

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL JLF

FUEL DELIVERY PIPE

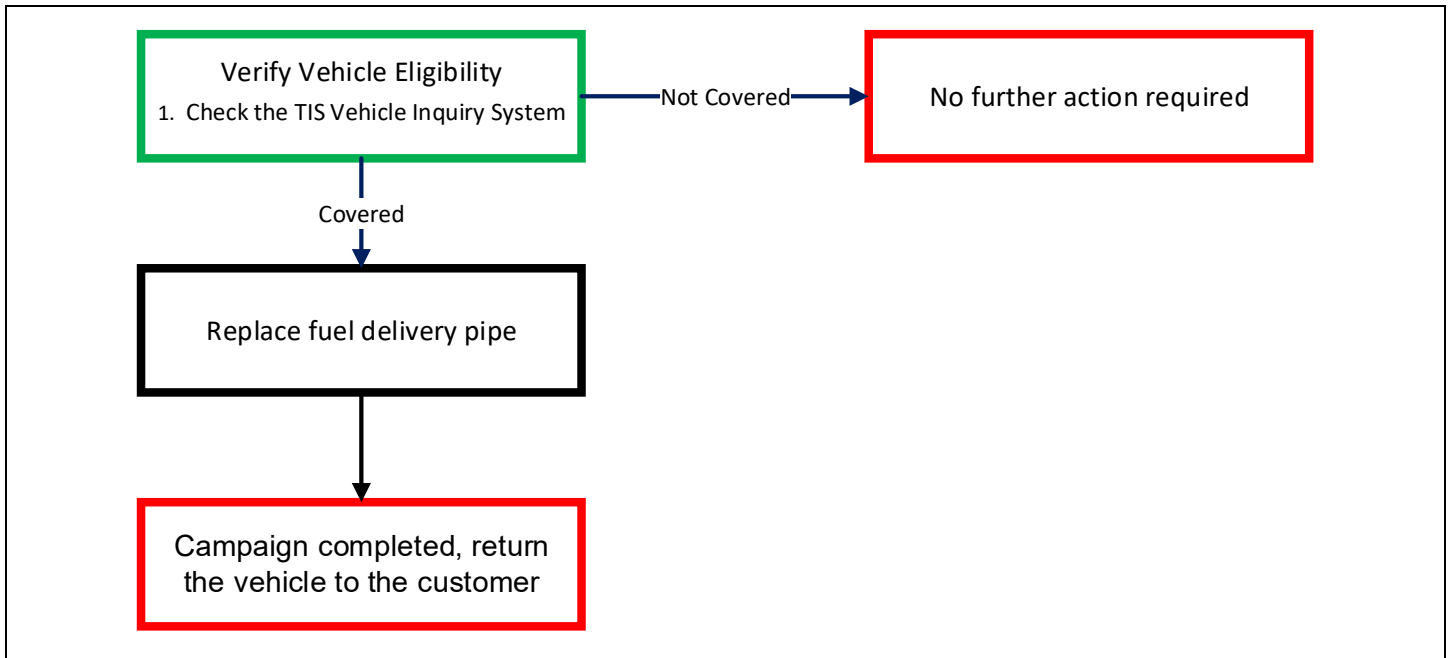
**CERTAIN 2007-2011 GS 350, GS 450h VEHICLES
CERTAIN 2006-2014 IS 350, IS 350C VEHICLES**

The repair quality of covered vehicles is extremely important to Lexus. All dealership technicians performing this recall are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certification levels:

- Certified
- Senior
- Master

It is the dealership's responsibility to select technicians with the above certification level or greater to perform this recall repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that it has not already been completed prior to dealer shipment or by another dealer.
- TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
04007-55131	Repair Kit, Fuel Delivery Pipe*	1

*The kit above includes the following parts:

Part Description	Quantity
Pipe Sub-Assy, Fuel Delivery	1
Ring,O	6
Ring,O	6
Gasket, Throttle Body	1
Gasket, Air Surge Tank to Manifold**	1

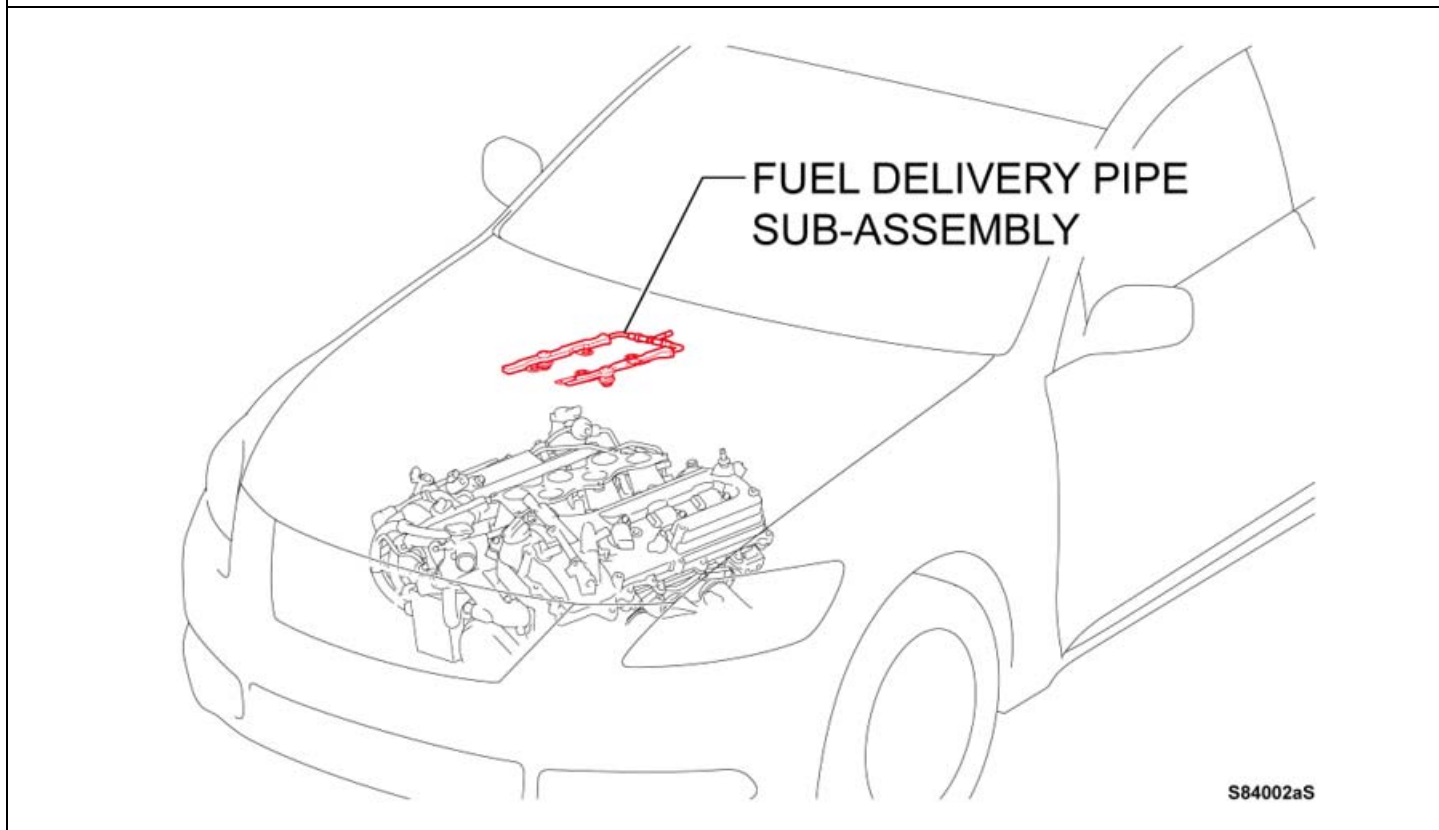
**The color of this gasket may be different than the original.

B. TOOLS & EQUIPMENT

- Techstream
- Standard Hand Tools
- Torque Wrench
- 5mm Hexagon Socket

IV. BACKGROUND

The involved vehicles are equipped with a certain 3.5-liter V6 gasoline engine. The diaphragm material in the fuel pulsation dampers in this engine may harden over time and crack, causing fuel to leak. A fuel leak in the presence of an ignition source can increase the risk of a vehicle fire.



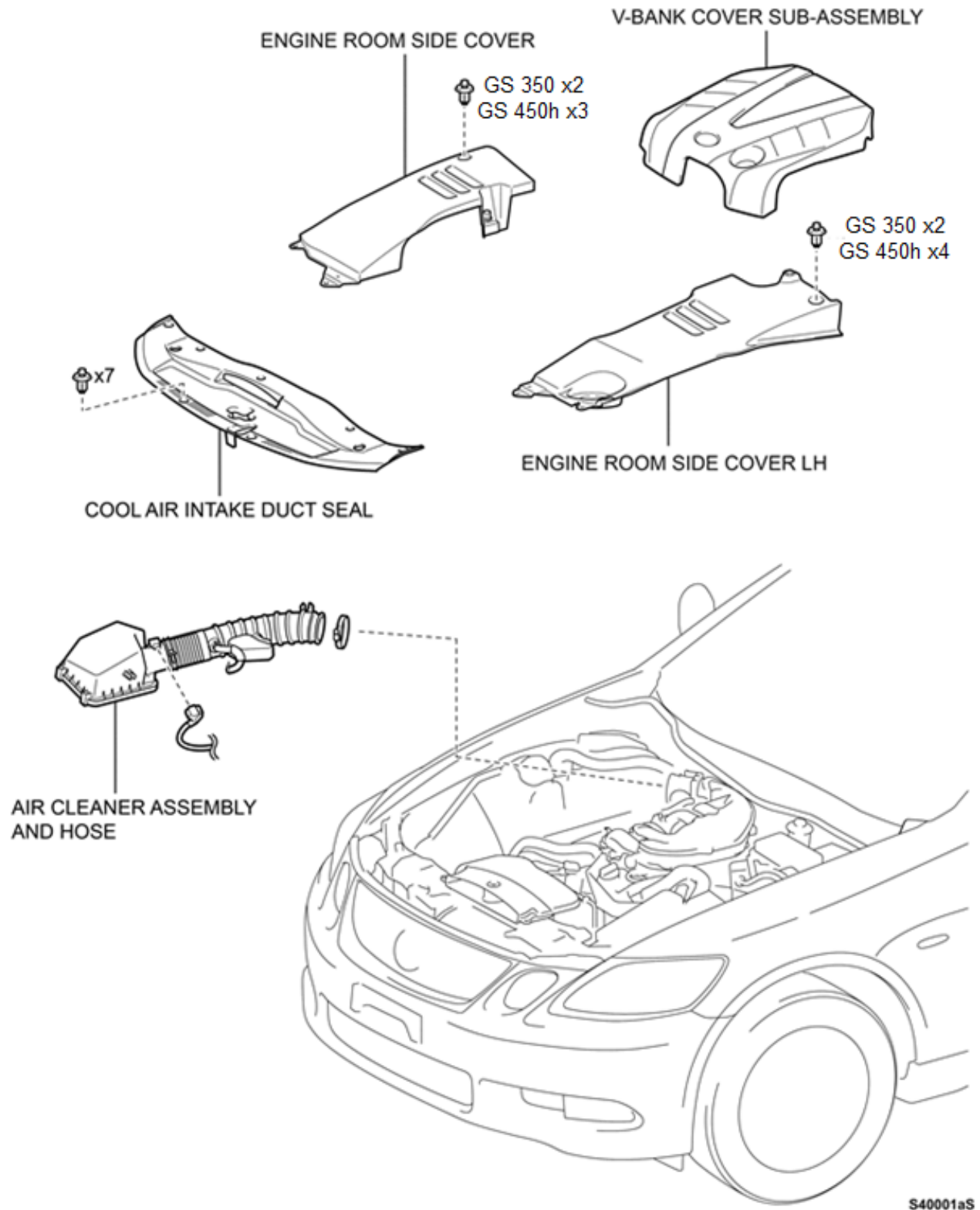
V. SAFETY PRECAUTIONS

CAUTION:

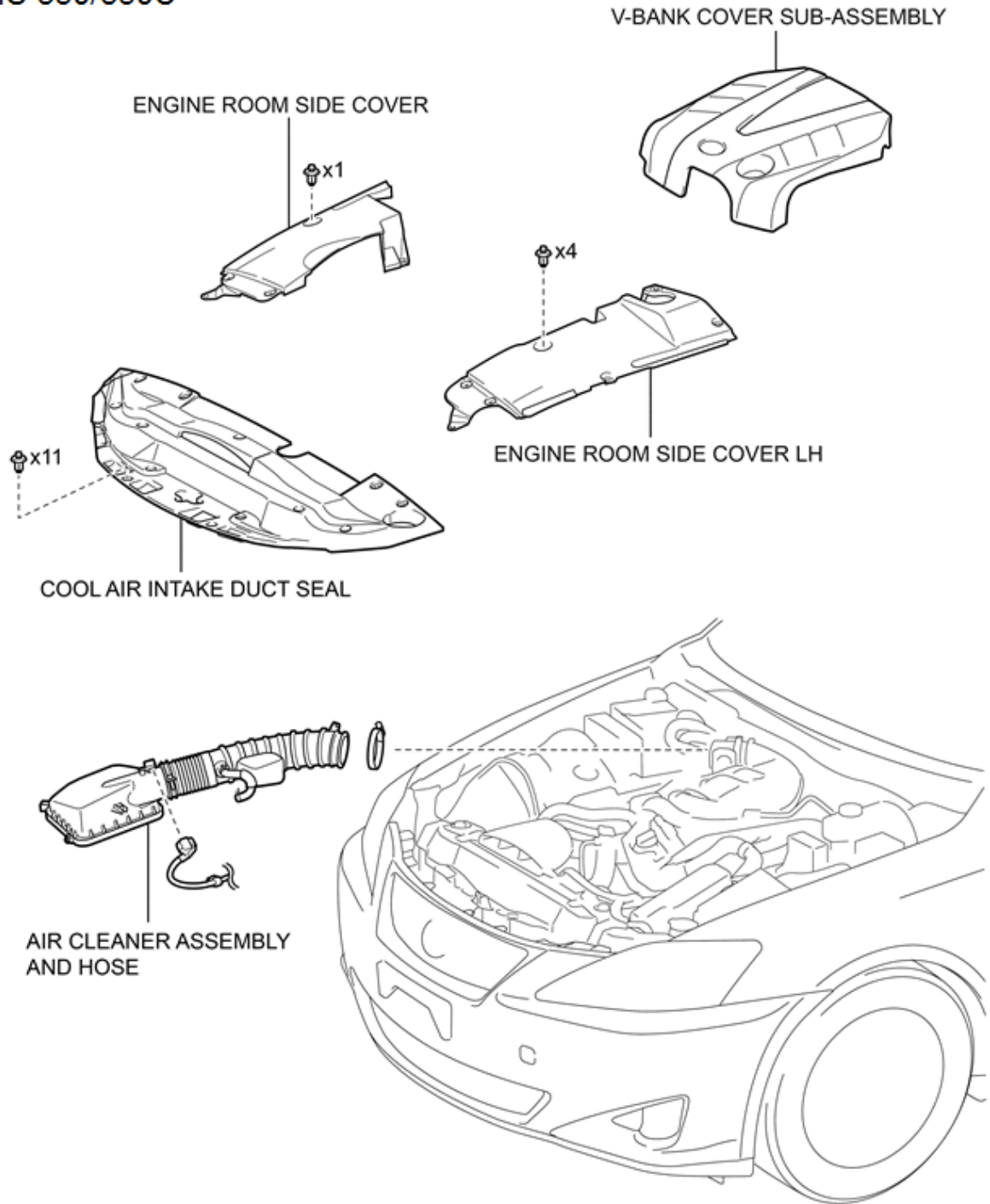
- Do not disconnect any part of the fuel system until you have discharged the fuel system pressure.
- Even after discharging the fuel pressure, place a piece of cloth or equivalent over fittings as you separate them to reduce the risk of fuel spray on yourself or in the engine compartment.
- Do not smoke or be near an open flame when working on the fuel system.

VI. COMPONENTS

GS 350/450h

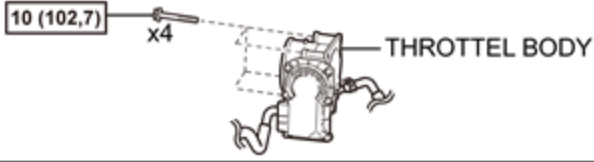


IS 350/350C

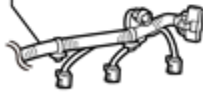


S40015aS

DO NOT disconnect the 2 water by-pass hoses



WIRE HARNESS



● THROTTLE BODY GASKET

10 (102,7)

UNION TO CHECK VALVE HOSE

No.2 FUEL VAPOR FEED HOSE

18 (184,13) x6

16 (163,12) x2

21 (214,15)

WIRE HARNESS

INTAKE AIR SURGE TANK ASSEMBLY



● AIR SURGE TANK TO INTAKE MANIFOLD GASKET

DO NOT remove the wire harness connectors from the fuel injectors



17 (173,13)

x4

● FUEL DELIVERY PIPE SUB-ASSEMBLY

FUEL TUBE SUB-ASSEMBLY

● O-RING x6

FUEL INJECTOR ASSEMBLY x6

x4

SPACER

● O-RING x6



● : Component to be replaced

[N*m (kgf*cm, ft.*lbf)] : Specified torque

S84004cS

VII. DISASSEMBLY



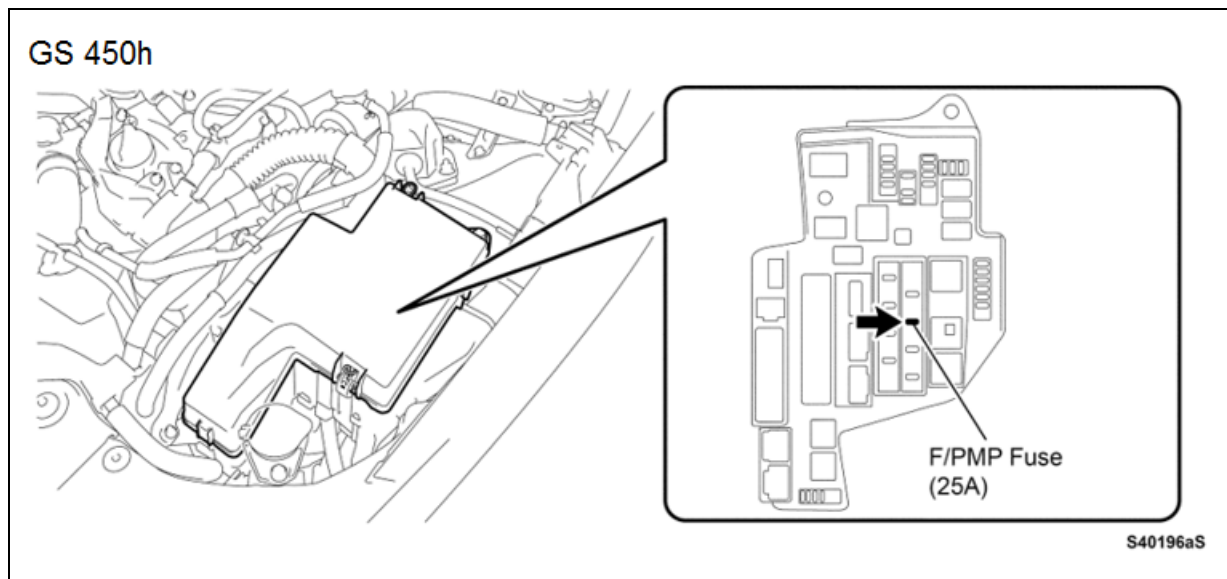
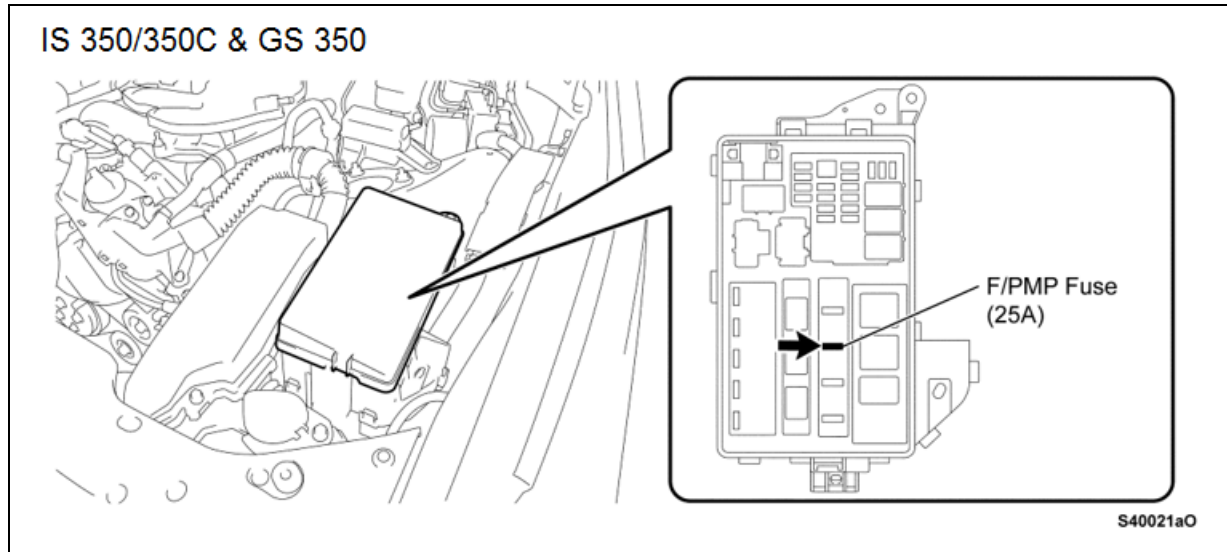
1. CHECK FOR DTC'S

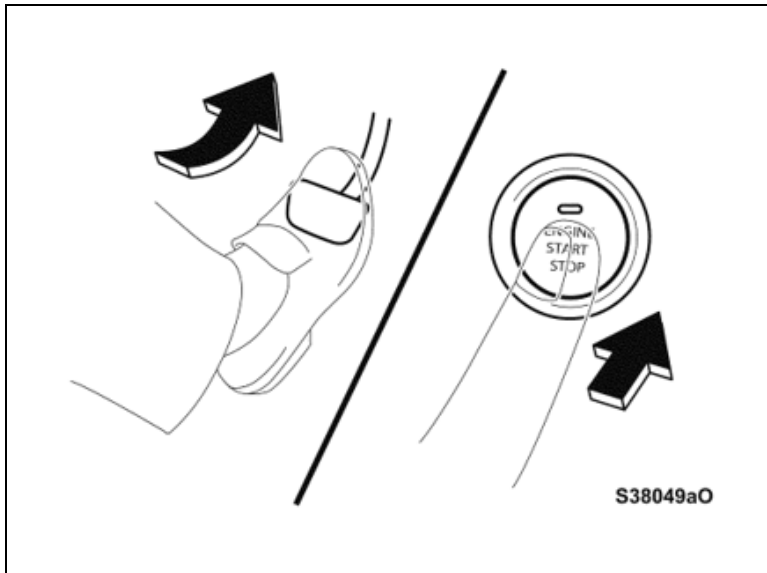
- a. Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.

Note: *This Service Campaign covers only the fuel delivery pipe, as detailed in these instructions. It does not cover the diagnosis or replacement of any other parts on the vehicle.*

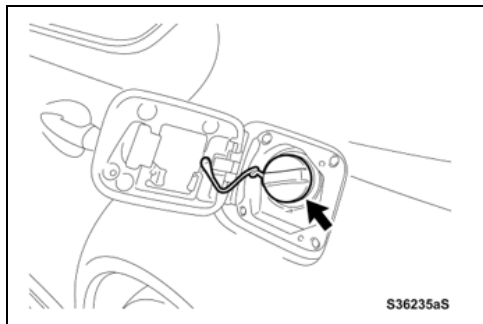
2. DISCHARGE FUEL PRESSURE

- a. Remove Engine Room side covers.
- b. Remove the relay block cover.
- c. Remove the F/PMP fuse (25A).





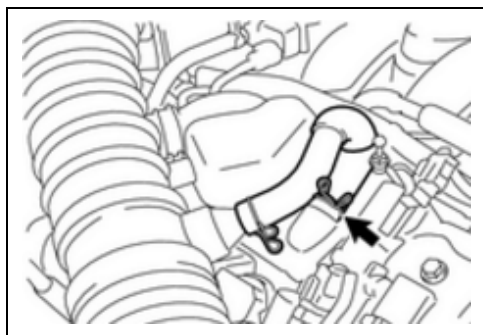
- d. Start the engine (IS 350, GS 350)
GS 450h: READY on and then press and hold the accelerator pedal. This should keep the engine running to discharge the fuel pressure.
- e. Allow the engine to run until it stalls (should take less than 15 seconds).
Note: The engine may not stall, but will run rough. This process will bleed most of the pressure from the low and high-pressure fuel lines. Running the engine longer than 15 seconds will not provide any more reduction of the fuel pressure in the lines.



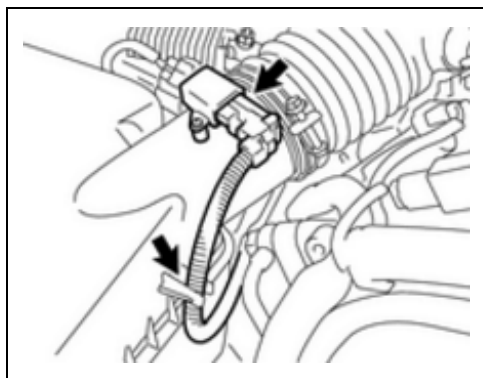
- f. Remove the fuel tank filler cap.

STOP To prevent fuel leakage caused by pressure rise inside the fuel tank, **DO NOT** reinstall the cap until instructed.

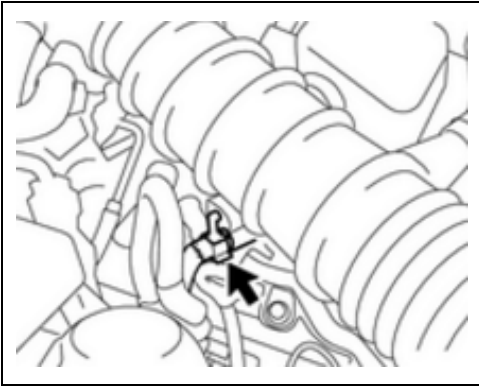
- 3. DISCONNECT THE NEGATIVE BATTERY CABLE.
- 4. REINSTALL THE F/PMP (25A) FUSE AND RELAY BLOCK COVER.
- 5. REMOVE V-BANK COVER.



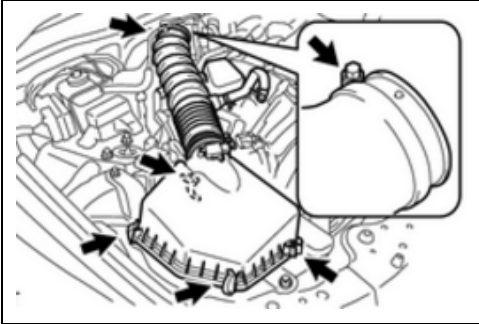
- 6. REMOVE AIR CLEANER CAP WITH HOSE
 - a. Disconnect the ventilation hose from the cylinder head.



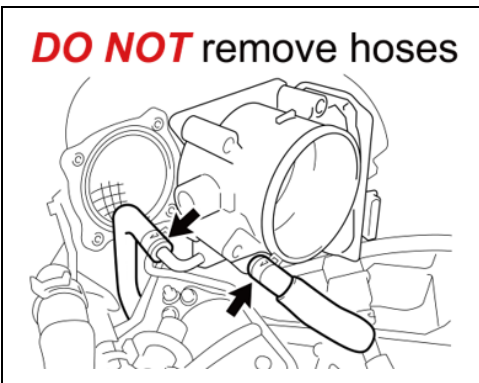
- b. Disconnect the MAF sensor connector and harness from the holder.



- c. Disconnect the ventilation hose from the air cleaner hose clamp.



- d. Disengage the 4 clamps, loosen the hose clamp, and remove the air cleaner cap and hose.



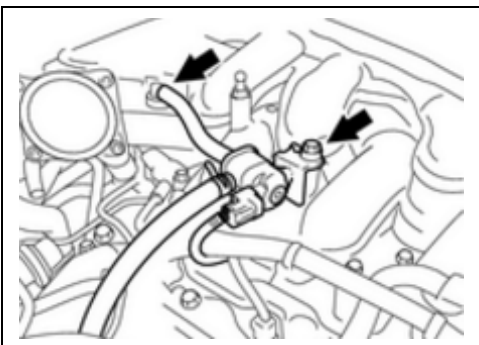
DO NOT remove hoses

7. REMOVE THROTTLE BODY

- a. Unplug the connector.
- b. Remove the 4 bolts.
- c. Reposition the throttle body to be able to clear the intake air surge tank.



- **DO NOT** remove either of the water by-pass hoses from the throttle body.

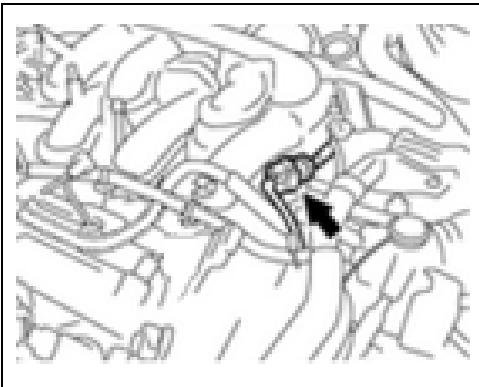


8. REMOVE INTAKE AIR SURGE TANK

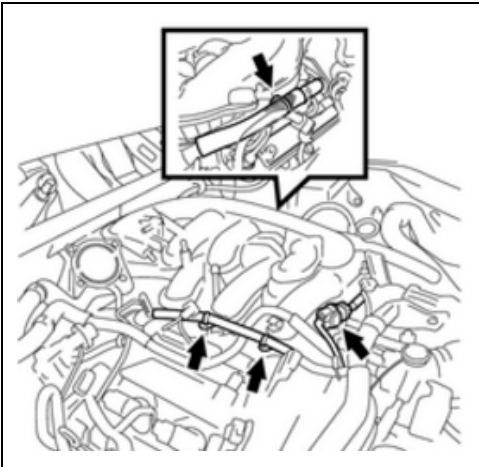
- a. Disconnect the vacuum hose.
- b. Remove the bolt from the No. 1 VSV.



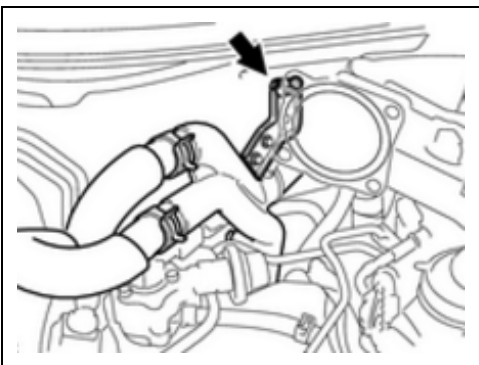
- c. Disconnect the ventilation hose, check valve union, and water by-pass hose.



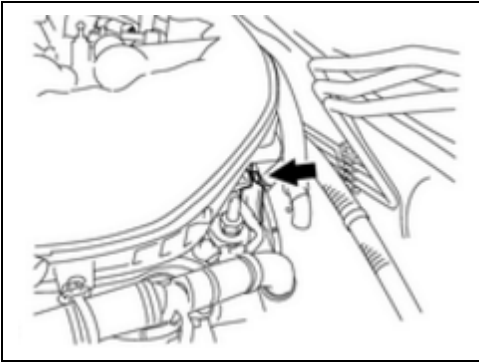
- d. Unplug the electrical connector for the LH fuel injectors at the front of the intake air surge tank.



- e. Remove the 4 wire harness clamps from the intake air surge tank.



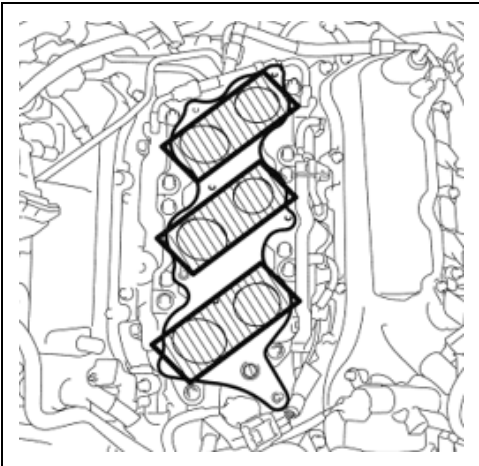
- f. Remove the bolt from the RH surge tank support brace.



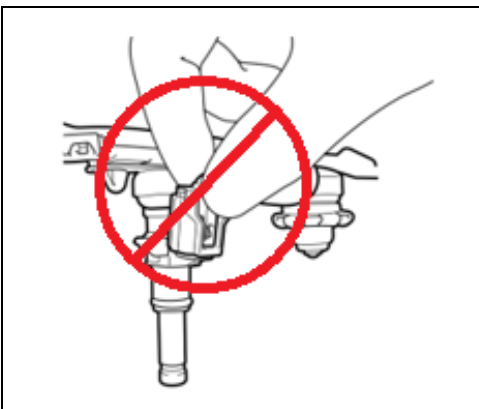
g. Remove the bolt from the LH surge tank stay.



- h. Remove the 6 bolts and 2 nuts.
- i. Remove the intake air surge tank.



j. Cover the air intake openings to prevent foreign objects from falling into the intake manifold.

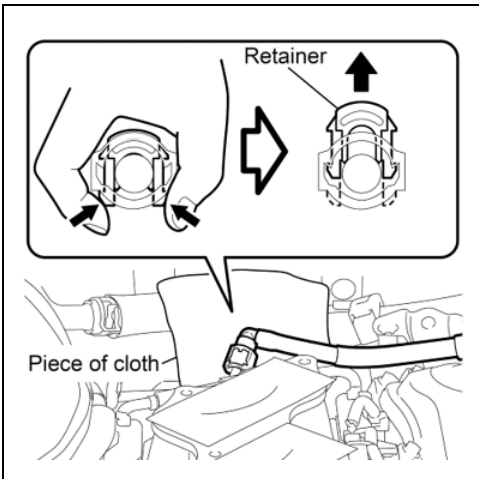


9. REMOVE FUEL DELIVERY PIPE WITH FUEL INJECTORS



DO NOT remove the fuel injector connectors as they may break due to age deterioration.

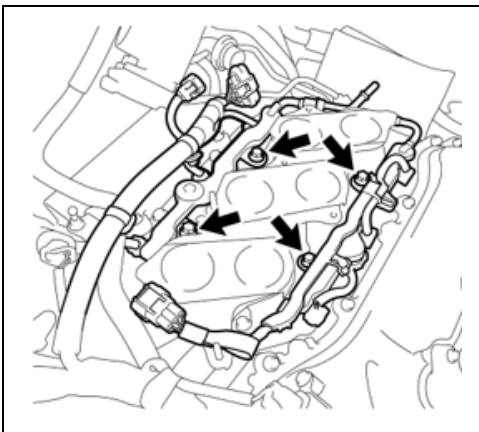
Note: In this procedure, the fuel delivery pipe will be replaced without disconnecting the electrical connector from any of the fuel injectors.



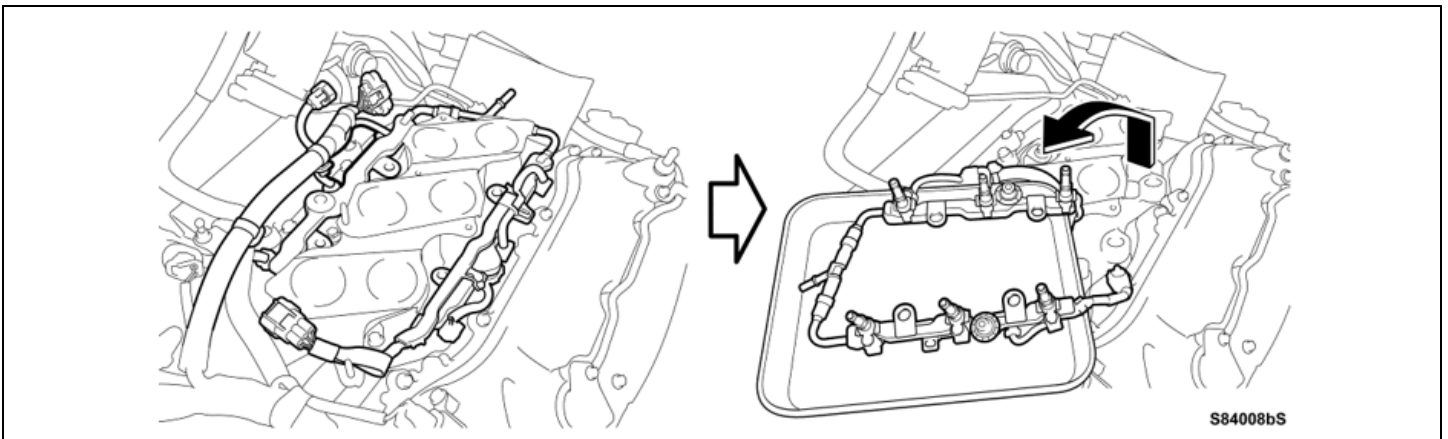
- Place a cloth under the fuel tube connection to catch any excess fuel.
- Push the claws of the retainer inward, then pull the retainer upward.
- Pull outward to remove the remove tube.



- Be extremely careful not to damage or allow any foreign objects to adhere to the O-rings as the O-rings are used for sealing between the fuel tube connector and the pipe.**

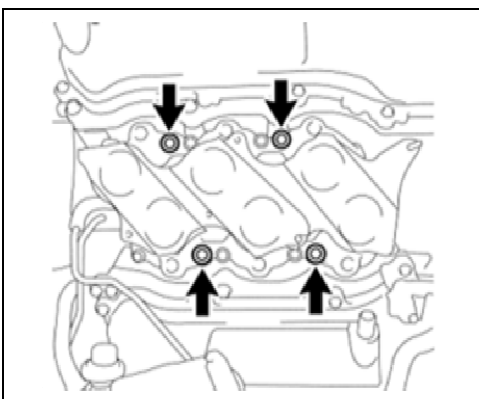


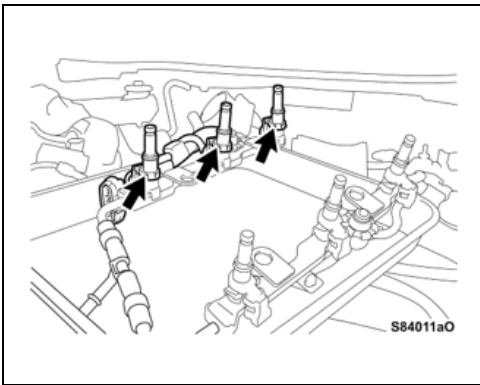
- Remove the 4 bolts from the fuel delivery pipe.
- Pull upward on the fuel delivery pipe to remove it from the lower intake manifold. Be sure that the fuel injectors are removed from the lower intake manifold and stay attached to the fuel delivery pipe.
- With the RH fuel injectors still attached to the main engine harness, rotate the fuel delivery pipe assembly upside down.



- Remove the 4 spacers from the intake manifold.

Note: Be careful to not drop the spacers.



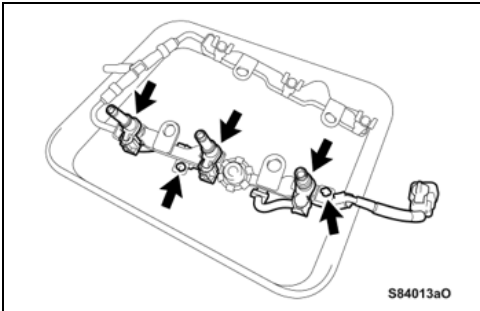


10. REMOVE FUEL INJECTORS AND O-RINGS

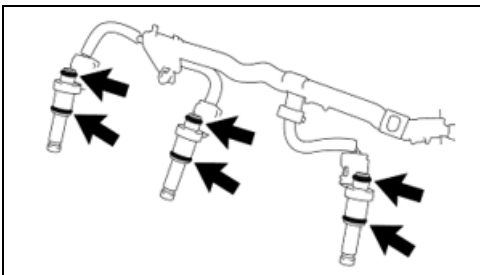
- a. Disengage the wire harness clamps of the RH fuel delivery pipe.
- b. Remove the 3 fuel injectors from the RH fuel delivery pipe without removing the electrical connections.



DO NOT unplug the connectors from the fuel injectors as damage may result from age deterioration.

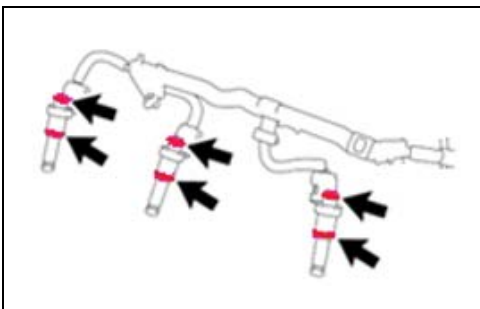


- c. Disengage the LH wire harness clamps at the 2 locations.
- d. Remove the 3 fuel injectors from the LH fuel delivery pipe without removing the electrical connectors.
- e. Discard the original fuel delivery pipe.



- f. Remove the 2 O-rings from each of the 6 fuel injectors. Discard these 12 O-Rings.

VIII. ASSEMBLE **NEW** FUEL DELIVERY PIPE

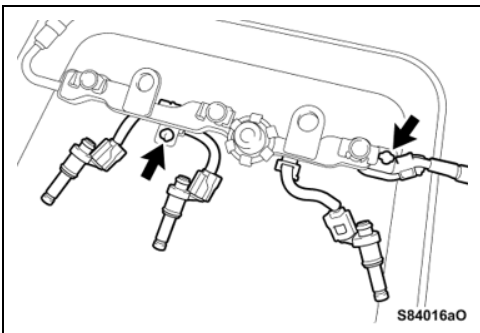


1. INSTALL **NEW** O-RINGS ONTO FUEL INJECTORS

- a. Coat the 12 **NEW** O-Rings with gasoline, and install them onto the 6 fuel injectors.



Check that there is no damage or foreign material in the grooves of the injectors when installing the O-rings.



2. ENGAGE WIRE HARNESS CLAMPS

- a. Engage the 2 wire harness clamps into each of the **NEW** fuel delivery pipes.



3. INSTALL FUEL INJECTORS INTO **NEW** FUEL DELIVERY PIPES

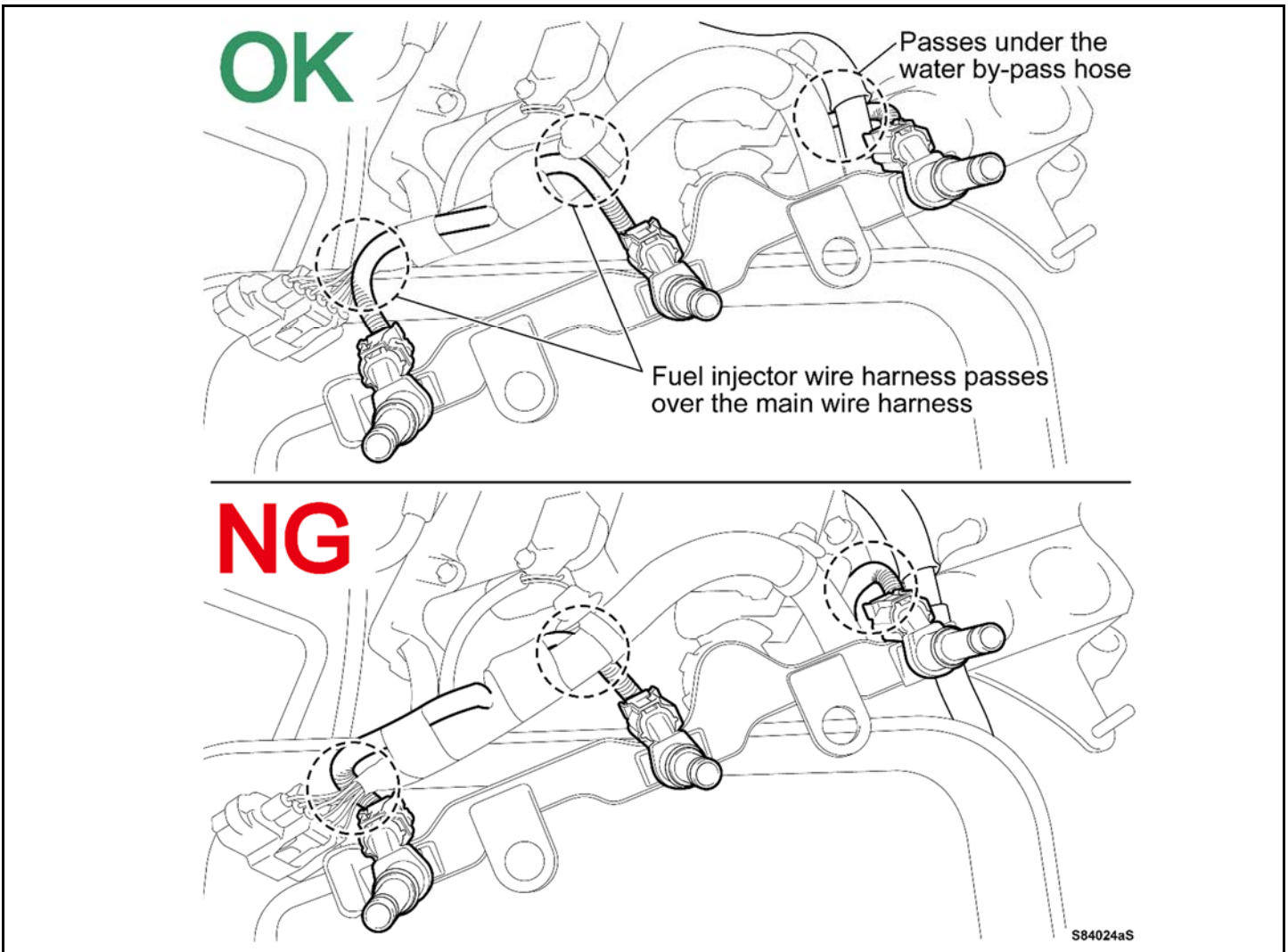
- a. Install the 6 injectors into the **NEW** fuel delivery pipes, ensuring that each injector fits properly into the groove of the stopper.



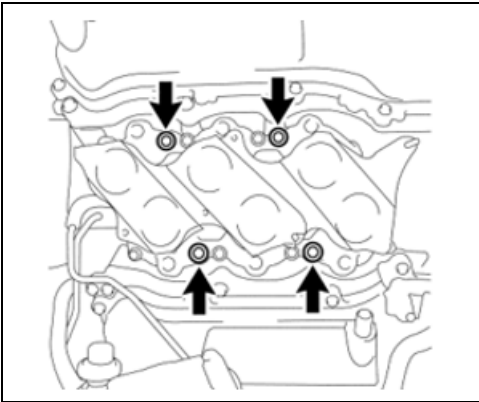
- If the fuel injector does not rotate smoothly, the O-ring may be pinched. Remove the injector and install a **NEW** O-ring.
- Check that each fuel injector fits with the groove of the stopper.



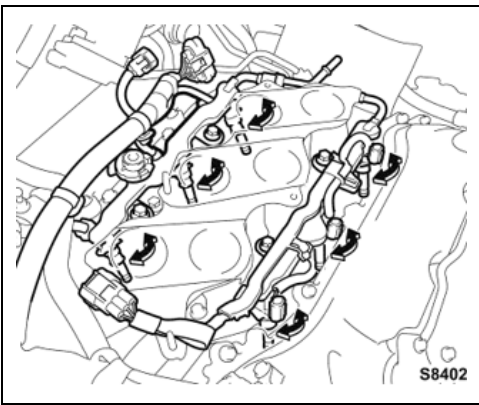
If the wire harness of the fuel injector is routed incorrectly, the wire harness will be pulled tight. As a result, the fuel delivery pipe may not be connected to the intake manifold properly.



IX. REINSTALLATION



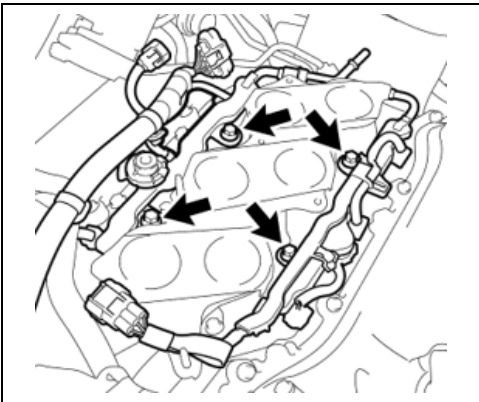
1. **INSTALL INTAKE MANIFOLD SPACERS**
 - a. Install the 4 spacers onto the intake manifold.



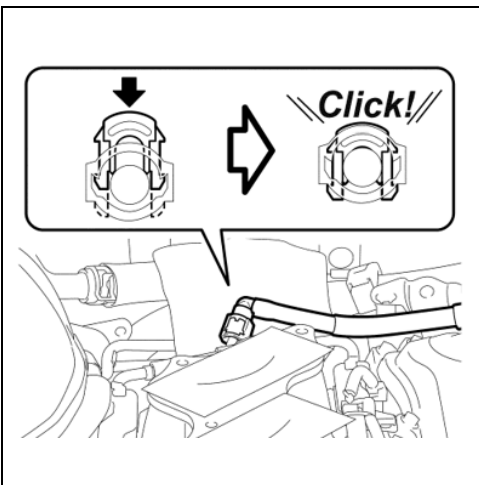
2. **INSTALL *NEW* FUEL DELIVERY PIPE**
 - a. Guide the *NEW* fuel delivery pipe into place on the lower intake manifold and insert the 6 fuel injectors into the intake manifold and seat the *NEW* fuel delivery pipe onto the spacers.



If the fuel injector does not rotate smoothly, the O-ring may be pinched. Remove the injector and install a *NEW* O-ring to the injector.



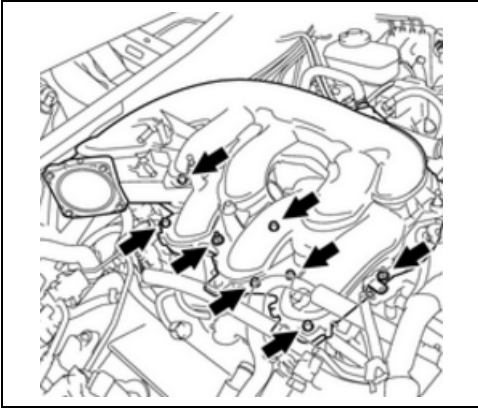
- b. Install the 4 mounting bolts
Torque: 156 in.lbs {17 N·m, 173 kgf·cm}



3. **CONNECT FUEL HOSE**
 - a. Check the fuel tube connector and pipe for any damage and foreign objects.
 - b. Reconnect the fuel tube by pushing it onto the fuel delivery pipe fitting until the hose completely seats.
 - c. Press down on the retainer clip until a click is heard.
 - d. After reconnecting, confirm that the tube and pipe are secured by pulling outward on the fuel pipe.



Be sure that the fuel tube connector is completely engaged onto the fuel delivery pipe before locking the retainer clip.

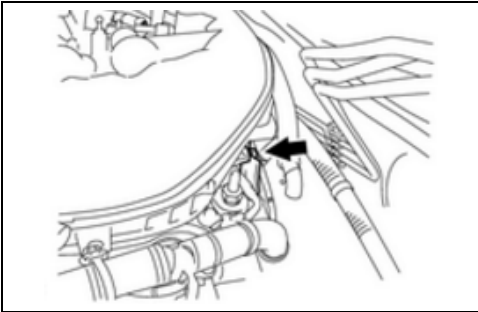


4. INSTALL INTAKE AIR SURGE TANK

- a. Remove the tape from the intake manifold.
- b. Install a **NEW** intake air surge tank gasket
- c. Install the intake air surge tank.
- d. Install the 6 bolts and 2 nuts.

Torque Nuts: 144 in.lbs {16 N·m, 163 kgf·cm}
Torque Bolts: 156 in.lbs {18 N·m, 184 kgf·cm}

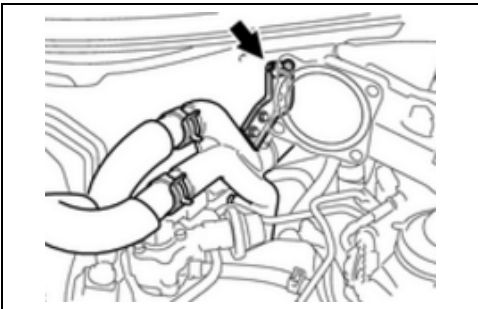
Note: DO NOT apply any oil to the bolts.



- e. Install the LH surge tank stay bolt.

Torque: 180 in.lbs {21 N·m, 214 kgf·cm}

Note: DO NOT apply any oil to the bolt.



- f. Install the RH surge tank stay bolt.

Torque: 84 in.lbs {10 N·m, 102 kgf·cm}

Note: DO NOT apply any oil to the bolt.



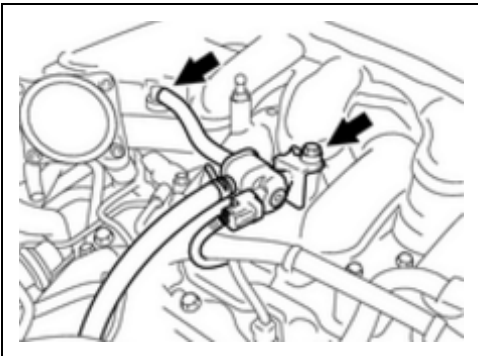
- g. Connect the main electrical connector for the fuel injectors at the front of the intake air surge tank.



- h. Engage the 4 wire harness clamps onto the intake air surge tank.

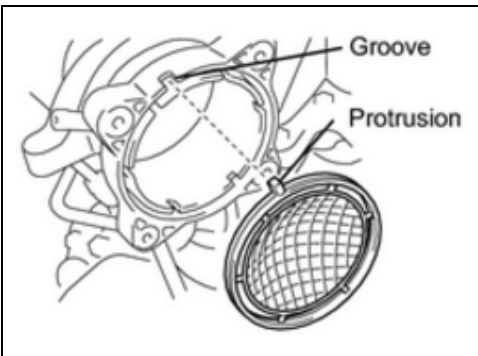


- i. Connect the ventilation hose, check valve hose union, and water bypass hose.



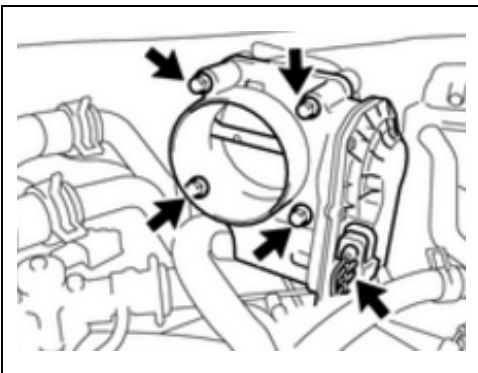
- j. Install the No. 1 vacuum switching valve and hose to the intake air surge tank.

Torque: 156 in.lbs {18 N·m, 184 kfg·cm}



5. INSTALL THROTTLE BODY

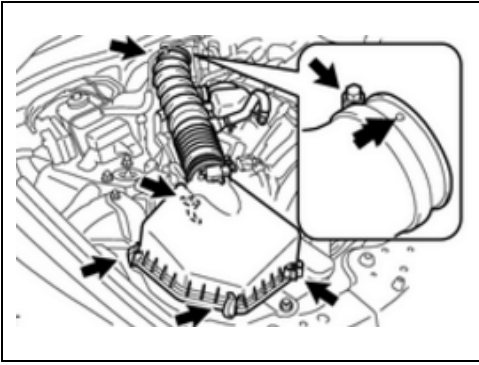
- a. Install **NEW** throttle body gasket, aligning the protrusion with the groove.



- b. Install the throttle body with 4 bolts.

- c. Connect the electrical connector.

Torque: 84 in.lbs {10 N·m, 102 kfg·cm}



- d. Install the air cleaner cap and hose with 4 clamps and the hose clamp.

Torque: 35 in.lbs {4.0 N·m, 41 kgf·cm}

- e. Connect the VSV hose.
f. Connect the MAF wiring.
g. Connect the ventilation hose to cylinder head.

6. CONNECT NEGATIVE BATTERY CABLE
7. REINSTALL THE V-BANK COVER
8. REINSTALL THE ENGINE ROOM SIDE COVERS AND TRIM
9. REINSTALL THE FUEL CAP



10. CLEAR DTC'S

- a. Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.

◀ VERIFY REPAIR QUALITY ▶

- With the engine running, check for fuel leaks.
- Perform a test drive to confirm proper vehicle operation.

If you have any questions regarding this update, please contact your Area representative.

10. APPENDIX

A. PARTS DISPOSAL

As required by Federal Regulations, please make sure all recalled parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, **unless requested for parts recovery return.**

B. CAMPAIGN DESIGNATION DECORDER

