## **FUEL SYSTEM**

#### **PRECAUTION**

#### 1. EXPRESSIONS OF IGNITION SWITCH

(a) The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this section.

Switch Type		Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition Switch off	LOCK	Off
	Ignition Switch on (IG)	ON	On (IG)
	Ignition Switch on (ACC)	ACC	On (ACC)
	Engine Start	START	Start

#### 2. PRECAUTION

- (a) Before inspecting and repairing the fuel system, disconnect the negative (-) battery cable.
- (b) Do not smoke or work near fire when handling the fuel system.
- (c) Keep gasoline away from rubber or leather parts.

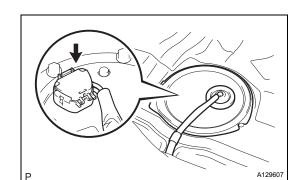
# 3. DISCHARGE FUEL SYSTEM PRESSURE CAUTION:

- Perform the following procedures to prevent fuel from spilling out before removing any fuel system parts.
- Pressure will still remain in the fuel line even after performing the following procedures. When disconnecting the fuel line, cover with a shop rag or a piece of cloth to prevent fuel from spraying or spewing out.
- (a) Disconnecting the fuel pump connector.
  - (1) Remove the rear seat cushion assembly.
  - (2) Remove the rear floor service hole cover.
  - (3) Disconnect the fuel pump connector.
  - (4) Start the engine.
  - (5) After the engine stops, turn the ignition switch off.

HINT:

DTC P0171/25 (fuel problem) and/or P0191/49 (fuel pressure sensor signal error) may be detected.

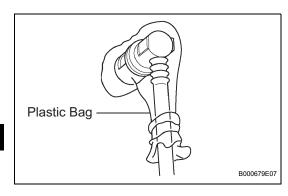
- (6) Crank the engine again. Check that the engine does not start.
- (7) Remove the fuel tank cap to discharge pressure from the fuel tank.
- (8) Disconnect the negative (-) battery terminal cable.
- (9) Reconnect the fuel pump connector.
- (10)Install the rear floor service hole cover.
- (11)Install the rear seat.





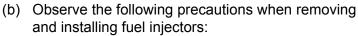
#### 4. FUEL SYSTEM

- (a) When disconnecting the high fuel pressure line, a large amount of gasoline will spill out, so observe the following procedures:
  - (1) Discharge the fuel system pressure. (step 3)
  - (2) Disconnect the fuel pump tube (See page FU-26).
  - (3) Drain the fuel that remains inside the fuel pump tube.
  - (4) To protect the disconnected fuel pump tube from damage and contamination, cover it with a plastic bag.
  - (5) Put a container under the connection part.



CORRECT

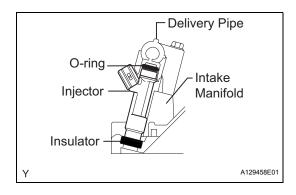
O-Ring



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

#### NOTICE:

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



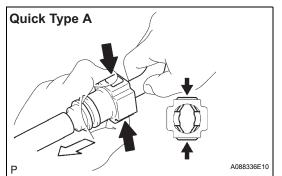
**Delivery Pipe** 

A075945E06

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

#### NOTICE:

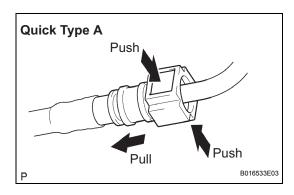
Before installing the injector, be sure to apply grease or gasoline on the place where the delivery pipe or cylinder head contacts the Oring of the injector.

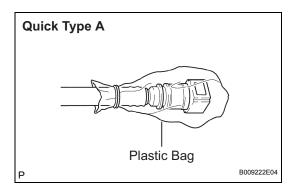


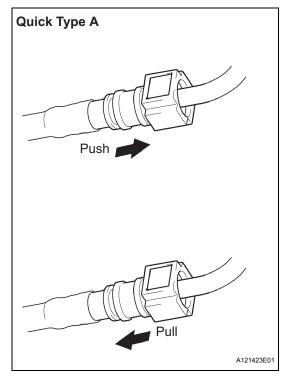
- (d) Observe the following precautions when disconnecting the fuel tube connectors (Quick type A):
  - (1) Remove the fuel pipe clamp No.1.

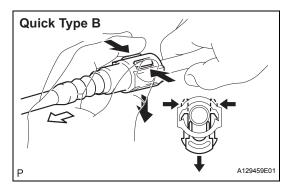


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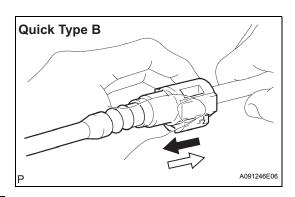


- (2) Check that there is no dirt or order foreign objects on the pipe and around the connector before disconnecting them. Clean them it necessary.
- (3) Disconnect the connector from the pipe by hand.
- (4) When the connector and the pipe are stuck, push in and pull on the connector to release it and pull the connector out of the pipe carefully.
- (5) Check that there is no dirt or other foreign objects on the sealing 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.



- (e) Observe the following precautions when connecting the fuel tube connectors (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. If 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 security connected by pulling on them.
  - (4) Check for fuel leaks.

- (f) Observe the following precautions when disconnecting the fuel tube connector (Quick type B):
  - (1) Check that there is no dirt or other foreign objects around the connector before disconnecting the fuel pump tube.



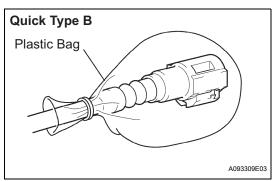
(2) Disengage the 2 claws of the connector retainer. Push down on the connector and disconnect it from the pipe.

HINT:

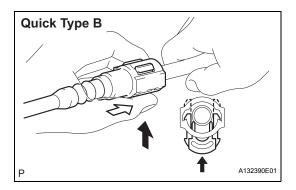
Be sure to disconnect it by hand.

- (3) If the connector and pipe are stuck, pinch the fuel pipe by hand and push or pull on the connector to disconnect it.
- (4) Check that there is no dirt or other foreign objects on the sealing surface of the disconnected pipe.





(5) Do no damage the connector and pipe, and prevent intrusion of foreign objects by covering them with a plastic bag.



- (g) Observe the following precautions when disconnecting the fuel tube connector (Quick Type B):
  - (1) Match the axis of the connector with the axis of the pipe. Push into the connector and push up on the retainer.

HINT:

If it is hard to make the connection, apply a small amount of engine oil to the tip of the pipe.

- (2) After finishing the connection, pull on the connector and pipe and make sure that they are securely connected.
- (3) Check for fuel leaks.
- (h) Observe the following precautions when handling a nylon tube:

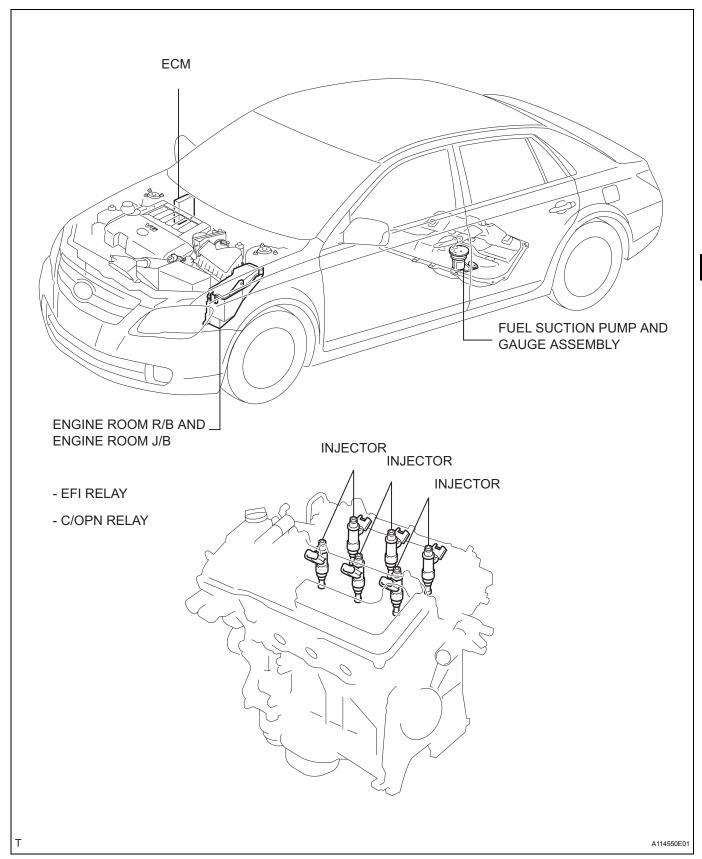
#### **CAUTION:**

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

#### 5. CHECK FOR FUEL LEAKS

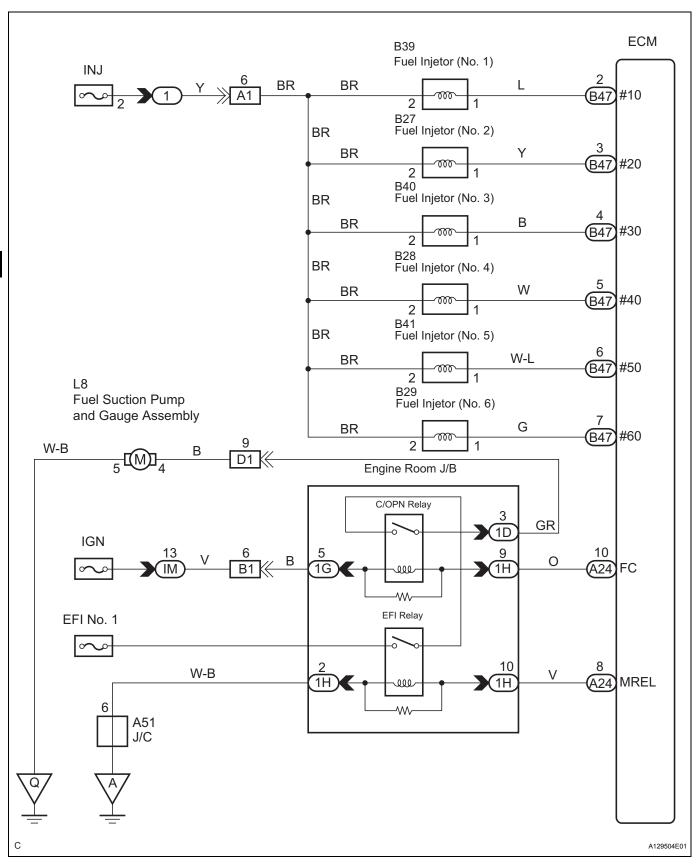
 (a) Check that there are no fuel leaks after doing maintenance on the fuel system (See page FU-19).

# **PARTS LOCATION**

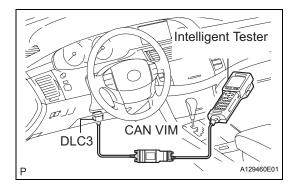


FU

# **SYSTEM DIAGRAM**



FU



#### ON-VEHICLE INSPECTION

# 1. CHECK FOR FUEL PUMP OPERATION AND FUEL LEAK

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch on (IG).

#### NOTICE:

#### Do not start the engine.

- (c) Turn the intelligent tester on.
- (d) On the intelligent tester, select following the items: Powertrain / Engine and ETC / Active Test / Control the Fuel Pump / speed.
- (e) Check fuel pump operation while operating it with the intelligent tester.
- (f) Check that there is pressure in the fuel inlet hose. If the fuel pump does not operate, release it.
- (g) Check that there are no fuel leaks from any part of the fuel system.
- (h) Turn the ignition switch off.
- (i) Disconnect the intelligent tester from the DLC3.

#### 2. CHECK FUEL PRESSURE

(a) Discharge fuel system pressure.

HINT:

See the step 3 of this "PRECAUTION" (See page FU-1)

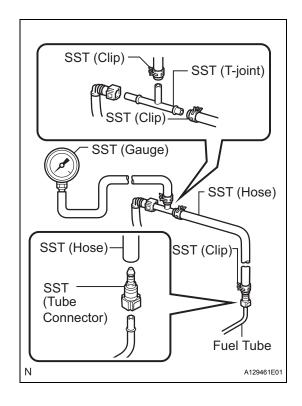
(b) Using a voltmeter, measure the battery voltage. **Standard:** 

#### 11 to 14 V

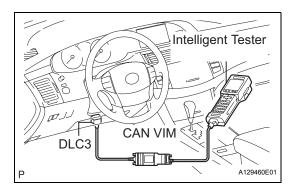
- (c) Disconnect the negative (-) battery cable.
- (d) Disconnect the fuel hose from the fuel main tube (See page FU-26).
- (e) Install SST (pressure gauge) using SST and a fuel tube connector as shown in the illustration.

SST 09268-41048 (90467-13001, 95336-08070, 09268-41500), 09268-45014 (09268-41200, 09268-41220, 09268-41250)

- (f) Wipe up any gasoline.
- (g) Connect the negative (-) battery cable.









- (i) Start the engine.
- (j) Measure the fuel pressure at idle.

#### Fuel pressure:

# 304 to 343 kPa (3.1 to 3.5 kgf\*cm<sup>2</sup>,44.1 to 49.7psi)

- 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.
- (k) Stop the engine.
- (I) Check that the fuel pressure remains as specified for 5 minutes after the engine stops.

#### Fuel pressure:

## 147 kPa (1.5 kgf\*cm<sup>2</sup>, 21 psi) or more

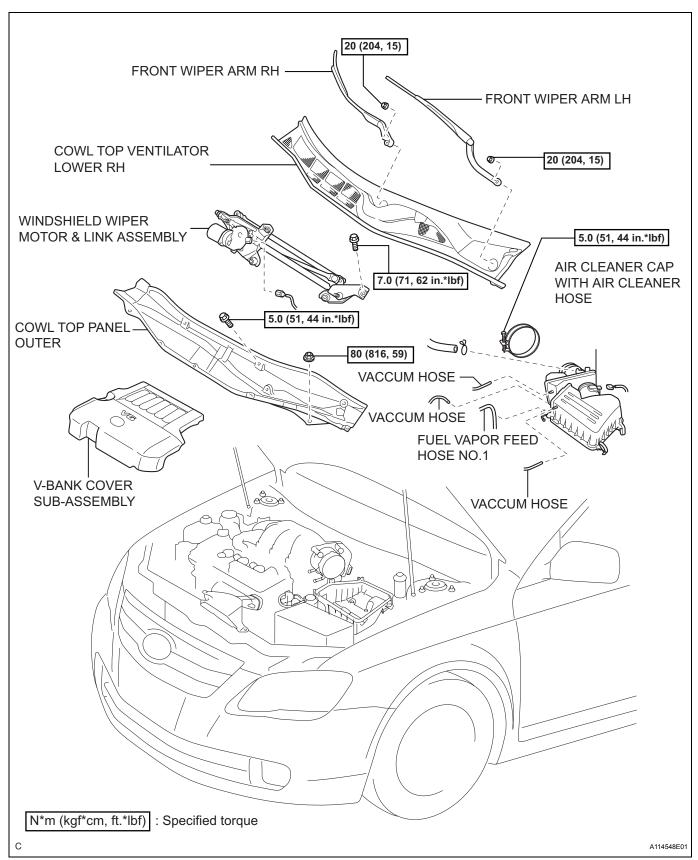
If the fuel pressure is not as specified, check the fuel pump or fuel injector.

- (m) After checking the fuel pressure, carefully disconnect the negative (-) battery cable, and remove the SST and fuel tube connector to prevent gasoline from splashing.
- (n) Reconnect the fuel tube to the main fuel tube.
- (o) Check for fuel leaks (See page FU-19).

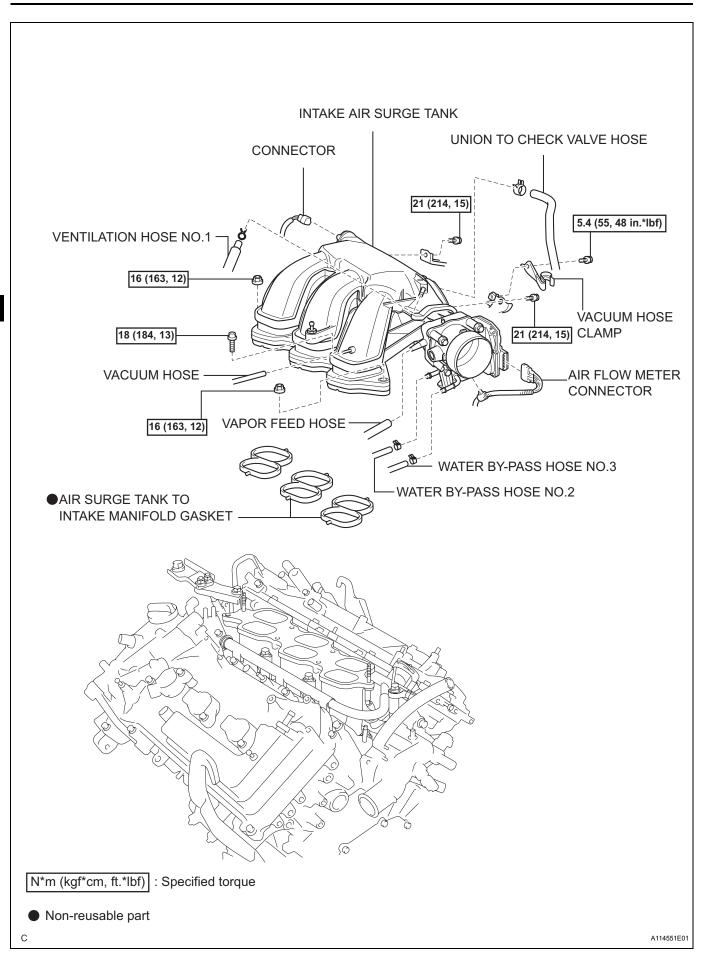


# **FUEL INJECTOR**

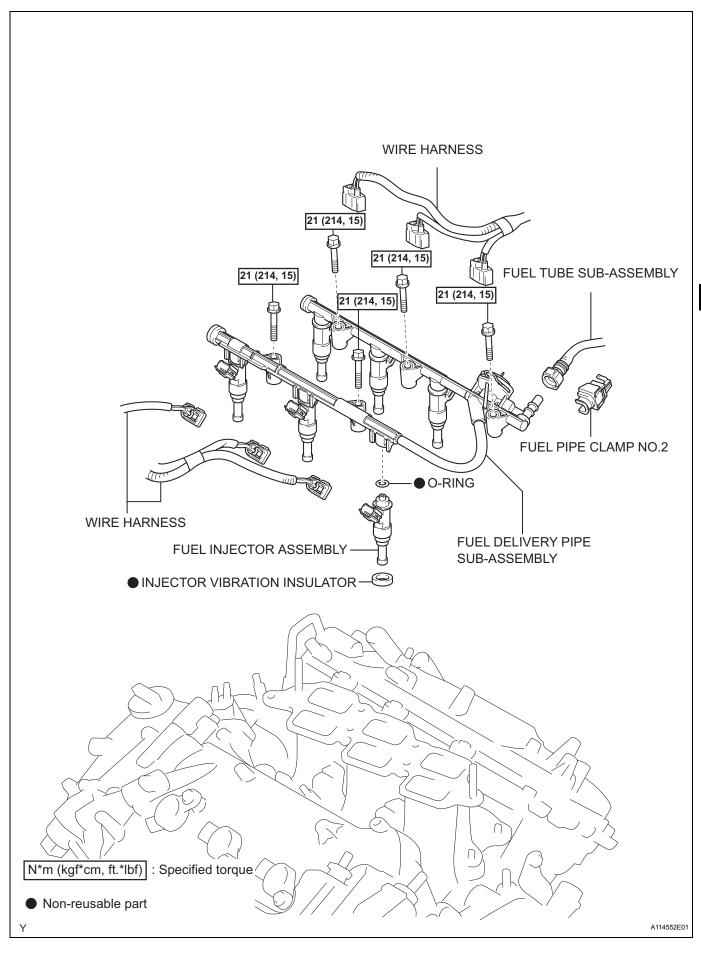
# **COMPONENTS**







FU



FU

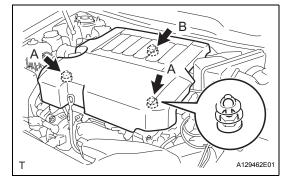
#### **REMOVAL**

- 1. PREVENT GASOLINE FROM SPILLING OUT
- 2. DISCONNECT BATTERY NEGATIVE TERMINAL
- 3. DRAIN ENGINE COOLANT (See page CO-7)
- 4. REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-38)
- 5. REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-38)
- 6. REMOVE COWL TOP VENTILATOR LOUVER RH (See page WW-38)
- 7. REMOVE WINDSHIELD WIPER MOTOR & LINK ASSEMBLY (See page WW-38)
- 8. REMOVE COWL TOP PANEL OUTER (See page BR-20)



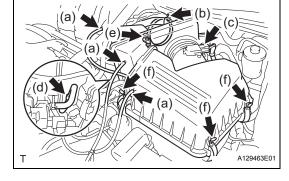
(a) Disengage the 3 clips and remove the v-bank cover. **NOTICE:** 

Be sure to disengage the clips in the order from A to B.



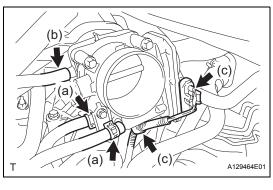
# 10. REMOVE AIR CLEANER CAP WITH AIR CLEANER HOSE

- (a) Disconnect the 3 vacuum hoses.
- (b) Disconnect the ventilation hose No.1.
- (c) Disconnect the air flow meter connector.
- (d) Separate the fuel vapor feed hose No.1.
- (e) Loosen the hose clamp bolt.
- (f) Remove the 3 clamps and air cleaner cap with air cleaner hose.

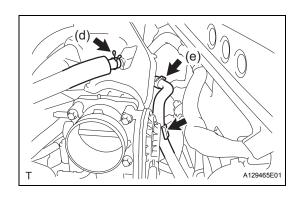


#### 11. REMOVE INTAKE AIR SURGE TANK

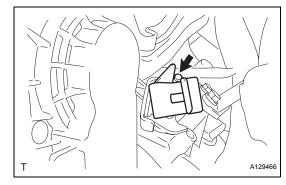
- (a) Disconnect the 2 water by-pass hoses from the throttle w/ motor body assembly.
- (b) Disconnect the vapor feed hose.
- (c) Disconnect the throttle w/ motor body assembly connector and clamp.





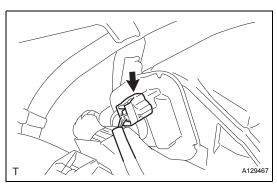


- (d) Disconnect the ventilation hose No.2.
- (e) Disconnect the union to check valve hose.

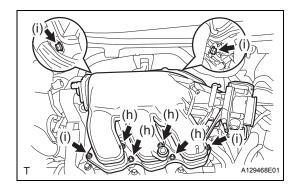


(f) Remove the bolt and vacuum hose clamp.

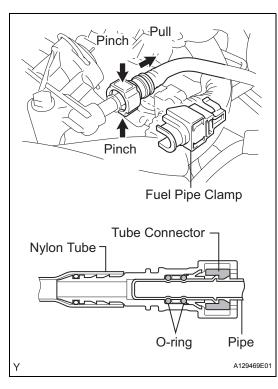




(g) Disconnect the connector.



- (h) Using a 5 mm socket hexagon wrench, remove the 4 bolts.
- (i) Remove the 2 nuts, 2 bolts and intake air surge tank.
- (j) Remove the gasket from the intake air surge tank.

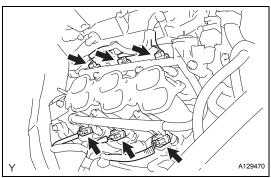


#### 12. DISCONNECT FUEL TUBE SUB-ASSEMBLY

- (a) Remove the fuel pipe clamp No.2.
- (b) Pinch the tube connector and then pull out the fuel pipe.

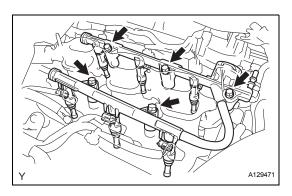
#### NOTICE:

- Check that there is no dirt or other foreign objects around the connector before this operation and clean the connector as necessary.
- Be careful of mud because the quick connector has O-rings which seal the pipe and connector that can be contaminated.
- · Do not use any tools in this operation.
- Do not bend or twist the nylon tube. Protect the connector by covering it with a plastic bag.
- When the pipe and the connector are stuck, push and pull the connector to release and pull the connector out carefully.



#### 13. REMOVE FUEL INJECTOR ASSEMBLY

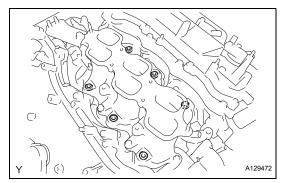
(a) Disconnect the 6 fuel injector connectors.



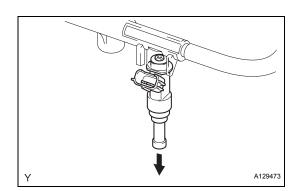
(b) Remove the 5 bolts and fuel delivery pipe together with the 6 fuel injectors.

#### NOTICE:

Be careful not to drop the fuel injectors when removing the fuel delivery pipe.



(c) Remove the 6 insulators from the intake manifold.



(d) Pull out the fuel injector from the fuel delivery pipe.



#### INSPECTION

#### 1. INSPECT FUEL INJECTOR ASSEMBLY

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

#### Resistance:

11.6 to 12.4  $\Omega$  at 20°C (68°F)

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

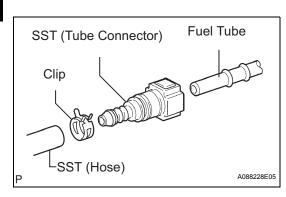
(b) Inspect the injection volume.

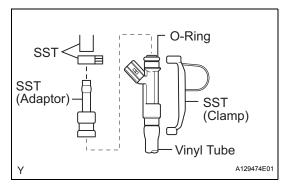
#### **CAUTION:**

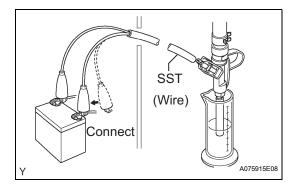
This test involves high - pressure fuel and electricity. Take every precaution regarding safe handling of both the fuel and the electricity. Perform this test in a safe area, and avoid any sparks or flames. Do not smoke.

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

SST 09268-41048 (95336-08070, 09268-41500)







- (2) Install the O-ring to the fuel injector.
- (3) Connect SST (adaptor and hose) to the injector, and hold the injector and union with SST (clamp).

SST 09268-41048 (09268-41130, 90467-13001), 09268-41400

(4) Put the injector into the graduated cylinder. **CAUTION:** 

Install a suitable vinyl tube onto the injector to contain gasoline spray.

- (5) Operate the fuel pump (See page FU-7).
- (6) Connect SST (wire) to the injector and the battery for 15 seconds, and measure the injection volume with the graduated cylinder. Test each injector 2 or 3 times.

SST 09842-30080

Volume:

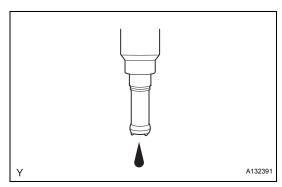
84 to 100 cm<sup>3</sup>(5.1 to 6.0 cu in.) in 15 seconds

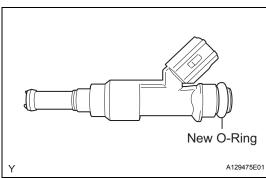
Difference between each injector:

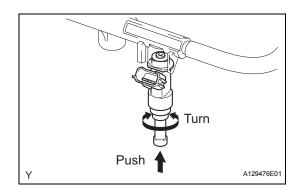
16 cm<sup>3</sup>(0.96 cu in.) or less

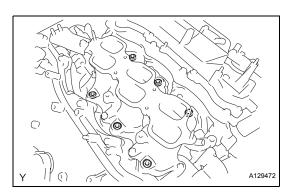
If the injection volume is not as specified, replace the injector.

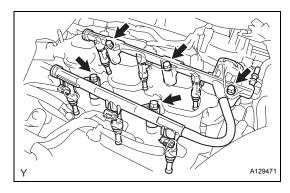












- (c) Check for leakage.
  - (1) In the condition above, disconnect the tester probes of SST (wire) from the battery and check for fuel leakage from the injector.

#### Fuel drop:

1 drop or less in 16 minutes

#### INSTALLATION

- **INSTALL FUEL INJECTOR ASSEMBLY** 
  - (a) Apply a light coat of spindle oil or gasoline to new Orings, and install it to each injector.



- (b) Apply a light coat of spindle oil or gasoline where the fuel delivery pipe contacts the O-ring.
- (c) Push the fuel injector while twisting it back and forth to install it in the fuel delivery pipe.
- (d) Position the fuel injector connector outward.

#### NOTICE:

- Be careful not to twist the O-ring.
- · After installing the fuel injector, check that it turns smoothly. if not, reinstall it with a new O-ring.
- (e) Install 6 new insulators to the intake manifold.

Place the fuel delivery pipe and the 6 fuel injectors together to the intake manifold.

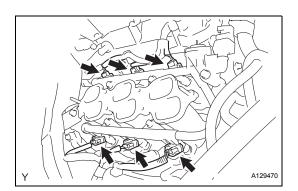
#### NOTICE:

Be careful not to drop the fuel injectors when installing the fuel delivery pipe.

(g) Temporarily install the 6 bolts which are used to hold the fuel delivery pipe to the intake manifold.

#### NOTICE:

After installing the fuel injector, check that it turns smoothly. If not, reinstall it with a new Oring.

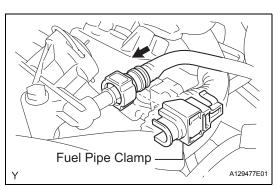


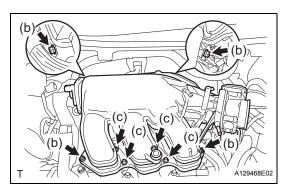
(h) Tighten the 5 bolts which are used to hold the fuel delivery pipe to the intake manifold.

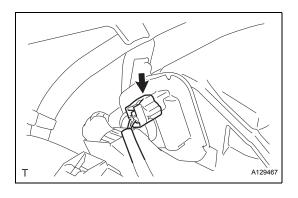
Torque: 21 N\*m (214 kgf\*cm, 15 ft.\*lbf)

(i) Connect the 6 fuel injector connectors.









#### 2. CONNECT FUEL TUBE SUB-ASSEMBLY

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

#### NOTICE:

- Check that there is no damage or foreign objects on the connected part of the fuel pipe.
- After connecting, check if the fuel tube connector and the pipe are securely connected by pulling on them.
- (b) Install the fuel pipe clamp No.2.

#### 3. INSTALL INTAKE AIR SURGE TANK ASSEMBLY

- (a) Install a new gasket to the intake air surge tank.
- (b) Using a 5 mm hexagon socket wrench, install the 4 bolts.

Torque: 18 N\*m (184 kgf\*cm, 13 ft.\*lbf)

(c) Install the intake air surge tank with the 2 nuts and 2 bolts.

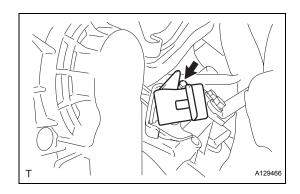
**Torque: Nut** 

16 N\*m (163 kgf\*cm, 12 ft.\*lbf)

Bolt

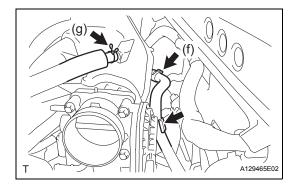
21 N\*m (214 kgf\*cm, 15 ft.\*lbf)

(d) Connect the connector.



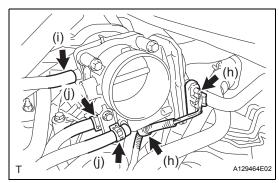
(e) Install the vacuum hose clamp with the bolt.

Torque: 5.4 N\*m (55 kgf\*cm, 48 in.\*lbf)

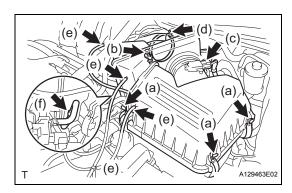


- (f) Connect the union to check valve hose.
- (g) Connect the ventilation hose No.2.



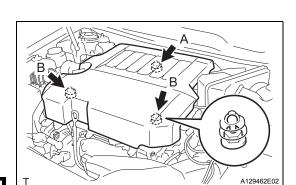


- (h) Install the clamp and connect the throttle w/ motor body assembly connector.
- (i) Connect the vapor feed hose.
- (j) Connect the 2 water by-pass hoses to the throttle w/ motor body assembly.



# 4. INSTALL AIR CLEANER CAP WITH AIR CLEANER HOSE

- (a) Install the 3 clamps and air cleaner cap with air cleaner hose.
- (b) Tighten the hose clamp bolt.
  - Torque: 5.0 N\*m (51 kgf\*cm, 44 in.\*lbf)
- (c) Connect the air flow meter connector.
- (d) Connect the ventilation hose No.1.
- (e) Connect the 3 vacuum hoses.
- (f) Connect the fuel vapor feed hose No.1.
- INSTALL COWL TOP PANEL OUTER (See page BR-23)
- 6. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSEMBLY (See page WW-40)
- 7. INSTALL COWL TOP VENTILATOR LOUVER RH
- 8. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-40)
- 9. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-41)



- 10. ADD ENGINE COOLANT (See page CO-7)
- 11. CONNECT BATTERY NEGATIVE TERMINAL
- 12. CHECK FOR ENGINE COOLANT LEAKS (See page CO-8)
- 13. CHECK FOR FUEL LEAKS (See page FU-7)
- 14. INSTALL V-BANK COVER SUB-ASSEMBLY
  - (a) Engage the 3 clips and install the v-bank cover. **NOTICE:**

Be sure to engage the clips in the order from A to B.

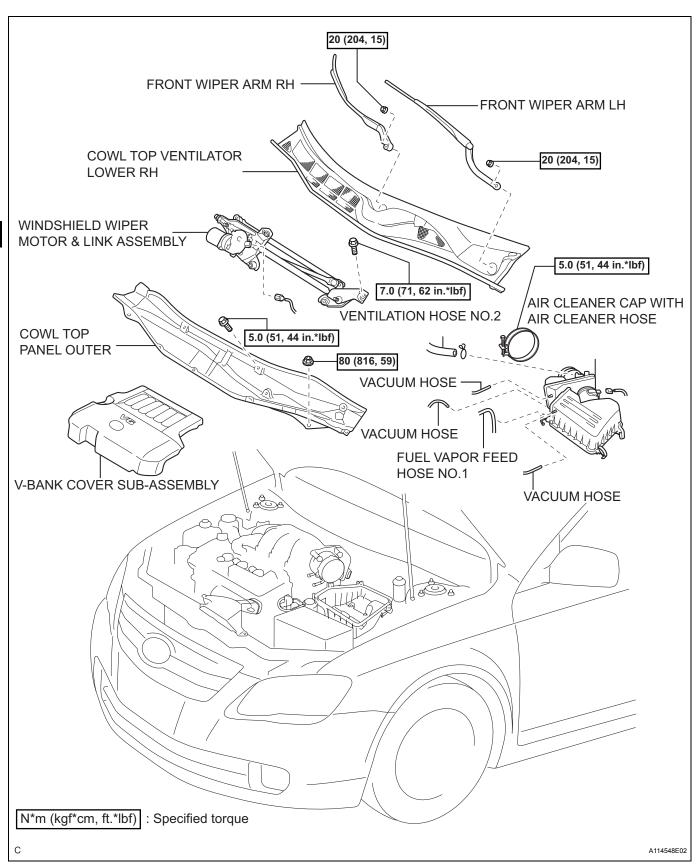
#### 15. PERFORM INITIALIZATION

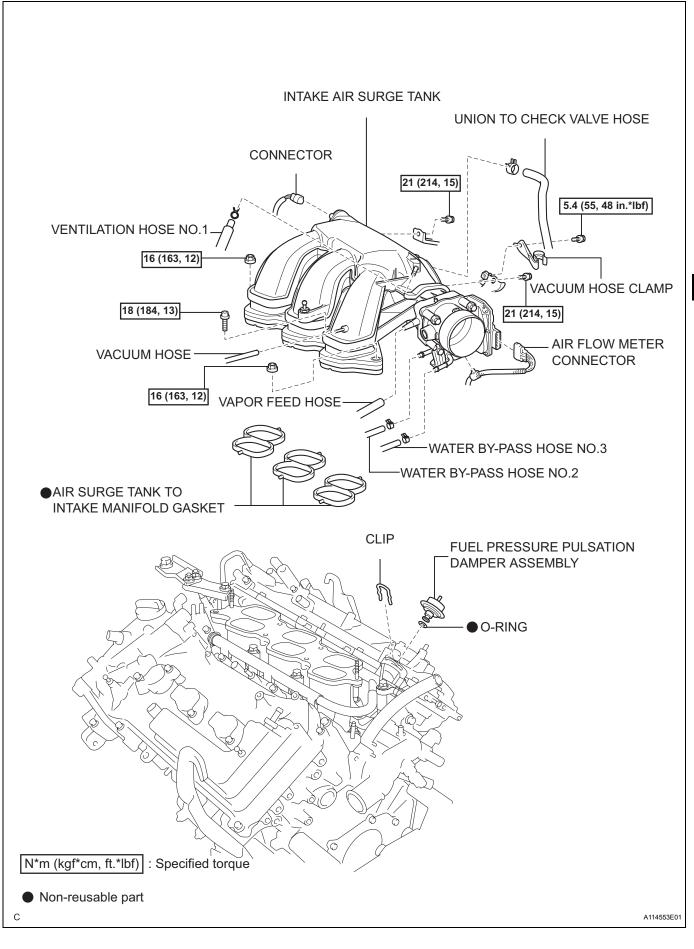
(a) Some systems need initialization when disconnecting the battery terminal.



# **FUEL PRESSURE PULSATION DAMPER**

# **COMPONENTS**





FU

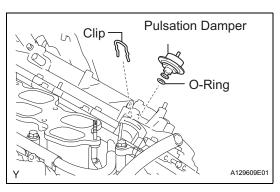
#### **REMOVAL**

- 1. PREVENT GASOLINE FROM SPILLING OUT
- 2. DISCONNECT BATTERY NEGATIVE TERMINAL
- 3. DRAIN ENGINE COOLANT (See page CO-7)
- 4. REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-38)
- 5. REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-38)
- 6. REMOVE COWL TOP VENTILATOR LOUVER RH (See page WW-38)
- 7. REMOVE WINDSHIELD WIPER MOTOR & LINK ASSEMBLY (See page WW-38)
- 8. REMOVE COWL TOP PANEL OUTER (See page BR-20)
- REMOVE V-BANK COVER SUB-ASSEMBLY (See page FU-12)
- 10. REMOVE AIR CLEANER CAP WITH AIR CLEANER HOSE (See page FU-12)
- 11. REMOVE INTAKE AIR SURGE TANK (See page FU12)



- (a) Remove the clip.
- (b) Pull out the fuel pressure pulsation damper from the fuel delivery pipe.





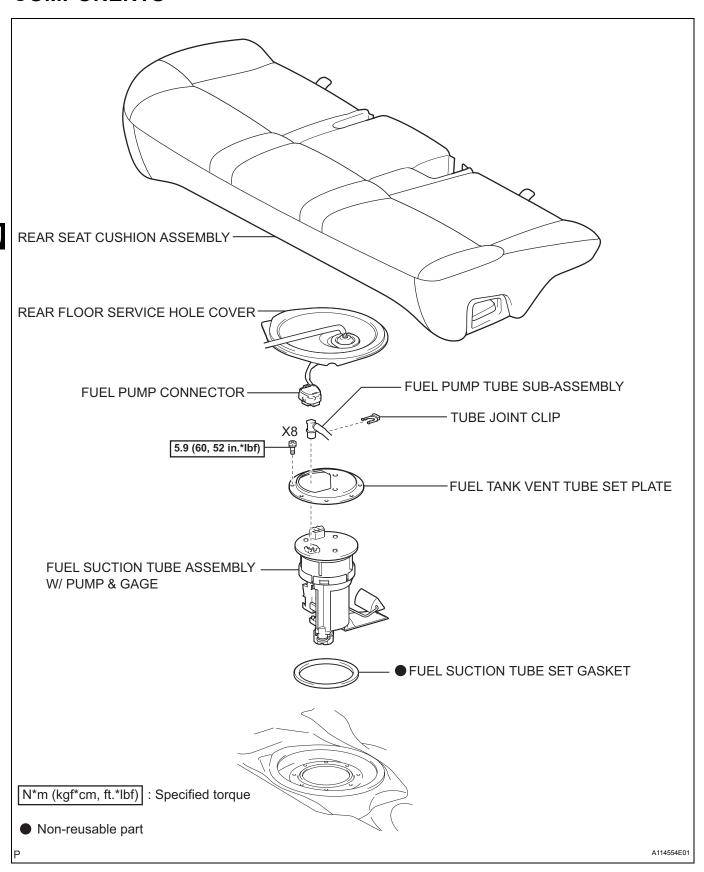
#### INSTALLATION

- 1. INSTALL FUEL PRESSURE PULSATION DAMPER ASSEMBLY
  - (a) Apply a light coat of spindle oil or gasoline to a new O-ring and install it to the fuel pressure pulsation damper.
  - (b) Install the fuel pressure pulsation damper to the fuel delivery pipe.
  - (c) Install the clip.
- 2. INSTALL INTAKE AIR SURGE TANK (See page FU17)
- 3. INSTALL AIR CLEANER CAP WITH AIR CLEANER HOSE (See page FU-18)
- 4. INSTALL COWL TOP PANEL OUTER (See page BR-23)
- 5. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSEMBLY (See page WW-40)
- 6. INSTALL COWL TOP VENTILATOR LOUVER RH
- 7. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-40)
- 8. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-41)
- 9. ADD ENGINE COOLANT (See page CO-7)
- 10. CONNECT BATTERY NEGATIVE TERMINAL
- 11. CHECK FOR ENGINE COOLANT LEAKS (See page CO-8)
- 12. CHECK FOR FUEL LEAKS (See page FU-7)
- 13. INSTALL V-BANK COVER SUB-ASSEMBLY (See page FU-19)
- 14. PERFORM SYSTEM INITIALIZE
  - (a) Some systems need initialization when disconnecting the battery terminal.

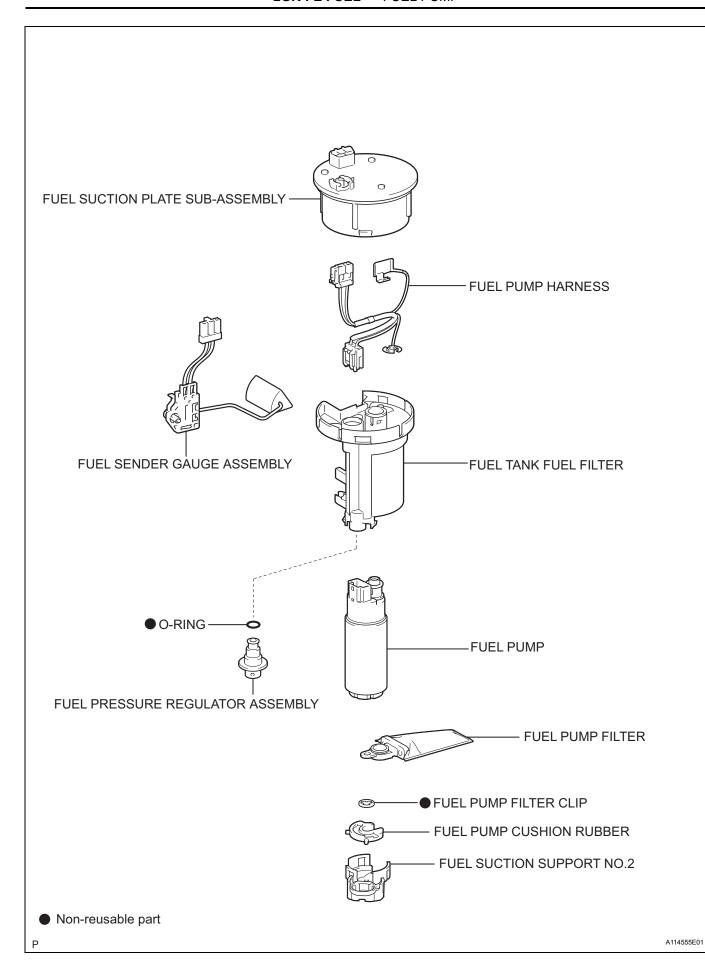


# **FUEL PUMP**

# **COMPONENTS**

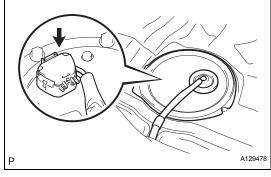






#### REMOVAL

- PREVENT GASOLINE FROM SPILLING OUT
- 2. **DISCONNECT BATTERY NEGATIVE TERMINAL**
- REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-68)
- REMOVE REAR FLOOR SERVICE HOLE COVER
  - (a) Remove the rear floor service hole cover.
  - (b) Disconnect the fuel pump connector.



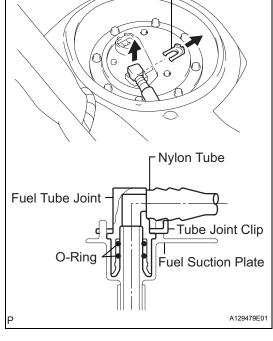
Tube Joint Clip

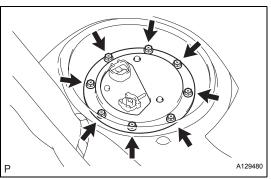


(a) Remove the tube joint clip, and pull out the fuel pump tube.

#### NOTICE:

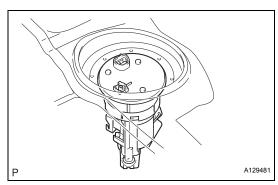
- Check that there is no dirt around the fuel tube joint before this work and clean the dirt awav.
- Be careful of dirt like mud because the fuel tube joint has O-rings to seal the fuel tube connector and fuel suction plate.
- · Do not use any tools in this work.
- · Do not bend or twist the nylon tube by force.
- After disconnecting, cover the fuel tube joint with a plastic bag.
- When the fuel tube joint and fuel suction plate are stuck, pinch the fuel tank tube between fingers, and turn it carefully to release. Disconnect the fuel tank tube.

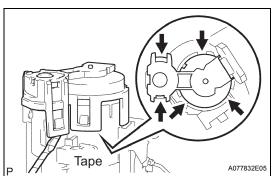


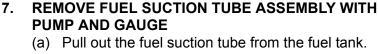


#### REMOVE FUEL TANK VENT TUBE SET PLATE

(a) Remove the 8 bolts and set plate.







- (a) Pull out the fuel suction tube from the fuel tank. NOTICE:
  - · Do not damage the fuel pump filter.
  - · Be careful that the arm of the sender gauge should not bend.
- (b) Remove the gasket from the fuel suction tube.



#### **REMOVE FUEL SUCTION SUPPORT NO.2**

(a) Using a screwdriver with its tip wrapped with tape, disengage the 5 snap claws from the claw holes, and remove the fuel suction support.

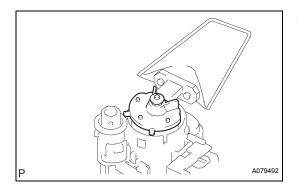
#### NOTICE:

Do not damage the fuel suction support.



#### 2. REMOVE FUEL PUMP CUSHION RUBBER

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

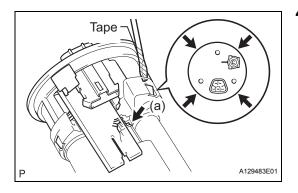


# Slide

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#### REMOVE FUEL SENDER GAUGE ASSEMBLY (a) Disconnect the fuel sender gauge connector.

(b) Unlock the fuel sender gauge, and slide it to remove.

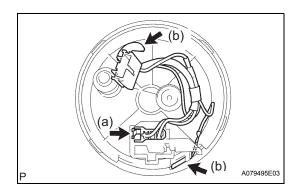


#### REMOVE FUEL SUCTION PLATE SUB-ASSEMBLY 4.

- (a) Disconnect the fuel pump connector.
- (b) Using a screwdriver with its tip wrapped with tape, disengage the 4 snap claws from the claw holes, and pull out the fuel suction plate.

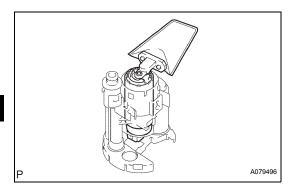
#### NOTICE:

Do not damage the fuel suction support.



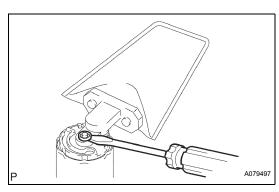
#### 5. REMOVE FUEL PUMP HARNESS

- (a) Disconnect the connector.
- (b) Using a screwdriver, pry out the fuel pump harness.



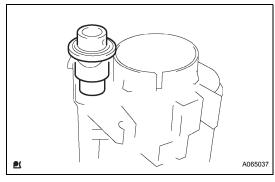
#### 6. REMOVE FUEL PUMP

(a) Pull out the fuel pump from the fuel tank fuel filter.



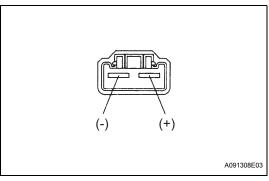
#### 7. REMOVE FUEL PUMP FILTER

- (a) Using a screwdriver, pry out the clip.
- (b) Pull out the fuel pump filter from the fuel pump.



# 8. REMOVE FUEL PRESSURE REGULATOR ASSEMBLY

- (a) Pull out the fuel pressure regulator from the fuel tank fuel filter.
- (b) Remove the O-ring from the fuel pressure regulator.



## **INSPECTION**

#### 1. INSPECT FUEL PUMP

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

#### Resistance:

0.2 to 3.0 Ω at 20°C (68°F)

If the result is not as specified, replace the fuel pump assembly.

- (b) Inspect fuel pump operation.
  - (1) Apply battery voltage to both the terminals. Check that the pump operates.

#### NOTICE:

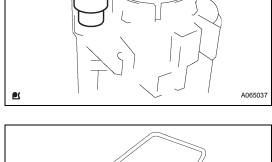
- These tests must be done quickly (within 10 seconds) to prevent damage to the pump.
- Keep fuel pump as far away from the battery as possible.
- Always switch at the battery side. If the pump does not operate, replace the fuel pump assembly.



## 1. INSTALL FUEL PRESSURE REGULATOR ASSEMBLY

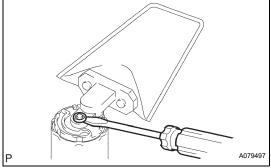
- (a) Apply a light coat of spindle oil or gasoline to a new O-ring, and install it to the fuel pressure regulator.
- (b) Push in the fuel pressure regulator to the fuel tank fuel filter.





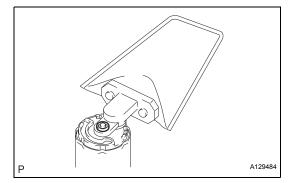
#### 2. INSTALL FUEL PUMP FILTER

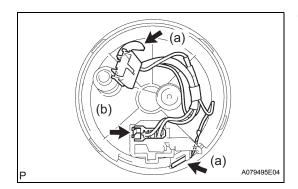
(a) Install the fuel pump filter with a new clip.



#### 3. INSTALL FUEL PUMP

- (a) Apply a light coat of gasoline or grease to the O-ring of the fuel pump.
- (b) Push in the fuel pump to the fuel tank fuel filter.

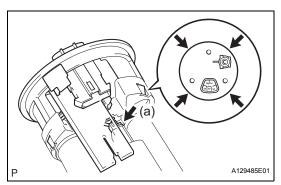




#### 4. INSTALL FUEL PUMP HARNESS

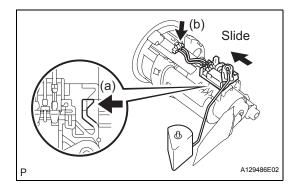
- (a) Install the fuel pump harness.
- (b) Connect the connector.





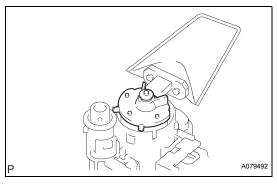
#### 5. INSTALL FUEL SUCTION PLATE SUB-ASSEMBLY

- (a) Install the fuel suction plate.
- (b) Connect the fuel pump connector.



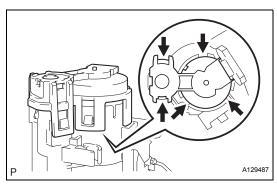
#### 6. INSTALL FUEL SENDER GAUGE ASSEMBLY

- (a) Slide the fuel sender gauge to engage with the claw.
- (b) Connect the fuel sender gauge connector.



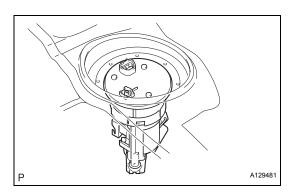
#### 7. INSTALL FUEL PUMP CUSHION RUBBER

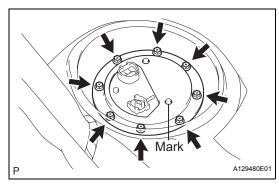
(a) Install the fuel pump cushion rubber to the fuel pump.

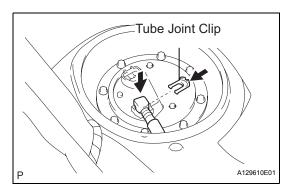


#### 8. INSTALL FUEL SUCTION SUPPORT NO.2

(a) Install the fuel suction support No.2.







#### INSTALLATION

- **INSTALL FUEL SUCTION TUBE ASSEMBLY WITH** PUMP AND GAUGE
  - (a) Install a new gasket to the fuel suction tube.
  - (b) Install the fuel suction tube.

#### NOTICE:

- Do not damage the fuel pump filter.
- · Be careful that the arm of the sender gauge should not bend.

#### **INSTALL FUEL TANK VENT TUBE SET PLATE** 2.

- (a) Align the mark of the set plate with the fuel suction tube.
- (b) Install the set plate with the 8 bolts.

Torque: 5.9 N\*m (60 kgf\*cm, 52 in.\*lbf)

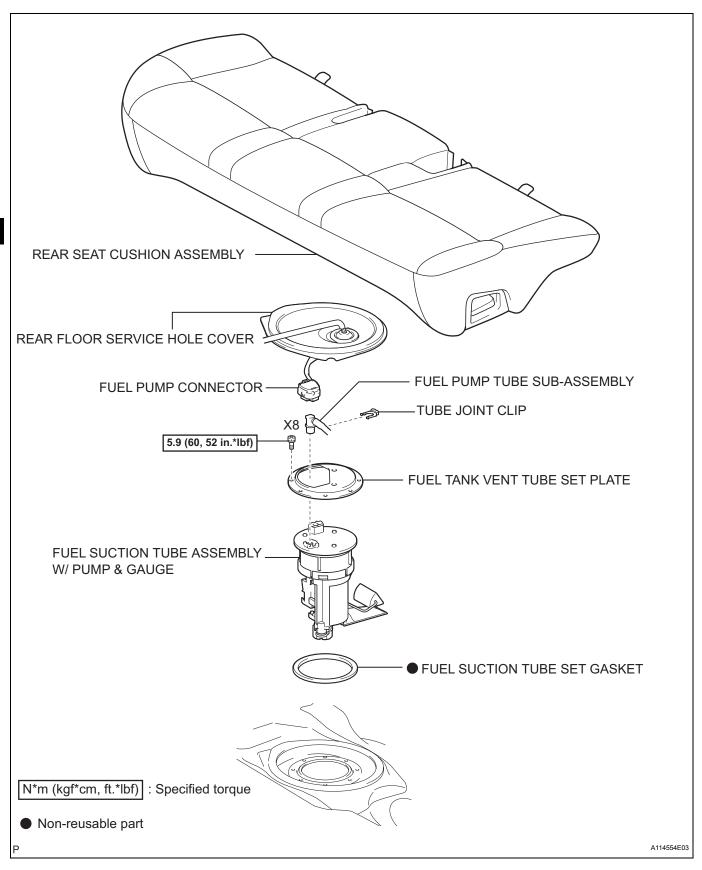


#### CONNECT FUEL PUMP TUBE SUB-ASSEMBLY

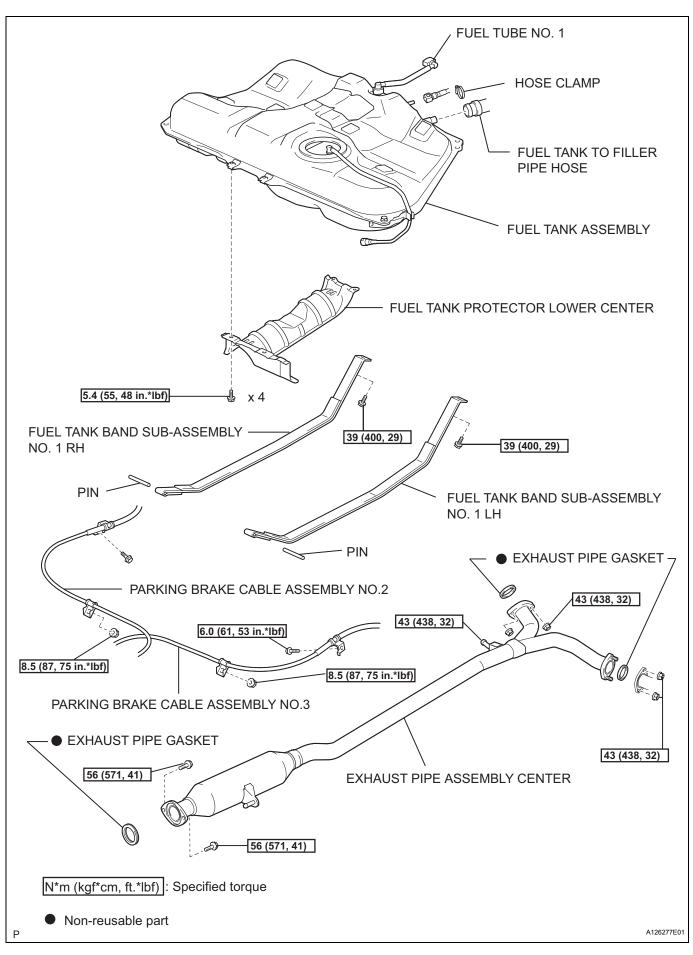
- (a) Install the fuel pump tube with the tube joint clip. NOTICE:
  - Check that there is no scratches or foreign objects on the connecting part.
  - · Check that the fuel tube joint is inserted securely.
  - · Check that the tube joint clip is on the collar of the fuel tube joint.
  - · After installing the tube joint clip, check that the fuel tube joint is pulled off.
- **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
- CHECK FOR FUEL LEAKS (See page FU-7) 5.
- INSTALL REAR FLOOR SERVICE HOLE COVER
- **INSTALL REAR SEAT CUSHION ASSEMBLY** 7.
- 8. PERFORM SYSTEM INITIALIZE
  - (a) Some systems need initialization when disconnecting the battery terminal.

# **FUEL TANK**

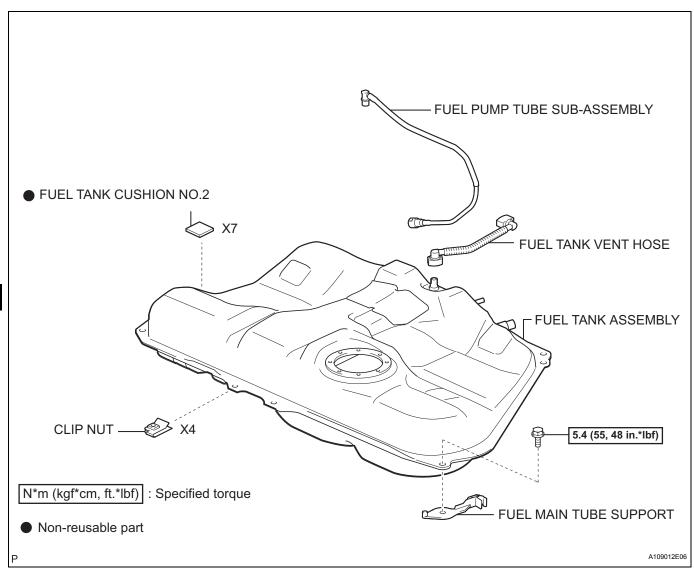
# **COMPONENTS**







FU



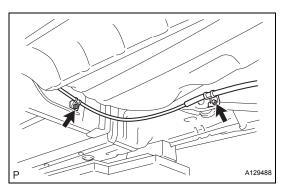


#### REMOVAL

- 1. PREVENT GASOLINE FROM SPILLING OUT
- 2. DISCONNECT BATTERY NEGATIVE TERMINAL
- 3. REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-68)
- REMOVE REAR FLOOR SERVICE HOLE COVER (See page FU-26)
- 5. SEPARATE FUEL PUMP TUBE SUB-ASSEMBLY (See page FU-26)
- 6. REMOVE FUEL TANK VENT TUBE SET PLATE (See page FU-26)
- 7. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE (See page FU-27)
- 8. DRAIN FUEL
- REMOVE EXHAUST PIPE ASSEMBLY CENTER (See page EX-2)

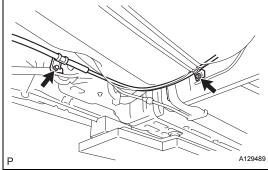


(a) Remove the set bolt and set nut of the parking brake cable assembly No.2.



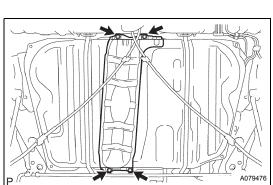


(a) Remove the set bolt and set nut of the parking brake cable assembly No.3.

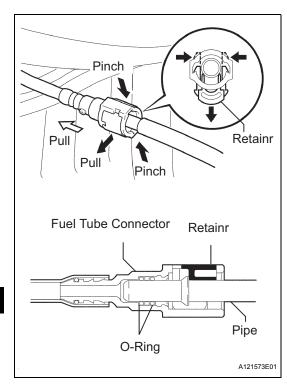


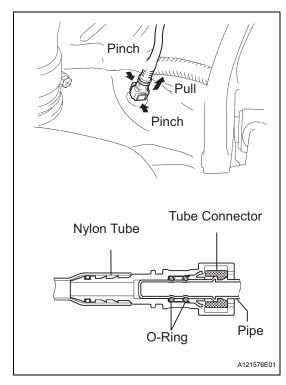
#### 12. REMOVE FUEL TANK PROTECTOR LOWER CENTER

(a) Remove the 4 bolts and fuel tank protector.









#### 13. REMOVE FUEL TANK ASSEMBLY

- (a) Disconnect the fuel pump tube.
  - (1) Pinch the tab of the retainer to remove the lock claws and pull it down as shown in the illustration.
  - (2) Pull out the fuel tank main tube.

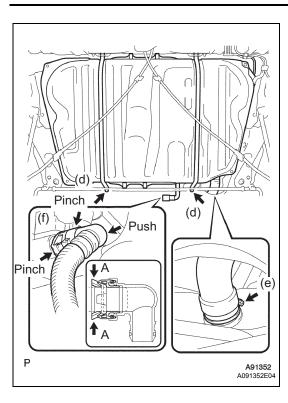
#### NOTICE:

- Check that there is no dirt or other foreign objects around the connector before this operation and clean the connector as necessary.
- Be careful of mud because the quick connector has O-rings which seal the pipe and connector that can be contaminated.
- Do not use any tools in this operation.
- Do not bend or twist the nylon tube.
   Protect the connector by covering it with a plastic bag.
- When the pipe and connector are stuck, push and pull the connector to release and pull the connector out carefully.
- (b) Disconnect the fuel tube No.1.
  - (1) Pinch the tube connector and then pull out the fuel tube No.1.

#### NOTICE:

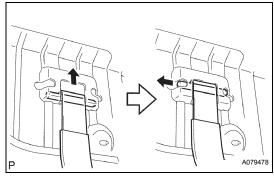
- Check that there is no dirt or other foreign objects around the connector before this operation and clean the connector as necessary.
- Be careful of mud because the quick connector has O-rings which seal the pipe and connector that can be contaminated.
- Do not use any tools in this operation.
- Do not bend or twist the nylon tube.
   Protect the connector by covering it with a plastic bag.
- When the pipe and connector are stuck, push and pull the connector to release and pull the connector out carefully.



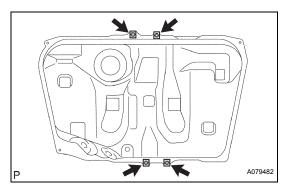


- (c) Set up a transmission jack underneath the fuel tank.
- (d) Remove the 2 set bolts of the fuel tank bands.
- (e) Remove the hose clamp and disconnect the fuel tank to filter pipe hose.
- (f) Disconnect the fuel tank vent hose from the charcoal canister.
  - (1) Push the connector deep into the charcoal canister to release the locking pin.
  - (2) Pinch portion A.
  - (3) Pull out the connector.
- (g) Remove the fuel tank.

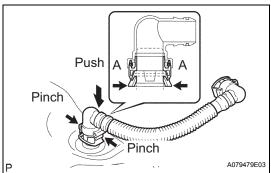




(h) Remove the 2 pins and 2 fuel tank bands as shown in the illustration.



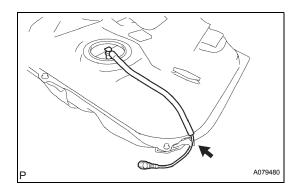
(i) Remove the 4 clip nuts.



# **DISASSEMBLY**

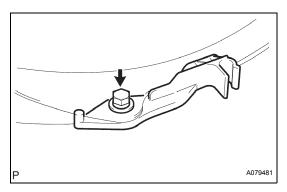
#### 1. REMOVE FUEL TANK VENT HOSE

- (a) Push the connector deep into the charcoal canister to release the locking pin.
- (b) Pinch portion A.
- (c) Pull out the connector.



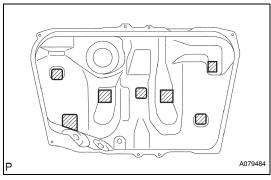
#### 2. REMOVE FUEL PUMP TUBE SUB-ASSEMBLY

(a) Remove the fuel pump tube from the fuel main tube support.



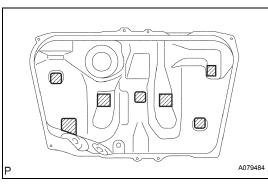
#### 3. REMOVE FUEL MAIN TUBE SUPPORT

(a) Remove the bolt and tube support.



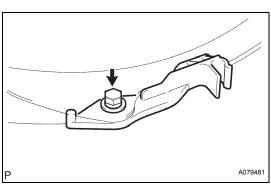
#### 4. REMOVE FUEL TANK CUSHION NO.2

(a) Remove the 7 fuel tank cushion No.2.



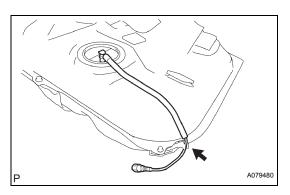
## **REASSEMBLY**

- 1. INSTALL FUEL TANK CUSHION NO.2
  - (a) Install the 7 new fuel tank cushions to the fuel tank.



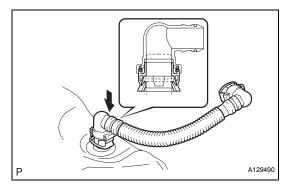
#### 2. INSTALL FUEL MAIN TUBE SUPPORT

(a) Install the fuel main tube support with the bolt. Torque: 5.4 N\*m (55 kgf\*cm, 48 in.\*lbf)



#### 3. INSTALL FUEL PUMP TUBE SUB-ASSEMBLY

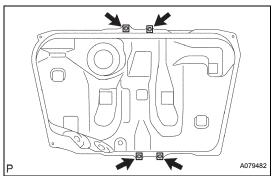
(a) Install the fuel pump tube to the fuel main tube support.



#### 4. INSTALL FUEL TANK VENT HOSE

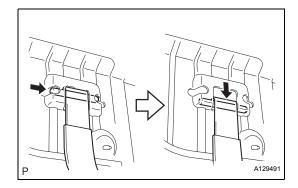
(a) Install the fuel tank vent hose.



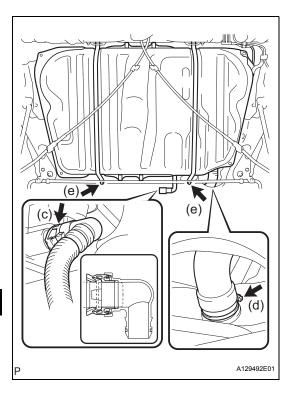


## **INSTALLATION**

- 1. INSTALL FUEL TANK ASSEMBLY
  - (a) Install the 4 clip nuts.



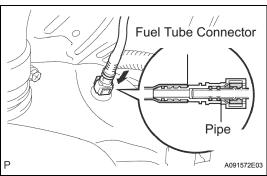
(b) Install the 2 fuel tank bands with the 2 pins.

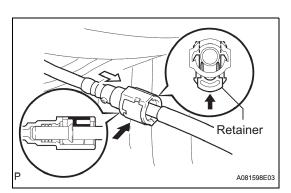


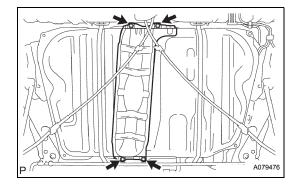
- (c) Connect the fuel tank vent hose.
- (d) Connect the fuel tank inlet pipe with the fuel filter pipe clamp.
- (e) Tighten the 2 set bolts of the fuel tank bands.

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







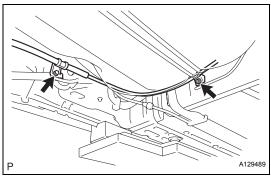


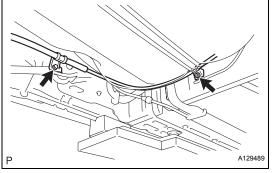
- Connect the fuel tube No.1.
  - (1) Push the fuel tube connector into the pipe until the fuel tube connector makes a "click" sound. NOTICE:
    - Check that there is no damage or foreign objects on the connected part.
    - After connecting, check if the fuel tube connector and the pipe are securely connected by trying to pull them apart.
- (g) Connect the fuel pump tube.
  - (1) Push in the fuel the connector to the pipe and push up the retainer so that the claws engage. NOTICE:
    - Check that there is no damage or foreign objects on the connected part.
    - After connecting, check if the fuel tube connector and the pipe are securely connected by trying to pull them apart.

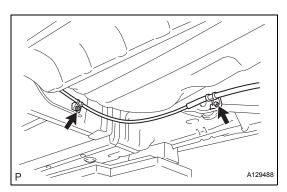
#### **INSTALL FUEL TANK PROTECTOR LOWER CENTER** 2.

(a) Install all fuel tank protector lower center.

Torque: 5.4 N\*m (55 kgf\*cm, 48 in.\*lbf)







#### **INSTALL PARKING BRAKE CABLE ASSEMBLY NO.3**

(a) Install the parking brake cable assembly No.3 with the bolt and nut.

**Torque: Bolt** 

6.0 N\*m (61 kgf\*cm, 53 in.\*lbf)

8.5 N\*m (87 kgf\*cm, 75 in.\*lbf)

#### **INSTALL PARKING BRAKE CABLE ASSEMBLY NO.2**

(a) Install the parking brake cable assembly No.2 with the bolt and nut.

**Torque: Bolt** 

6.0 N\*m (61 kgf\*cm, 53 in.\*lbf)

8.5 N\*m (87 kgf\*cm, 75 in.\*lbf)



- **INSTALL FUEL SUCTION TUBE ASSEMBLY WITH** 6. PUMP AND GAUGE (See page FU-31)
- INSTALL FUEL TANK VENT TUBE SET PLATE (See 7. page FU-31)
- CONNECT FUEL PUMP TUBE SUB-ASSEMBLY (See page FU-31)
- 9. ADD FUEL
- 10. CONNECT BATTERY NEGATIVE TERMINAL
- 11. CHECK FOR FUEL LEAKS (See page FU-7)
- 12. CHECK FOR EXHAUST GAS LEAKS
- 13. INSTALL REAR FLOOR SERVICE HOLE COVER
- 14. INSTALL REAR SEAT CUSHION ASSEMBLY

#### 15. PERFORM SYSTEM INITIALIZE

(a) Some systems need initialization when disconnecting the battery terminal.

