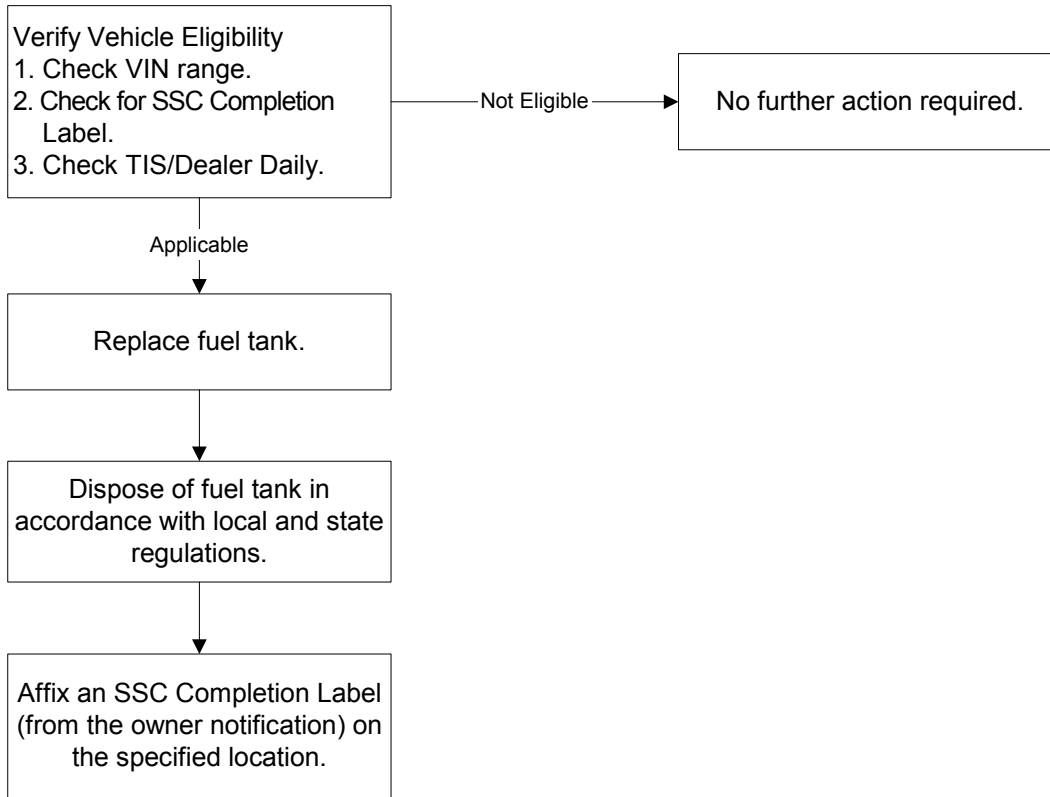
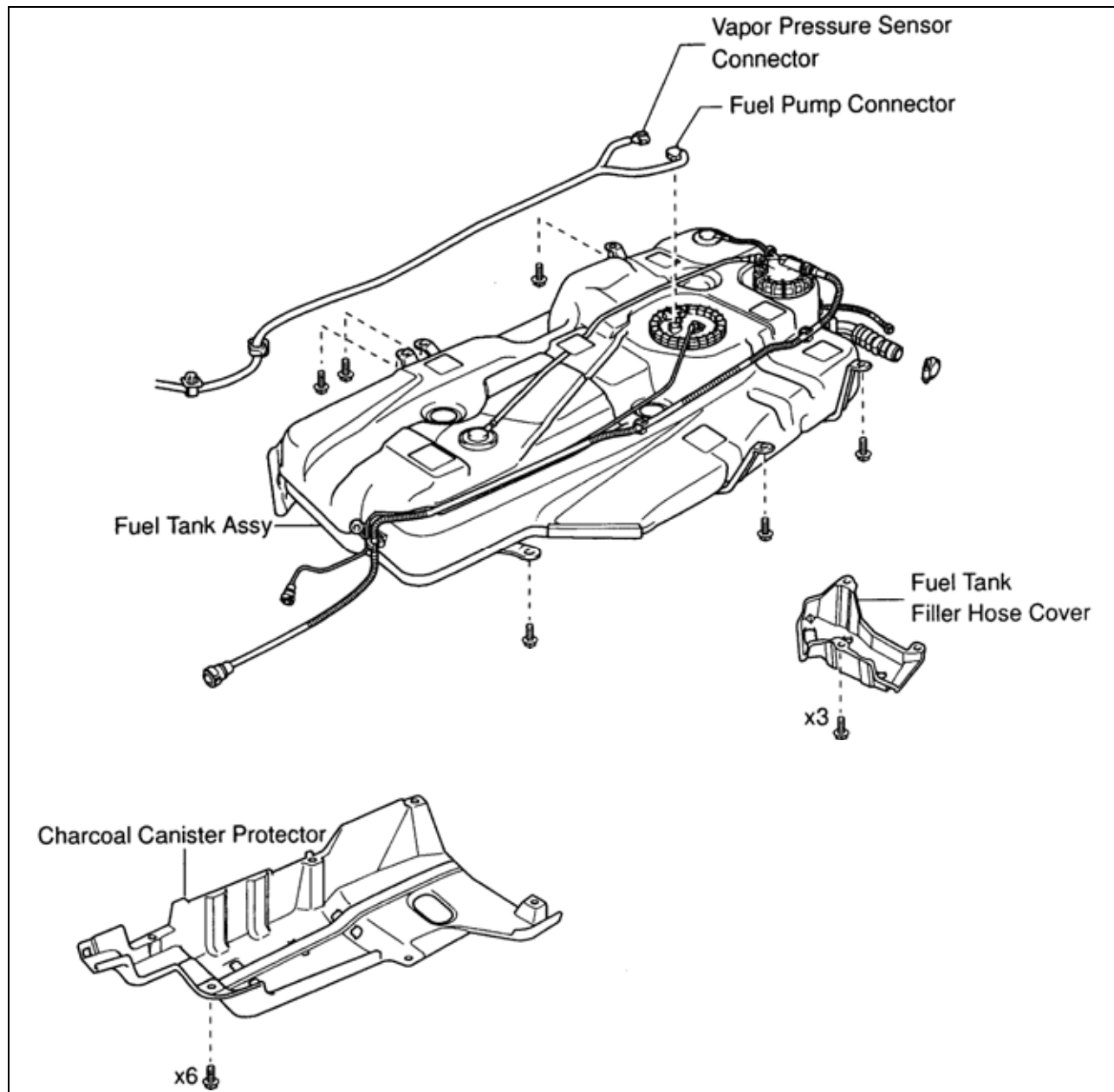


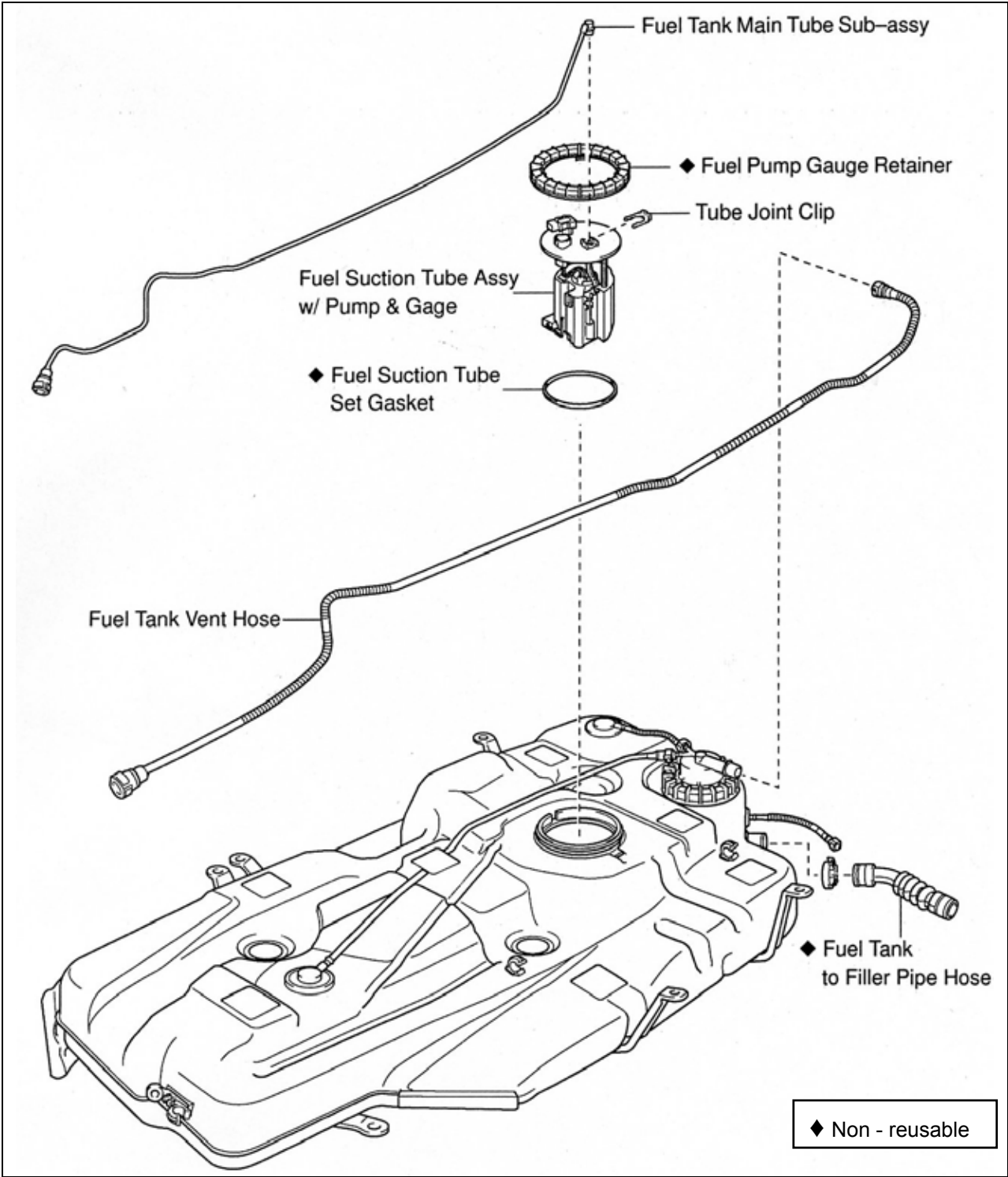
TECHNICAL INSTRUCTIONS
FOR
SPECIAL SERVICE CAMPAIGN 30K
2004 MY TOYOTA SIENNA
FUEL TANK REPLACEMENT

I. OPERATION FLOW CHART



II. LOCATION OF AFFECTED PARTS





III. AFFECTED VIN RANGE

Model	Year	VIN Range*	
		VDS	Ranges
Sienna (2WD and 4WD)	Early to Mid-2004	BA22C	S000023 – S004413
		BA23C	S000020 – S004414
		ZA22C	S000020 – S040937
		ZA23C	S000038 – S040939

NOTE: Not all vehicles in the VIN range are affected by this SSC. Always consult Dealer Daily or TIS to confirm VIN eligibility and to assure the SSC is applicable. This will verify the vehicle is involved and has not already been completed by another dealer. TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected.

IV. PREPARATION

A. PARTS

2WD:


Part Number	Part Description	Qty/Vehicle
77001-08060	Fuel Tank Assembly	1
77213-08020	Fuel Filler Hose	1

4WD:

Part Number	Part Description	Qty/Vehicle
77001-08070	Fuel Tank Assembly	1
77213-08020	Fuel Filler Hose	1

B. TOOLS

- Standard tools
- Torque wrench
- Plastic bag
- Toyota Scantool
- 09808-14020 Fuel Sender Lock Nut Wrench

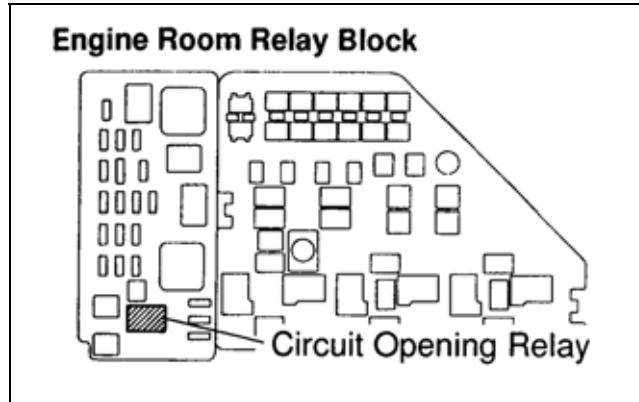
<p>Fuel storage cart (Available through your Dealer Equipment Catalog)</p>	
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V. WORK PROCEDURE

A. FUEL TANK REMOVAL

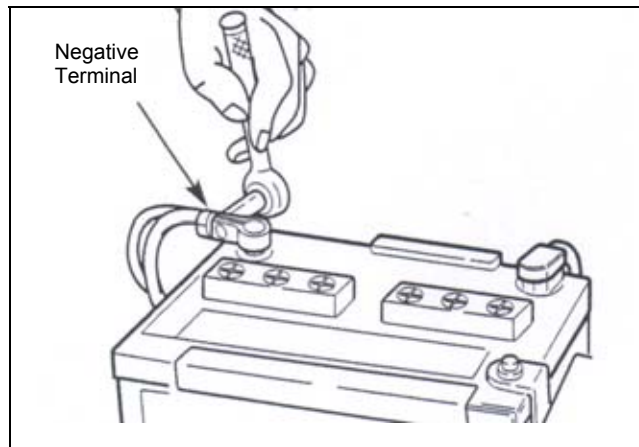
CAUTION:
DO NOT SMOKE OR WORK NEAR AN OPEN FLAME WHEN WORKING ON THE FUEL SYSTEM.

1. PLACE THE VEHICLE ON A LIFT
2. RECORD AUDIO STATION PRESETS

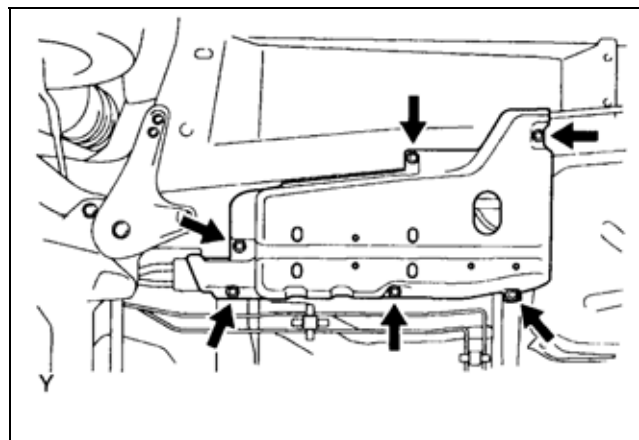


3. **RELEASE FUEL SYSTEM PRESSURE**
 - (a) Remove the circuit opening relay from the engine room relay block.
 - (b) Start engine and run it until it stops.

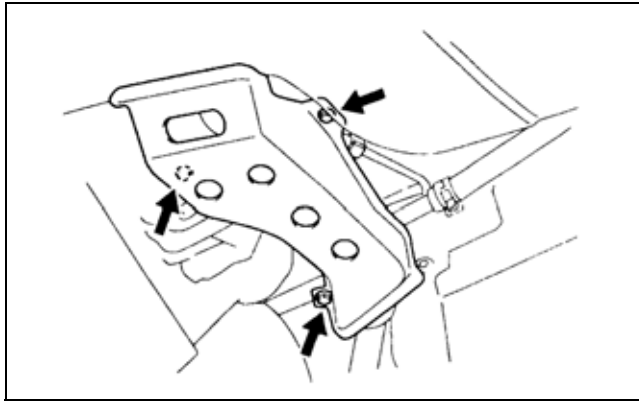
NOTE:
It is possible that DTC P0171 (system too lean) may be set during the above operation.



4. **CONFIRM THAT THE IGNITION SWITCH IS IN THE LOCK POSITION**
5. **DISCONNECT THE NEGATIVE BATTERY TERMINAL**
6. **REINSTALL THE CIRCUIT OPENING RELAY**
7. **DRAIN THE TANK USING THE FUEL STORAGE CART**

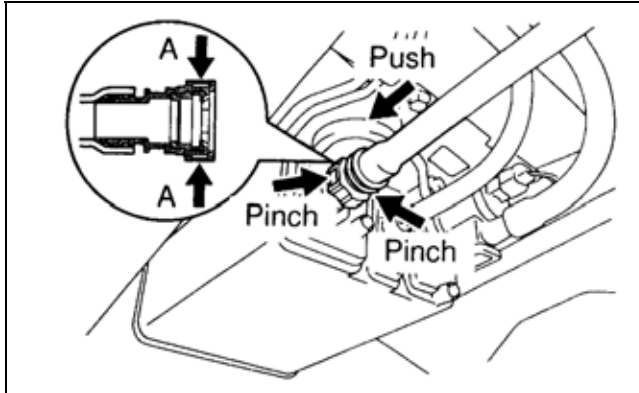


8. **REMOVE THE CHARCOAL CANISTER PROTECTOR**
 - (a) Remove the 6 bolts.
 - (b) Remove the charcoal canister protector.



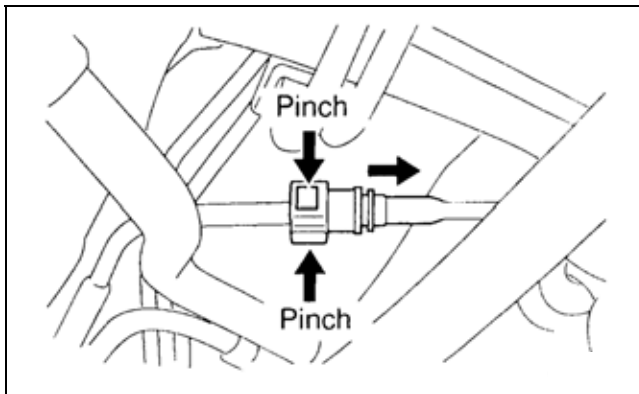
9. REMOVE THE FUEL TANK FILLER HOSE COVER

- (a) Remove the 3 bolts.
- (b) Remove the filler hose cover.

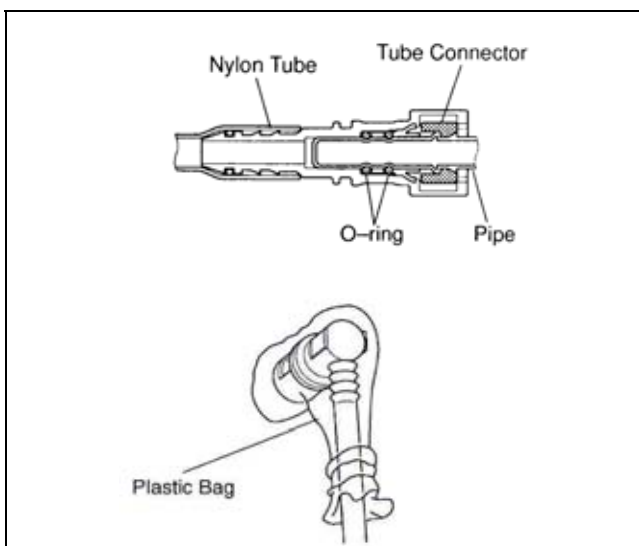


10. REMOVE THE FUEL TANK ASSEMBLY

- (a) Disconnect the fuel tank vent hose.
 1. Push the connector into the canister to release the lock tab.
 2. Pinch portion A.
 3. Remove the connector.

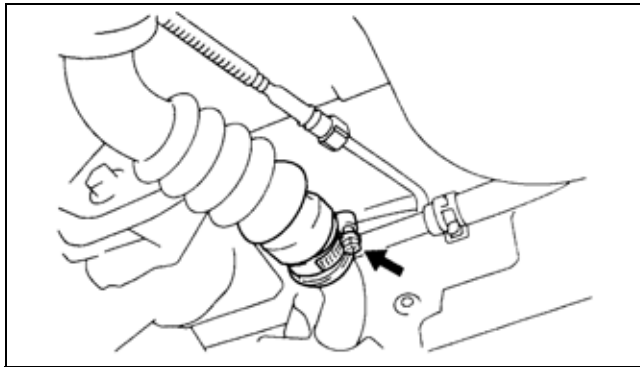


- (b) Disconnect the fuel tank main tube.
 1. Pinch the tube connector.
 2. Remove the main tube.

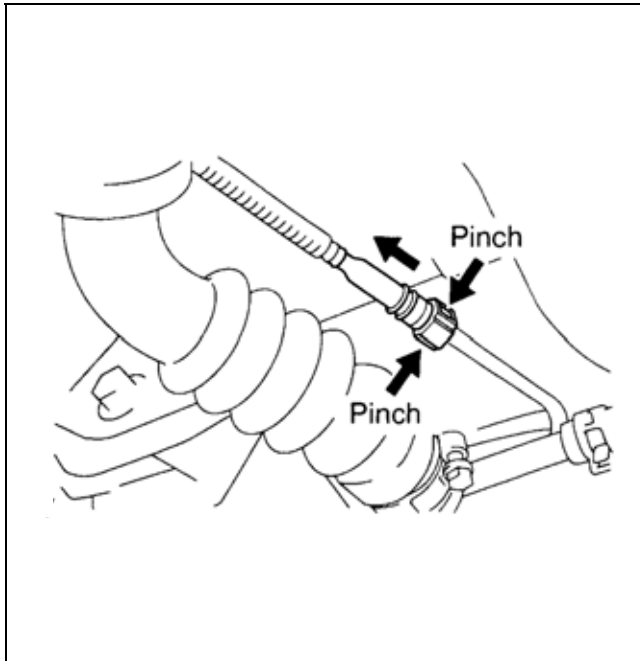


NOTE:

Prior to removal, clean any dirt around the connector. Do not damage the “O-Rings” that seal the pipe and connector. Do not use any tools to release the tube. Do not bend or twist the nylon tube. Cover the connector in a plastic bag to prevent contamination. If the pipe and connector are stuck, carefully push and pull the connector to release and gently pull the connector out.



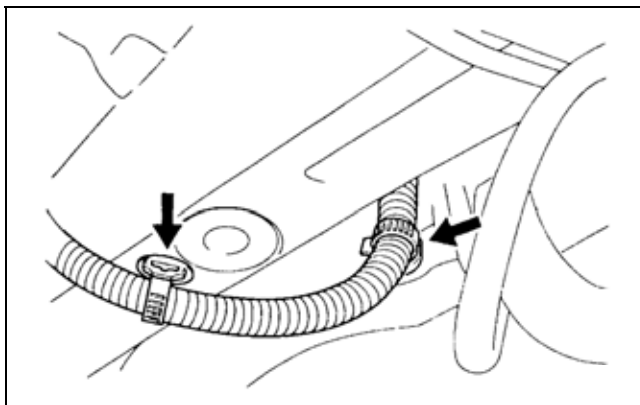
- (c) Disconnect the fuel tank filler hose from filler neck.
1. Loosen the hose clamp.
 2. Remove the filler hose.



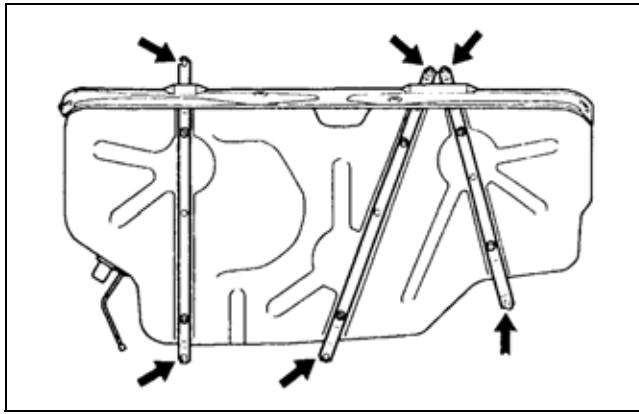
- (d) Disconnect the rear fuel tube to the filler neck.
1. Pinch the tube connector.
 2. Pull out the fuel tube.

NOTE:

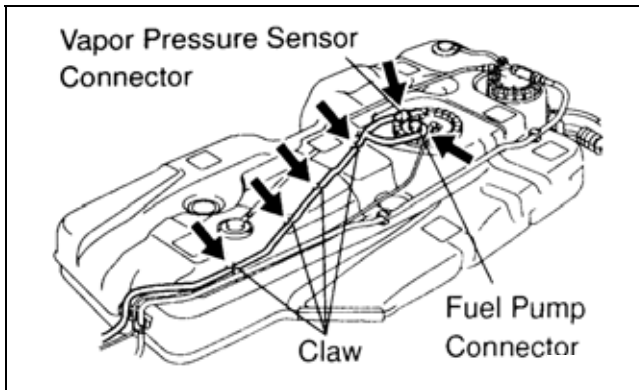
Prior to removal clean any dirt around the connector. Do not damage the "O-Rings" that seal the pipe and connector. Do not use any tools to release the tube. Do not bend or twist the nylon tube. Cover the connector in a plastic bag to prevent contamination. If the pipe and connector are stuck, carefully push and pull the connector to release and gently pull the connector out.



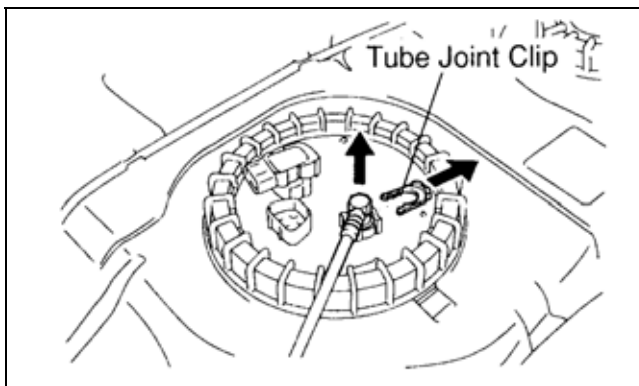
- (e) Remove the 2 wire harness clamps.



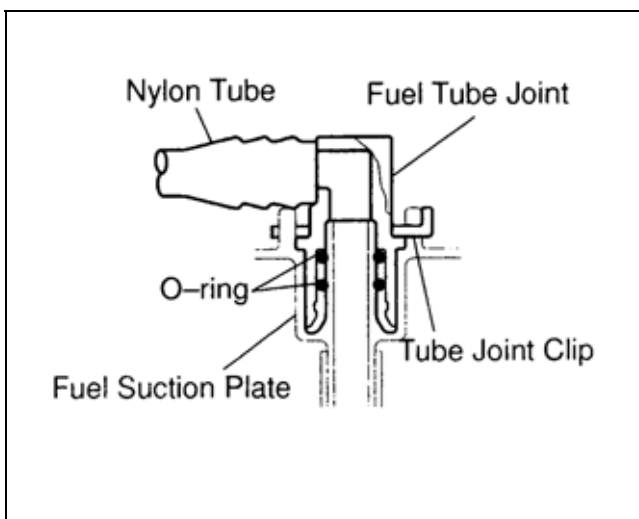
- (f) Support the fuel tank for removal.
- (g) Remove the 6 clips that hold the fuel tank straps to the fuel tank.
- (h) Remove fuel tank protector No. 1 (2WD only)
- (i) Remove the 6 bolts and the 3 fuel tank straps.



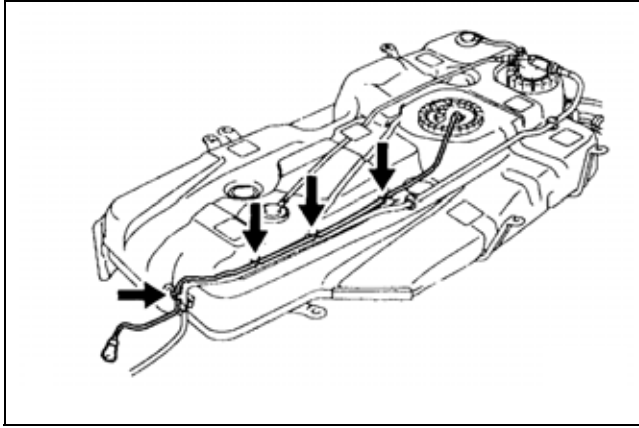
- (j) Carefully lower the fuel tank enough to disconnect the following:
 - The 4 wire harness claws.
 - The fuel pump connector.
 - The vapor pressure sensor.



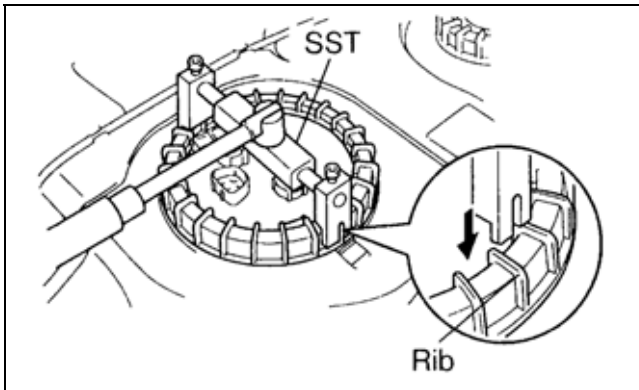
- (k) Remove the tube joint clip
- (l) Remove the main fuel tube.



NOTE:
 Prior to removal, clean any dirt around the connector. Do not damage the “O-Rings” that seal the pipe and connector. Do not use any tools to release the tube. Do not bend or twist the nylon tube. Cover the connector in a plastic bag to prevent contamination. If the pipe and connector are stuck, carefully push and pull the connector to release and gently pull the connector out.



- (m) Unfasten the 4 claws and remove the fuel tank main tube from the fuel tank.



11. REMOVE THE FUEL PUMP ASSEMBLY

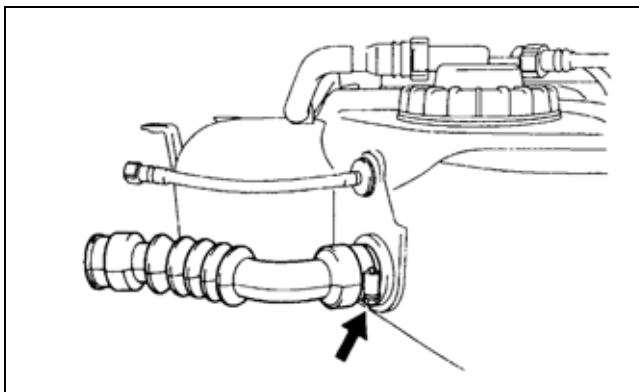
- (a) Using SST loosen and remove the fuel pump retainer ring.

SST: 09808-14020

NOTE:

The ribs of the fuel pump retainer ring engage into the SST.

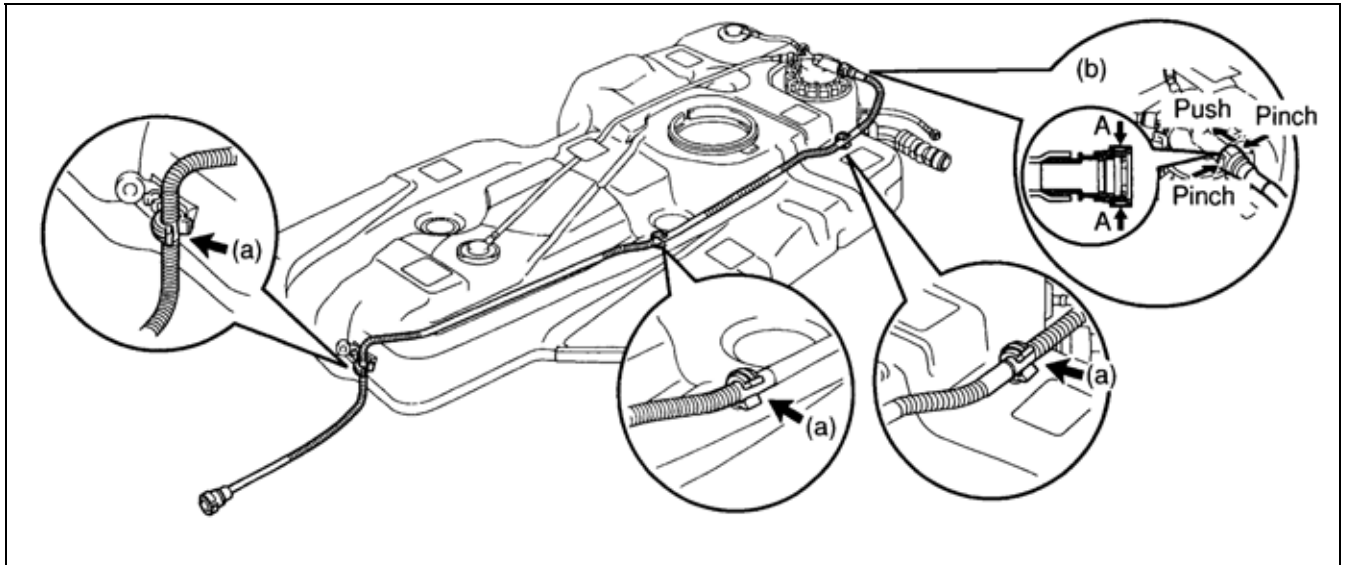
- (b) Remove the fuel suction tube with the pump and gage from the tank.



- (c) Remove the hose clamp for the filler hose.

12. REMOVE FUEL TANK VENT HOSE

- (a) Remove the fuel tank vent hose from the 3 retainer clips.
- (b) Disconnect the fuel tank vent hose from the overflow check valve.
 1. Push the connector in to release the locking tab.
 2. Pinch portion A.
 3. Pull out the connector.

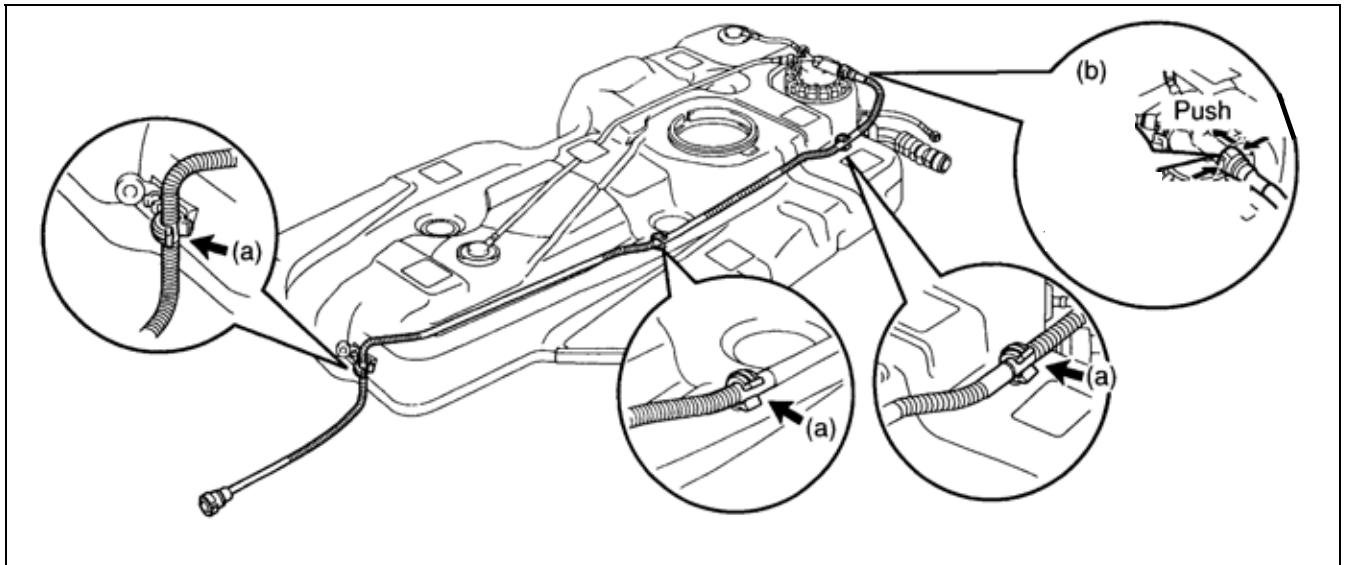


Note:
Dispose of fuel tank in accordance with local and state regulations.

B. NEW FUEL TANK INSTALLATION

1. REINSTALL THE VENT HOSE

- (a) Reinstall the vent hose into the 3 clips.
- (b) Reconnect the vent hose onto the vent assembly to the overflow check valve.

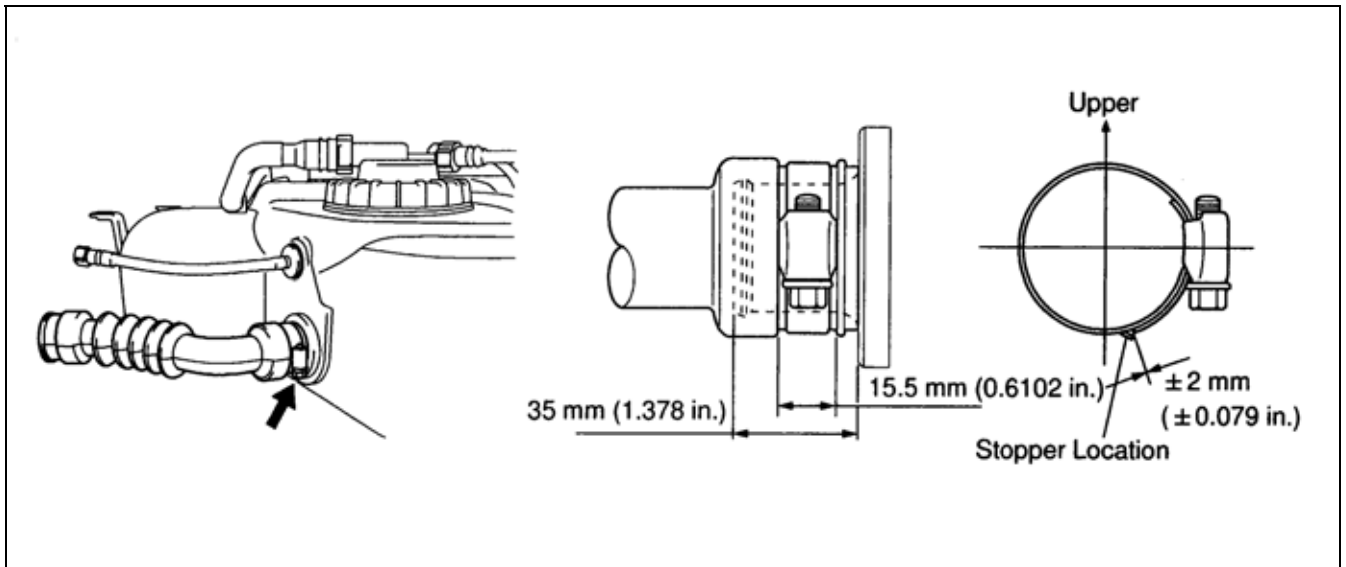


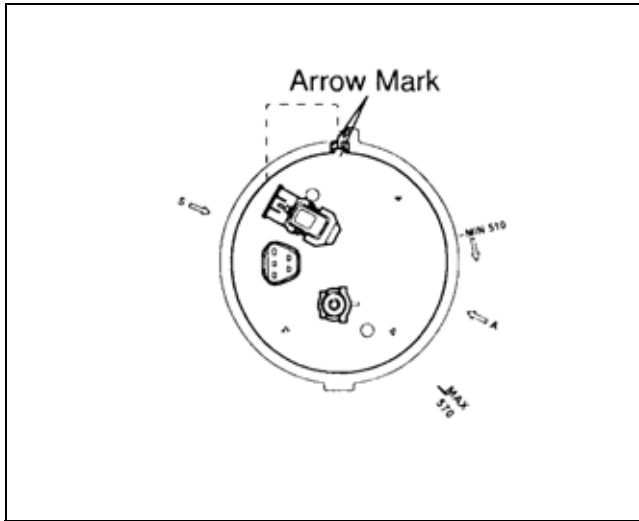
2. INSTALL THE NEW FUEL FILLER HOSE

- (a) Install the new fuel filler hose onto the new fuel tank as shown.

NOTE:

The fuel filler hose is not reusable. A new hose must be installed.



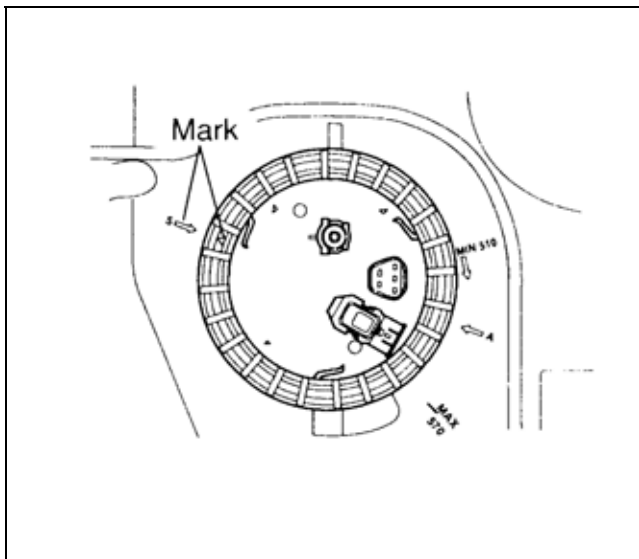


3. REINSTALL THE FUEL PUMP ASSEMBLY

- (a) Check that the gasket groove is clean.
- (b) Install the new gasket onto the fuel tank.
- (c) Ensure that the gasket is properly seated in the groove.
- (d) Reinstall the fuel pump assembly.
- (e) Align the arrow marks on the suction gage tube and the tank.

NOTE:

Do not bend the fuel level sender arm.

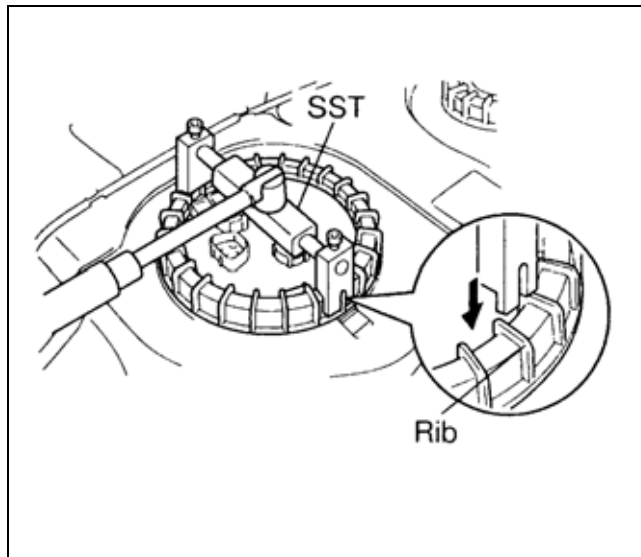


- (f) Position the new fuel pump gage retainer ring on the top of the suction gage tube while pushing down the flange in the center.
- (g) While holding the suction gage tube, tighten the fuel pump gage retaining ring one complete turn by hand.

NOTE:

Ensure that the auto-rotation groove on the suction gage tube is engaged when installing the retaining ring. The "S" arrow on the tank equals 0 degrees.

- (h) Inspect the gap between the fuel pump retaining ring and the tank.
- (i) The gap should be even, if it is not, the retaining ring is cross threaded and step (g) needs to be repeated.



- (j) Using the SST tighten the fuel pump retaining ring.

SST: 09808-14020

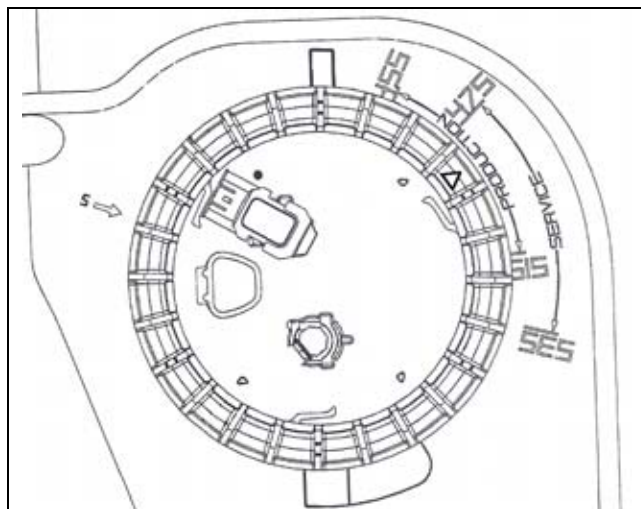
Torque:

80 to 90 N•m (819 to 918 kgf•cm, 59 to 67 ft•lbf)

NOTE:

The ribs of the fuel pump retainer ring engage into the SST. Do not lube the retaining ring threads.

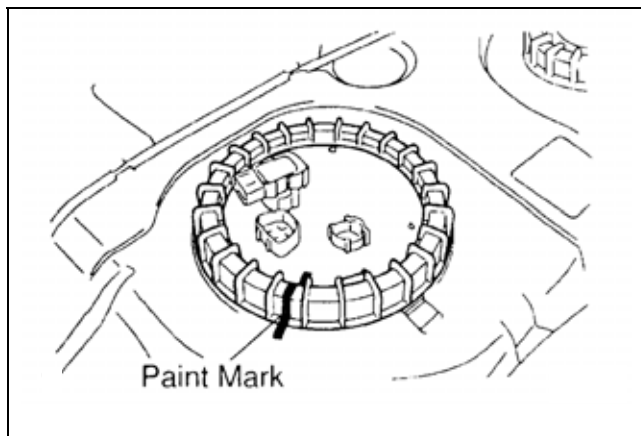
When tightening the retaining ring, do not ratchet the tool.



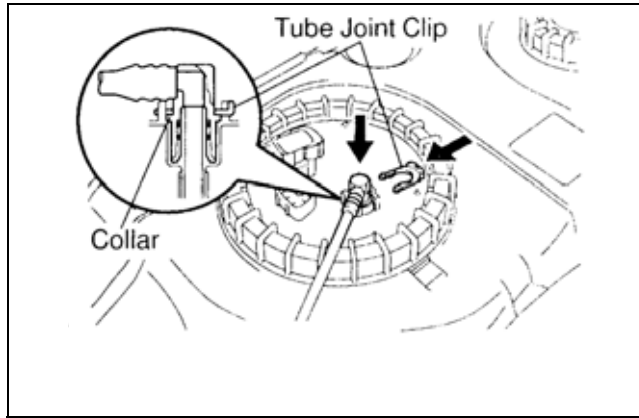
- (k) When correctly installed, the “triangle” on the retaining ring will be between the 475° and 535° from the start position.

NOTE:

If the “triangle” mark does not reach 475° check for cross threading of the retaining ring by checking the gap between the bottom of the ring and the tank.



- (l) Place a paint mark across the fuel pump retaining ring and the fuel tank.



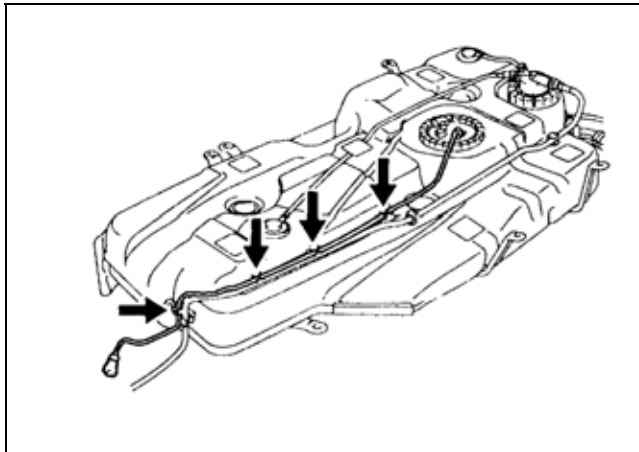
4. REINSTALL THE FUEL TANK MAIN TUBE

- (a) Reinstall the fuel main tube.
- (b) Reinstall the tube joint clip.

NOTE:

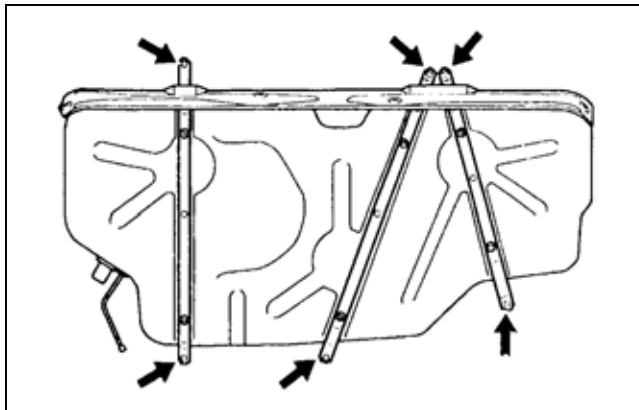
Check the following:

- That the both pieces are clean and not damaged.
- That the main tube is fully seated.
- Ensure that the clip is fully seated.



5. INSTALL THE NEW FUEL TANK ASSEMBLY

- (a) Support the fuel tank for installation.
- (b) Carefully guide the fuel tank to the vehicle.
- (c) Prior to fully lifting the fuel tank to the vehicle reconnect the following:
 - The 4 wire harness claws.
 - The fuel pump connector.
 - The vapor pressure sensor.

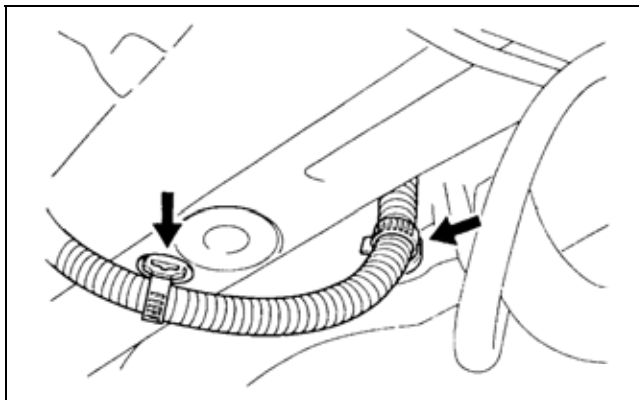


- (d) Reinstall the fuel tank straps and fuel tank strap clips.
- (e) Reinstall the 3 fuel tank straps using the 6 bolts.

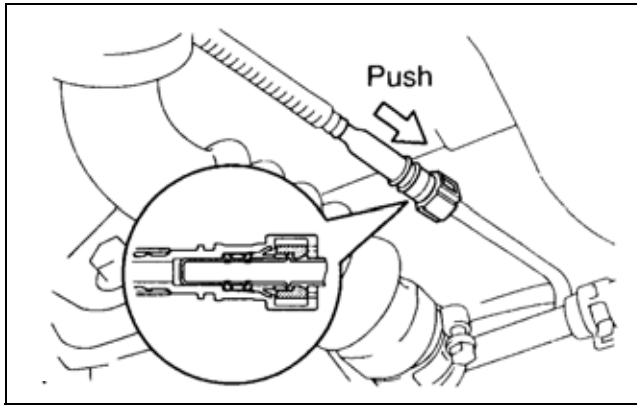
Torque:

33 N•m (336 kgf•cm, 24 ft•lbf)

- (f) Reinstall the fuel tank protector No.1 using the 4 nuts (2WD only).



- (g) Reinstall the 2 wire harness clamps.



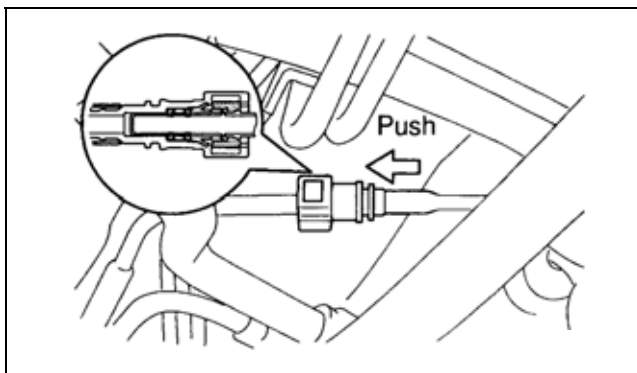
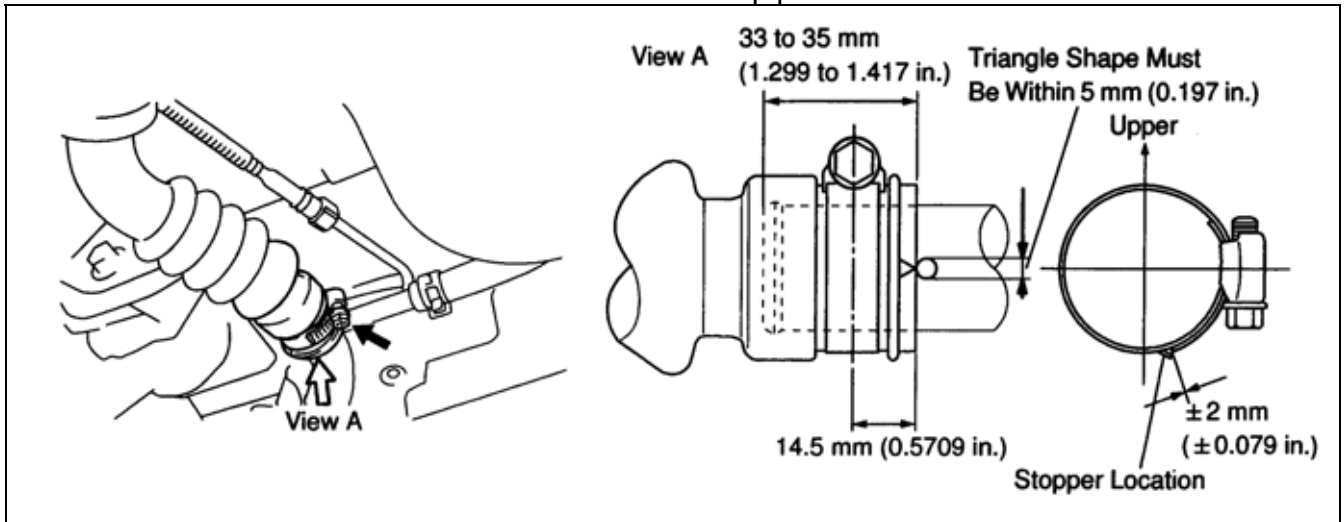
(h) Reconnect the fuel tube

1. Push the fuel tube connector to the pipe until a click sound is heard.
2. Carefully tug on the connector to ensure proper connection.

NOTE:

Check that the both pieces are clean and not damaged.

(i) Connect the fuel filler hose to the filler pipe as shown.

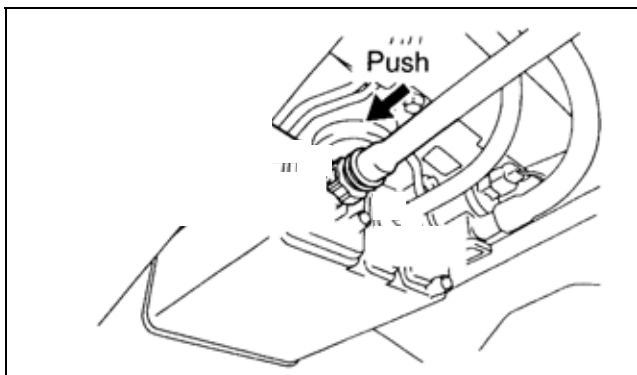


(j) Reconnect the main tube.

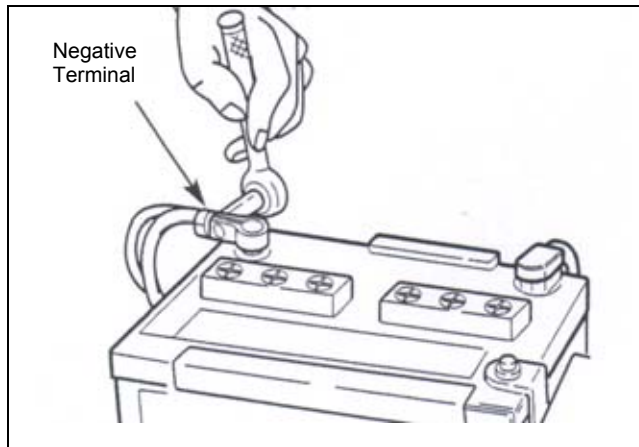
1. Push the fuel tube connector to the pipe until a click sound is heard.
2. Carefully tug on the connector to ensure proper connection.

NOTE:

Check that the both pieces are clean and not damaged.



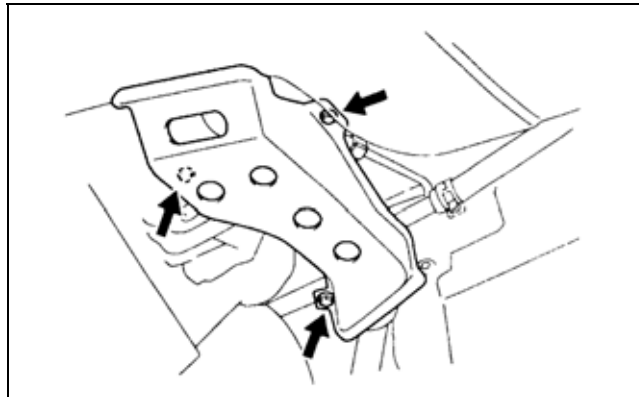
(k) Reconnect the fuel tank vent hose.



- (l) Fill the vehicle with approximately 2 gallons of fuel.
- (m) Reconnect the negative battery cable.
- (n) Connect the scantool to the DLC3 connector.
- (o) Turn the ignition switch to the "ON" position.

NOTE:
Do not start engine.

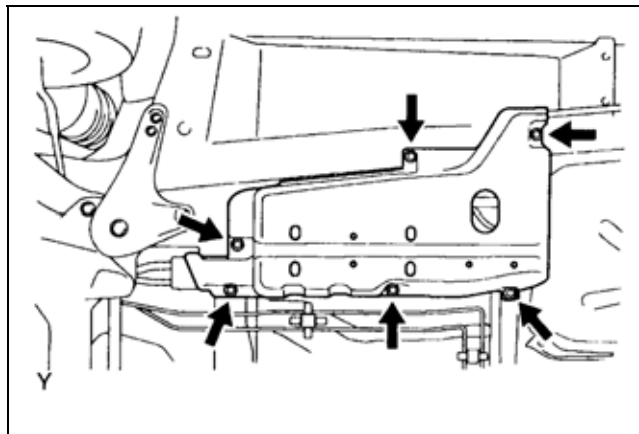
- (p) Select the "ACTIVE TEST" mode on the scantool.
- (q) Ensure that the fuel pump pressurizes the system.
- (r) Check for fuel leaks.
- (s) Disconnect the scan tool.



6. REINSTALL THE FUEL FILLER HOSE COVER

- (a) Reinstall the fuel filler hose cover using the 3 bolts.

Torque:
5.0 N•m (51 kgf•cm, 44 in•lbf)



7. REINSTALL THE CHARCOAL CANISTER PROTECTOR

- (a) Reinstall the charcoal canister protector using the 6 bolts.

Torque:
5.0 N•m (51 kgf•cm, 44 in•lbf)

- 8. FILL VEHICLE WITH FUEL**
- 9. WASH VEHICLE**

VI. SSC COMPLETION LABEL INSTALLATION

1. After completing the repair and before returning the vehicle to the owner, an SSC completion label that is enclosed in the owner's notification letter must be affixed to the left front door hinge post near the check strap.

2. The label is to be filled out as follows:

- Write in SSC 30K.
- Write in the date the repair was performed.
- Write in your dealer code.



The diagram shows a rectangular label form with a border. It is divided into three main sections. At the top left is a small box labeled 'SSC'. At the top right is a small box labeled 'Date'. Below these two boxes is a larger rectangular area labeled 'DEALER CODE NO.'. At the bottom right corner of the entire label, the part number '00410-01917' is printed.

3. Additional SSC completion labels, in sheets of 50 (P/N 00410-01917), may be ordered through the non-parts system on a 1450 order form or through the TDN system.