TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL ELF

FUEL PRESSURE SENSOR GASKET

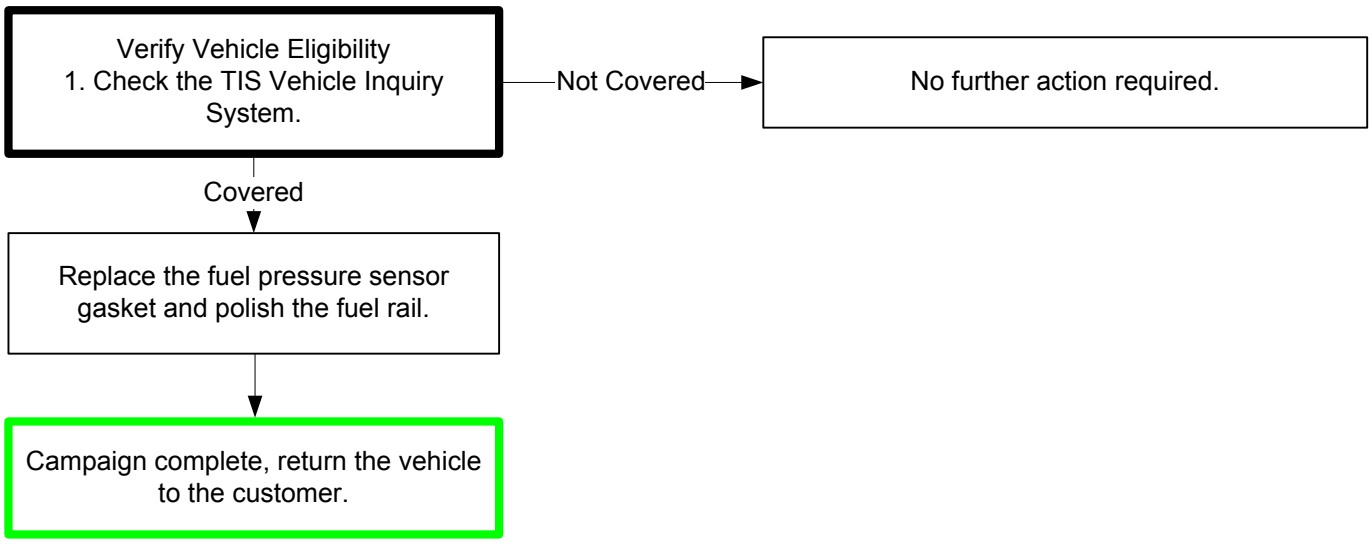
CERTAIN
2008 - 2011 MY IS-F (2UR-GSE Engine)

All dealership associates involved in the campaign process are required to successfully complete E-Learning course SC13A. 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 certifications levels:

- **Certified, Senior, or Master Technician**
- **Certified, Senior, or Master Diagnostic Technician**

ELF UR ENGINE FUEL PRESSURE SENSOR GASKET VIDEO OVERVIEW

I. OPERATION FLOWCHART



NOTE:

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

II. PREPARATION

A. PARTS

Model	Part Number	Part Description	Quantity
IS-F	04004-35238	Fuel Pressure Sensor Gasket Kit	1
		The kit contains the following parts	
	90430-12026	Fuel Pressure Sensor Gasket	1
	23279-74010	Pulsation Damper Gasket	4
	22271-38020	Throttle Body Gasket	1
	90301-06017	Injector O-Ring	8
	90301-11029	Injector O-Ring	8
	17177-38040	Intake Manifold to Cylinder Head Gasket	2
	09264-99020	Polishing Brush Pad	1

B. TOOLS

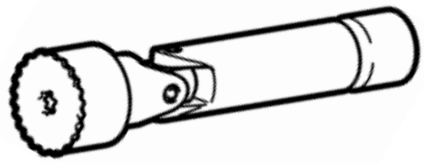
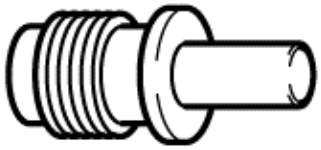
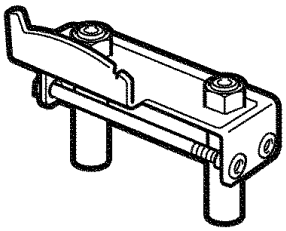
- Standard hand tools
- Torque wrench
- Techstream
- Air Ratchet
- Blow gun

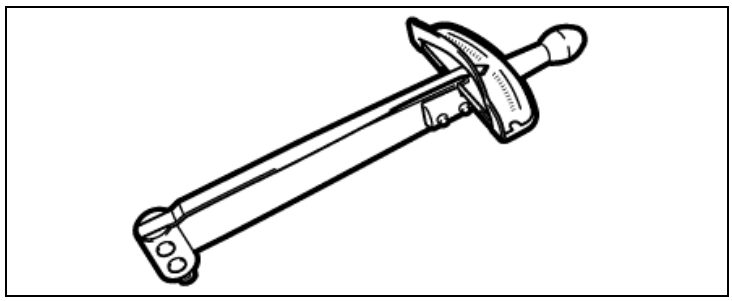
SST- These are essential special service tools that all dealerships should have.

Part Number	Part Name	Quantity
09617-24011*	Steering Rack Wrench	1

*The equivalent is a 22mm crows foot

The following special campaign tools where sent to the Dealership free of charge.

	Fuel Delivery Pipe Polishing Tool (with Spare Velcro)
	Polishing Guide Tool (with thread protector)
	Torque Angle Plate for UR Engines
	24 mm Open End Wrench
	Torque Wrench Adaptor



Torque Wrench

C. EQUIPMENT & MATERIALS

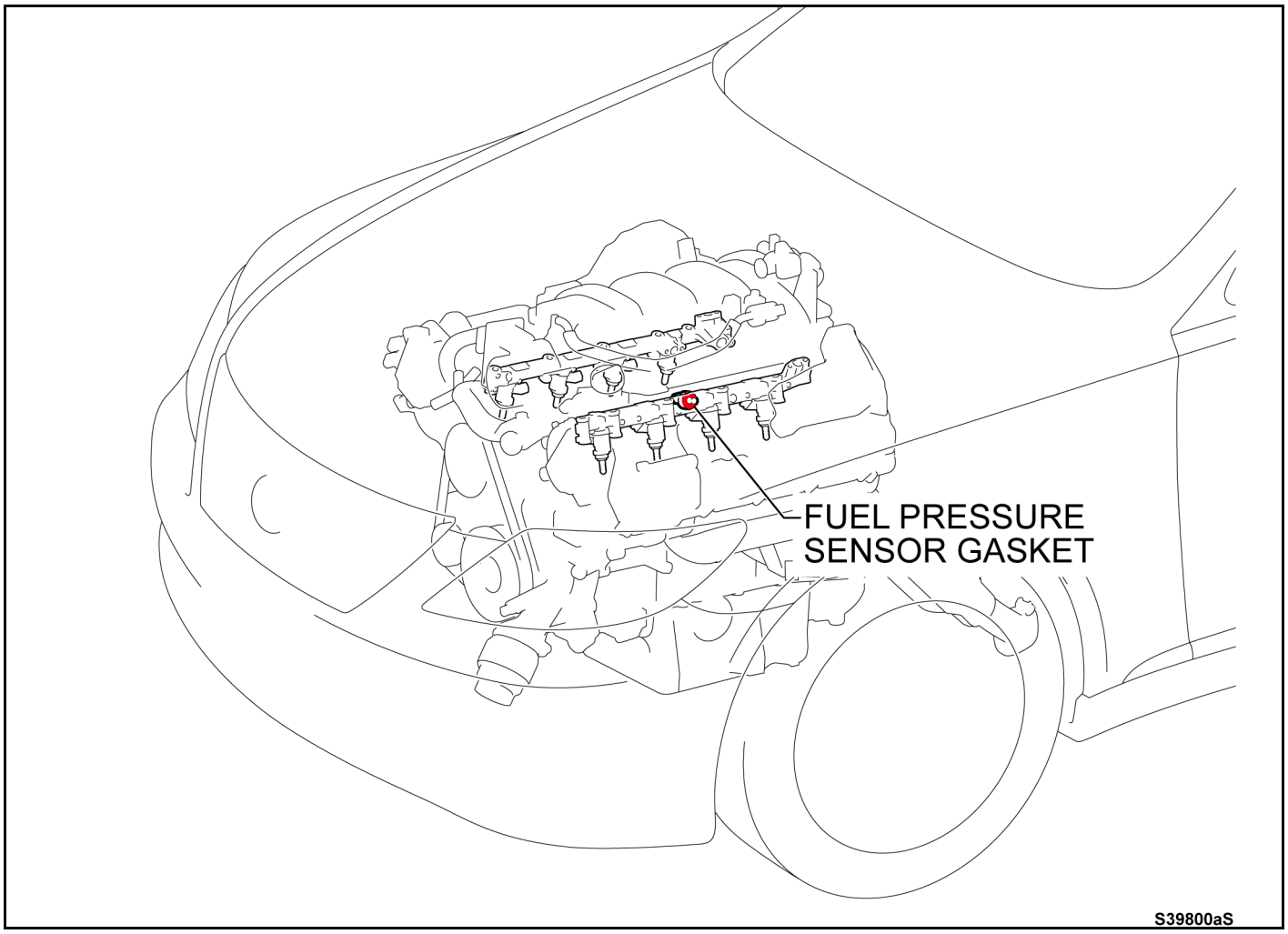
- Brake cleaner
- Protective tape
- Pando39C Adhesive spray
  (Note: one can will service approximately 120 vehicles)

An initial quantity of the required Pando 39C (**00289-ELF39**) has been shipped to each dealer. Please contact your DSPM to request additional quantities of Pando 39C. Your DSPM will contact Lexus headquarters who will evaluate your ELF paid warranty claim volume, overall remaining UIO, and availability of Pando 39C. Upon Lexus headquarters approval your dealership will be authorized to submit an order for the approved quantity via the LCMC website.

III. WORK PROCEDURE TABLE OF CONTENTS

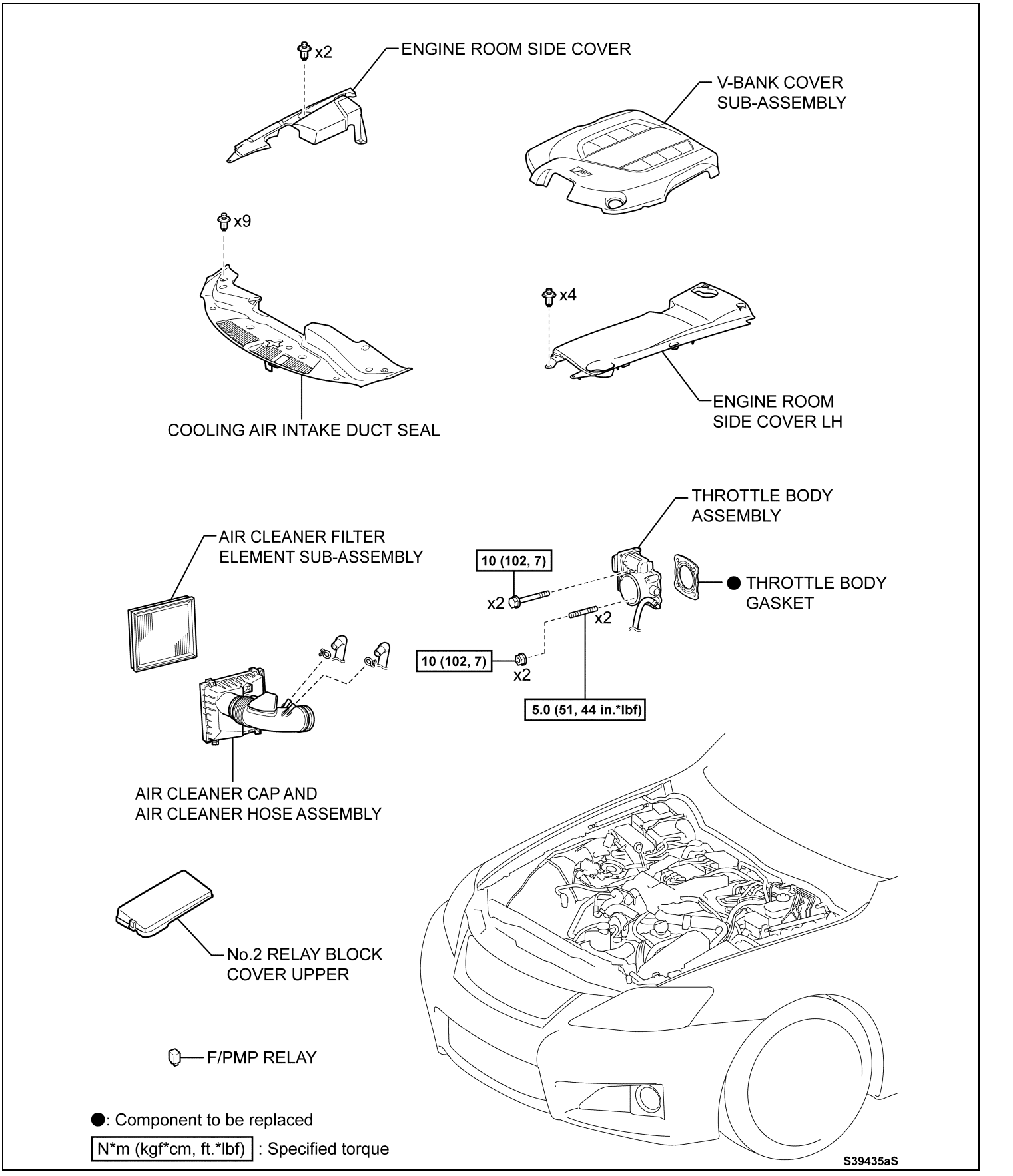
IV. BACKGROUND

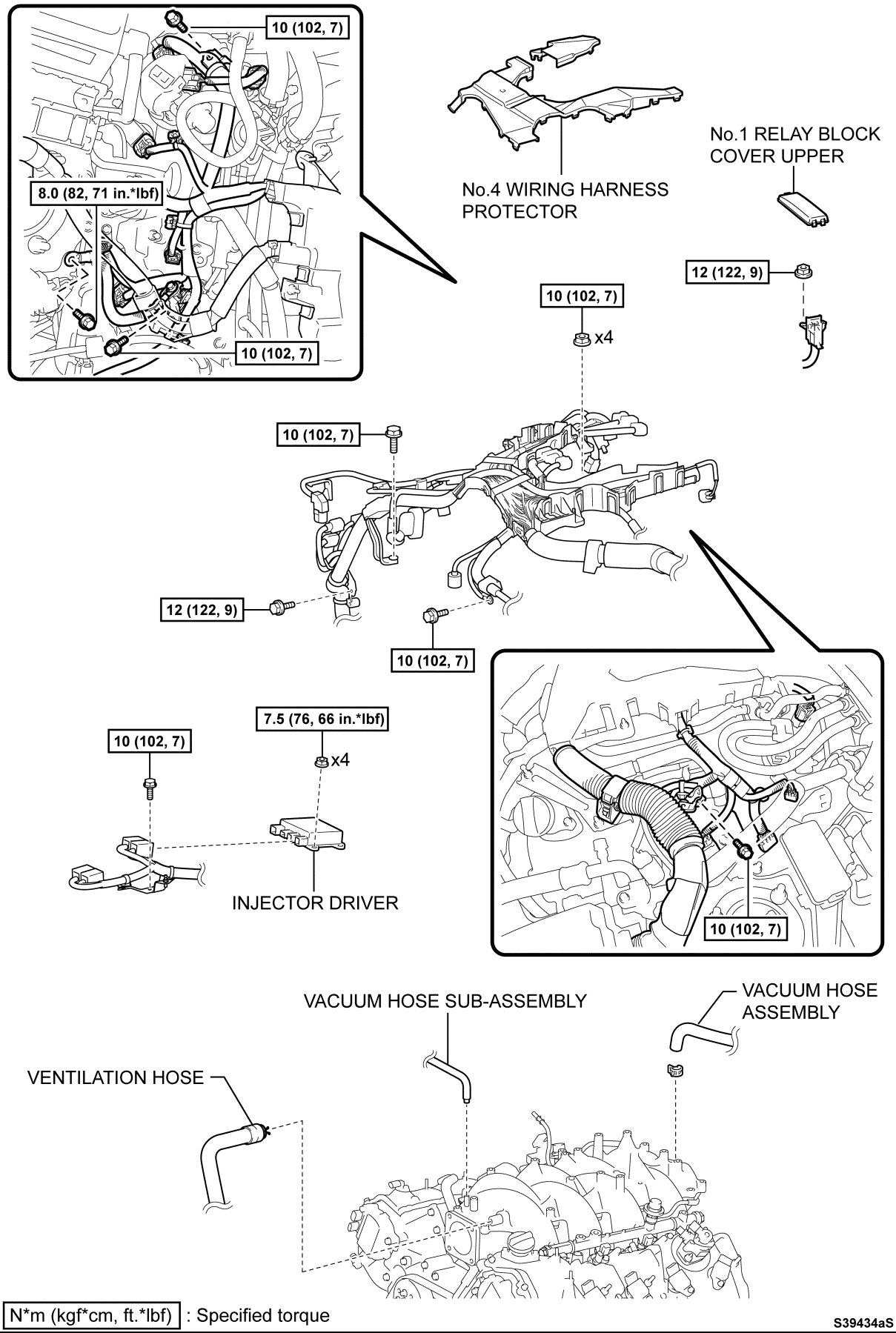
In the subject vehicles, the sealing property of the gasket seated in between the pressure sensor and the fuel delivery pipe could become degraded. During vehicle operation, fuel could leak past the gasket. In the presence of an ignition source, this could increase the risk of a vehicle fire.

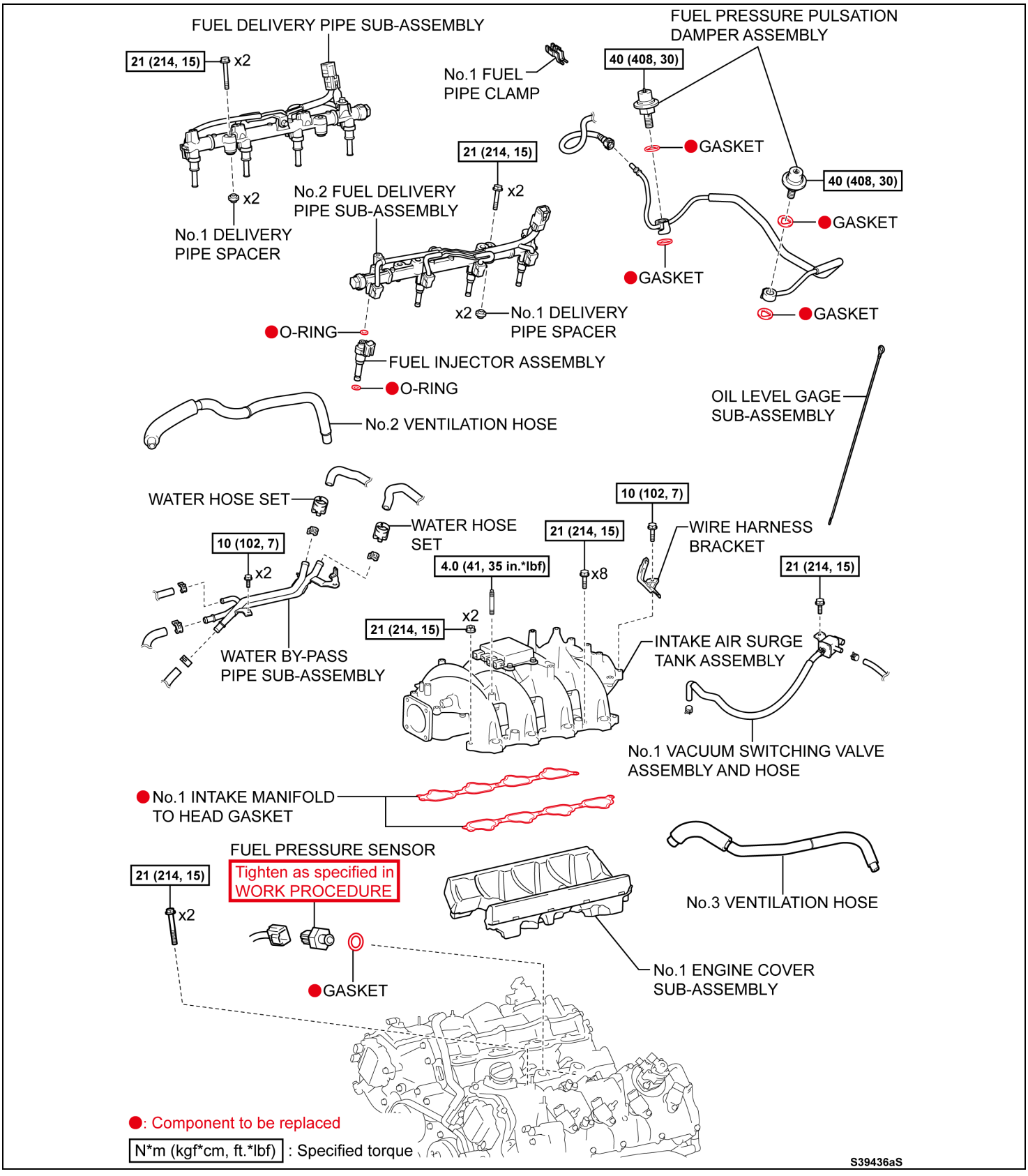


V. DISASSEMBLE THE VEHICLE

A. COMPONENTS




10 (102, 7)
8.0 (82, 71 in.*lbf)
10 (102, 7)
No.4 WIRING HARNESS PROTECTOR
No.1 RELAY BLOCK COVER UPPER
12 (122, 9)
10 (102, 7)
x4
10 (102, 7)
12 (122, 9)
10 (102, 7)
7.5 (76, 66 in.*lbf)
10 (102, 7)
x4
INJECTOR DRIVER
10 (102, 7)
VACUUM HOSE SUB-ASSEMBLY
VACUUM HOSE ASSEMBLY
VENTILATION HOSE
N*m (kgf*cm, ft.*lbf) : Specified torque
S39434aS


FUEL DELIVERY PIPE SUB-ASSEMBLY
21 (214, 15)
x2
x2
No.1 DELIVERY PIPE SPACER
No.1 FUEL PIPE CLAMP
FUEL PRESSURE PULSATION DAMPER ASSEMBLY
40 (408, 30)
GASKET
40 (408, 30)
GASKET
GASKET
GASKET
21 (214, 15)
x2
No.2 FUEL DELIVERY PIPE SUB-ASSEMBLY
x2
No.1 DELIVERY PIPE SPACER
O-RING
FUEL INJECTOR ASSEMBLY
O-RING
No.2 VENTILATION HOSE
OIL LEVEL GAGE SUB-ASSEMBLY
WATER HOSE SET
WATER HOSE SET
10 (102, 7)
x2
WATER BY-PASS PIPE SUB-ASSEMBLY
10 (102, 7)
21 (214, 15)
x8
WIRE HARNESS BRACKET
4.0 (41, 35 in.*lbf)
21 (214, 15)
x2
21 (214, 15)
INTAKE AIR SURGE TANK ASSEMBLY
No.1 VACUUM SWITCHING VALVE ASSEMBLY AND HOSE
No.1 INTAKE MANIFOLD TO HEAD GASKET
FUEL PRESSURE SENSOR
21 (214, 15)
x2
Tighten as specified in WORK PROCEDURE
GASKET
No.3 VENTILATION HOSE
No.1 ENGINE COVER SUB-ASSEMBLY
●: Component to be replaced
N*m (kgf*cm, ft.*lbf) : Specified torque
S39436aS

B. CHECK SYSTEM FOR DTC's.

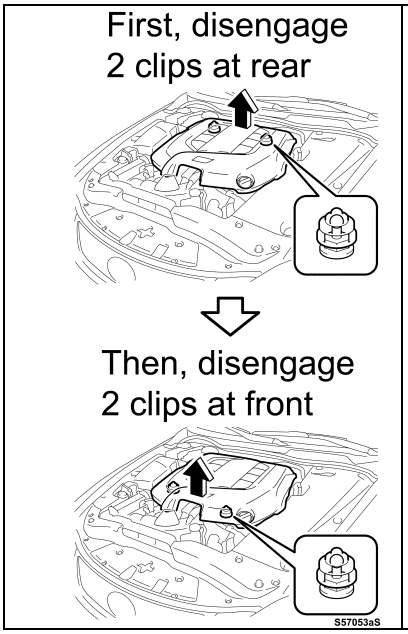
This campaign only covers the replacement of the fuel pressure sensor gasket. No other components in the engine management or fuel system are covered by this campaign.

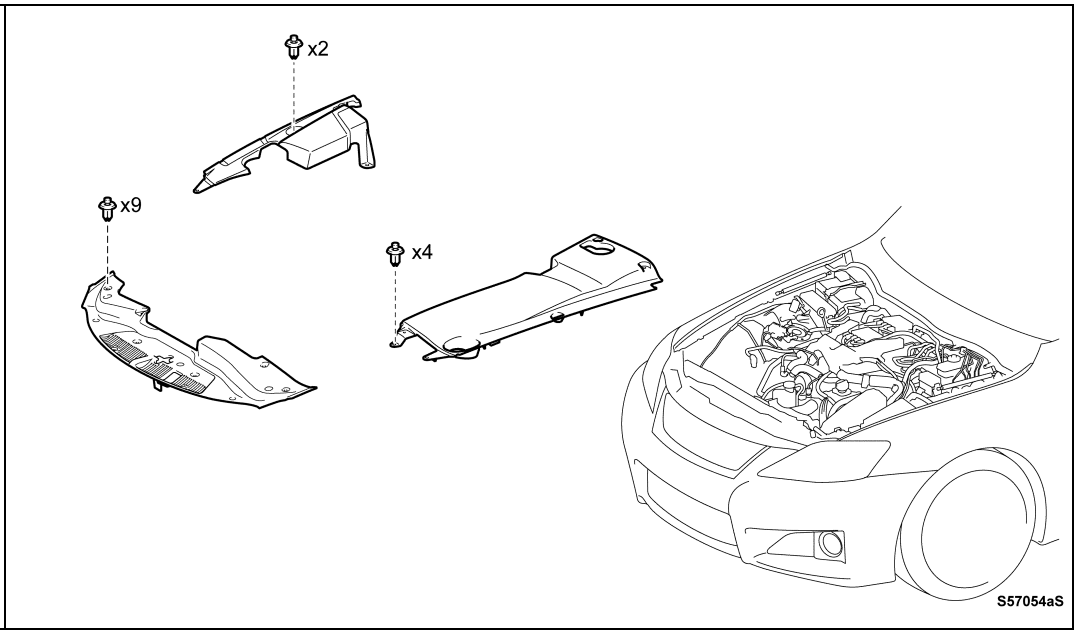
a) Using Techstream, perform a health check to confirm if there are any fuel system mangement related DTCs present in the system (**current, history or pending**).

NOTES:

- **Ensure that the Techstream software is 9.2 or higher.**
- **On the "connect to vehicle" screen, enter the VIN number to ensure that the vehicle information is uploaded to TIS.**
- **Record any fuel system mangement DTCs to aid in any additional dicussions needed with the customer.**

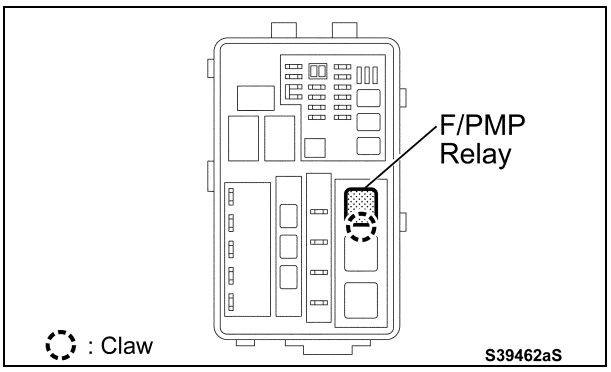
C. REMOVE THE ENGINE ROOM COVERS





D. DISCHARGE THE FUEL SYSTEM PRESSURE

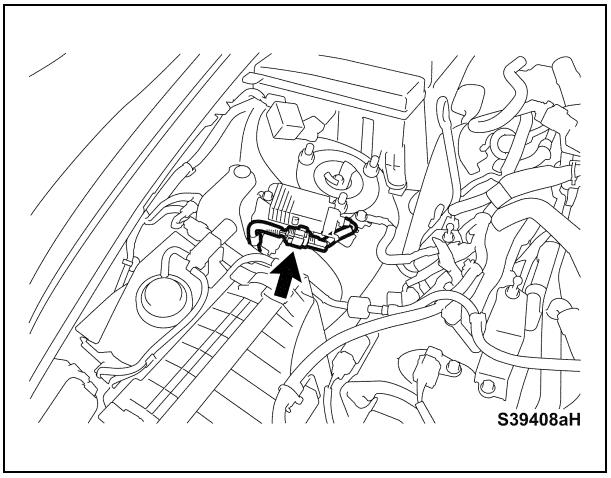
- ***DO NOT* disconnect any part of the fuel system until you have discharged the fuel system pressure.**
- **Even after discharging the fuel system pressure; place a shop cloth around the fuel pressure sensor as you separate it to reduce the risk of fuel spraying on yourself and in the engine compartment.**



1. DISCHARGE THE FUEL SYSTEM PRESSURE

a) Remove the relay block cover.

b) Remove the F/PMP relay.



c) Disconnect the fuel pump resistor connector.

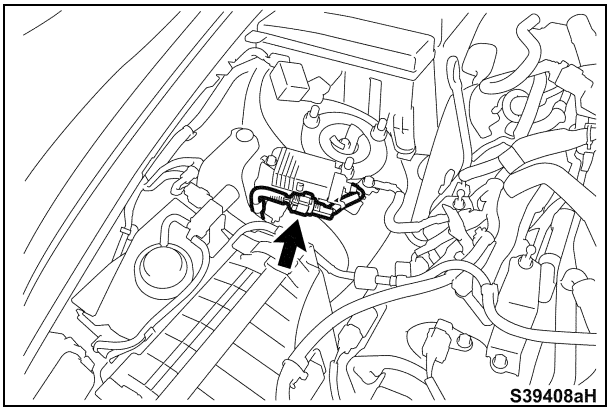
d) Start the engine.

e) After the engine has stopped, turn the ignition switch OFF.

NOTE:
DTCs related to fuel pressure, lean fuel mixture, and/or engine stop may be detected.

f) Remove the fuel tank cap to discharge the fuel tank pressure.

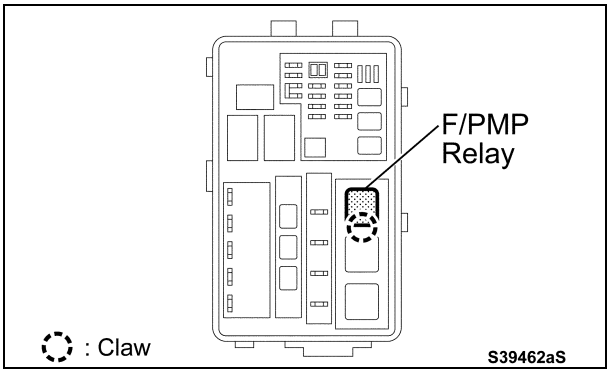
NOTE:
***DO NOT* reinstall the fuel tank cap.**



2. DISCONNECT THE NEGATIVE BATTERY CABLE

NOTE: For models with a navigation system, wait at least 6 minutes before disconnecting the battery. The system requires approximately 6 minutes to save information and settings after vehicle shut down.

a) Reconnect the fuel pump resistor connector.



b) Reinstall the F/PMP relay.

c) Reinstall the relay block cover.

E. REMOVE THE AIR CLEANER ASSEMBLY

1. REMOVE THE AIR CLEANER ASSEMBLY AND HOSE

a) Disconnect the MAF connector.

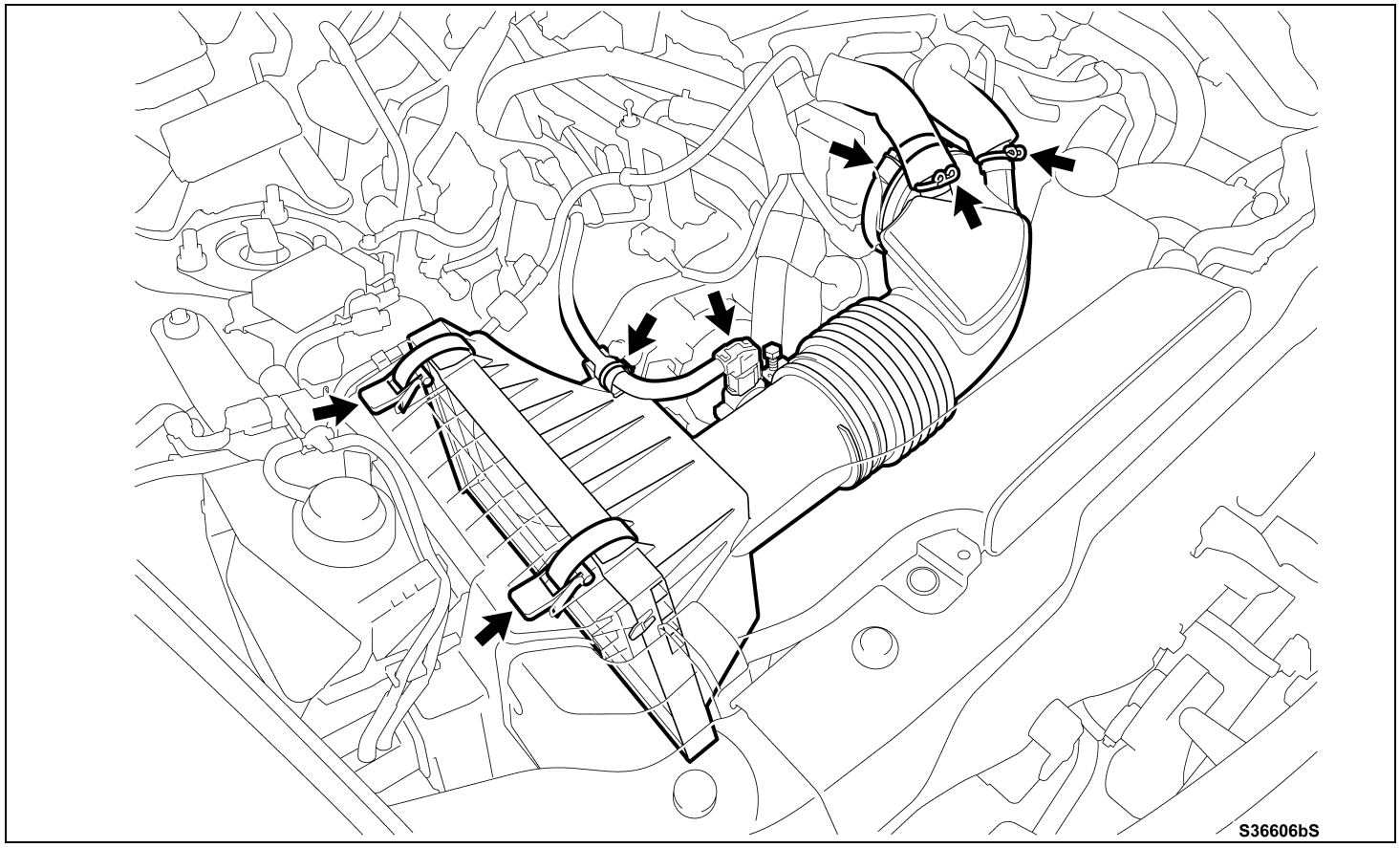
b) Unclip the harness for the MAF.

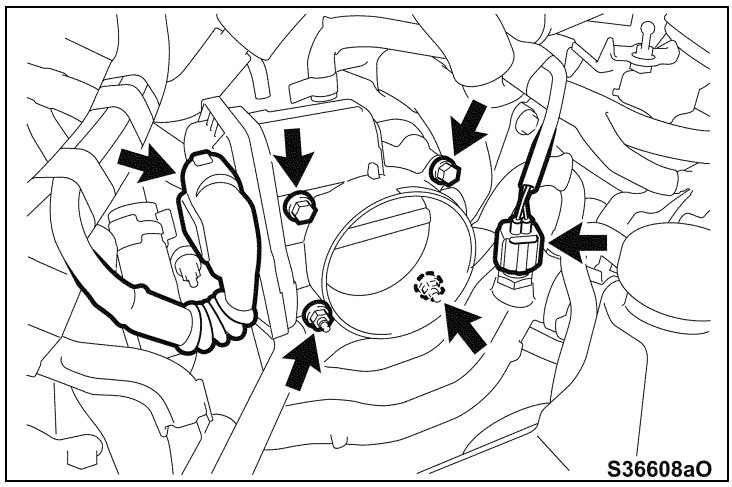
c) Disconnect the 2 vent hoses.

d) Disconnect the hose at the throttle body.

e) Remove the 2 clips and air cleaner housing with the hose.

f) Remove the air filter.

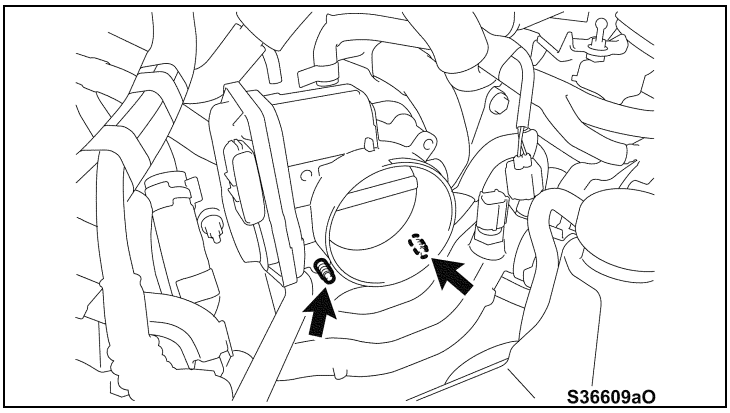




2. REMOVE THE THROTTLE BODY

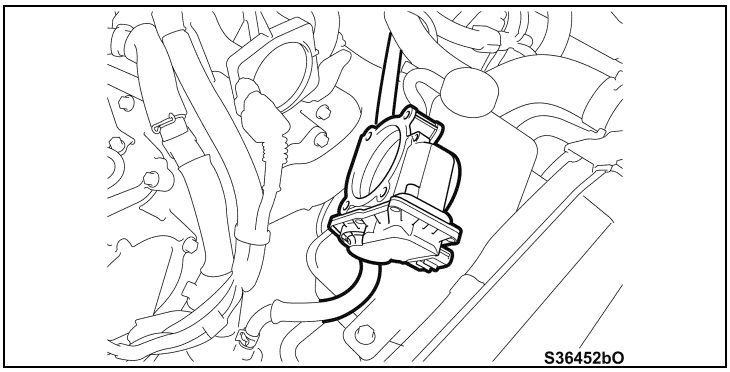
a) Disconnect the 2 connectors.

b) Remove the 2 bolts and nuts.



c) Remove the 2 lower studs.

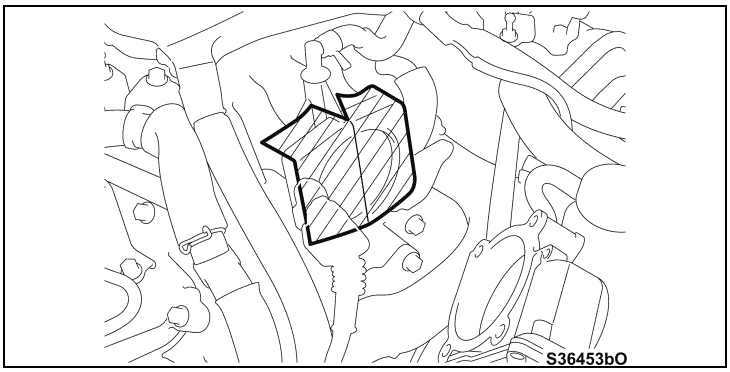
d) Separate the throttle body from intake manifold.



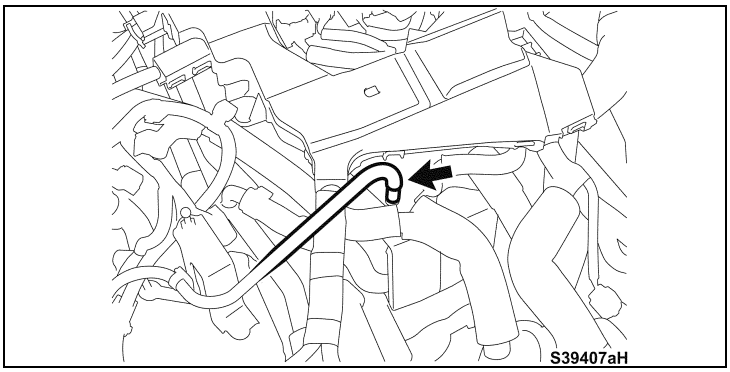
e) Place the throttle body on the reservor tank.

NOTE: Leave the coolant lines attached to the throttle body.

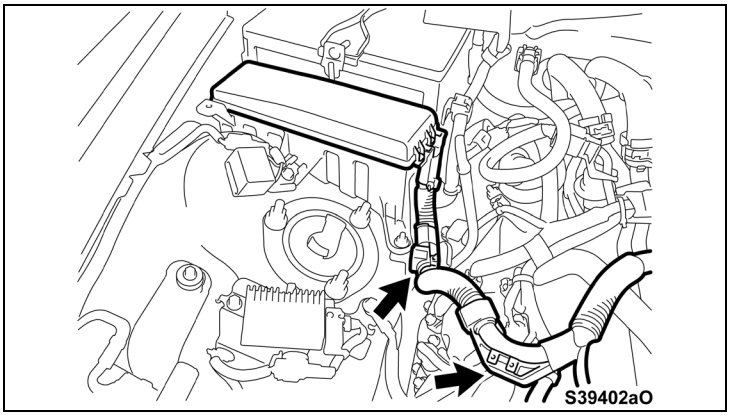
f) Remove and discard the throttle body gasket.



g) Place protective tape over the throttle body opening to prevent foreign objects from entering the surge tank.



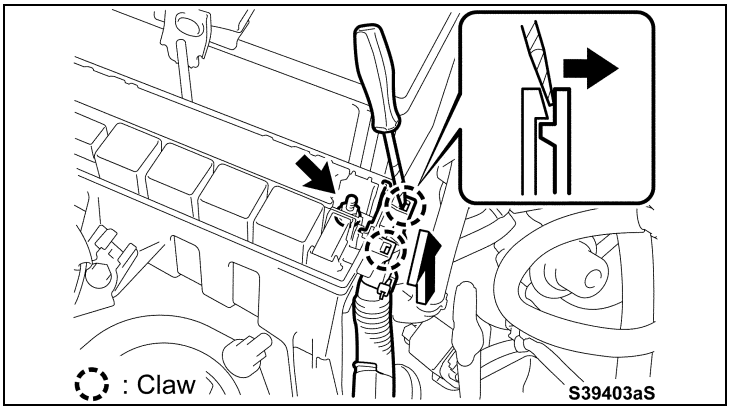
h) Disconnect the vacuum hose.



3. ENGINE WIRE HARNESS DISCONNECT

a) Remove the No. 1 Relay block cover.

b) Disengage the 2 clamps.

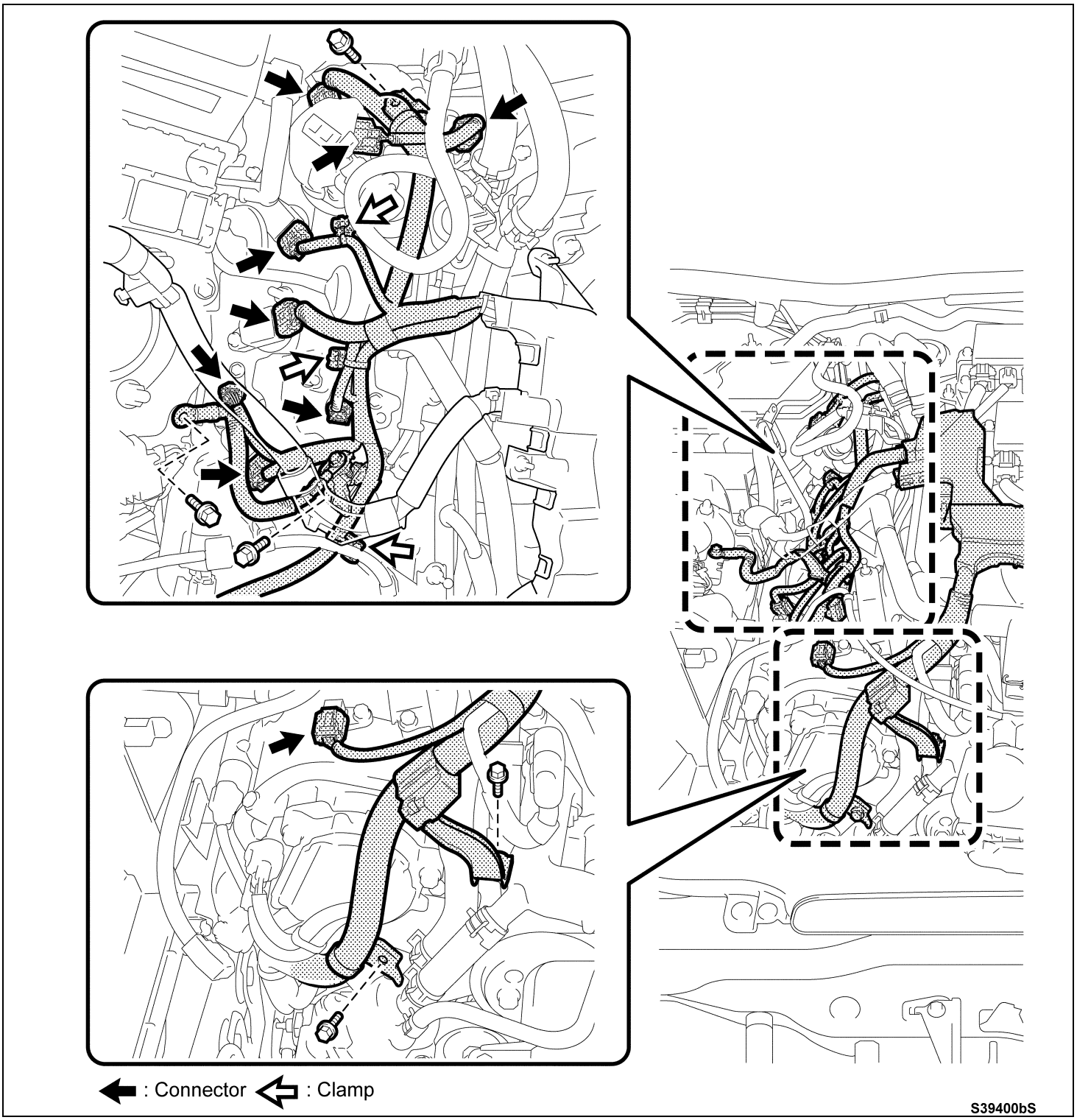


c) Remove the nut.

d) Disengage the 2 claws and separate the harness.

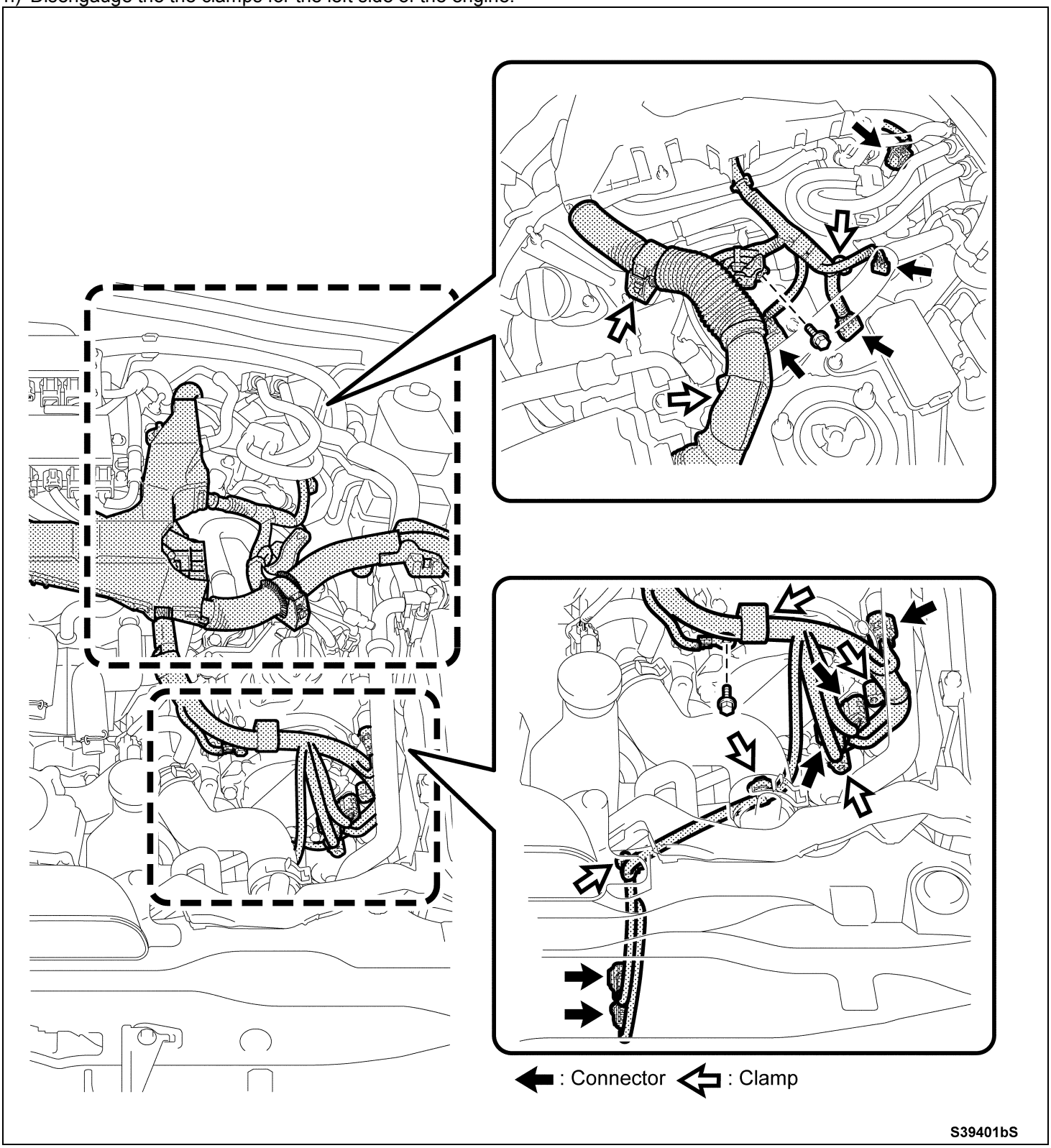
e) Remove the 5 bolts and disconnect the connectors.

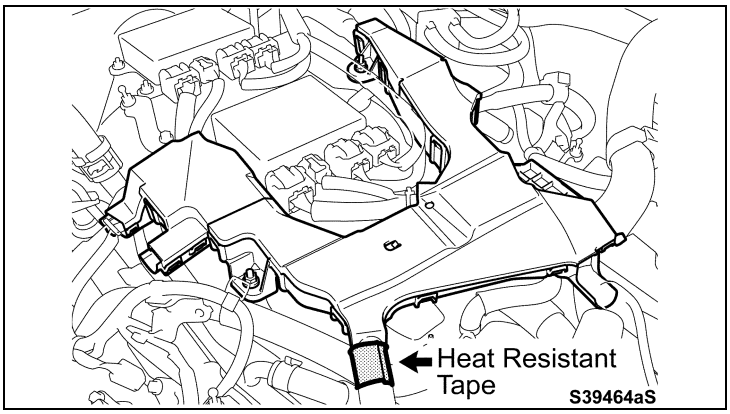
f) Disengauge the the clamps for the right side of the engine.



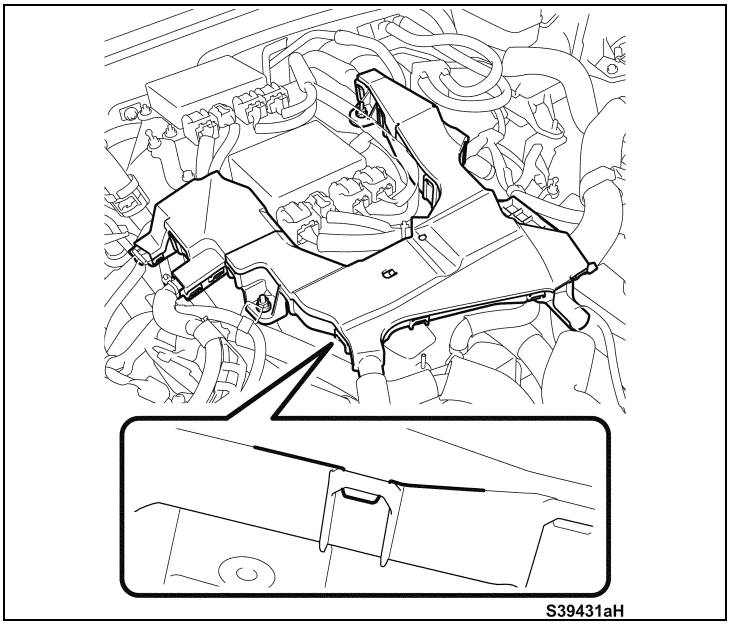
g) Remove the 2 bolts bolts and disconnect the connectors.

h) Disengauge the the clamps for the left side of the engine.





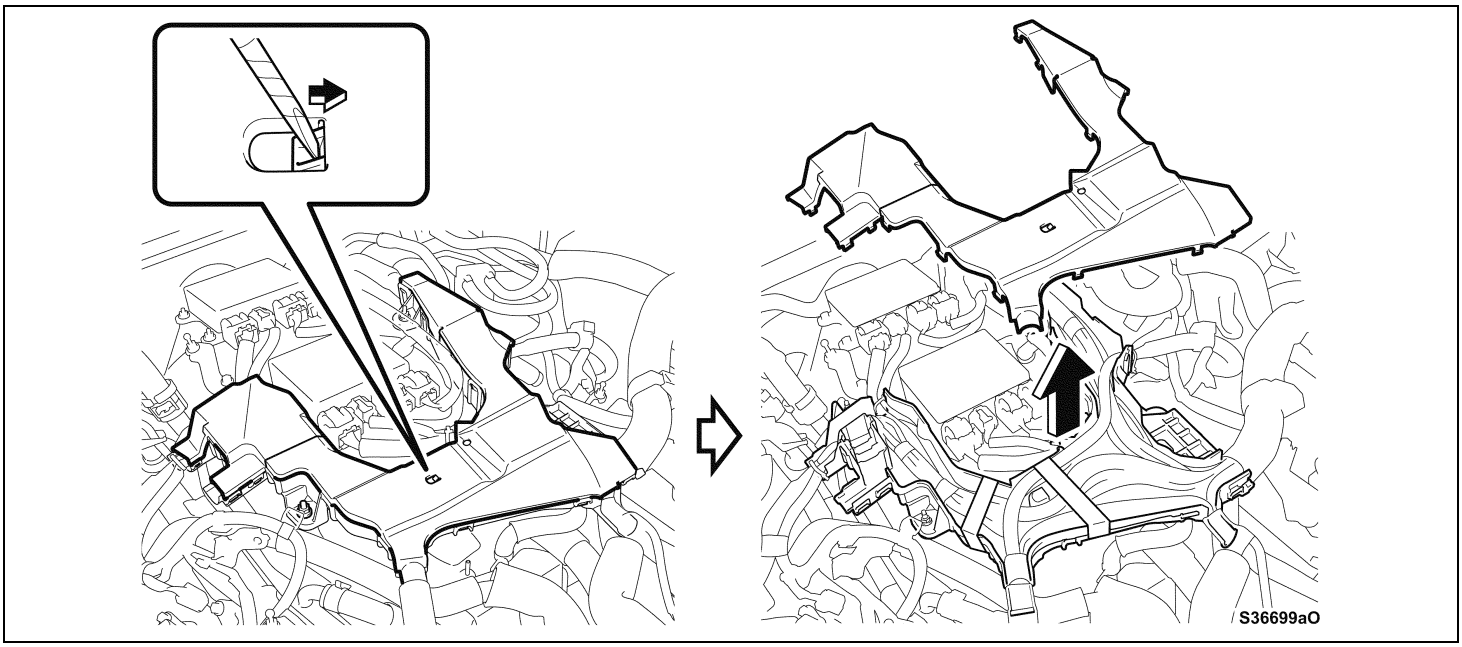
i) Remove the heat resistant tape.

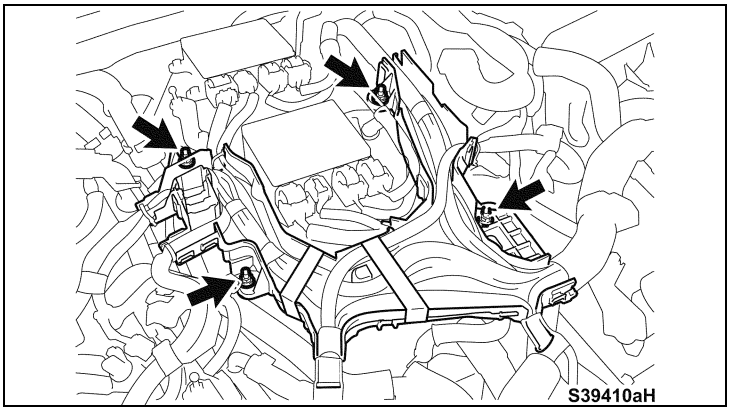


j) Disengage the 30 claws around the edge of the No. 4 harness upper cover.

NOTE: DO NOT forcibly try to remove the cover as this will damage it.

k) Disengage the claw and remove the upper cover.



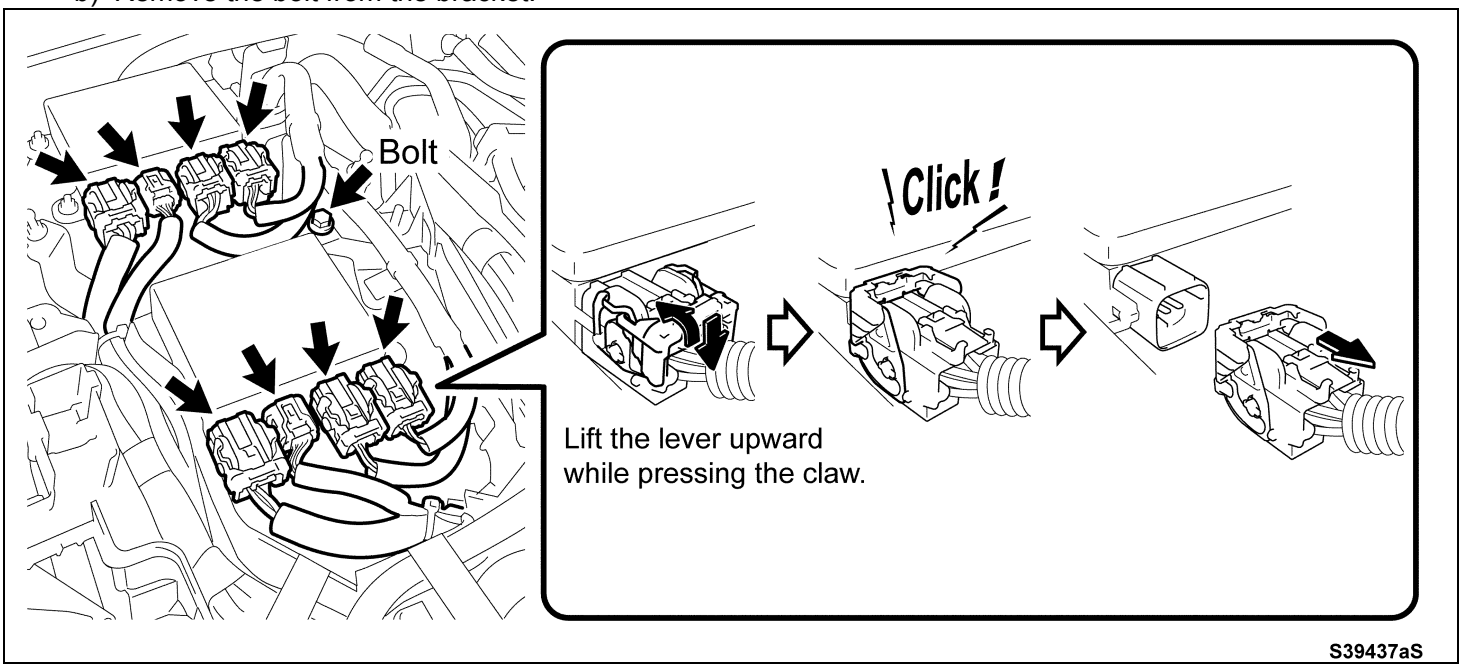


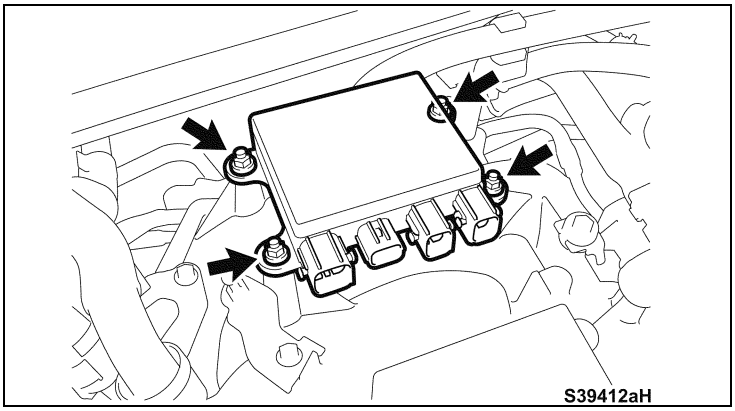
l) Remove the 4 nuts and remove the lower cover.

4. REMOVE THE INJECTOR DRIVER

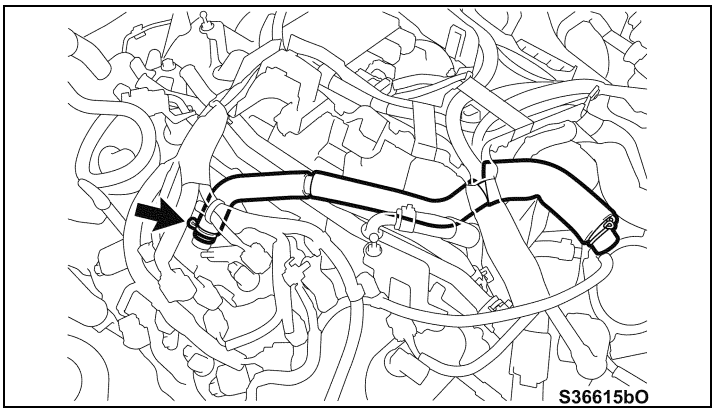
a) Disconnect the 8 connectors.

b) Remove the bolt from the bracket.

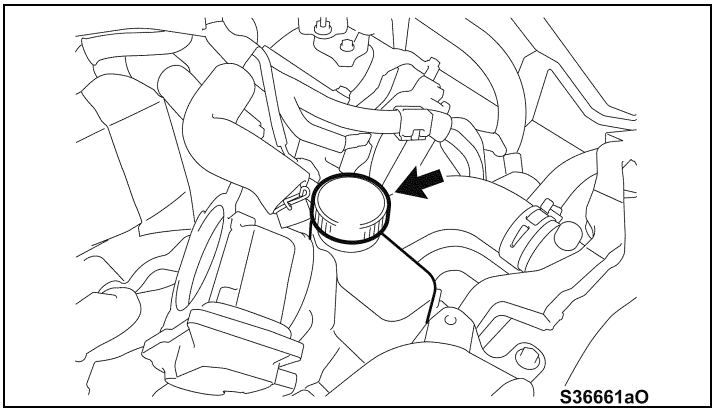




c) Remove the 4 nuts and the driver.



5. REMOVE THE No. 2 VENT HOSE

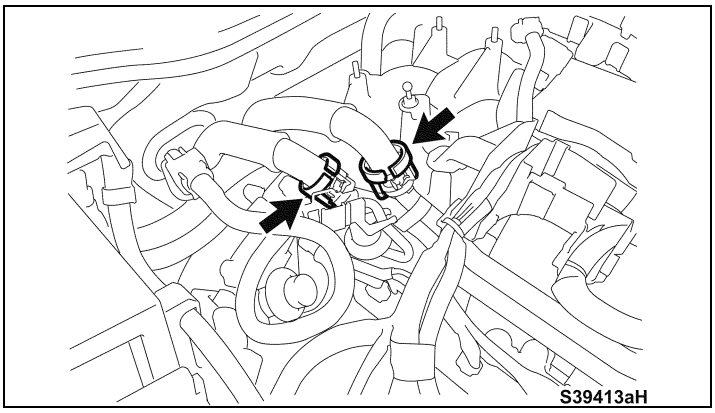


6. REMOVE THE WATER BY-PASS PIPE

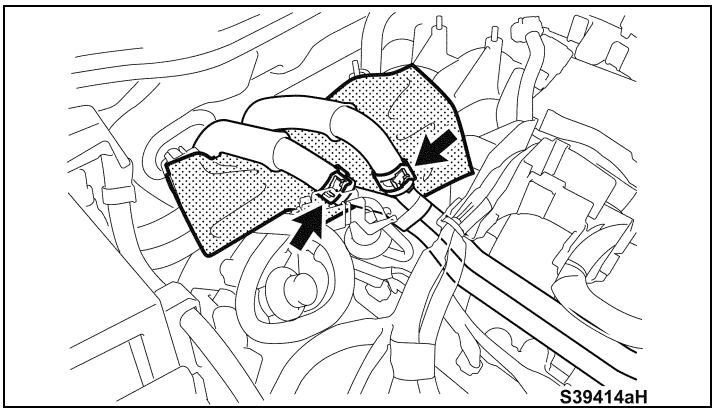
a) Remove the reservoir cap and check coolant level.

b) If the level is above the full mark remove the excess coolant.

NOTE: Use the appropriate devise to remove any excess coolant.

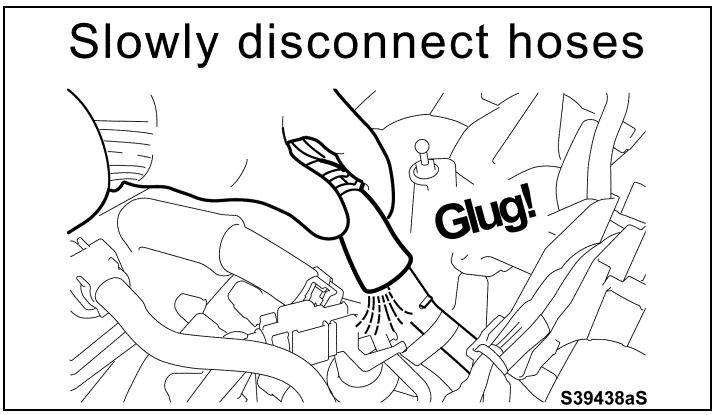


c) Remove the 2 water hoses sets.



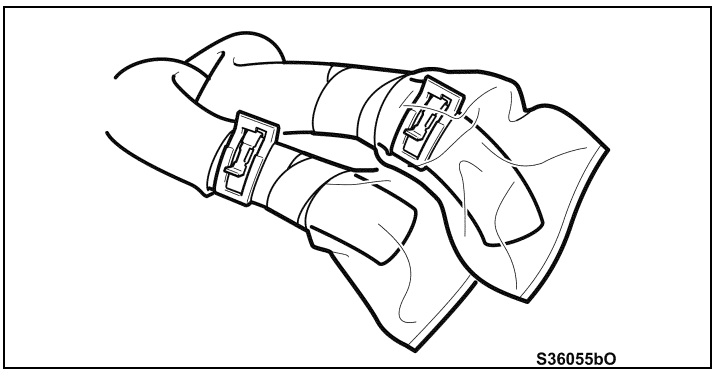
d) Place a cloth under the hoses as shown.

e) Slide the 2 clips up the hose.

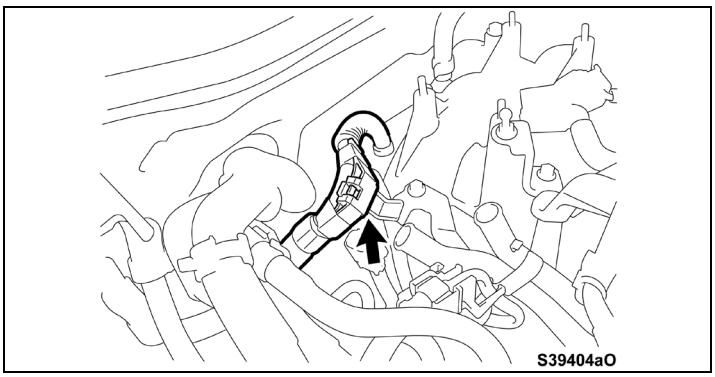


f) Slowly disconnect each hose while allowing air to enter the hose.

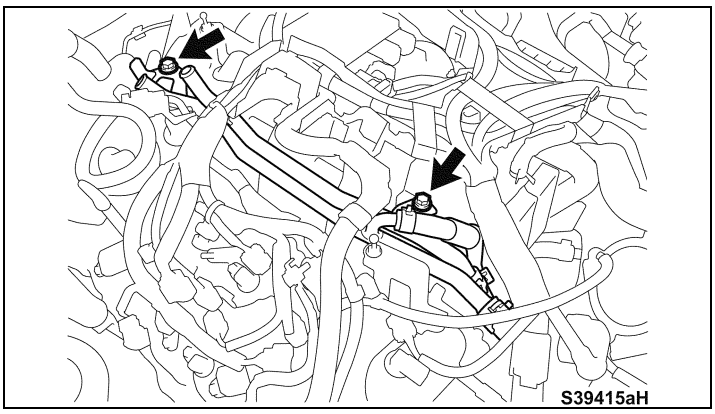
NOTE: DO NOT disconnect the hoses quickly as it could cause a large amount of coolant to flow from the hoses.



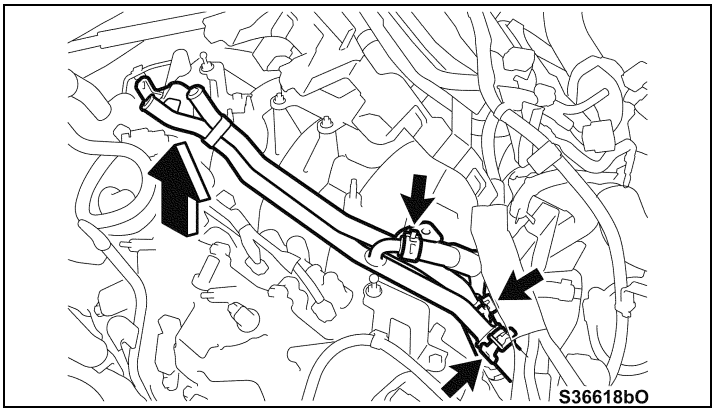
g) Cover the ends of the hoses to prevent foreign objects from entering.



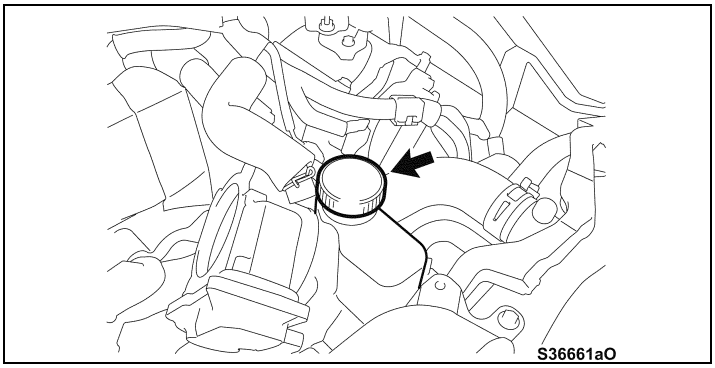
h) Disengage the clamp.



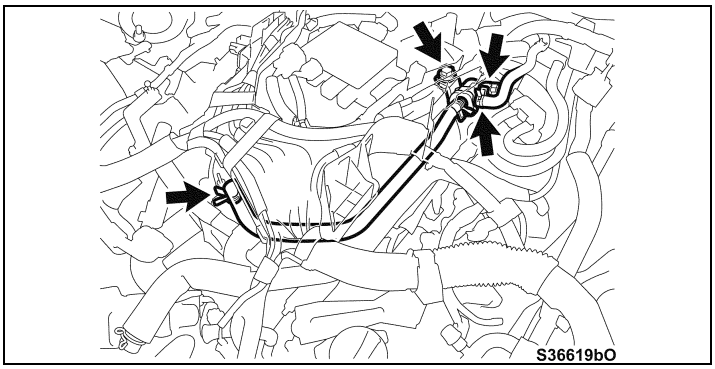
i) Remove the 2 bolts.



j) Release the 3 clips and remove the 3 hoses while lifting the pipe at an angle.



k) Reinstall the reservoir tank cap.



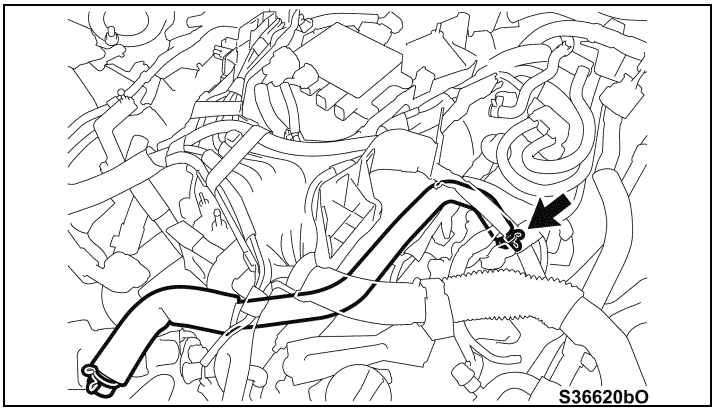
7. REMOVE THE No. 1 VACUUM SWITCHING VALVE AND HOSE

a) Disconnect the 2 hoses.

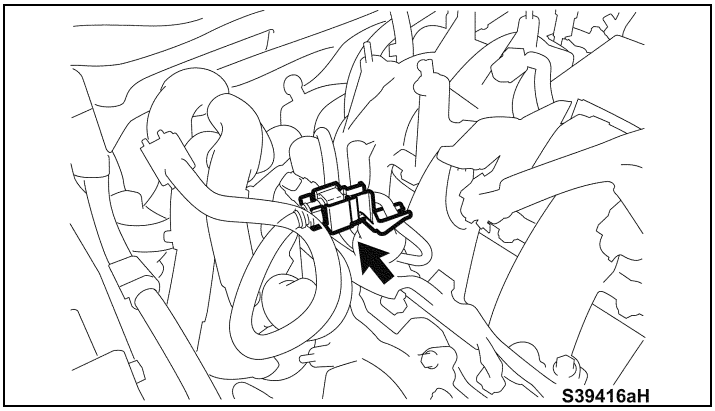
b) Disconnect the connector.

c) Remove the bolt.

d) Remove the vacuum switching valve.

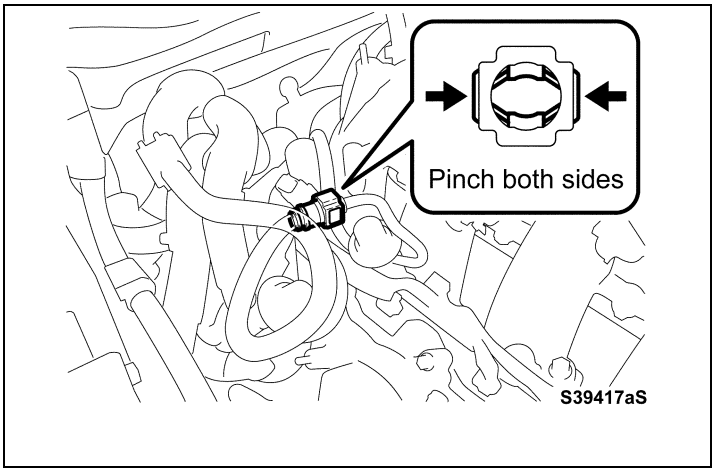


8. REMOVE THE No. 3 VENT HOSE



9. DISCONNECT No. 3 FUEL HOSE

a) Detach the No.1 fuel hose clamp.



b) Place a cloth under the No. 3 fuel line.

c) Disconnect the fuel line.

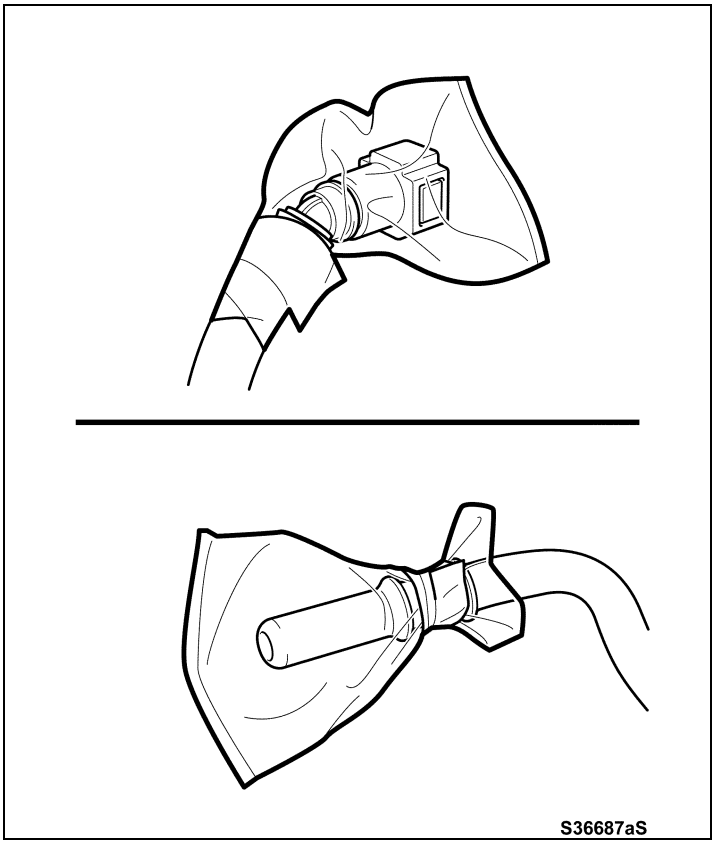
NOTE: Before disconnecting the fuel line ensure that the area around the fuel line is clean to prevent damage to the O-Rings.

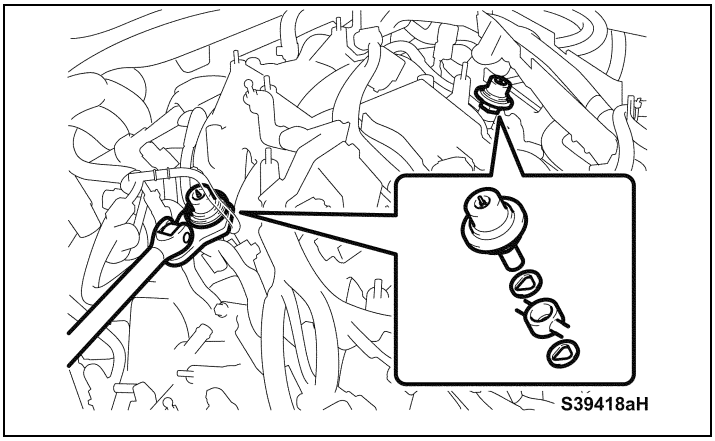
Disconnect the fuel line by hand.

DO NOT bend, twist, or rotate the nylon fuel line.

If the fuel line is stuck to the pipe. Push the fuel line in the pull back.

d) Cover the fuel line and fuel pipe to prevent damage.





10. REMOVE THE FUEL PRESSURE PULSATION DAMPERS

a) Place a cloth under each pulsation dampner.

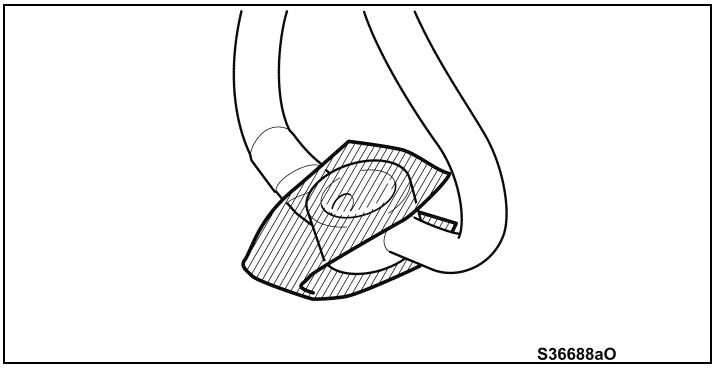
b) Using the SST and remove the 2 pulsation dampner.

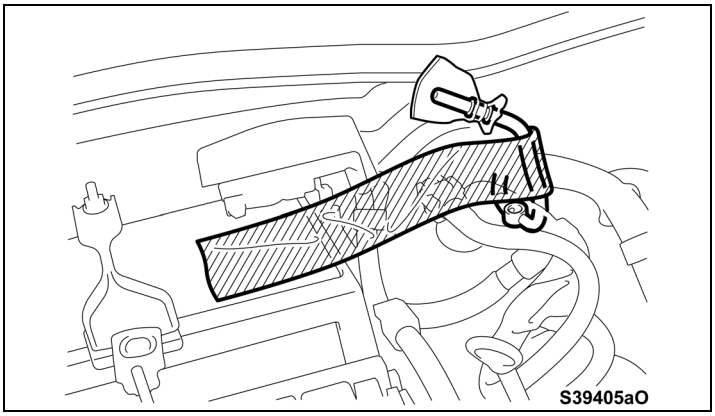
SST: 09617-24011

c) Remove and discard the damper gaskets.

NOTE: DO NOT blow air into the pulsation damper.

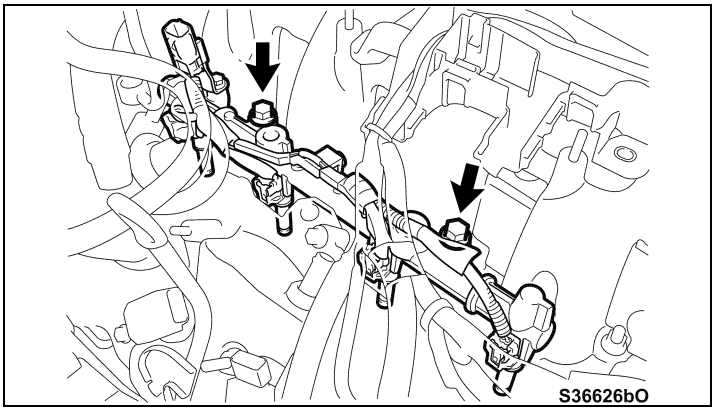
d) Cover the fuel pipe to prevent damage.





e) Cover the fuel line to prevent damage.

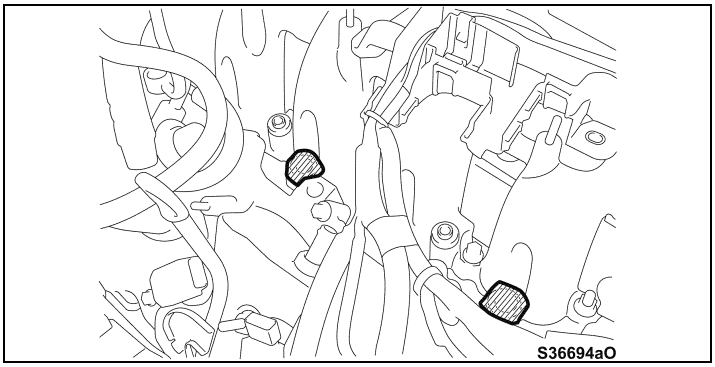
f) Temporarily move the fuel line to provide clearence.



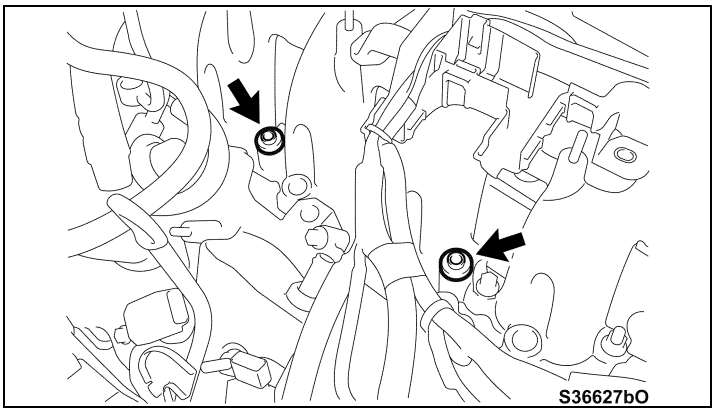
11. REMOVE No.1 FUEL DELIVERY PIPE

a) Remove the 2 bolts and remove the fuel delivery pipe with the fuel injectors.

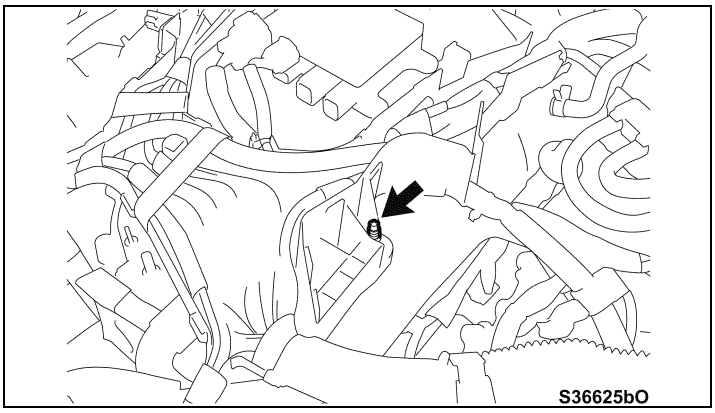
NOTE: When removing the delivery pipe hold the pipe on each end and pull straight upward.



b) Cover the injector port openings with tape.



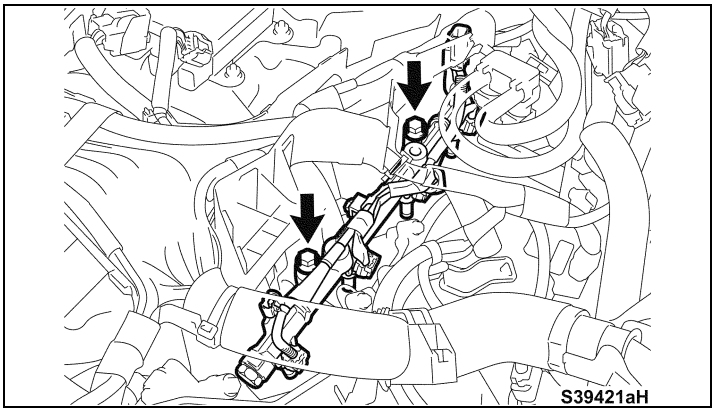
c) Remove the 2 No. 1 delivery pipe spacers.



12. REMOVE No.2 FUEL DELIVERY PIPE

a) Remove the stud from the upper surge tank.

NOTE: The stud must be remove for clearance.

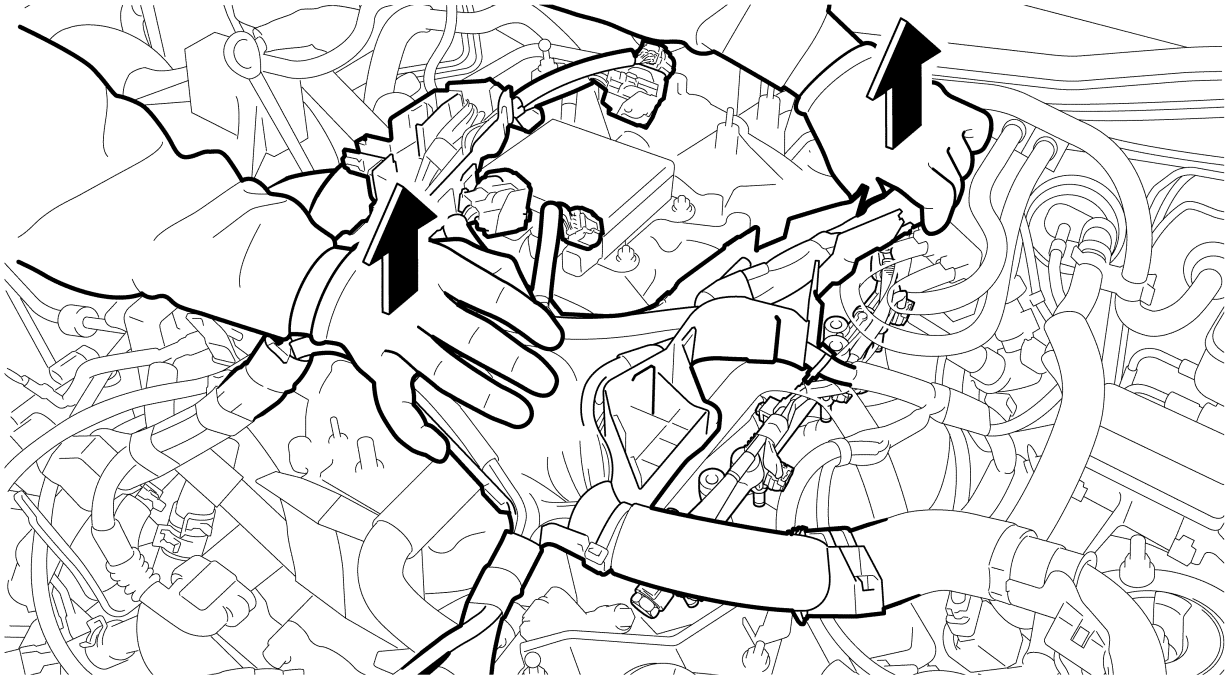


b) Remove the 2 bolts.

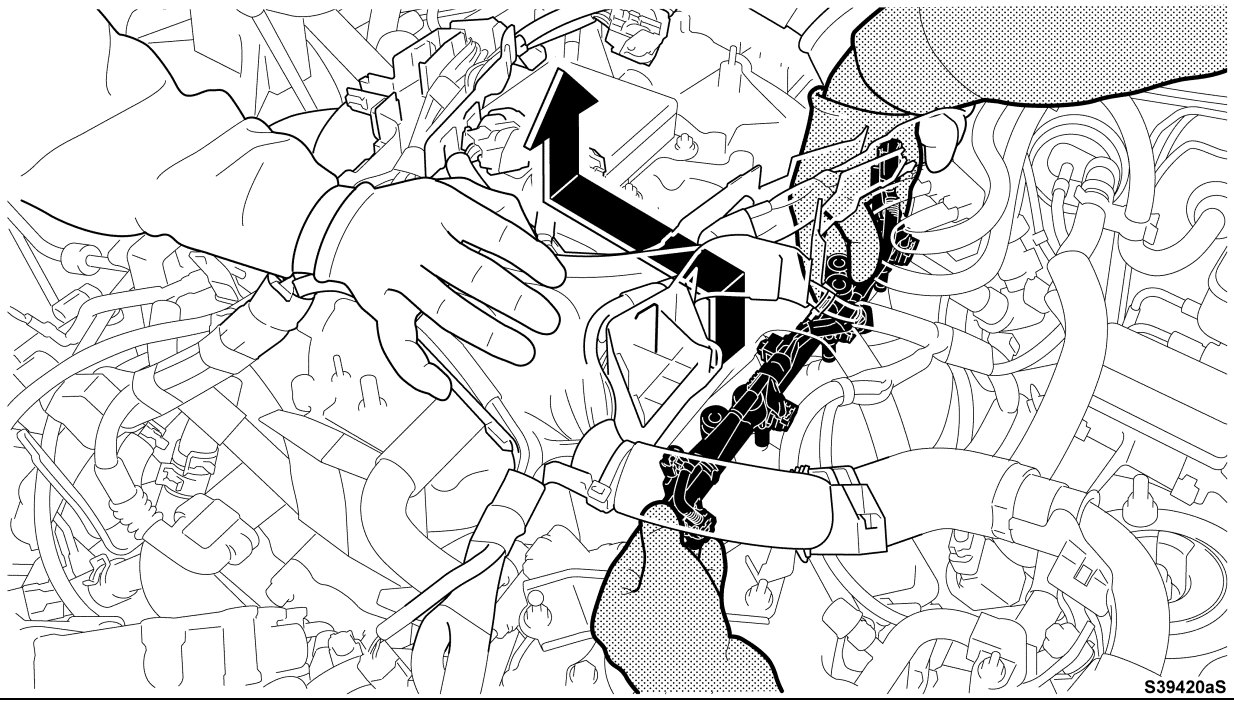
c) Remove the No. 2 fuel delivery pipe.

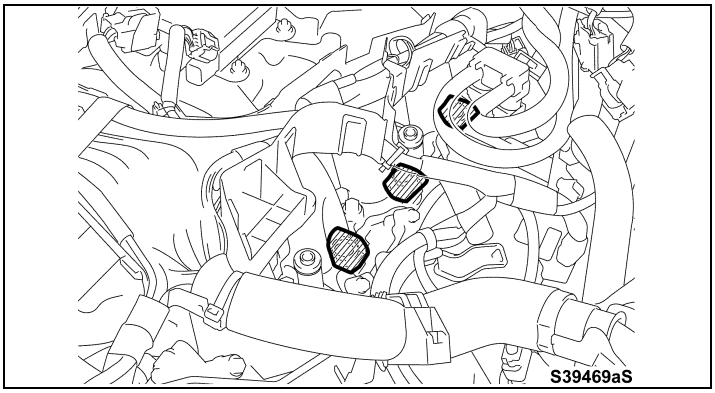
Requires 2 Workers

1. The assisting worker must lift the wire harnesses. (Work from the right side of the vehicle)

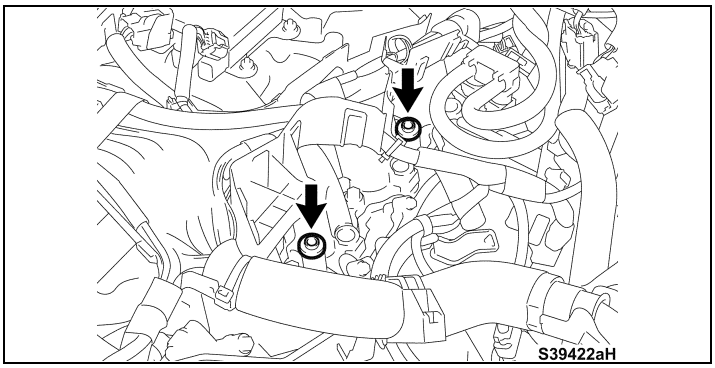


2. The main worker must remove the No. 2 delivery pipe while avoiding damage to the injectors by interference with other parts. (Work from the left side of the vehicle)

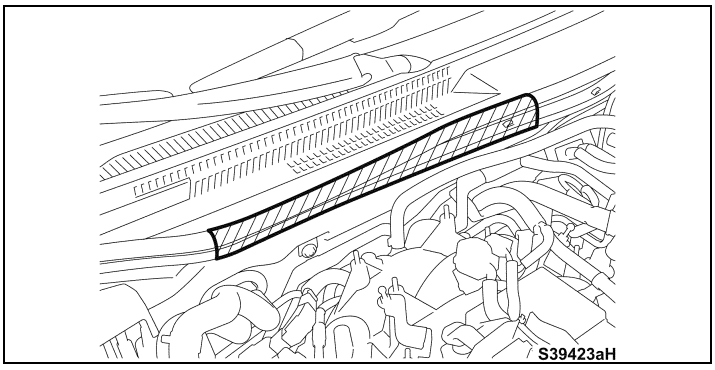




d) Cover the injector port openings with tape.

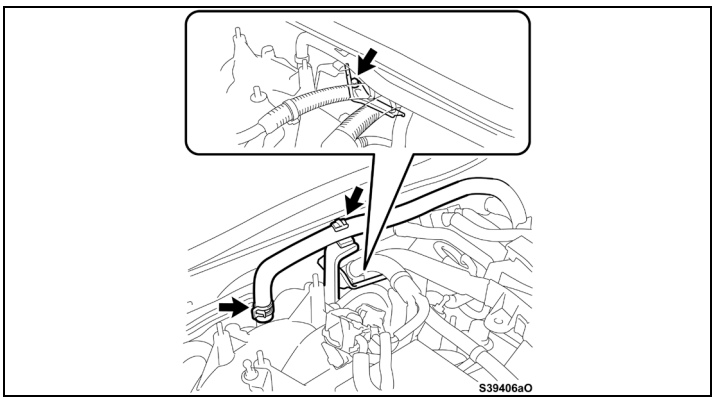


e) Remove the 2 No. 1 delivery pipe spacers.



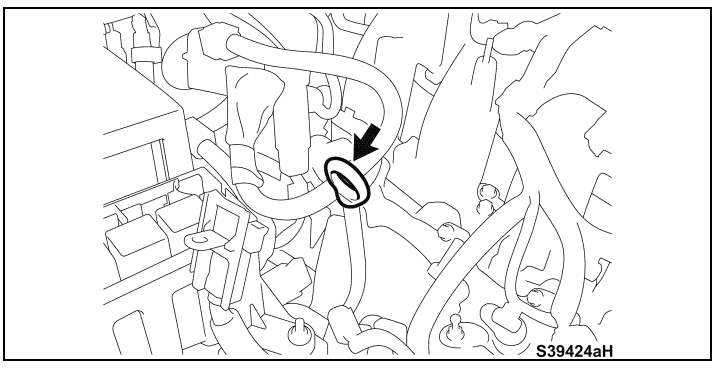
13. REMOVE THE AIR SURGE TANK

a) Apply protective tape to the cowl top vent louver to prevnet damage.

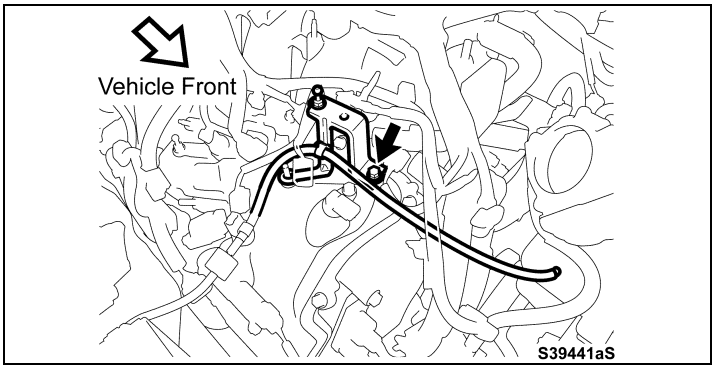


b) Disengage the clip and separate the vacuum hose.

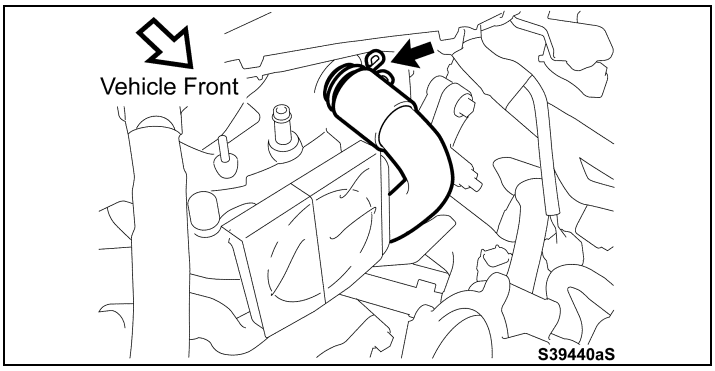
c) Remove the bolt from the wire harness bracket.



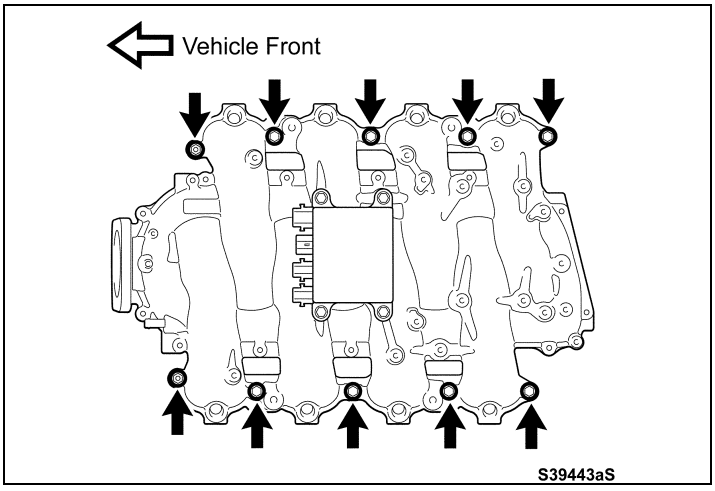
d) Remove the engine dip stick.



e) Remove the bolt from the bracket and move the bracket to provide clearance to remove the surge tank.



f) Disconnect the vent hose.

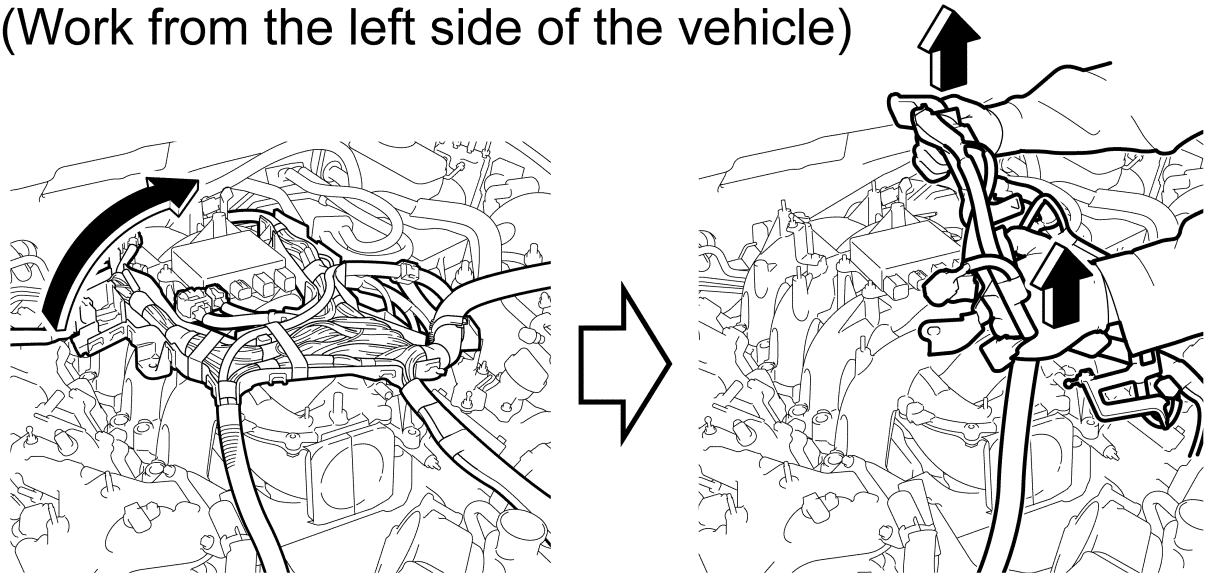


g) Remove the 8 bolts and 2 nuts.

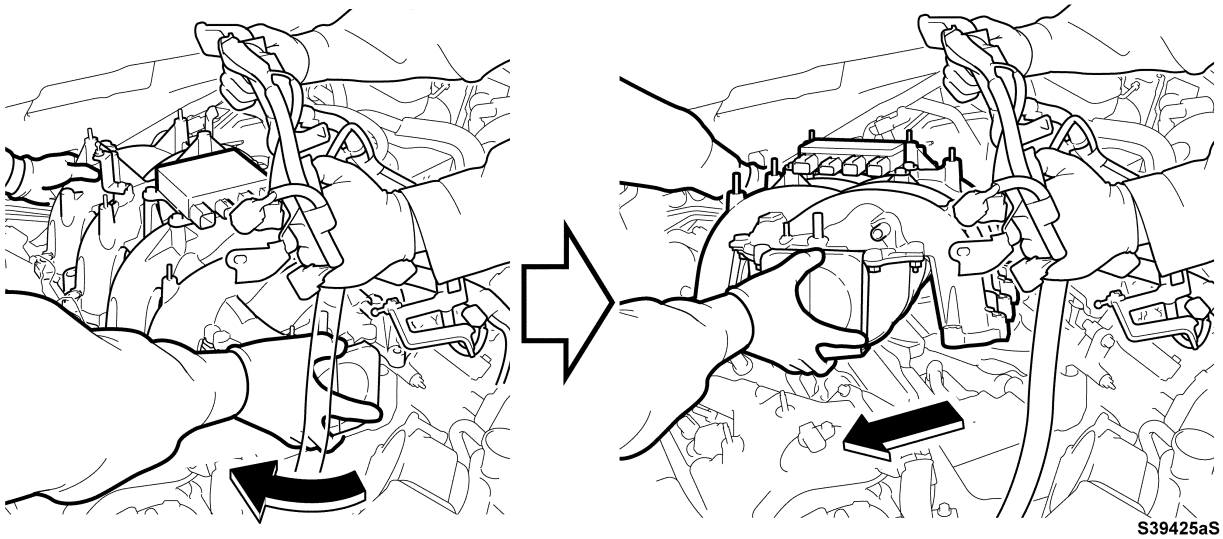
h) Remove the air surge tank.

Requires 2 Workers

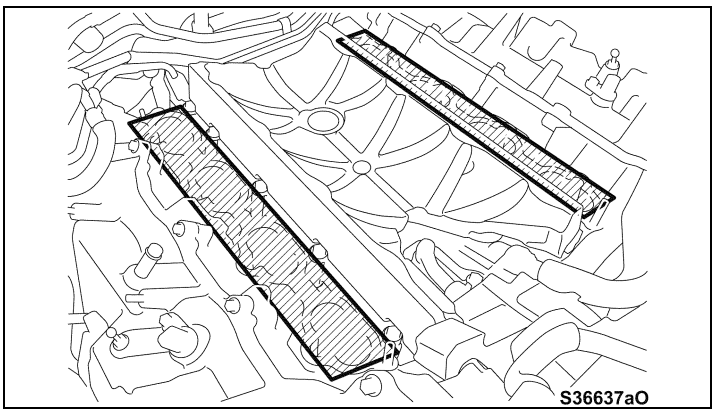
1. The assisting worker must lift the wire harnesses. (Work from the left side of the vehicle)



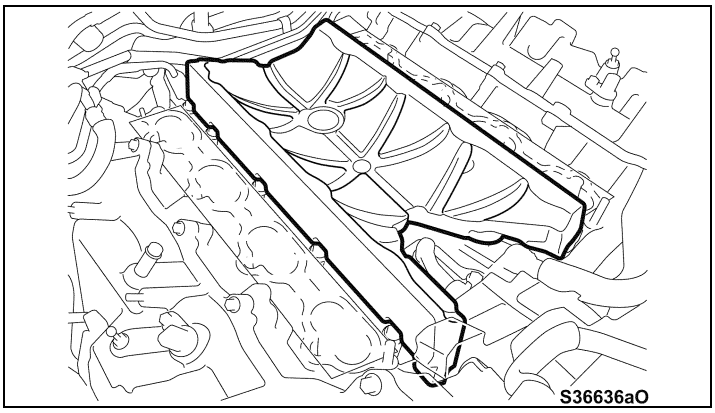
2. The main worker must remove the intake air surge tank while the assisting worker is lifting the wire harnesses. (Work from the right side of the vehicle)



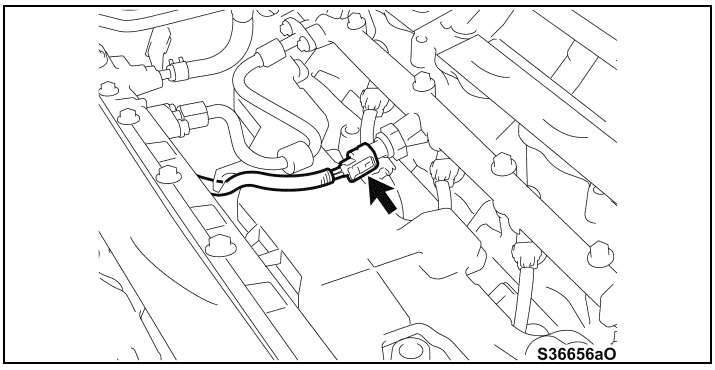
i) Remove and discard the surge tank gasket.



j) Cover the openings with tape to prevent foreign objects from entering the intake ports.



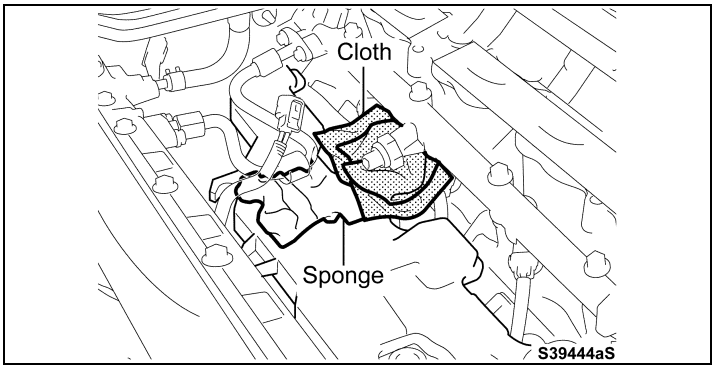
14. REMOVE No. 1 ENGINE COVER



15. REMOVE THE FUEL PRESSURE SENSOR

a) Disconnect the connector.

NOTE: It may be necessary to loosen the pressure sensor 90 degrees to disconnect the connector.

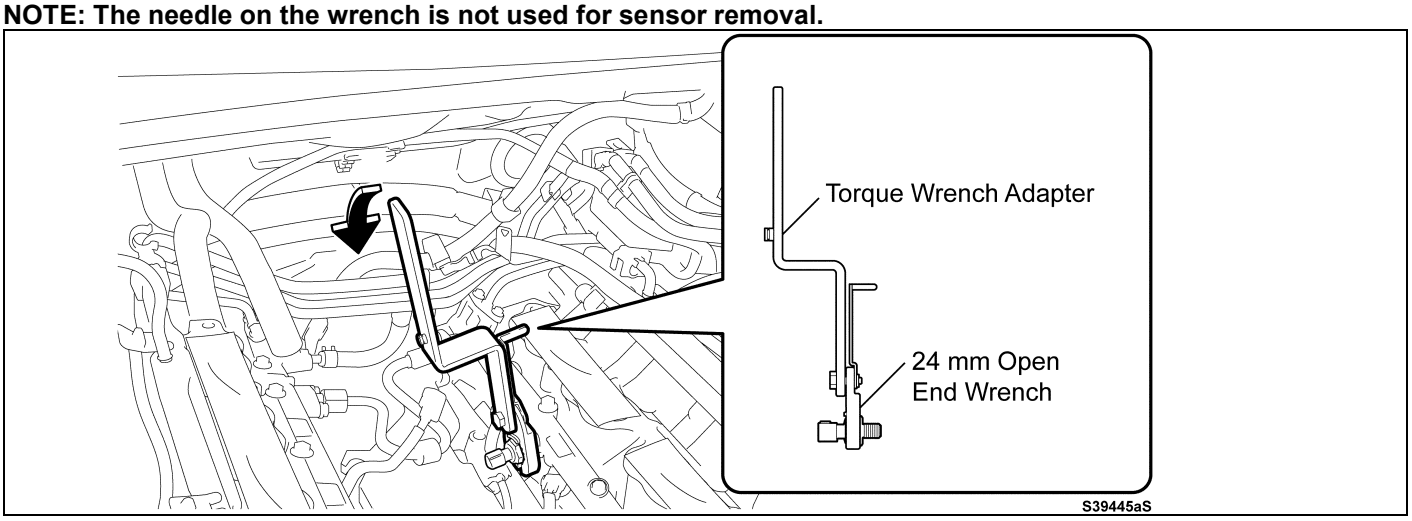


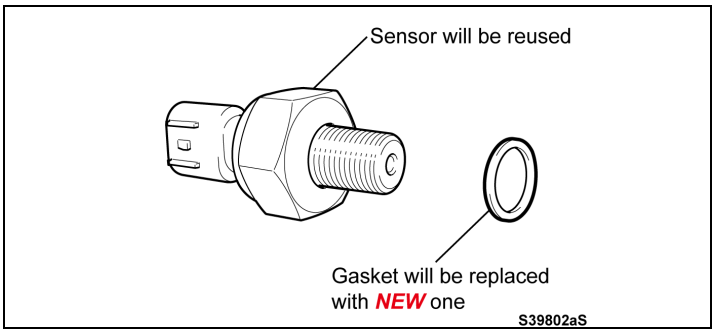
b) Place a cloth under the sensor.

NOTE: Place a cloth under the sensor to absorb any fuel.
DO NOT apply any force to the needle on the wrench.

d) Attach the supplied torque wrench adaptor to the 24 mm wrench as shown and loosen the sensor.

NOTE: The needle on the wrench is not used for sensor removal.





e) Remove the tool from the sensor and remove the sensor by hand.

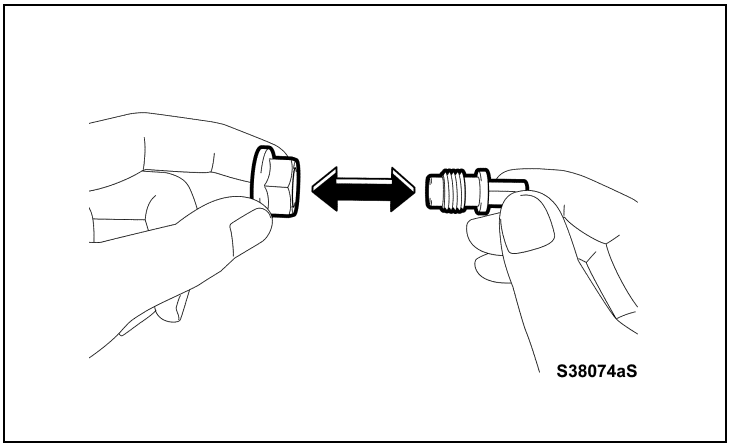
f) Remove and discard the sensor gasket.

STOP

The old pressure sensor will be reused.

DO NOT drop the sensor.
If it is dropped it must be replaced.

VI. POLISH THE FUEL DELIVERY PIPE



1. INSTALL GUIDE

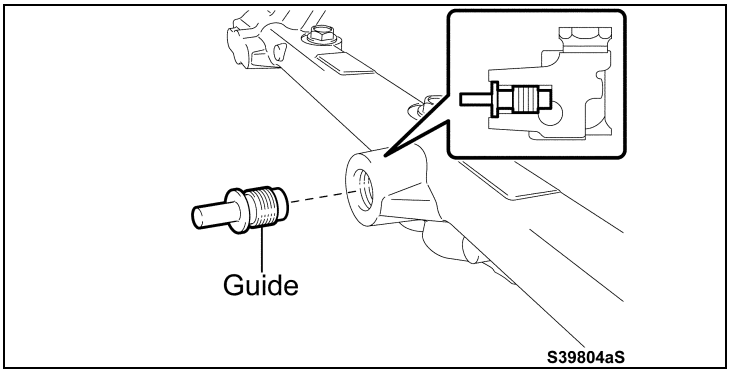
a) Ensure that fuel has stopped dripping from the delivery pipe.

b) Clean the end of the fuel delivery pipe of any fuel.

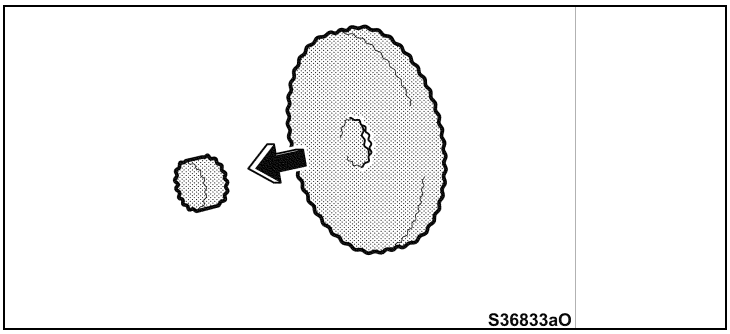
c) Remove the supplied guide from the thread protector.

d) Inspect and clean the threads of the guide.

NOTE: DO NOT dispose of the guide protector it is needed to store the guide.
Replace the guide if the threads are damaged.

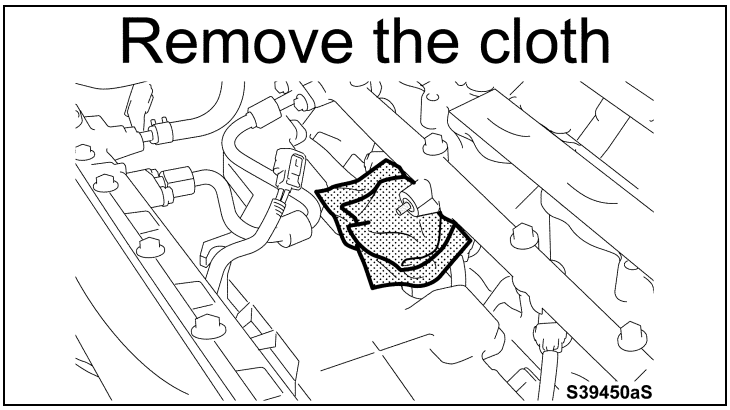


e) Install the guide into the fuel delivery pipe finger tight.

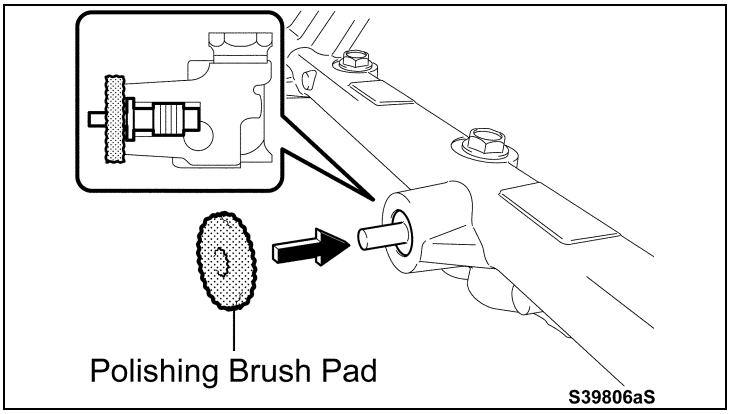


f) Inspect the polishing pad that is contained in the parts kit. Ensure that the center piece of the new pad is removed.

NOTE: DO NOT drop the center piece in the engine compartment.

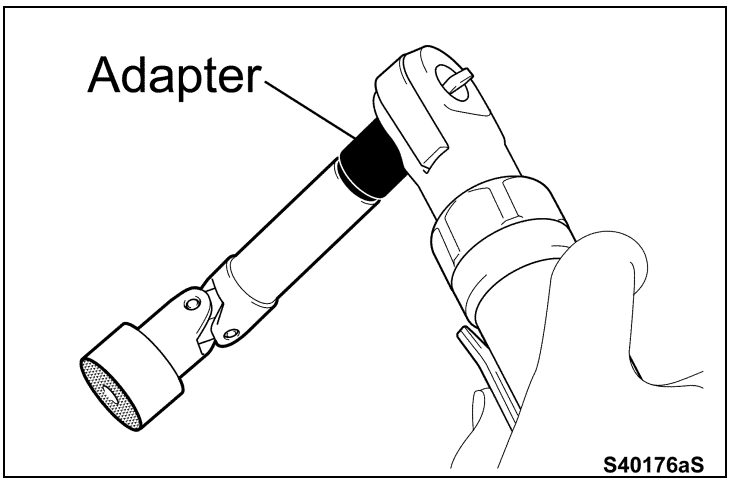


g) Remove the cloth from under the sensor mounting hole.



h) Place the NEW polishing pad onto the guide in the fuel delivery pipe.

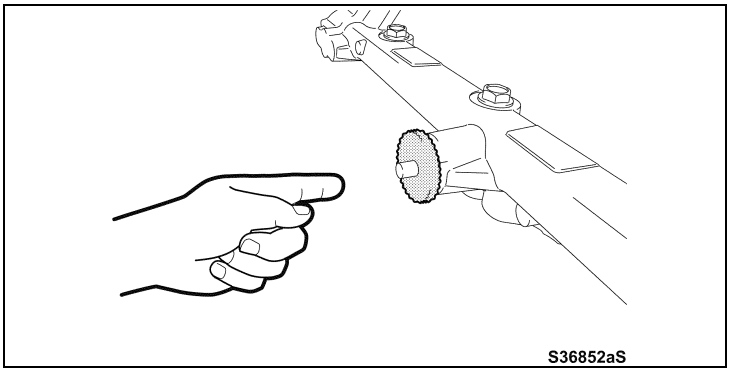
NOTE: Always use a new polishing pad each time. Either side of the pad can be used.



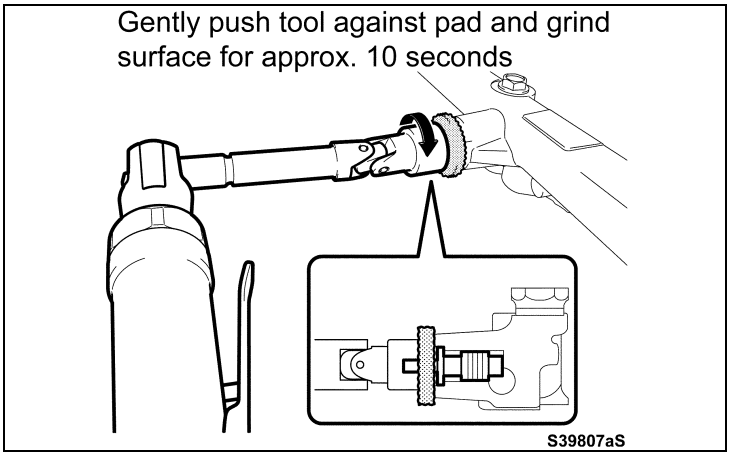
i) Check that the air ratchet will rotate clockwise.

NOTE: Operating the air ratchet in the counter clockwise direction could case the guide to come out of the delivery pipe.

j) Attach the supplied fuel pipe polishing tool to the air ratchet.

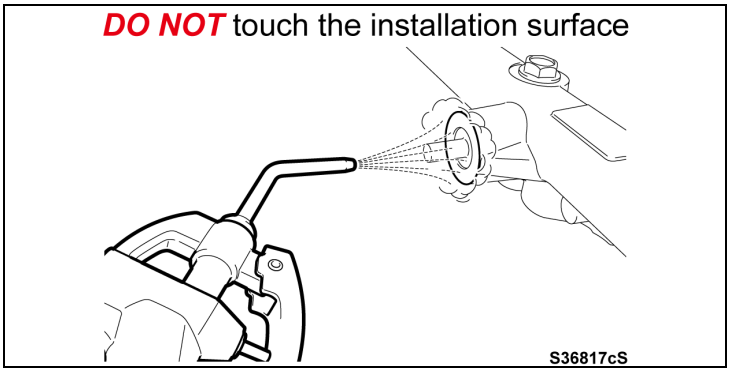


NOTE: Check that the pad is in the correct position.



k) Gently push the tool and pad against the end of the delivery pipe.

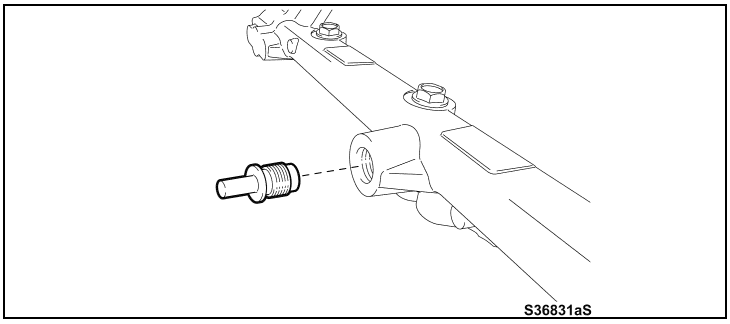
l) Polish the end of the delivery pipe for 10 seconds.



m) Remove the polishing tool and pad from the pipe.

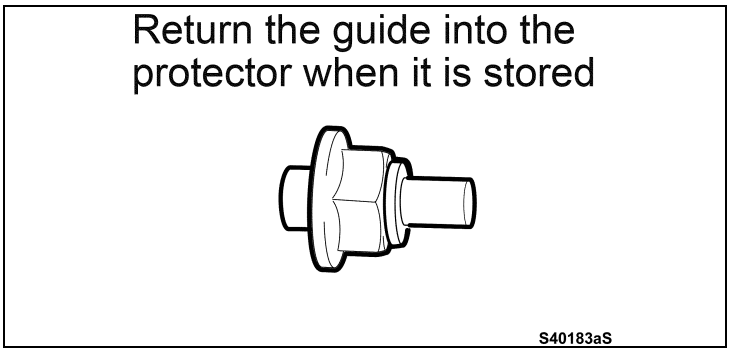
n) Clean the end of the pipe with compressed air.

NOTE: Do not touch the end of the pipe after cleaning.



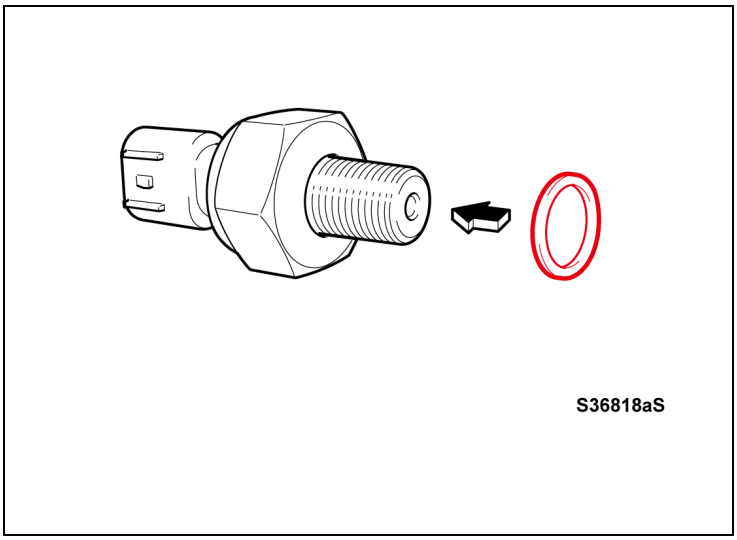
o) Remove the guide from the end of the pipe.

NOTE: The guide may need to be removed with pliers. Be careful not to damage the sensor sealing surface on the end of the pipe.



p) Reinstall the guide into the protector to protect the threads.

VII. REINSTALL THE FUEL PRESSURE SENSOR



1. REINSTALL SENSOR

a) Check the sensor for any damage, and that the threads and sealing surface are clean.

b) Check that the **NEW** sensor gasket for damage and that it is clean.

c) Install the **NEW** gasket onto the sensor.

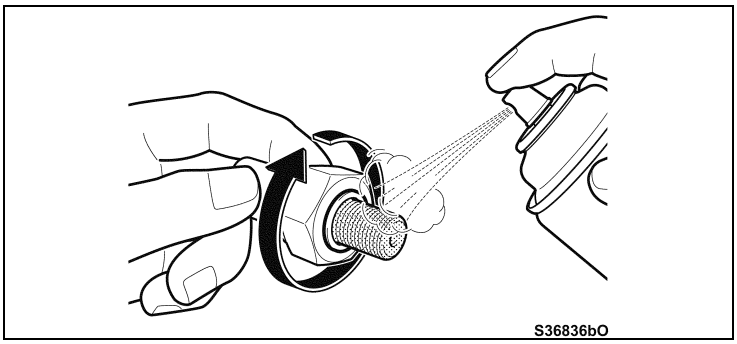
Caution:
When reinstalling the fuel pressure sensor to the fuel delivery pipe, follow the specified procedure.

Failure to observe the instructions may cause looseness or deformation of the sensor and could result in abnormal sensor outputs.

STOP **The Pando 39C is the only approved product to be used for this campaign.**

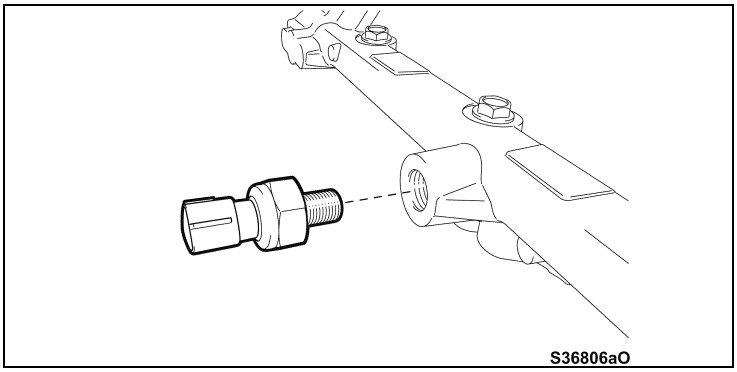
Do not use any other chemical on the fuel sensor threads.

To order Pando 39C see **Section II Step C**.

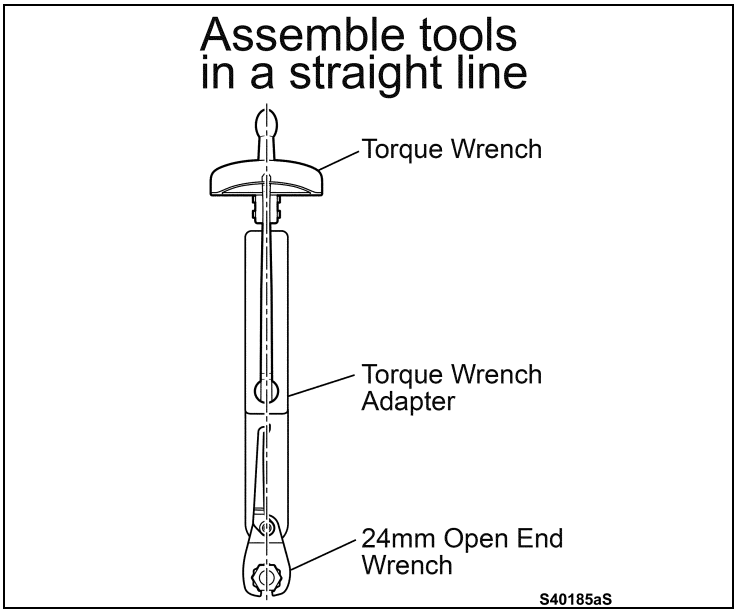


d) Spray Pando 39C onto the threaded portion of the sensor.

STOP **DO NOT spray the Pando 39C into the connector.**



e) Reinstall the sensor into the pipe.

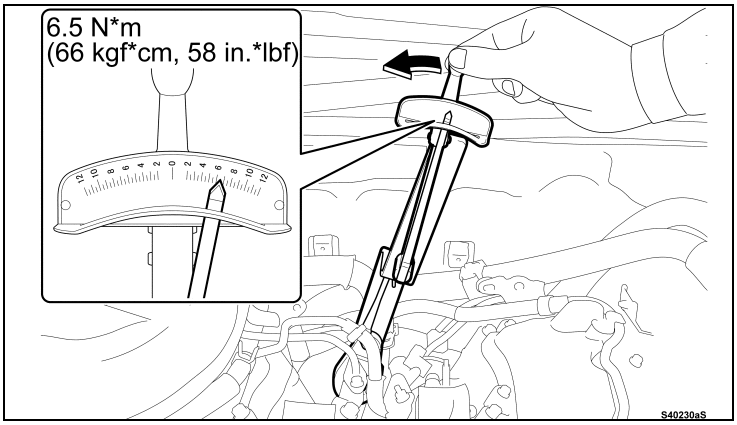


f) Assemble the 24 mm wrench, torque adapter and the supplied torque wrench as shown.

Only use the torque wrench that was supplied for this campaign.

Ensure that three pieces are assembled in a straight line.

The needle on 24 mm wrench is not used on this initial tightening step.

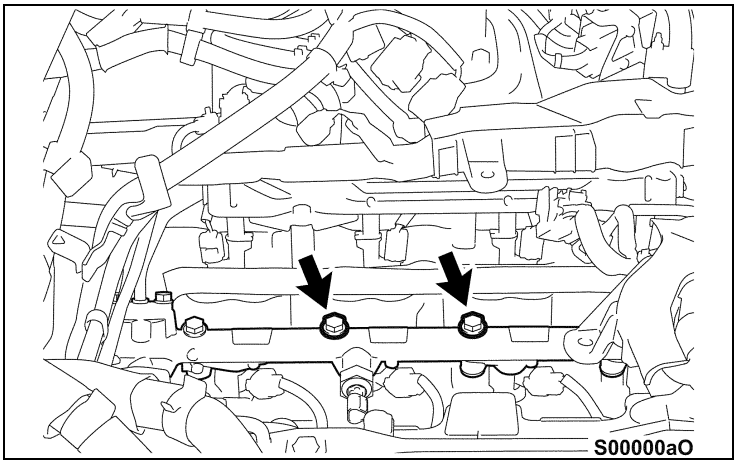


g) Tighten the sensor as shown until the specified torque reading is obtained.

Torque: 6.5 Nm (66 kpf-cm, 58 in-lbs)

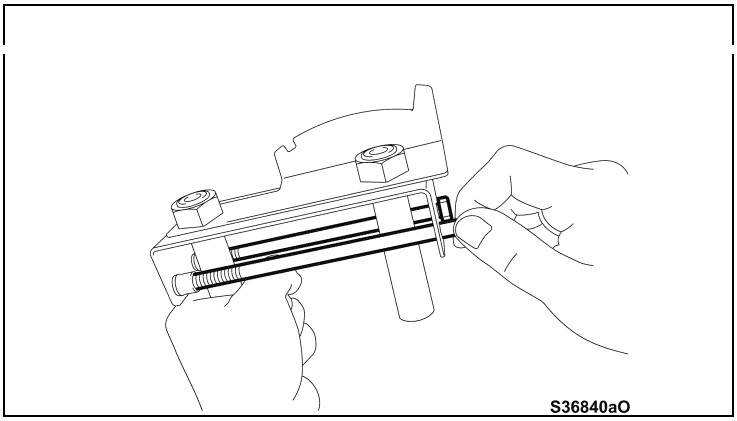
NOTE: If the torque specification has been exceeded, replace the sensor gasket with a NEW one and repeat Steps 1c to 1h.

h) Remove the tool from the sensor.



2. SENSOR TORQUE ANGLE

a) Remove the 2 bolts shown from the fuel delivery pipe.

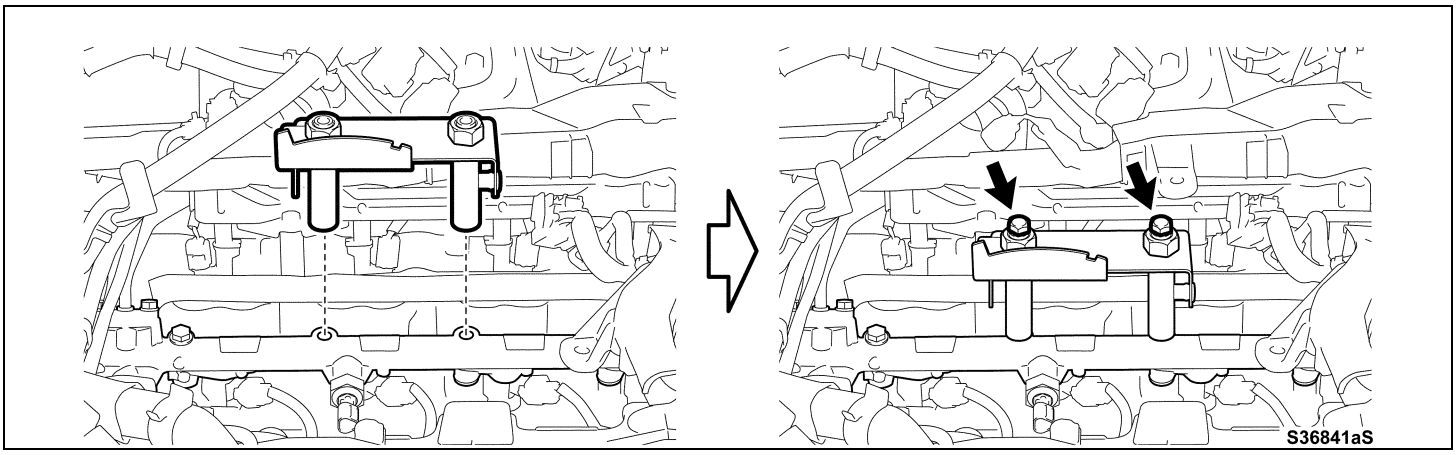


3.

b) Remove the 2 bolts from the supplied UR torque angle plate.

c) Place the UR torque angle plate onto the delivery pipe.

d) Install the bolt into the location shown and hand tighten.



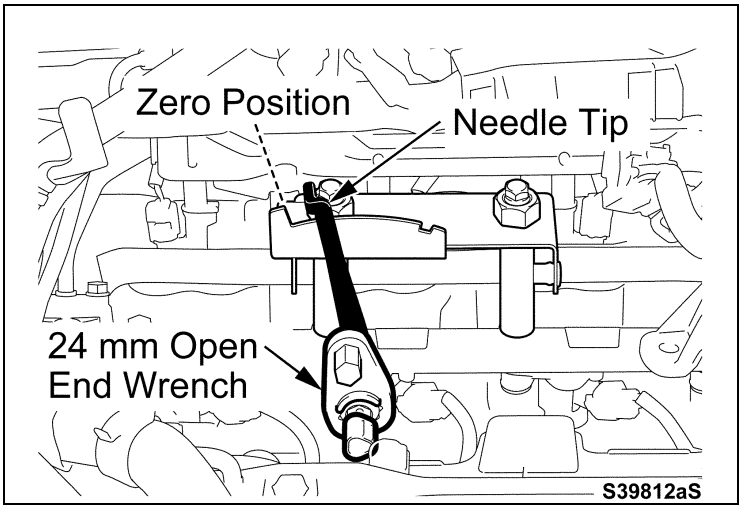
DO NOT skip the torque angle procedure it is the critical step in this repair.

When preforming the torque angle procedure be aware of the following:

DO NOT rotate the sensor until ready.

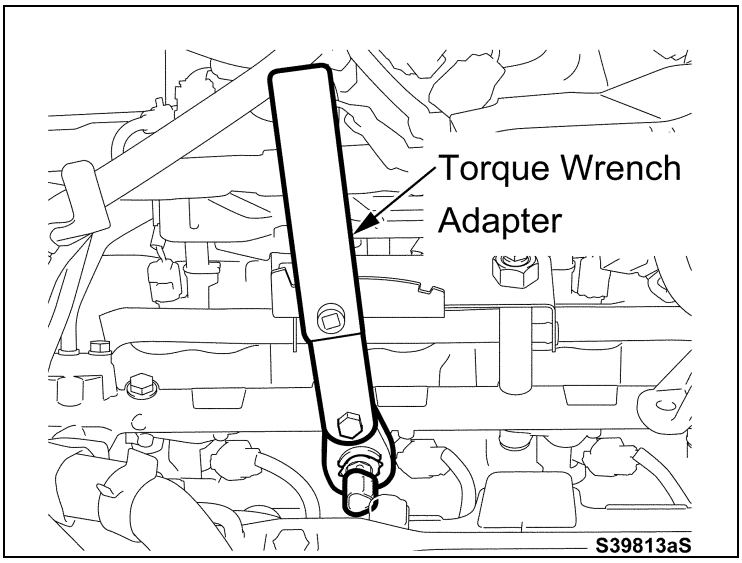
DO NOT rotate the sensor past the indicated notch on the torque angle plate.

If any of the above cautions are violated a NEW fuel pressure sensor gasket will need to be installed and restart the torqueing procedure again at step 1c.

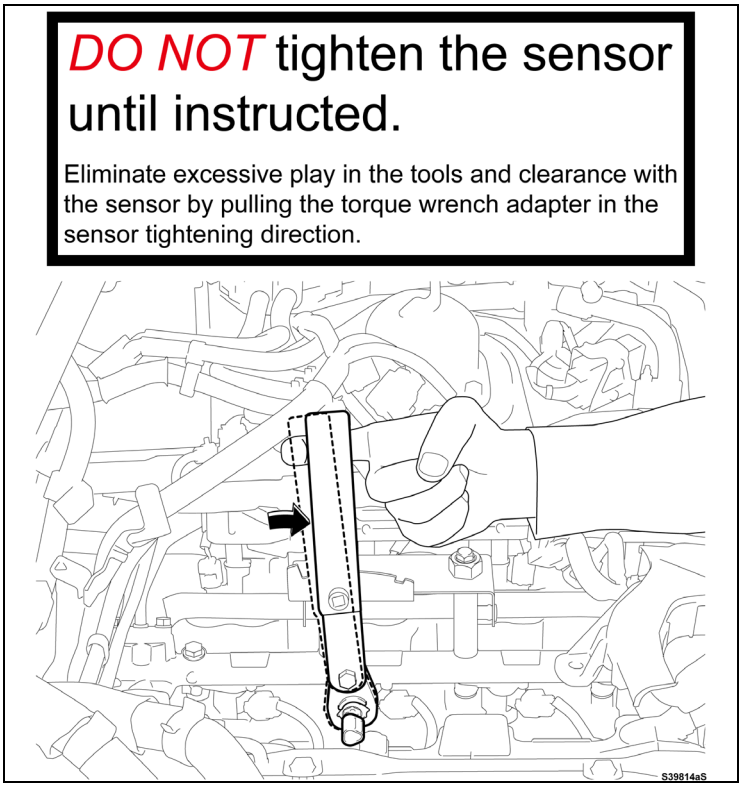


e) Place the 24 mm wrench onto the sensor with the needle as close as possible to the zero position of the torque plate.

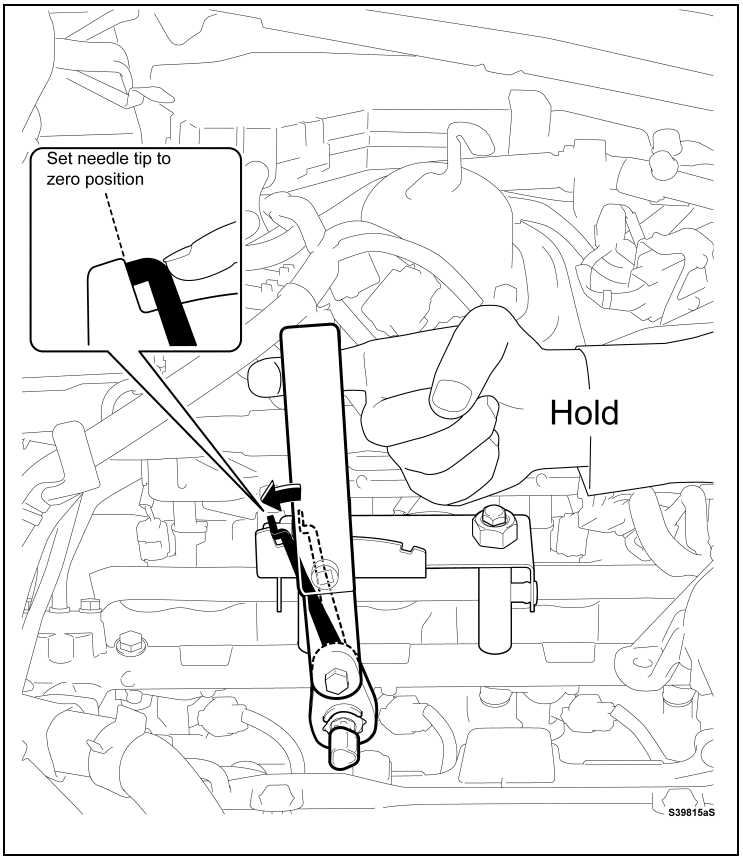
NOTE: Do not rotate the sensor while placing the wrench on the sensor. If the sensor is unintentionally rotated during steps 2e through 2g replace the sensor gasket with a new one and start again from step 1c.



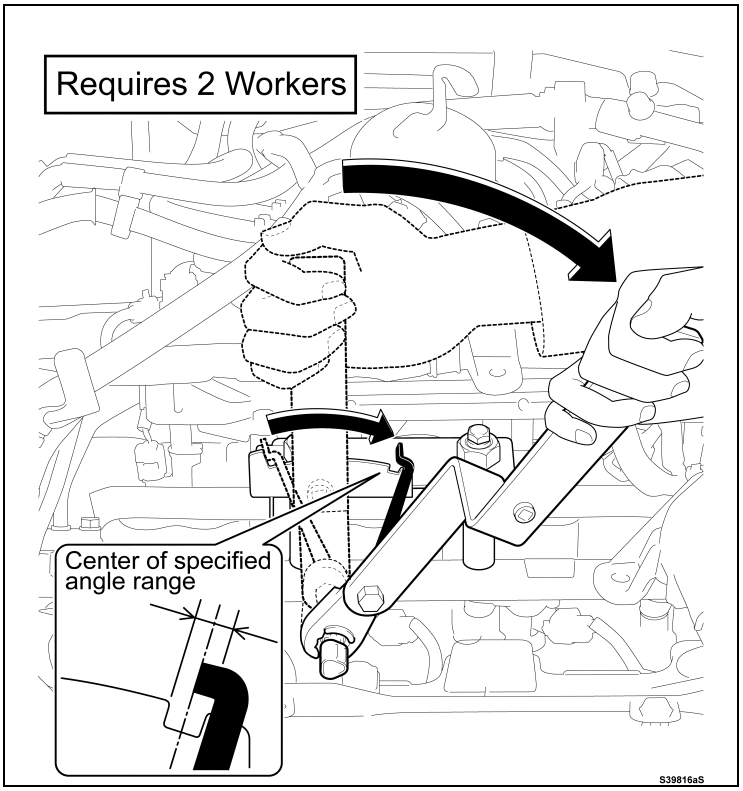
f) Attach the torque wrench adapter to the 24 mm wrench.



g) Lightly push and hold the torque adapter as shown to eliminate any play but do not rotate the sensor.



h) While holding the torque adaptor gently move the needle on the 24 mm wrench to the zero position on the plate.

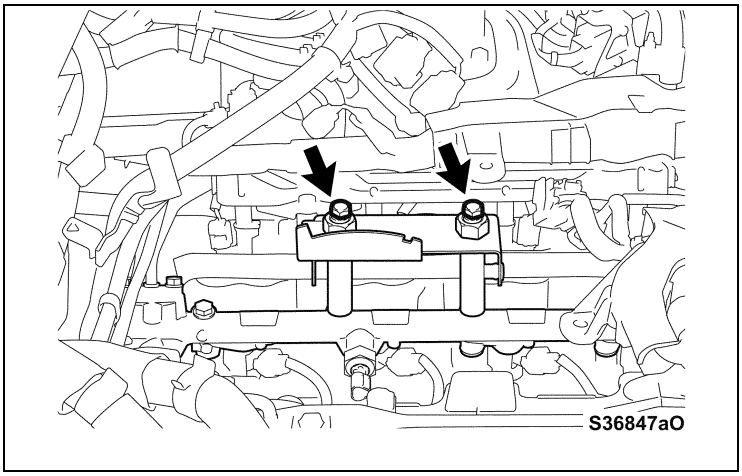


i) Tighten the sensor until the needle tip aligns with the center of the cut out in the plate as shown.

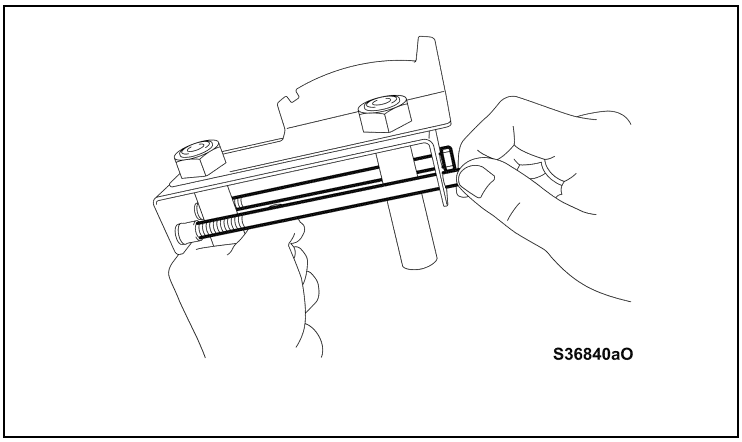
NOTE: A second technician may be required to watch the needle position as it moves across the torque angle gage.

If the sensor is tightened beyond the specified range, replace the sensor gasket with a new one and start again on Step 1c.

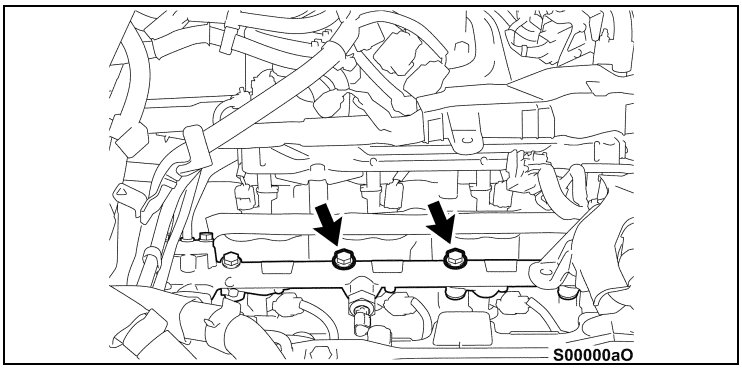
j) Remove the tools from the sensor.



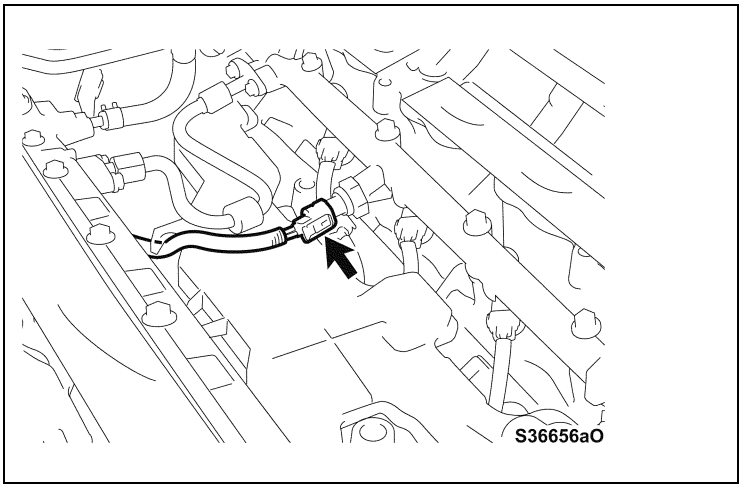
k) Remove the 2 bolts shown and remove the plate.



l) Return the 2 bolts to the storage location on the plate.



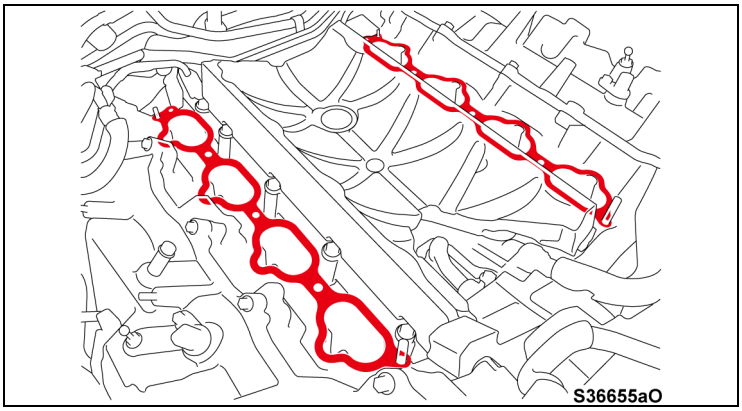
m) Reinstall the bolt and nut for the right fuel delivery pipe.
Torque: 21 Nm (214 kpf-cm, 15 ft-lbs)



n) Reconnect the sensor connector.

VIII. REASSEMBLE THE VEHICLE

1. REINSTALL THE No. 1 ENGINE COVER



2. REINSTALL THE INTAKE MANIFOLD

a) Remove the protective tape from the cylinder head.

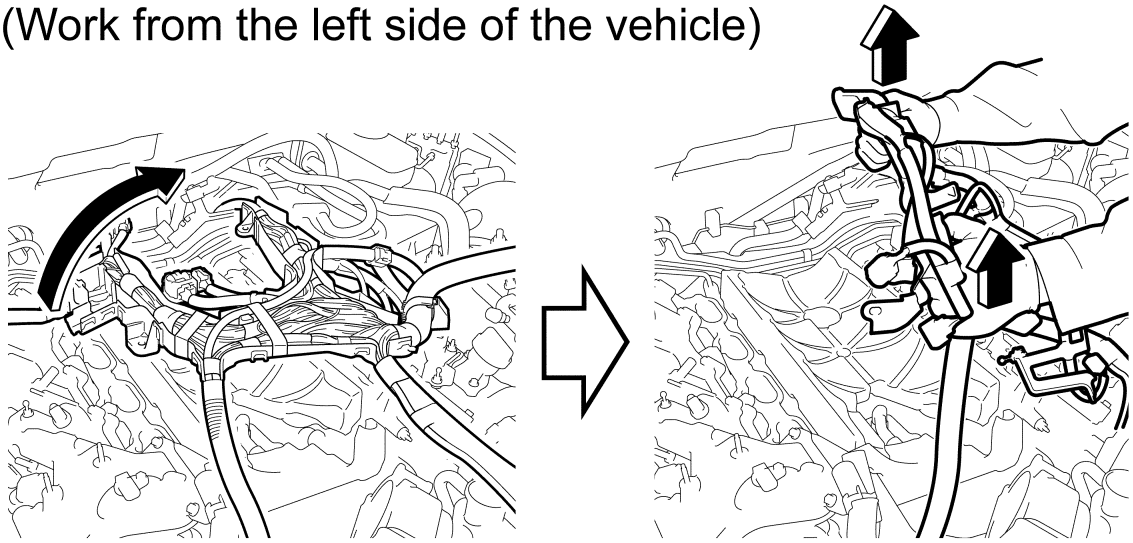
b) Clean the gasket surface of the cylinder head.

c) Install 2 NEW intake manifold gaskets onto the cylinder heads.

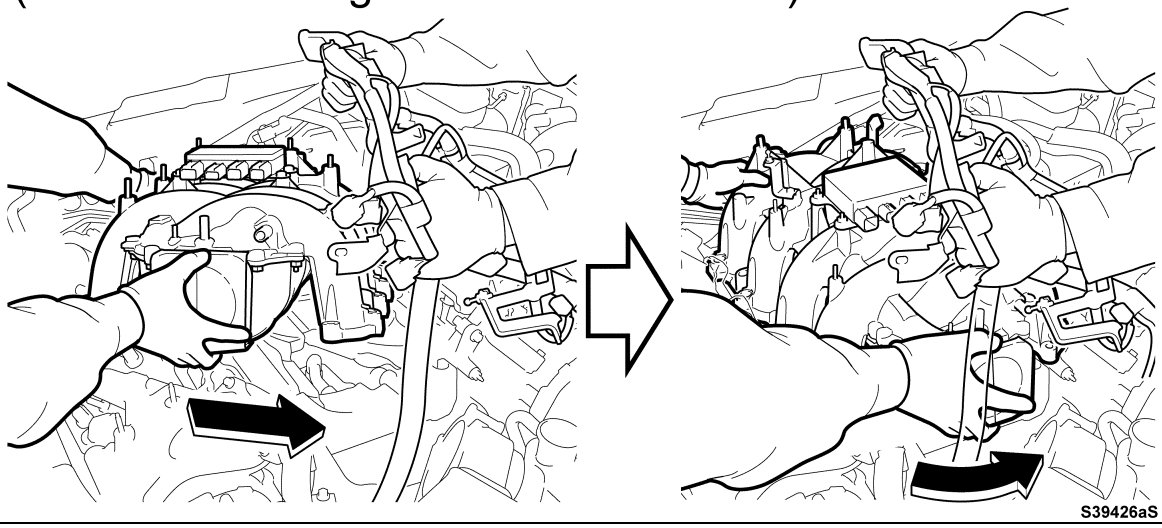
d) Reinstall the intake manifold as shown.

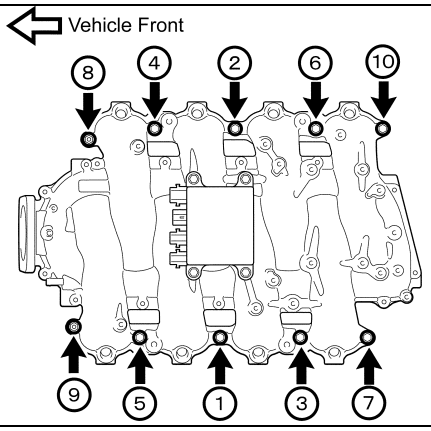
Requires 2 Workers

1. The assisting worker must lift the wire harnesses. (Work from the left side of the vehicle)

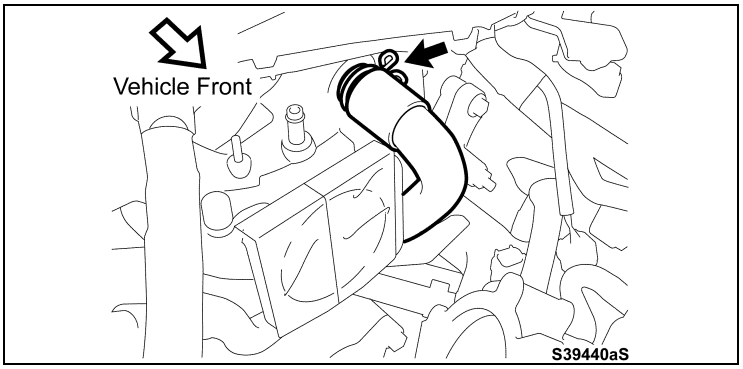


2. The main worker must temporarily install the surge tank while the assisting worker is lifting the wire harness. (Work from the right side of the vehicle)

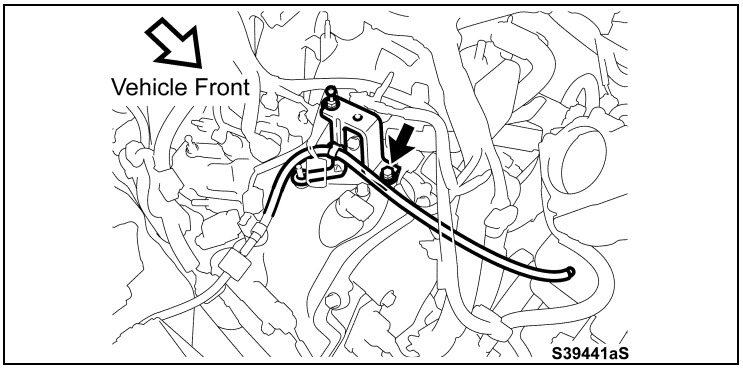




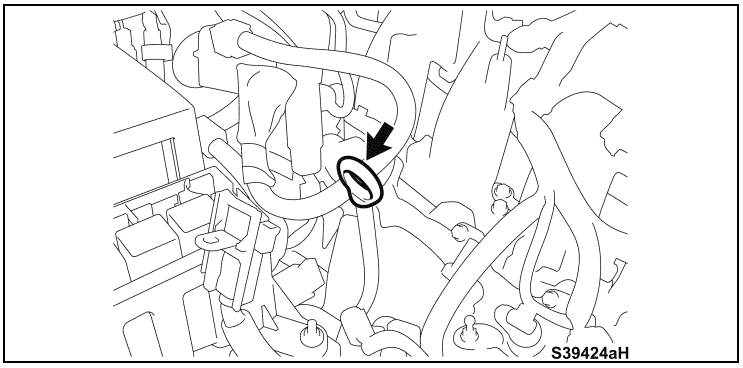
e) Reinstall the 8 bolts and the 2 nuts in the sequence shown.
Torque: 21 Nm (214 kpf-cm, 15 ft-lbs)



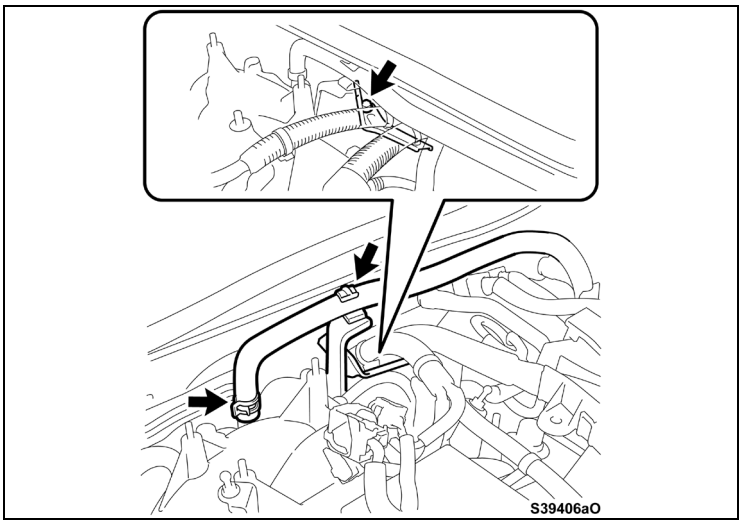
f) Reconnect the vent hose.



g) Reinstall the bracket and bolt
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)



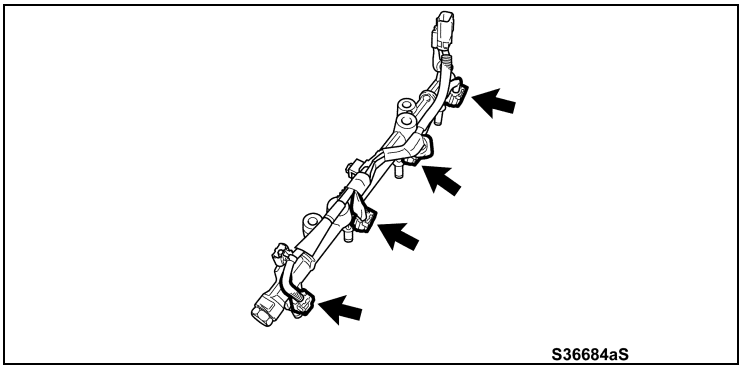
h) Reinstall the engine dip stick.



i) Reinstall the bolt onto the wire harness bracket.
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)

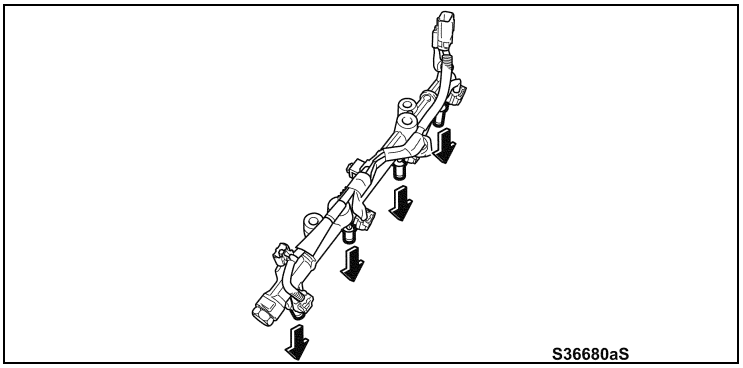
j) Reconnect the vacuum hose and clip.

k) Remove protective tape.


S36684aS

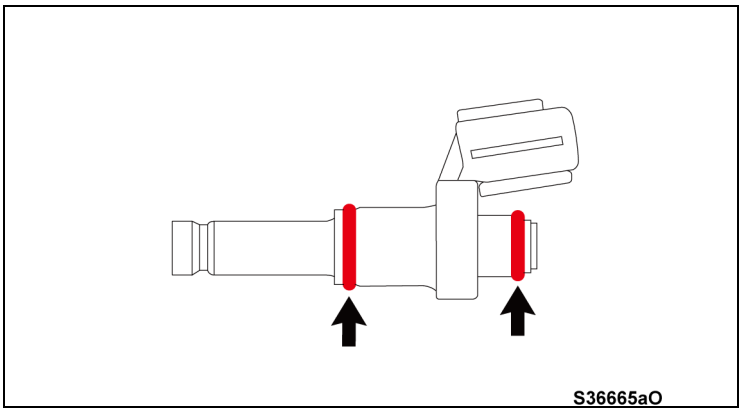
3. REINSTALL THE FUEL PIPES AND INJECTORS

a) Disconnect the 4 injector harness connectors.


S36680aS

b) Remove the 4 injectors.

c) Remove and discard the 8 O-Rings.


S36665aO

d) Apply Pando 39C to the NEW O-Rings.

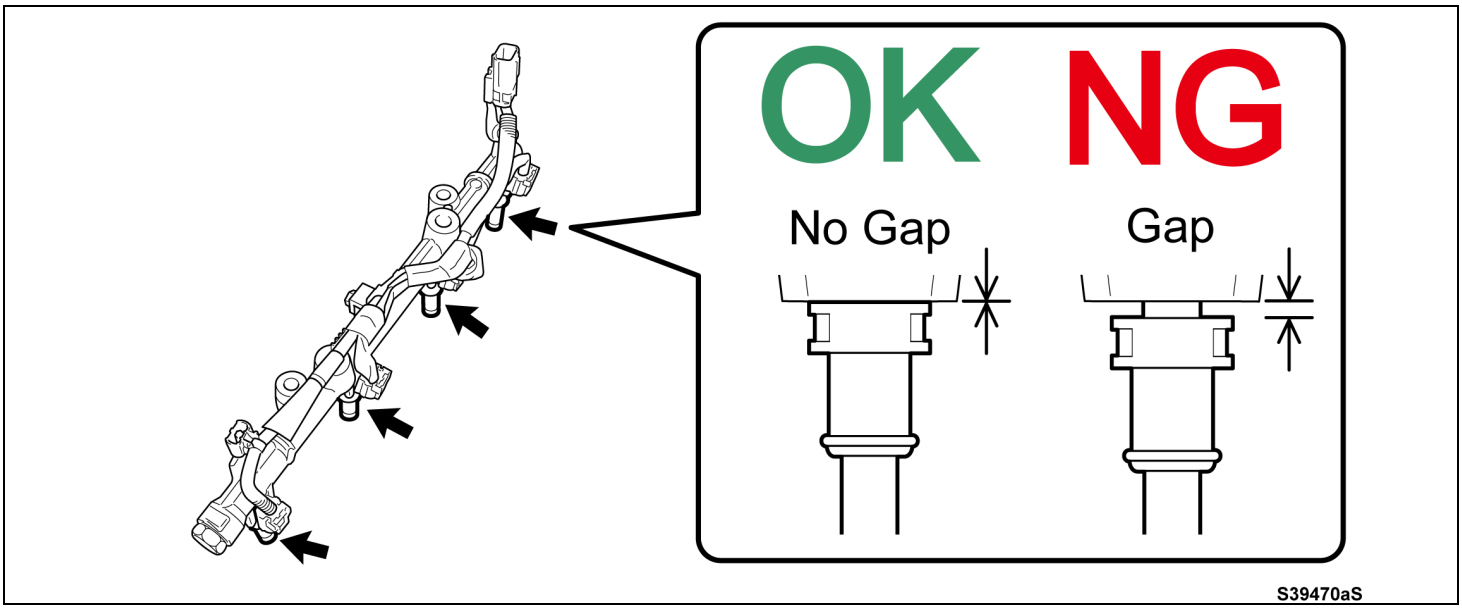
e) Install the NEW O-Rings onto the injectors.

f) Reinstall the 4 injectors onto the fuel pipe.

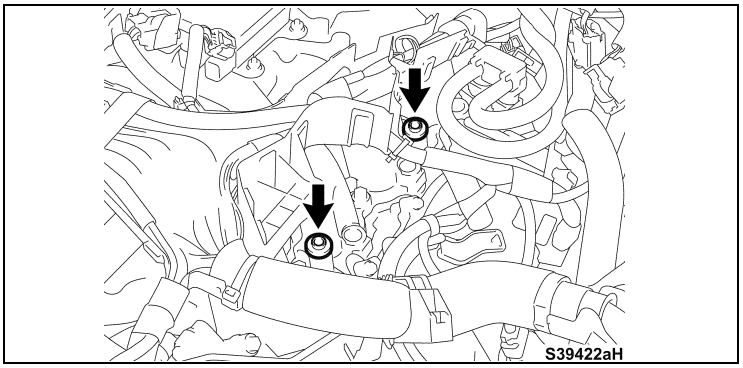
NOTE: Ensure that there is no gap between the injector and the fuel pipe.

g) Reconnect the injector connectors.

h) Preform steps a through f on the other fuel pipe.



S39470aS



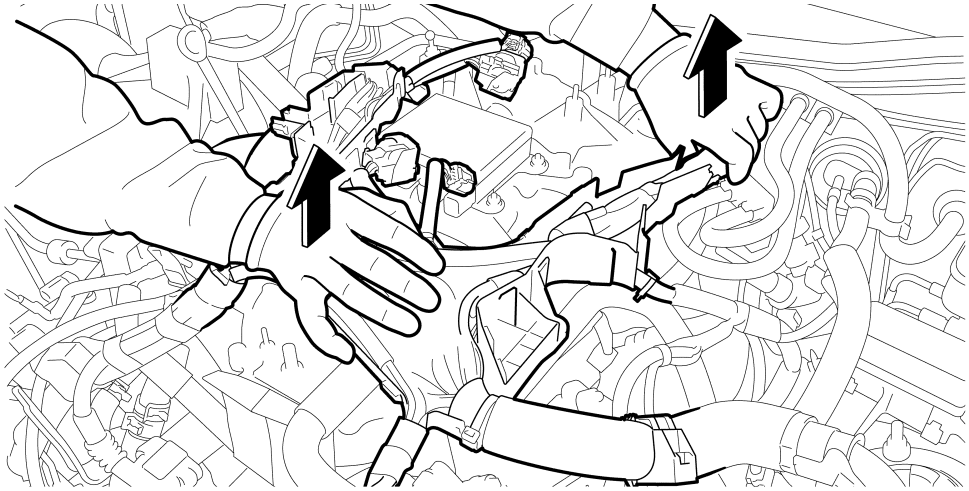
i) Reinstall the 2 No. 2 fuel delivery pipe spacers.

j) Remove the protective tape from the injector ports.

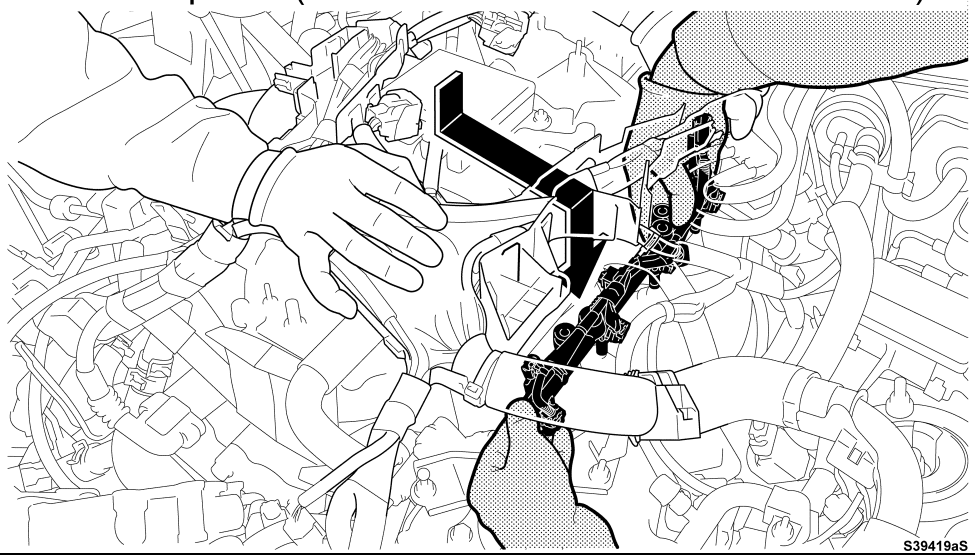
k) Reinstall the No. 2 fuel delivery pipe as shown.

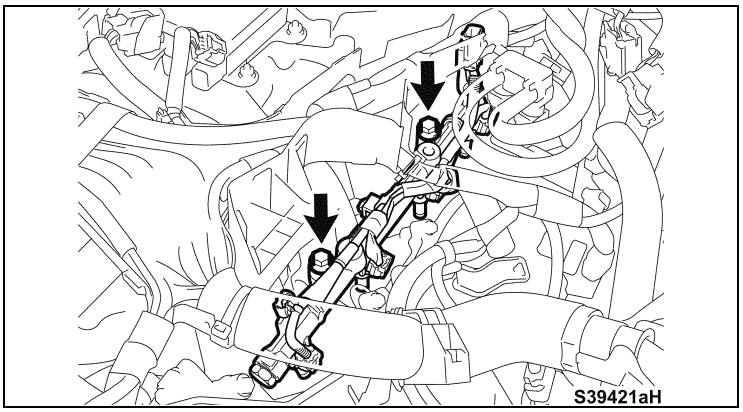
Requires 2 Workers

1. The assisting worker must lift the wire harnesses. (Work from the right side of the vehicle)

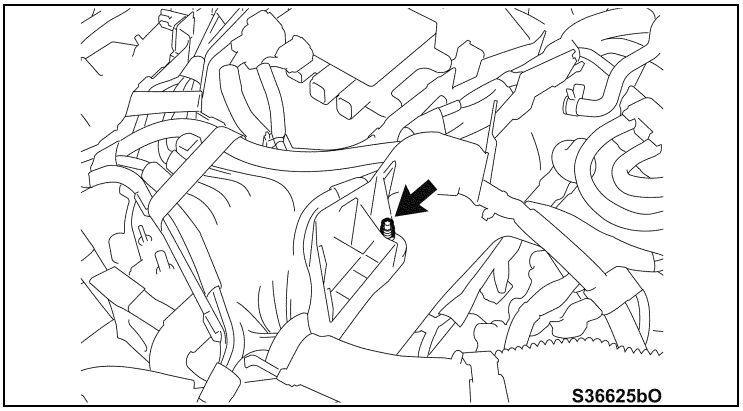


2. The main worker must temporarily install the manifold while the assisting worker is lifting the wire harnesses, avoiding damage to the injectors due to interference with other parts. (Work from the left side of the vehicle)

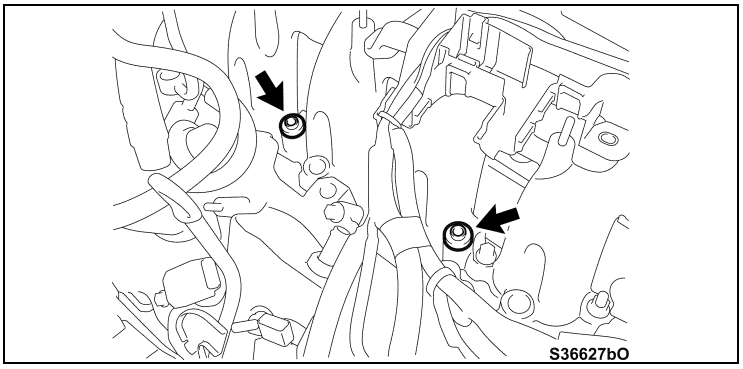




l) Reinstall the 2 bolts.
Torque: 21 Nm (214 kpf-cm, 15 ft-lbs)

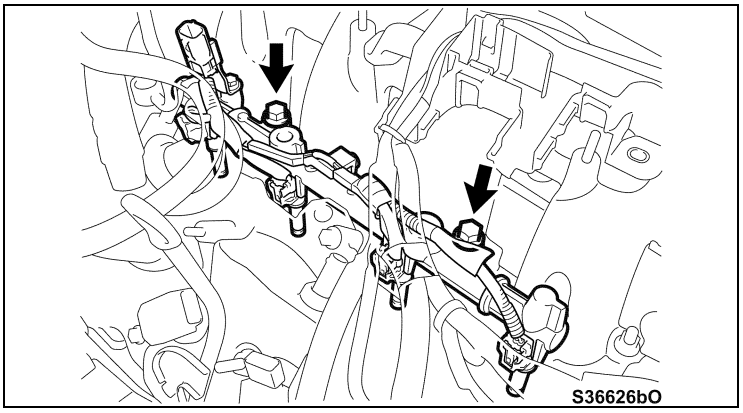


m) Reinstall the stud.
Torque: 4.0 Nm (41kpf-cm, 35 in-lbs)



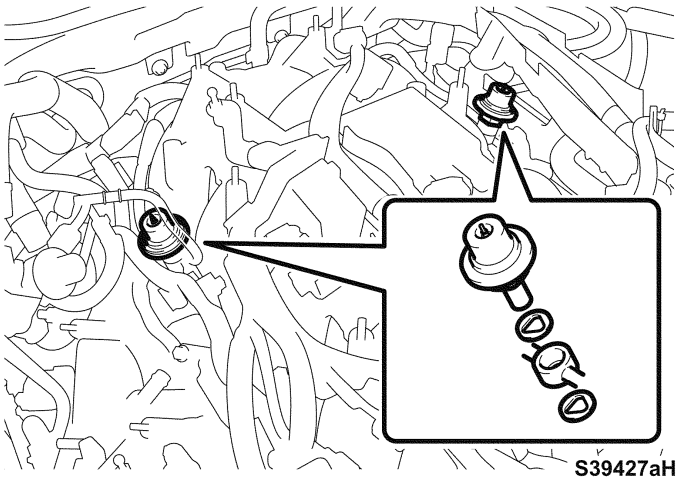
n) Reinstall the 2 No. 1 fuel delivery pipe spacers.

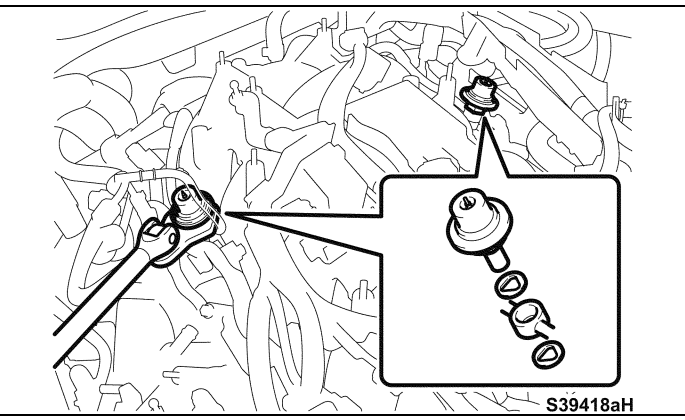
o) Remove the protective tape from the injector ports.



p) Reinstall the No. 1 fuel pipe.

q) Reinstall the 2 bolts.
Torque: 21 Nm (214 kpf-cm, 15 ft-lbs)





4. REINSTALL THE FUEL PULSATION DAMPERS

a) Remove the tape from the fuel pipe.

b) Temporarily install both pulsation dampers with NEW gaskets.

STOP

- ***DO NOT*** **reuse the pulsation dampers if dropped.**
- ***DO NOT*** **blow air onto the pulsation dampers. The air pressure could damage the diaphragm.**
- ***DO NOT*** **damage the sealing surface when installing the pulsation dampers, it could cause fuel leaks.**

c) Using the SST torque both dampers.
Torque: 40 Nm (408 kpf-cm, 30 ft-lbs)

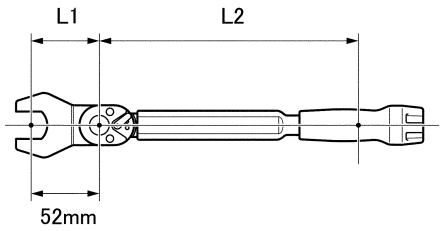
Torque when using the SST along with torque wrench QL50N

SST: 09617-24011 (22mm Crowsfoot)

Torque: 31 Nm (316 kpf-cm, 23 ft-lbs)

STOP

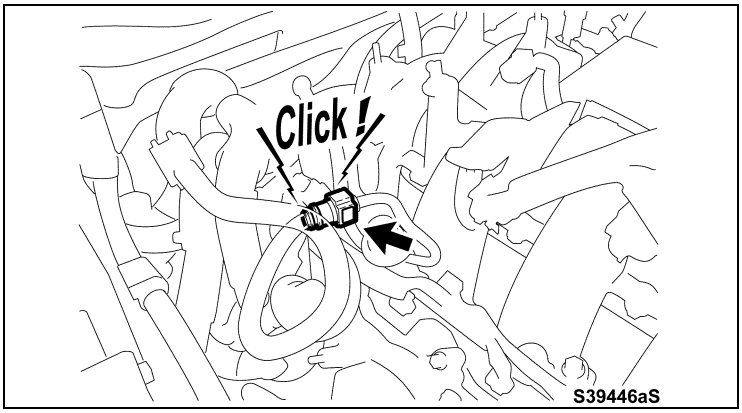
Use the formula below to calculate the torque reading values when using the extension tool.



Formula: T' = T x L2 / (L1+L2)

T'	Torque wrench reading [N*m (kgf*cm, ft.*lbf)]
T	Specified torque value [N*m (kgf*cm, ft.*lbf)]
L1	Length of extension tool (mm)
L2	Length of torque wrench (mm)

S39472aS



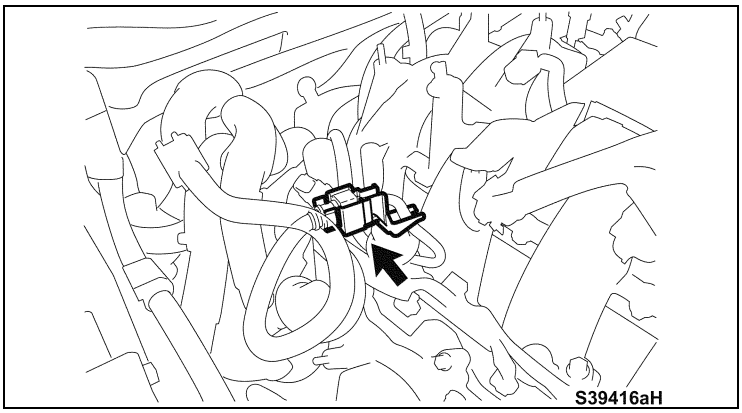
5. RECONNECT THE No. 3 FUEL LINE

a) Uncover the fuel line and fuel pipe.

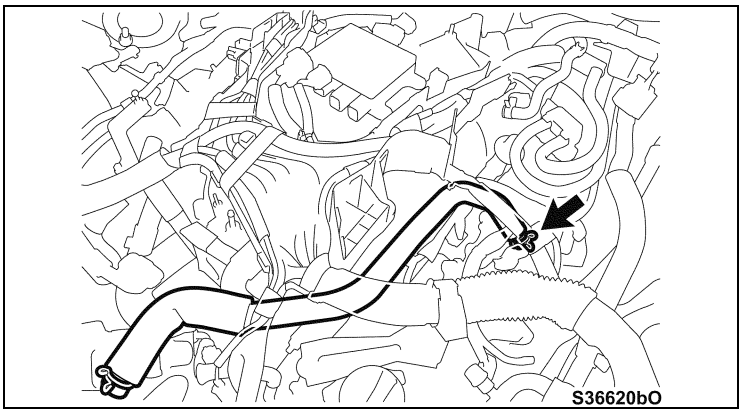
b) Check the fuel line and pipe for any damage or dirt.

c) Reconnect the fuel line to the pipe and push in until a click is heard.

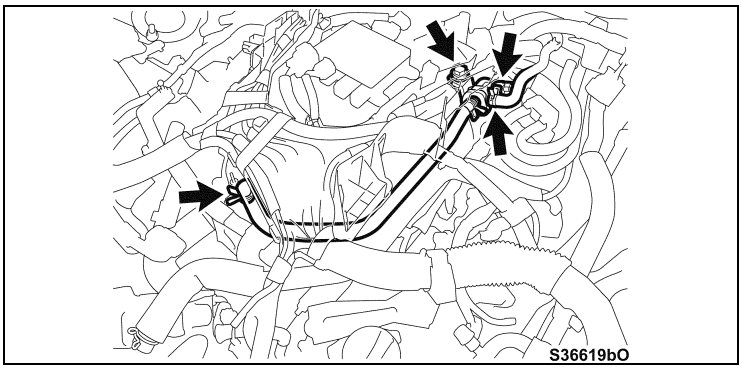
d) Confirm that the fuel line is secured by pulling on it.



e) Reinstall the No. 3 fuel line clamp.



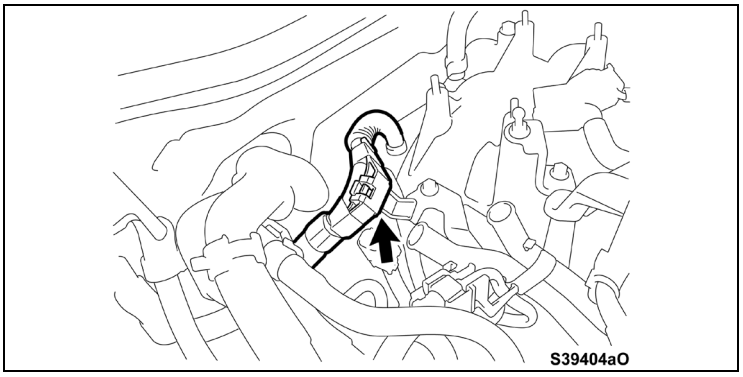
6. REINSTALL THE No. 3 VENT HOSE



7. REINSTALL THE No. 1 VACUUM SWITCHING VALVE AND HOSE

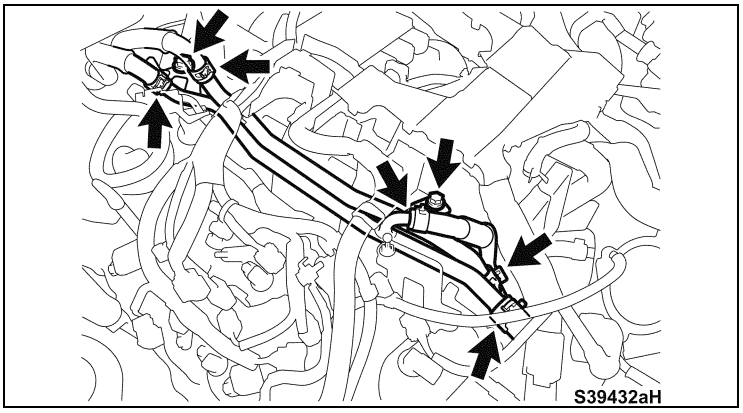
a) Reinstall the bolt for the switching valve.
Torque: 21 Nm (214 kpf-cm, 15 ft-lbs)

b) Reconnect the 2 hoses and the connector.



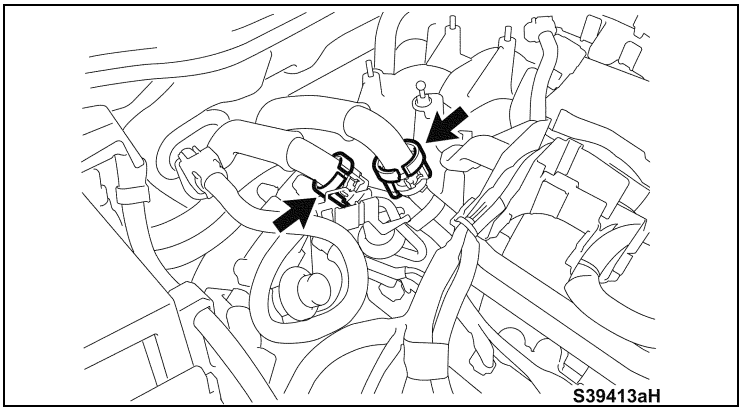
8. REINSTALL THE WATER BY-PASS PIPE

a) Reinstall the clamp.

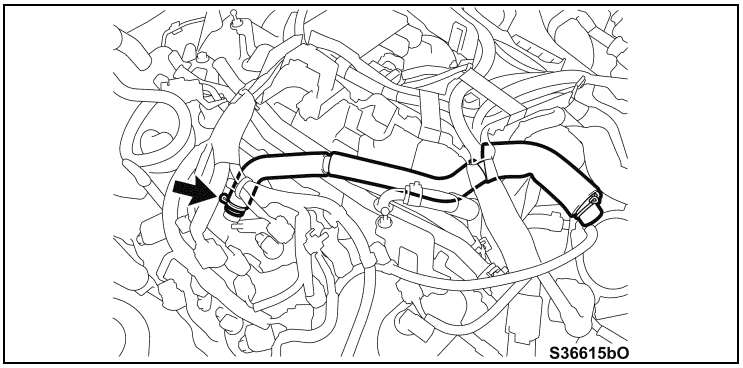


b) Reconnect the hoses at the 5 locations.

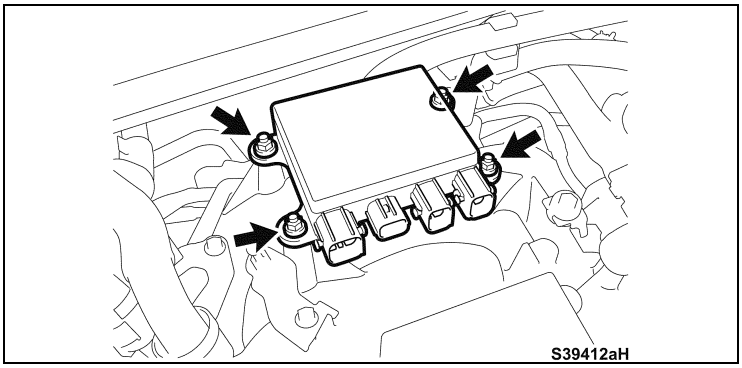
c) Reinstall the 2 bolts for the water by-pass pipe.
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)



d) Reinstall the 2 water hose sets.



9. REINSTALL THE No. 2 VENT HOSE

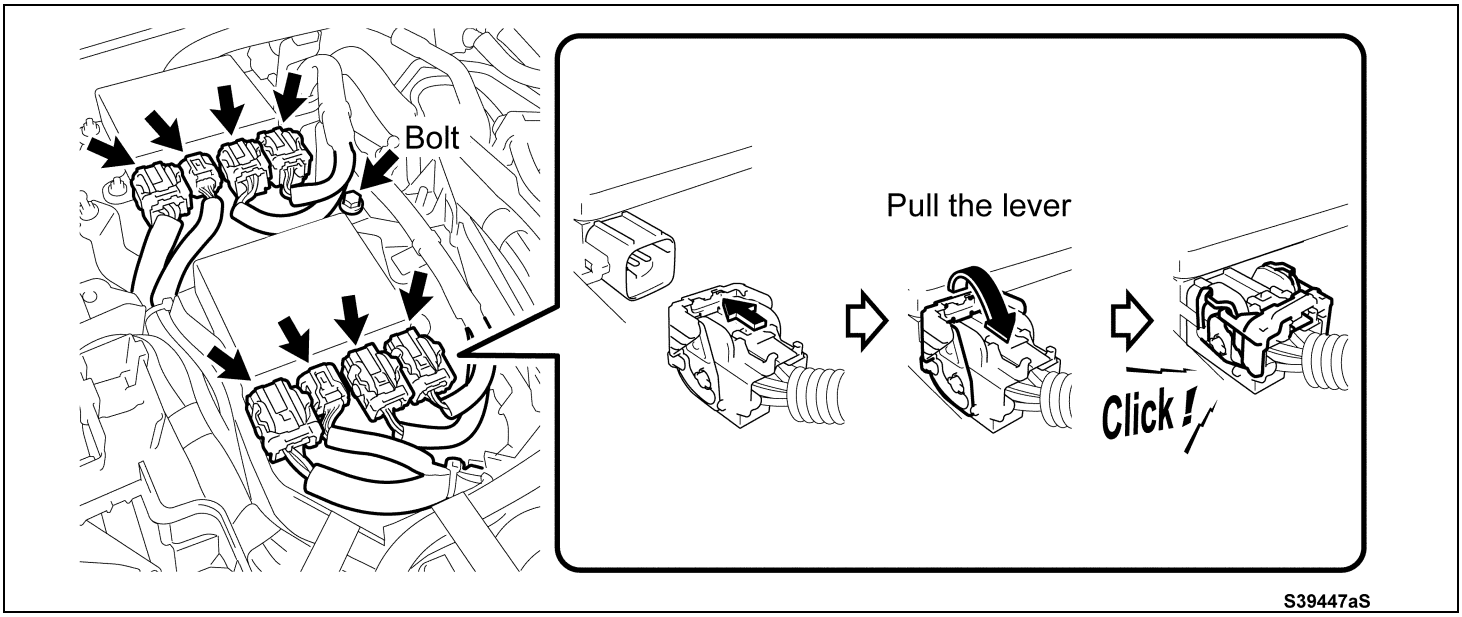


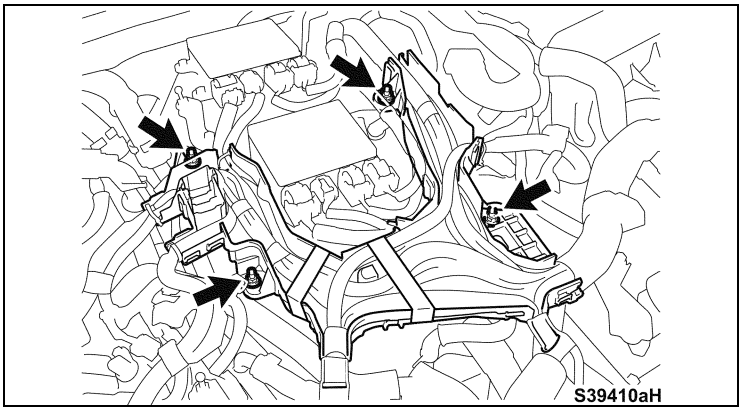
10. REINSTALL THE INJECTOR DRIVER

a) Reinstall the injector driver with the 4 nuts.
Torque: 7.5 Nm (76 kpf-cm, 66 in-lbs)

b) Reinstall the bracket with the bolt.
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)

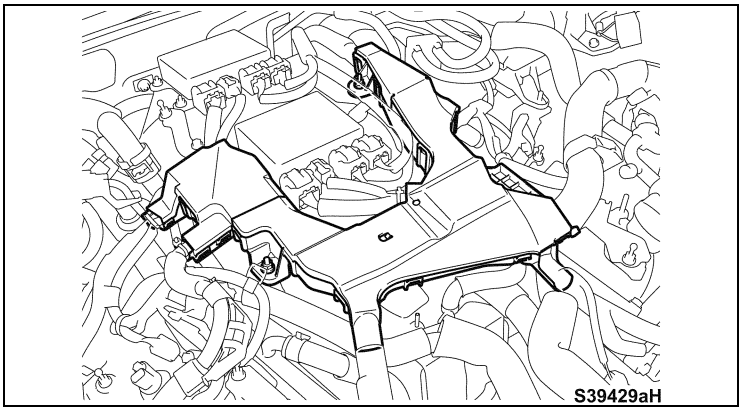
c) Reconnect the 8 connectors.



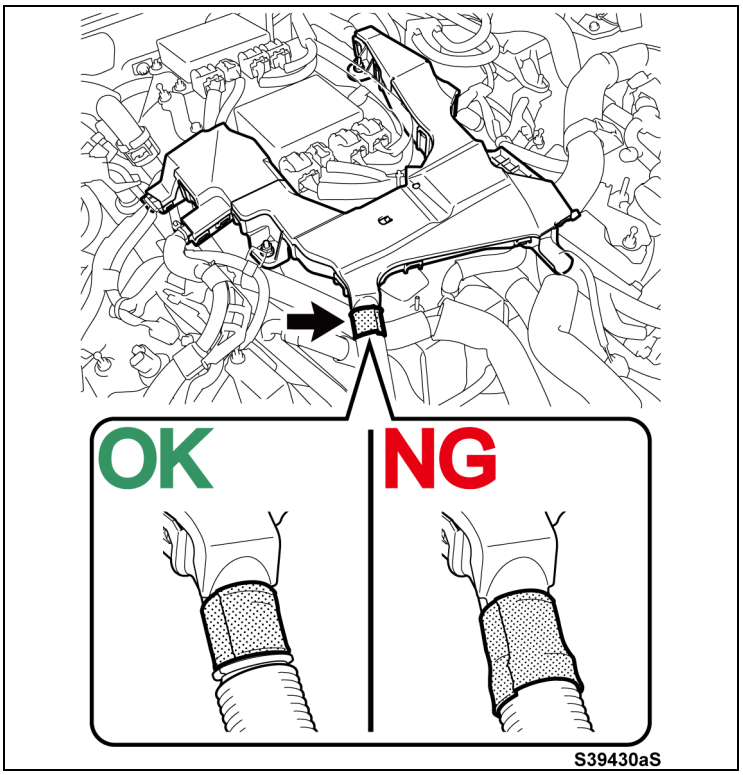


11. REINSTALL THE No. 4 WIRING HARNESS COVER

a) Reinstall the No. 4 lower wiring harness cover with the 4 nuts.
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)



b) Reinstall the upper cover and engage the 30 claws.

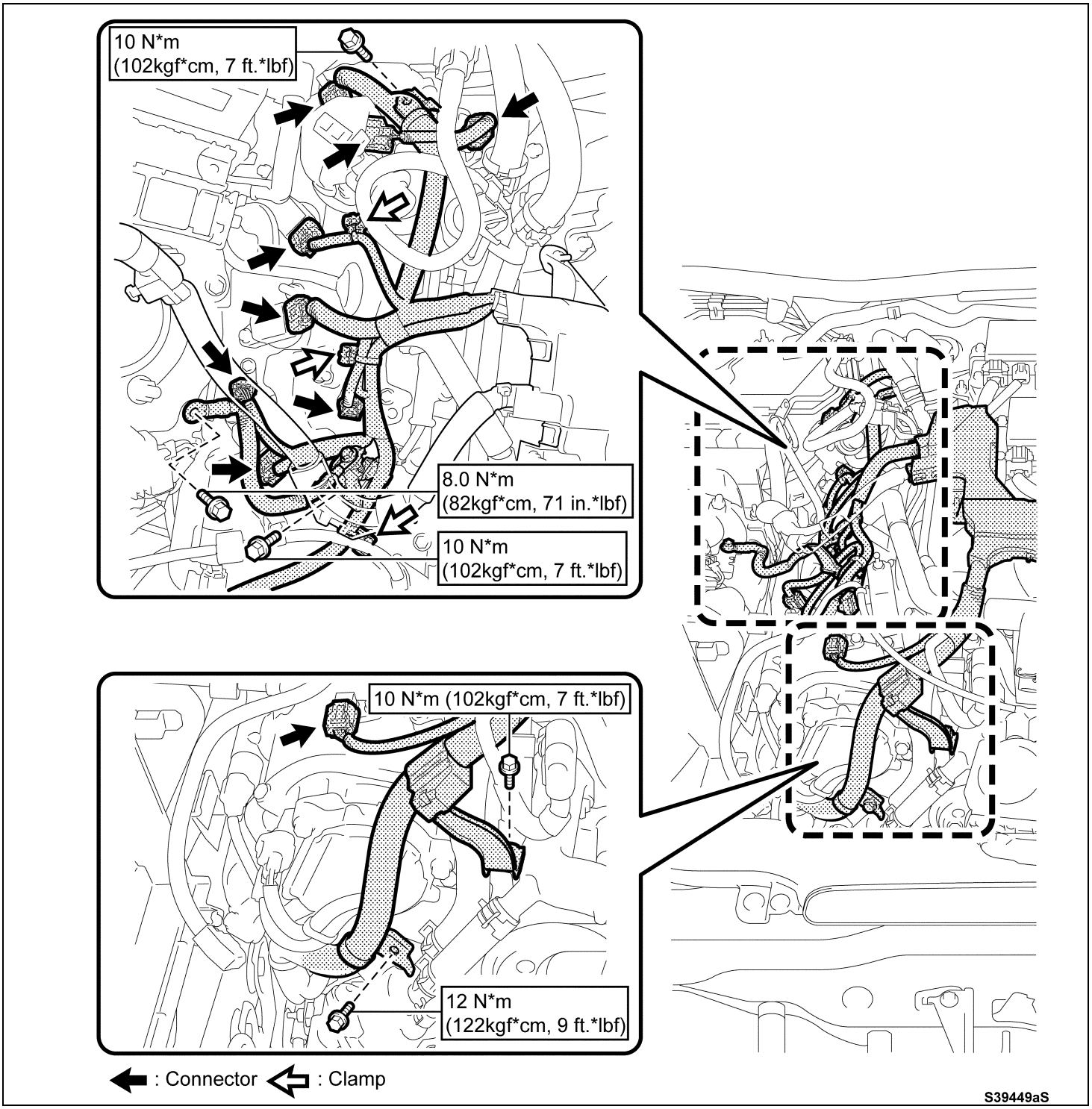


c) Wrap heat resistant tape in the area shown.

NOTE: DO NOT apply tape to the harness.

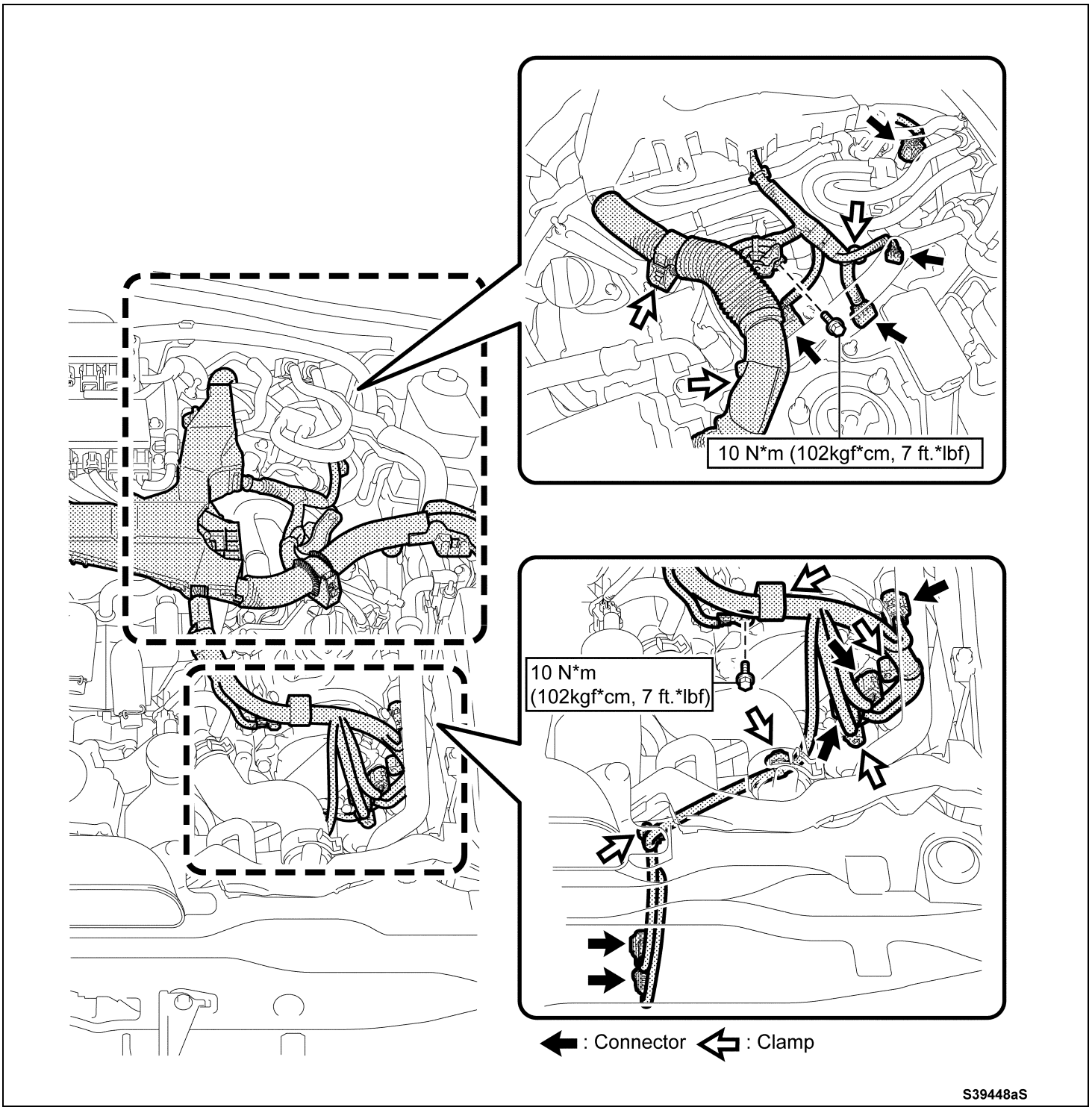
12. RECONNECT THE ENGINE WIRE HARNESS

a) On the right side of the engine
- Reinstall the 5 bolts.
- Reconnect the connectors.
- Re-engage the clamps.



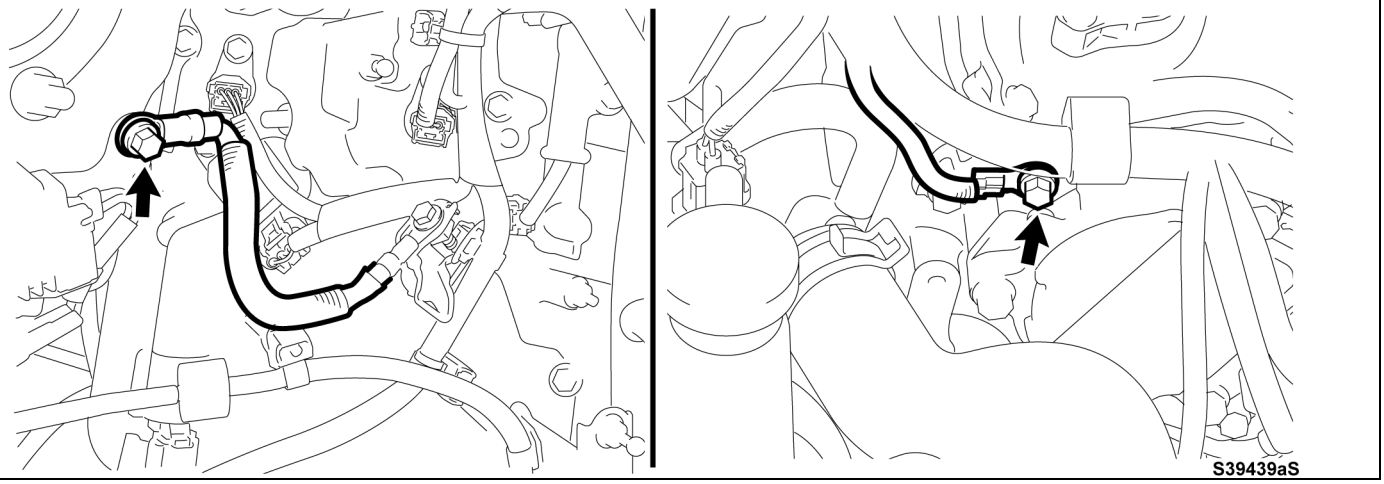
b) On the left side of the engine

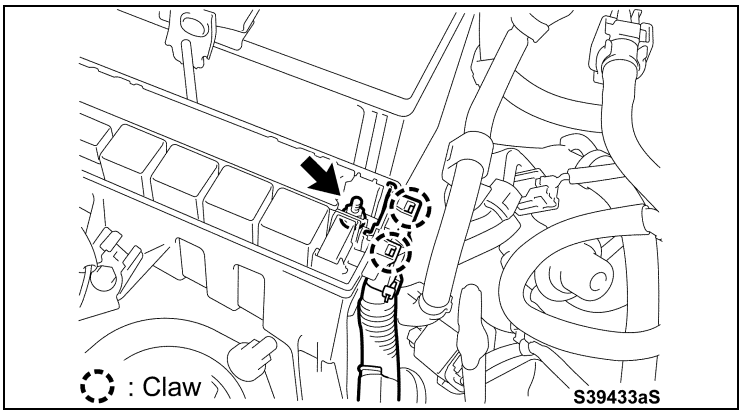
- Reinstall the 2 bolts.
- Reconnect the connectors.
- Re-engage the clamps.



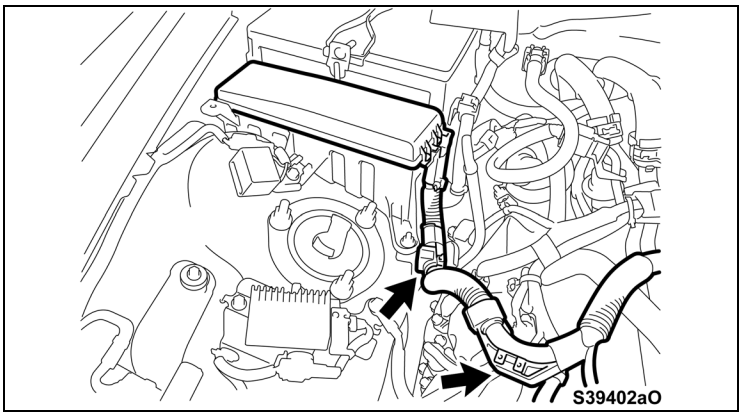
c) Ensure that the ground bolts are reinstalled.

DO NOT forget to reinstall ground bolts.



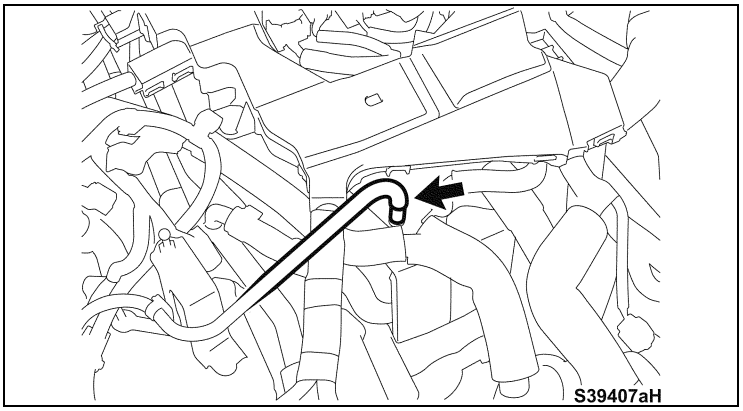


d) Re-engage the 2 claws and reconnect the wire harness.
e) Reinstall the nut.
Torque: 12 Nm (122 kpf-cm, 9 ft-lbs)

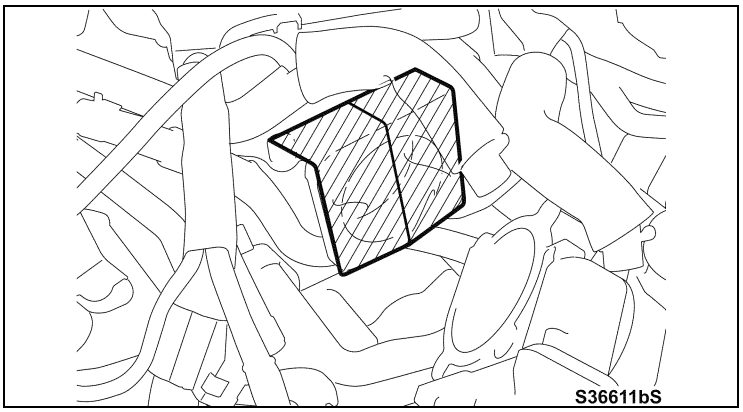


f) Re-engage the 2 clamps.

g) Reinstall the No. 1 relay block cover.



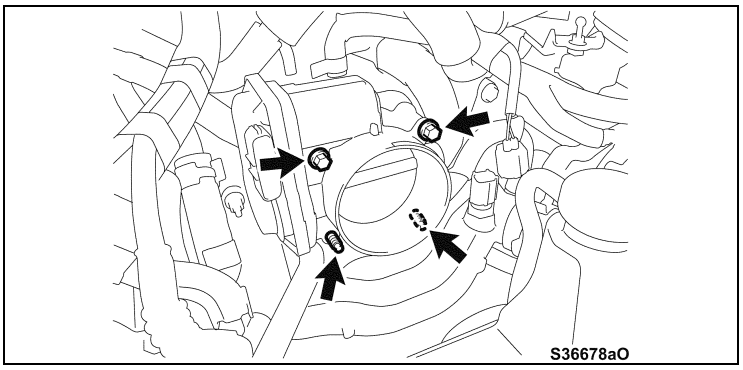
13. RECONNECT THE VACUUM HOSE



14. REINSTALL THE THROTTLE BODY

a) Remove the tape from the throttle body port.

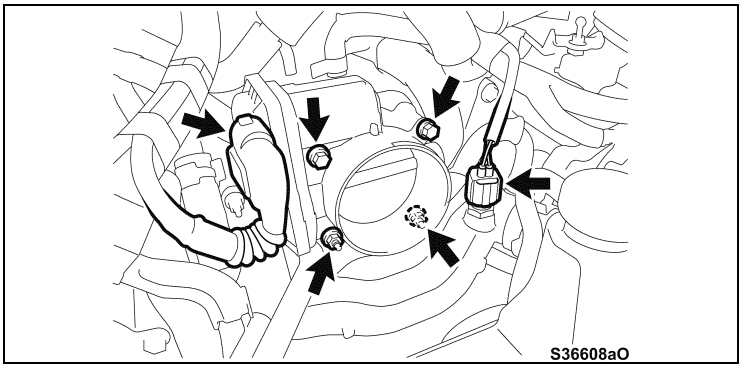
b) Clean the gasket surface.



c) Reinstall the throttle body with a NEW gasket.

d) Reinstall the 2 lower studs for the throttle body.

NOTE: It may be necessary to install the 2 bolts to hold the throttle body while installing the studs.



e) Reinstall the 2 bolts and 2 nuts.
Torque: 10 Nm (102 kpf-cm, 7 ft-lbs)

f) Reconnect the 2 connectors.

15. REINSTALL AIR CLEANER ASSEMBLY

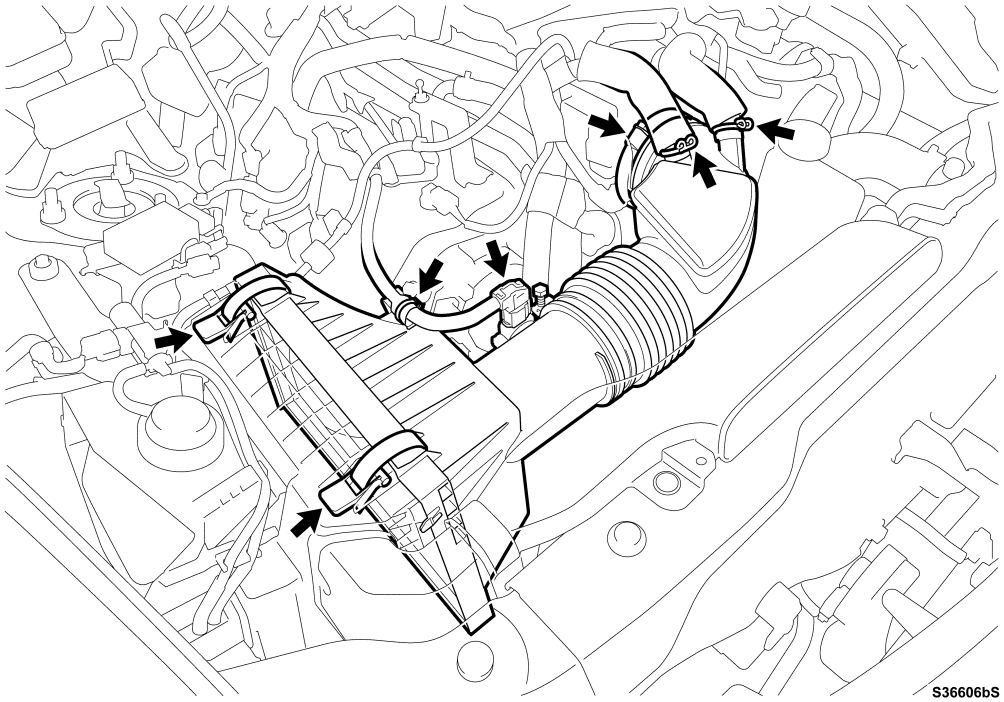
a) Reinstall the air filter.

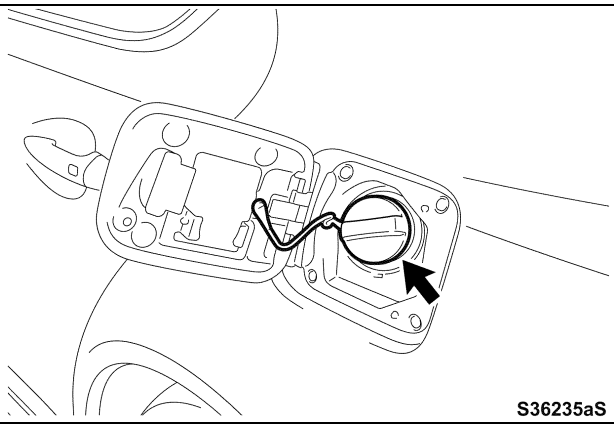
b) Reinstall the air cleaner housing and reconnect the 2 clips and hose.

c) Reconnect the hose to the throttle body.

d) Reconnect the MAF sensor and re-clip the harness.

e) Reconnect the 2 vent hoses.





a) Reinstall the fuel cap.

16. RECONNECT THE NEGATIVE BATTERY CABLE

a) Restore any memory settings and initialize any system needed (i.e. power windows, moonroof, etc.).

17. CHECK AND CLEAR DTC's

18. INSPECT THROTTLE BODY OPERATION

a) Start the engine and check that the Check engine light is off.

b) Allow the engine reach operating temperature.

c) Make sure climate control system is off.

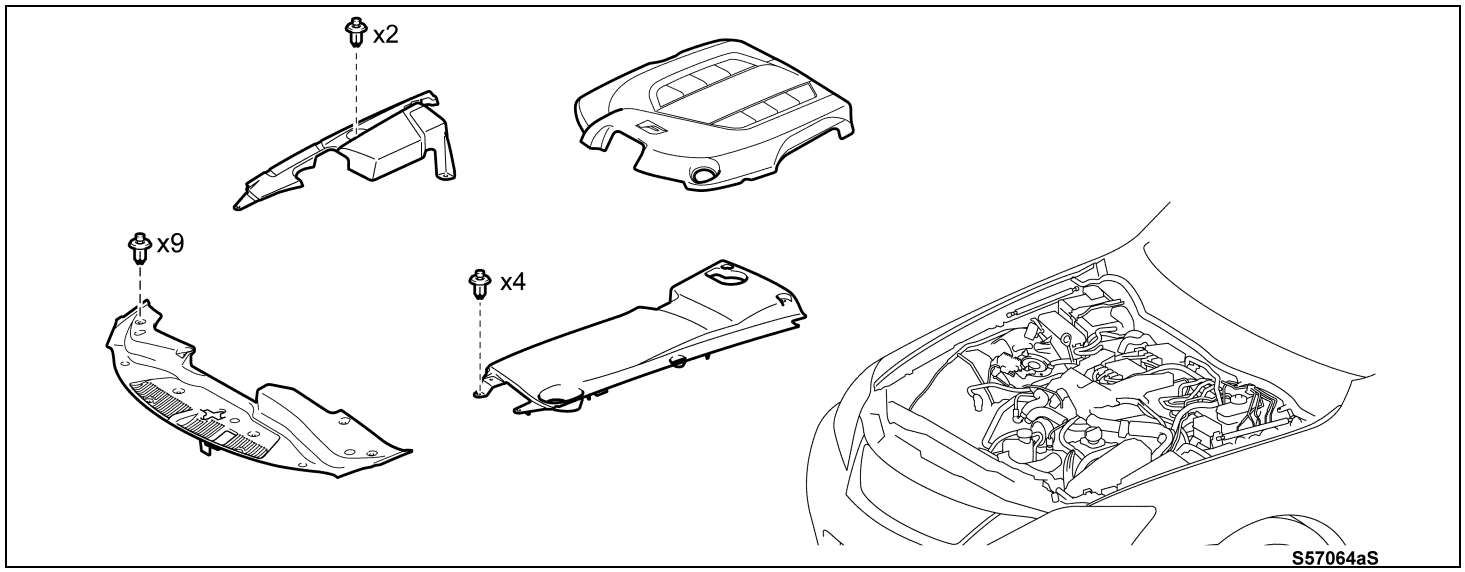
d) Check that the idle is within specifications 600-700 RPM.

NOTE: All accessories, climate control and cooling fans must be off, and the transmission in P or N when preforming this check.

e) Quickly open the throttle to WOT and check that the Throttle Sensor Position reading is a minimum of 60 %.

19. TEST DRIVE VEHICLE

20. REINSTALL ENGINE ROOM COVERS



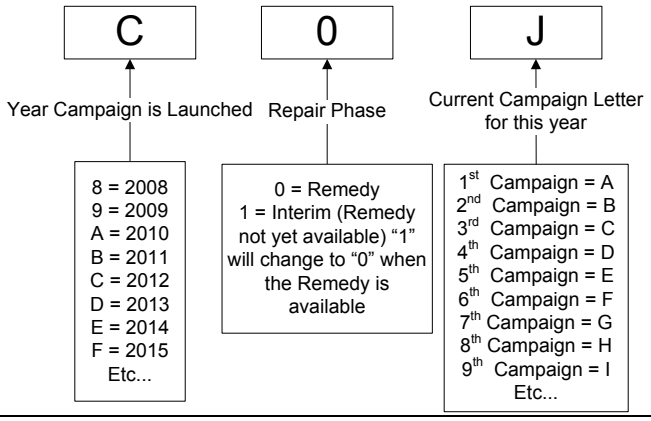
◄ VERIFY REPAIR QUALITY ►

- **Clear DTC's**
- **No fuel leaks or fuel smell**

If you have any questions regarding this recall, please contact your area representative.

IX. APPENDIX

CAMPAIGN DESIGNATION DECODER



Examples:
A0D = Launched in 2010, Remedy Phase, 4th Campaign Launched in 2010
B1E = Launched in 2011, Interim Phase, 5rd Campaign Launched in 2011
C1C = Launched in 2012, Interim Phase, 3rd Campaign Launched in 2012

X. REMOVED PARTS

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.***