

Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017R800UX
Title: 2AZ-FE FUEL: FUEL INJECTOR: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE

HINT: 

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

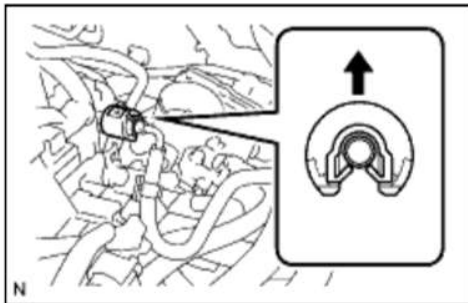
3. REMOVE NO. 1 ENGINE COVER SUB-ASSEMBLY

4. REMOVE AIR CLEANER CAP SUB-ASSEMBLY WITH HOSE

5. DISCONNECT FUEL MAIN TUBE

NOTICE:

Do not forcibly bend, kink or twist the fuel main tube.



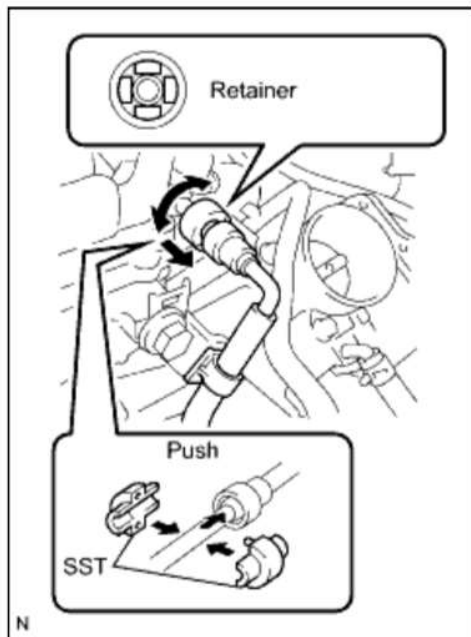
(a) Remove the fuel tube from the fuel hose clamp.

(b) Remove the fuel pipe clamp.

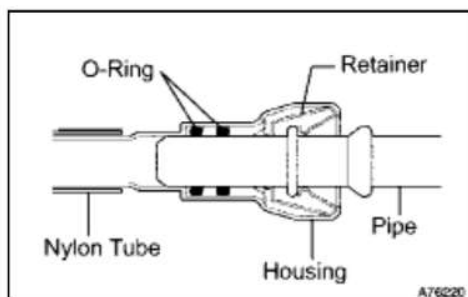
(c) Wipe off any dirt on the fuel tube connector.

(d) Hold the fuel tube connector, and then install SST.

SST: 09268-21010



- (e) Turn SST to align the retainer inside the fuel tube connector with the chamfered part of SST.
- (f) Insert SST into the fuel tube and hold it. Then push the fuel tube connector toward SST.
- (g) Mount the retainer of the fuel tube connector onto the chamfered part of SST.

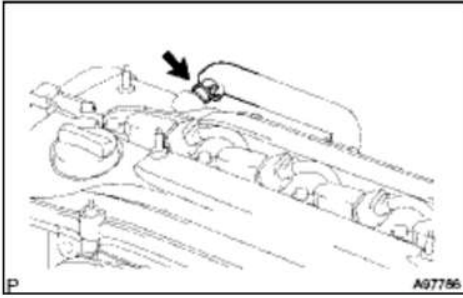


- (h) Slide SST and fuel tube connector together towards the fuel tube until they make a "click" sound, and then disconnect the fuel tube.

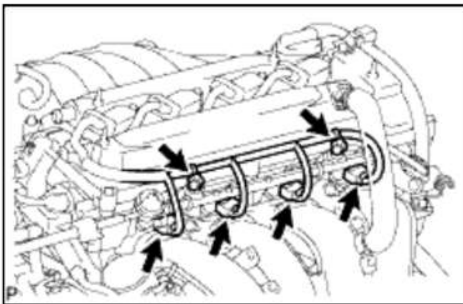
- (i) Drain the fuel remaining inside the fuel tube.
- (j) Cover the fuel tube and fuel pipe with a plastic bag to protect the disconnected part.

6. DISCONNECT NO. 2 VENTILATION HOSE

- (a) Disconnect the No. 2 ventilation hose from the ventilation valve.

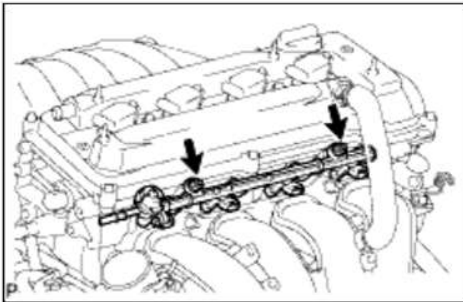


7. REMOVE FUEL DELIVERY PIPE SUB-ASSEMBLY



(a) Remove the 2 wire harness clamps.

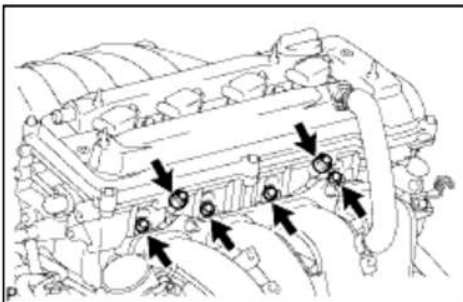
(b) Disconnect the 4 fuel injector connectors.



(c) Remove the 2 bolts, then remove the fuel delivery pipe together with the 4 fuel injectors.

NOTICE:

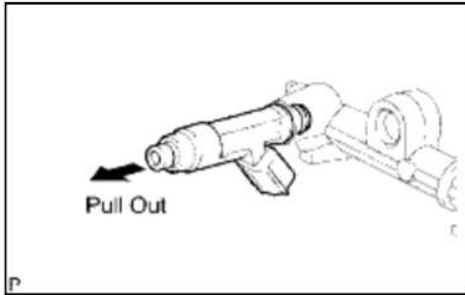
Be careful not to drop the fuel injectors when removing the fuel delivery pipe.



(d) Remove the 2 delivery pipe spacers from the cylinder head.

(e) Remove the 4 insulators from the cylinder head.

8. REMOVE FUEL INJECTOR ASSEMBLY



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

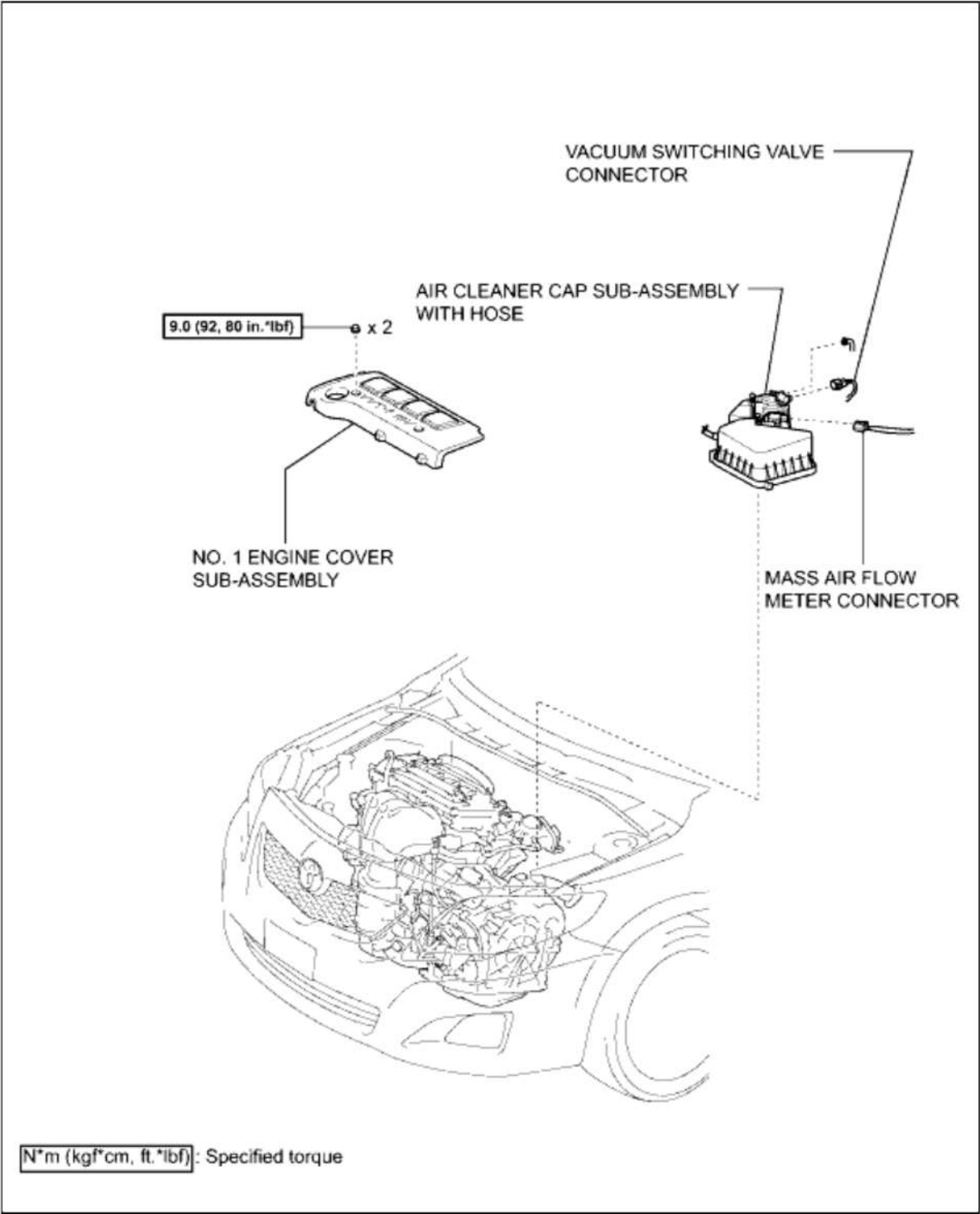
(b) Remove the 4 O-rings from the 4 fuel injectors.



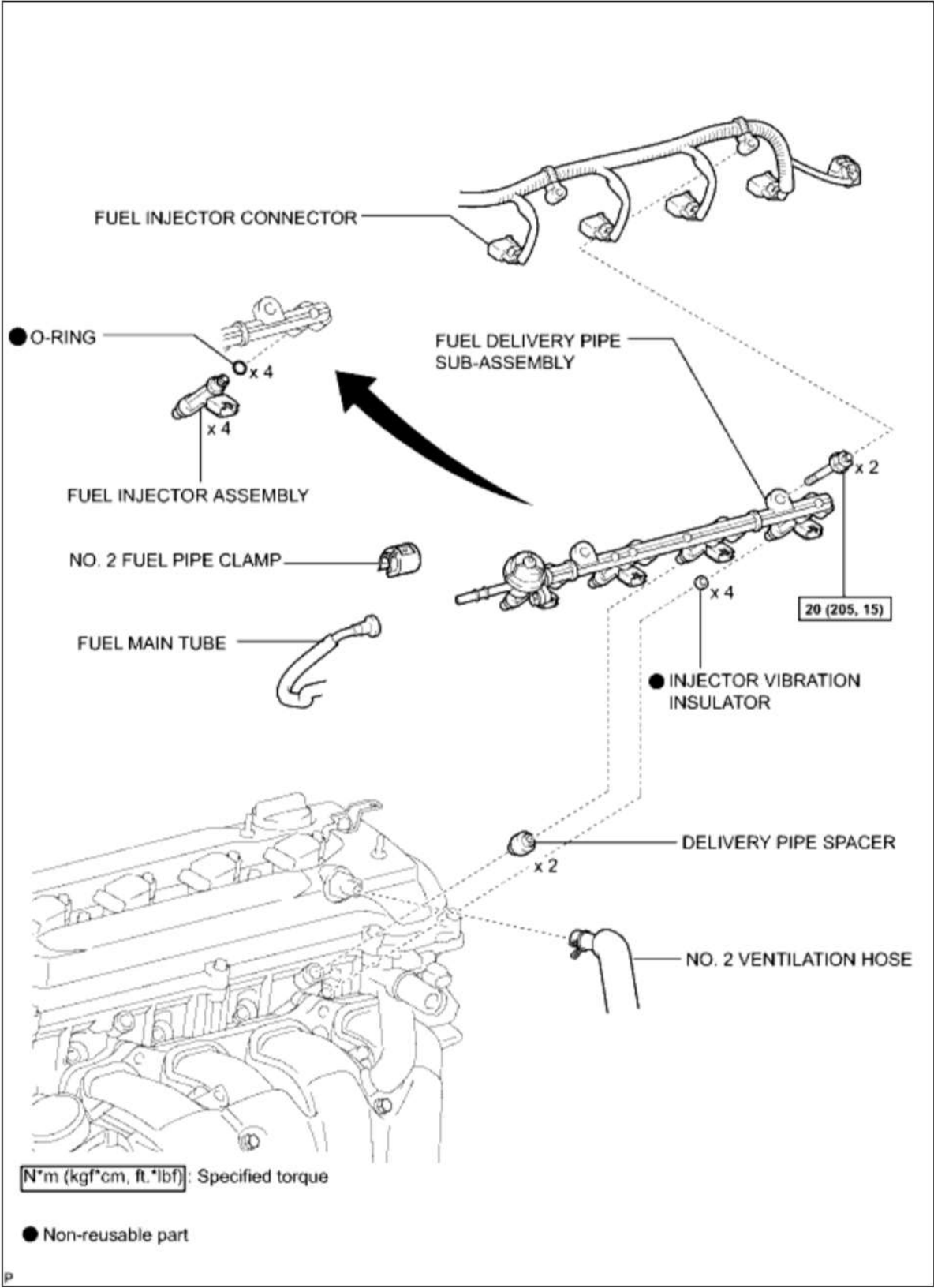
Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017R700QX
Title: 2AZ-FE FUEL: FUEL INJECTOR: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



ILLUSTRATION

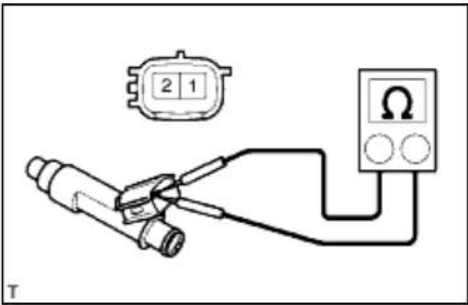


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Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000VZW015X
Title: 2AZ-FE FUEL: FUEL INJECTOR: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL INJECTOR ASSEMBLY



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

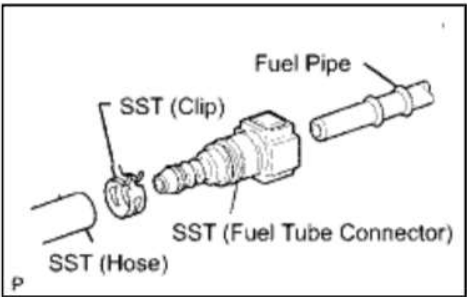
Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - 2	20°C (68°F)	11.6 to 12.4 Ω

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

(b) Inspect the injector injection.

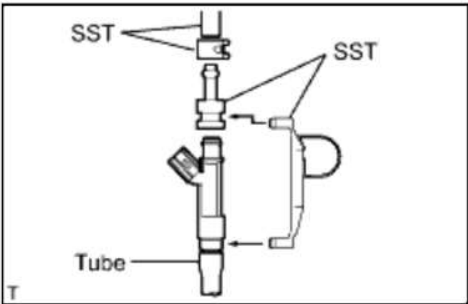
CAUTION:
Keep the injector away from sparks during the test.



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

SST: 09268-31012
09268-41500
90467-13001
95336-08070

(2) Install the O-ring to the fuel injector.



(3) Connect SST (adapter and hose) to the injector, and hold the injector and union with SST (clamp).

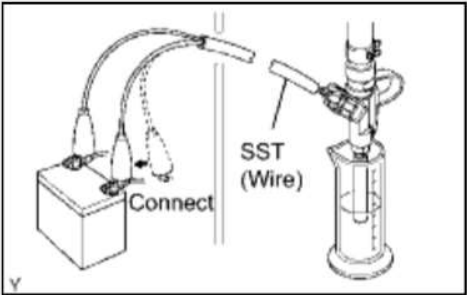
SST: 09268-31012
95336-08070
09268-41110
09268-41130
09268-41400

(4) Put the injector into the graduated cylinder.

CAUTION:
Install a suitable vinyl tube onto the injector that will contain gasoline spray.

(5) Operate the fuel pump.

(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.

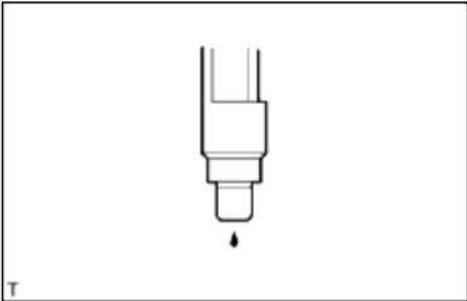


SST: 09842-30080
Injection Volume:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Positive terminal - Ground terminal	per 15 seconds	76 to 92 cc (4.6 to 5.6 cu in.)

Standard difference between each injector:
16 cc (1.0 cu in.) or less

(c) Inspect the fuel leakage.



(1) Disconnect the SST (wire) tester probes from the battery and check the fuel leakage from the injector.

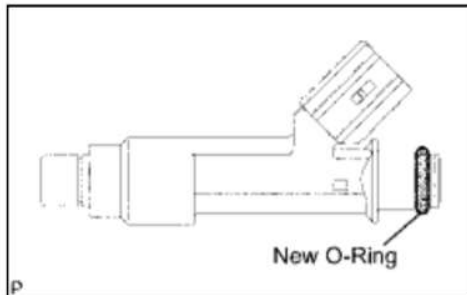
Standard fuel drop:
1 drop or less per 12 minutes

- (2) Turn the ignition switch off.
- (3) Disconnect the cable from the negative (-) battery terminal.
- (4) Remove SST.
- (5) Disconnect the Techstream from the DLC3.
- (6) Reconnect the fuel inlet hose (rear fuel pipe) to the fuel main tube.

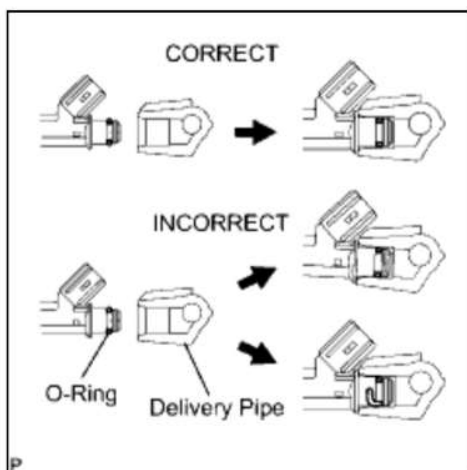
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017R500RX
Title: 2AZ-FE FUEL: FUEL INJECTOR: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL INJECTOR ASSEMBLY



- (a) Apply a light coat of gasoline or spindle oil to new O-rings, then install them to the fuel injectors.



- (b) Apply a light coat of gasoline or spindle oil to the part of the fuel delivery pipe which comes into contact with the O-ring of the fuel injector.

- (c) Apply a light coat of gasoline or spindle oil to the O-ring again, then install the right and left fuel injectors onto the fuel delivery pipe.

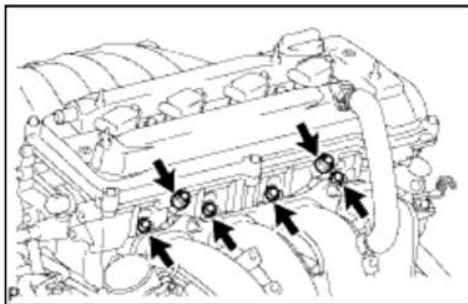
NOTICE:

Make sure that the O-rings are not cracked or does not jump out of position during installation.

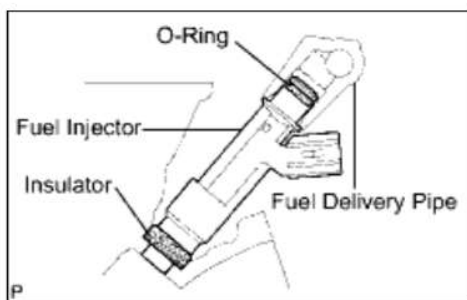
- (d) Check that the fuel injectors rotate smoothly. If the fuel injector does not rotate, replace the O-ring.

2. INSTALL FUEL DELIVERY PIPE SUB-ASSEMBLY

- (a) Install 4 new insulators to the cylinder head.



(b) Install the 2 delivery pipe spacers onto the cylinder head.



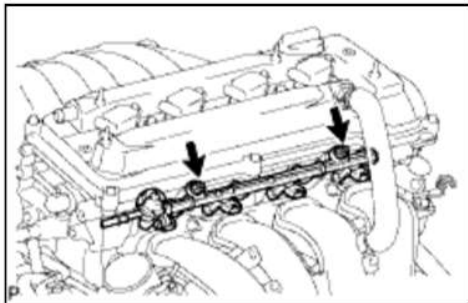
(c) Install the fuel delivery pipe together with the 4 fuel injectors, then temporarily tighten the 2 bolts.

NOTICE:

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

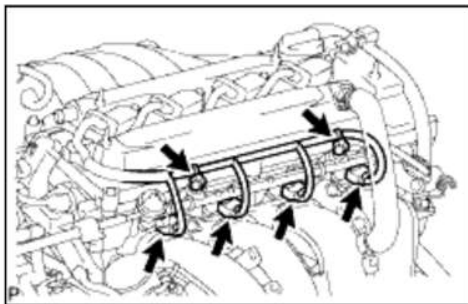
(d) Check that the fuel injector rotates smoothly.

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



(e) Tighten the 2 bolts to the specified torque.

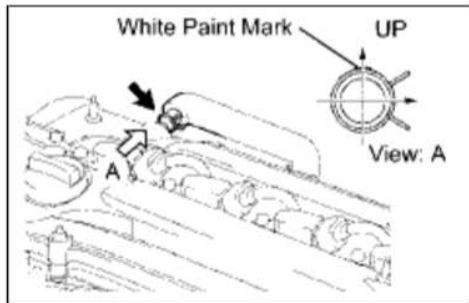
Torque: 20 N·m (205 kgf·cm, 15ft·lbf)



(f) Connect the 4 fuel injector connectors.

(g) Install the 2 wire harness clamps.

3. CONNECT NO. 2 VENTILATION HOSE



(a) Connect the ventilation hose to the ventilation valve.

NOTICE:

Make sure that the paint mark and hose clamp are at the correct angle when installing the hose.

4. CONNECT FUEL MAIN TUBE

- (a) Connect the fuel main tube.
- (b) Push the fuel tube connector until it makes a "click" sound.
- (c) Install the fuel pipe clamp.
- (d) Install the fuel tube to the fuel hose clamp.

5. INSTALL AIR CLEANER CAP SUB-ASSEMBLY WITH HOSE INFO

6. INSTALL NO. 1 ENGINE COVER SUB-ASSEMBLY INFO

7. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

- (a) Connect the cable to the negative battery terminal.

Torque: 5.4 N·m (55 kgf·cm, 48in·lbf)

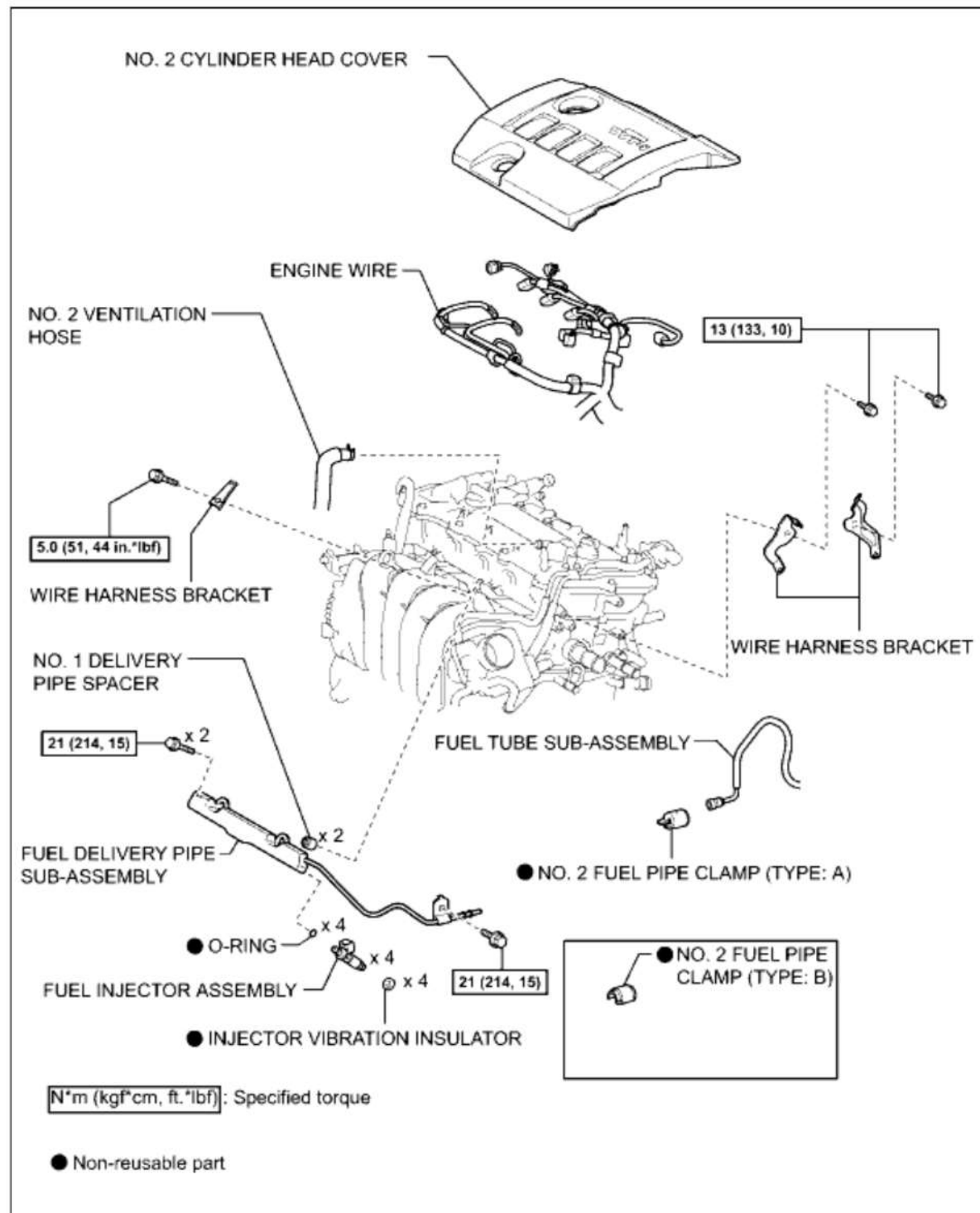
8. INSPECT FOR FUEL LEAK INFO



Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EDR01DX
Title: 2ZR-FE FUEL: FUEL INJECTOR: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION





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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EDS01EX
Title: 2ZR-FE FUEL: FUEL INJECTOR: REMOVAL (2010 Corolla)		

REMOVAL

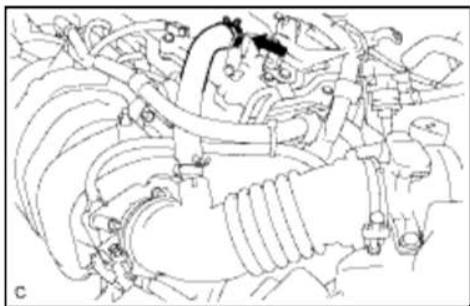
1. DISCHARGE FUEL SYSTEM PRESSURE

HINT:  .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

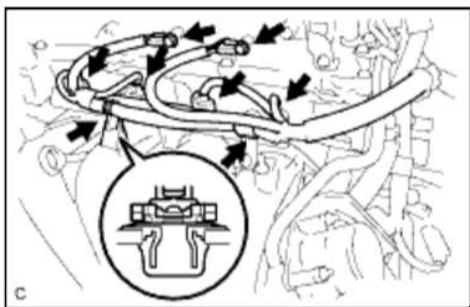
3. REMOVE NO. 2 CYLINDER HEAD COVER

4. DISCONNECT NO. 2 VENTILATION HOSE



(a) Disconnect the No. 2 ventilation hose.

5. REMOVE ENGINE WIRE

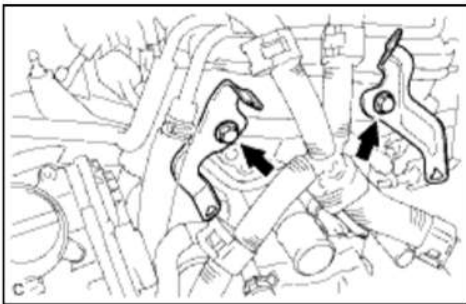
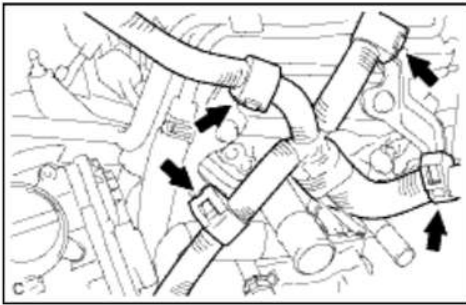


(a) Remove the 2 bolts and disconnect the ground wires.

(b) Disconnect the 4 fuel injector assembly connectors.

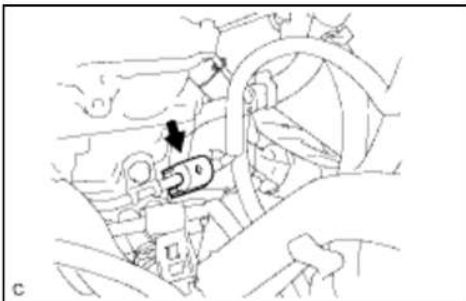
(c) Disconnect the 2 wire harness clamps.

(d) Disconnect the 4 wire harness clamps.

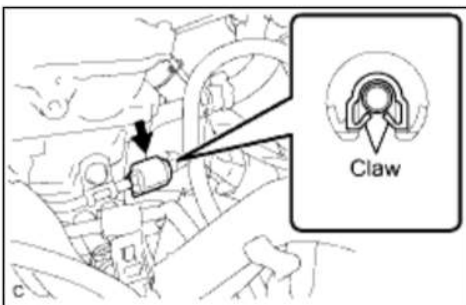


(e) Remove the 2 bolts and 2 wire harness brackets.

6. DISCONNECT FUEL TUBE SUB-ASSEMBLY

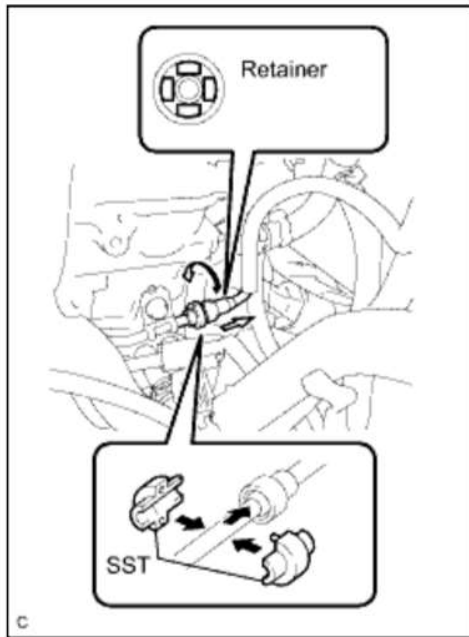


(a) Remove the No. 2 fuel pipe clamp (Type A).



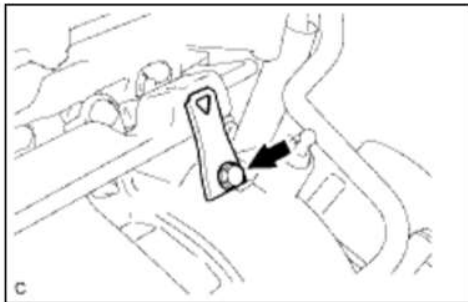
(b) Remove the No. 2 fuel pipe clamp (Type B).

(c) Using SST, disconnect the fuel tube sub-assembly.

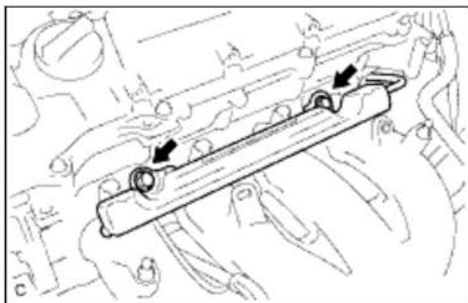


SST: 09268-21010

7. REMOVE FUEL DELIVERY PIPE SUB-ASSEMBLY

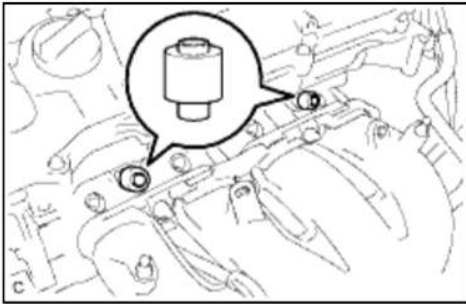
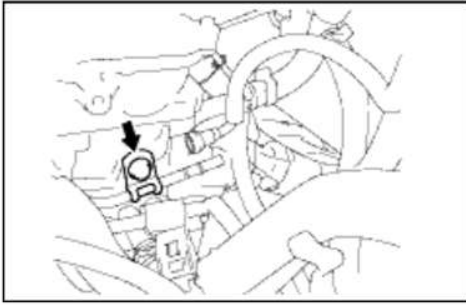


(a) Remove the bolt and wire harness bracket.



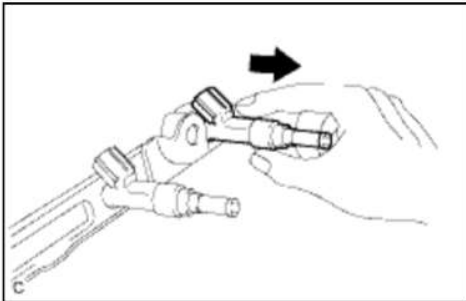
(b) Remove the 2 bolts.

(c) Remove the bolt and the fuel delivery pipe sub-assembly.

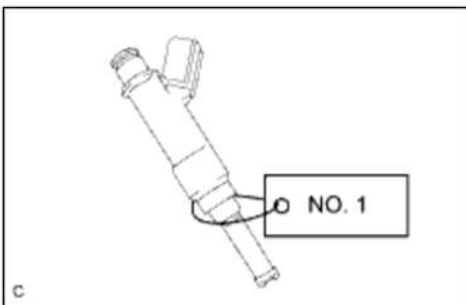


(d) Remove the 2 No. 1 delivery pipe spacers.

8. REMOVE FUEL INJECTOR ASSEMBLY



(a) Pull the 4 fuel injector assemblies out of the fuel delivery pipe sub-assembly.

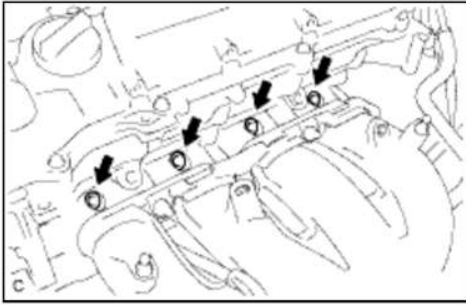


(b) For reinstallation, attach a tag or label to the injector shaft.

NOTICE:

Prevent entry of foreign objects by covering the fuel injector with a plastic bag.

(c) Remove the O-rings from the fuel injector assemblies.



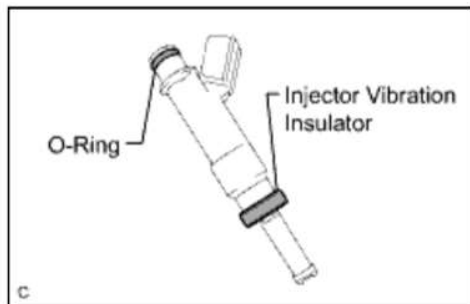
(d) Remove the 4 injector vibration insulators.



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EDP01FX
Title: 2ZR-FE FUEL: FUEL INJECTOR: INSTALLATION (2010 Corolla)		

INSTALLATION

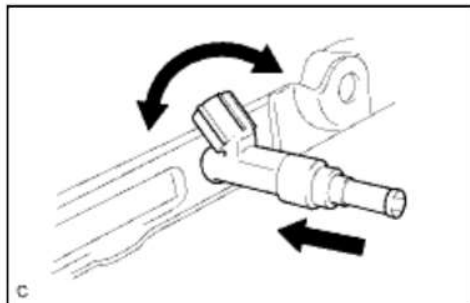
1. INSTALL FUEL INJECTOR ASSEMBLY



(a) Install 4 new injector vibration insulators to the 4 fuel injector assemblies.

(b) Install 4 new injector vibration insulators to the 4 fuel injector assemblies.

(c) Apply a light coat of gasoline or spindle oil to the contact surfaces of the the O-rings of the fuel injector assemblies.

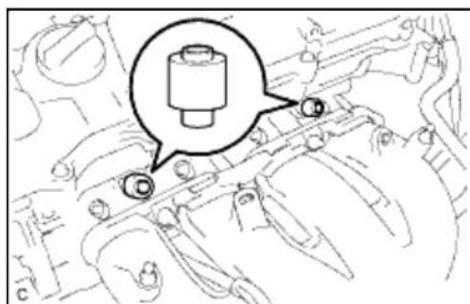


(d) While turning the fuel injector assembly left and right, install it onto the fuel delivery pipe sub-assembly.

NOTICE:

- Do not twist the O-ring.
- After installing the fuel injectors, check that they turn smoothly.

2. INSTALL NO. 1 DELIVERY PIPE SPACER

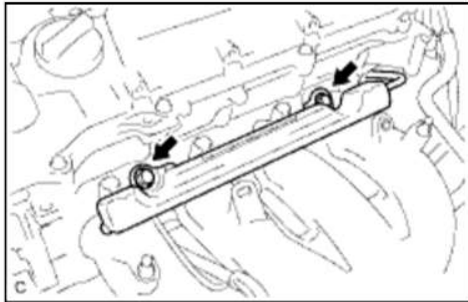


(a) Install the 2 No. 1 delivery pipe spacers onto the cylinder head.

NOTICE:

Install the No. 1 delivery pipe spacers in the correct direction.

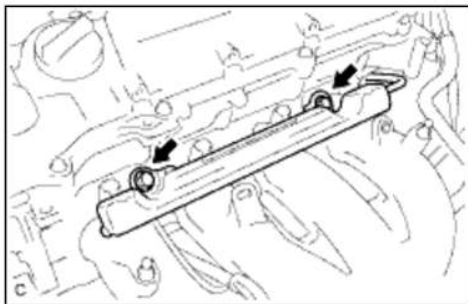
3. INSTALL FUEL DELIVERY PIPE SUB-ASSEMBLY



- (a) Install the fuel delivery pipe sub-assembly with the 4 fuel injector assemblies, then temporarily install the 2 bolts.

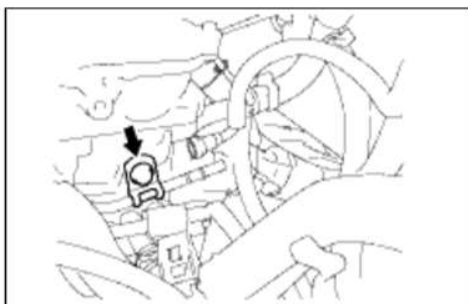
NOTICE:

- Do not drop the fuel injectors when installing the fuel delivery pipe sub-assembly.
- Check that the fuel injector assemblies rotate smoothly after installing the fuel delivery pipe sub-assembly.



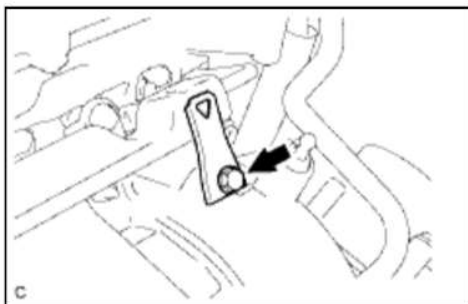
- (b) Tighten the 2 bolts to the specified torque.

Torque: 21 N·m (214 kgf·cm, 15ft·lbf)



- (c) Install the bolt to secure the fuel delivery pipe sub-assembly.

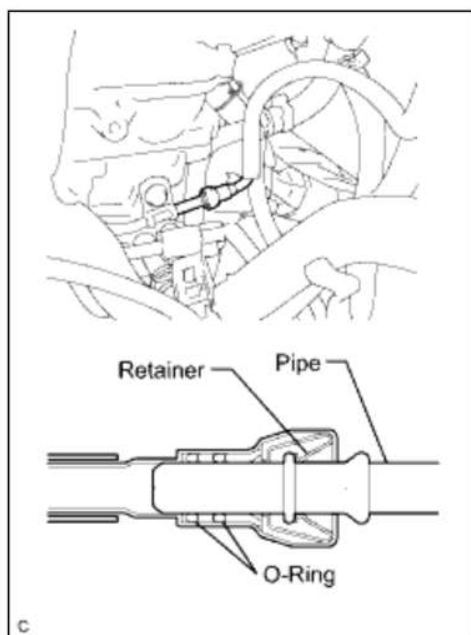
Torque: 21 N·m (214 kgf·cm, 15ft·lbf)



- (d) Install the wire harness bracket with the bolt.

Torque: 5.0 N·m (51 kgf·cm, 44in·lbf)

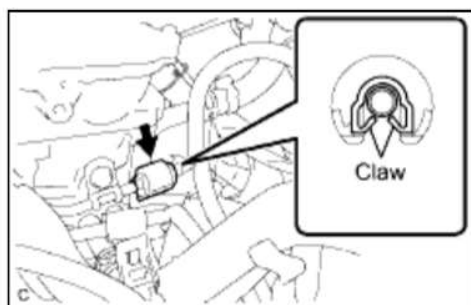
4. CONNECT FUEL TUBE SUB-ASSEMBLY



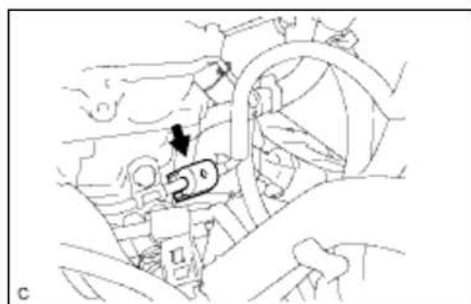
(a) Insert the fuel tube sub-assembly connector into the fuel delivery pipe until a "click" sound can be heard.

NOTICE:

- Check that there are no scratches or foreign matter around the contact surfaces of the fuel tube connector and pipe before performing this work.
- After connecting the fuel tube, check that the fuel tube connector and pipe are securely connected by pulling on them.



(b) Install a new No. 2 fuel pipe clamp (Type B).

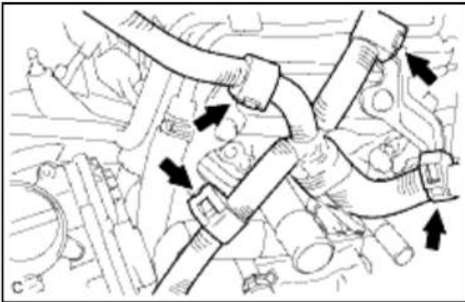
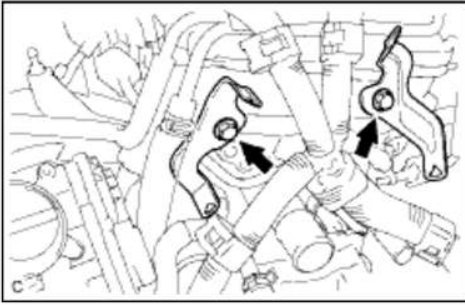


(c) Install a new No. 2 fuel pump clamp (Type A).

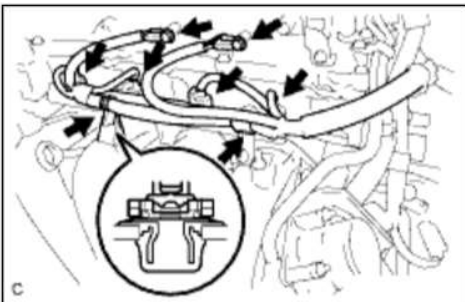
5. CONNECT ENGINE WIRE

(a) Install the 2 wire harness brackets with the 2 bolts.

Torque: 13 N·m (133 kgf·cm, 10ft·lbf)



(b) Connect the 4 wire harness clamps.



(c) Connect the 4 fuel injector assembly connectors.

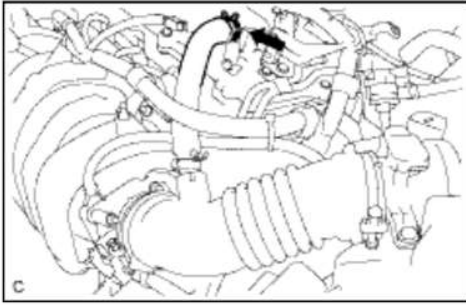
(d) Connect the 2 wire harness clamps.

(e) Connect the ground wires with the 2 bolts.

6. INSTALL AIR CLEANER CAP SUB-ASSEMBLY INFO

7. CONNECT NO. 2 VENTILATION HOSE

(a) Connect the No. 2 ventilation hose.



8. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

(a) Connect the cable to the negative battery terminal.

Torque: 5.4 N·m (55 kgf·cm, 48in·lbf)

9. INSPECT FOR FUEL LEAK

INFO

10. INSTALL NO. 2 CYLINDER HEAD COVER

INFO



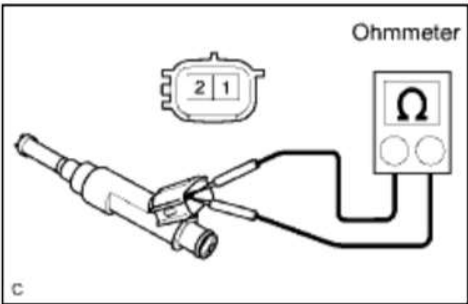
TOYOTA

Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EDQ010X
Title: 2ZR-FE FUEL: FUEL INJECTOR: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL INJECTOR ASSEMBLY

- (a) Check the resistance.
- (1) Using an ohmmeter, measure the resistance according to the value(s) in the table below.
- Standard Resistance:

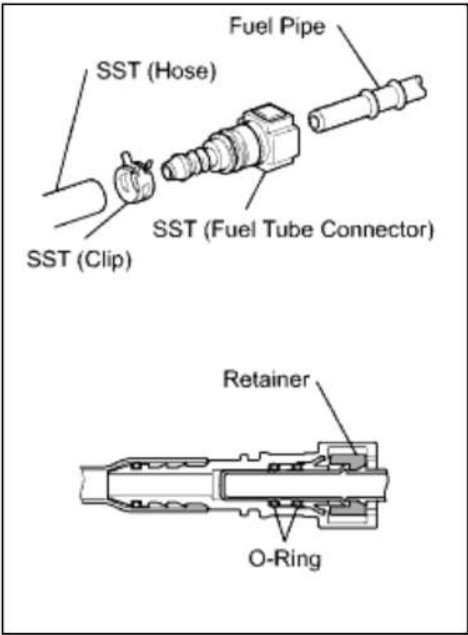


TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - 2	20°C (68°F)	11.6 to 12.4 Ω

If the result is not as specified, replace the injector assembly.

- (b) Check the operation.

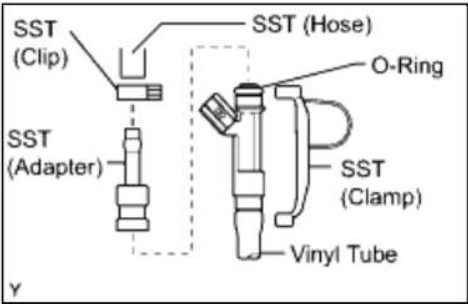
CAUTION:
Perform the inspection in a well-ventilated area.
Do not perform the inspection near a naked flame.



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

SST: 09268-31012
90467-13001
95336-08070
09268-41500

- (2) Install the O-ring onto the fuel injector assembly.



(3) Connect SST (adapter and hose) to the injector assembly, and hold the injector assembly and union with SST (clamp).

SST: 09268-31012

- 90467-13001
- 95336-08070
- 09268-41400
- 09268-41110

(4) Set the injector assembly in a graduated cylinder.

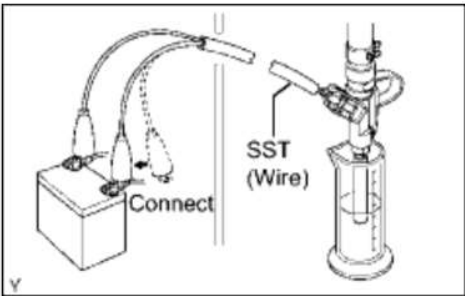
CAUTION:
Install a suitable vinyl tube onto the injector assembly to prevent gasoline from spraying.

(5) Operate the fuel pump.

(6) Connect SST (wire) to the injector assembly 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

Injection Volume:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Positive terminal - Ground terminal	Per 15 seconds	60 to 73 cc (3.7 to 4.5 cu in.)

Difference between each injector:
13 cc (0.8 cu in.) or less

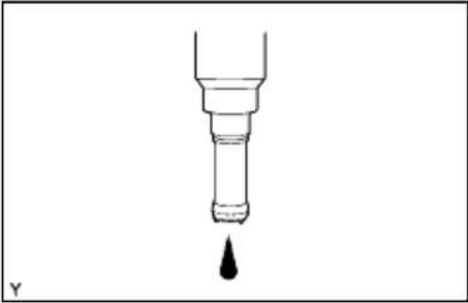
NOTICE:
Always do the switching at the battery side.

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

(c) Check for leaks.

(1) Disconnect the test probes of SST (wire) from the battery and check the fuel leaks from the injector.

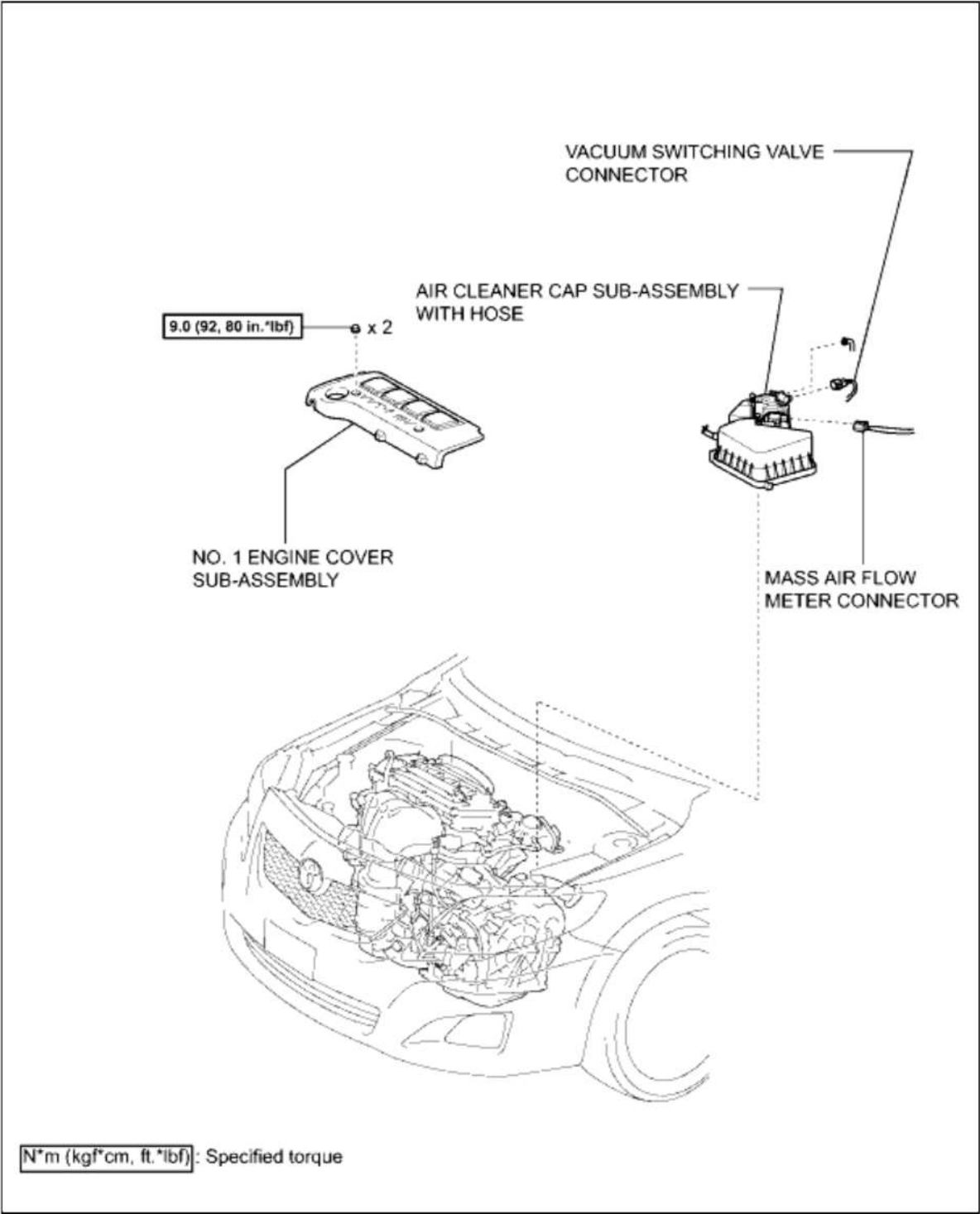
Fuel drop:
1 drop or less every 12 minutes



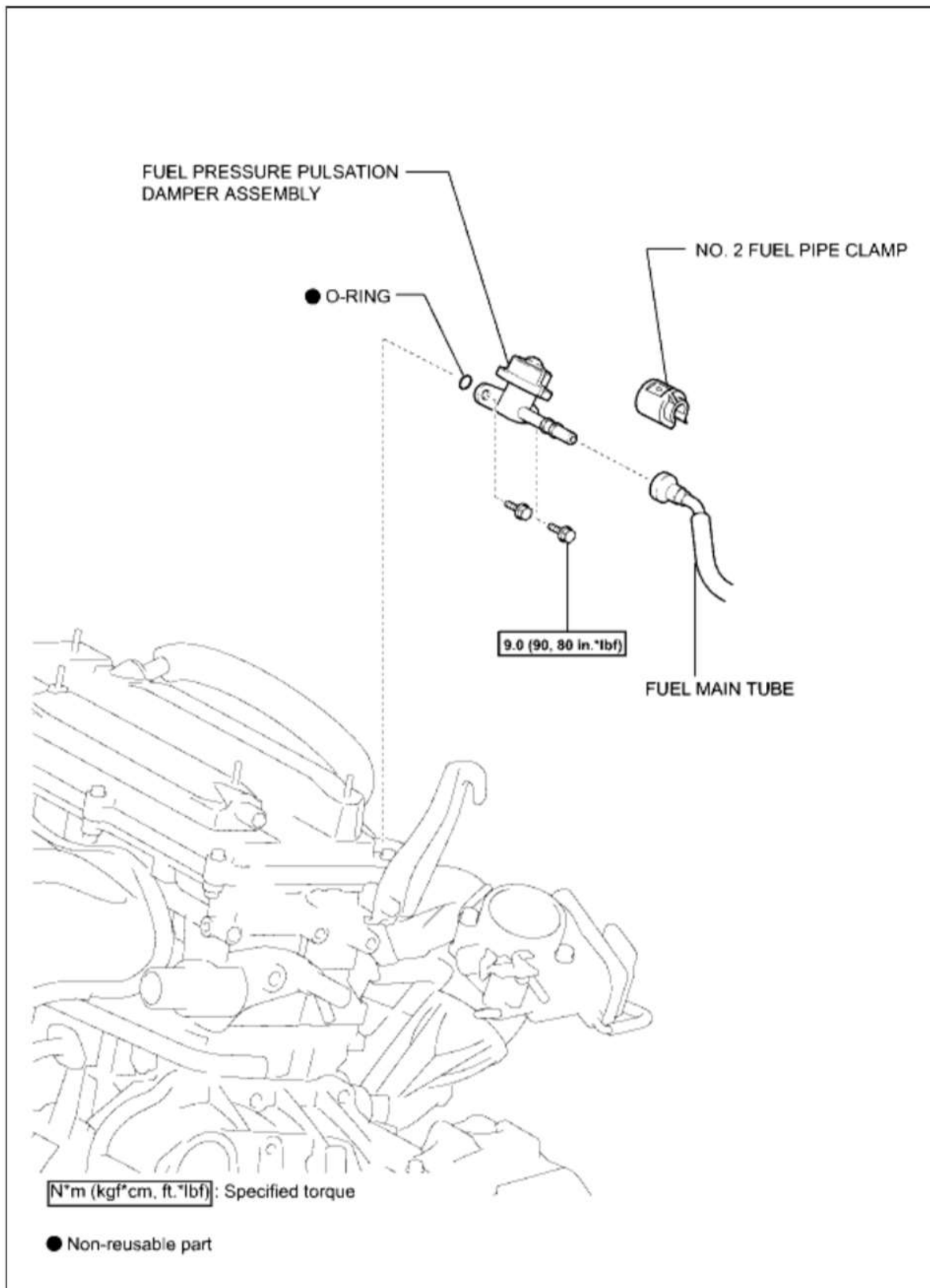
Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017RQ01BX
Title: 2AZ-FE FUEL: FUEL PRESSURE PULSATION DAMPER: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



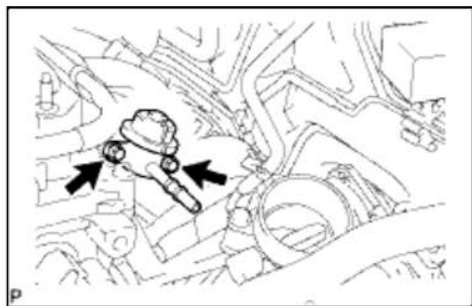
ILLUSTRATION



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017RR01QX
Title: 2AZ-FE FUEL: FUEL PRESSURE PULSATION DAMPER: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE [INFO](#)
2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
3. REMOVE NO. 1 ENGINE COVER SUB-ASSEMBLY [INFO](#)
4. REMOVE AIR CLEANER CAP SUB-ASSEMBLY WITH HOSE [INFO](#)
5. DISCONNECT FUEL MAIN TUBE [INFO](#)
6. REMOVE FUEL PRESSURE PULSATION DAMPER ASSEMBLY



(a) Remove the 2 bolts and fuel pressure pulsation damper.

(b) Remove the O-ring from the fuel pressure pulsation damper.

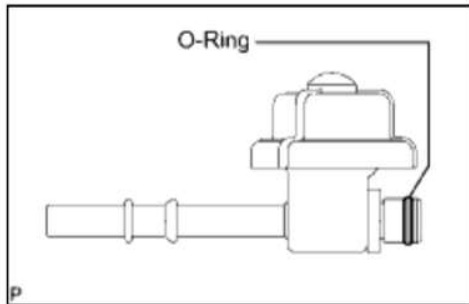


TOYOTA

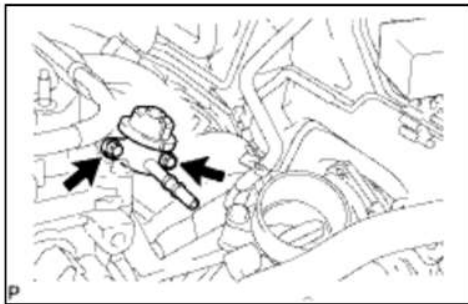
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000017RP01NX
Title: 2AZ-FE FUEL: FUEL PRESSURE PULSATION DAMPER: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL PRESSURE PULSATION DAMPER ASSEMBLY



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



- (b) Install the fuel pressure pulsation damper with the 2 bolts.

Torque: 9.0 N·m (90 kgf·cm, 80in·lbf)

NOTICE:

Make sure that the O-ring is not cracked or does not jump out of position during installation.

2. INSTALL FUEL MAIN TUBE INFO

3. INSTALL AIR CLEANER CAP SUB-ASSEMBLY WITH HOSE INFO

4. INSTALL NO. 1 ENGINE COVER SUB-ASSEMBLY INFO

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL INFO

6. INSPECT FOR FUEL LEAK INFO



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002YQ401JX
Title: 2AZ-FE FUEL: FUEL PRESSURE REGULATOR: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE

HINT:  .

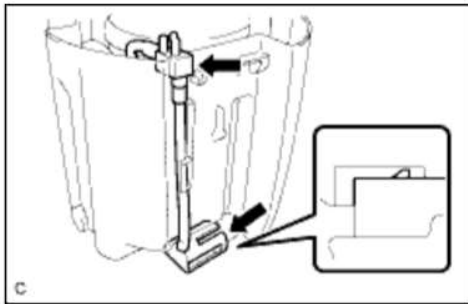
2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

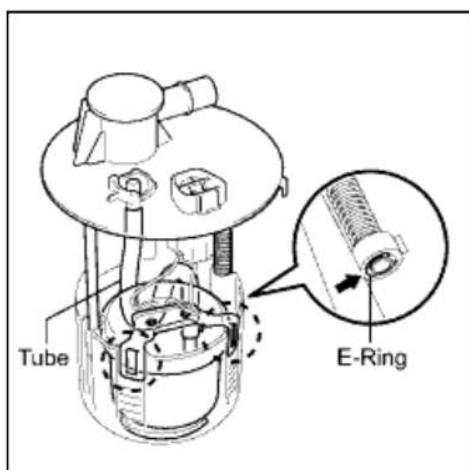
(a) Remove the fuel suction tube assembly with pump and gauge  .

4. REMOVE FUEL SENDER GAUGE ASSEMBLY

5. REMOVE FUEL PUMP



(a) Release the claw and disconnect the fuel pump filter hose.



(b) Remove the E-ring and separate the 2 claws, then remove the fuel pump sub-tank.

NOTICE:

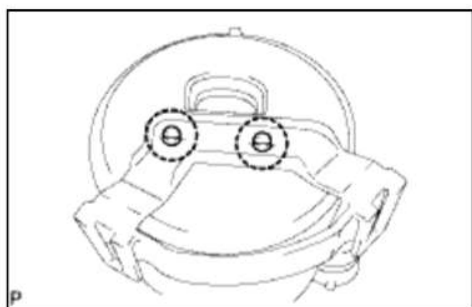
Do not separate the tube indicated in the illustration  .

(c) Disconnect the fuel pump harness connector.

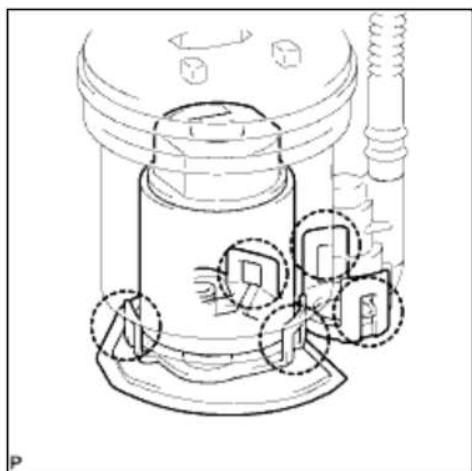
NOTICE:



Do not damage the wire harness.



(d) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws and remove the No. 1 fuel suction support.

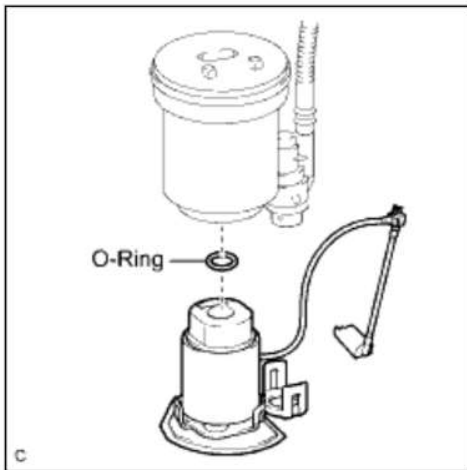
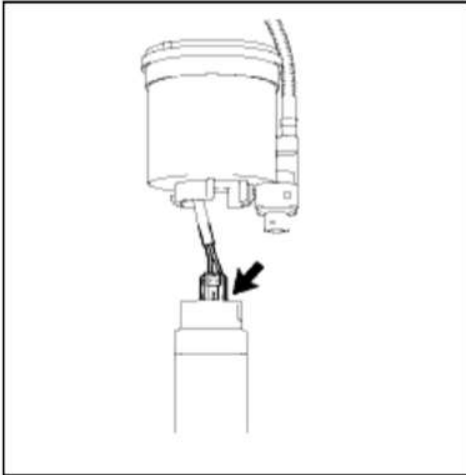


(e) Using a screwdriver with its tip wrapped in protective tape, disengage the 5 claws, and remove the suction filter and fuel pump from the fuel filter.

NOTICE:

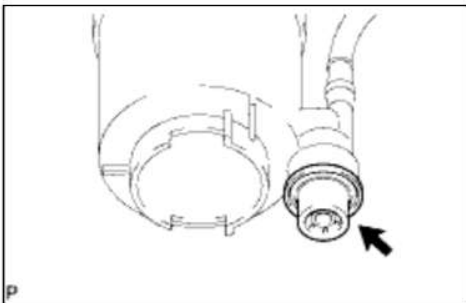
- Do not damage the fuel pump filter or fuel filter.
- Do not remove the suction filter.
- Do not use either the fuel pump or the suction filter if the suction filter is removed from the fuel pump.

(f) Disconnect the fuel pump connector.



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

6. REMOVE FUEL PRESSURE REGULATOR ASSEMBLY

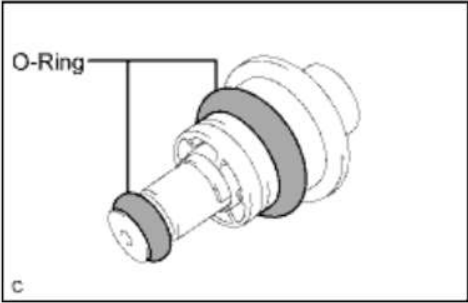


(a) Using a screwdriver with its tip wrapped in protective tape, remove the fuel pressure regulator assembly.

NOTICE:

Slowly pull out the fuel pressure regulator assembly because the O-ring is firmly installed between the regulator and the fuel filter.

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

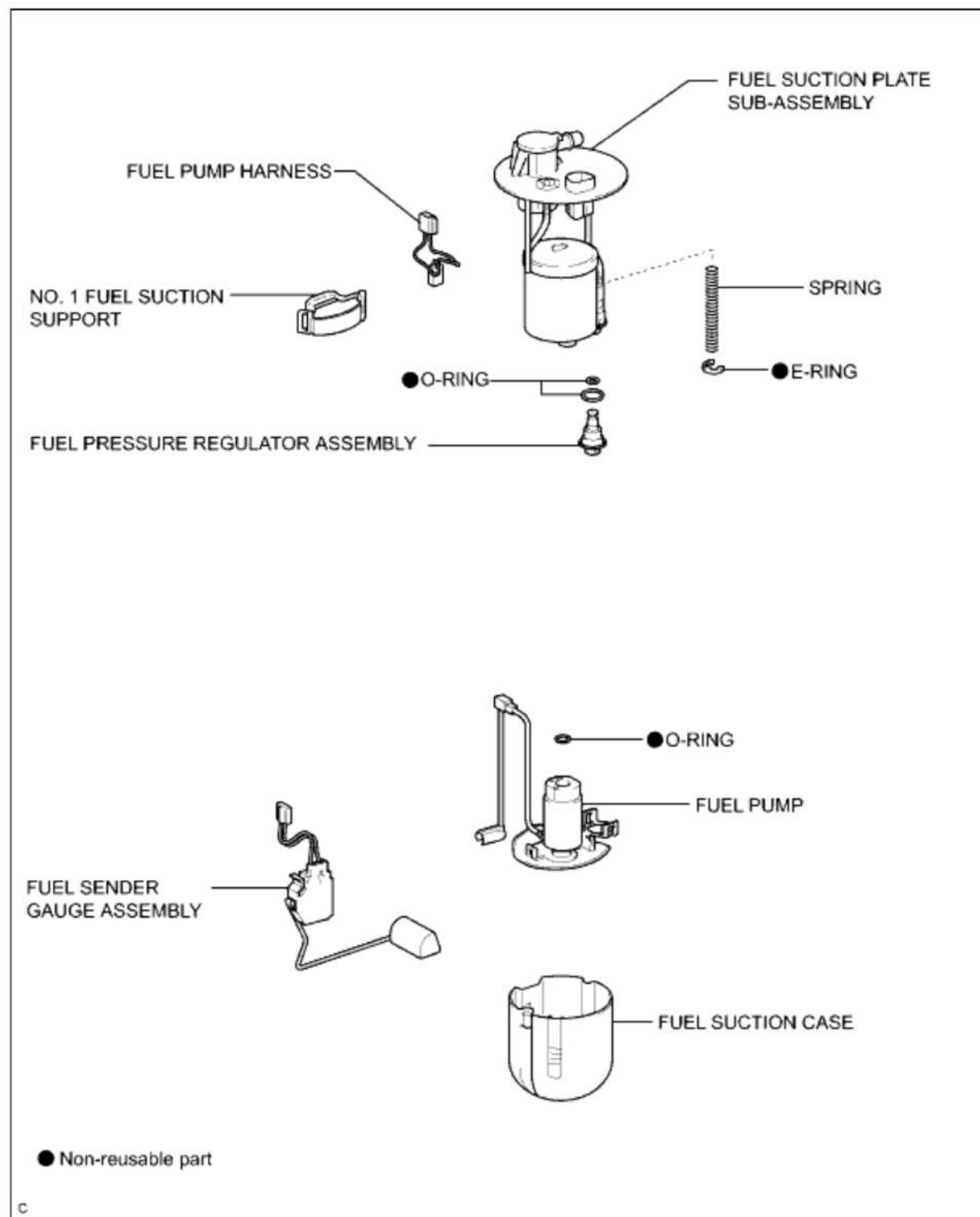


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Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002YQ301EX
Title: 2AZ-FE FUEL: FUEL PRESSURE REGULATOR: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



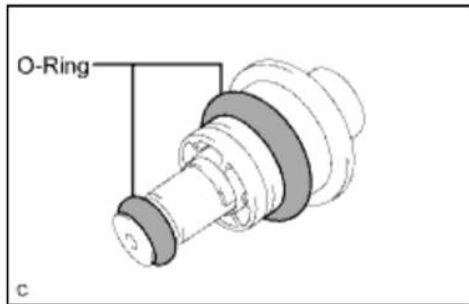


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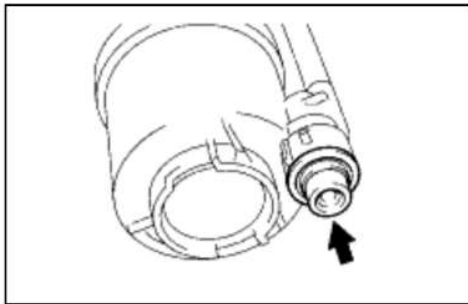
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002YQ201JX
Title: 2AZ-FE FUEL: FUEL PRESSURE REGULATOR: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL PRESSURE REGULATOR ASSEMBLY



(a) Apply gasoline to 2 new O-rings and then install them to the fuel pressure regulator assembly.



(b) Install the fuel pressure regulator assembly.

2. INSTALL FUEL PUMP INFO

3. INSTALL FUEL SENDER GAUGE ASSEMBLY INFO

4. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Install the fuel suction tube assembly with pump and gauge INFO.

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL INFO

6. INSPECT FOR FUEL LEAK INFO





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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002YQ401IX
Title: 2ZR-FE FUEL: FUEL PRESSURE REGULATOR: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE

HINT:  .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Remove the fuel suction tube assembly with pump and gauge from the fuel tank  .

4. DRAIN FUEL

5. REMOVE FUEL SENDER GAUGE ASSEMBLY

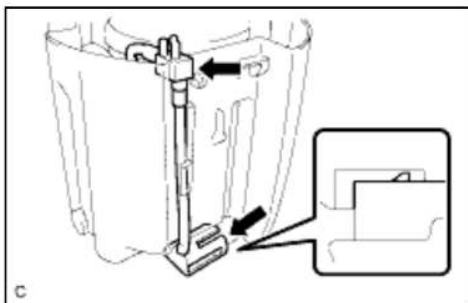
6. REMOVE FUEL PUMP

(a) Disconnect the wire harness connector.

NOTICE:

Do not damage the wire harness.

(b) Disconnect the connector of the fuel pump harness.

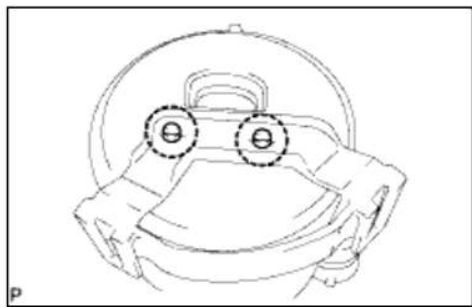
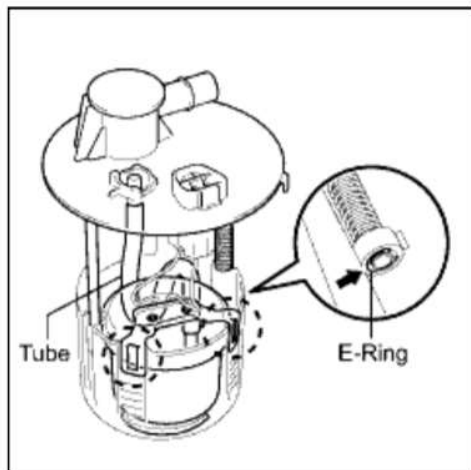


(c) Disconnect the fuel pump filter hose.

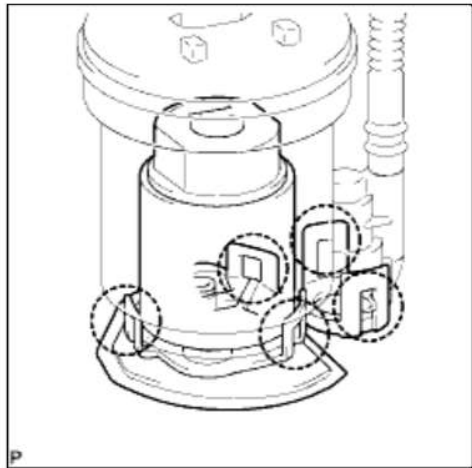
(d) Remove the E-ring and separate the 2 claws, then remove the fuel pump sub-tank.

NOTICE:

Do not separate the tube indicated in the illustration  .



- (e) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws and remove the No. 1 fuel suction support.

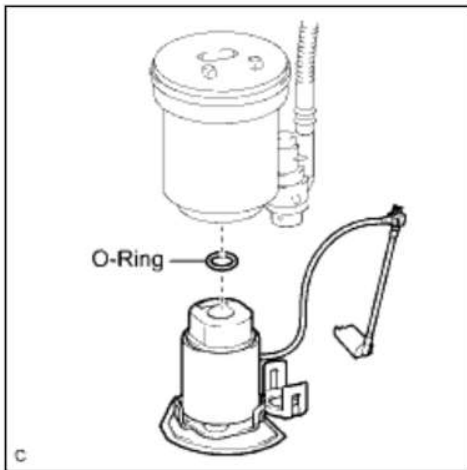
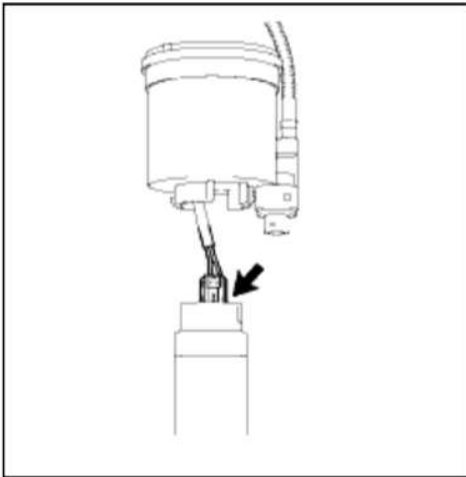


- (f) Using a screwdriver with its tip wrapped in protective tape, disengage the 5 claws, and remove the fuel pump filter and fuel pump from the fuel filter.

NOTICE:

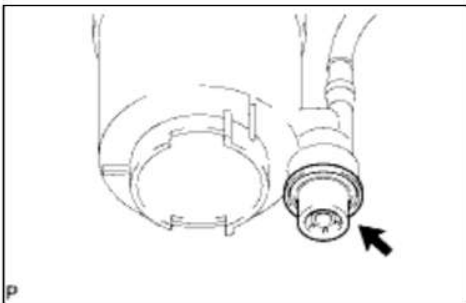
- Do not damage the fuel pump filter.
- Do not remove the suction filter.
- Do not use either the fuel pump or the suction filter if the suction filter is removed from the fuel pump.

- (g) Disconnect the fuel pump harness connector.



(h) Remove the O-ring.

7. REMOVE FUEL PRESSURE REGULATOR ASSEMBLY

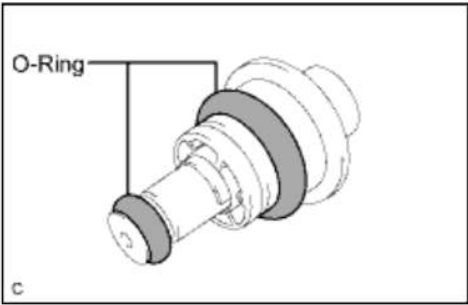


(a) Using a screwdriver with its tip wrapped in protective tape, remove the fuel pressure regulator assembly.

NOTICE:

Slowly pull out the fuel pressure regulator assembly because the O-ring is firmly installed between the regulator and the fuel filter.

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

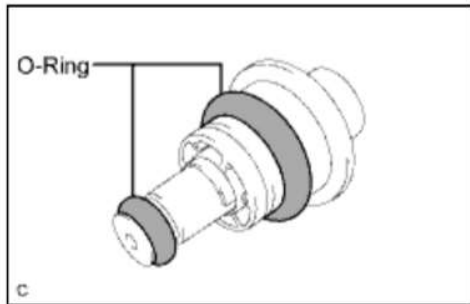


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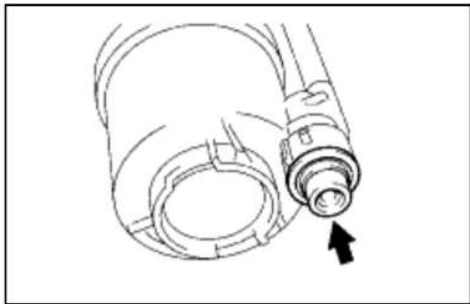
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002YQ201IX
Title: 2ZR-FE FUEL: FUEL PRESSURE REGULATOR: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL PRESSURE REGULATOR ASSEMBLY



(a) Apply gasoline to 2 new O-rings and then install them to the fuel pressure regulator assembly.



(b) Install the fuel pressure regulator assembly.

2. INSTALL FUEL PUMP INFO

3. INSTALL FUEL SENDER GAUGE ASSEMBLY INFO

4. INSTALL FUEL SUCTION WITH PUMP AND GAUGE TUBE ASSEMBLY

(a) Install the fuel suction tube assembly with pump and gauge to the fuel tank INFO.

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL INFO

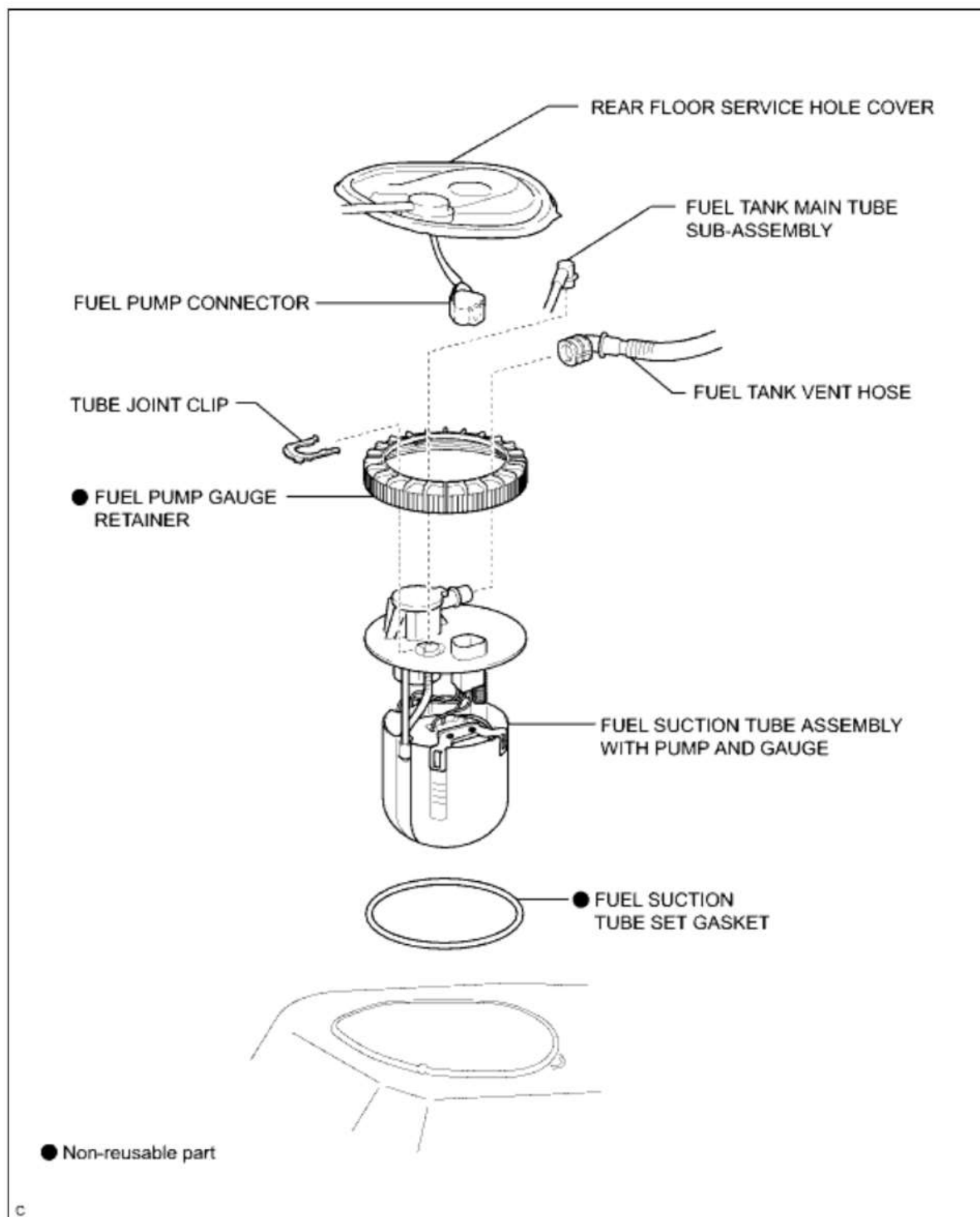
6. INSPECT FOR FUEL LEAK INFO



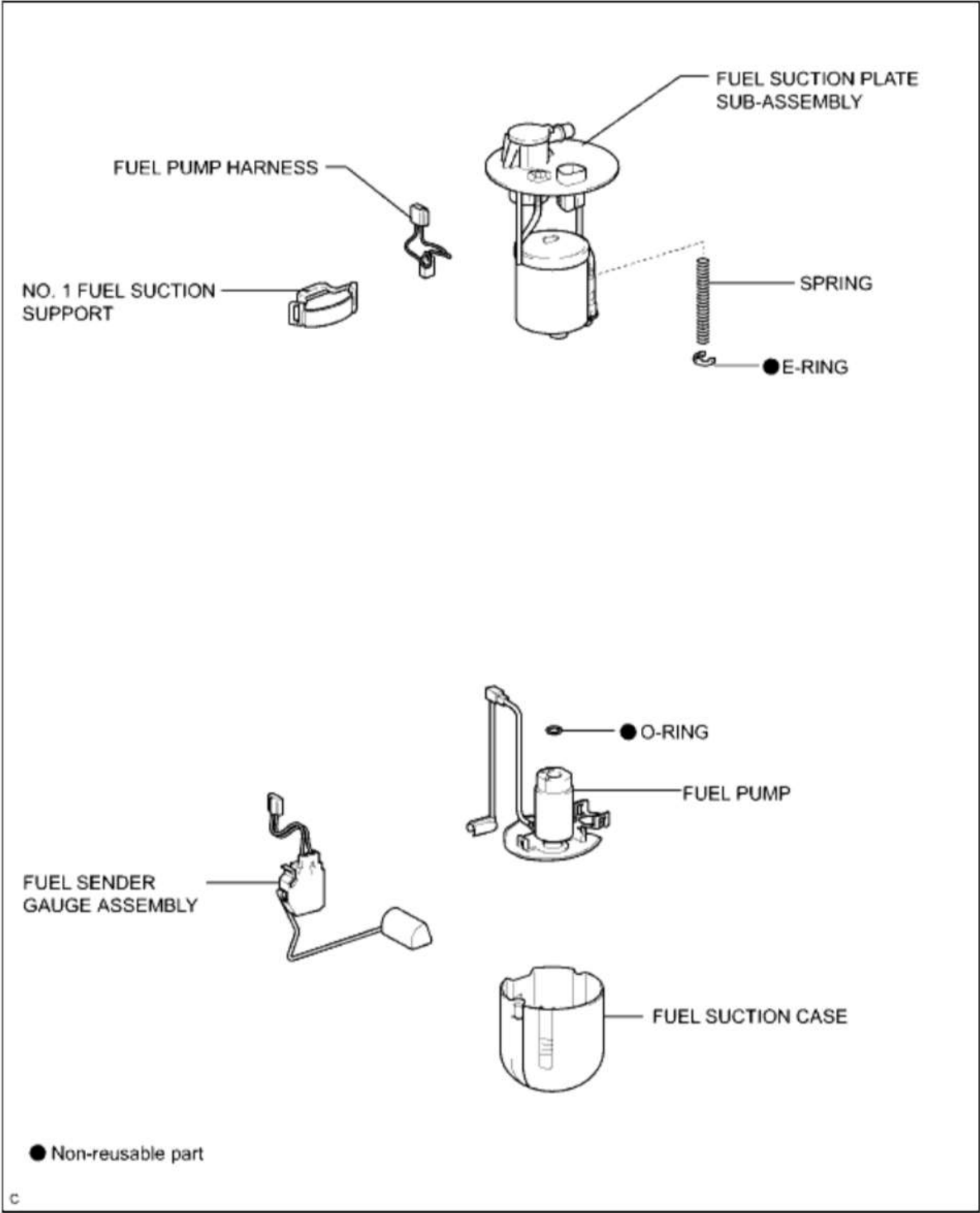
Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XW010X
Title: 2AZ-FE FUEL: FUEL PUMP: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



ILLUSTRATION



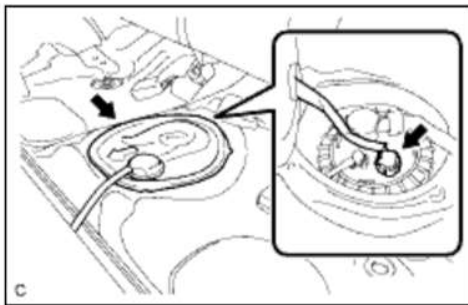
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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XX01UX
Title: 2AZ-FE FUEL: FUEL PUMP: REMOVAL (2010 Corolla)		

REMOVAL

1. REMOVE REAR SEAT CUSHION ASSEMBLY INFO

2. REMOVE REAR FLOOR SERVICE HOLE COVER



(a) Remove the rear floor service hole cover.

(b) Disconnect the connector from the fuel suction tube assembly.

3. DISCHARGE FUEL SYSTEM PRESSURE

HINT: INFO .

4. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

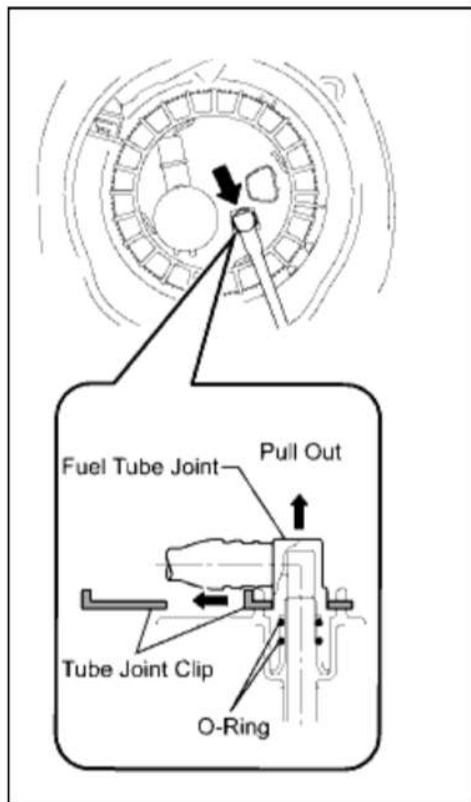
5. DISCONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

(a) Disconnect the fuel tank main tube.

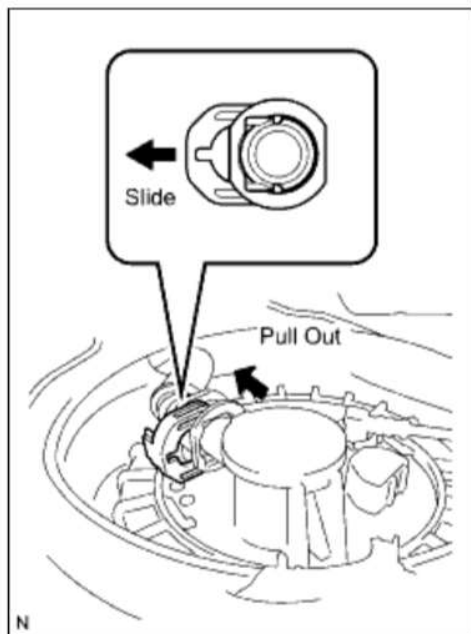
(1) Remove the tube joint clip, and pull the fuel tube joint out of the plug of the fuel suction plate.

NOTICE:

- Check that there is no dirt or other foreign objects around the fuel tube joint before disconnecting it. Clean the joint if necessary.
- It is necessary to prevent mud or dirt from entering the joint. If mud or dirt gets in the joint, the O-rings may not seal properly.
- Only disconnect the joint by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the joint by covering it with a plastic bag.



6. DISCONNECT FUEL TANK VENT HOSE



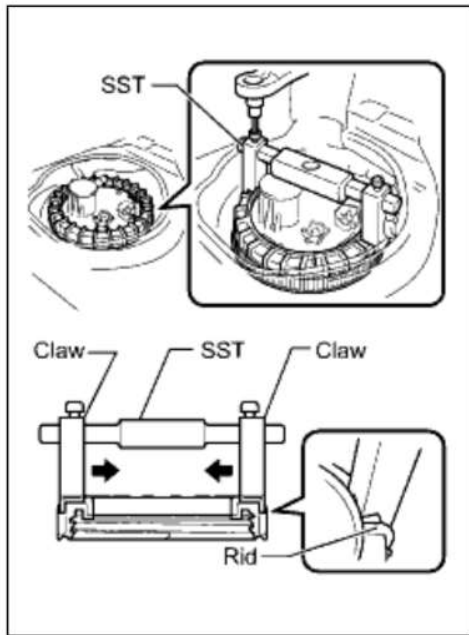
(a) Disconnect the fuel tank vent hose.

- (1) Pinch the retainer and pull the fuel tank vent connector out of the fuel tank to disconnect the fuel tank vent hose from the fuel suction plate.

NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.

7. REMOVE FUEL PUMP GAUGE RETAINER



(a) Using a 6 mm socket hexagon wrench, set SST to the fuel pump gauge retainer.

SST: 09808-14020

09808-01410

09808-01420

09808-01430

HINT:

- Engage the SST claws securely with the fuel pump gauge retainer ribs to secure SST.
- Install SST while pressing the SST claws toward the fuel pump gauge retainer (towards the center of SST).

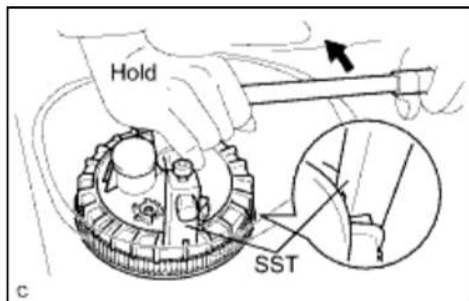
(b) Using SST, loosen the fuel pump gauge retainer.

SST: 09808-14020

09808-01410

09808-01420

09808-01430



NOTICE:

- Do not use any tools other than specified in this operation. Damage to the fuel pump gauge retainer or the fuel tank.
- Loosen the retainer by turning it counterclockwise while holding SST down. Do not allow the claw of the tank suction tube support to slip out of its groove on the fuel tank.

HINT:

The ribs on the fuel pump gauge retainer can be fitted into the tips of SST.

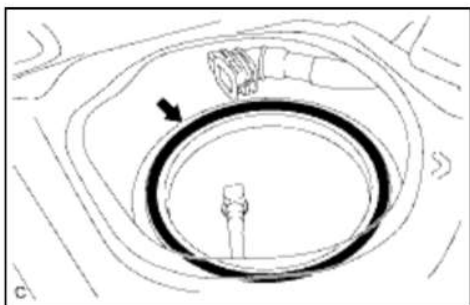
(c) Remove the fuel pump gauge retainer while holding the fuel suction tube assembly by hand.

8. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Remove the fuel suction tube assembly from the fuel tank.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.



(b) Remove the gasket from the fuel tank.



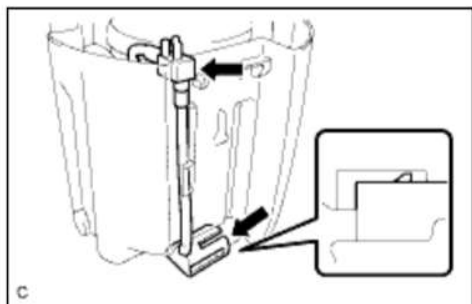
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000003D8C004X
Title: 2AZ-FE FUEL: FUEL PUMP: DISASSEMBLY (2010 Corolla)		

DISASSEMBLY

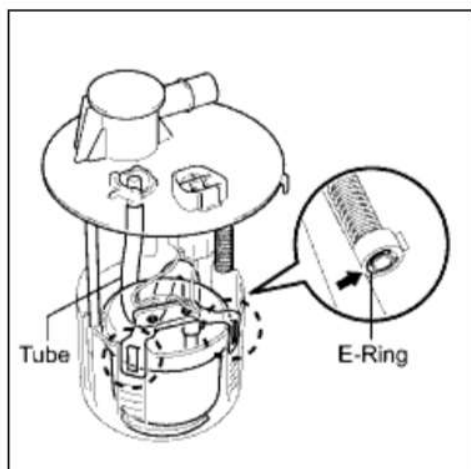
1. REMOVE FUEL SENDER GAUGE ASSEMBLY



2. REMOVE FUEL PUMP



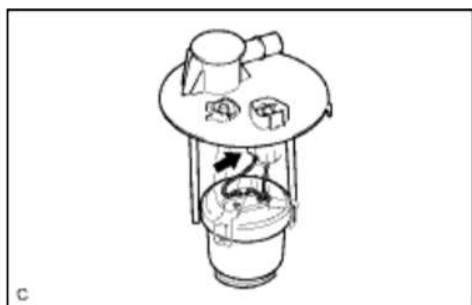
(a) Release the claw and disconnect the fuel pump filter hose.



(b) Remove the E-ring and separate the 2 claws, then remove the fuel pump sub-tank.

NOTICE:

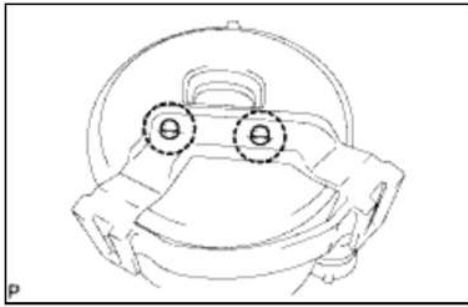
Do not separate the tube indicated in the illustration



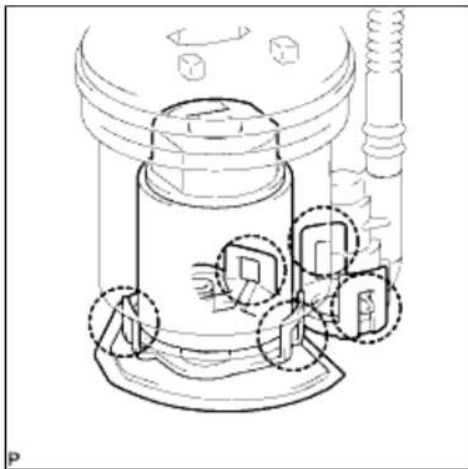
(c) Disconnect the fuel pump harness connector.

NOTICE:

Do not damage the wire harness.



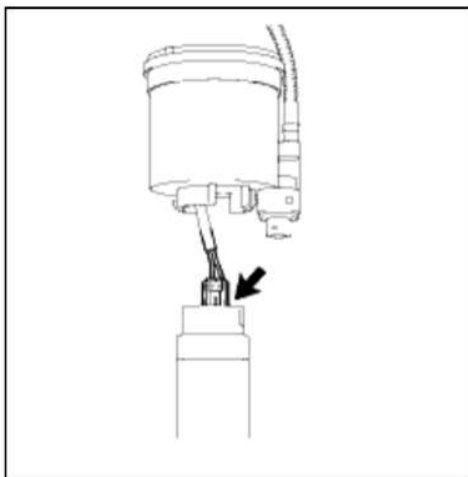
- (d) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws and remove the No. 1 fuel suction support.



- (e) Using a screwdriver with its tip wrapped in protective tape, disengage the 5 claws, and remove the suction filter and fuel pump from the fuel filter.

NOTICE:

- Do not damage the fuel pump filter or fuel filter.
- Do not remove the suction filter.
- Do not use either the fuel pump or the suction filter if the suction filter is removed from the fuel pump.

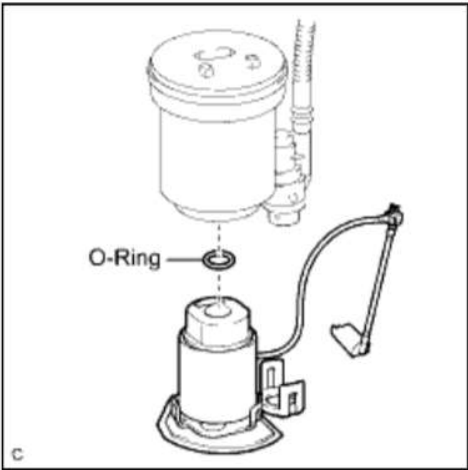


- (f) Disconnect the fuel pump connector.

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

NOTICE:

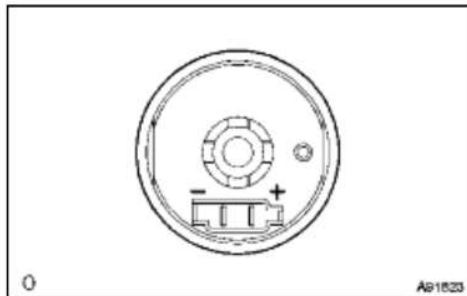
Do not disassemble the fuel pump and the suction filter because they are non-reusable parts.



Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XV011X
Title: 2AZ-FE FUEL: FUEL PUMP: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL PUMP



(a) Check the resistance.

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

Standard Resistance:

TESTER CONNECTION	SPECIFIED CONDITION
1 - 2	0.2 to 3.0 Ω at 20°C (68°F)

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

(b) Check the operation.

(1) Apply battery voltage to both terminals. Check that the pump operates.

NOTICE:

- These tests must be done quickly (for less than 10 seconds) to prevent the coil from burning out.
- Keep the fuel pump as far away from the battery as possible.
- Always do the switching at the battery side.

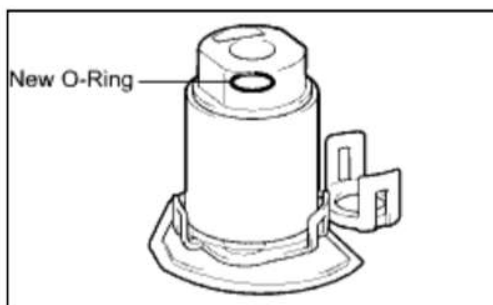
If the motor does not operate, replace the fuel pump.



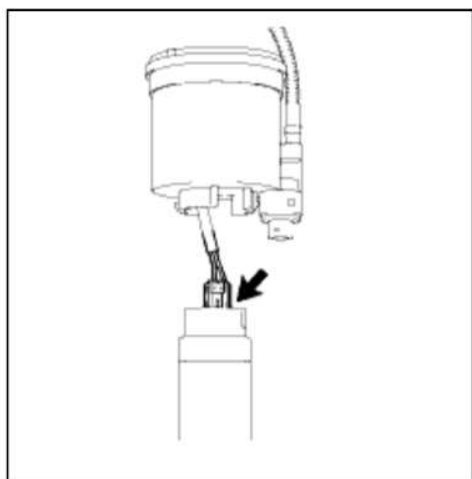
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000003D8D004X
Title: 2AZ-FE FUEL: FUEL PUMP: REASSEMBLY (2010 Corolla)		

REASSEMBLY

1. INSTALL FUEL PUMP



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



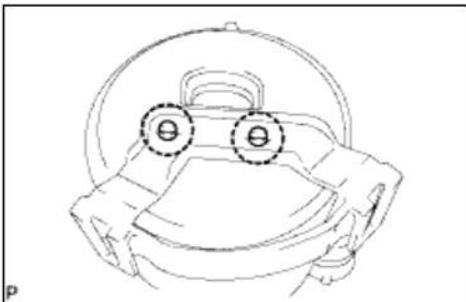
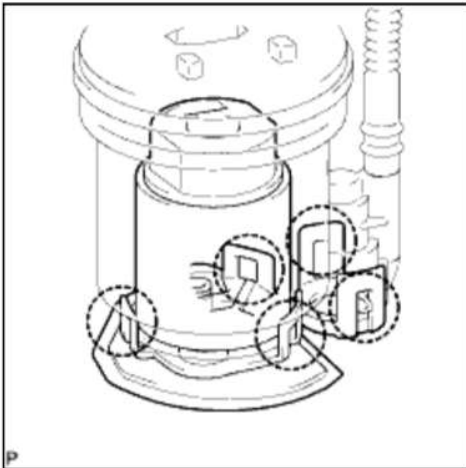
- (b) Connect the fuel pump harness connector.

- (c) Apply a light coat of gasoline or spindle oil to the O-ring of the fuel pump again.

- (d) Engage the 5 claws, and install the fuel pump filter onto the fuel pump with fuel filter.

NOTICE:

Make sure that the O-ring is not cracked or does not jump out of position during installation.

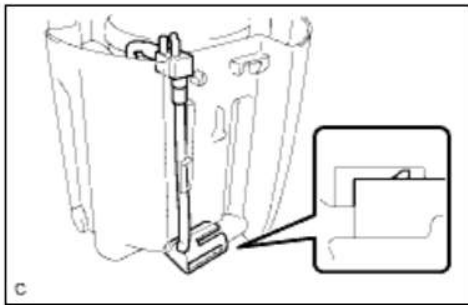
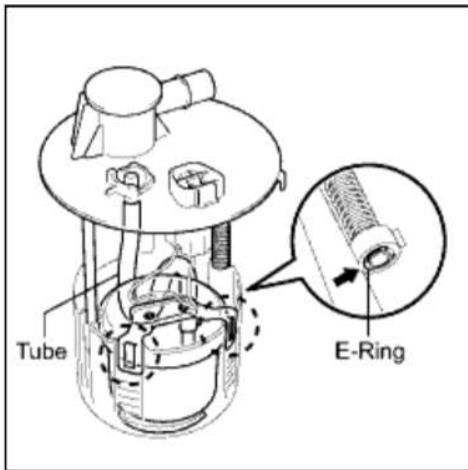


(e) Engage the 2 claws of the No. 1 fuel suction support.



(f) Connect the fuel pump harness connector.

(g) Engage the 2 claws and install a new E-ring and fuel pump sub-tank.



(h) Align the groove of the fuel pump filter hose with the cutout of the fuel sub-tank and install the hose.

2. INSTALL FUEL SENDER GAUGE ASSEMBLY

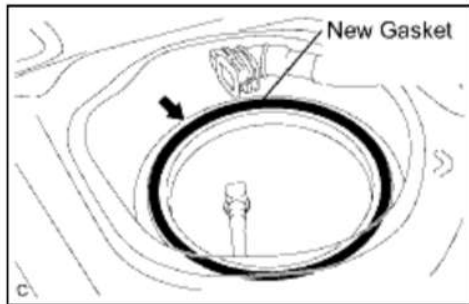
[INFO](#)

TOYOTA

Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XU01UX
Title: 2AZ-FE FUEL: FUEL PUMP: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE



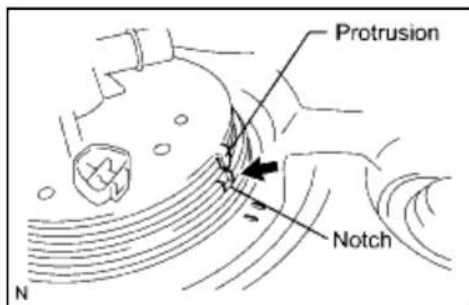
(a) Install a new gasket onto the fuel tank.

(b) Set the fuel suction tube assembly to the fuel tank.

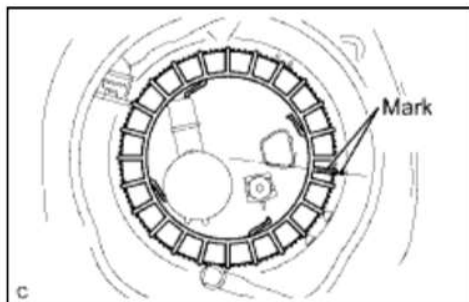
NOTICE:

Make sure that the fuel sender gauge arm does not bend.

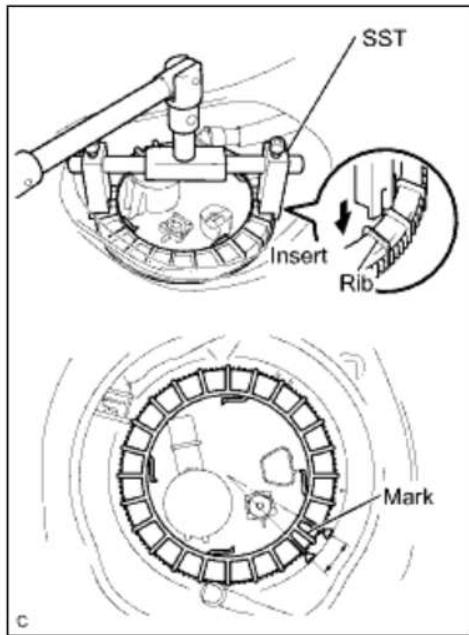
2. INSTALL FUEL PUMP GAUGE RETAINER



(a) Align the protrusion of the fuel suction tube assembly with the notch of the fuel tank.



(b) While holding the fuel suction tube assembly by hand, align the marks of a new fuel pump gauge retainer and fuel tank as shown in the illustration, then install the fuel pump gauge retainer.



(c) Using SST and your hand, tighten the fuel pump gauge retainer 2 revolutions so that the mark of the retainer comes within the range shown in the illustration.

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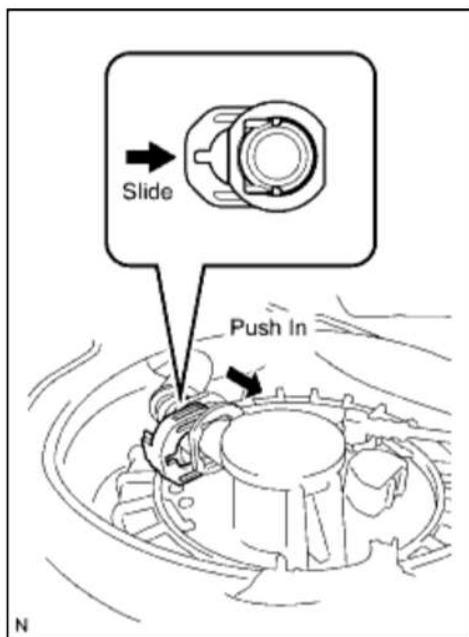
NOTICE:

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

HINT:

Insert the notch of SST into the rib of the fuel pump gauge retainer.

3. INSTALL FUEL TANK VENT HOSE



(a) Connect the fuel tank vent hose.

(1) Align the fuel tank vent connector with the pipe, then push in the fuel tank vent connector until the retainer makes a "click" sound to connect the fuel tank vent hose to the fuel suction plate.

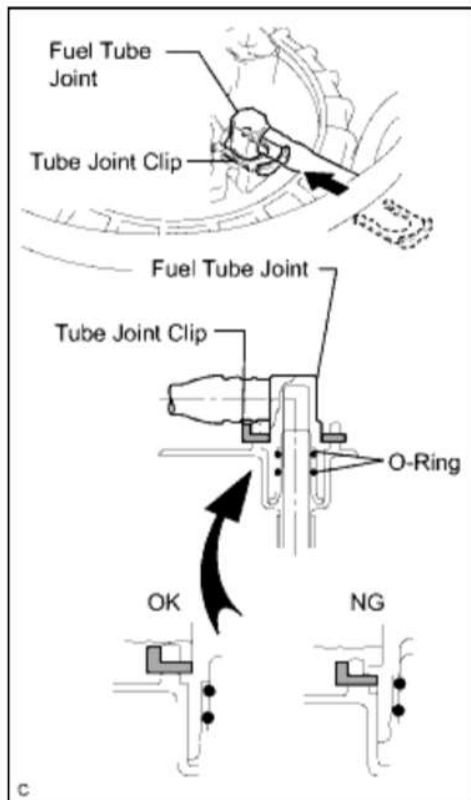
NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tank vent connector and pipe before performing this work.
- After connecting the fuel tank vent hose, check that the fuel tank vent hose is securely connected by pulling on the quick connector.

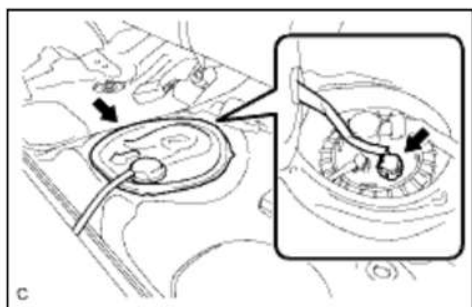
4. INSTALL FUEL TANK MAIN TUBE SUB-ASSEMBLY

(a) Connect the fuel tank main tube.

(1) Push the fuel tube joint in the plug of the fuel suction plate, then install the tube joint clip.

**NOTICE:**

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube joint and plug before performing 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 tank main tube cannot be pulled out.

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL INFO**6. INSPECT FOR FUEL LEAK** INFO**7. INSTALL REAR FLOOR SERVICE HOLE COVER**

(a) Connect the fuel pump connector.

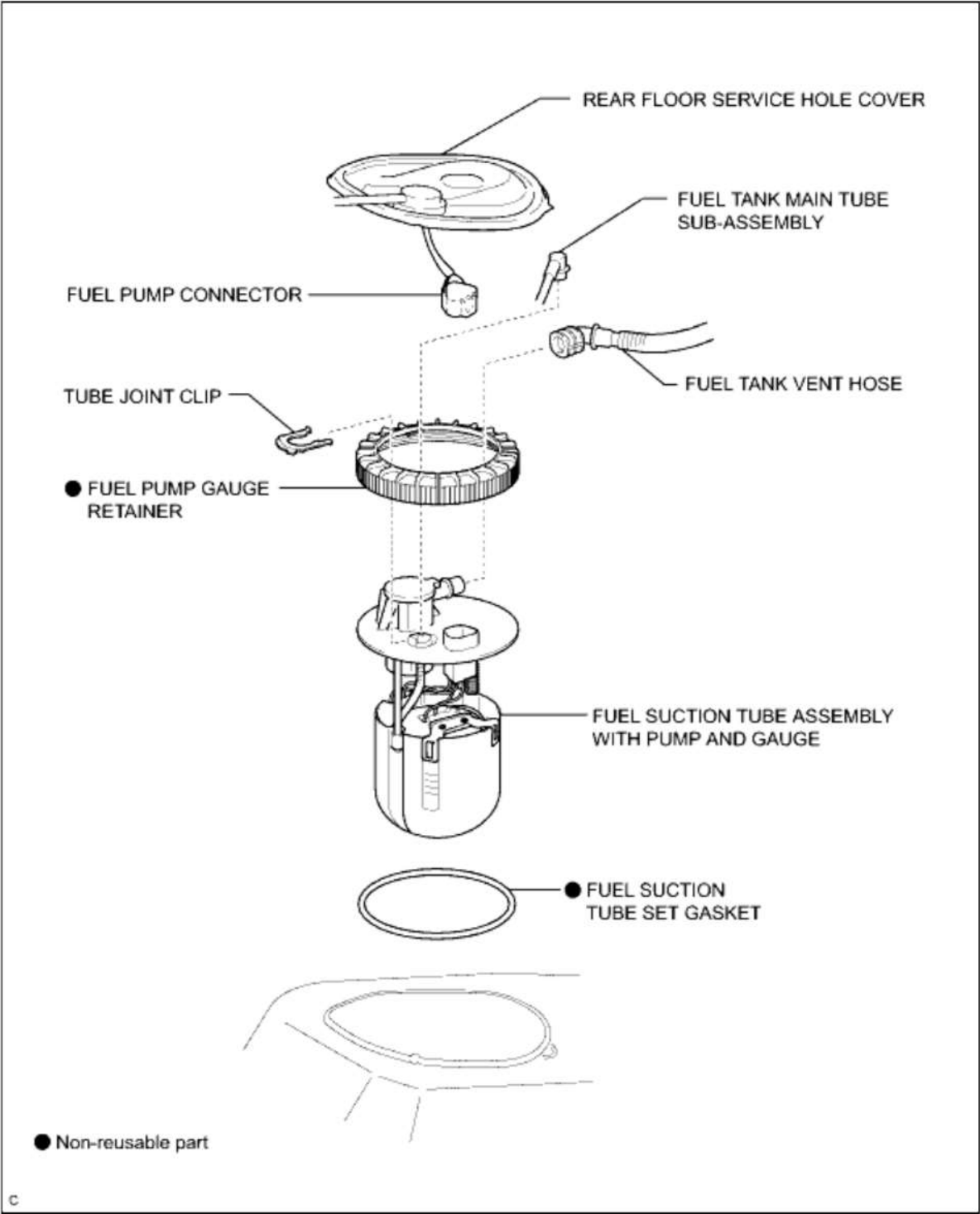
(b) Install the rear floor service hole cover.

8. INSTALL REAR SEAT CUSHION ASSEMBLY INFO

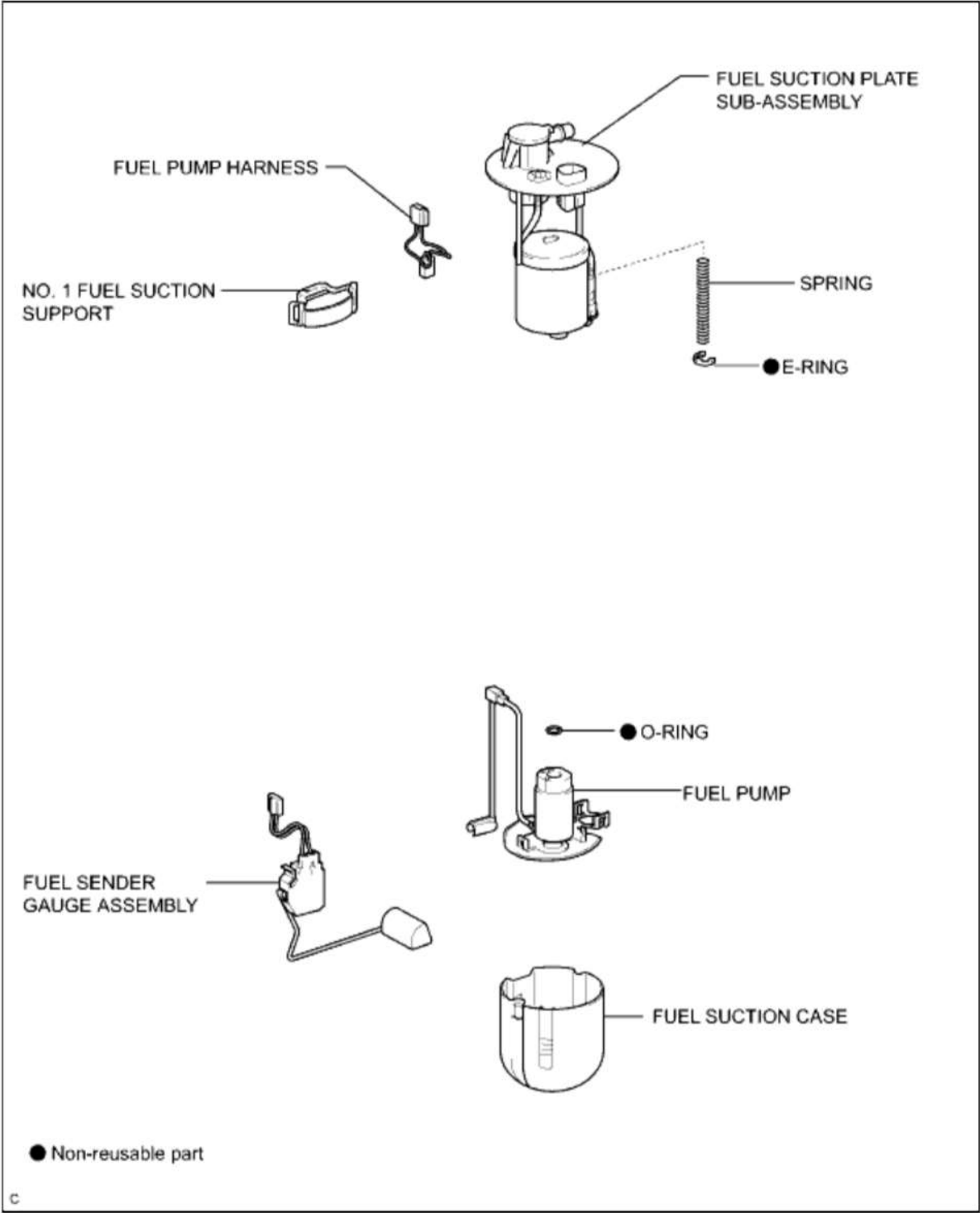
Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XW00ZX
Title: 2ZR-FE FUEL: FUEL PUMP: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



ILLUSTRATION



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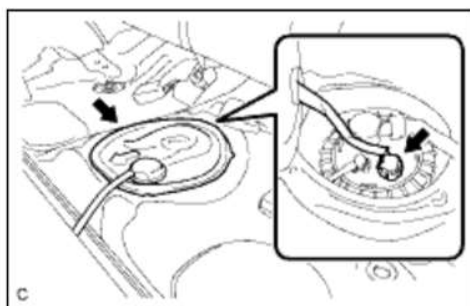
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XX01TX
Title: 2ZR-FE FUEL: FUEL PUMP: REMOVAL (2010 Corolla)		

REMOVAL

1. REMOVE REAR SEAT CUSHION ASSEMBLY



2. REMOVE REAR FLOOR SERVICE HOLE COVER



(a) Remove the rear floor service hole cover.

(b) Disconnect the connector from the fuel suction tube assembly.

3. DISCHARGE FUEL SYSTEM PRESSURE

(a) Start the engine. After the engine stops naturally, turn the ignition switch off.

HINT:

DTC P0171/25 (system too lean) may be set.

(b) Crank the engine again and make sure that the engine does not start.

(c) Remove the fuel tank cap and discharge the pressure from the fuel tank.

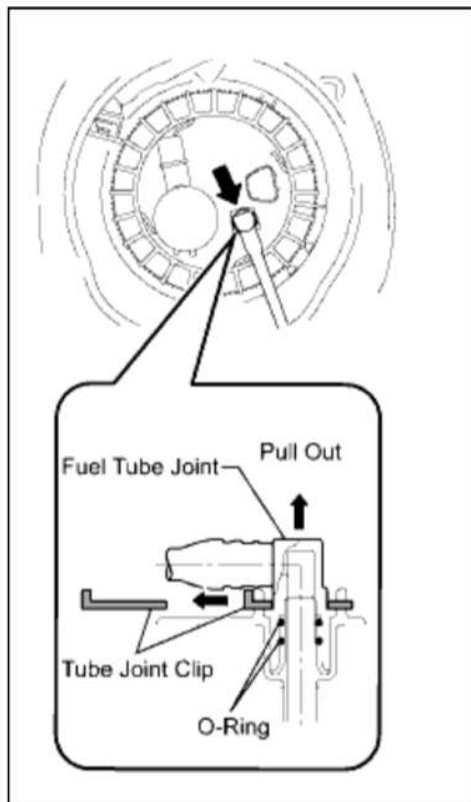
4. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

5. DISCONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

(a) Remove the tube joint clip, then pull the fuel tube joint out of the plug of the fuel suction tube assembly.

NOTICE:

- Check that there is no dirt or other foreign objects around the fuel tube joint before disconnecting it. Clean the joint if necessary.
- It is necessary to prevent mud or dirt from entering the joint. If mud or dirt gets in the joint, the O-rings may not seal properly.
- Only disconnect the joint by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the contact surfaces by covering it with a plastic



bag.

6. DISCONNECT FUEL TANK VENT HOSE

(a) Disconnect the fuel tank vent hose.

- (1) Pinch the retainer and pull the fuel tank vent connector out of the fuel tank to disconnect the fuel tank vent hose from the fuel suction plate.

NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.

7. REMOVE FUEL PUMP GAUGE RETAINER

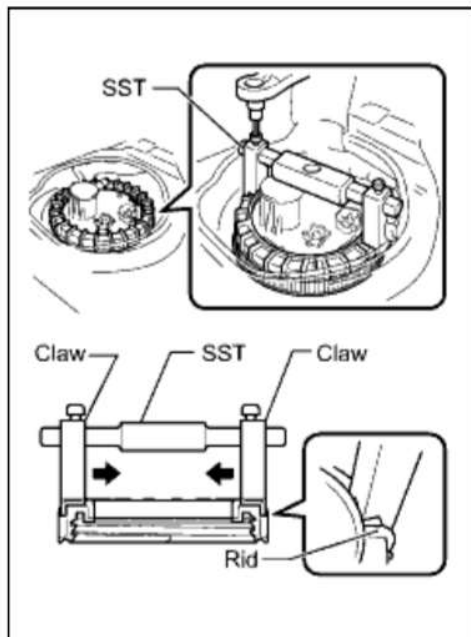
- (a) Using a 6 mm socket hexagon wrench, set SST to the fuel pump gauge retainer.

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**HINT:**

- Engage the SST claws securely with the fuel pump gauge retainer ribs to secure SST.
- Install SST while pressing the SST claws toward the fuel pump gauge retainer (towards the center of SST).

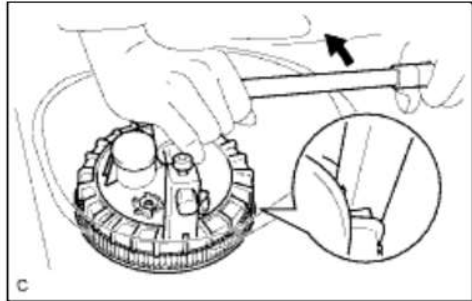
(b) Using SST, loosen the fuel pump gauge retainer.

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**NOTICE:**

- Do not use any tools other than specified in this operation. Damage to the fuel pump gauge retainer or the fuel tank.
- Loosen the retainer by turning it counterclockwise while holding SST down. Do not allow the claw of the tank suction tube support to slip out of its groove on the fuel tank.

HINT:

The ribs on the fuel pump gauge retainer can be fitted into the tips of SST.

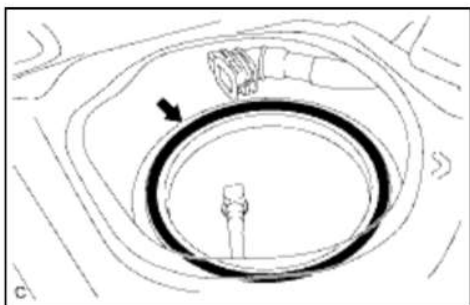
(c) Remove the fuel pump gauge retainer while holding the fuel suction tube assembly by hand.

8. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Remove the fuel suction tube assembly with pump and gauge from the fuel tank.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.



(b) Remove the gasket from the fuel tank.



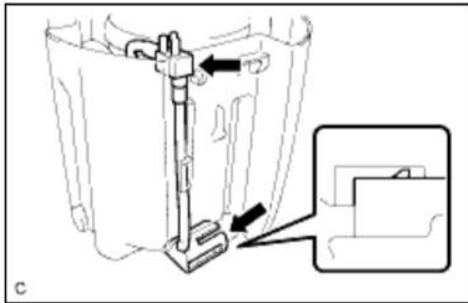
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000SL902XX
Title: 2ZR-FE FUEL: FUEL PUMP: DISASSEMBLY (2010 Corolla)		

DISASSEMBLY

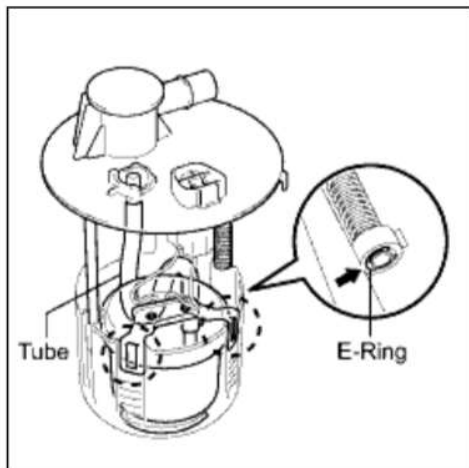
1. REMOVE FUEL SENDER GAUGE ASSEMBLY



2. REMOVE FUEL PUMP



(a) Release the claw and disconnect the fuel pump filter hose.



(b) Remove the E-ring and separate the 2 claws, then remove the fuel pump sub-tank.

NOTICE:

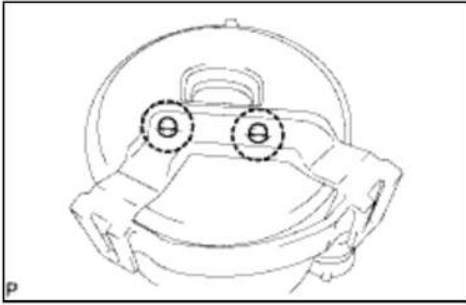
Do not separate the tube indicated in the illustration



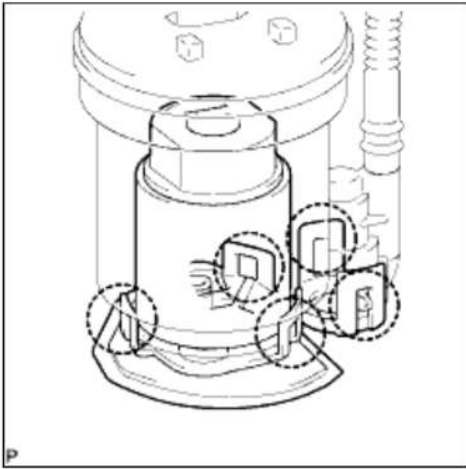
(c) Disconnect the fuel pump harness connector.

NOTICE:

Do not damage the wire harness.



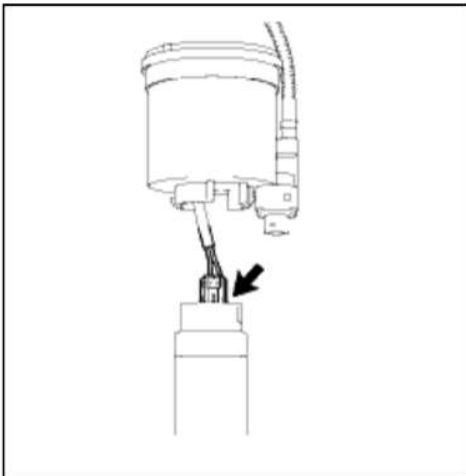
(d) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws and remove the No. 1 fuel suction support.



(e) Using a screwdriver with its tip wrapped in protective tape, disengage the 5 claws, and remove the fuel pump filter and fuel pump from the fuel filter.

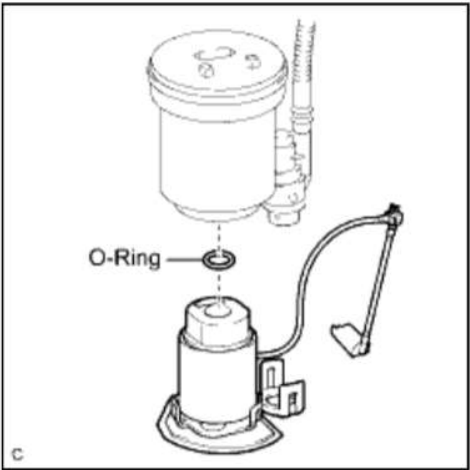
NOTICE:

- Do not damage the fuel pump filter.
- Do not remove the suction filter.
- Do not use either the fuel pump or the suction filter if the suction filter is removed from the fuel pump.



(f) Disconnect the fuel pump harness connector.

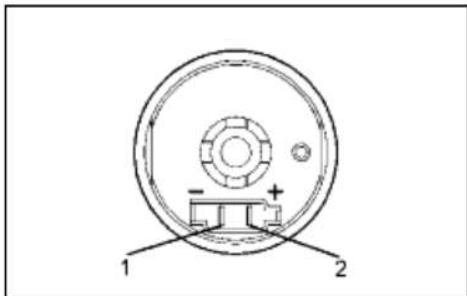
(g) Remove the O - ring from the fuel pump.



Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XV010X
Title: 2ZR-FE FUEL: FUEL PUMP: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL PUMP



(a) Check the resistance.

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

Standard Resistance:

TESTER CONNECTION	SPECIFIED CONDITION
1 - 2	0.2 to 3.0 Ω at 20°C (68°F)

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

(b) Check the operation.

(1) Apply battery voltage to both terminals. Check that the pump operates.

NOTICE:

- These tests must be done quickly (within 10 seconds) to prevent the coil from burning out.
- Keep the fuel pump as far away from the battery as possible.
- Always do the switching at the battery side.

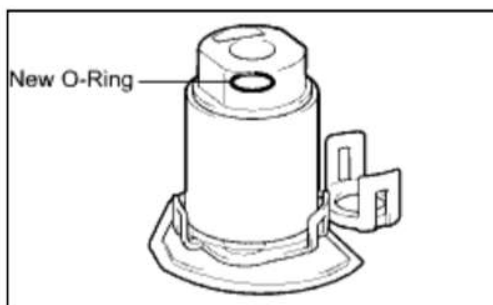
If the motor does not operate, replace the fuel pump.



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000SLA02VX
Title: 2ZR-FE FUEL: FUEL PUMP: REASSEMBLY (2010 Corolla)		

REASSEMBLY

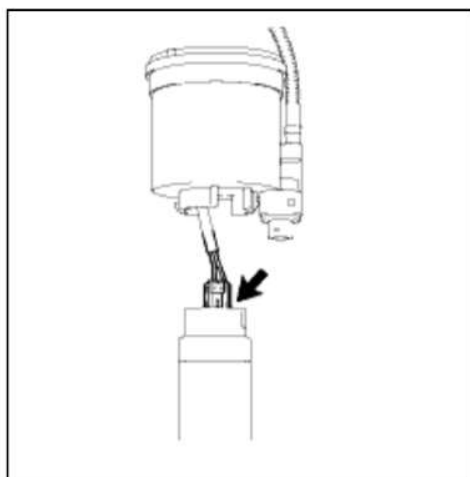
1. INSTALL FUEL PUMP



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

NOTICE:

Do not disassemble the fuel pump and the suction filter. Doing so will cause the fuel pump to be non-reusable.



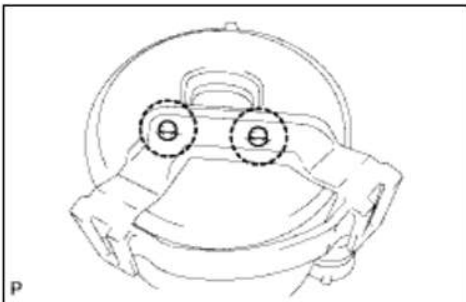
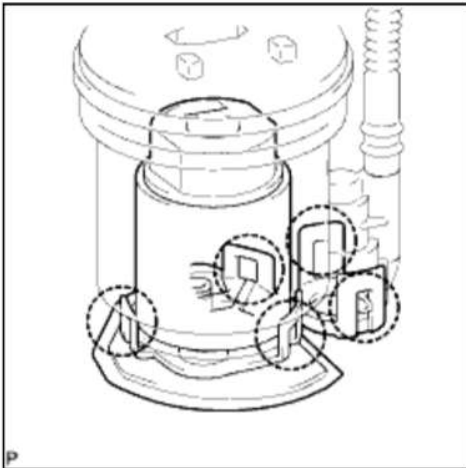
- (b) Connect the fuel pump harness connector.

- (c) Apply a light coat of gasoline or spindle oil to the O-ring of the fuel pump again.

- (d) Engage the 5 claws, and install the fuel pump filter onto the fuel filter.

NOTICE:

Make sure that the O-ring is not cracked or does not jump out of position during installation.

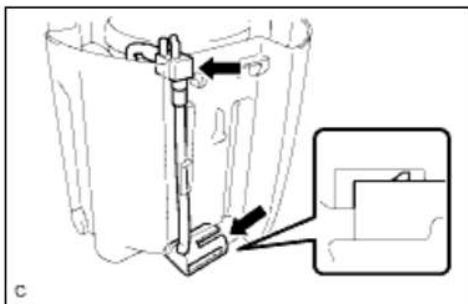
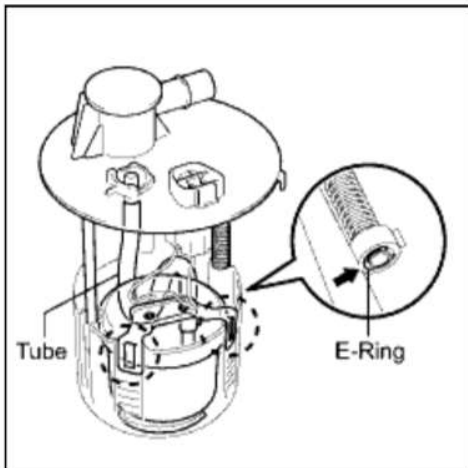


(e) Engage the 2 claws of the No. 1 fuel suction support.



(f) Connect the fuel pump harness connector.

(g) Engage the 2 claws and install a new E-ring and fuel pump sub-tank.



(h) Align the groove of the fuel pump filter hose with the cutout of the fuel sub-tank and install the hose.

NOTICE:

Do not apply excessive force to the fuel tube or the suction support.

(i) Connect the connector of the fuel pump harness.

2. INSTALL FUEL SENDER GAUGE ASSEMBLY

INFO

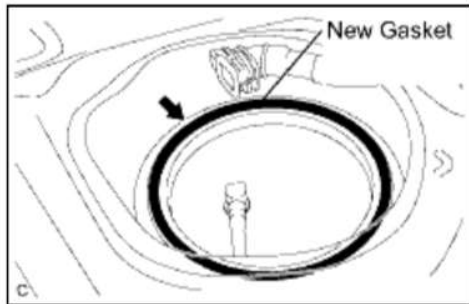


TOYOTA

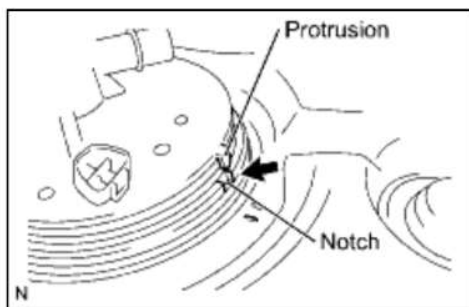
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022XU01TX
Title: 2ZR-FE FUEL: FUEL PUMP: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE



(a) Install a new gasket onto the fuel tank.



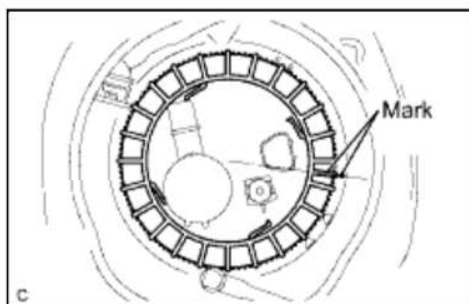
(b) Set the fuel suction tube assembly with pump and gauge to the fuel tank.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.

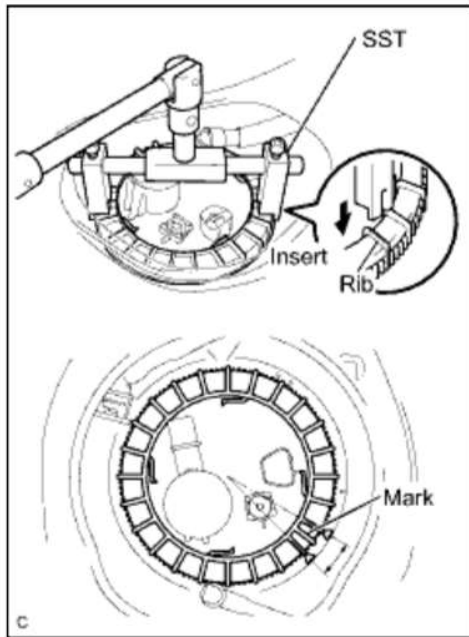
2. INSTALL FUEL PUMP GAUGE RETAINER

(a) Align the protrusion of the fuel suction tube with the notch of the fuel tank.



(b) While holding the fuel suction tube assembly by hand to prevent it from tilting, align the starting marks on the fuel pump gauge retainer and fuel tank and tighten the fuel pump gauge retainer.

(c) Using SST and your hand, tighten the fuel pump gauge retainer 2 revolutions so that the mark of the retainer



comes within the range shown in the illustration.

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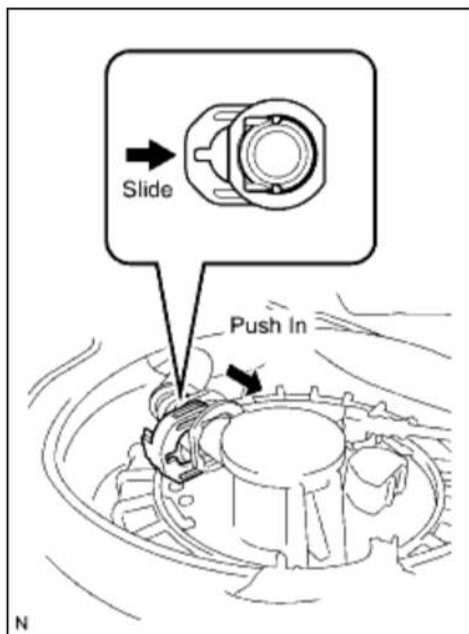
NOTICE:

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

HINT:

Insert the notch of SST into the rib of the fuel pump gauge retainer.

3. CONNECT FUEL TANK VENT HOSE



(a) Connect the fuel tank vent hose.

- (1) Align the fuel tank vent connector with the pipe, then push in the fuel tank vent connector until the retainer makes a "click" sound to connect the fuel tank vent hose to the fuel suction plate.

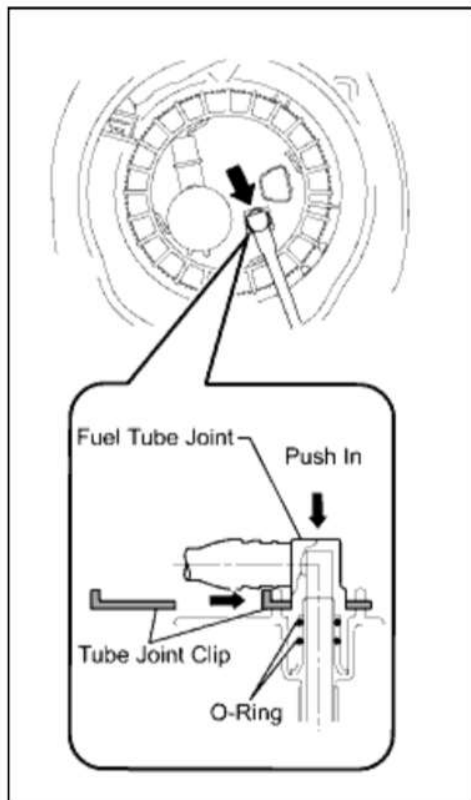
NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tank vent connector and pipe before performing this work.
- After connecting the fuel tank vent hose, check that the fuel tank vent hose is securely connected by pulling on the quick connector.

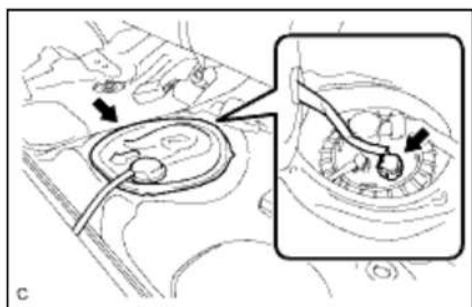
4. CONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

(a) Connect the fuel tank main tube.

- (1) Push the fuel tube joint in the plug of the fuel suction plate, then install the tube joint clip.

**NOTICE:**

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube joint and plug before performing 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 tank main tube cannot be pulled out.

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL INFO**6. INSPECT FOR FUEL LEAK** INFO**7. INSTALL REAR FLOOR SERVICE HOLE COVER**

(a) Connect the fuel pump connector.

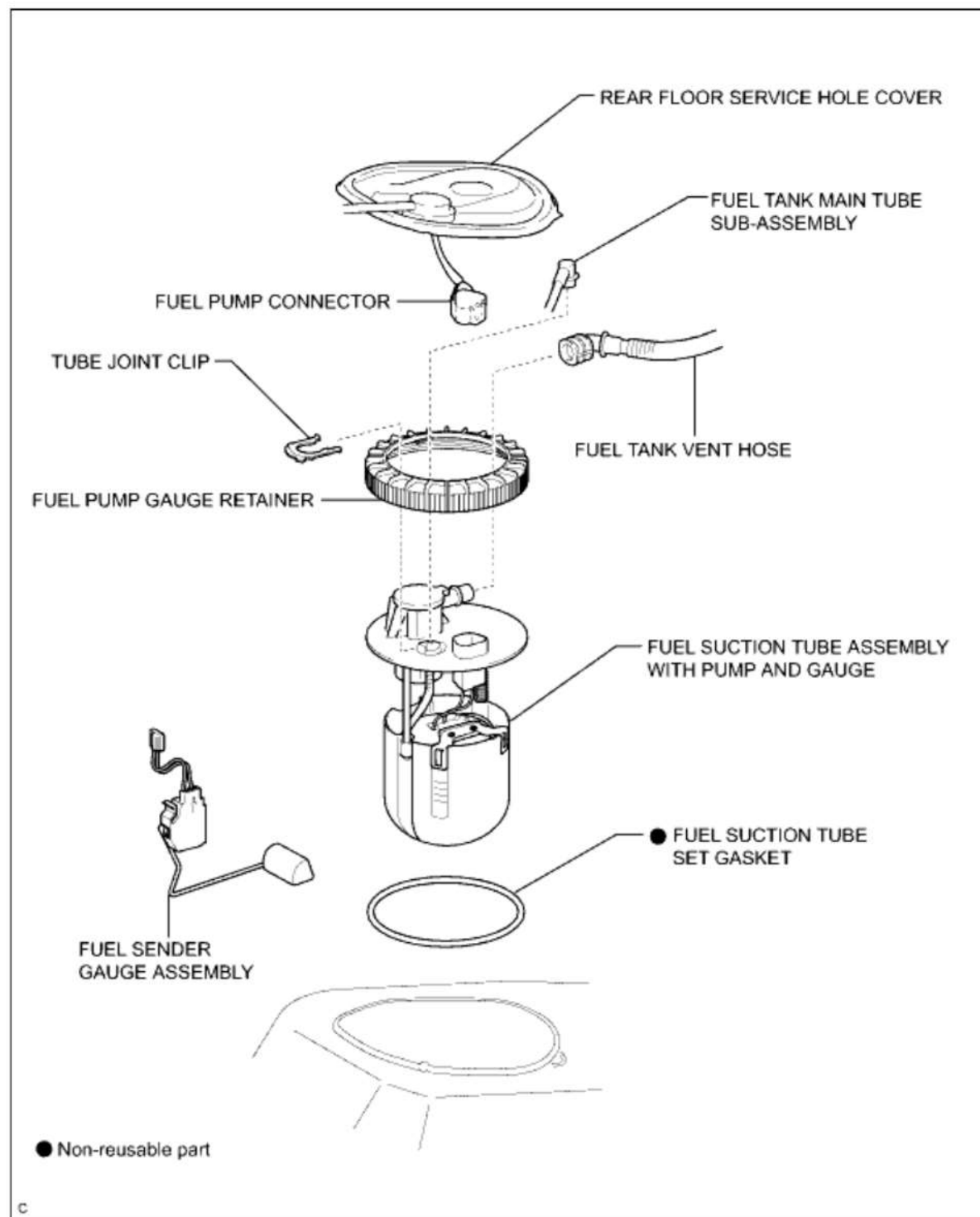
(b) Install the rear floor service hole cover.

8. INSTALL REAR SEAT CUSHION ASSEMBLY INFO

Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P400VX
Title: 2AZ-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION





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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P500YX
Title: 2AZ-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE

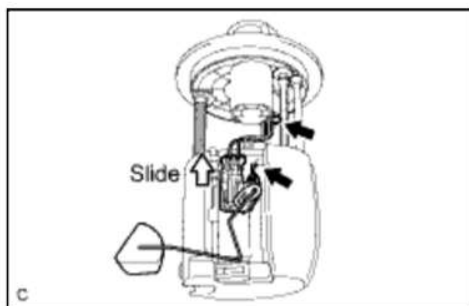


2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Remove the fuel suction tube assembly with pump and gauge from the fuel tank .

4. REMOVE FUEL SENDER GAUGE ASSEMBLY



(a) Disconnect the fuel sender gauge connector.

NOTICE:

Do not damage the wire harness.

(b) Release the lock and slide the fuel sender gauge assembly to remove it.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.

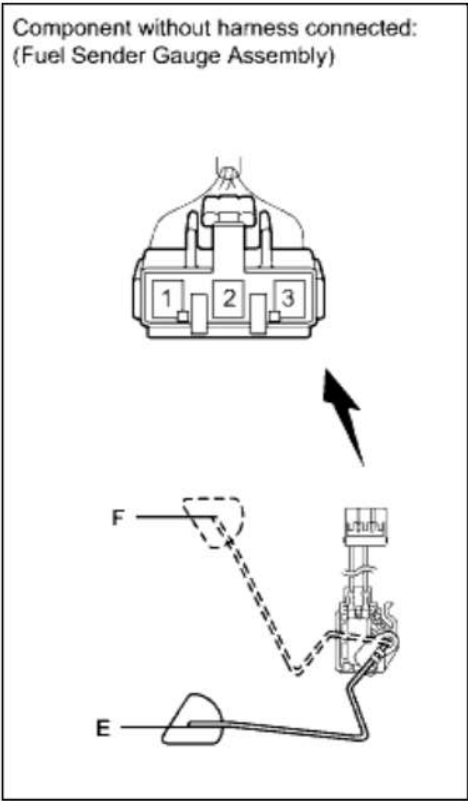


Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P300YX
Title: 2AZ-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL SENDER GAUGE ASSEMBLY

- (a) Check that the float moves smoothly between F and E.



- (b) Measure the resistance between terminals 1 and 2 of the connector according to the value(s) in the table below.

Standard Resistance:

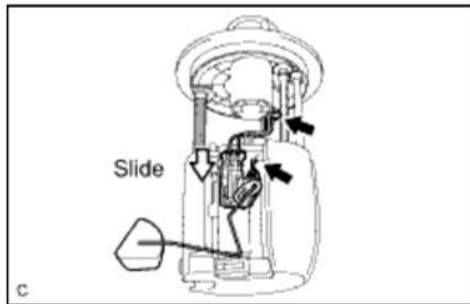
FLOAT LEVEL	RESISTANCE (Ω)
F	13.5 to 16.5
Between E and F	13.5 to 414.5 (Gradually changes)
E	405.5 to 414.5

If the value is not as specified, replace the fuel sender gauge assembly.

Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P200YX
Title: 2AZ-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL SENDER GAUGE ASSEMBLY



(a) Install the fuel sender gauge assembly by sliding it downward.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.

(b) Connect the connector of the fuel sender gauge assembly.

NOTICE:

Do not damage the wire harness.

2. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Install the fuel suction tube assembly with pump and gauge to the fuel tank .

3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

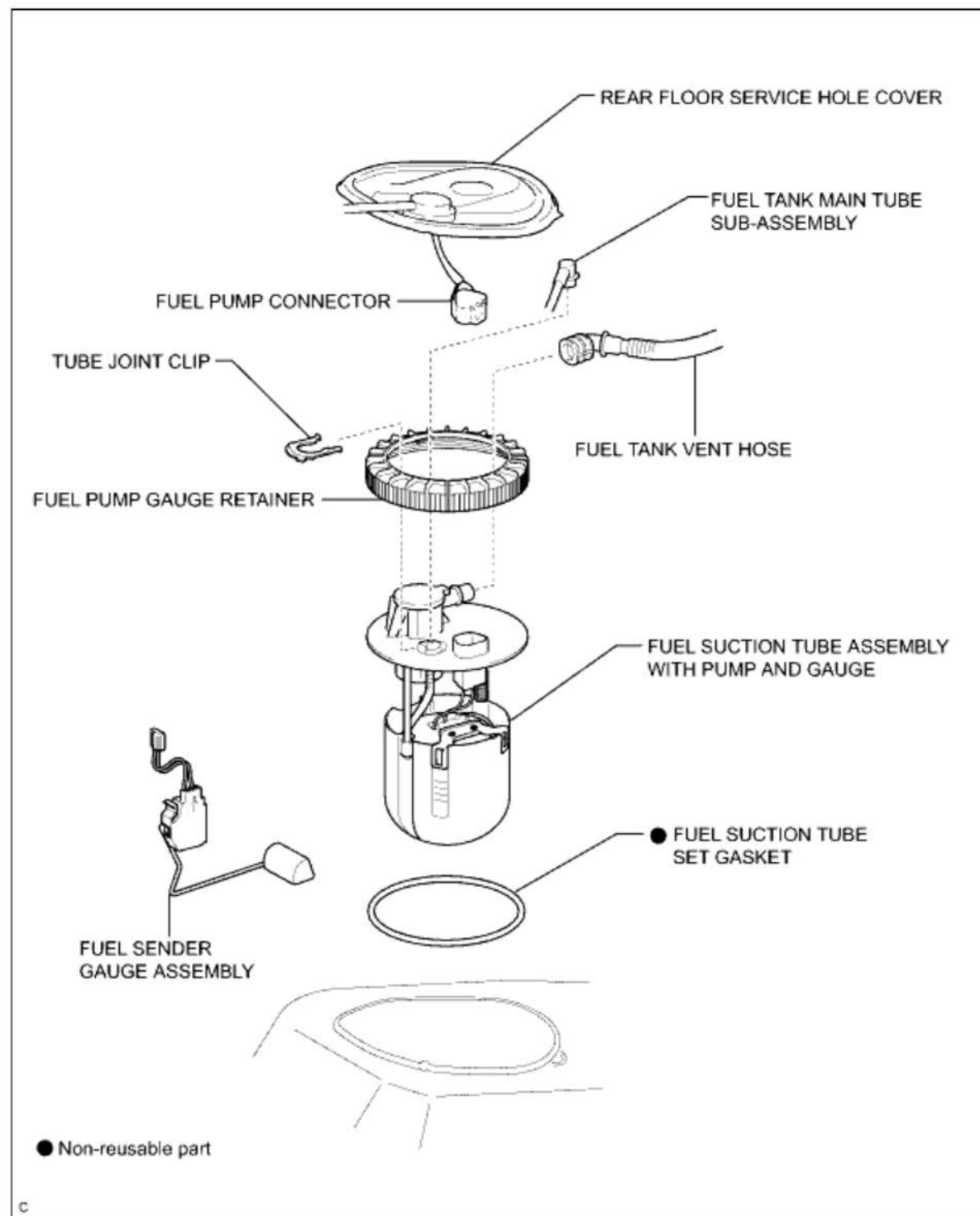
4. INSPECT FOR FUEL LEAK



Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P400UX
Title: 2ZR-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION





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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P500XX
Title: 2ZR-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE



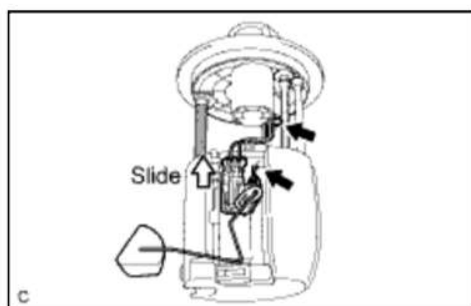
2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Remove the fuel suction tube assembly with pump and gauge



4. REMOVE FUEL SENDER GAUGE ASSEMBLY



(a) Disconnect the fuel sender gauge connector.

NOTICE:

Do not damage the wire harness.

(b) Release the lock and slide the fuel sender gauge assembly to remove it.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.



Last Modified: 3-10-2010	6.4 L	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EEY01QX
Title: 2AZ-FE FUEL: FUEL SYSTEM: PRECAUTION (2010 Corolla)		

PRECAUTION

1. PRECAUTIONS

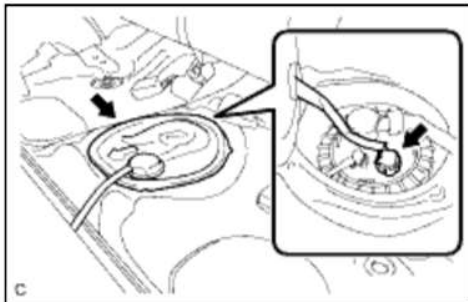
- (a) Before inspecting and repairing the fuel system, disconnect the cable from the negative (-) battery terminal.
- (b) Do not smoke or work near open flame when handling the fuel system.
- (c) Keep gasoline away from rubber or leather parts.

2. DISCHARGE FUEL SYSTEM PRESSURE

CAUTION:

- Perform the following procedure to prevent fuel from spilling out before removing any fuel system parts.
- Pressure will still remain in the fuel lines even after performing the following procedure. When disconnecting a fuel line, cover it with a piece of cloth to prevent fuel from spraying or coming out.

- (a) Remove the rear seat cushion assembly .



- (b) Remove the rear floor service hole cover.

- (c) Disconnect the connector from the fuel pump assembly.
- (d) Start the engine. After the engine stops naturally, turn the ignition switch off.

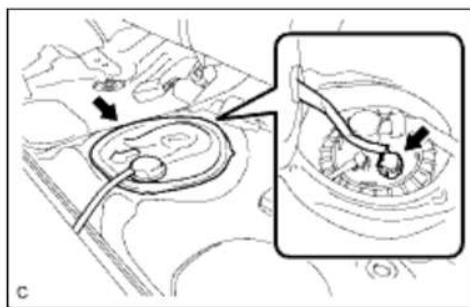
NOTICE:

Do not increase engine speed or drive the vehicle while waiting for the engine to stop naturally.

HINT:

DTC P0171/25 (system too lean) may be set.

- (e) Crank the engine again and make sure that the engine does not start.
- (f) Remove the fuel tank cap and discharge the pressure from the fuel tank.
- (g) Disconnect the cable from the negative (-) battery terminal.
- (h) Connect the connector of the fuel pump assembly.
- (i) Install the rear floor service hole cover.

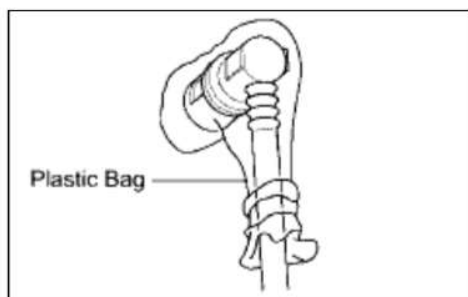


(j) Install the rear seat cushion assembly INFO.

3. FUEL LINE

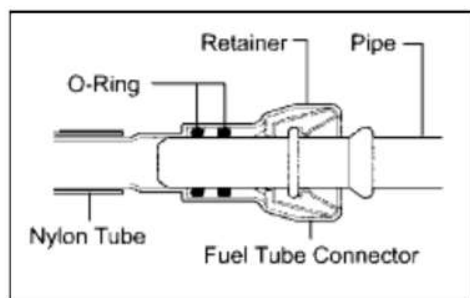
(a) When disconnecting a high-pressure fuel line, a large amount of gasoline will spray out. Perform the following procedure:

- (1) Discharge fuel system pressure.
- (2) Disconnect the fuel tube.
- (3) Drain the fuel remaining inside the fuel pump tube into a container.



- (4) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.

(b) Perform the following procedure when disconnecting a fuel delivery pipe (metallic type):



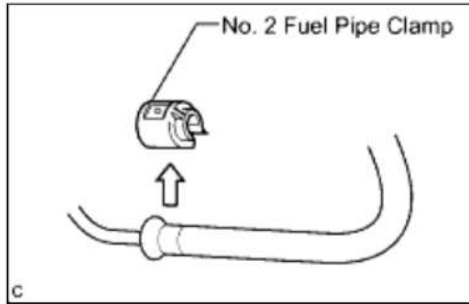
HINT:

The structure of a fuel tube connector is as shown in the illustration.

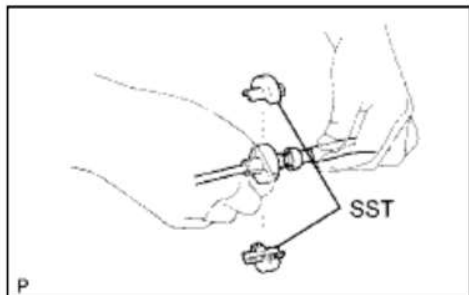
- (1) Check if there is any damage or foreign objects on the pipe connections.
- (2) Remove the No. 2 fuel pipe clamp.

NOTICE:

Do not reuse the fuel pipe clamp.

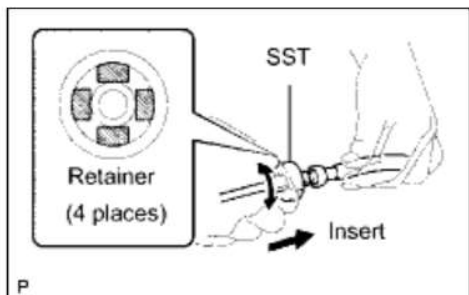


(3) Find the metallic connector of the fuel tube assembly.



(4) Assemble SST to the connector as shown in the illustration.

SST: 09268-21010



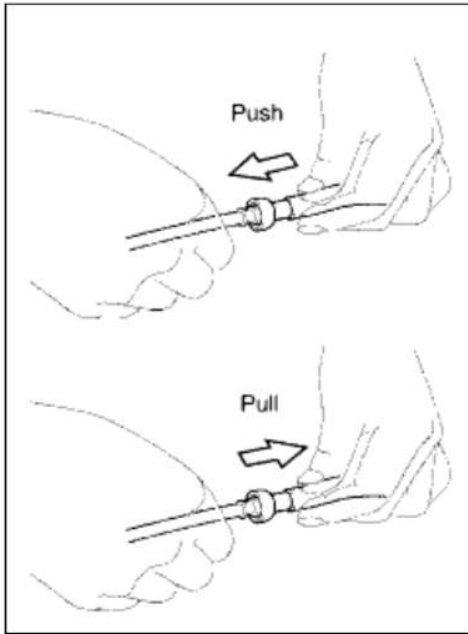
(5) Turn SST, align the retainers inside the connector with the SST chamfers and insert SST into the connector.

(6) Slide SST and the connector together towards the fuel tube assembly.

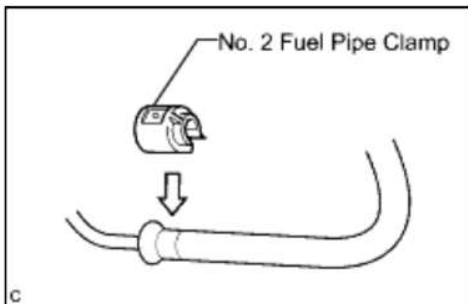
(c) Perform the following procedure when connecting a fuel tube connector (metallic type):

(1) Check if there is any damage or foreign objects on the pipe connections.

(2) Match the axis of the connector with the axis of the pipe, and push the pipe into the connector until the connector makes a "click" sound. If the pipe is difficult to push into the connector, apply a small amount of clean engine oil to the tip of the pipe.



- (3) After connecting, check if the pipe and the connector are securely connected by pulling on them.

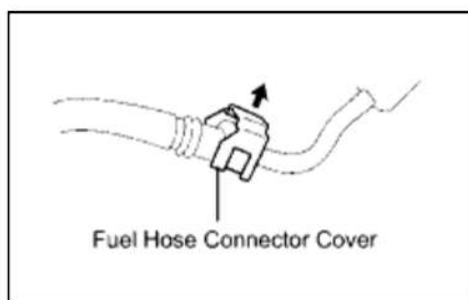
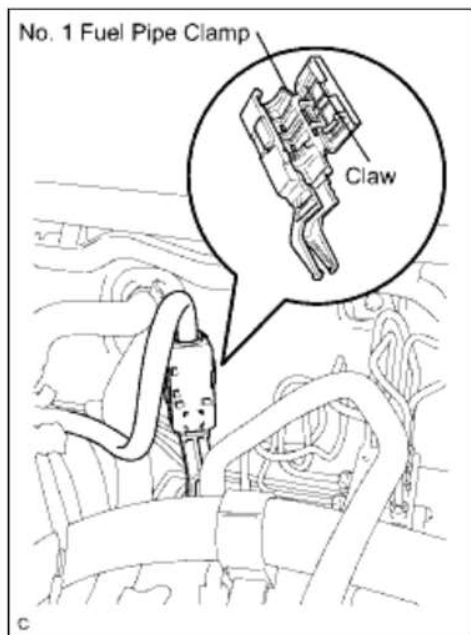


- (4) Install a new No. 2 fuel pipe clamp.

- (5) Check for fuel leaks.

- (d) Perform the following procedure when disconnecting a fuel tube connector (quick type A):

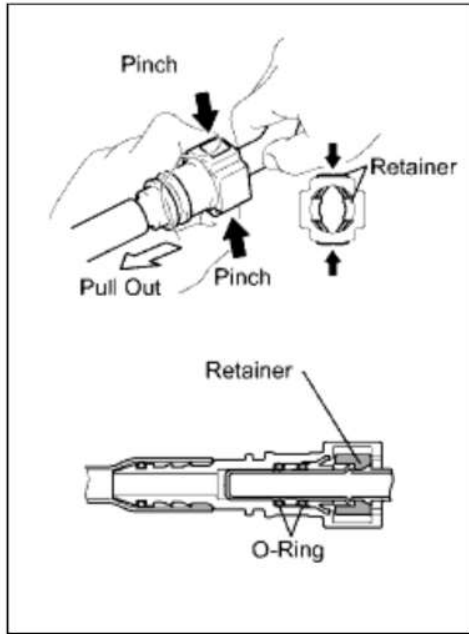
- (1) Release the claw and remove the No. 1 fuel pipe clamp.



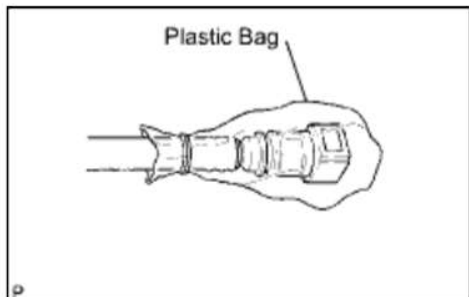
- (2) Disengage the lock claws by raising the fuel hose connector cover as shown in the illustration.

- (3) Check that there is no dirt or other foreign objects on the pipe and contact surface before disconnecting them. Clean them if necessary.
- (4) Disconnect the connector from the pipe by hand.

- (5) If the connector and the pipe are stuck, push in and pull on the connector to release them. Pull the connector out of the pipe carefully.



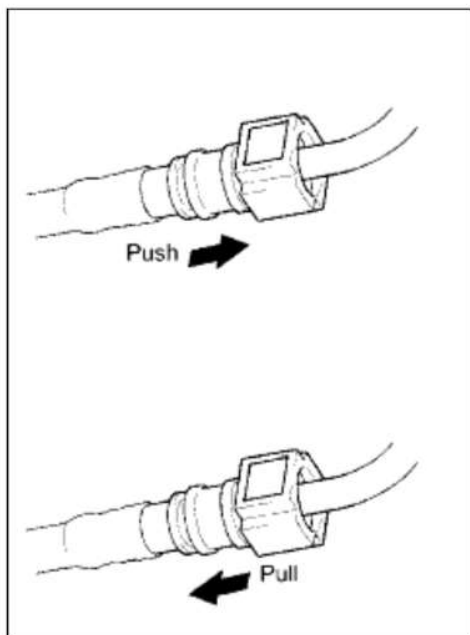
- (6) Check that there is no dirt or other foreign objects on the contact surfaces of the disconnected pipe. Clean them away if necessary.



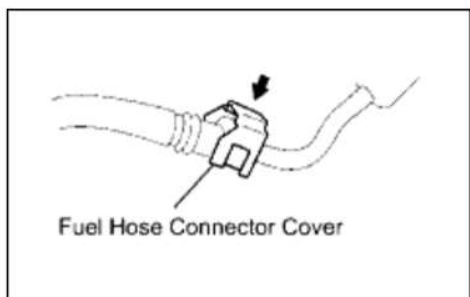
- (7) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.

(e) Perform the following procedure when connecting a fuel tube connector (quick type A):

- (1) Check if there is any damage or foreign objects on the pipe connections.

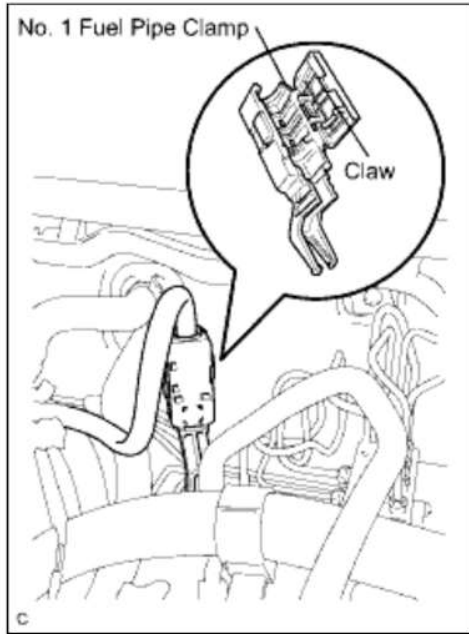


- (2) Line up the two parts of the pipes to be connected, and push them together until the connector makes a "click" sound. If the pipe is difficult to push into the connector, apply a small amount of clean engine oil to the tip of the pipe and reinsert it.
- (3) After connecting the pipes, check that the pipe and connector are securely connected by pulling on them.



- (4) Engage the lock claws to the connector by pushing down on the fuel hose connector cover.

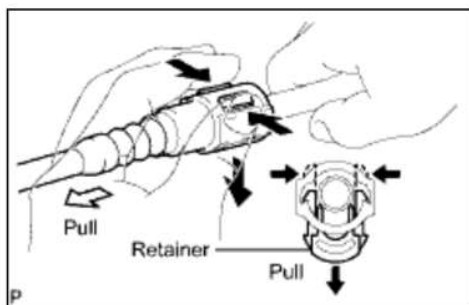
- (5) Engage the lock claw and install the No. 1 fuel pipe clamp.



(6) Check for fuel leaks.

(f) Perform the following procedure when disconnecting a fuel tube connector (quick type B):

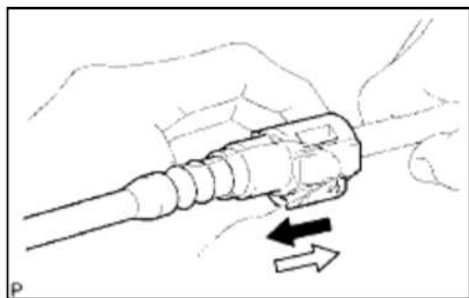
(1) Before disconnecting the connector, clean off any dirt that may be present.



(2) Pull the tabs of the fuel tube retainer to disengage the 2 claws. Push the retainer down as shown in the illustration.

HINT:

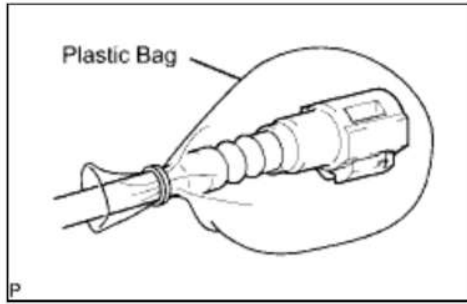
Be sure to disconnect the connector by hand.



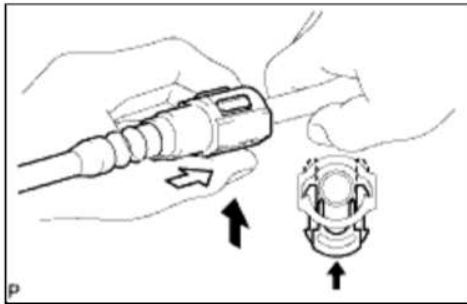
(3) If the connector and pipe are stuck, hold the fuel pipe by hand and push and pull on the connector. Pull the two pipes apart to separate the connector.

(4) If there are any dirt or any other foreign objects on the sealing surfaces of the disconnected pipes, clean them if necessary.

(5) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.

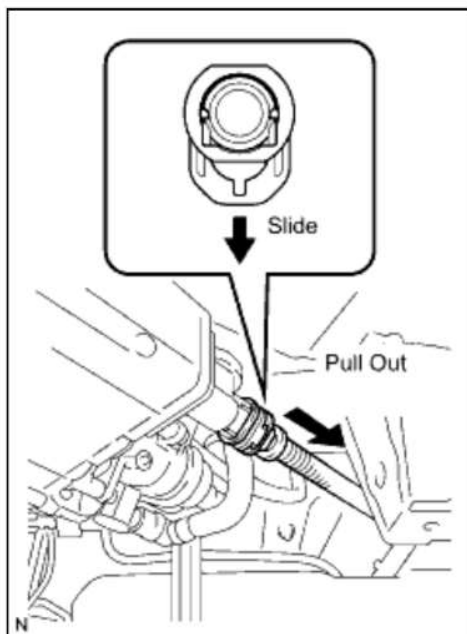


(g) Perform the following procedure when connecting a fuel tube connector (quick type B):



- (1) Align the fuel tube connector with the pipe, then push the fuel tube connector in until it comes into contact with the seat, then push the retainer in until the claws lock.

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

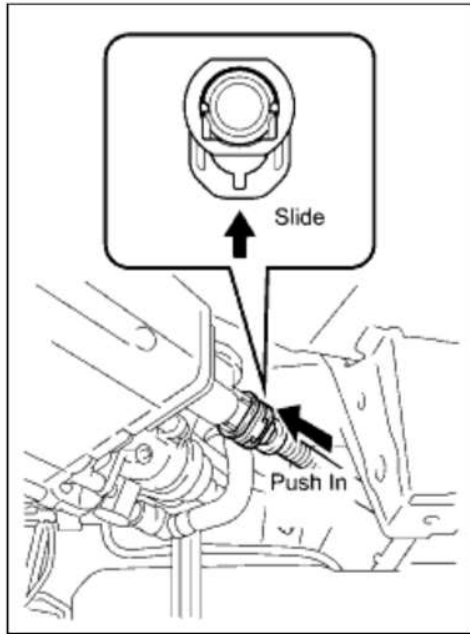


(h) Perform the following procedure when disconnecting a fuel tube connector (quick type C):

- (1) Check the pipe and around the connector for dirt and mud before disconnecting them. Clean them if necessary.
- (2) Remove the checker of the fuel tube connector from the pipe.
- (3) Pinch the tab of the retainer of the fuel tube connector to disengage the lock claws and slide it as shown in the illustration.
- (4) Check the sealing surface of the disconnected pipe for dirt and mud. Clean them away if necessary.
- (5) Cover the disconnected fuel tube connector and pipe with a plastic bag to prevent damage and contamination.

(i) Observe the following procedure when connecting a fuel tube connector (quick type C):

- (1) Check the connected part of the pipe for any damage



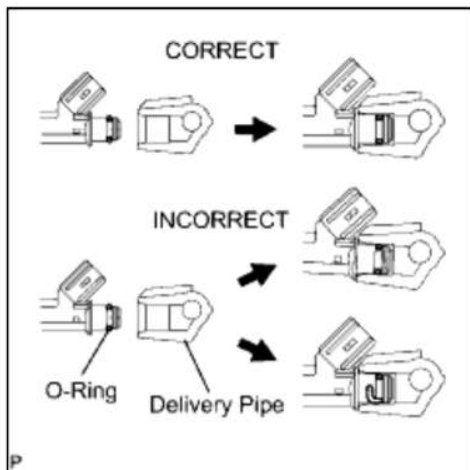
and foreign objects.

- (2) Align the fuel tube connector with the pipe, then push the fuel tube connector in until the retainer makes a "click" sound. If the connection is tight, apply a small amount of clean engine oil to the tip of the pipe.
- (3) Install the checker onto the pipe.
- (4) Check for fuel leaks.

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

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

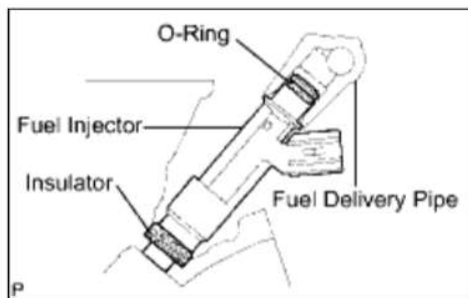
4. INJECTOR



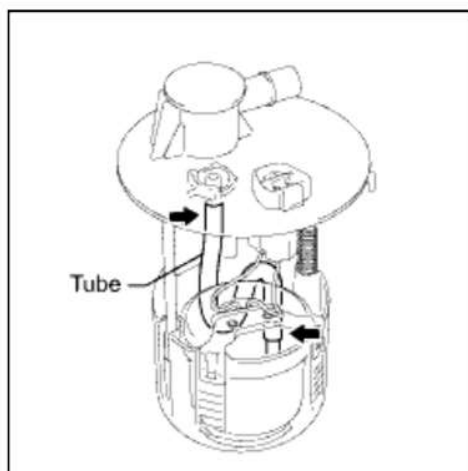
(a) Observe the following precautions when removing and installing a fuel injector:

- (1) Do not reuse a O-ring and insulator.
- (2) When placing a new O-ring onto the injector, do not damage the O-ring.
- (3) Coat a new O-ring with grease or gasoline before installing it. Do not use engine oil, gear oil or brake fluid.

(b) Install the injector into the delivery pipe and cylinder head as shown in the illustration. Apply grease or gasoline to the contact surfaces of the injector before installing the injector.



5. FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE



- (a) Do not disconnect the tube shown in the illustration when disassembling the fuel suction tube assembly with pump and gauge. Doing so will cause reassembly of the fuel suction tube assembly with pump and gauge to be impossible as the tube is welded to the plate.

6. INSPECT FOR FUEL LEAK

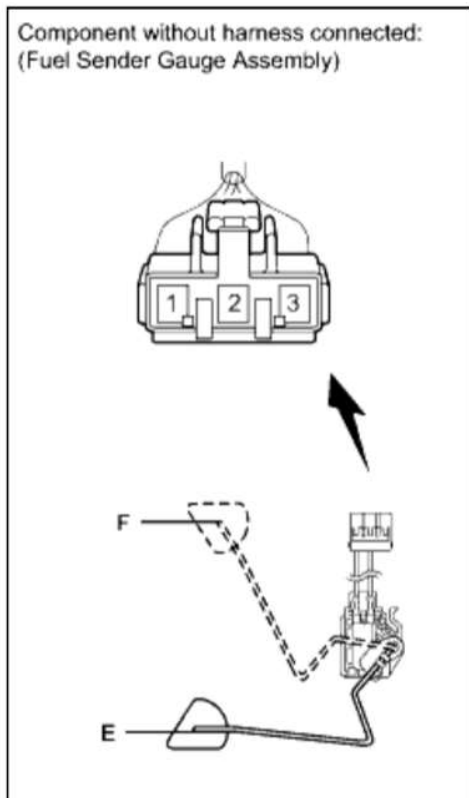
- (a) Check that there is no fuel leakage after performing maintenance anywhere on the fuel system



Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P300XX
Title: 2ZR-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT FUEL SENDER GAUGE ASSEMBLY



(a) Remove the fuel sender gauge assembly.

(b) Check that the float moves smoothly between F and E.

(c) Measure the resistance between terminals 1 and 2 of the connector according to the value(s) in the table below.

Standard Resistance:

FLOAT LEVEL	RESISTANCE (Ω)
F	13.5 to 16.5
Between E and F	13.5 to 414.5 (Gradually changes)
E	405.5 to 414.5

If the value is not as specified, replace the fuel sender gauge assembly.

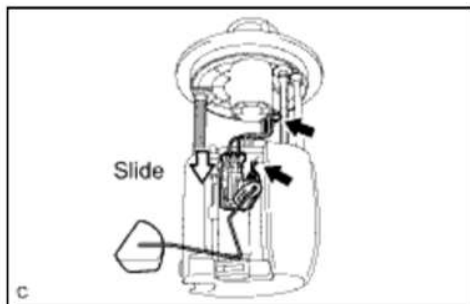


TOYOTA

Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000030P200XX
Title: 2ZR-FE FUEL: FUEL SENDER GAUGE ASSEMBLY: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL FUEL SENDER GAUGE ASSEMBLY



(a) Install the fuel sender gauge assembly by sliding it downward.

NOTICE:

Do not damage the wire harness.

(b) Connect the connector of the fuel sender gauge assembly.

NOTICE:

Make sure that the fuel sender gauge arm does not bend.

2. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

(a) Install the fuel suction tube assembly with pump and gauge .

3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

4. INSPECT FOR FUEL LEAK



Last Modified: 3-10-2010	6.4 L	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EEY01PX
Title: 2ZR-FE FUEL: FUEL SYSTEM: PRECAUTION (2010 Corolla)		

PRECAUTION

1. PRECAUTIONS

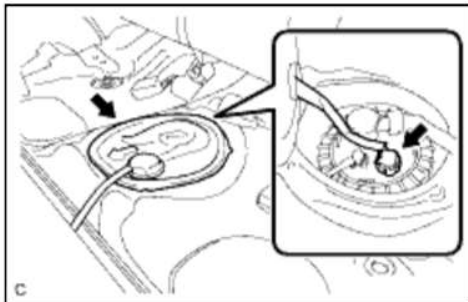
- (a) Before inspecting and repairing the fuel system, disconnect the cable from the negative (-) battery terminal.
- (b) Do not smoke or work near an open flame when handling the fuel system.
- (c) Keep gasoline away from rubber or leather parts.

2. DISCHARGE FUEL SYSTEM PRESSURE

CAUTION:

- Perform the following procedure to prevent fuel from spilling out before removing any fuel system parts.
- Pressure will still remain in the fuel lines even after performing the following procedure. When disconnecting a fuel line, cover it with a piece of cloth to prevent fuel from spraying or coming out.

- (a) Remove the rear seat cushion assembly .



- (b) Remove the rear floor service hole cover.

- (c) Disconnect the connector from the fuel pump assembly.
- (d) Start the engine. After the engine stops naturally, turn the ignition switch off.

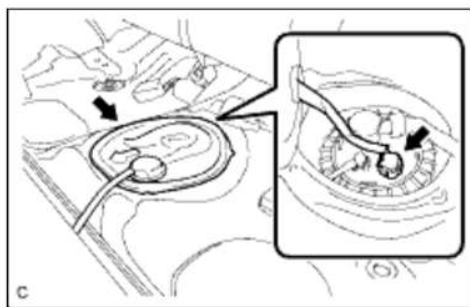
NOTICE:

Do not increase engine speed or drive the vehicle while waiting for the engine to stop naturally.

HINT:

DTC P0171/25 (system too lean) may be set.

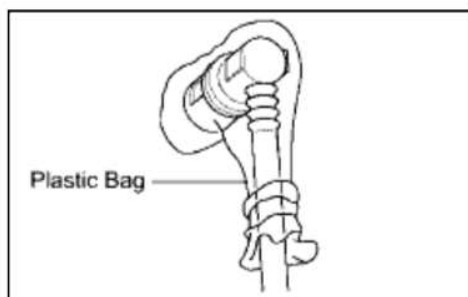
- (e) Crank the engine again and make sure that the engine does not start.
- (f) Remove the fuel tank cap and discharge the pressure from the fuel tank.
- (g) Disconnect the cable from the negative (-) battery terminal.
- (h) Connect the connector of the fuel pump assembly.



- (i) Install the rear floor service hole cover.
- (j) Install the rear seat cushion assembly (INFO).

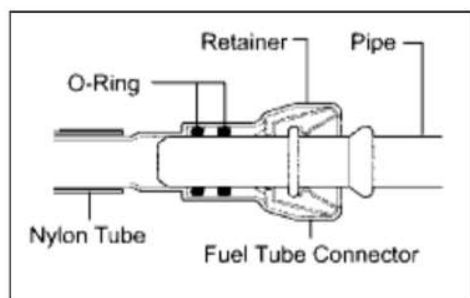
3. FUEL LINE

- (a) When disconnecting a high-pressure fuel line, a large amount of gasoline will spray out. Perform the following procedure:
 - (1) Discharge fuel system pressure.
 - (2) Disconnect the fuel tube.
 - (3) Drain the fuel remaining inside the fuel pump tube into a container.



- (4) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.

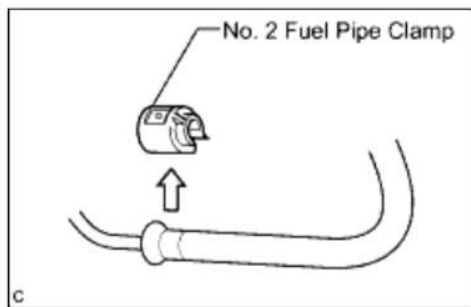
- (b) Perform the following procedure when disconnecting a fuel delivery pipe (metallic type):



HINT:

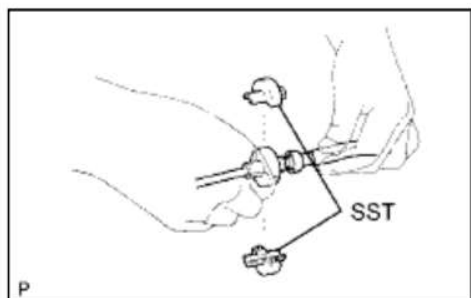
The structure of a fuel tube connector is as shown in the illustration.

- (1) Check if there is any damage or foreign objects on the pipe connections.
- (2) Remove the No. 2 fuel pipe clamp.

**NOTICE:**

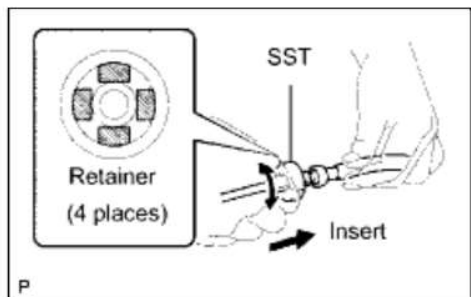
Do not reuse the fuel pipe clamp.

(3) Find the metallic connector of the fuel tube assembly.



(4) Assemble SST to the connector as shown in the illustration.

SST: 09268-21010



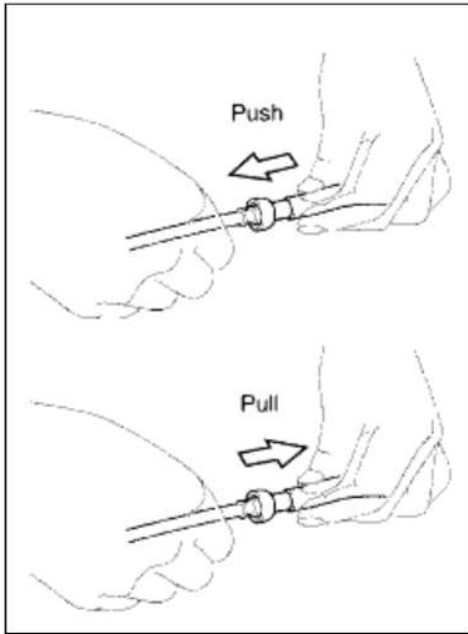
(5) Turn SST, align the retainers inside the connector with the SST chamfers and insert SST into the connector.

(6) Slide SST and the connector together towards the fuel tube assembly.

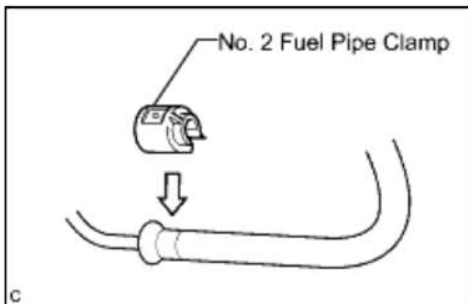
(c) Perform the following procedure when connecting a fuel tube connector (metallic type):

(1) Check if there is any damage or foreign objects on the pipe connections.

(2) Match the axis of the connector with the axis of the pipe, and push the pipe into the connector until the connector makes a "click" sound. If the pipe is difficult to push into the connector, apply a small amount of clean engine oil to the tip of the pipe.



- (3) After connecting, check if the pipe and the connector are securely connected by pulling on them.

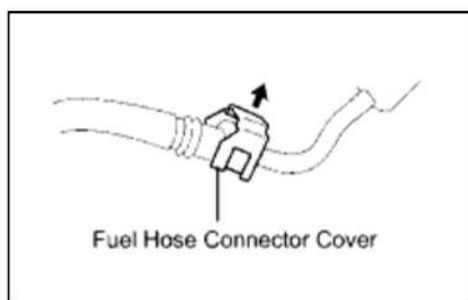
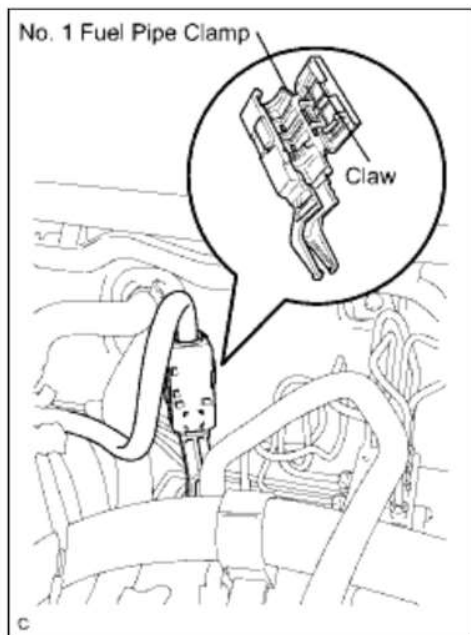


- (4) Install a new No. 2 fuel pipe clamp.

- (5) Check for fuel leaks.

- (d) Perform the following procedure when disconnecting a fuel tube connector (quick type A):

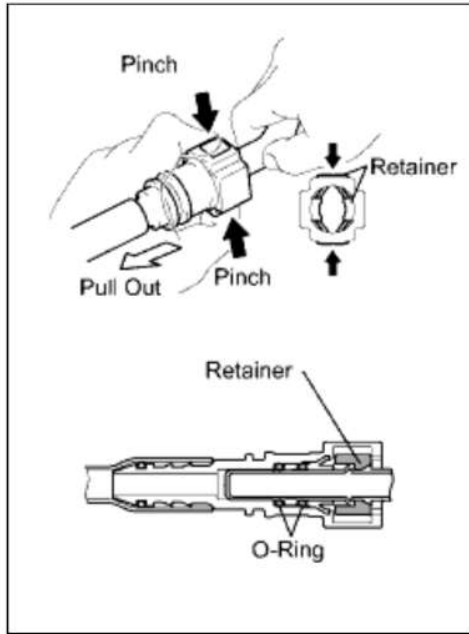
- (1) Release the claw and remove the No. 1 fuel pipe clamp.



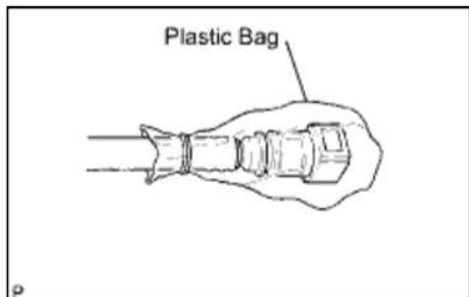
- (2) Disengage the lock claws by raising the fuel hose connector cover as shown in the illustration.

- (3) Check that there is no dirt or other foreign objects on the pipe and contact surface before disconnecting them. Clean them if necessary.
- (4) Disconnect the connector from the pipe by hand.

- (5) If the connector and the pipe are stuck, push in and pull on the connector to release them. Pull the connector out of the pipe carefully.



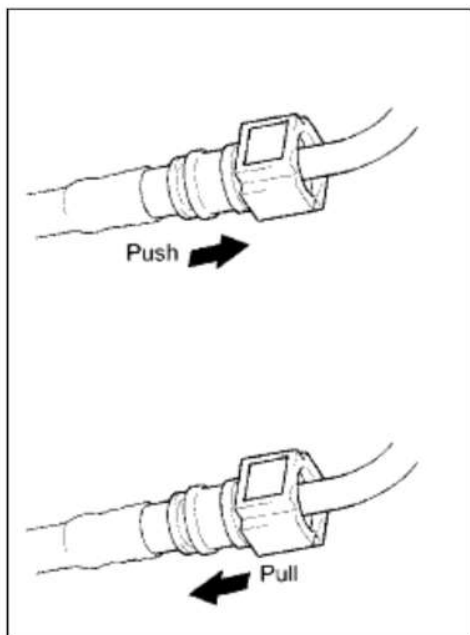
- (6) Check that there is no dirt or other foreign objects on the contact surface of the disconnected pipe. Clean them away if necessary.



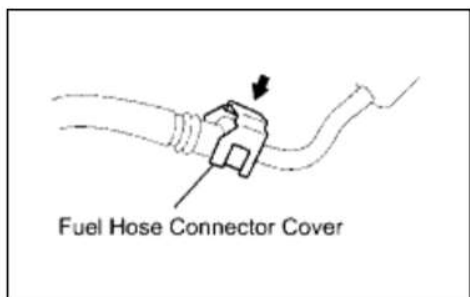
- (7) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.

- (e) Perform the following procedure when connecting a fuel tube connectors (quick type A):

- (1) Check if there is any damage or foreign objects on the pipe connections.

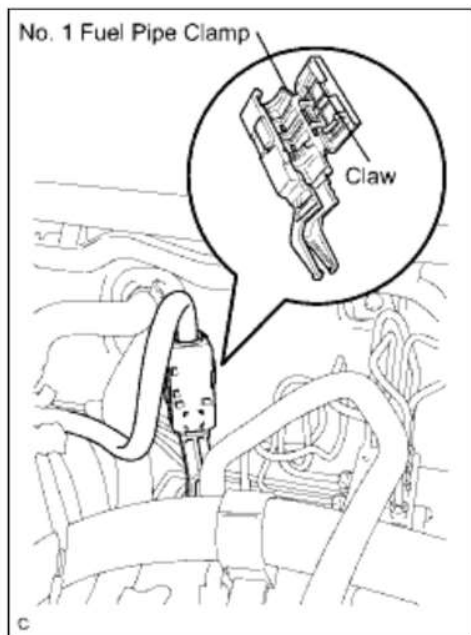


- (2) Line up the two parts of the pipes to be connected, and push them together until the connector makes a "click" sound. If the pipe is difficult to push into the connector, apply a small amount of clean engine oil to the tip of the pipe and reinsert it.
- (3) After connecting the pipes, check that the pipe and connector are securely connected by pulling on them.



- (4) Engage the lock claws to the connector by pushing down on the fuel hose connector cover.

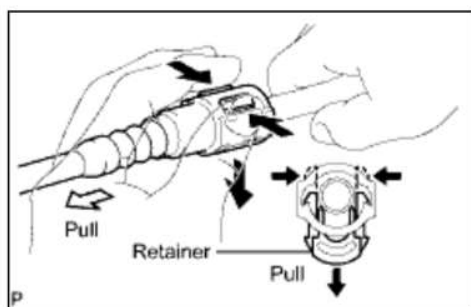
- (5) Engage the lock claws and install the No. 1 fuel pipe clamp.



(6) Check for fuel leaks.

(f) Perform the following procedure when disconnecting a fuel tube connector (Quick Type B):

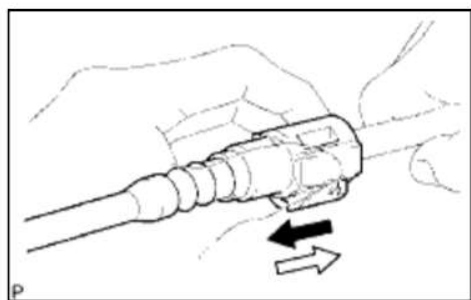
(1) Before disconnecting the connector, clean off any dirt that may be present.



(2) Pinch the tabs of the fuel tube retainer to disengage the 2 claws. Push the retainer down as shown in the illustration

HINT:

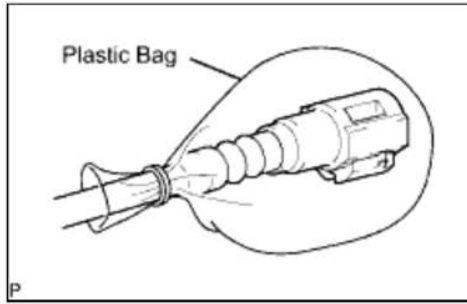
Be sure to disconnect the connector by hand.



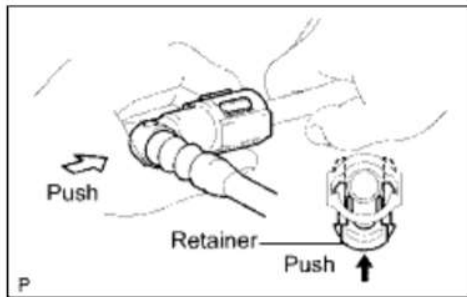
(3) If the connector and pipe are stuck, hold the fuel pipe by hand and push and pull on the connector. Pull the two pipes apart to separate the connector.

(4) If there are any dirt or any other foreign objects on the sealing surfaces of the disconnected pipes, clean them if necessary.

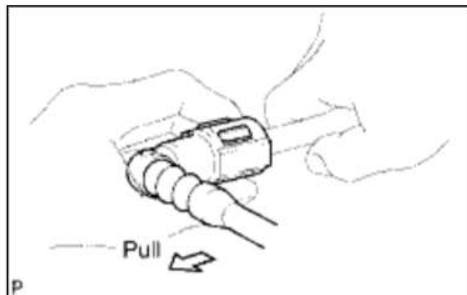
(5) Cover the disconnected pipe and connector with a plastic bag to prevent to damage and contamination.



(g) Perform the following procedure when connecting a fuel tube connector (quick type B):



- (1) Align the fuel tube connector with the pipe, then push the fuel tube connector in until it comes into contact with the seat, then push the retainer in until the claws lock.

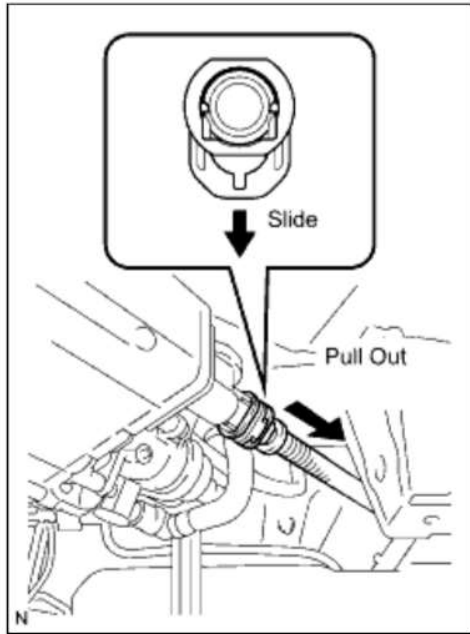


- (2) After connecting the fuel tube connector, check that the fuel tube connector and pipe are securely connected by pulling on them.

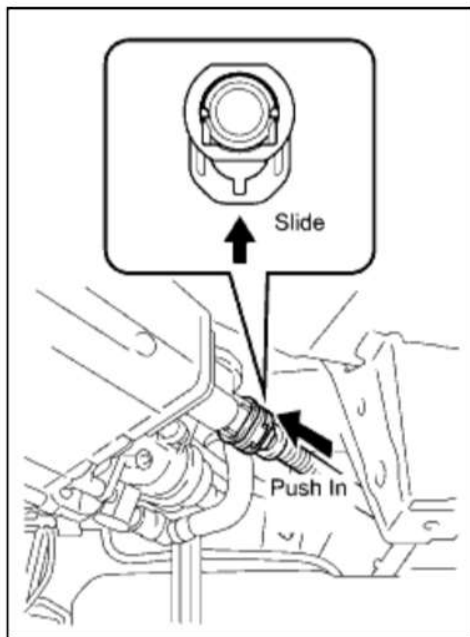
(3) Check for fuel leaks.

(h) Perform the following procedure when disconnecting a fuel tube connector (quick type C):

- (1) Check the pipe and around the connector for dirt and mud before disconnecting them. Clean them if necessary.
- (2) Remove the checker of the fuel tube connector from the pipe.
- (3) Pinch the tabs of the retainer of the fuel tube connector to disengage the lock claws and slide it as shown in the illustration.
- (4) Check the sealing surface of the disconnected pipe for dirt and mud. Clean them away if necessary.
- (5) Cover the disconnected fuel tube connector and pipe with a plastic bag to prevent damage and



contamination.



(i) Perform the following procedure when connecting a fuel tube connector (quick type C):

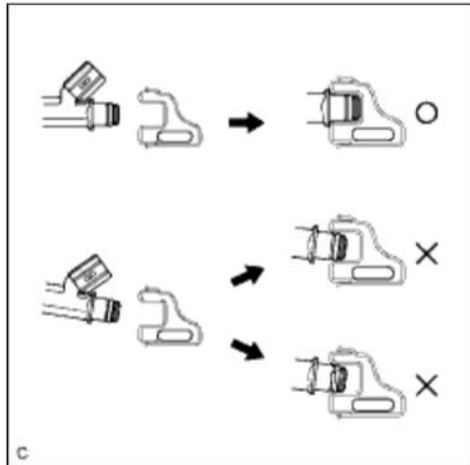
- (1) Check the connected part of the pipe for any damage and foreign objects.
- (2) Align the fuel tube connector with the pipe, then push the fuel tube connector in until the retainer makes a "click" sound. If the connection is tight, apply a small amount of clean engine oil to the tip of the pipe.
- (3) Install a checker onto the pipe.
- (4) Check for fuel leaks.

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

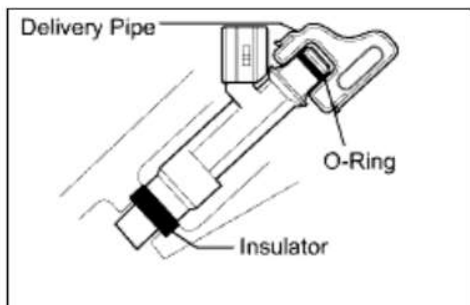
- Do not twist the connection part of the nylon tube and the quick connector when connecting them.
- Do not bend, kink, or twist the nylon tube.
- Do not remove the EPDM protector on the outside of the nylon tube.
- Do not close the piping by kinking the nylon tube.

4. INJECTOR

(a) Observe the following precautions when removing and installing a fuel injector:

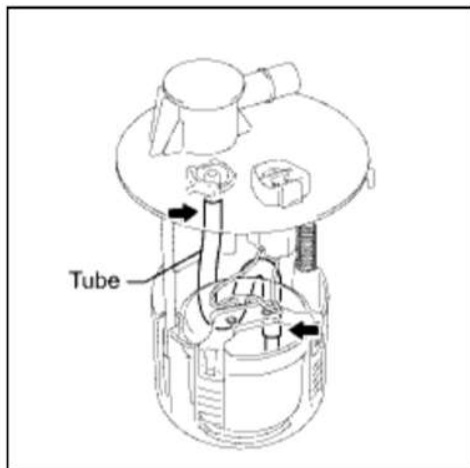


- (1) Do not reuse a O-ring and insulator.
- (2) When placing a new O-ring onto the injector, do not damage the O-ring.
- (3) Coat a new O-ring with grease or gasoline before installing it. Do not use engine oil, gear oil or brake fluid.



- (b) Install the injector into the delivery pipe and cylinder head as shown in the illustration. Apply grease or gasoline to the contact surfaces of the injector before installing the injector.

5. FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE



- (a) Do not disconnect the tube shown in the illustration when disassembling the fuel suction tube assembly with pump and gauge. Doing so will cause reassembly of the fuel suction tube assembly with pump and gauge to be impossible as the tube is welded to the plate.

6. INSPECT FOR FUEL LEAK

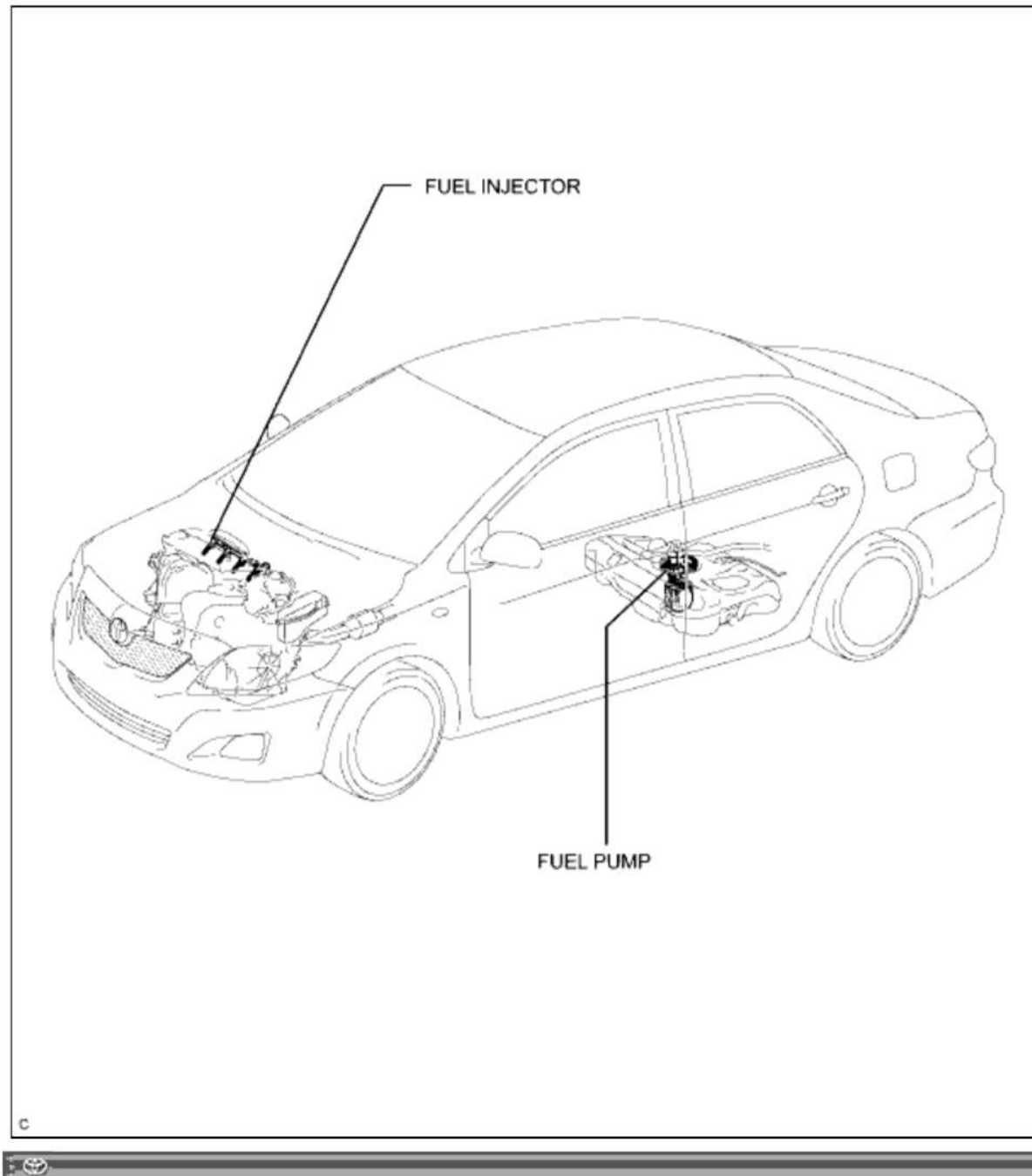
- (a) Check that there are no fuel leakage after performing maintenance anywhere on the fuel system



Last Modified: 3-10-2010	6.4 R	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EEZ00ZX
Title: 2AZ-FE FUEL: FUEL SYSTEM: PARTS LOCATION (2010 Corolla)		

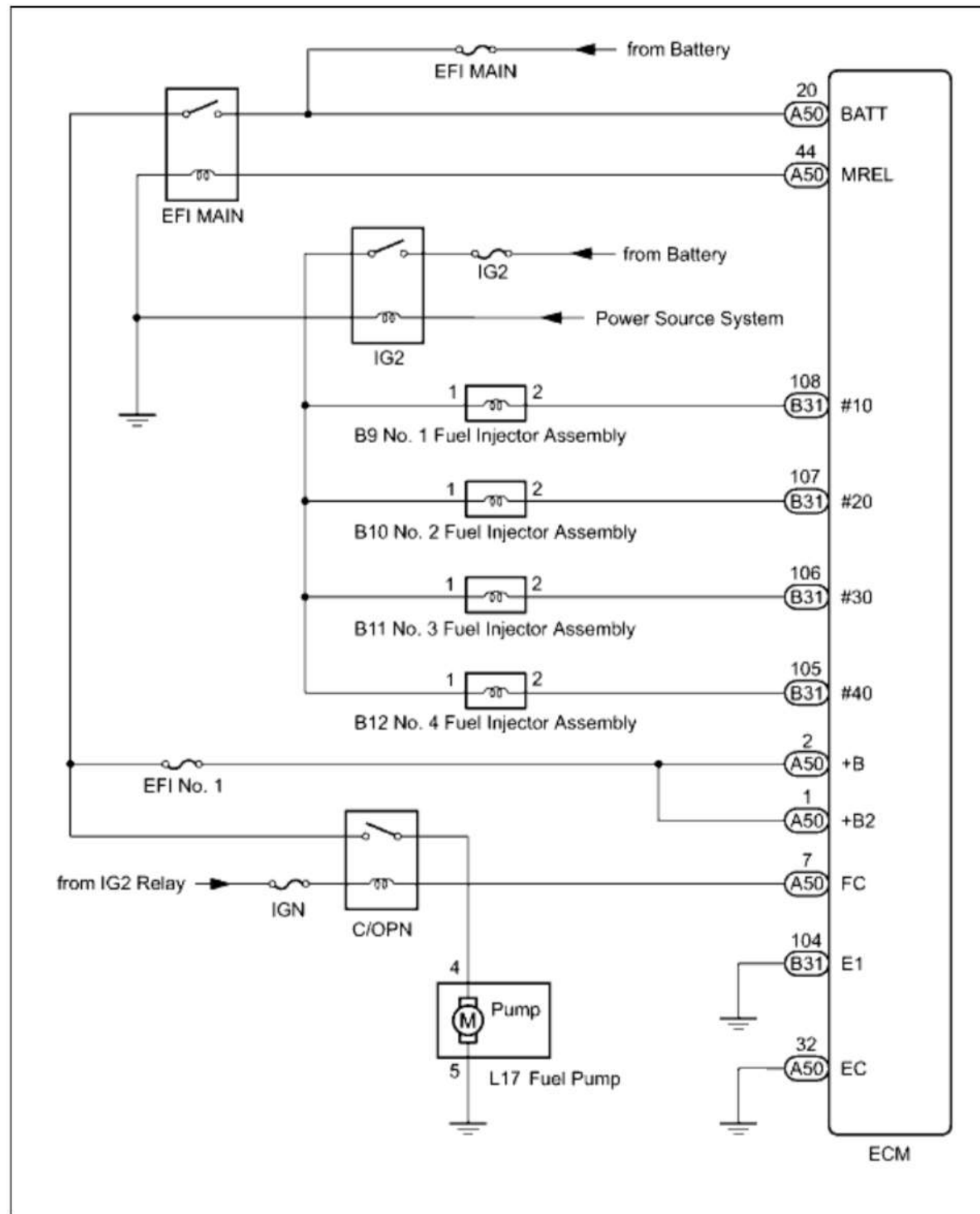
PARTS LOCATION

ILLUSTRATION



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EF000YX
Title: 2AZ-FE FUEL: FUEL SYSTEM: SYSTEM DIAGRAM (2010 Corolla)		

SYSTEM DIAGRAM



Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001IQZ02UX
Title: 2AZ-FE FUEL: FUEL SYSTEM: ON-VEHICLE INSPECTION (2010 Corolla)		

ON-VEHICLE INSPECTION

1. CHECK FOR FUEL PUMP OPERATION AND INSPECT FOR FUEL LEAK

(a) Check fuel pump operation.

(1) Connect the Techstream to the DLC3.

(2) Turn the ignition switch to ON and turn the Techstream on.

NOTICE:

Do not start the engine.

(3) Enter the following menus: Powertrain / Engine / Active Test / Control the Fuel Pump /Speed.

(4) Check for pressure in the fuel inlet tube from the fuel line. Check that sounds of fuel flowing from the fuel tank can be heard. If no sounds can be heard, check the integration relay, fuel pump, ECM and wiring connectors.

(b) Check for fuel leaks.

(1) There is no fuel leakage after performing maintenance anywhere on the fuel system. If there is a fuel leak, repair or replace parts as necessary.

(c) Turn the ignition switch off.

(d) Disconnect the Techstream from the DLC3.

2. CHECK FUEL PRESSURE

(a) Discharge fuel system pressure .

(b) Using a voltmeter, measure the battery voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
Positive terminal - Negative terminal	Ignition switch off	11 to 14 V

(c) Disconnect the cable from the negative (-) battery terminal.

(d) Disconnect the fuel hose from the fuel main tube .

(e) Install SST (pressure gauge) using other SST as shown in the illustration.

SST: 09268-31012

09268-41500

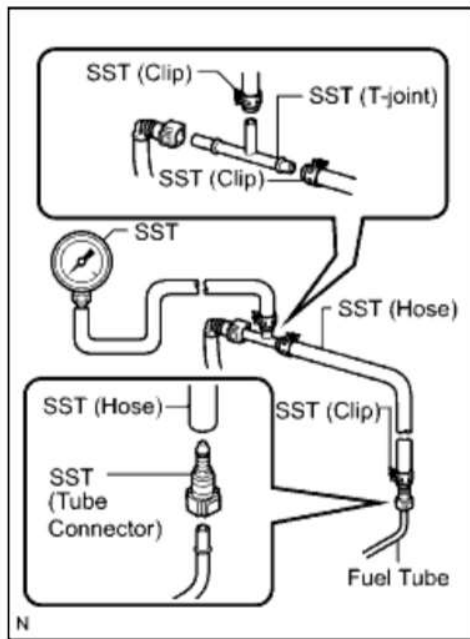
90467-13001

95336-08070

SST: 09268-45014

09268-41200

09268-41220



09268-41250

- (f) Clean up any spilled gasoline.
- (g) Connect the cable to the negative (-) battery terminal.
- (h) Connect the Techstream to the DLC3.
- (i) Enter the following menus: Powertrain / Engine / Active Test / Control the Fuel Pump / Speed.
- (j) Measure the fuel pressure.

Fuel pressure:

304 to 343 kPa (3.1 to 3.5 kgf*cm², 44.1 to 49.7 psi)

- If the fuel pressure is greater than the standard value, replace the fuel pressure regulator.
- If the fuel pressure is less than the standard value, check the fuel hoses and connections, fuel pump, fuel filter and fuel pressure regulator.

- (k) Disconnect the Techstream from the DLC3.

- (l) Start the engine.

- (m) Measure the fuel pressure at idle.

Fuel pressure:

304 to 343 kPa (3.1 to 3.5 kgf*cm², 44.1 to 49.7 psi)

- (n) Stop the engine.

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

Fuel pressure:

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.

- (p) After checking the fuel pressure, disconnect the cable from the negative (-) battery terminal and carefully remove SST to prevent gasoline from spraying.
- (q) Reconnect the fuel tube to the main fuel tube (fuel tube connector).
- (r) Install the No. 1 fuel pipe clamp to the fuel tube connector.

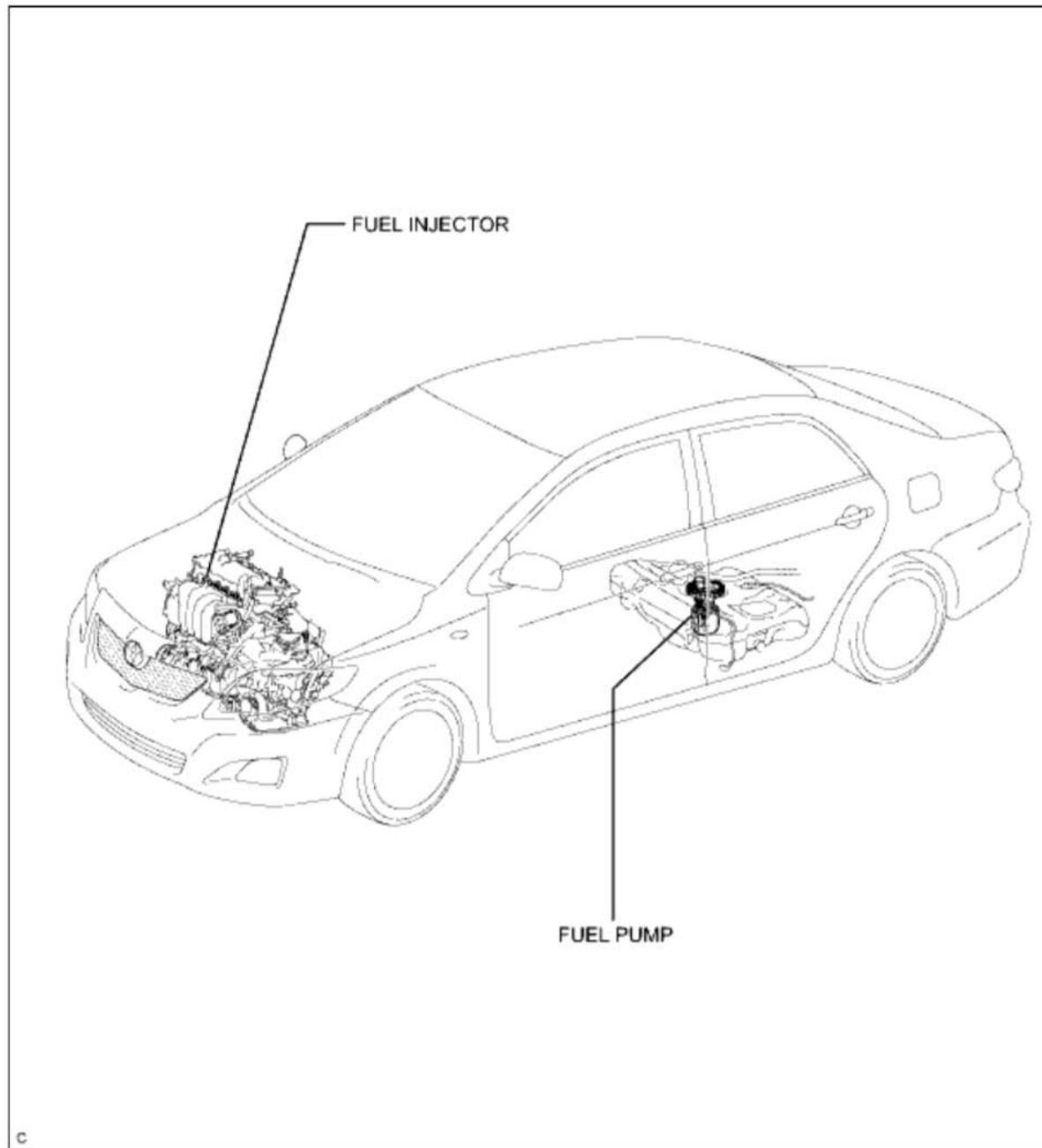
(s) Check for fuel leaks (Step 1).



Last Modified: 3-10-2010	6.4 R	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EEZ00YX
Title: 2ZR-FE FUEL: FUEL SYSTEM: PARTS LOCATION (2010 Corolla)		

PARTS LOCATION

ILLUSTRATION



Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001IQZ02TX
Title: 2ZR-FE FUEL: FUEL SYSTEM: ON-VEHICLE INSPECTION (2010 Corolla)		

ON-VEHICLE INSPECTION

1. CHECK FOR FUEL PUMP OPERATION AND INSPECT FOR FUEL LEAK

(a) Check fuel pump operation.

(1) Connect the Techstream to the DLC3.

(2) Turn the ignition switch ON and turn the Techstream on.

NOTICE:

Do not start the engine.

(3) Enter the following menus: Powertrain / Engine / Active Test / Control the Fuel Pump /Speed.

(4) Check for pressure in the fuel inlet tube from the fuel line. Check that sounds of fuel flowing from the fuel tank can be heard. If no sounds can be heard, check the integration relay, fuel pump, ECM and wiring connectors.

(b) Inspect for fuel leaks.

(1) Check that there are no fuel leakage after performing maintenance anywhere on the fuel system. If there is a fuel leak, repair or replace parts as necessary.

(c) Turn the ignition switch off.

(d) Disconnect the Techstream from the DLC3.

2. CHECK FUEL PRESSURE

(a) Discharge fuel system pressure .

(b) Using a voltmeter, measure the battery voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
Positive terminal - Negative terminal	Ignition switch off	11 to 14 V

(c) Disconnect the cable from the negative (-) battery terminal.

(d) Disconnect the fuel hose from the fuel main tube .

(e) Install SST (pressure gauge) using other SST as shown in the illustration.

SST: 09268-31012

09268-41500

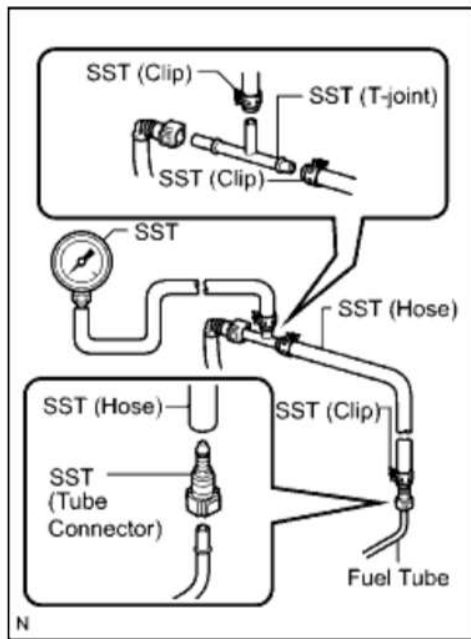
90467-13001

95336-08070

SST: 09268-45014

09268-41200

09268-41220



09268-41250

- (f) Clean up any spilled gasoline.
- (g) Connect the cable to the negative (-) battery terminal.
- (h) Connect the Techstream to the DLC3.
- (i) Enter the following menus: Powertrain / Engine / Active Test / Control the Fuel Pump / Speed.
- (j) Measure the fuel pressure.

Fuel pressure:

304 to 343 kPa (3.1 to 3.5 kgf*cm², 44.1 to 49.7 psi)

- If the fuel pressure is greater than the standard value, replace the fuel pressure regulator.
- If the fuel pressure is less than the standard value, check the fuel hoses and connections, fuel pump, fuel filter and fuel pressure regulator.

- (k) Disconnect the Techstream from the DLC3.

- (l) Start the engine.

- (m) Measure the fuel pressure at idle.

Fuel pressure:

304 to 343 kPa (3.1 to 3.5 kgf*cm², 44.1 to 49.7 psi)

- (n) Stop the engine.

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

Fuel pressure:

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.

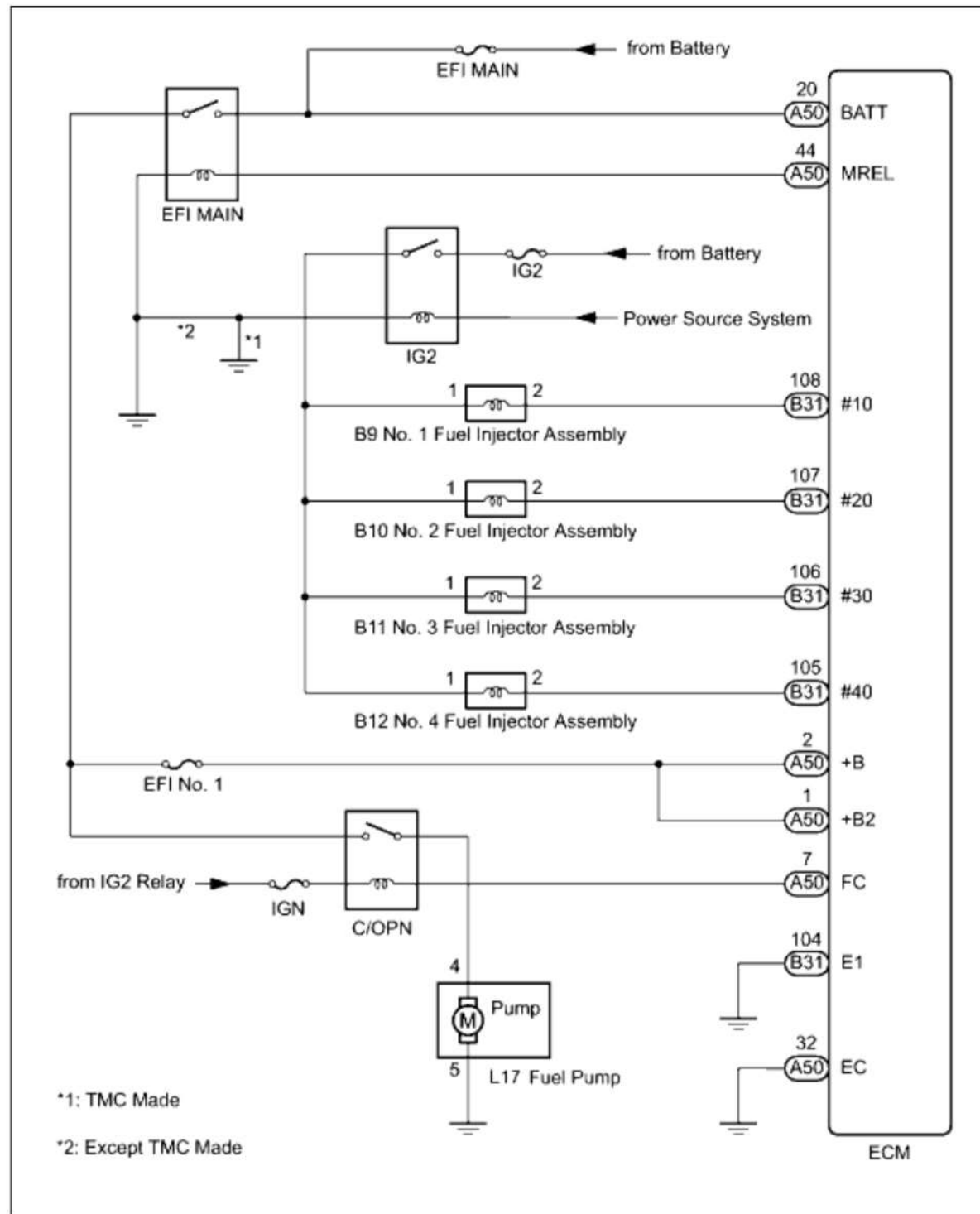
- (p) After checking the fuel pressure, disconnect the cable from the negative (-) battery terminal and carefully remove SST to prevent gasoline from spraying.
- (q) Reconnect the fuel tube to the main fuel tube (fuel tube connector).
- (r) Install the No. 1 fuel pipe clamp to the fuel tube connector.

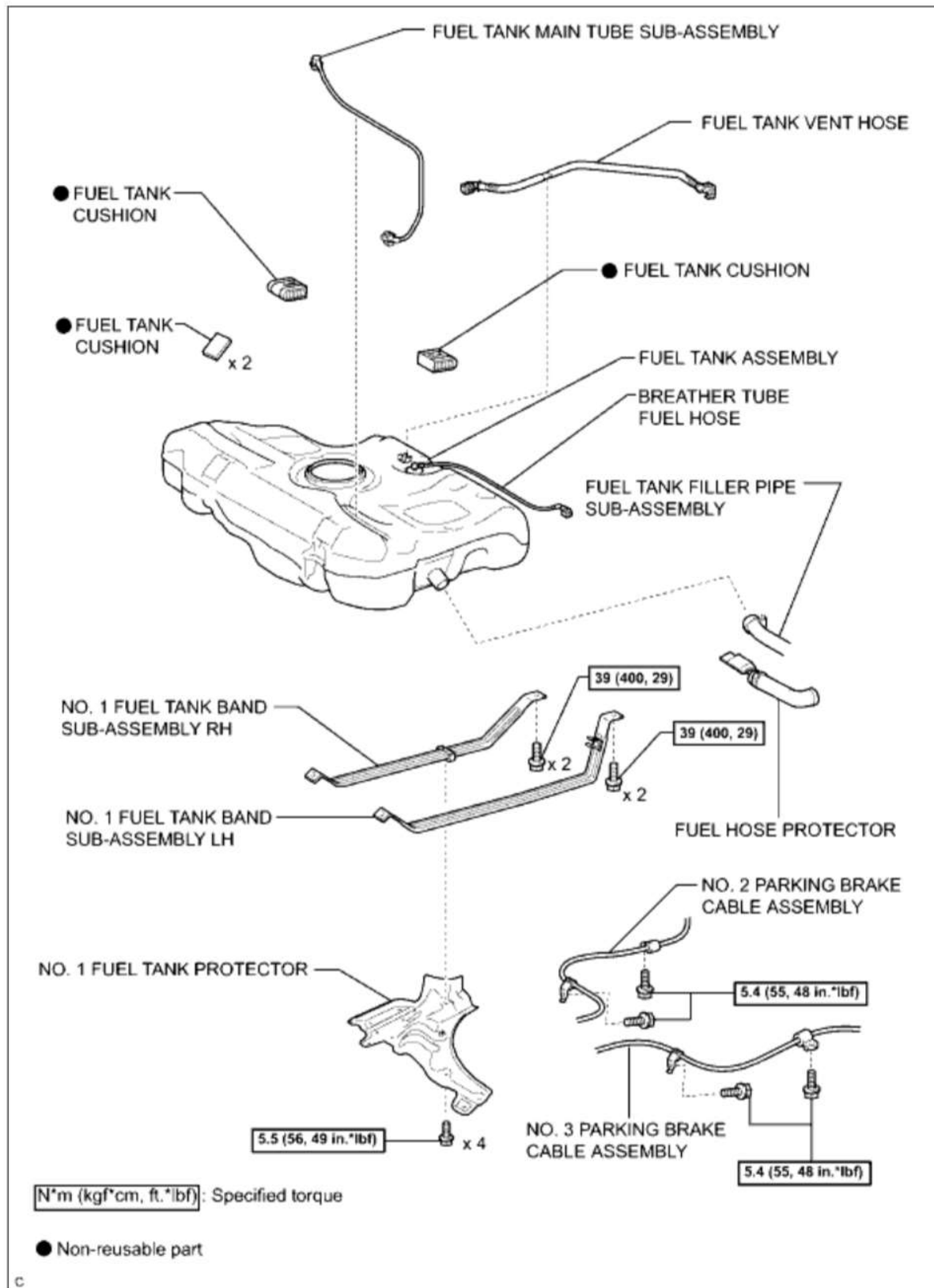
(s) Check for fuel leaks (Step 1).



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001EF000XX
Title: 2ZR-FE FUEL: FUEL SYSTEM: SYSTEM DIAGRAM (2010 Corolla)		

SYSTEM DIAGRAM





Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022Y400AX
Title: 2AZ-FE FUEL: FUEL TANK: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE

HINT:  .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

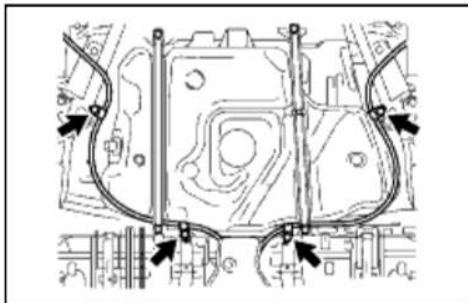
(a) Remove the fuel suction tube assembly with pump and gauge from the fuel tank  .

4. DRAIN FUEL

5. REMOVE CENTER EXHAUST PIPE ASSEMBLY

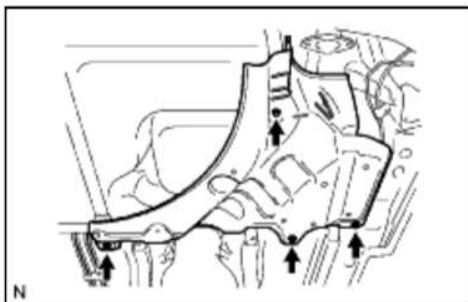
HINT:  .

6. SEPARATE PARKING BRAKE CABLE



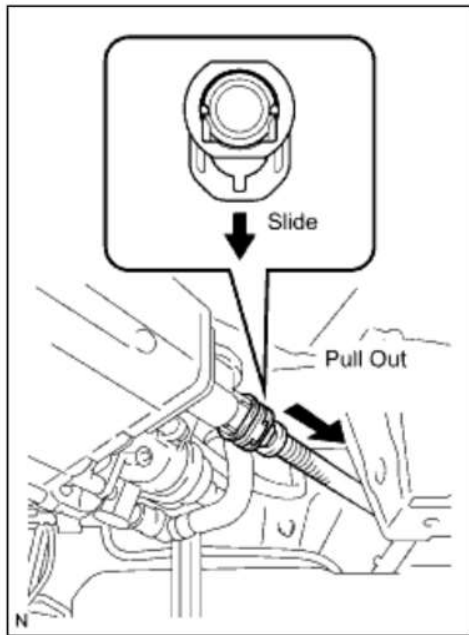
(a) Remove the 4 bolts, and separate the parking brake cables.

7. REMOVE NO. 1 FUEL TANK PROTECTOR



(a) Remove the 4 bolts and the No. 1 fuel tank protector.

8. DISCONNECT FUEL TANK VENT HOSE



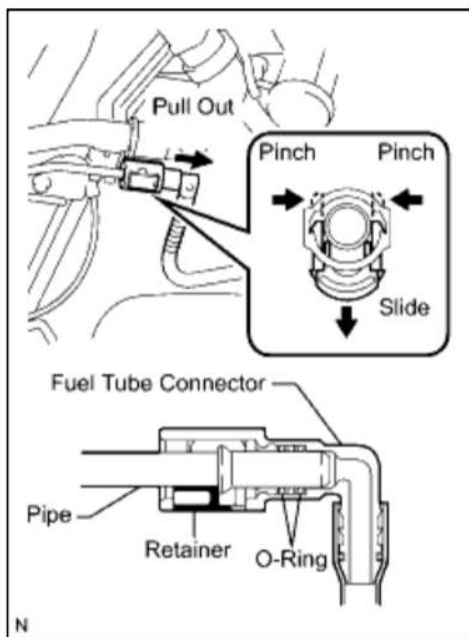
(a) Disconnect the fuel tank vent hose.

- (1) Pinch the tabs of the retainer of the fuel tube connector to disengage the lock claws and slide it as shown in the illustration.
- (2) Pull the fuel tank vent hose out of the pipe.

NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.

9. DISCONNECT BREATHER TUBE FUEL HOSE



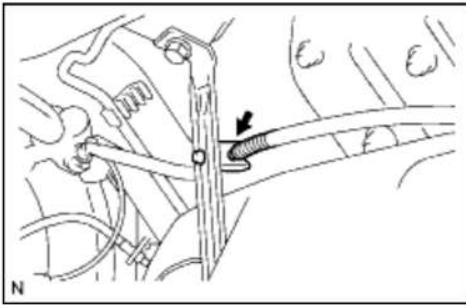
(a) Disconnect the breather tube fuel hose.

- (1) Pinch the retainer of the fuel tube connector, then pull the fuel tube connector out of the pipe.

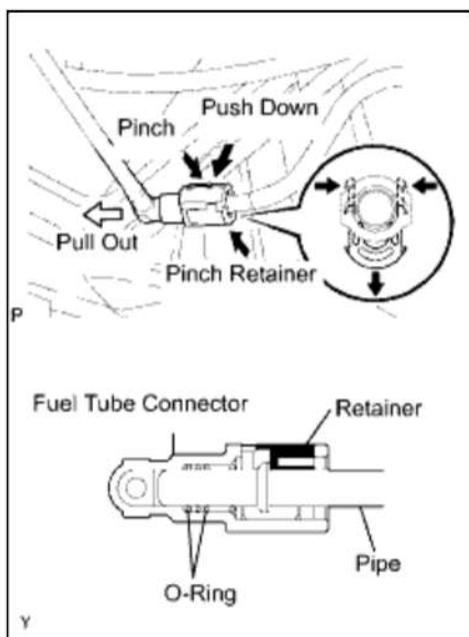
NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.

(b) Separate the breather tube fuel hose.



10. DISCONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY



(a) Disconnect the fuel tank main tube.

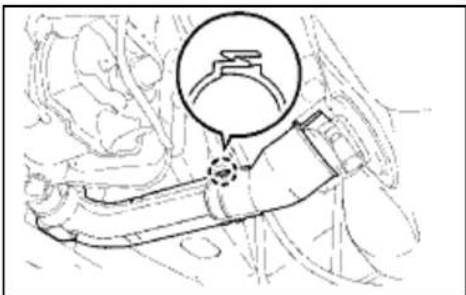
(1) Pinch the tabs of the retainer of the fuel tube connector to disengage the lock claws and push it down as shown in the illustration.

(2) Pull the fuel tank main tube out of the pipe.

NOTICE:

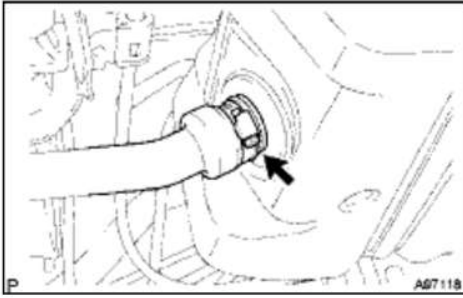
- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.

11. DISCONNECT FUEL TANK FILLER PIPE SUB-ASSEMBLY



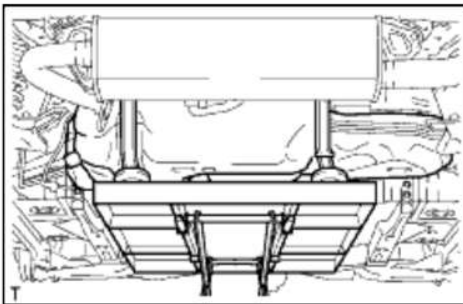
(a) Using a screwdriver, unfasten the claw. Then remove the fuel tank filler pipe cover from the fuel tank filler pipe.

(b) Loosen the hose clamp bolt, then disconnect the fuel tank

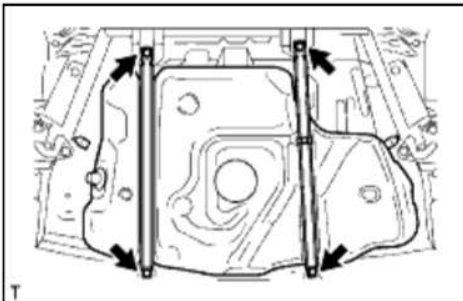


filler pipe hose from the fuel tank.

12. REMOVE FUEL TANK ASSEMBLY



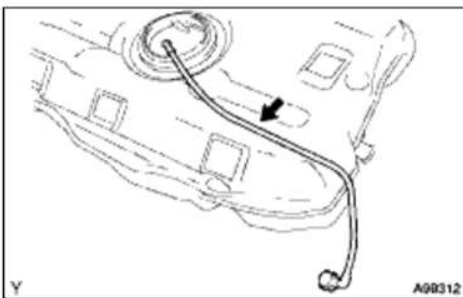
(a) Hold the fuel tank using a transmission jack.



(b) Remove the 4 bolts, then remove the 2 No. 1 fuel tank bands.

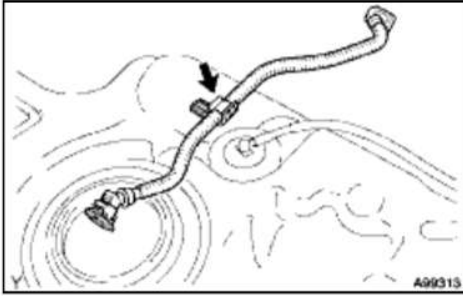
(c) Operate the transmission jack, then remove the fuel tank.

13. REMOVE FUEL TANK MAIN TUBE SUB-ASSEMBLY



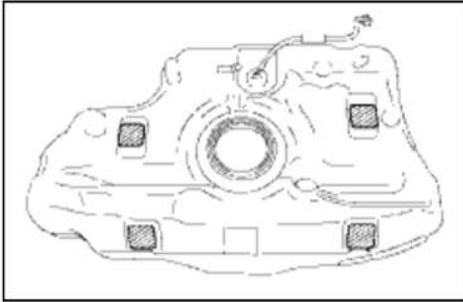
(a) Remove the fuel tank main tube from the fuel tank.

14. REMOVE FUEL TANK VENT HOSE



(a) Remove the fuel tank vent hose from the fuel tank clamp.

15. REMOVE FUEL TANK CUSHION



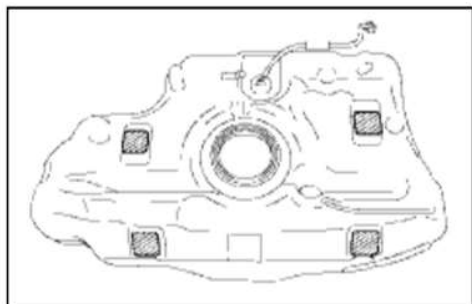
(a) Remove the fuel tank cushions from the fuel tank.



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM0000022Y200AX
Title: 2AZ-FE FUEL: FUEL TANK: INSTALLATION (2010 Corolla)		

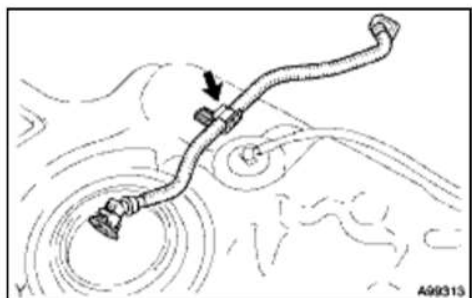
INSTALLATION

1. INSTALL FUEL TANK CUSHION



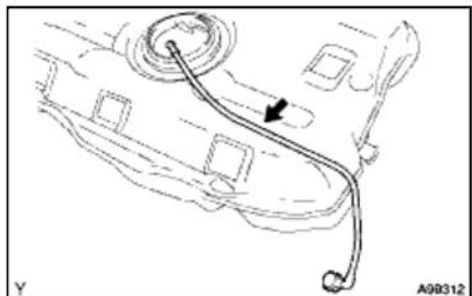
(a) Install new fuel tank cushions onto the fuel tank.

2. INSTALL FUEL TANK VENT HOSE



(a) Install the fuel tank vent hose onto the fuel hose clamp.

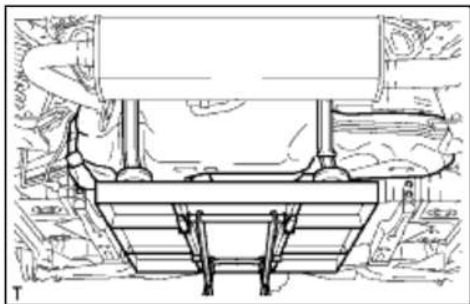
3. INSTALL FUEL TANK MAIN TUBE SUB-ASSEMBLY



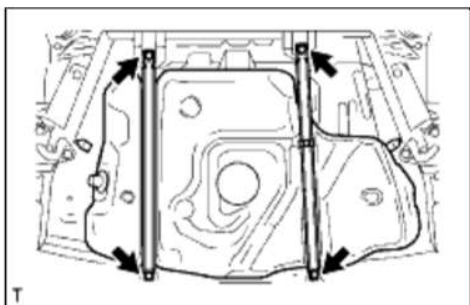
(a) Install the fuel tank main tube onto the fuel tank.

4. INSTALL FUEL TANK ASSEMBLY

(a) Set the fuel tank on a transmission jack.



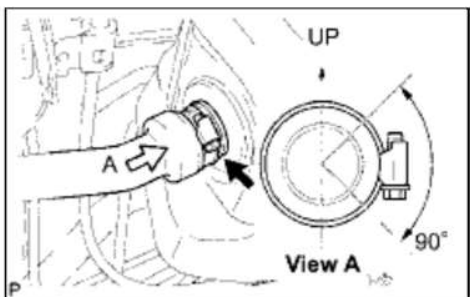
- (b) Operate the transmission jack, then install the fuel tank into the vehicle.



- (c) Install the 2 No. 1 fuel tank bands with the 4 bolts.

Torque: 39 N·m (400 kgf·cm, 29ft·lbf)

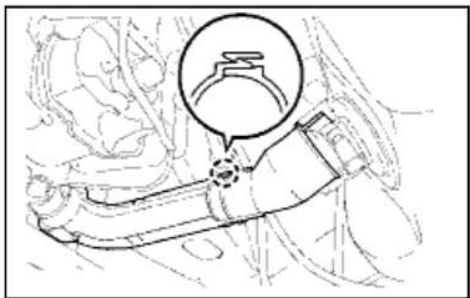
5. INSTALL FUEL TANK FILLER PIPE SUB-ASSEMBLY



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

NOTICE:

Make sure that the hose clamp is facing in the correct direction when installing.

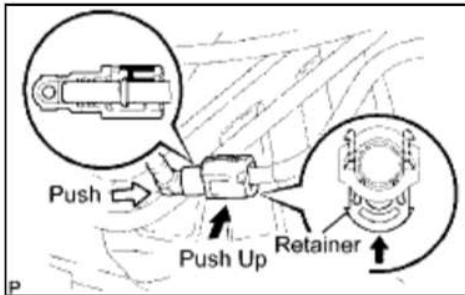


- (b) Engage the claw, then install the fuel tank filler pipe cover onto the fuel tank filler pipe.

6. CONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

(a) Connect the fuel tank main tube.

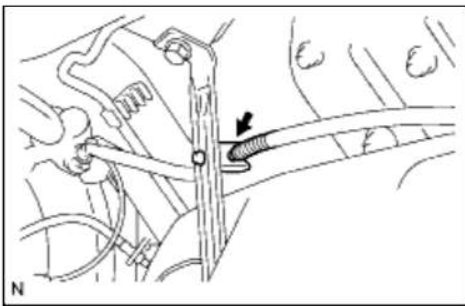
- (1) Align the fuel tube connector with the pipe, then push the fuel tube connector in until it comes into contact with the seat to connect the fuel tank main tube to the pipe, then push the retainer up until the claws lock.



NOTICE:

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

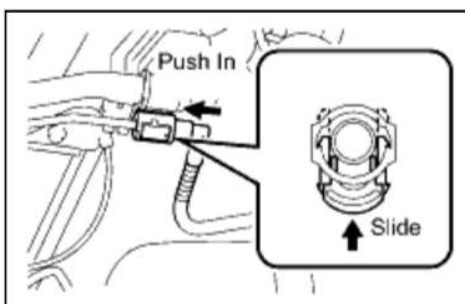
7. CONNECT BREATHER TUBE FUEL HOSE



(a) Connect the breather tube fuel hose to the hose clamp.

(b) Connect the breather tube fuel hose.

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



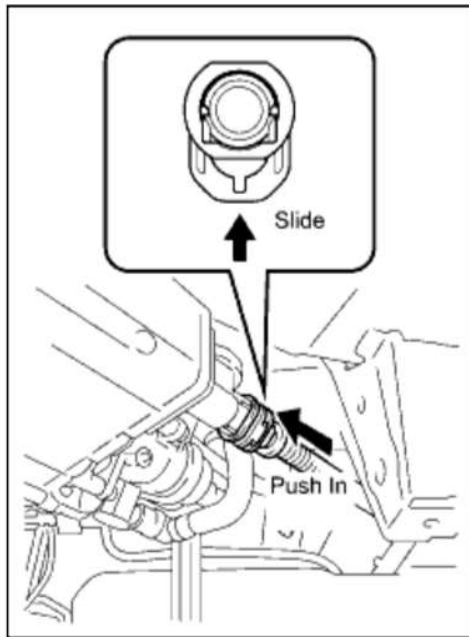
NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube connector and pipe before performing this work.
- After connecting the breather tube fuel hose, check that the fuel pump tube is securely connected by pulling on the fuel tube connector and pipe.

8. CONNECT FUEL TANK VENT HOSE

(a) Connect the fuel tank vent hose.

- (1) Align the fuel tube connector with the pipe, then push



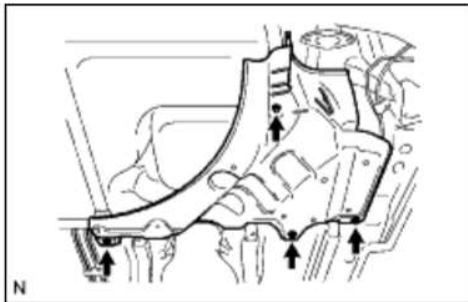
the fuel tube connector in until it comes into contact with the seat to connect the fuel tank vent hose to the pipe.

- (2) Slide the retainer of the fuel tube connector to lock the claws as shown in the illustration.

NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube connector and pipe before performing this work.
- After connecting the fuel tank vent hose, check that the fuel tank vent hose is securely connected by pulling on the fuel tube connector.

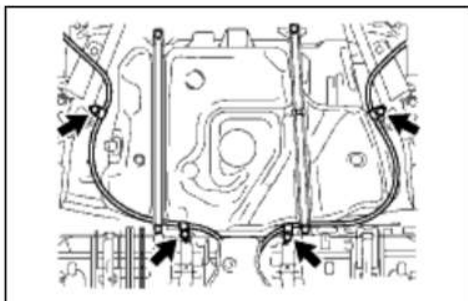
9. INSTALL NO. 1 FUEL TANK PROTECTOR



- (a) Install the No.1 fuel tank protector with the 4 bolts.

Torque: 5.5 N·m (56 kgf·cm, 49in·lbf)

10. CONNECT PARKING BRAKE CABLE



- (a) Install the parking cables with the 4 bolts.

Torque: 5.4 N·m (55 kgf·cm, 48in·lbf)

11. INSTALL CENTER EXHAUST PIPE ASSEMBLY

HINT: .

12. ADD FUEL**13. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE**

(a) Install the fuel suction with pump and gauge tube assembly to the fuel tank .

14. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL **15. INSPECT FOR FUEL LEAK** **16. INSPECT FOR EXHAUST GAS LEAK**

Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002PZU00TX
Title: 2ZR-FE FUEL: FUEL TANK: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE INFO

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

3. REMOVE FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE

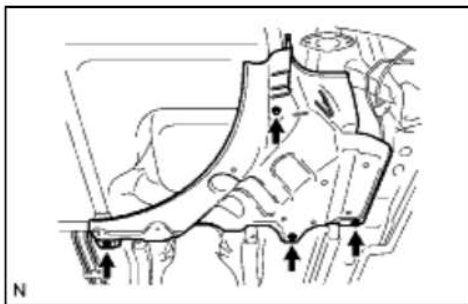
(a) Remove the fuel suction tube assembly with pump and gauge from the fuel tank INFO.

4. DRAIN FUEL

5. REMOVE FRONT EXHAUST PIPE ASSEMBLY

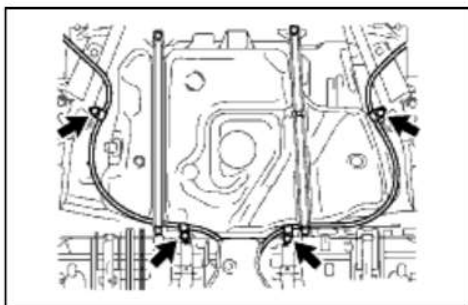
HINT: INFO.

6. REMOVE NO. 1 FUEL TANK PROTECTOR



(a) Remove the 4 bolts and the No. 1 fuel tank protector.

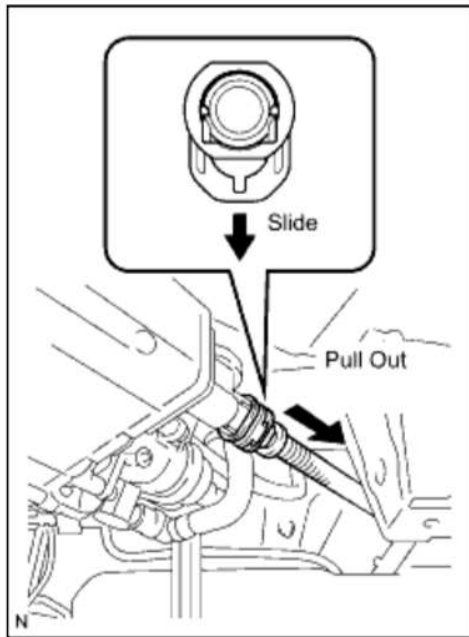
7. SEPARATE PARKING BRAKE CABLE



(a) Remove the 4 bolts, and separate the parking brake cables.

8. DISCONNECT FUEL TANK VENT HOSE

(a) Disconnect the fuel tank vent hose.



(b) Pull the fuel tank vent hose out of the pipe.

NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.

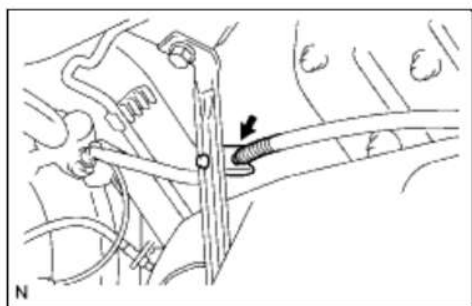
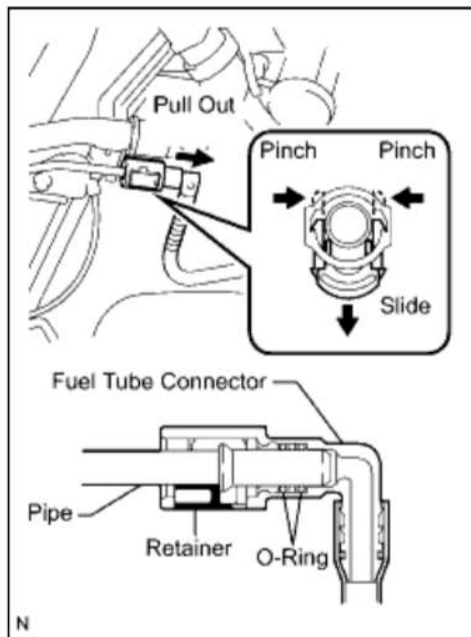
9. DISCONNECT BREATHER TUBE FUEL HOSE

(a) Disconnect the breather tube fuel hose.

(1) Pinch the retainer of the fuel tube connector, then pull the fuel tube connector out of the pipe.

NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.
- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.



(b) Separate the fuel breather tube fuel hose.

10. DISCONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

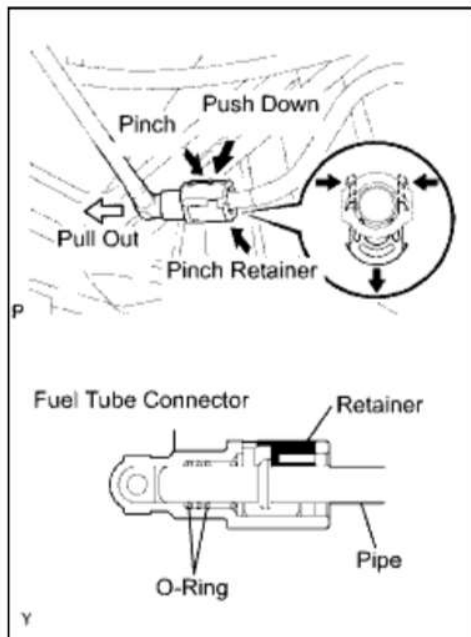
(a) Disconnect the fuel tank main tube.

(1) Pinch the tabs of the retainer of the fuel tube connector to disengage the lock claws and push it down as shown in the illustration.

(2) Pull the fuel tank main tube out of the pipe.

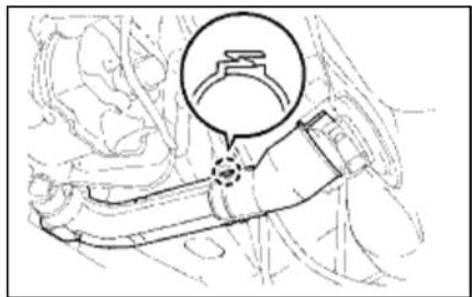
NOTICE:

- Check that there is no dirt or other foreign objects around the connector before disconnecting it. Clean the connector if necessary.
- It is necessary to prevent mud or dirt from entering the connector. If mud or dirt gets in the connector, the O-rings may not seal properly.
- Only disconnect the quick connector by hand.
- Do not bend, kink or twist the nylon tubes.

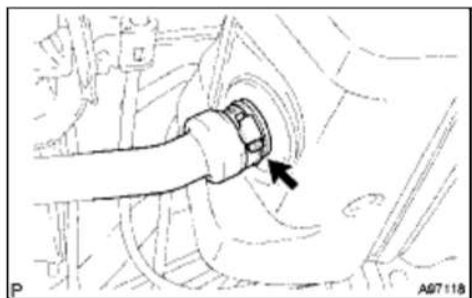


- Protect the connector by covering it with a plastic bag.
- If the pipe and connector are stuck, carefully try wiggling or pushing and pulling on the connector to release it. Pull the connector off the pipe carefully.

11. DISCONNECT FUEL TANK FILLER PIPE SUB-ASSEMBLY



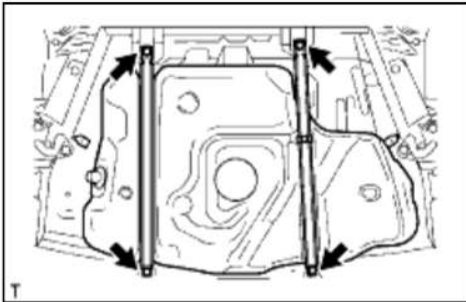
- (a) Using a screwdriver, unfasten the claw. Then remove the fuel tank filler pipe cover from the fuel tank filler pipe.



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

12. REMOVE FUEL TANK ASSEMBLY

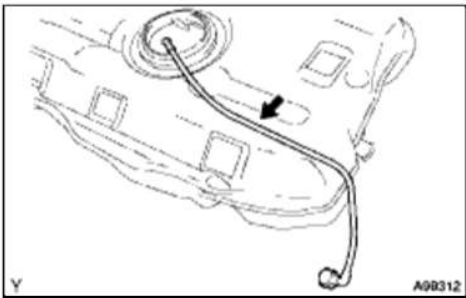
- (a) Hold the fuel tank using a transmission jack.



(b) Remove the 4 bolts, then remove the 2 No. 1 fuel tank bands.

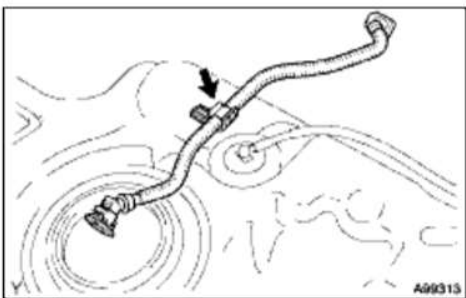
(c) Operate the transmission jack, then remove the fuel tank.

13. REMOVE FUEL TANK MAIN TUBE SUB-ASSEMBLY



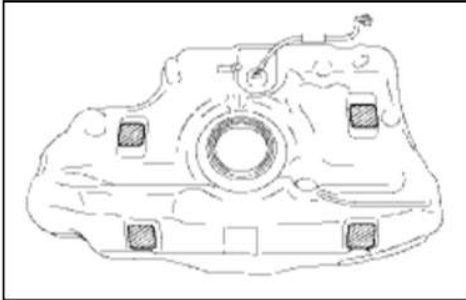
(a) Remove the fuel tank main tube from the fuel tank.

14. REMOVE FUEL TANK VENT HOSE



(a) Remove the fuel tank vent hose from the fuel tank clamp.

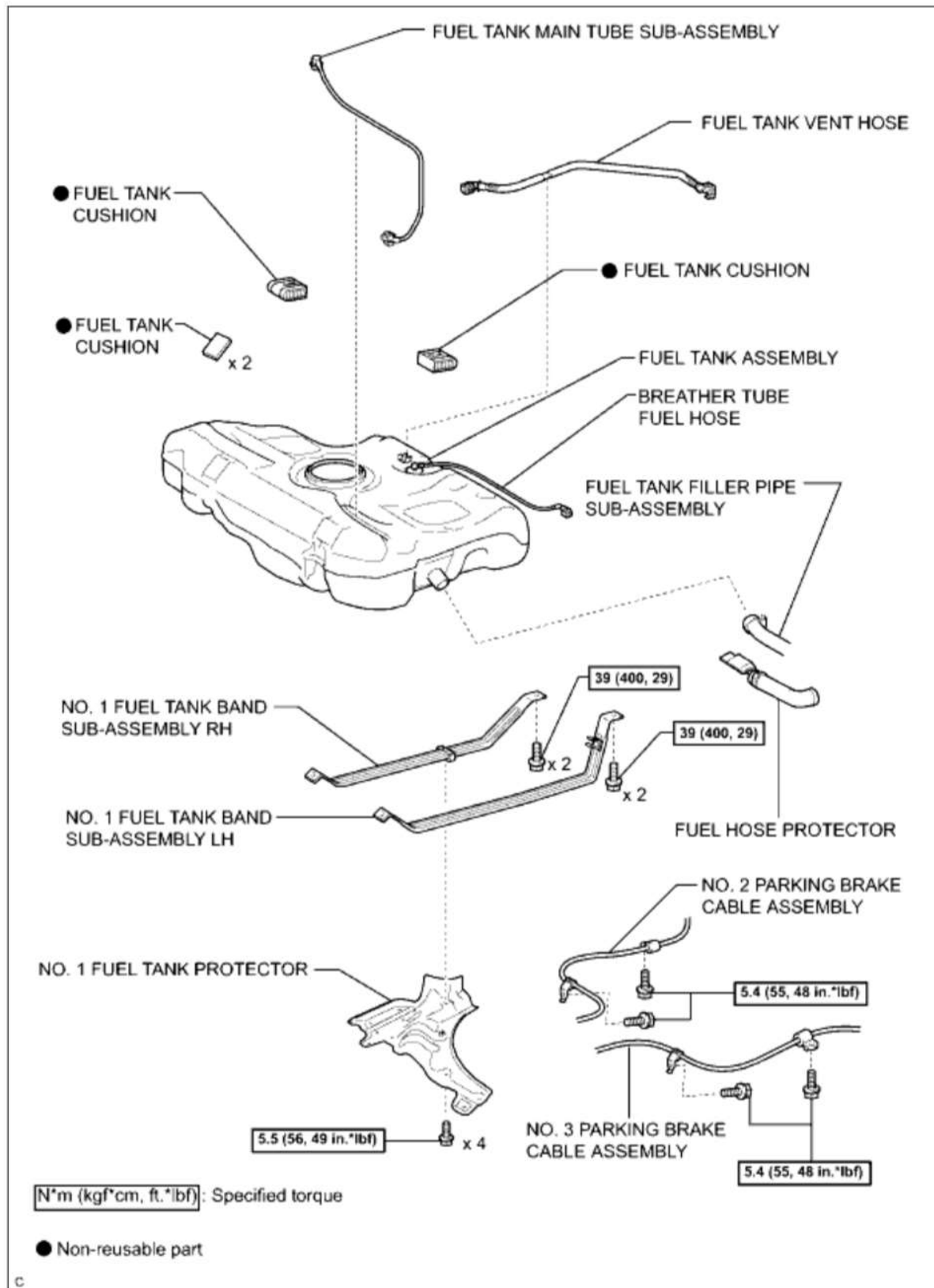
15. REMOVE FUEL TANK CUSHION



(a) Remove the fuel tank cushions from the fuel tank.



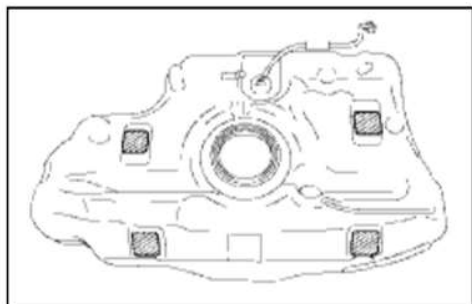
TOYOTA



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002PZS00TX
Title: 2ZR-FE FUEL: FUEL TANK: INSTALLATION (2010 Corolla)		

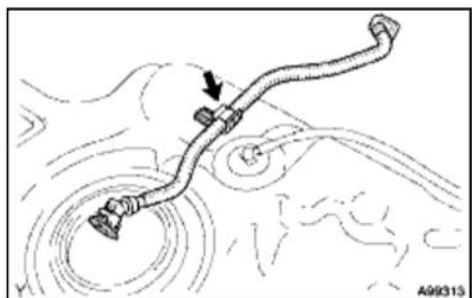
INSTALLATION

1. INSTALL FUEL TANK CUSHION



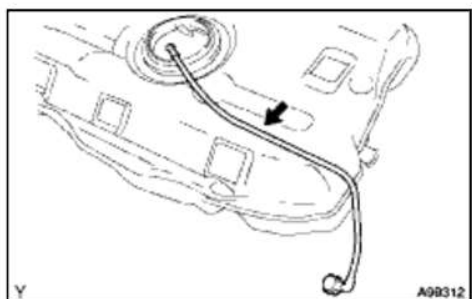
(a) Install new fuel tank cushions onto the fuel tank.

2. INSTALL FUEL TANK VENT HOSE



(a) Install the fuel tank vent hose onto the fuel tank clamp.

3. INSTALL FUEL TANK MAIN TUBE SUB-ASSEMBLY



(a) Install the fuel tank main tube onto the fuel tank.

4. INSTALL FUEL TANK ASSEMBLY

(a) Set the fuel tank on a transmission jack.

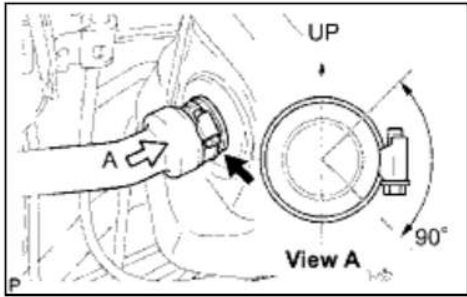


- (b) Operate the transmission jack, then install the fuel tank into the vehicle.

- (c) Install the 2 No. 1 fuel tank bands with the 4 bolts.

Torque: 39 N·m (400 kgf·cm, 29ft·lbf)

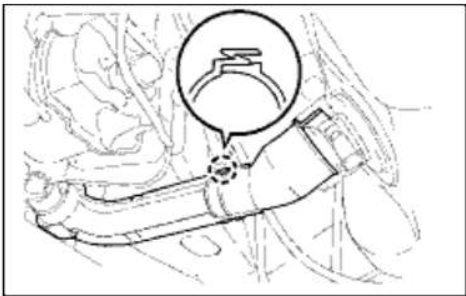
5. INSTALL FUEL TANK FILLER PIPE SUB-ASSEMBLY



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

NOTICE:

Make sure that the hose clamp is facing in the correct direction when installing.



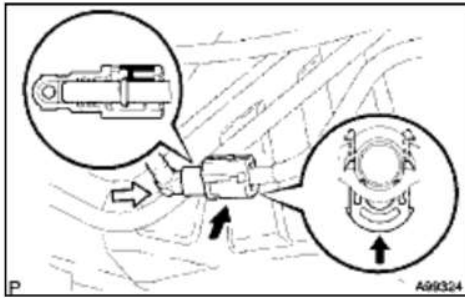
- (b) Engage the claw, then install the fuel tank filler pipe cover onto the fuel tank filler pipe.

6. CONNECT FUEL TANK MAIN TUBE SUB-ASSEMBLY

- (a) Connect the fuel tank main tube.

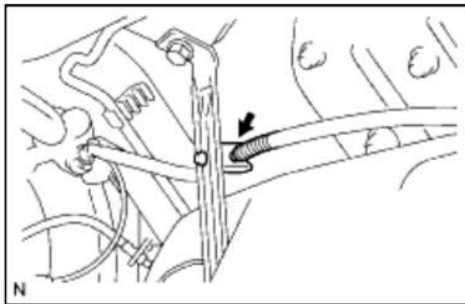
- (1) Align the fuel tube connector with the pipe, then push the fuel tube connector in until it comes into contact with the seat to connect the fuel tank main tube to the pipe, then push the retainer up until the claws lock.

NOTICE:



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

7. CONNECT BREATHER TUBE FUEL HOSE



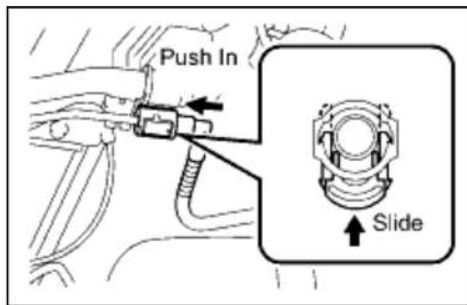
(a) Connect the breather tube fuel hose to the clamp.

(b) Connect the breather tube fuel hose to the pipe.

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

NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube connector and pipe before performing this work.
- After connecting the fuel tank breather tube, check that the fuel pump tube is securely connected by pulling on the fuel tube connector and pipe.

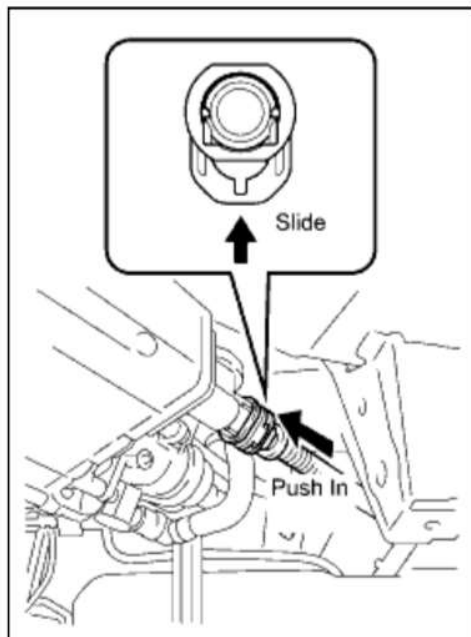


8. CONNECT FUEL TANK VENT HOSE

(a) Connect the fuel tank vent hose.

- (1) Align the fuel tube connector with the pipe, then push the fuel tube connector in until it comes into contact with the seat to connect the fuel tank vent hose to the pipe.

(2) Slide the retainer of the fuel tube connector to lock the

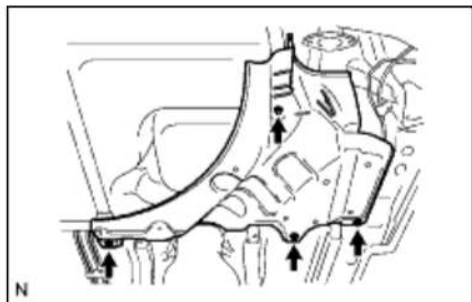


claws as shown in the illustration.

NOTICE:

- Check that there are no scratches or foreign objects around the connecting surfaces of the fuel tube connector and pipe before performing this work.
- After connecting the fuel tank vent hose, check that the fuel tank vent hose is securely connected by pulling on the fuel tube connector.

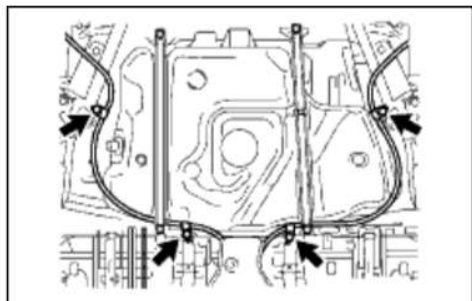
9. INSTALL NO. 1 FUEL TANK PROTECTOR



- (a) Install the fuel tank protector sub-assembly with the 4 bolts.

Torque: 5.5 N·m (56 kgf·cm, 49in·lbf)

10. CONNECT PARKING BRAKE CABLE



- (a) Install the parking cables with the 4 bolts.

Torque: 5.4 N·m (55 kgf·cm, 48in·lbf)

11. INSTALL FRONT EXHAUST PIPE ASSEMBLY



12. ADD FUEL**13. INSTALL FUEL SUCTION TUBE ASSEMBLY WITH PUMP AND GAUGE**

(a) Install the fuel suction tube assembly with pump and gauge .

14. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL **15. INSPECT FOR FUEL LEAK** **16. INSPECT FOR EXHAUST GAS LEAK**