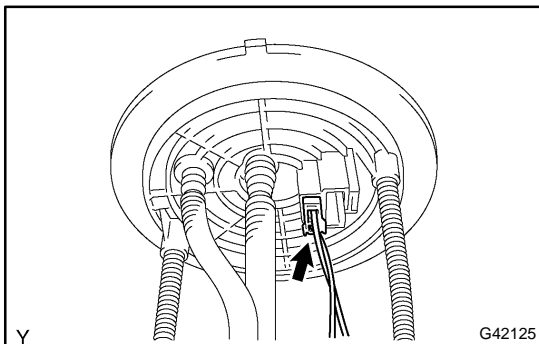


### 2. REMOVE FUEL SENDER GAGE ASSY

- (a) Disconnect the sender gage connector from the fuel suction plate No.1.

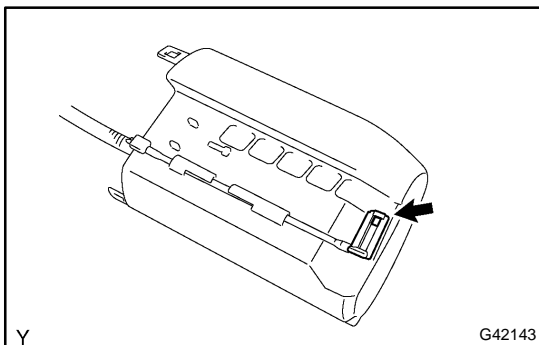


- (b) Unlock the fuel sender gage and remove it.



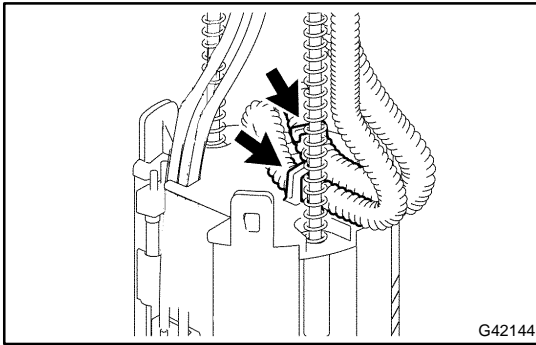
### 3. REMOVE FUEL SUB-TANK

- (a) Disconnect the fuel pump harness connector from the fuel suction plate No.1.

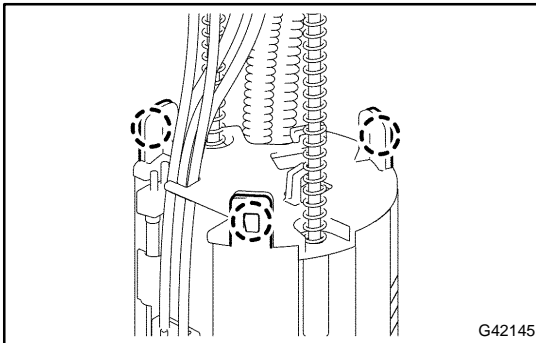


- (b) Disconnect the suction filter hose from the fuel sub-tank.





- (c) Disconnect the 2 tubes from the tube clamps.

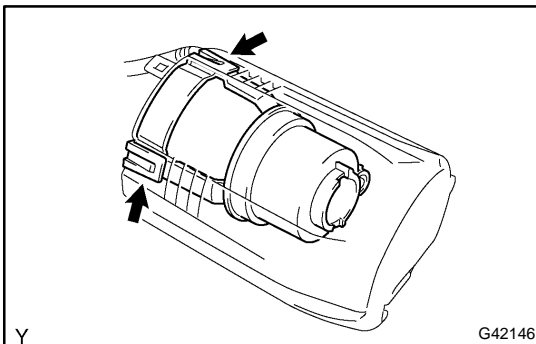


- (d) Using a screwdriver with the tip wrapped in tape, disengage the 3 claws to separate the fuel suction plate No.2.

**NOTICE:**

**Do not damage the fuel suction plate No.2 or fuel sub-tank.**

- (e) Disconnect the fuel suction plate No.1 with the fuel filter Assy from the fuel sub-tank.



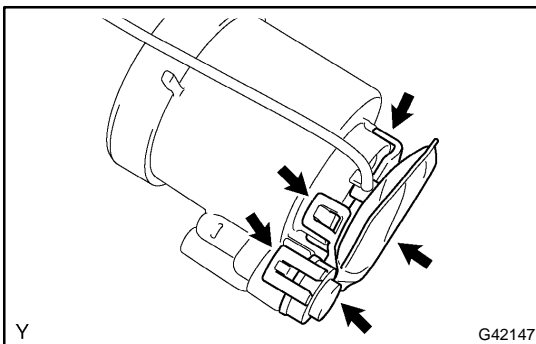
**4. REMOVE FUEL PUMP ASSY W/FILTER**

- (a) Using a screwdriver with the tip wrapped in tape, disengage the 2 claws to separate the fuel suction support.

**NOTICE:**

**Do not damage the fuel filter Assy or fuel suction support.**

- (b) Remove the fuel filter Assy with the fuel pump from the fuel suction support.



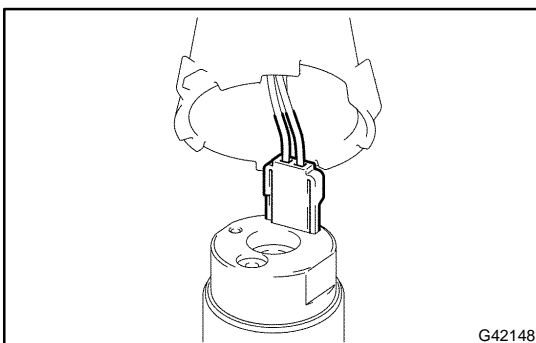
**5. REMOVE FUEL PUMP**

- (a) Using a screwdriver with the tip wrapped in tape, disengage the 5 claws to separate the suction filter.

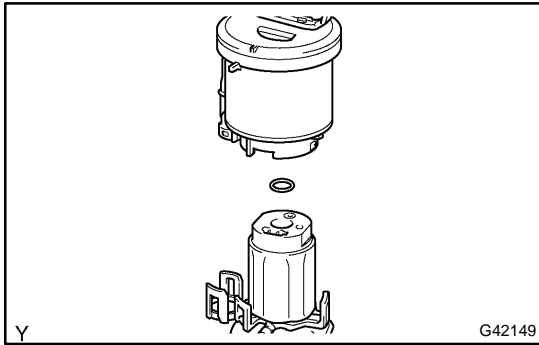
**NOTICE:**

**Do not damage the fuel filter Assy or suction filter.**

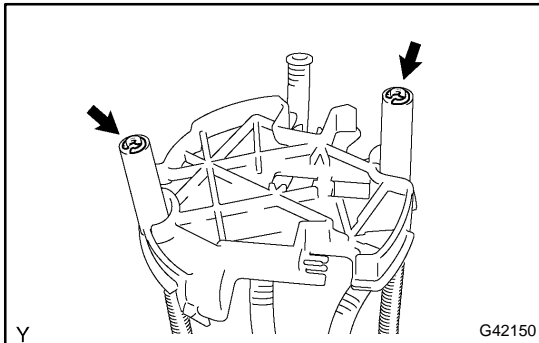
- (b) Remove the fuel suction filter with the fuel pump from the fuel filter.



- (c) Disconnect the fuel pump harness connector from the fuel pump.

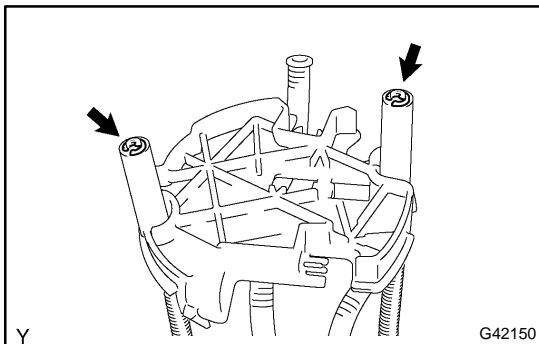


- (d) Remove the O-ring from the fuel pump.



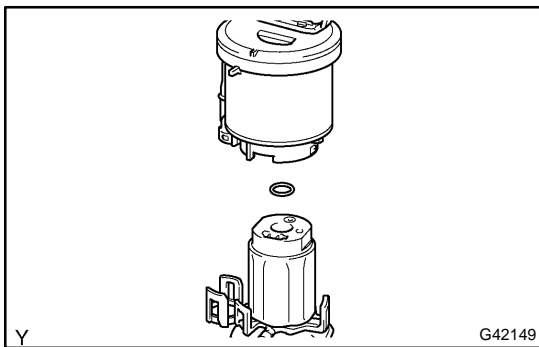
#### 6. REMOVE FUEL SUCTION PLATE NO.2

- (a) Using a screwdriver, remove the 2 E-rings from the suction plate No.2.
- (b) Remove the suction plate No.2 and 2 springs from the fuel suction plate No.1.



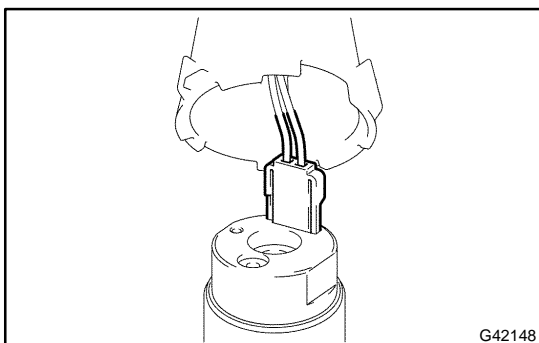
#### 7. INSTALL FUEL SUCTION PLATE NO.2

- (a) Install the 2 springs and suction plate No.2 to the suction plate No.1.
- (b) Using needle-nose pliers, install 2 new E-rings to the suction plate No.2.

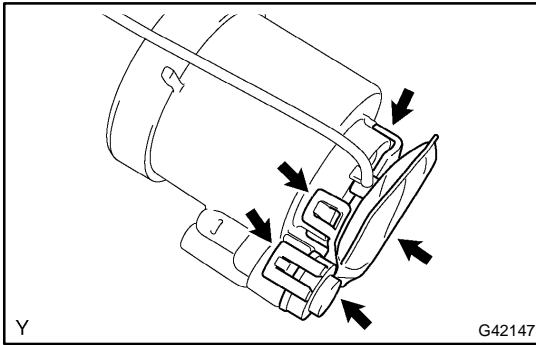


#### 8. INSTALL FUEL PUMP

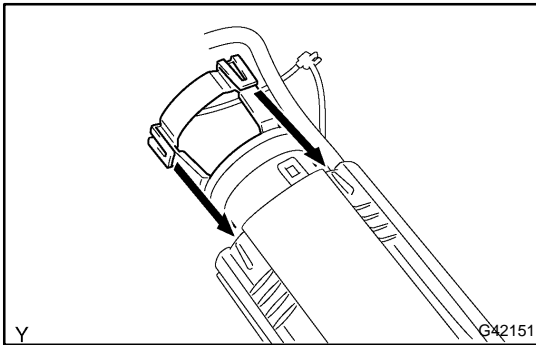
- (a) Apply a light coat of gasoline or spindle oil to a new O-ring, and install it to the fuel pump.



- (b) Connect the fuel pump harness connector to the fuel pump.

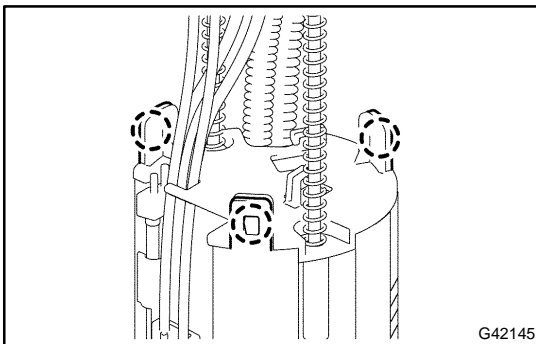


- (c) Install the suction filter to the fuel pump.
- (d) Install the fuel pump with the suction filter to the fuel filter.



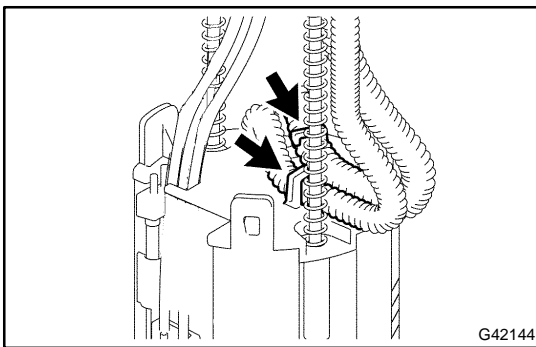
## 9. INSTALL FUEL PUMP ASSY W/FILTER

Install the fuel filter to the fuel sub-tank.

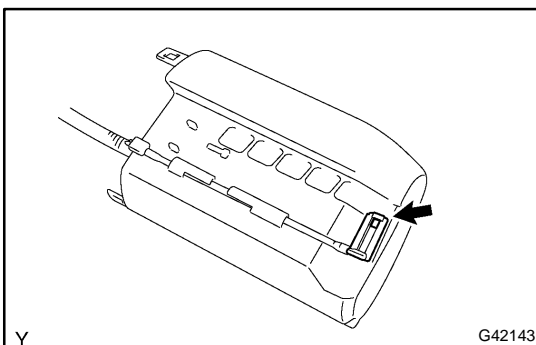


## 10. INSTALL FUEL SUB-TANK

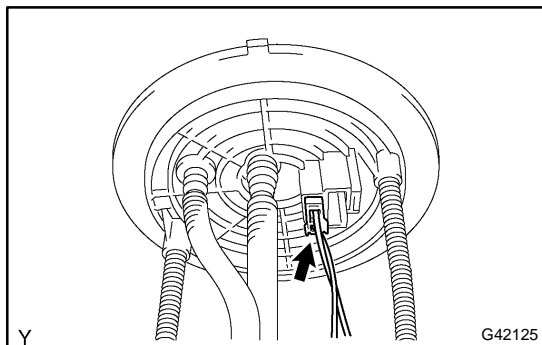
- (a) Engage the 3 claws to install the fuel suction plate No.2 to the fuel sub-tank.



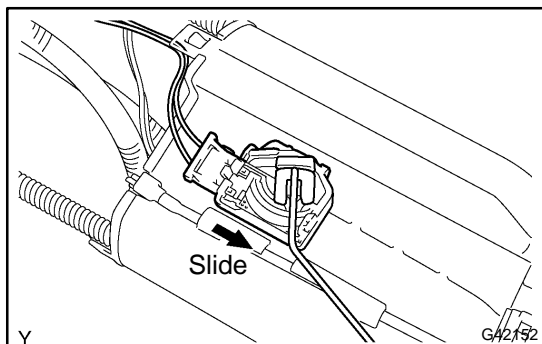
- (b) Connect the 2 tubes to the tube clamps.



- (c) Connect the suction filter hose to the fuel sub-tank.

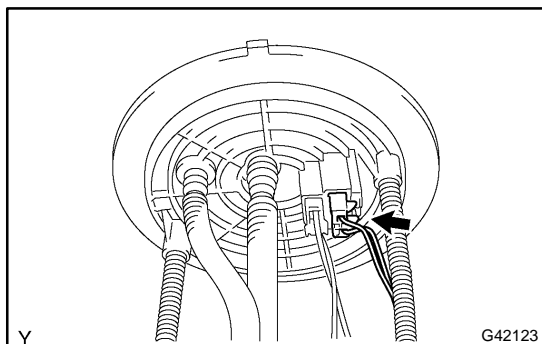


- (d) Connect the fuel pump harness connector to the fuel suction plate No.1.



## 11. INSTALL FUEL SENDER GAGE ASSY

- (a) Install the fuel sender gage to the fuel suction support.



- (b) Connect the sender gage connector to the fuel suction plate No.1.

## 12. INSTALL FUEL SUCTION W/PUMP & GAGE TUBE ASSY (SEE PAGE 11-16)