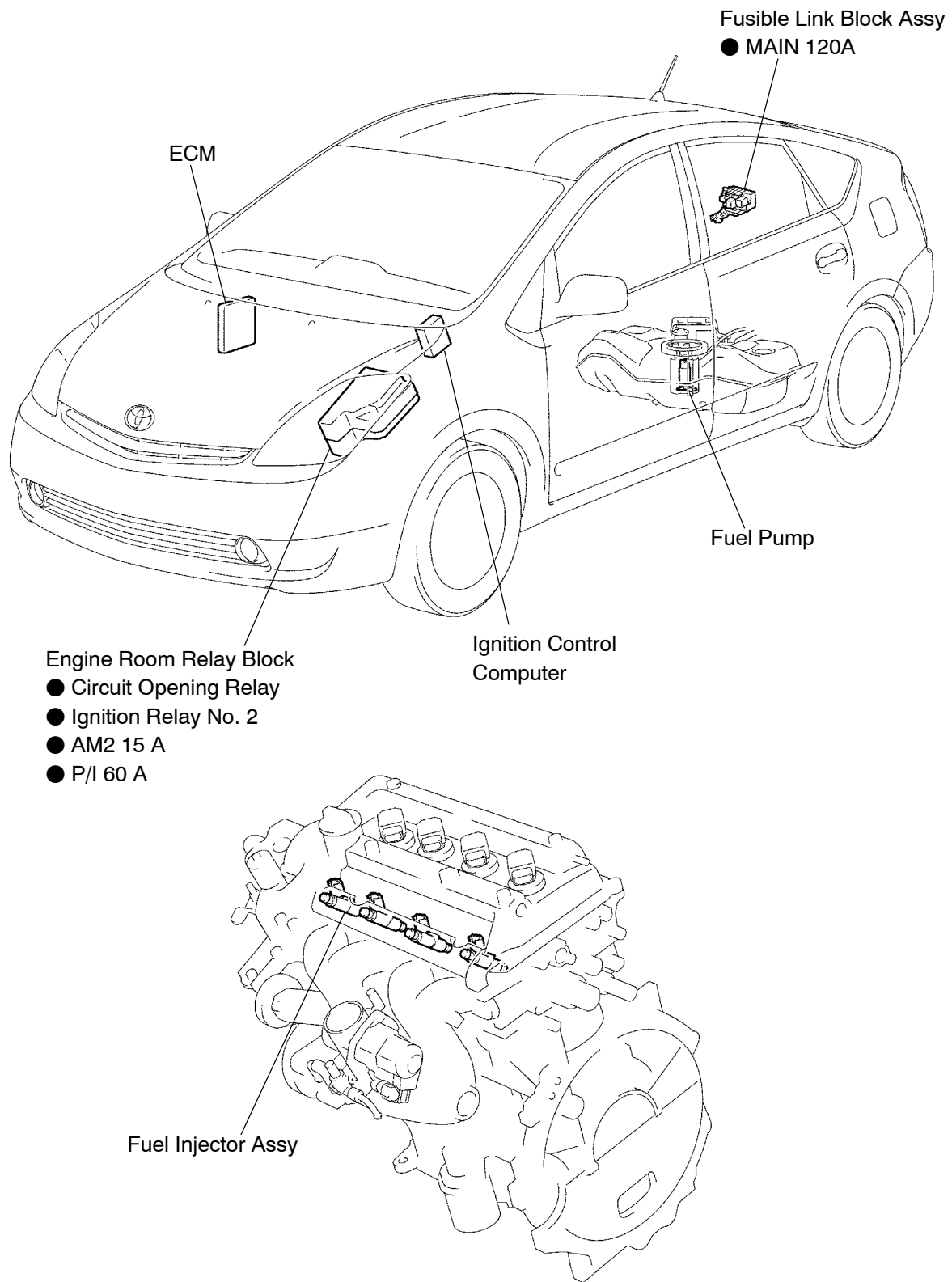


FUEL SYSTEM (1NZ-FXE)

LOCATION

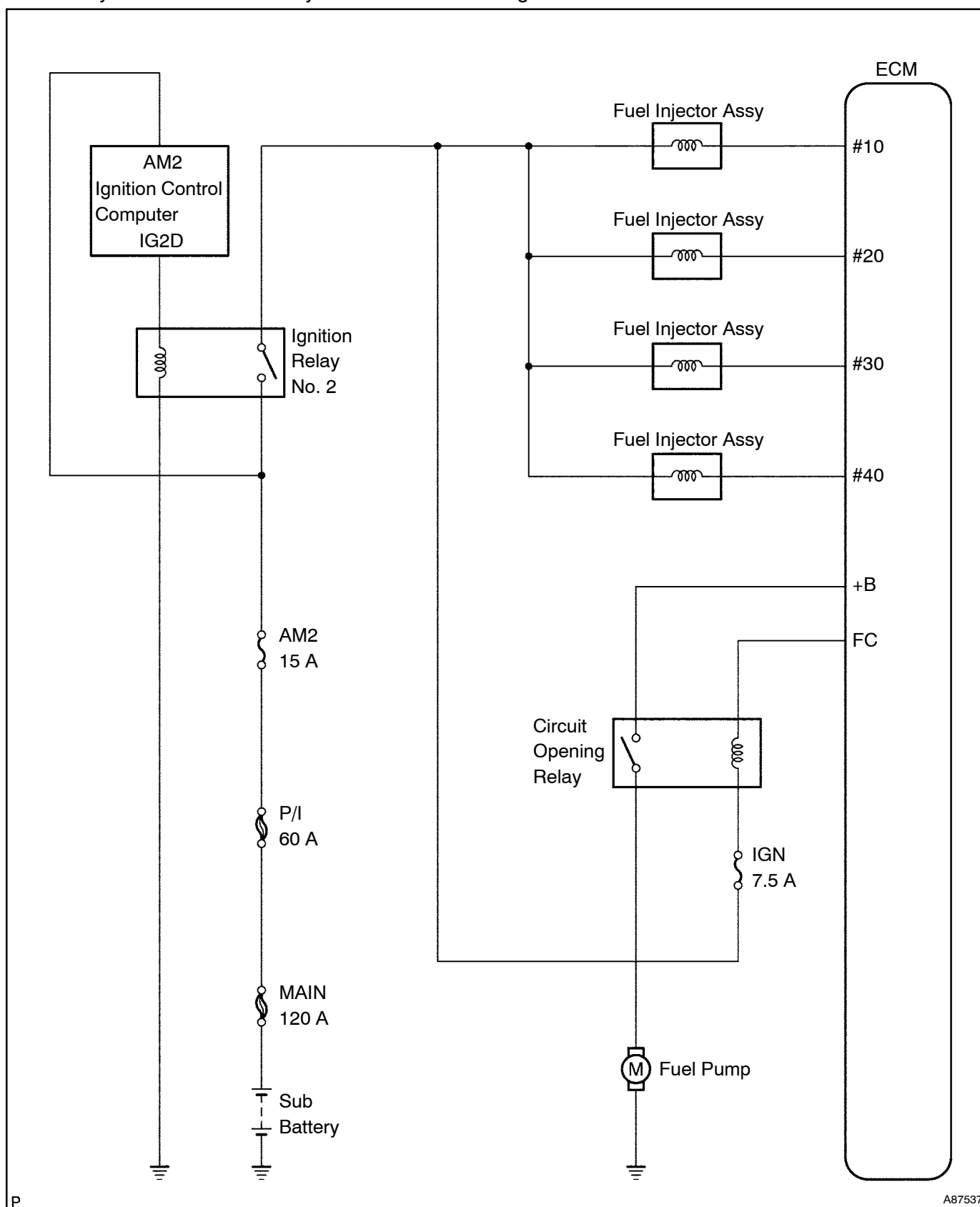
1111H-01



P ● Component parts

A86324

The fuel system is determined by the ECM based on signals from various sensors.



PRECAUTION

1. PRECAUTION

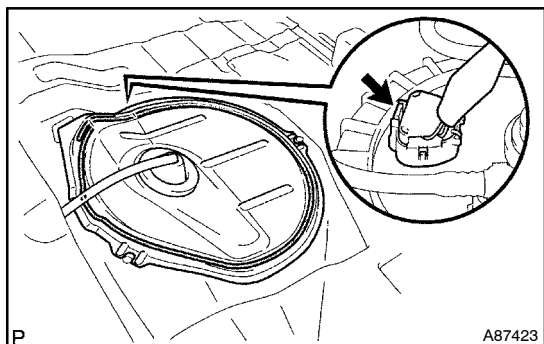
- (a) Before working on the fuel system, disconnect the engine wire No. 2 (battery negative terminal).
- (b) Do not work on the fuel system near fire. Never smoke during the work.
- (c) Keep rubber or leather parts away from gasoline.

2. DISCHARGE FUEL SYSTEM PRESSURE

CAUTION:

- Before removing the fuel system parts, take precautions to prevent gasoline spill.
- As some pressure remains in the fuel line even after taking precautions to prevent gasoline spill, use a shop rag to prevent gasoline splash when disconnecting the fuel line.

- (a) Set the vehicle to the "Inspection mode-2WD inspection" (see page 01-5)
- (b) Remove the rear floor board No. 2 (see page 19-2)
- (c) Remove the deck floor box rear (see page 19-2)
- (d) Remove the rear floor board No. 3 (see page 19-2)
- (e) Disconnect the engine wire No. 3 (battery negative terminal) (see page 19-2)
- (f) Remove the rear seat (see page 72-9)
- (g) Remove the rear floor service hole cover.

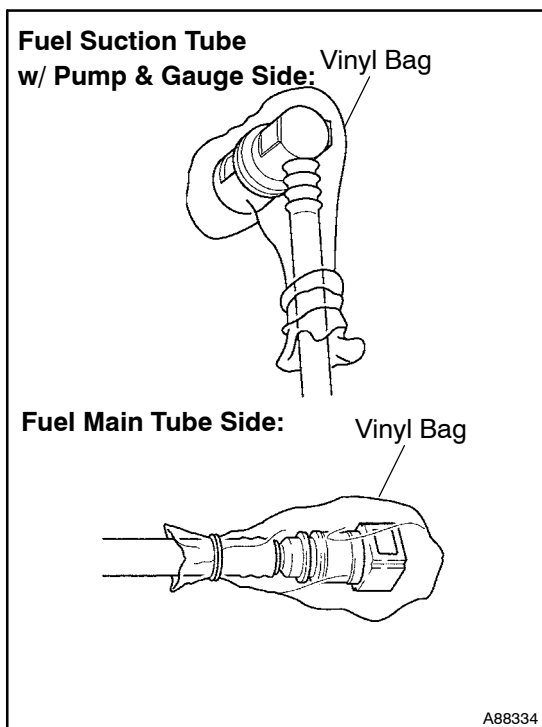


- (h) Disconnect the fuel pump connector.
- (i) Connect the engine wire No. 3 (battery negative terminal) (see page 19-2)
- (j) Start the engine.
- (k) After the engine stops (rough idle), push the power switch OFF.

HINT:

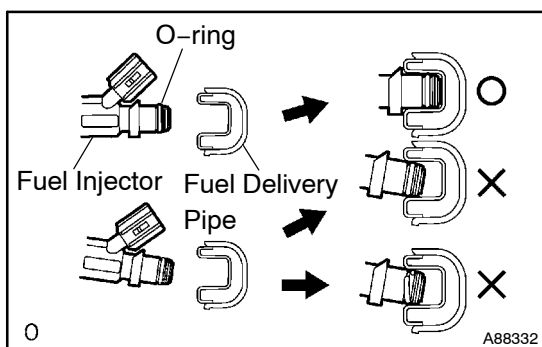
DTC P0171 (system too lean) may be present.

- (l) Crank the engine again, then check that the engine does not start.
- (m) Remove the fuel tank cap, then discharge the pressure in the fuel tank completely.
- (n) Disconnect the engine wire No. 3 (battery negative terminal) (see page 19-2)
- (o) Connect the fuel pump connector.
- (p) Install the rear floor service hole cover.
- (q) Install the rear seat (see page 72-9)
- (r) Connect the engine wire No. 3 (battery negative terminal) (see page 19-2)
- (s) Install the rear floor board No. 3.
- (t) Install the deck floor box rear.
- (u) Install the rear floor board No. 2.



3. FUEL SYSTEM

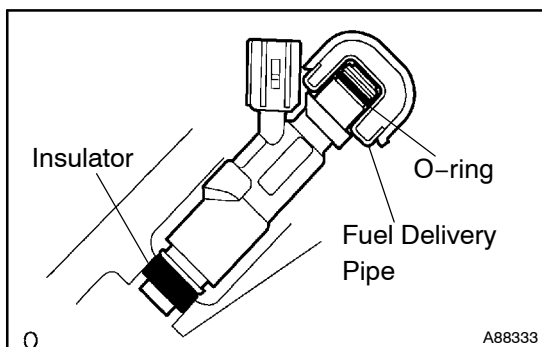
- (a) When disconnecting the high-pressure fuel line, a large amount of gasoline will splash. So take the following precautions.
- (1) Discharge the fuel system pressure (step 2).
 - (2) Disconnect the fuel pump tube (see page 11-25, 11-36).
 - (3) Drain the pressure remaining in the fuel pump tube.
 - (4) Cover the disconnected fuel pump tube (fuel tube joint and fuel tube connector) with a vinyl bag to prevent damage and intrusion of foreign objects.



- (b) Take the following precautions when removing and installing the fuel injector.
- (1) Do not reuse the O-ring.
 - (2) Do not damage a new O-ring when installing it to the fuel injector.
 - (3) Before installing a new O-ring, apply spindle oil or gasoline.

NOTICE:

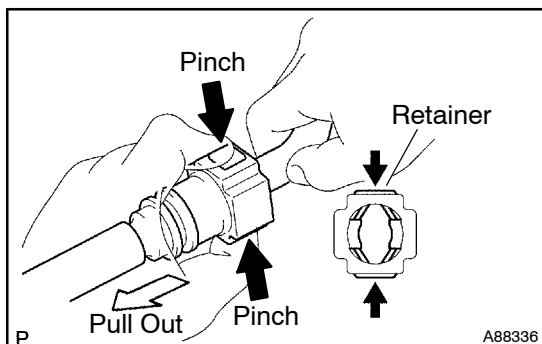
Do not use engine oil, gear oil or brake oil.



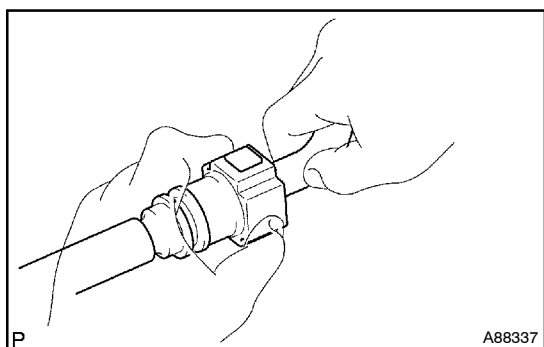
- (c) Install the fuel injector to the fuel delivery pipe and cylinder head as illustrated.

NOTICE:

Apply spindle oil or gasoline to the contact surface of the fuel delivery pipe and fuel injector before installing the fuel injector.



- (d) Take the following precautions when removing the fuel tube connector (Type A).
- (1) Check the fuel tube connector and pipe for dirt or mud before removing the fuel tube connector. If dirty, wipe it off with a shop rag.
 - (2) Pinch the retainer as illustrated, then pull out the fuel tube connector from the pipe.



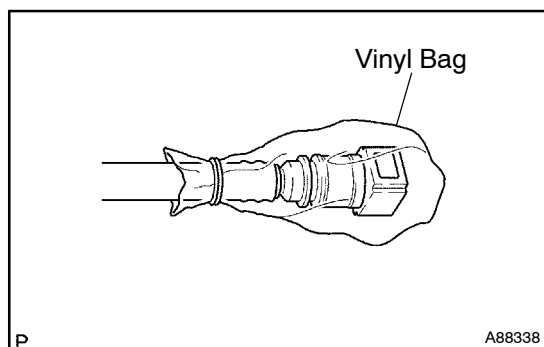
- (3) If the fuel tube connector and pipe are stuck, pinch the pipe, then push and pull the fuel tube connector to release and disconnect the fuel tube connector.

NOTICE:

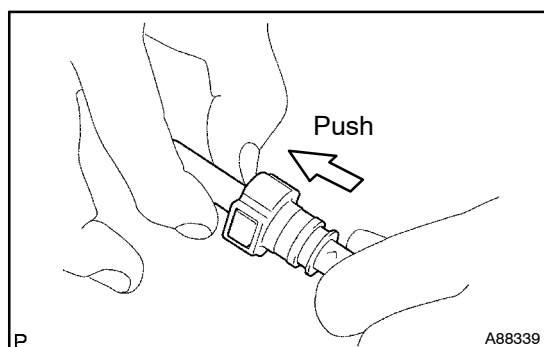
Never use any tools.

- (4) After removing the fuel tube, check the sealing surface of the pipe for dirt or mud.

If dirty, wipe it off with a shop rag.



- (5) Cover the disconnected fuel tube connector and pipe with a vinyl bag to prevent damage and intrusion of foreign objects.

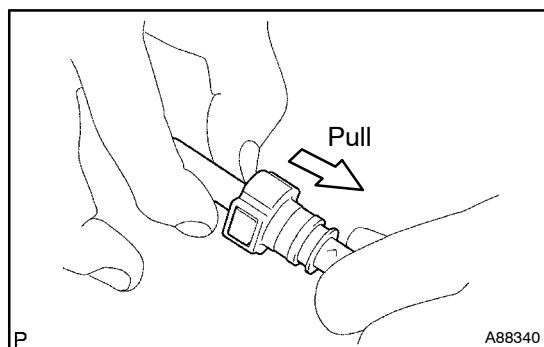


- (e) Take the following precautions when installing the fuel tube connector (Type A).

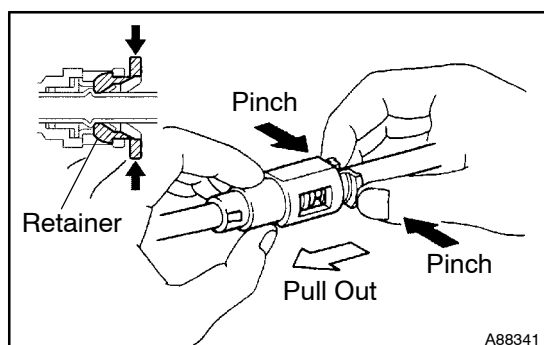
- (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound.

HINT:

If they are connected too tightly, apply a light coat of engine oil to the tip of the pipe, then install the fuel tube connector.



- (2) After connecting the fuel tube connector, check that the fuel tube connector and pipe are securely connected by pulling them.

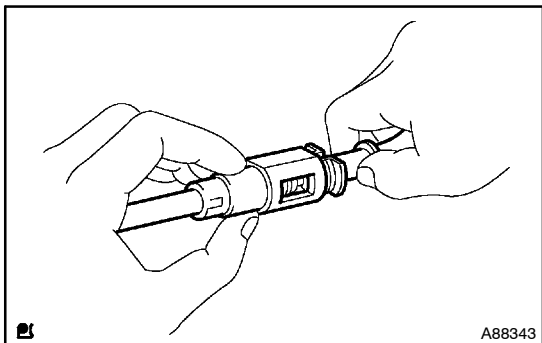


- (f) Take the following precautions when removing the fuel tube connector (Type B).

- (1) Check the fuel tube connector and pipe for dirt or mud before removing the fuel tube connector

If dirty, wipe it off with a shop rag.

- (2) Pinch the retainer as illustrated, then pull out the fuel tube connector from the pipe.



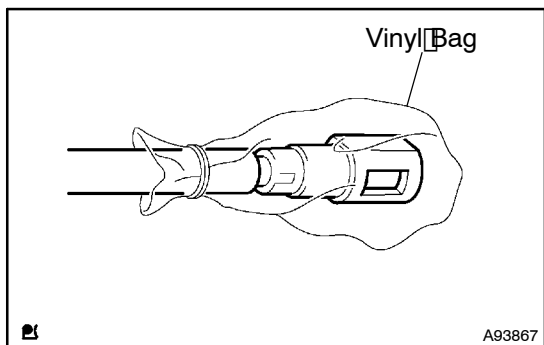
- (3) If the fuel tube connector and pipe are stuck, pinch the pipe, then push and pull the fuel tube connector to release and disconnect the fuel tube connector/

NOTICE:

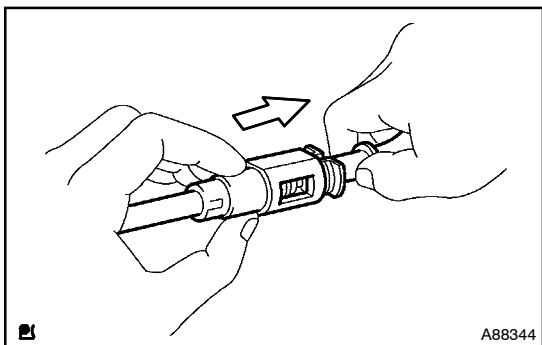
Never use any tools.

- (4) After removing the fuel tube, check the sealing surface of the pipe for dirt or mud.

If dirty, wipe it off with a shop rag.



- (5) Cover the disconnected fuel tube connector and pipe with a vinyl bag to prevent damage and intrusion of foreign objects.

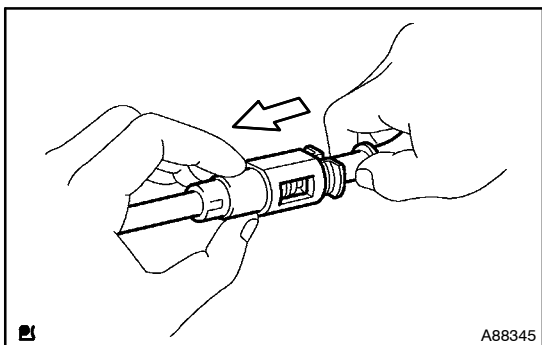


- (g) Take the following precautions when installing the fuel tube connector (Type B).

- (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound.

HINT:

If they are connected too tightly, apply a light coat of engine oil to the tip of the pipe, then install the fuel tube connector.

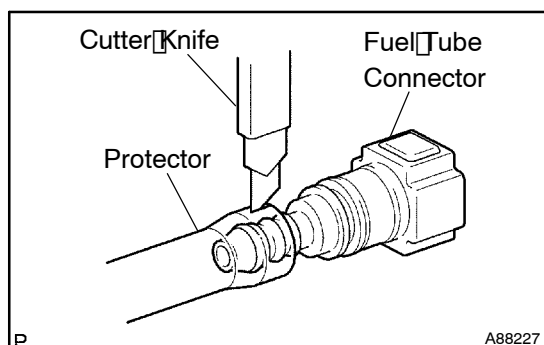


- (2) After connecting the fuel tube connector, check that the fuel tube connector and pipe are securely connected by pulling them.

4. CHECK FOR FUEL LEAKS

- (a) Check that there are no fuel leaks after doing maintenance on the fuel system (see page 11-7).

ON-VEHICLE INSPECTION



1. CHECK FUEL PRESSURE

(a) Prepare for the inspection.

(1) Prepare a new fuel tube.

HINT:

Part No. 23901-21080

(2) Using a cutter knife, cut off the protector of the fuel tube as illustrated. Tear off the protector by hand, then remove the fuel tube connector.

NOTICE:

If the protector is cut too deeply using a cutter, the O-ring of the fuel tube connector will be damaged.

(b) Discharge fuel system pressure (see page 1-3).

(c) Remove the rear floor board No. 2 (see page 9-2).

(d) Remove the deck floor box rear (see page 9-2).

(e) Remove the rear floor board No. 3 (see page 9-2).

(f) Using a voltmeter, measure battery voltage.

Standard: 9.0 to 14 V

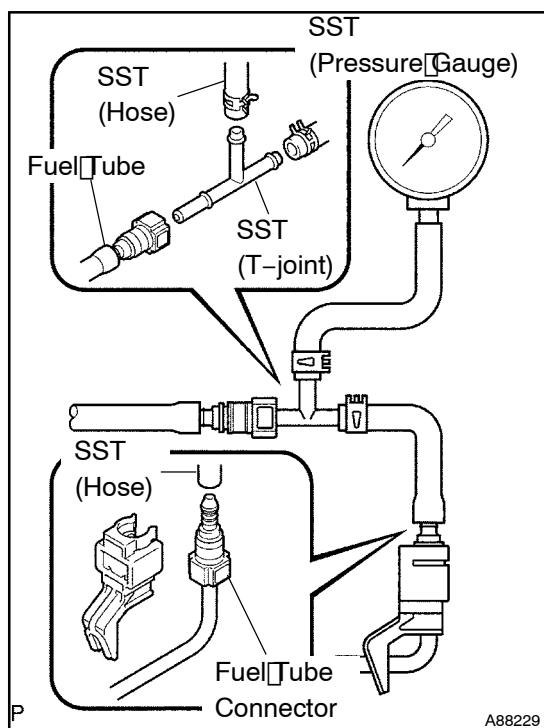
(g) Disconnect the engine wire No. 3 (battery negative terminal) (see page 9-2).

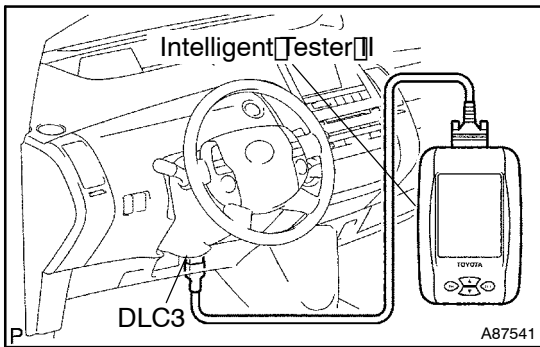
(h) Disconnect the fuel tube (see page 1-16).

(i) Install SST and the fuel tube connector to the vehicle.
SST 09268-41047 (95336-08070), 09268-45014
(09268-41200, 09268-41220, 09268-41250)

(j) Wipe off the spilt gasoline.

(k) Connect the engine wire No. 3 (battery negative terminal) (see page 9-2).





(l) Connect the intelligent tester II to the DLC3.

(m) Measure the fuel pressure.

Standard:

304 to 343 kPa (3.1 to 3.5 kgf/cm², 44 to 50 psi)

- If the fuel pressure is greater than the standard value, replace the fuel pump.
- If the fuel pressure is less than the standard value, check the connection of the fuel hose and the fuel pump.

(n) Disconnect the intelligent tester II from the DLC3.

(o) Set the vehicle to the "Inspection mode-2WD Inspection" (see page 1-5).

(p) Start the engine.

(q) Measure the fuel pressure at idle.

Standard:

304 to 343 kPa (3.1 to 3.5 kgf/cm², 44 to 50 psi)

(r) Stop the engine.

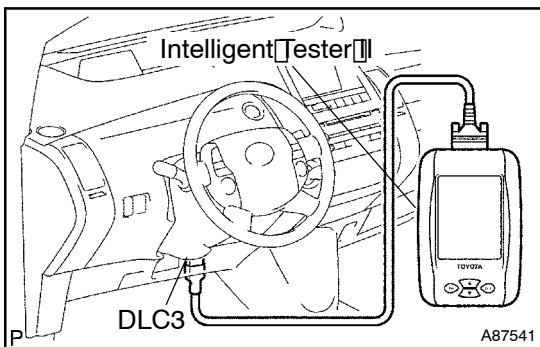
(s) After stopping the engine, check that the fuel pressure does not change for 5 minutes.

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

If the fuel pressure is not as specified, check the fuel pump or fuel injector (see page 1-9).

(t) After measuring the fuel pressure, disconnect the engine wire No. 3 (battery negative terminal). Remove SST and the fuel tube connector while paying attention to prevent gasoline splash.

(u) Connect the fuel tube (see page 1-16).



2. CHECK FUEL PUMP

(a) Connect the intelligent tester II to the DLC3.

(b) Push the power switch twice without depressing the brake pedal (IG ON).

NOTICE:

Do not start the engine.

(c) Turn the intelligent tester II ON.

(d) On the intelligent tester II, select the item: Powertrain / Engine and ECT / Active Test / Control the Fuel Pump / Speed.

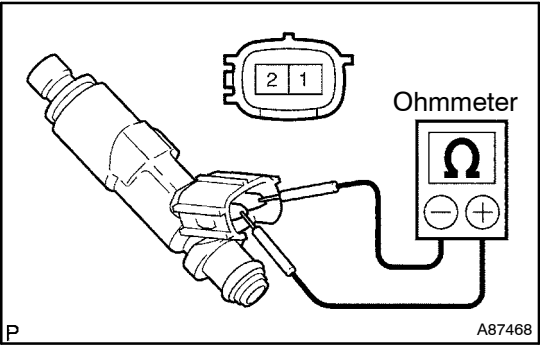
(e) Check the fuel pump operation while operating it with the intelligent tester II.

If the fuel pump does not operate, replace the fuel pump.

3. CHECK FOR FUEL LEAKS

(a) Check that there are no leaks in the fuel system while fuel pressure is applied.

INSPECTION



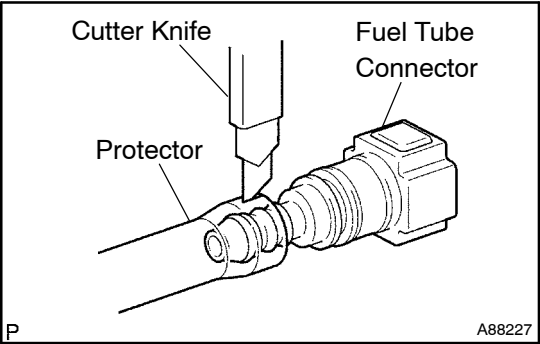
1. INSPECT FUEL INJECTOR ASSY

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

Standard:

Tester Connection	Specified Condition
1 - 2	13.45 to 14.15 Ω at 21°C (68°F)

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



- (b) Inspect the injection volume.

NOTICE:

- Perform the test in a well-ventilated area and watch out for flames.
- Carefully handle the fuel tube connector.

- (1) Prepare a new fuel tube.

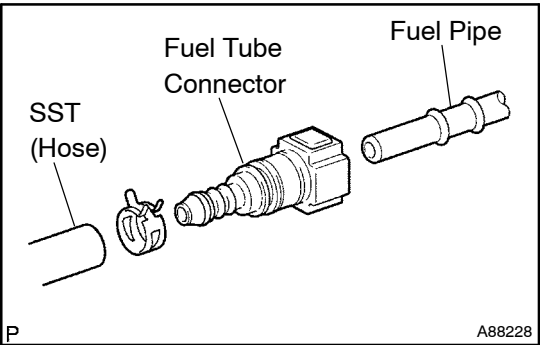
HINT:

Part No. 23901-21080

- (2) Using a cutter knife, cut off the protector of the fuel tube as illustrated. Tear off the protector by hand, then remove the fuel tube connector.

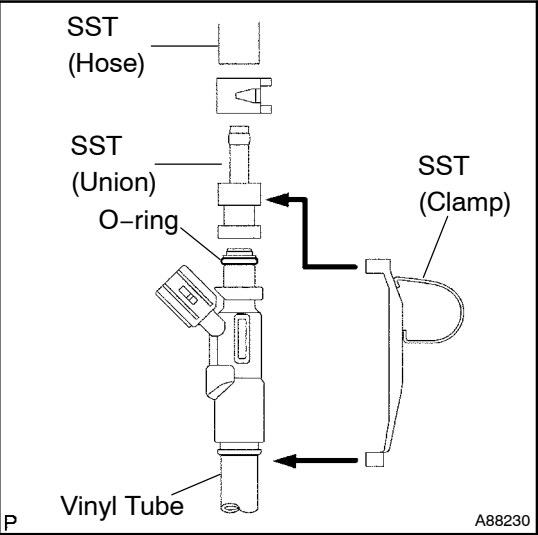
NOTICE:

If the protector is cut too deeply with a cutter, the O-ring of the fuel tube connector will be damaged.

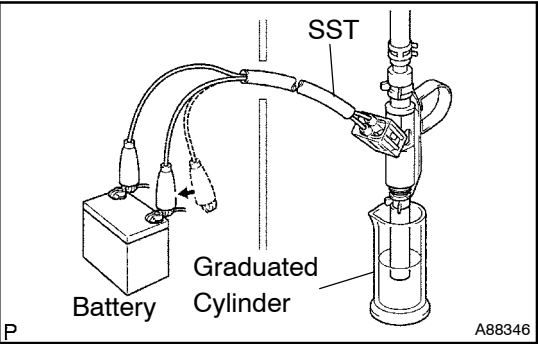


- (3) Install SST to the fuel tube connector, then connect the fuel tube connector to the fuel pipe (the vehicle side).

SST 09268-41047 (95336-08070)



- (4) Install a new O-ring to the fuel injector.
 - (5) Install SST and the vinyl tube to the fuel injector.
- SST 09268-41047 (09268-41110, 09268-41300)



- (6) Set the fuel injector to a graduated cylinder.
 - (7) Actuate the fuel pump (see page 11-7).
 - (8) Install SST to the fuel injector.
- SST 09842-30080
- (9) Connect SST to the battery, then measure the injection volume for 15 seconds. Perform the inspection 2 or 3 times, then calculate the average.

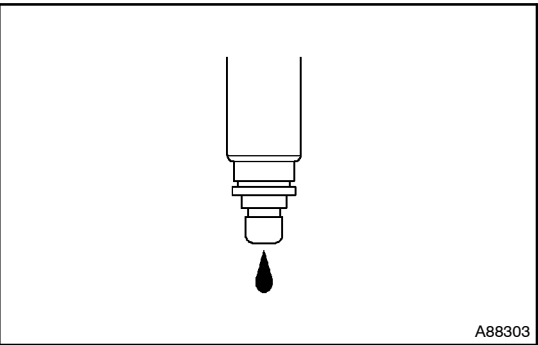
Standard:

Injection Volume	Difference between each fuel injector
36 to 46 cm ³ (2.1 to 2.8 cu in.)	10 cm ³ (0.6 cu in.) or less

NOTICE:

Always do the switching at the battery side.

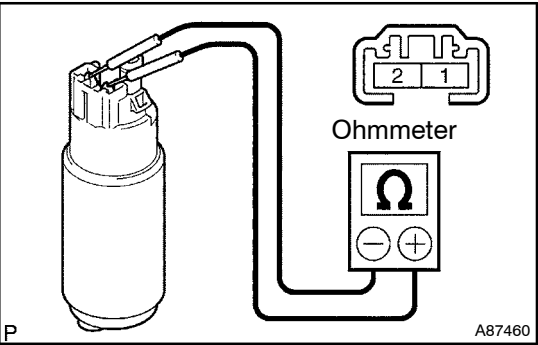
If the injection volume is not as specified, replace the fuel injector.



- (c) Inspect the leakage.
 - (1) In the condition that the injection volume was inspected, remove SST from the battery. Inspect the fuel leakage from the fuel injector.

Standard: 1 drop or less per 12 minutes

If the fuel leakage is not as specified, replace the fuel injector.



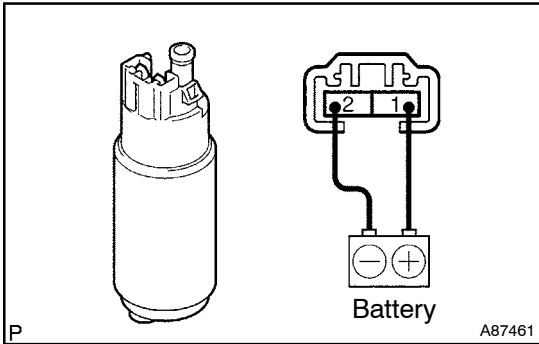
2. INSPECT FUEL PUMP

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

Standard:

Tester Connection	Specified Condition
1 - 2	0.2 to 3.0 Ω at 20°C (68°F)

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



(b) Check the operation.

- (1) Check that the motor operates when battery voltage is applied across the terminals.

NOTICE:

- **Perform the check quickly (shorter than 10 seconds).**
- **Keep the battery as far away from the fuel pump as possible.**
- **Always do the switching at the battery side.**

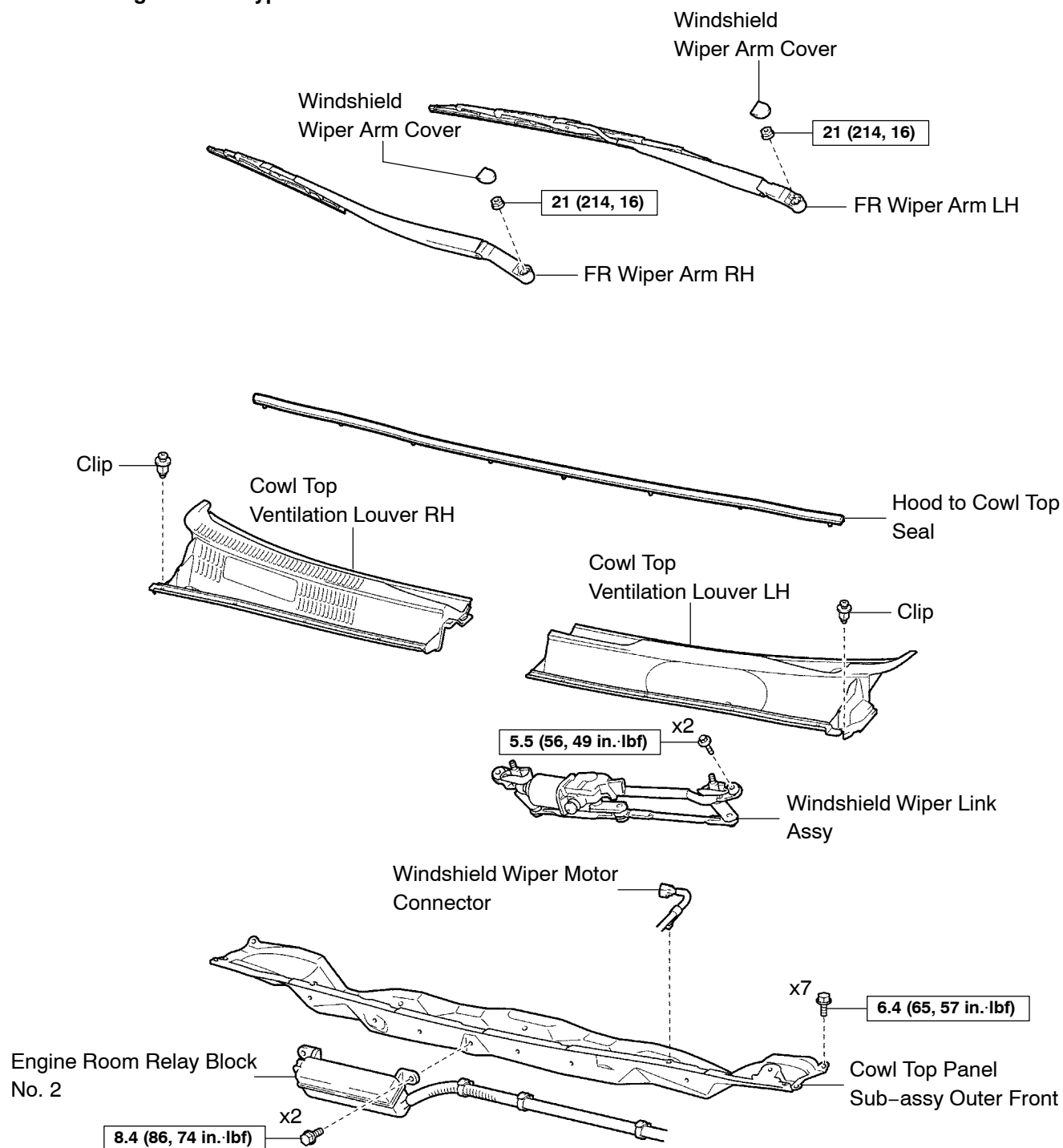
If the motor does not operate, replace the fuel pump.

FUEL INJECTOR ASSY (1NZ-FXE)

COMPONENTS

1111M-01

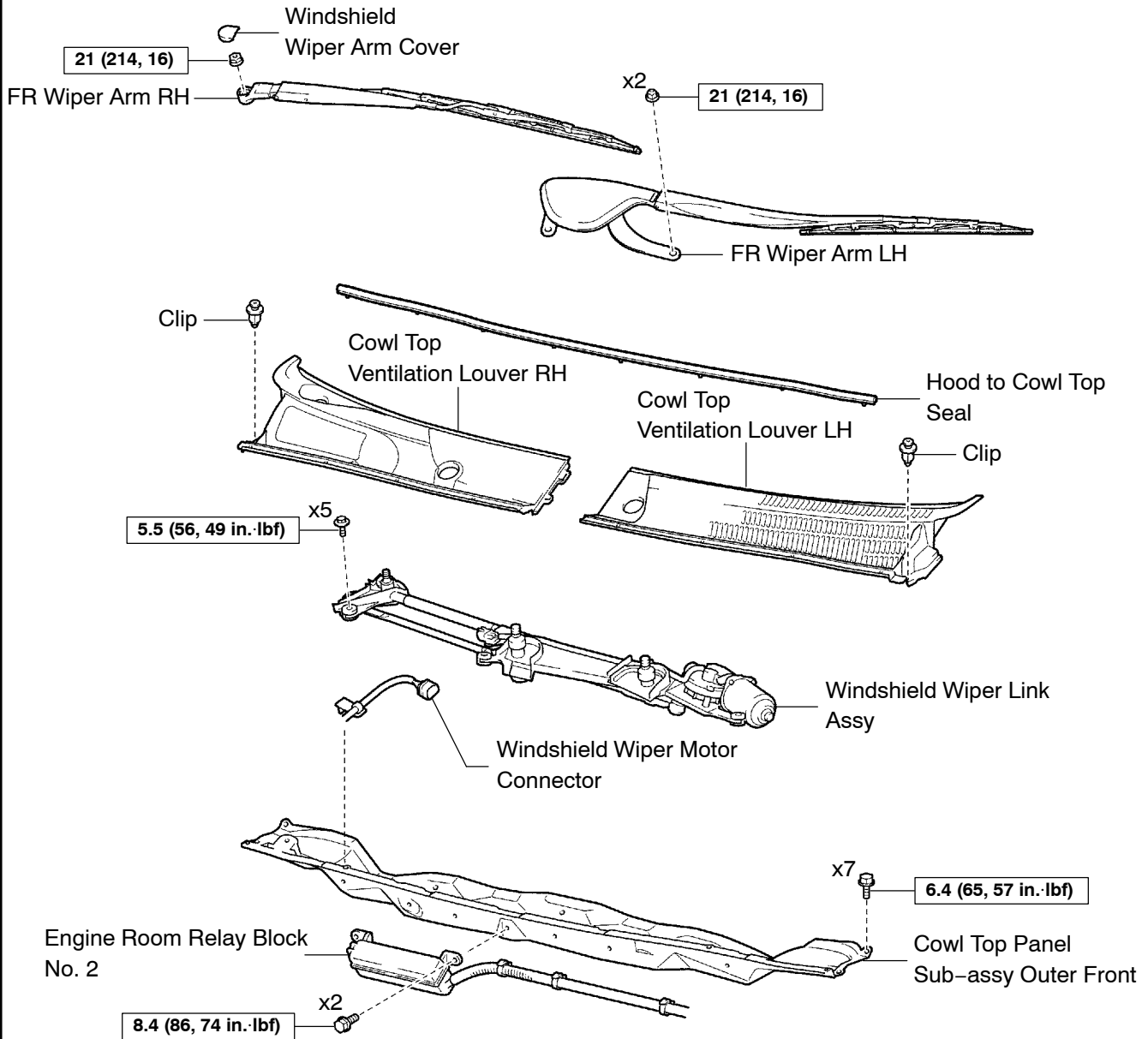
LHD Steering Position Type:



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

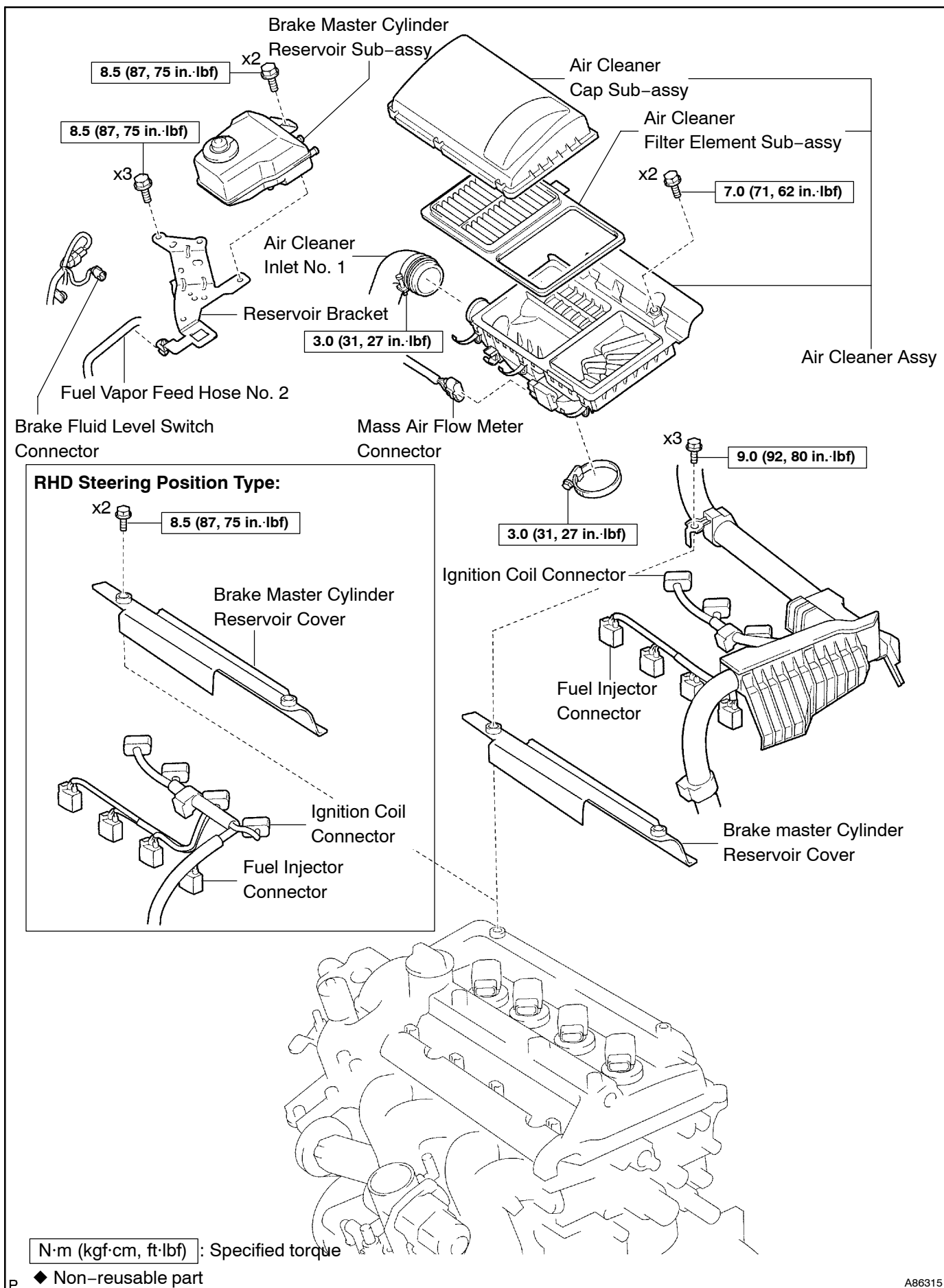
A86311

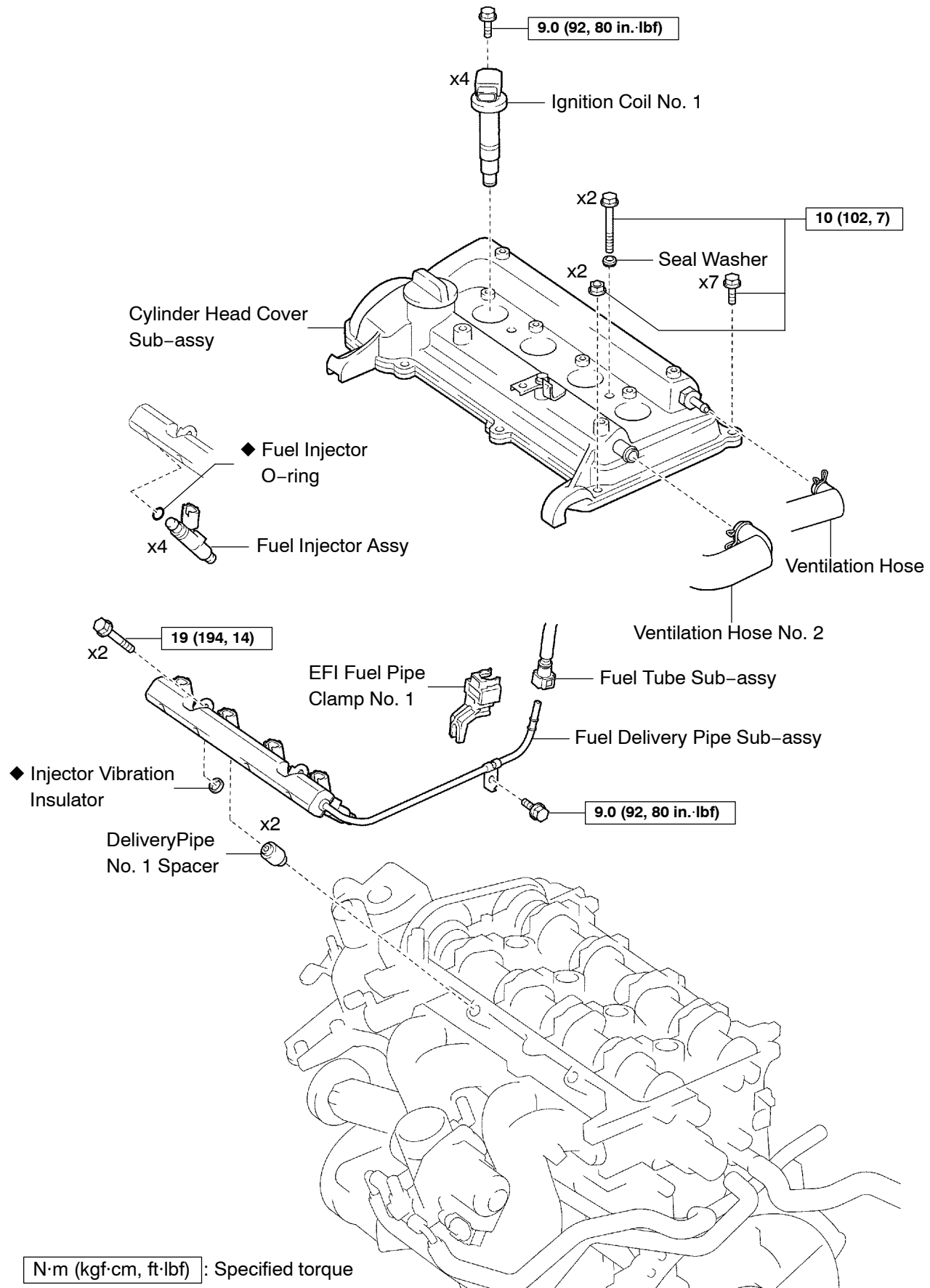
RHD Steering Position Type:



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

A86312

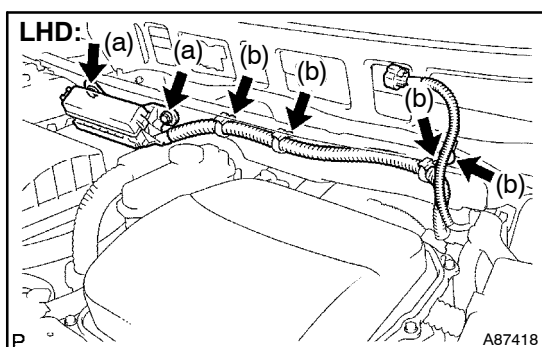




cardiagn.com

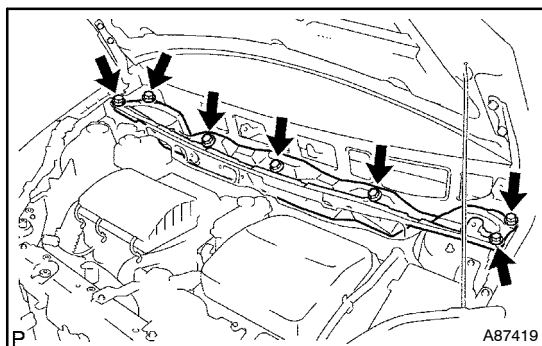
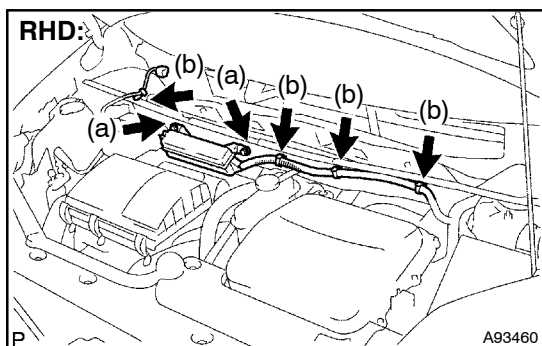
REPLACEMENT

1. DISCHARGE FUEL SYSTEM PRESSURE (See page 11-3)
2. REMOVE REAR FLOOR BOARD NO.2 (See page 19-2)
3. REMOVE DECK FLOOR BOX REAR (See page 19-2)
4. REMOVE REAR FLOOR BOARD NO.3 (See page 19-2)
5. DISCONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 19-2)
6. REMOVE WINDSHIELD WIPER ARM COVER
7. REMOVE FR WIPER ARM RH (See page 66-16)
8. REMOVE FR WIPER ARM LH (See page 66-16)
9. REMOVE HOOD TO COWL TOP SEAL (See page 66-16)
10. REMOVE COWL TOP VENTILATOR LOUVER LH (See page 66-16)
11. REMOVE COWL TOP VENTILATOR LOUVER RH (See page 66-16)
12. REMOVE WINDSHIELD WIPER LINK ASSY (See page 66-16)



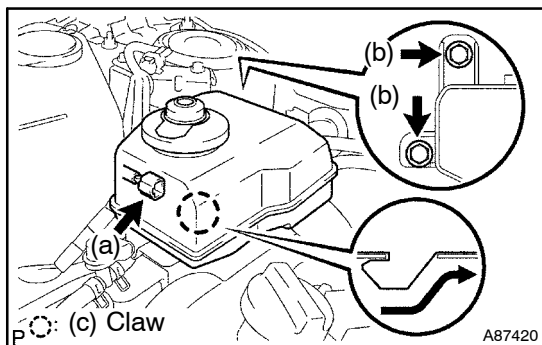
13. REMOVE COWL TOP PANEL SUB-ASSY OUTER FRONT

- (a) Remove the 2 bolts then remove the engine room relay block No. 2.
- (b) Remove the 4 wire harness clamps.



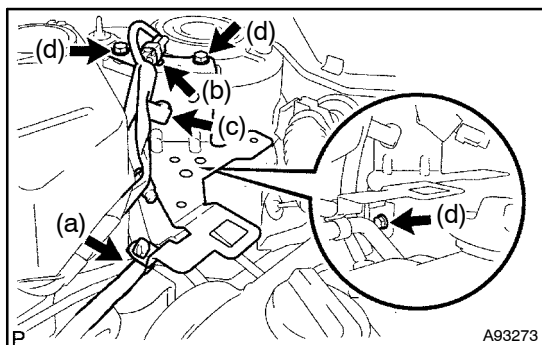
- (c) Remove the 7 bolts, then remove the cowl top panel outer front.

14. REMOVE AIR CLEANER ASSY (See page 10-15)



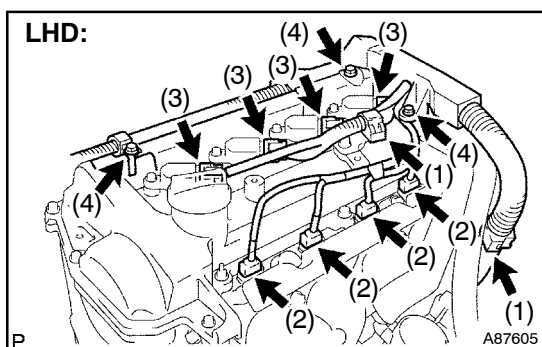
15. REMOVE BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

- (a) Disconnect the brake fluid level switch connector.
- (b) Remove the 2 bolts.
- (c) Separate the claw fitting, then remove the brake master cylinder reservoir.



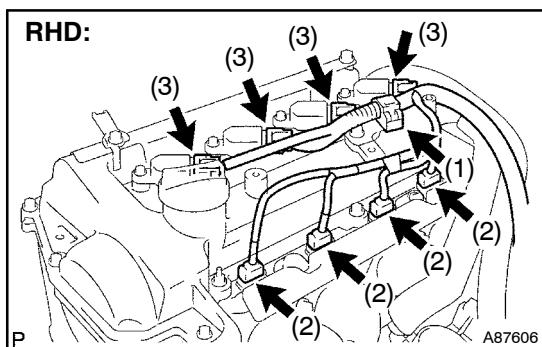
16. REMOVE RESERVOIR BRACKET

- (a) Remove the fuel vapor feed hose No. 2 from the hose clamp.
- (b) Remove the connector clamp.
- (c) Remove the wire harness clamp.
- (d) Remove the 3 bolts, then remove the reservoir bracket.

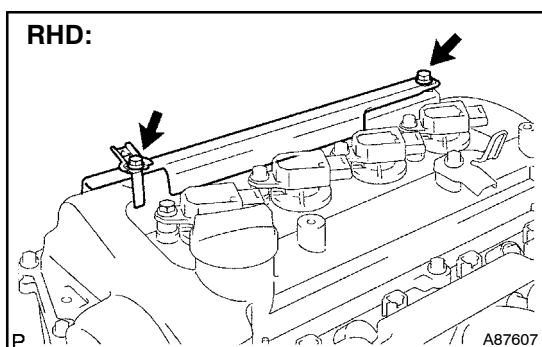


17. REMOVE CYLINDER HEAD COVER SUB-ASSY

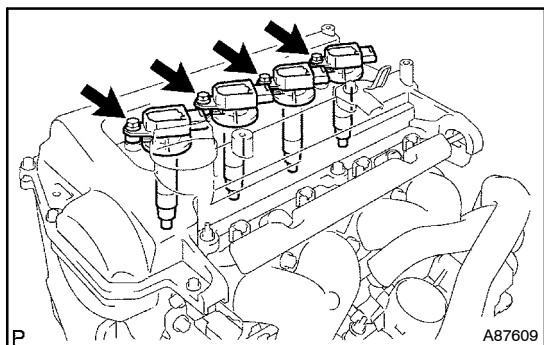
- (a) LHD Steering Position Type:
 - (1) Remove the 2 wire harness clamps.
 - (2) Disconnect the 4 fuel injector connectors.
 - (3) Disconnect the 4 ignition coil connectors.
 - (4) Remove the 3 bolts, then remove the engine wire and brake master cylinder reservoir cover.



- (b) RHD Steering Position Type:
 - (1) Remove the wire harness clamp.
 - (2) Disconnect the 4 fuel injector connectors.
 - (3) Disconnect the 4 ignition coil connectors.



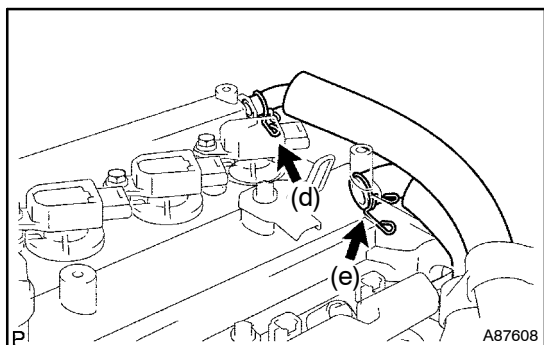
- (4) Remove the 2 bolts, then remove the brake master cylinder reservoir cover.



(c) Remove the 4 bolts, then remove the 4 ignition coils.

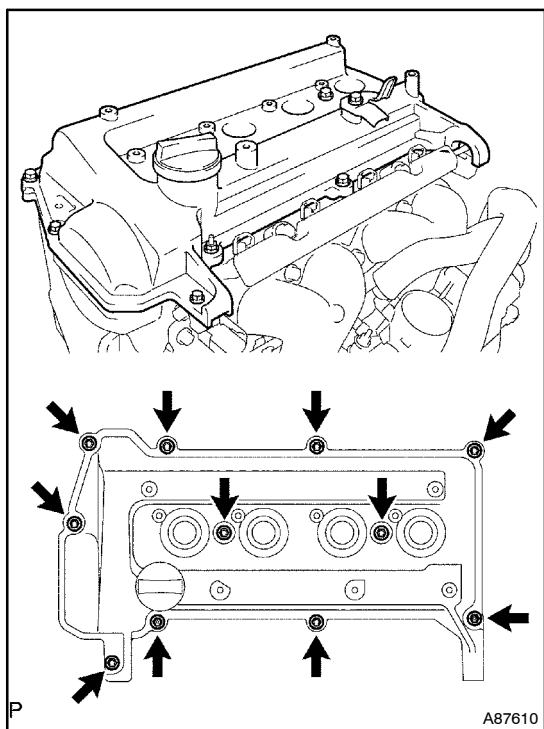
HINT:

Each ignition coil is installed with 1 bolt.

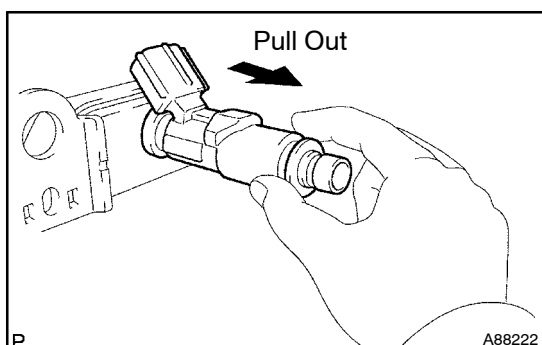
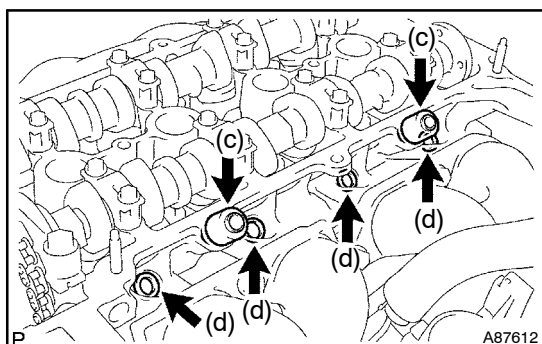
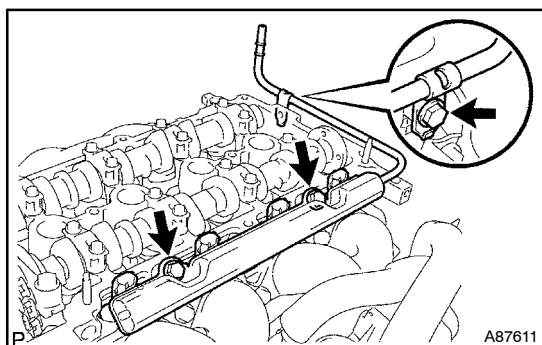
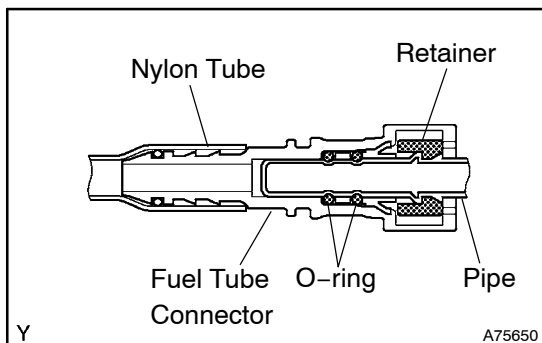
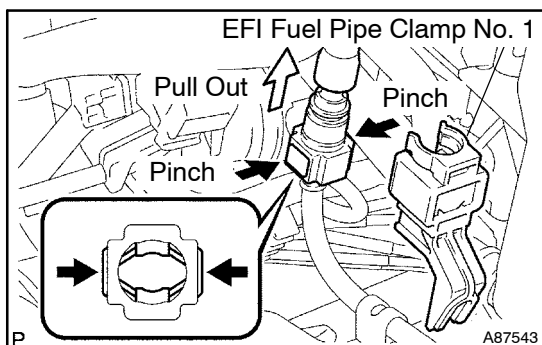


(d) Disconnect the ventilation hose from the ventilation valve.

(e) Disconnect the ventilation hose No. 2 from the cylinder head cover.



(f) Remove the 9 bolts, 2 seal washers and 2 nuts, then remove the cylinder head cover.



18. REMOVE FUEL DELIVERY PIPE SUB-ASSY

- (a) Disconnect the fuel tube from the fuel delivery pipe.
 - (1) Remove the EFI fuel pipe clamp No. 1.
 - (2) Pinch the retainer of the fuel tube connector, then pull out the fuel tube connector to disconnect the fuel tube from the fuel delivery pipe.

NOTICE:

- Remove dirt or foreign objects on the fuel tube connector before this work.
- Do not allow any scratches or foreign objects on the parts when disconnecting as the fuel tube connector has the O-ring that seals the pipe.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag after disconnecting the fuel tube.
- If the fuel tube connector and pipe are stuck, push and pull them to release.

- (b) Remove the 3 bolts, then remove the fuel delivery pipe together with the 4 fuel injectors.

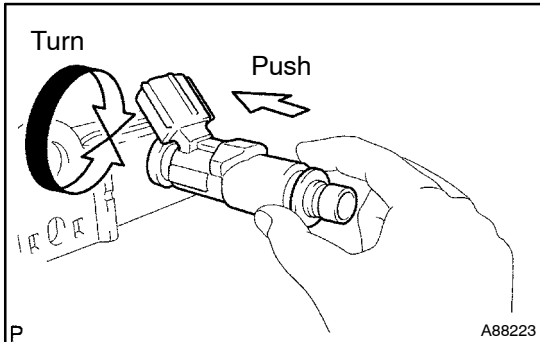
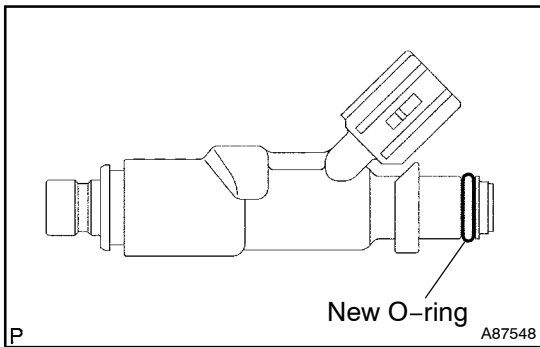
NOTICE:

Do not drop the fuel injectors when removing the fuel delivery pipe.

- (c) Remove the 2 delivery pipe No. 1 spacers from the cylinder head.
- (d) Remove the 4 insulators from the cylinder head.

19. REMOVE FUEL INJECTOR ASSY

- (a) Pull out the 4 fuel injectors from the fuel delivery pipe.



20. INSTALL FUEL INJECTOR ASSY

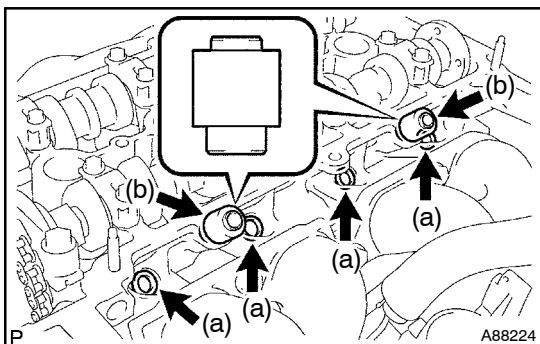
- Apply a light coat of spindle oil or gasoline to a new O-ring, then install it to each fuel injector.

- Apply a light coat of spindle oil or gasoline to the surface of the fuel delivery pipe which contacts the O-ring of the fuel injector.
- Apply a light coat of spindle oil or gasoline to the O-ring again, then turn the fuel injector right and left to the fuel delivery pipe.

NOTICE:

Be careful that the O-ring is not cracked or jammed when installing.

- Check that the fuel injector rotates smoothly. If the fuel injector does not rotate, replace the O-ring.

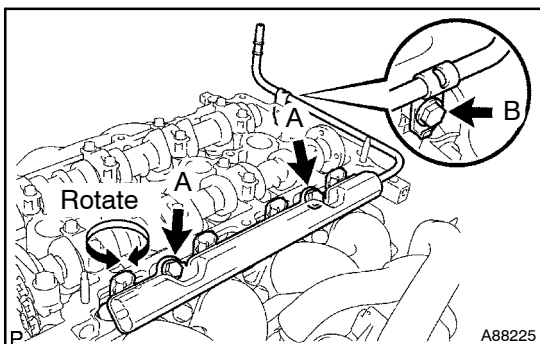


21. INSTALL FUEL DELIVERY PIPE SUB-ASSY

- Install 4 new insulators to the cylinder head.
- Install the 2 delivery pipe No. 1 spacers to the cylinder head.

NOTICE:

Be careful of the installation direction of the delivery pipe spacer.



- Install the fuel delivery pipe together with the 4 fuel injectors, then temporarily tighten the 3 bolts.

NOTICE:

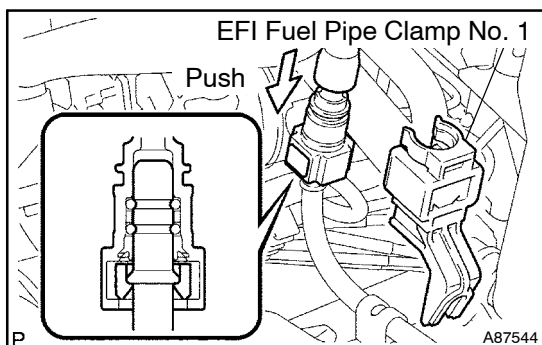
Do not drop the fuel injectors when installing the fuel delivery pipe.

- Check that the fuel injector rotates smoothly. If the fuel injector does not rotate, replace the O-ring.
- Retighten the 3 bolts with the specified torque.

Torque:

19 N·m (194 kgf·cm, 14 ft·lbf) for bolt A

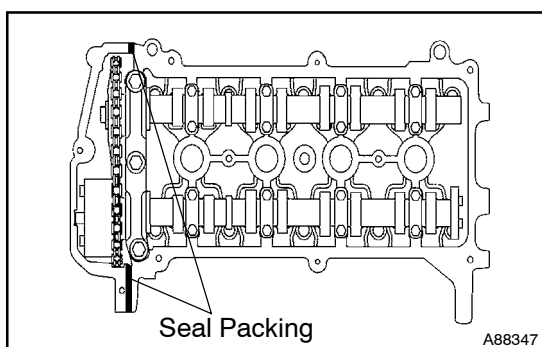
9.0 N·m (92 kgf·cm, 80 in·lbf) for bolt B



- (f) Connect the fuel tube to the fuel delivery pipe.
- (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound to connect the fuel tube to the fuel delivery pipe.

NOTICE:

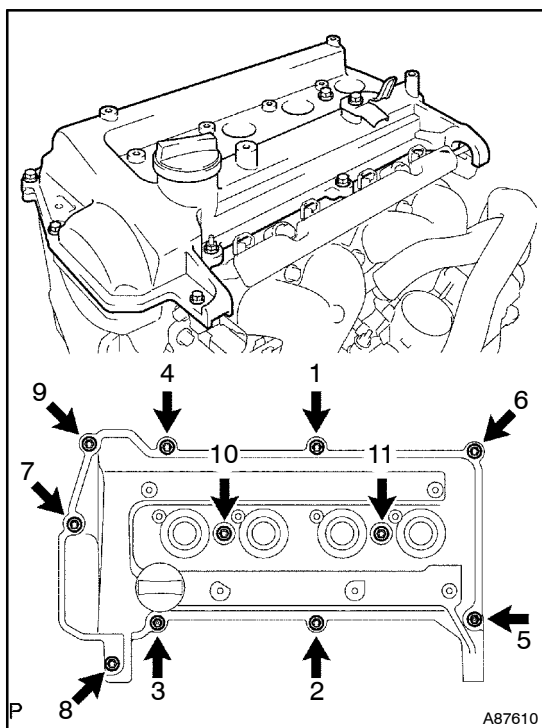
- Check that there are no scratches or foreign objects around the connected part of the fuel tube connector and pipe before this work.
 - After connecting the fuel tube, check that the fuel tube connector and pipe are securely connected by pulling them.
- (2) Install the EFI fuel pipe clamp No. 1.

**22. INSTALL CYLINDER HEAD COVER SUB-ASSY**

- (a) Apply seal packing to the cylinder head as illustrated.
Seal packing: Part No. 08826-00080 or equivalent

NOTICE:

- Remove any oil from the contact surface.
- Install the cylinder head cover within 3 minutes after applying seal packing.
- Do not start the engine within 2 hours of installation.



- (b) Tighten the 9 bolts, 2 seal washers and 2 nuts in the sequence shown in the illustration to install the cylinder head cover.

Torque: 10 N·m (102 kgf·cm, 7 ft·lbf)

- (c) Connect the ventilation hose No. 2 to the cylinder head cover.

- (d) Connect the ventilation hose to the ventilation valve.

- (e) Install the 4 ignition coils with the 4 bolts.

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

- (f) LHD Steering Position Type:

- (1) Install the engine wire and brake master cylinder reservoir cover with the 3 bolts.

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

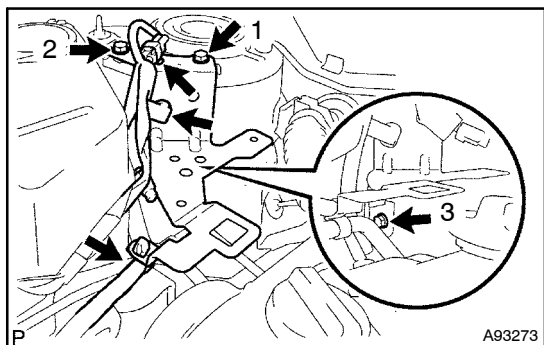
- (2) Connect the 4 ignition coil connectors.
- (3) Connect the 4 fuel injector connectors.
- (4) Install the 2 wire harness clamps.

- (g) RHD Steering Position Type:

- (1) Install the brake master cylinder reservoir cover with the 2 bolts.

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

- (2) Connect the 4 ignition coil connectors.
- (3) Connect the 4 fuel injector connectors.
- (4) Install the wire harness clamp.

**23. INSTALL RESERVOIR BRACKET**

- (a) Temporarily install the reservoir bracket with the bolt.
- (b) Tighten the 3 bolts with the specified torque in the sequence shown in the illustration.

Torque: 8.5 N·m (87 kgf·cm, 75 in.·lbf)

- (c) Install the connector clamp.
- (d) Install the wire harness clamp.
- (e) Install the fuel vapor feed hose No. 2 to the hose clamp.

24. INSTALL BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

Torque: 8.5 N·m (87 kgf·cm, 75 in.·lbf)

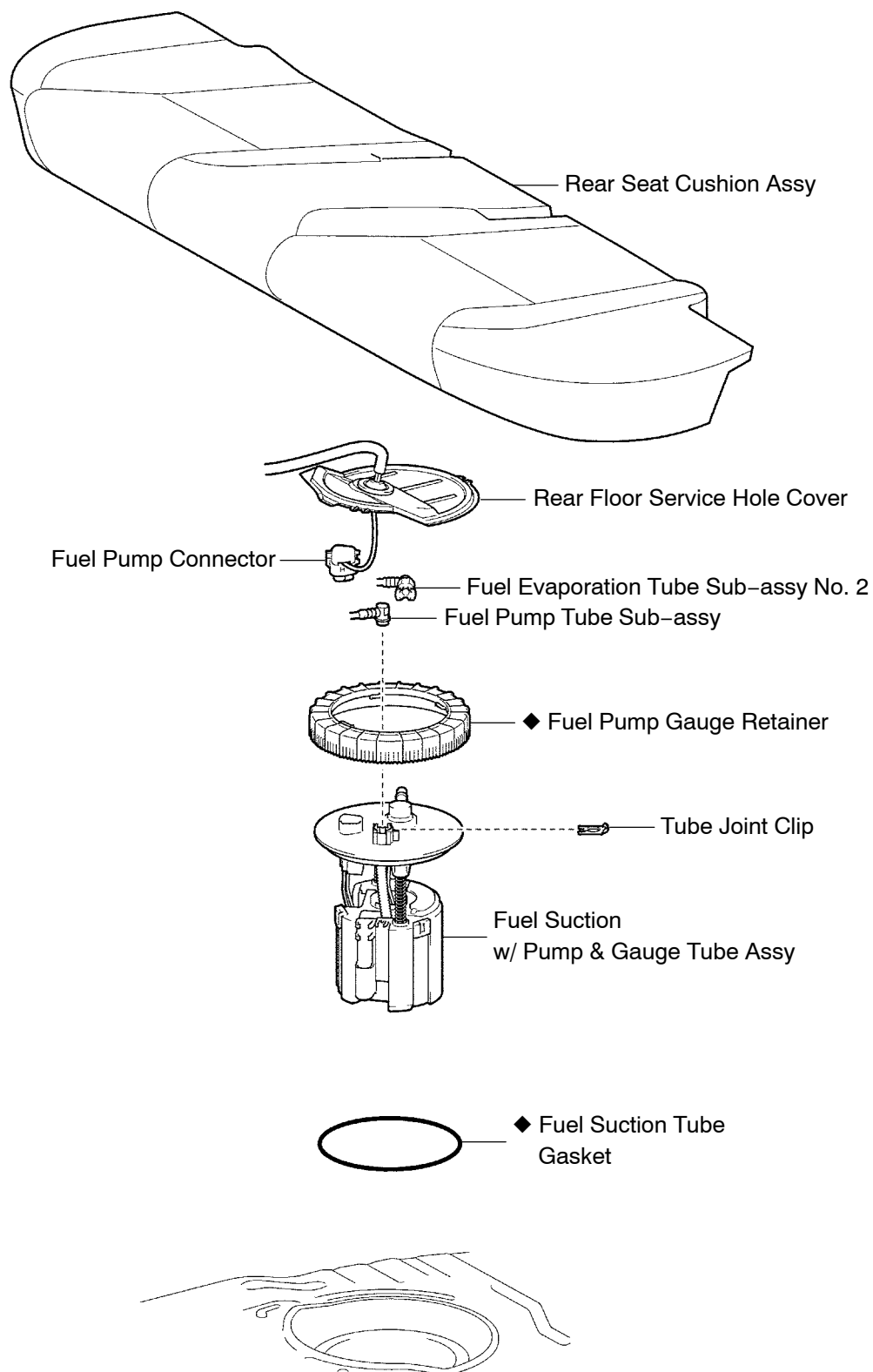
25. INSTALL AIR CLEANER ASSY (See page 10-15)**26. INSTALL COWL TOP PANEL SUB-ASSY OUTER FRONT**

Torque: 6.4 N·m (65 kgf·cm, 57 in.·lbf)

27. INSTALL WINDSHIELD WIPER LINK ASSY (See page 66-16)**28. CONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 19-2)****29. CHECK FOR FUEL LEAKS (See page 11-7)****30. CHECK FOR ENGINE OIL LEAKS****31. INSTALL COWL TOP VENTILATOR LOUVER RH****32. INSTALL COWL TOP VENTILATOR LOUVER LH****33. INSTALL HOOD TO COWL TOP SEAL****34. INSTALL FR WIPER ARM LH (See page 66-16)****35. INSTALL FR WIPER ARM RH (See page 66-16)****36. INSTALL WINDSHIELD WIPER ARM COVER****37. INSTALL REAR FLOOR BOARD NO.3****38. INSTALL DECK FLOOR BOX REAR****39. INSTALL REAR FLOOR BOARD NO.2****40. POWER WINDOW CONTROL SYSTEM INITIALIZE (See page 01-29)**

FUEL SUCTION W/ PUMP & GAUGE TUBE ASSY (1NZ-FXE) COMPONENTS

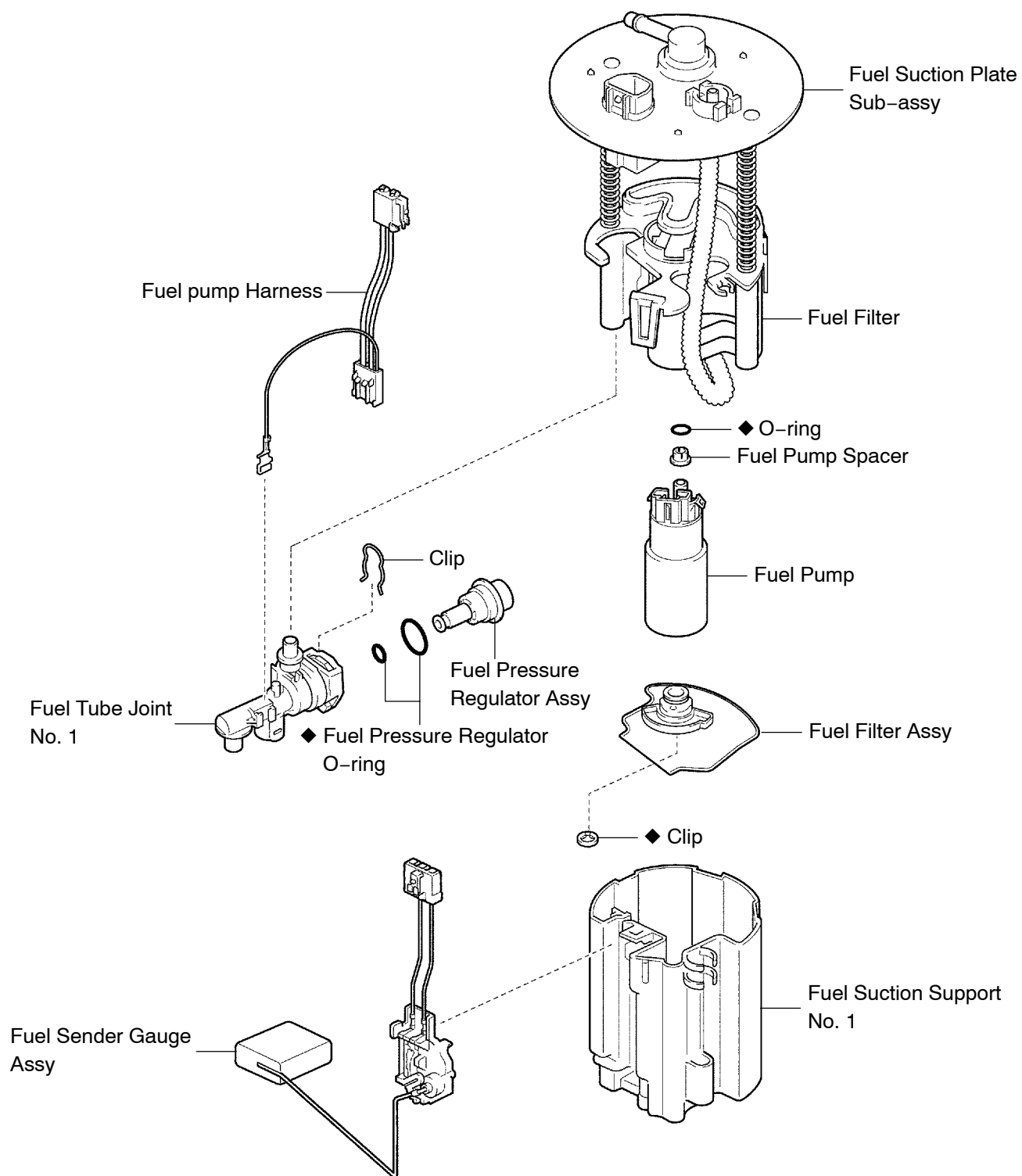
11110-01



◆ Non-reusable part

P

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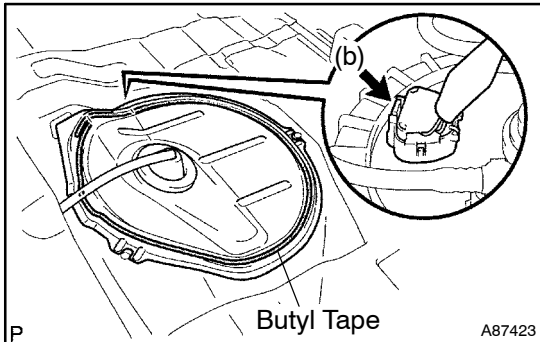


◆ Non-reusable part

A86318

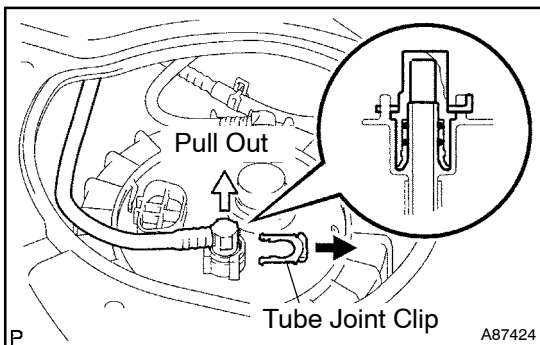
Removal & Installation and Disassembly & Reassembly

1. □ DISCHARGE FUEL SYSTEM PRESSURE (See page 11-3)
2. □ REMOVE REAR FLOOR BOARD NO.2 (See page 19-2)
3. □ REMOVE DECK FLOOR BOX REAR (See page 19-2)
4. □ REMOVE REAR FLOOR BOARD NO.3 (See page 19-2)
5. □ DISCONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 19-2)
6. □ REMOVE REAR SEAT CUSHION ASSY (See page 72-9)



7. REMOVE REAR FLOOR SERVICE HOLE COVER

- (a) Remove the butyl tape, then remove the rear floor service hole cover.
- (b) Disconnect the fuel pump connector.

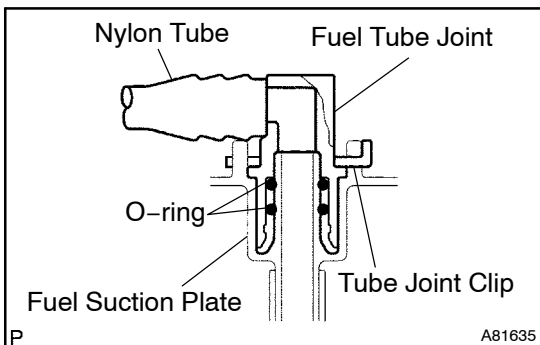


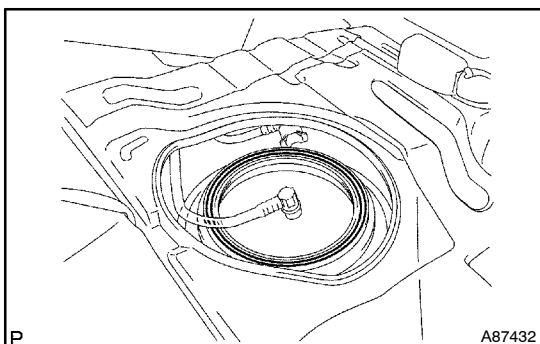
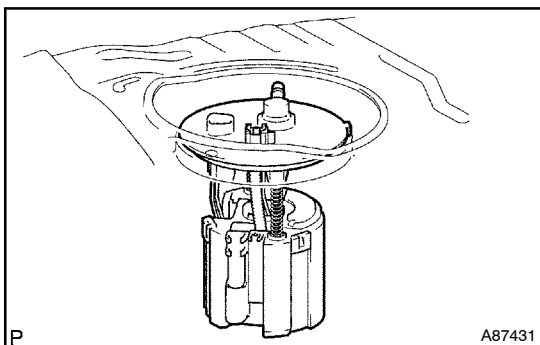
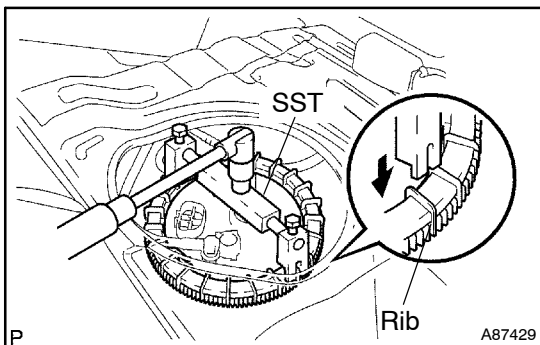
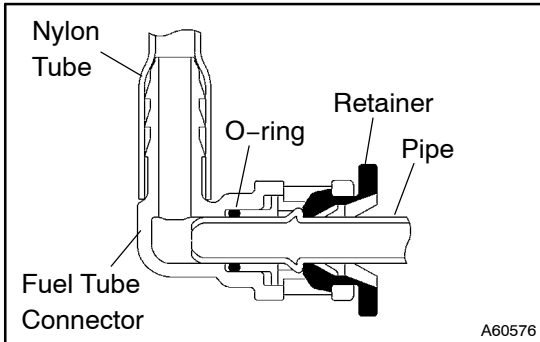
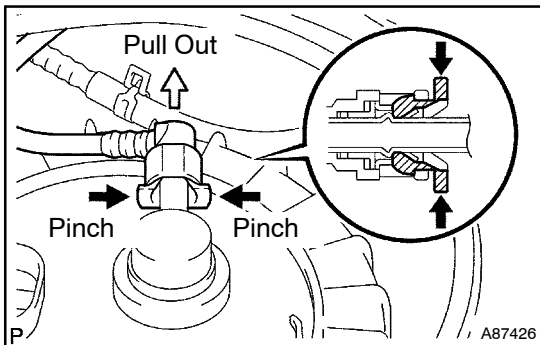
8. REMOVE FUEL SUCTION W/ PUMP & GAUGE TUBE ASSY

- (a) Disconnect the fuel pump tube.
 - (1) Remove the tube joint clip, then pull out the fuel tube joint from the plug of the fuel suction support No. 1.

NOTICE:

- Remove the dirt or foreign objects on the fuel tube joint before this work.
- Do not allow any scratches or foreign objects on the parts when disconnecting as the fuel tube joint has the O-ring that seals the plug.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag and gum tape after disconnecting the fuel pump tube.





- (b) Disconnect the fuel evaporation tube No. 2.
- (1) Pinch the retainer of the fuel tube connector, then pull out the fuel tube connector to disconnect the fuel evaporation tube No. 2 from the pipe.

NOTICE:

- Remove dirt or foreign objects on the fuel tube connector before this work.
- Do not allow any scratches or foreign objects on the parts when disconnecting as the fuel tube connector has the O-ring that seals the pipe.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag after disconnecting the fuel evaporation tube No. 2.
- If the fuel tube connector and pipe are stuck, push and pull them to release.

- (c) Using SST, loosen the fuel pump gauge retainer.
SST 09808-14020 (09808-01410, 09808-01420, 09808-01430)

NOTICE:

Use SST. Do not use other tools such as a screwdriver.

HINT:

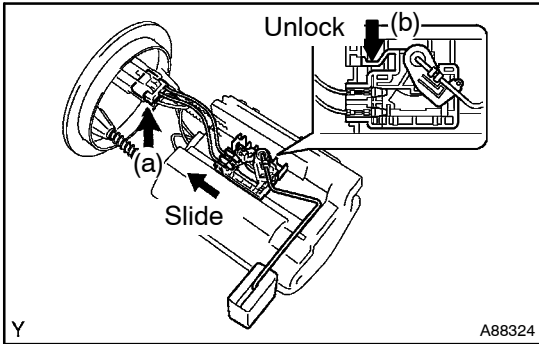
Insert the notch of SST to the convex of the fuel pump gauge retainer.

- (d) Remove the fuel pump gauge retainer while holding the fuel suction with pump & gauge tube by hand.
- (e) Remove the fuel suction with pump & gauge tube from the fuel tank.

NOTICE:

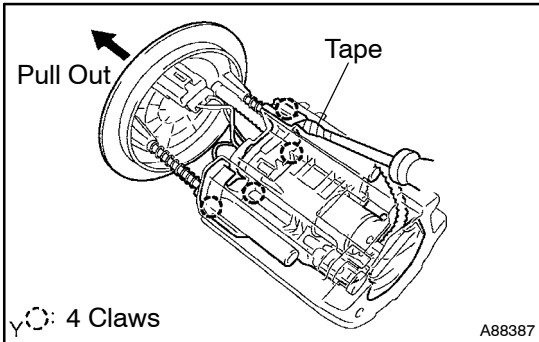
Be careful that the fuel sender gauge arm does not bend.

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



9. REMOVE FUEL SENDER GAGE ASSY

- (a) Disconnect the fuel sender gauge connector.
- (b) Unlock the indicated portion in the illustration, then slide the fuel sender gauge to remove.

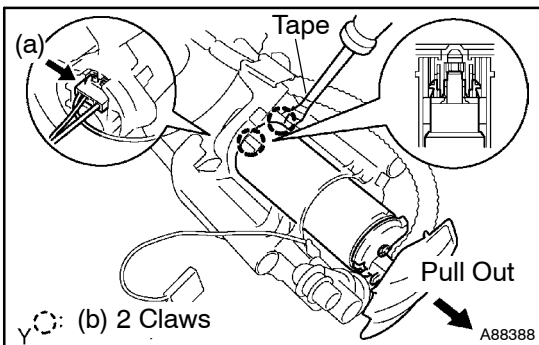


10. REMOVE FUEL SUCTION SUPPORT NO.1

- (a) Using a screwdriver with its tip wrapped in tape, separate the 4 claw fittings. Then pull out the fuel suction plate.

NOTICE:

Do not damage the fuel suction plate and fuel suction support No. 1.

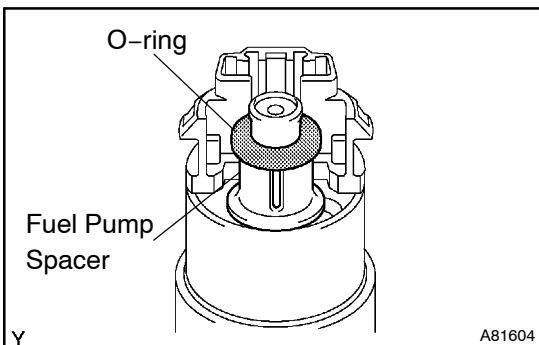


11. REMOVE FUEL PUMP

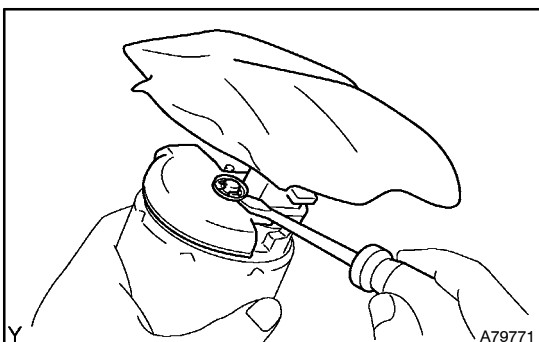
- (a) Disconnect the fuel pump connector.
- (b) Using a small screwdriver with its tip wrapped in tape, separate the 2 claw fittings. Then pull out the fuel pump.

NOTICE:

Do not damage the fuel pump and fuel suction plate.

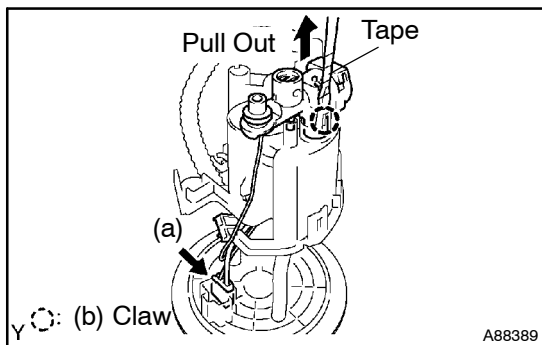


- (c) Remove the O-ring from the fuel pump.
- (d) Remove the fuel pump spacer from the fuel pump.



12. REMOVE FUEL PUMP FILTER

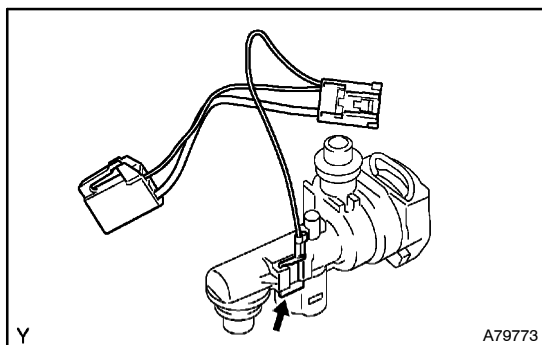
- (a) Using a small screwdriver, remove the clip. Then remove the fuel pump filter.

**13. REMOVE FUEL TUBE JOINT NO.1**

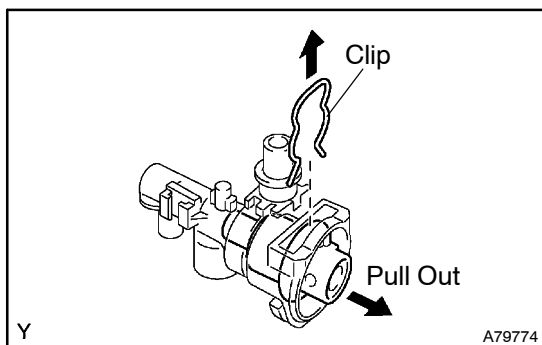
- (a) Disconnect the fuel pump harness connector.
- (b) Using a screwdriver with its tip wrapped in tape, separate the claw fittings. Then pull out the fuel tube joint No. 1.

NOTICE:

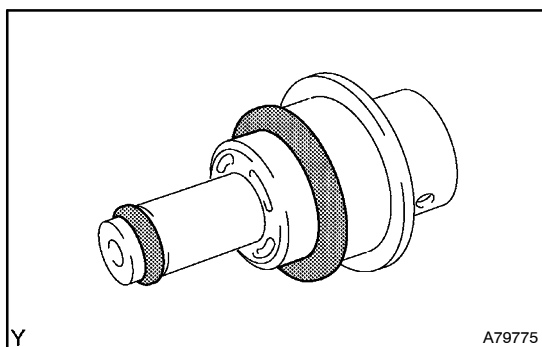
Do not damage the fuel tube joint No. 1 and fuel suction plate.

**14. REMOVE FUEL PUMP HARNESS**

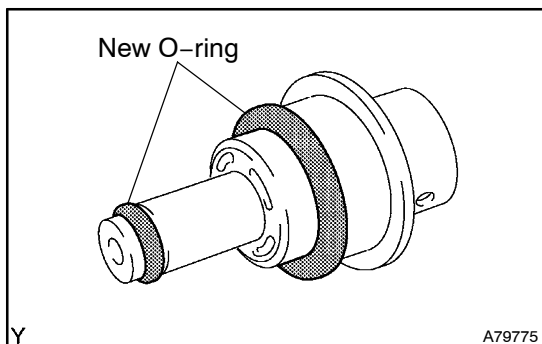
- (a) Remove the terminal and fuel pump harness.

**15. REMOVE FUEL PRESSURE REGULATOR ASSY**

- (a) Remove the clip, then pull out the fuel pressure regulator.



- (b) Remove the 2 O-rings from the fuel pressure regulator.

**16. INSTALL FUEL PRESSURE REGULATOR ASSY**

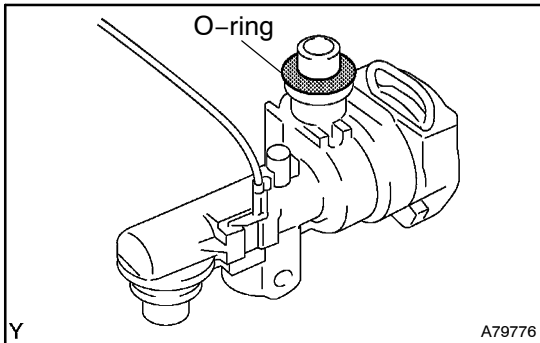
- (a) Apply a light coat of spindle oil or gasoline to 2 new O-ring, then install them to the fuel pressure regulator.
- (b) Apply a light coat of spindle oil or gasoline to the 2 O-rings again, then install the fuel pressure regulator to the fuel tube joint No. 1.

NOTICE:

Be careful that the O-ring is not cracked or jammed when installing.

- (c) Install the clip to the fuel tube joint No. 1.

17. INSTALL FUEL PUMP HARNESS



18. INSTALL FUEL TUBE JOINT NO.1

- Apply a light coat of spindle oil or gasoline to the O-ring of the fuel tube joint No. 1, then install it to the fuel suction plate.

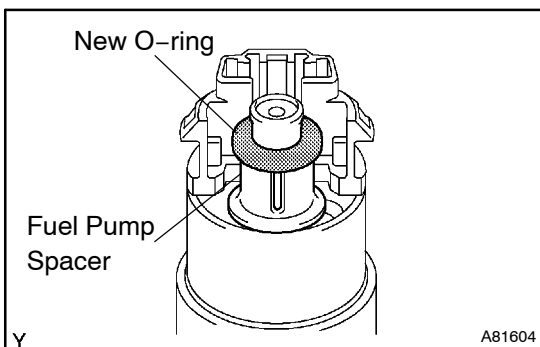
NOTICE:

Be careful that the O-ring is not cracked or jammed when installing.

- Connect the fuel pump harness connector.

19. INSTALL FUEL PUMP FILTER

- Install the fuel pump filter with a new clip.



20. INSTALL FUEL PUMP

- Install the fuel pump spacer to the fuel pump.
- Apply a light coat of spindle oil or gasoline to a new O-ring, then install it to the fuel pump.
- Apply a light coat of spindle oil or gasoline to the O-ring again, then install the fuel pump to the fuel suction plate.

NOTICE:

Be careful that the O-ring is not cracked or jammed when installing.

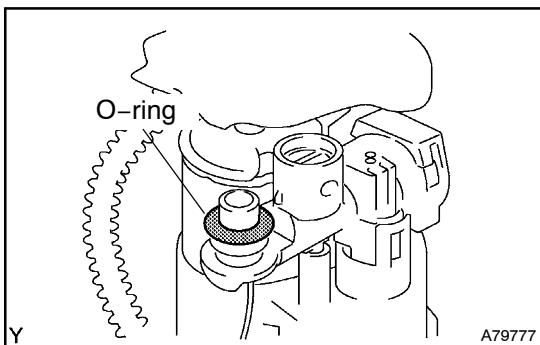
- Connect the fuel pump connector.

21. INSTALL FUEL SUCTION SUPPORT NO.1

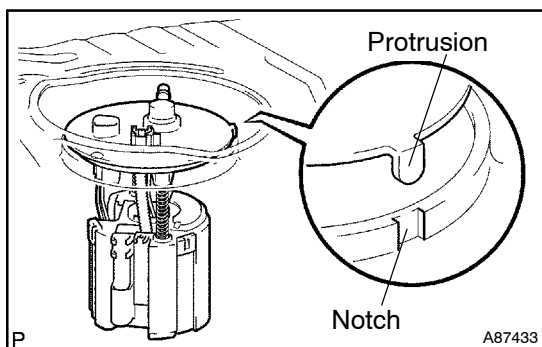
- Apply a light coat of spindle oil or gasoline to the O-ring of the fuel tube joint No. 1, then install fuel suction support No. 1 to the fuel suction supports No. 1.

NOTICE:

Be careful that the O-ring is not cracked or jammed when installing.



22. INSTALL FUEL SENDER GAGE ASSY



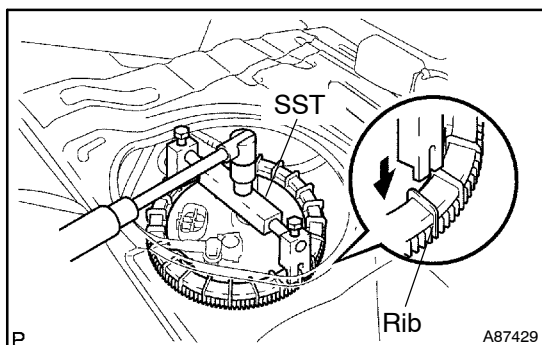
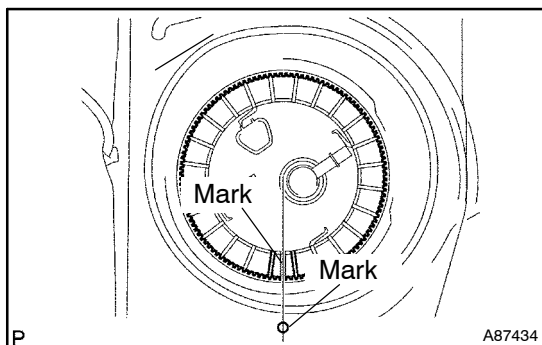
23. INSTALL FUEL SUCTION W/ PUMP & GAUGE TUBE ASSY

- Install a new gasket to the fuel tank.
- Set the fuel tank to the fuel suction with pump & gauge tube.

NOTICE:

Be careful that the fuel sender gauge arm does not bend.

- Align the protrusion of the fuel suction with pump & gauge tube with the notch of the fuel suction tube support.
- While holding the fuel suction with pump & gauge tube by hand, align the marks of a new fuel pump gauge retainer and fuel tank, then install the fuel pump gauge retainer.



- Using SST and your hand, tighten it by 2 revolution so that the mark of the fuel pump gauge retainer comes within the range shown in the illustration.

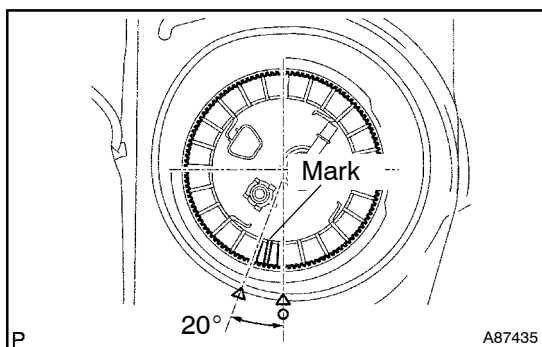
SST 09808-14020 (09808-01410, 09808-01420, 09808-01430)

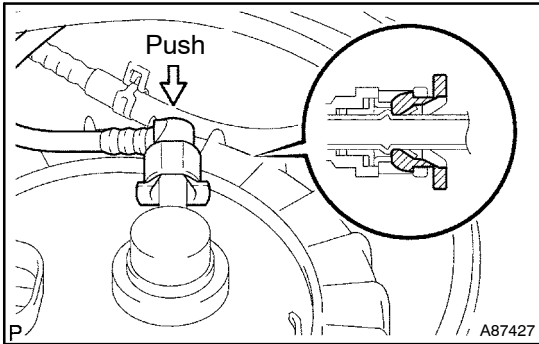
NOTICE:

Use SST. Do not use other tools such as a screwdriver.

HINT:

Insert the Notch of SST to the convex of the fuel pump gauge retainer.

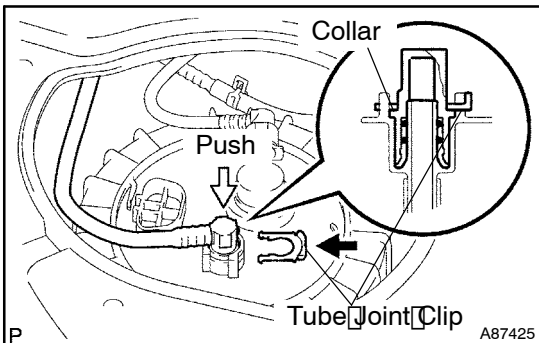




- (f) Connect the fuel evaporation tube No. 2.
- (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound to connect the fuel evaporation tube No. 2 to the pipe of the fuel suction with pump & gauge tube.

NOTICE:

- Check that there are no scratches or foreign objects around the connected part of the fuel tube connector and pipe before this work.
- After connecting the fuel evaporation tube No. 2, check that the fuel tube connector and pipe are securely connected by pulling them.



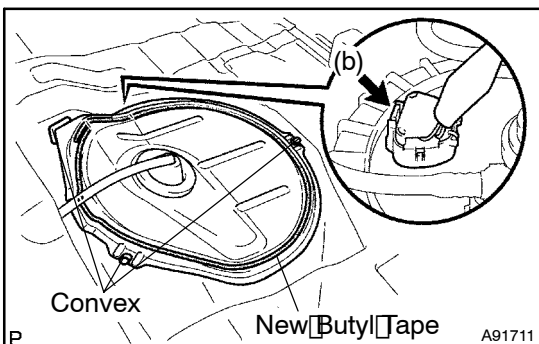
- (g) Connect the fuel pump tube.
- (1) Push in the fuel tube joint to the plug of the suction with pump & gauge tube, then install the tube joint clip.

NOTICE:

- Check that there are no scratches or foreign objects around the connected part of the fuel tube joint and plug before this work.
- Check that the fuel tube joint is securely inserted to the end.
- Check that the tube joint clip is on the collar of the fuel tube joint.
- After installing the tube joint clip, check that the fuel pump tube cannot be pulled out.

24. CONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 9-2)

25. CHECK FOR FUEL LEAKS (See page 11-7)



26. INSTALL REAR FLOOR SERVICE HOLE COVER

- (a) Attach new butyl tape to the rear floor service hole cover.
- (b) Connect the fuel pump connect.
- (c) Install the rear floor service hole cover while adjusting it to the 3 convexes of the floor panel.

NOTICE:

Be careful that the rear floor service hole cover does not mount on the convex of the floor panel when installing.

27. INSTALL REAR SEAT CUSHION ASSY (See page 72-9)

28. INSTALL REAR FLOOR BOARD NO.3

29. INSTALL DECK FLOOR BOX REAR

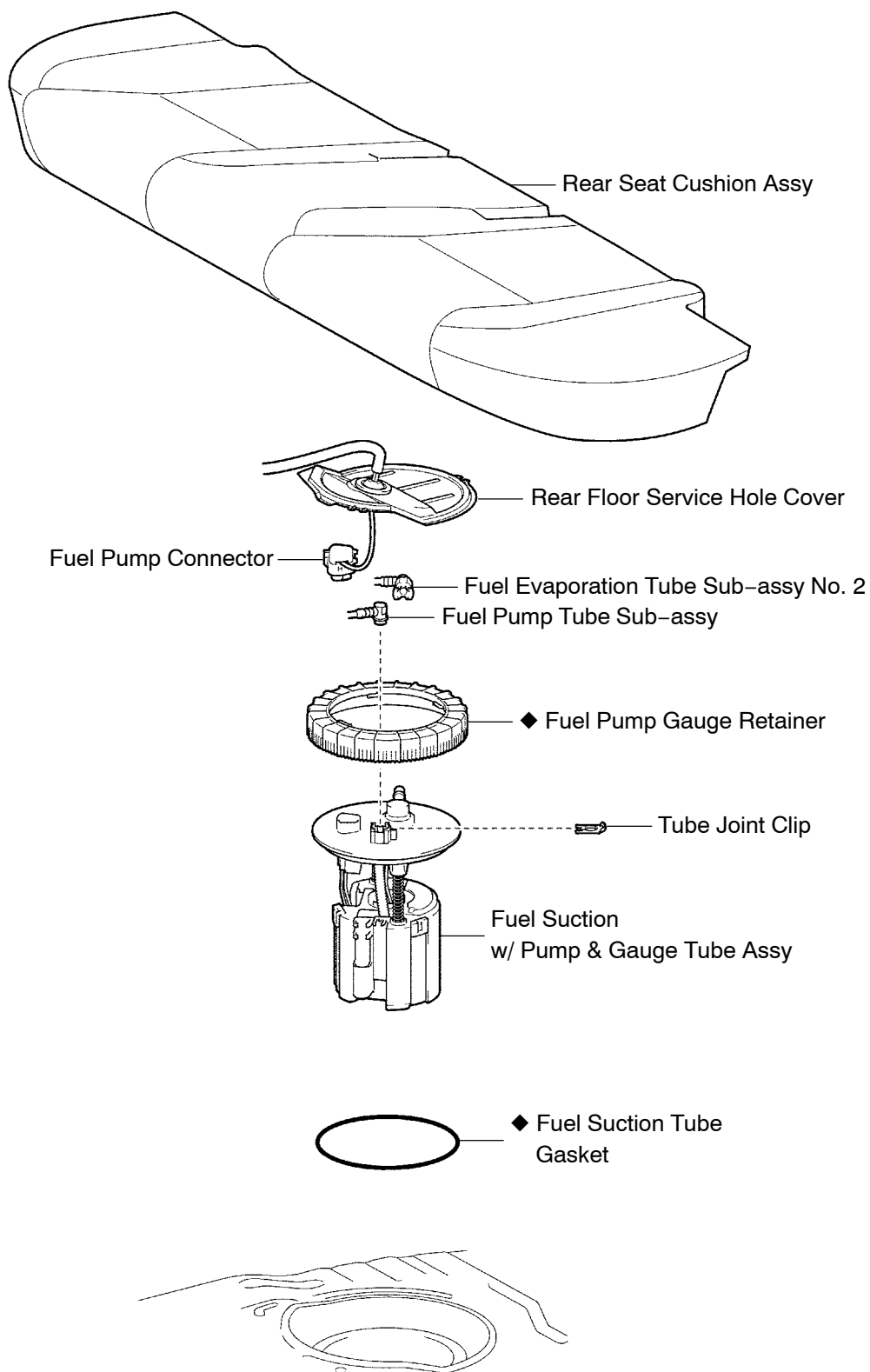
30. INSTALL REAR FLOOR BOARD NO.2

31. POWER WINDOW CONTROL SYSTEM INITIALIZE (See page 01-29)

FUEL TANK ASSY (1NZ-FXE)

COMPONENTS

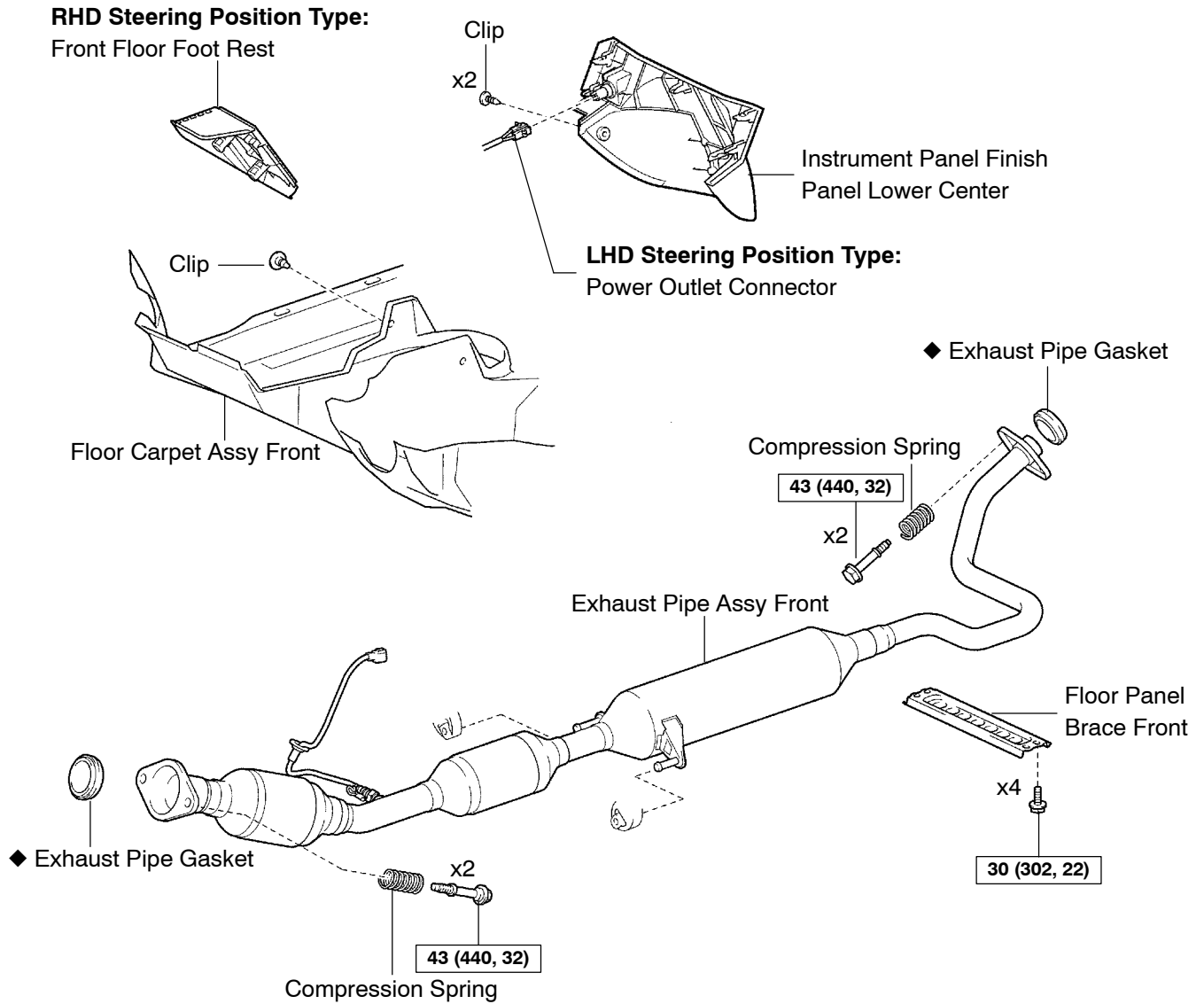
1111Q-01



◆ Non-reusable part

P

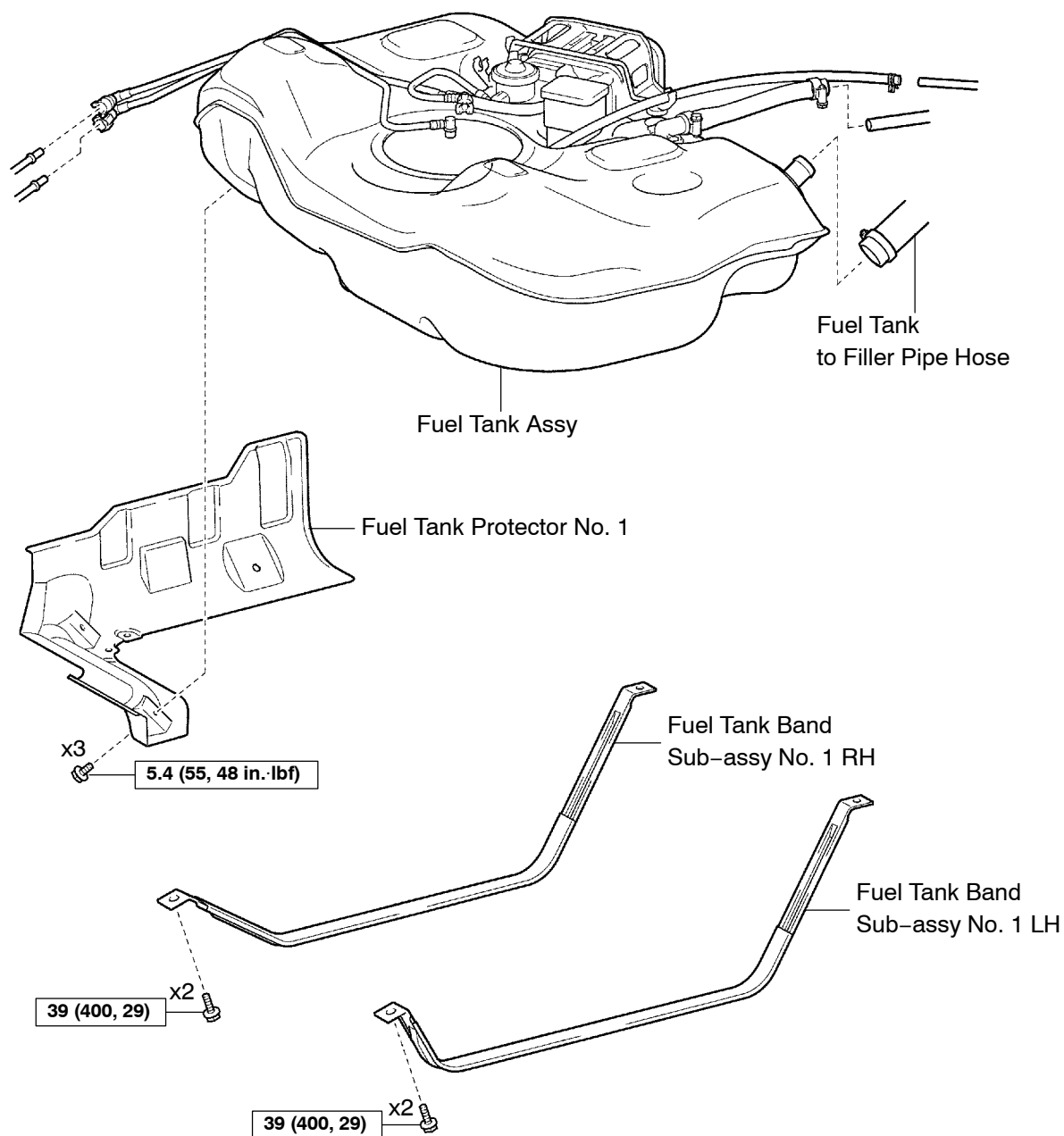
A86328



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

◆ Non-reusable part

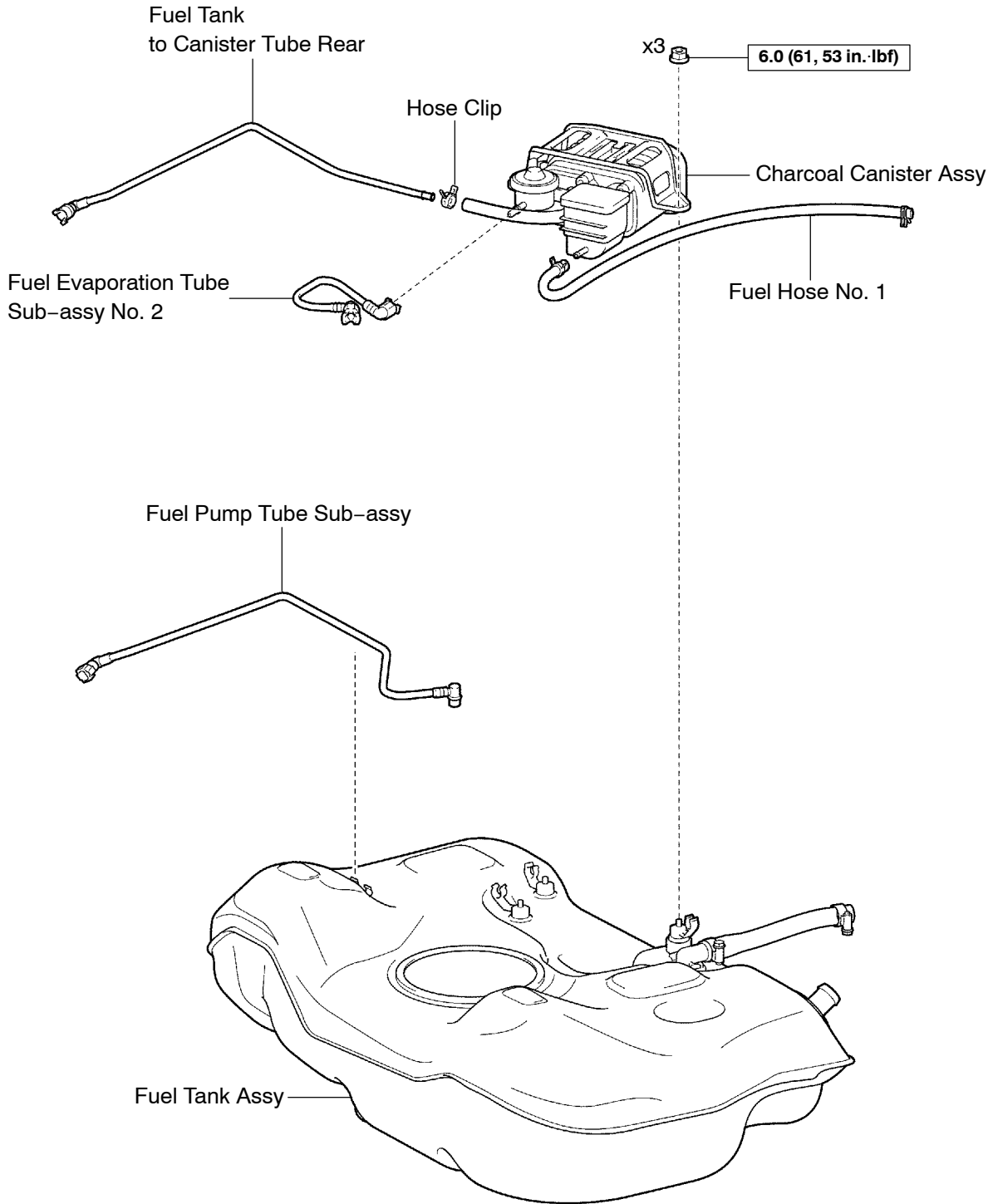
A88302



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

P

A86321

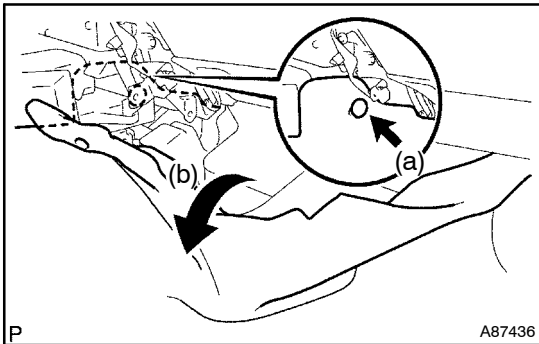


N·m (kgf·cm, ft·lbf) : Specified torque

A86322

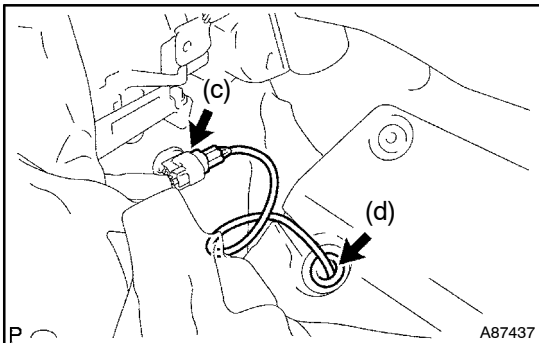
Removal & Installation and Disassembly & Reassembly

1. DISCHARGE FUEL SYSTEM PRESSURE (See page 11-3)
2. REMOVE REAR FLOOR BOARD NO.2 (See page 19-2)
3. REMOVE DECK FLOOR BOX REAR (See page 19-2)
4. REMOVE REAR FLOOR BOARD NO.3 (See page 19-2)
5. DISCONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 19-2)
6. REMOVE REAR SEAT CUSHION ASSY (See page 72-9)
7. REMOVE REAR FLOOR SERVICE HOLE COVER (See page 11-25)
8. REMOVE FUEL SUCTION W/ PUMP & GAUGE TUBE ASSY (See page 11-25)
SST 09808-14020 (09808-01410, 09808-01420, 09808-01430)
9. DRAIN FUEL
10. REMOVE FLOOR PANEL BRACE FRONT (See page 15-2)
11. REMOVE FRONT FLOOR FOOTREST (RHD STEERING POSITION TYPE) (See page 76-25)
12. REMOVE INSTRUMENT PANEL FINISH PANEL LOWER CENTER (See page 71-13)



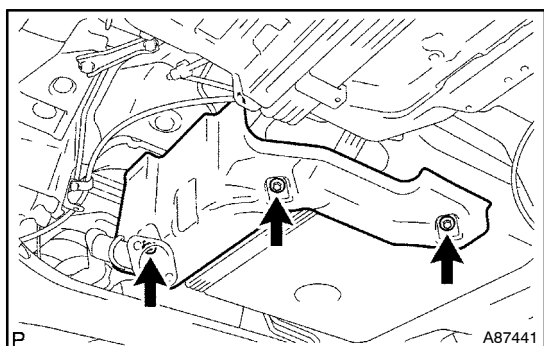
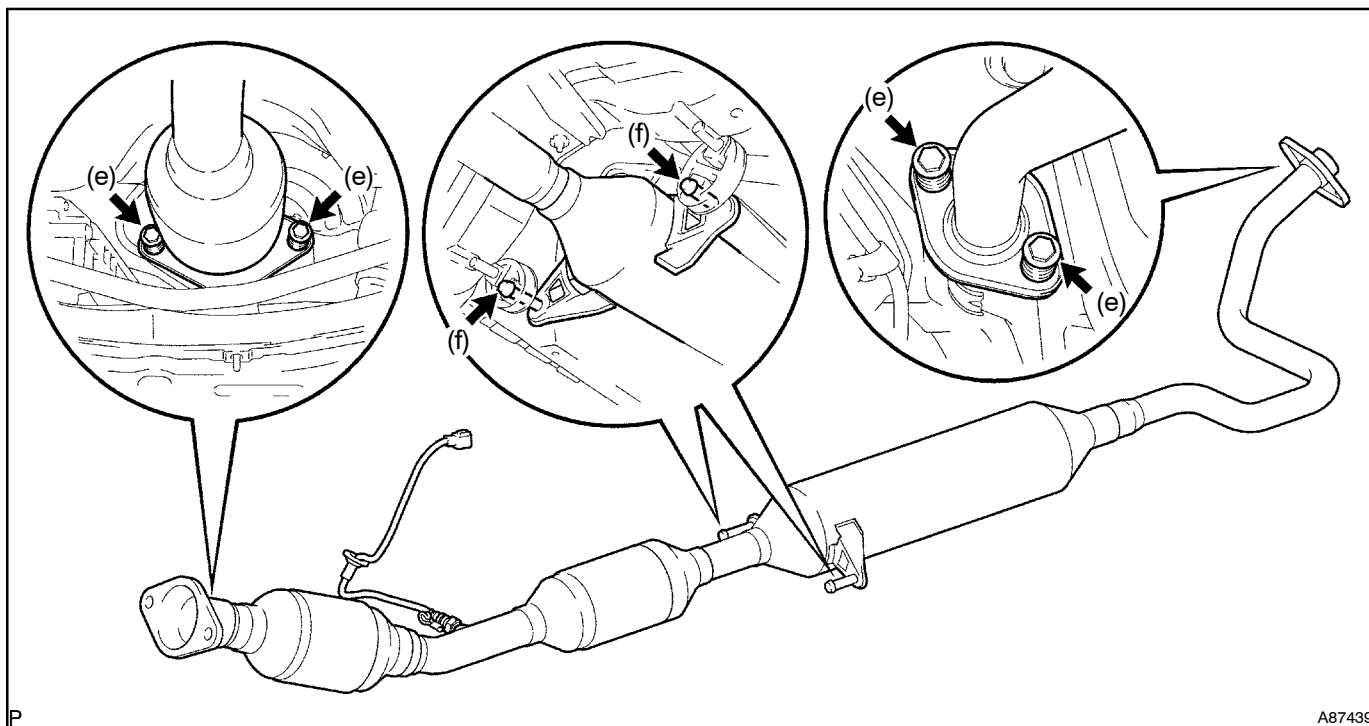
13. REMOVE EXHAUST PIPE ASSY FRONT

- (a) Using a clip remover, remove the clip.
- (b) Pull off the floor carpet front.



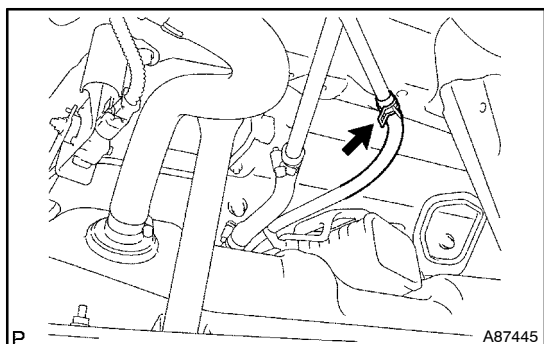
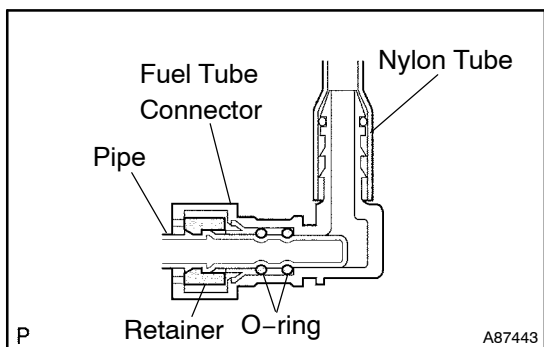
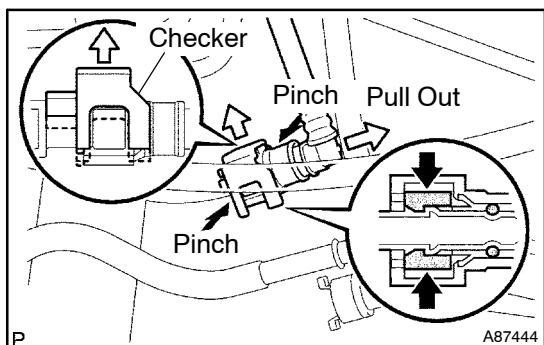
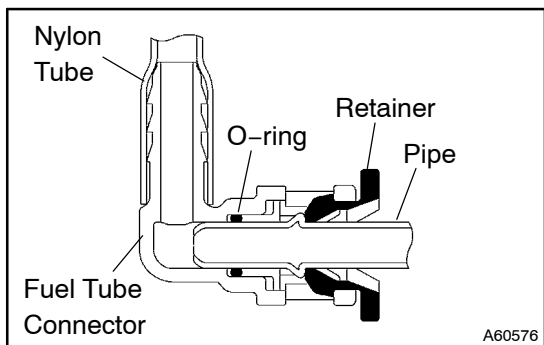
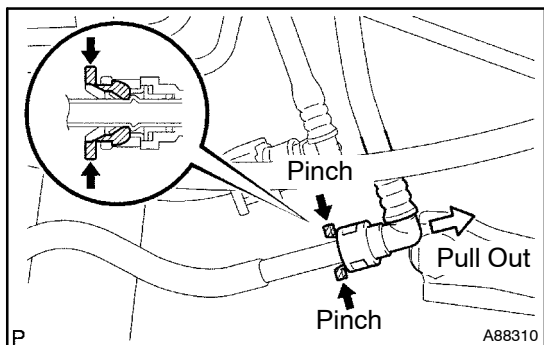
- (c) Disconnect the heated oxygen sensor connector.
- (d) Remove the grommet from the vehicle.

- (e) Remove the 4 bolts and 4 compression springs.
- (f) Remove the exhaust pipe front from the 2 exhaust pipe supports.
- (g) Remove the 2 gaskets from the exhaust manifold and exhaust pipe front.



14. REMOVE FUEL TANK PROTECTOR NO.1

- (a) Remove the 3 bolts, then remove the fuel tank protector No. 1.



15. REMOVE FUEL TANK ASSY

(a) Disconnect the fuel tank to canister tube rear.

- (1) Pinch the retainer of the fuel tube connector, then pull out the fuel tube connector to disconnect the fuel tank to canister tube rear from the pipe.

NOTICE:

- Remove dirt or foreign objects on the fuel tube connector before this work.
- Do not allow any scratches or foreign objects on the parts when disconnecting as the fuel tube connector has the O-ring that seals the pipe.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag after disconnecting the fuel tank to canister tube rear.
- If the fuel tube connector and pipe are stuck, push and pull them to release.

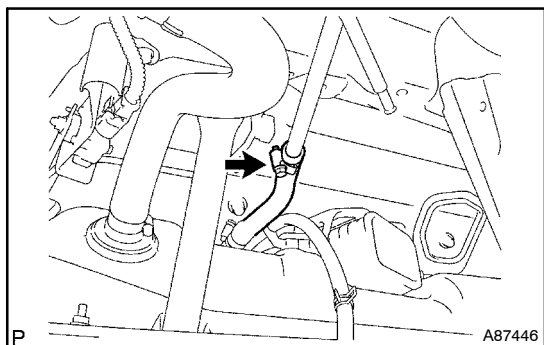
(b) Disconnect the fuel pump tube.

- (1) Remove the checker of the fuel tube connector from the pipe.
- (2) Pinch the retainer of the fuel tube connector, then pull out the fuel tube connector to disconnect the fuel pump tube from the pipe.

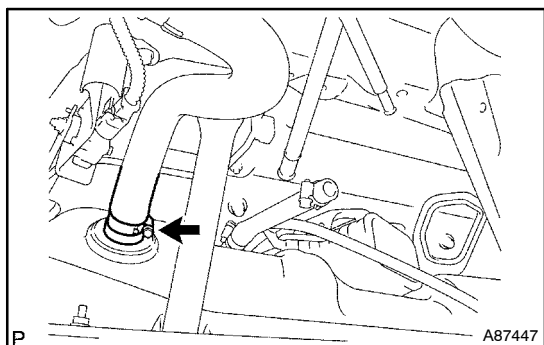
NOTICE:

- Remove dirt or foreign objects on the fuel tube connector before this work.
- Do not allow any scratches or foreign objects on the parts when disconnecting as the fuel tube connector has the O-ring that seals the pipe.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag after disconnecting fuel pump tube.
- If the fuel tube connector and pipe are stuck, push and pull them to release.

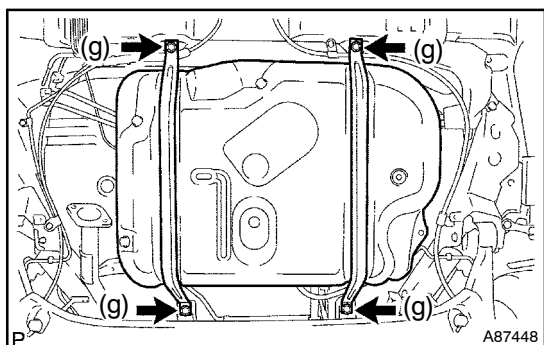
(c) Disconnect the fuel hose No. 1 from the fuel tank to filler pipe.



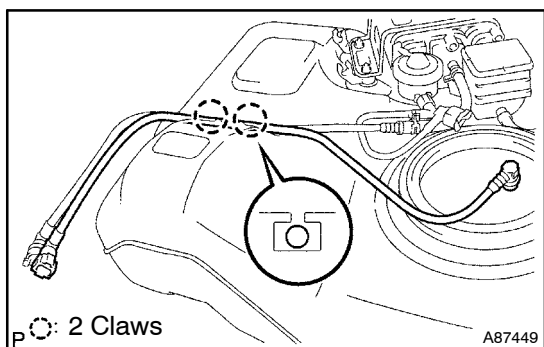
- (d) Loosen the hose clamp bolt, then disconnect the fuel tank breather tube from the fuel tank to filler pipe.



- (e) Loosen the hose clamp bolt, then disconnect the fuel tank to filler pipe hose from the fuel tank.

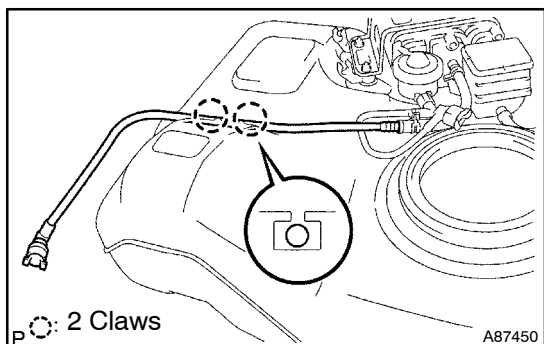


- (f) Hold the fuel tank using a transmission jack.
 (g) Remove the 4 bolts and fuel tank band No. 1 RH and LH.
 (h) Operate the transmission jack, then remove the fuel tank.



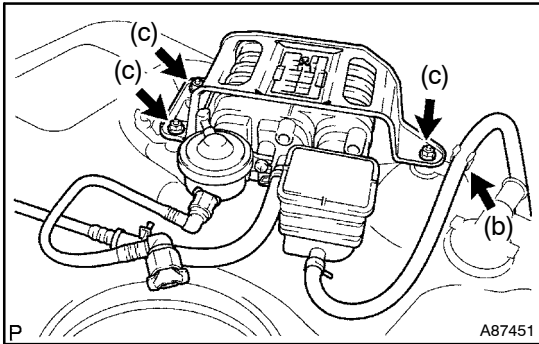
16. REMOVE FUEL PUMP TUBE SUB-ASSY

- (a) Separate the 2 claw fittings, then remove the fuel pump tube.

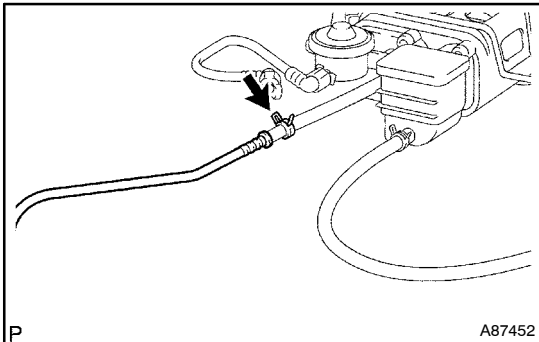


17. REMOVE CHARCOAL CANISTER ASSY

- (a) Separate the 2 claw fittings, then remove the fuel tank to canister tube rear.

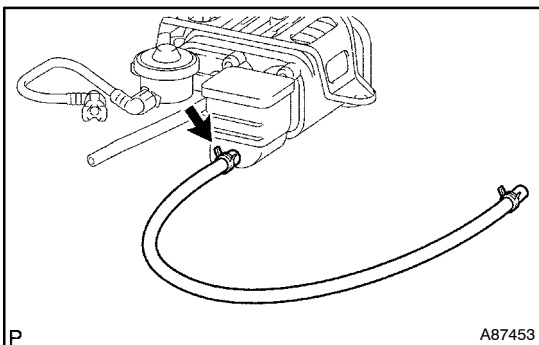


- (b) Remove the fuel hose No. 1 from the clamp.
 (c) Remove the 3 nuts, then remove the charcoal canister.



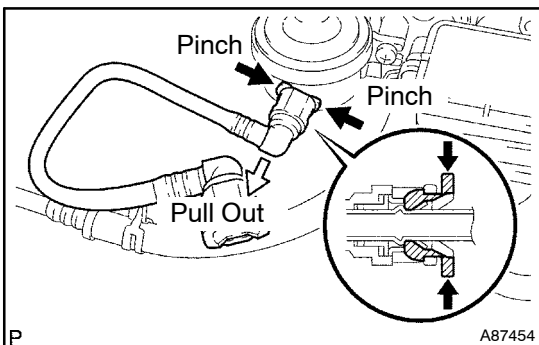
18. REMOVE FUEL TANK TO CANISTER TUBE SUB-ASSY REAR

- (a) Remove the fuel tank to canister tube rear from the charcoal canister.



19. REMOVE FUEL HOSE NO.1

- (a) Remove the fuel hose No. 1 from the charcoal canister.

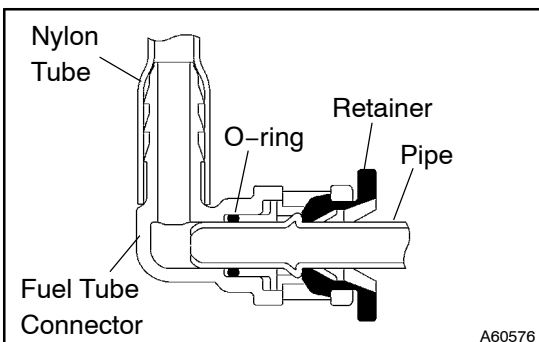


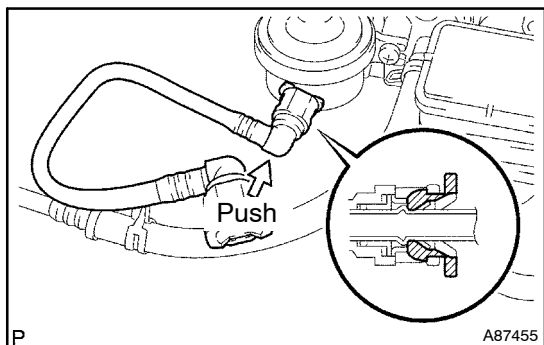
20. REMOVE FUEL EVAPORATION TUBE SUB-ASSY NO.2

- (a) Pinch the retainer of the fuel tube connector, then pull out the fuel tube connector to remove the fuel evaporation tube No. 2 from the charcoal canister.

NOTICE:

- Remove dirt or foreign objects on the fuel tube connector before this work.
- Do not allow scratches or foreign objects on the parts when disconnecting as the fuel tube connector has the O-ring that seals the pipe.
- Perform this work by hand. Do not use any tools.
- Do not forcibly bend, twist or turn the nylon tube.
- Protect the connected part by covering it with a vinyl bag after disconnecting the fuel evaporation tube No. 2.
- If the fuel tube connector and pipe are stuck, push and pull them to release.





21. INSTALL FUEL EVAPORATION TUBE SUB-ASSY NO.2

- (a) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound to install the fuel evaporation tube No. 2 to the charcoal canister.

NOTICE:

- Check that there are no scratches or foreign objects around the connected part of the fuel tube connector and pipe before this work.
- After connecting the fuel evaporation tube No. 2, check that the fuel evaporation tube No. 2 is securely connected by pulling the fuel tube connector and pipe.

22. INSTALL FUEL HOSE NO.1

23. INSTALL FUEL TANK TO CANISTER TUBE SUB-ASSY REAR

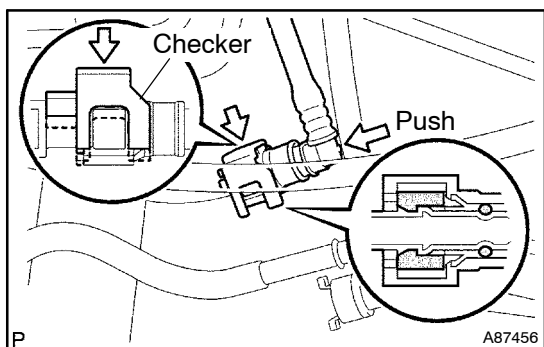
24. INSTALL CHARCOAL CANISTER ASSY

Torque: 6.0 N·m (61 kgf·cm, 53 in·lbf)

25. INSTALL FUEL PUMP TUBE SUB-ASSY

26. INSTALL FUEL TANK ASSY

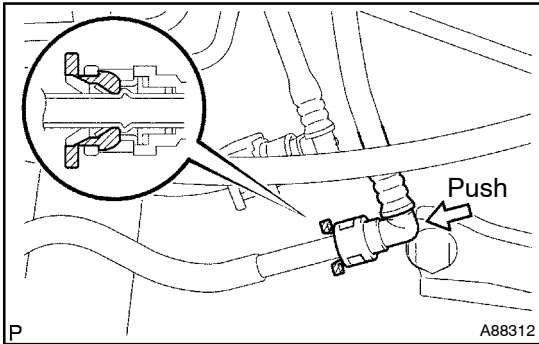
- (a) Set the fuel tank to a transmission jack.
- (b) Operate the transmission jack, then install the fuel tank.
- (c) Install the fuel tank band No. 1 RH and LH with the 4 bolts.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)
- (d) Connect the fuel tank to filler pipe hose to the fuel tank.
- (e) Connect the fuel tank breather tube to the fuel tank to filler pipe.
- (f) Connect the fuel hose No. 1 to the fuel tank to filler pipe.



- (g) Connect the fuel pump tube.
 - (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound to connect the fuel pump tube to the pipe.

NOTICE:

- Check that there are no scratches or foreign objects around the connected part of the fuel tube connector and pipe before this work.
- After connecting and pipe fuel pump tube, check that the fuel pump tube is securely connected by pulling the fuel tube connector and pipe.
- (2) Install the checker to the pipe.



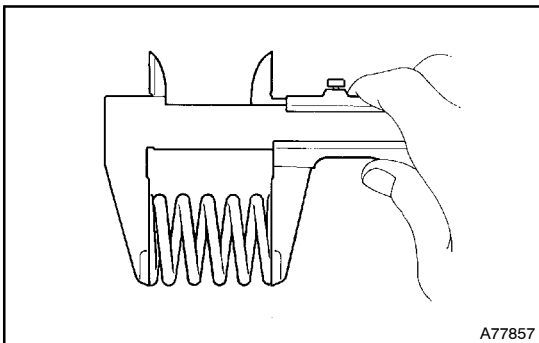
- (h) Connect the fuel tank to canister tube rear.
- (1) Align the fuel tube connector with the pipe, then push in the fuel tube connector until the retainer makes a "click" sound to connect the fuel tank to canister tube rear to the pipe.

NOTICE:

- Check that there are no scratches or foreign objects around the connected part of the fuel tube connector and pipe before this work.
- After connecting the fuel tank to canister tube rear, check that the fuel tank to canister tube rear is securely connected by pulling the fuel tube connector and pipe.

27. INSTALL FUEL TANK PROTECTOR NO.1

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

**28. INSTALL EXHAUST PIPE ASSY FRONT**

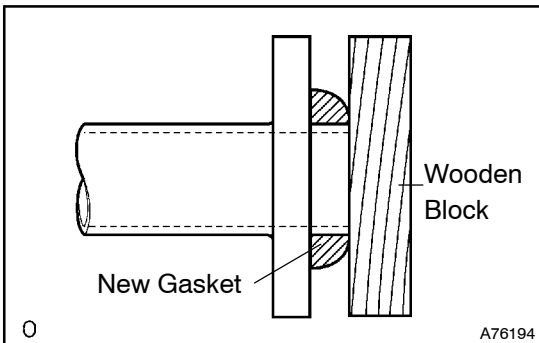
- (a) Inspect the free length.
- (1) Using vernier calipers, measure the free length of the compression spring.

Minimum:

40.5mm (1.594 in.) for Exhaust pipe front x Exhaust manifold

38.5mm (1.516 in.) for Exhaust pipe front x Exhaust pipe tail

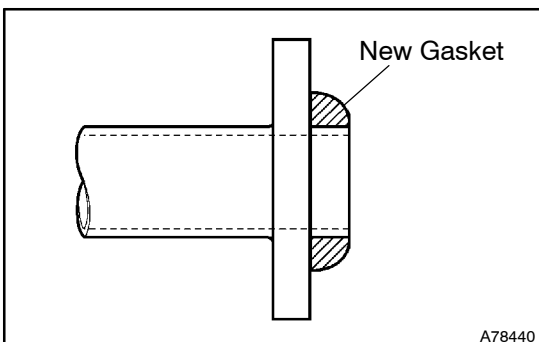
If the free length is less than minimum, replace the compression spring.



- (b) Using a wooden block and plastic-faced hammer, tap in a new gasket until it is flush with the exhaust manifold.

NOTICE:

- Be careful of the installation direction of a new gasket.
- Do not reuse the removed gasket.
- Never push a new gasket into the exhaust manifold by installing the exhaust pipe front to the exhaust manifold.



- (c) Install a new gasket to the exhaust pipe front.

NOTICE:

Be careful of the installation direction of a new gasket.

- (d) Install the exhaust pipe front to the 2 exhaust pipe supports.
- (e) Tighten the 4 compression springs and 4 bolts.
Torque: 43 N·m (440 kgf·cm, 32 ft·lbf)
- (f) Install the grommet of the heated oxygen sensor to the vehicle.
- (g) Connect the heated oxygen sensor connector.

(h) Install the floor carpet front with the clip.

29. INSTALL INSTRUMENT PANEL FINISH PANEL LOWER CENTER
30. INSTALL FRONT FLOOR FOOTREST (RHD STEERING POSITION TYPE) (See page 76-25)
31. ADD FUEL
32. INSTALL FUEL SUCTION W/ PUMP & GAUGE TUBE ASSY (See page 11-25)
SST 09808-14020 (09808-01410, 09808-01420, 09808-01430)
33. CONNECT ENGINE WIRE NO.3 (BATTERY NEGATIVE TERMINAL) (See page 19-2)
34. CHECK FOR FUEL LEAKS (See page 1-7)
35. CHECK FOR EXHAUST GAS LEAKS
36. INSTALL FLOOR PANEL BRACE FRONT (See page 15-2)
37. INSTALL REAR FLOOR SERVICE HOLE COVER (See page 11-25)
38. INSTALL REAR SEAT CUSHION ASSY (See page 72-9)
39. INSTALL REAR FLOOR BOARD NO.3
40. INSTALL DECK FLOOR BOX REAR
41. INSTALL REAR FLOOR BOARD NO.2
42. POWER WINDOW CONTROL SYSTEM INITIALIZE (See page 01-29)