

REVISED 1/5/15
Updated vacuum hose routing illustrations

REVISED 04/2014
The parts section and work procedure have been modified.

Part number 04009-13137 Intake Air Connector Kit is no longer available.

TECHNICAL INSTRUCTIONS

FOR

SPECIAL SERVICE CAMPAIGN 90H (SAFETY RECALL)
FOR VEHICLES IN

AK, CO, IA, ID, IL, KS, ME, MI, MN, MT, ND, NE, NH, NV, NY, SD, VT, WI & WY

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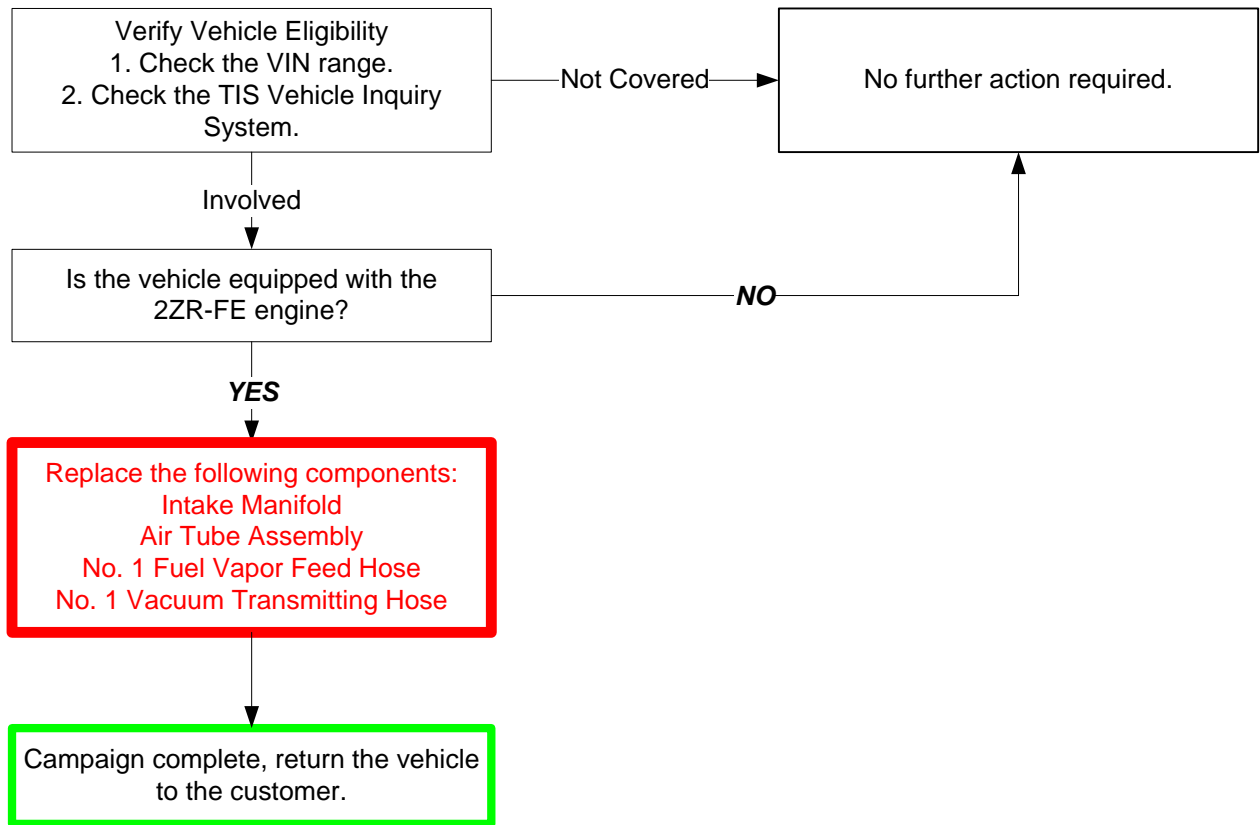
SPECIAL SERVICE CAMPAIGN 90H
FOR VEHICLES IN

AL, AR, AZ, CA, CT, DC, DE, FL, GA, HI, IN, KY, LA, MA, MD, MO, MS, NC, NJ, NM,
OH, OK, OR, PA, RI, SC, TN, TX, UT, VA, WA, WV & THE US TERRITORIES

BRAKE VACUUM PORT ON THE 2ZR-FE (1.8 LITER) ENGINE

2009 – 2010 COROLLA & COROLLA MATRIX
2008 – 2009 SCION xD

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Model	WMI	Year	VIN Range	
			VDS	Range
Corolla	1NX	2009	BU40E	Z001002 – Z165305
		2010	BU4EE	Z165312 – Z216294
	2T1	2009	BU40E	C001054 – C191051
		2010	BU4EE	C185955 – C241463
	JTD	2009	BL40E	9017763 – 9095008
				J000111 – J055039
2010	BU4EE	9093922 – 9102968		
		J054618 – J057553		
Corolla Matrix	2T1	2009	KU40E	C001057 – C191049
		2010	KU4EE	C191054 – C241053
xD	JTK	2008	KU104	J000116 – J032918
		2009	KU104	J032919 – J049777

- Check the TIS Vehicle Inquiry system to confirm the VIN is involved in this SSC. This will verify the vehicle is affected and 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.**

III. PREPARATION

A. PARTS

- Corolla & Corolla Matrix

Part Number	Part Description	Quantity
17120-0T012	Intake Manifold (includes the intake and throttle body gaskets)	1
17361-37011	Air Tube Assy.	1
23826-37021	Fuel Vapor Feed Hose No. 1	1
25761-37011	Vacuum Transmitting Hose No. 1	1
00272-SLLC2	Super Long Life Coolant	1

- Scion xD

Part Number	Part Description	Quantity
17120-0T012	Intake Manifold (includes the intake and throttle body gaskets)	1
17361-37011	Air Tube Assy.	1
23826-37021	Fuel Vapor Feed Hose No. 1	1
25761-37011	Vacuum Transmitting Hose No. 1	1
90301-07037	Fuel Injector O-Ring	4
23291-23010	Fuel Injector Insulator (Type A)	4
00272-SLLC2	Super Long Life Coolant	1

B. TOOLS, EQUIPMENT & MATERIALS

- Standard hand tools
- E6 TORX® socket
- Techstream scantool

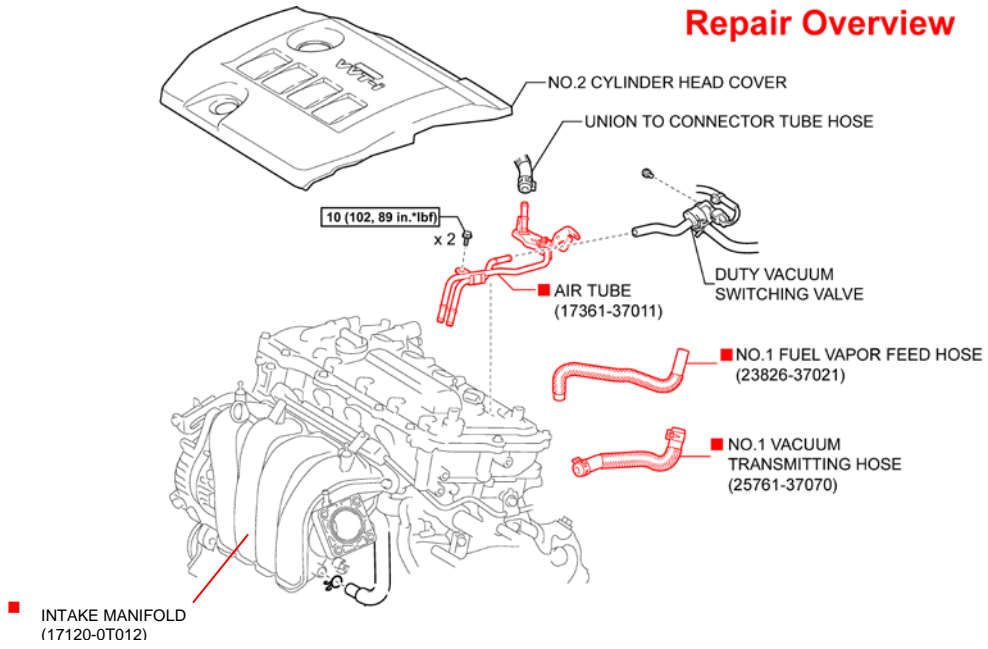
IV. BACKGROUND & COMPONENTS

If the vehicle is operated in extremely low temperatures, there is a possibility that condensed moisture from a positive crankcase ventilation (PCV) port may seep into the brake system vacuum port (“port”) and freeze. The port is located inside the intake manifold and provides vacuum assist for the brakes.

Should this condition continue, ice may slowly accumulate at the port and in the worst case, ultimately plug the port. As a result, power assist to the brakes would gradually decrease (eventually to zero), and the increased pedal pressure required could lead to greater vehicle stopping distances. To correct this condition, the following components will be replaced:

- Intake Manifold
- Air Tube
- No. 1 Fuel Vapor Feed Hose
- No.1 Vacuum Transmitting Hose

Repair Overview



N*m (kgf*cm, in.*lbf): Specified torque

V. WORK PROCEDURE

1. REMOVE THE INTAKE MANIFOLD

Refer to the Technical Information System (TIS), applicable model year Corolla, Corolla Matrix or Scion xD Repair Manual:

[2009 MY Corolla](#)

[2009 MY Matrix](#)

[2008 MY Scion xD](#)

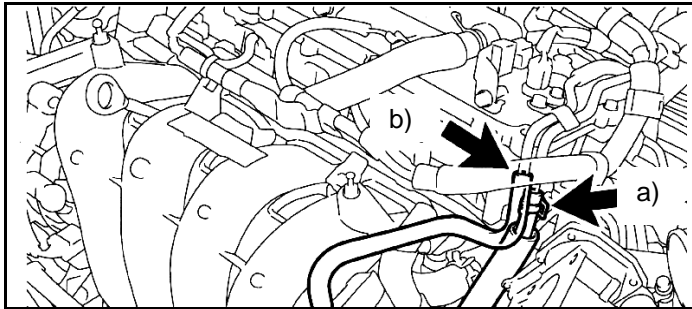
[2010 MY Corolla](#)

[2010 MY Matrix](#)

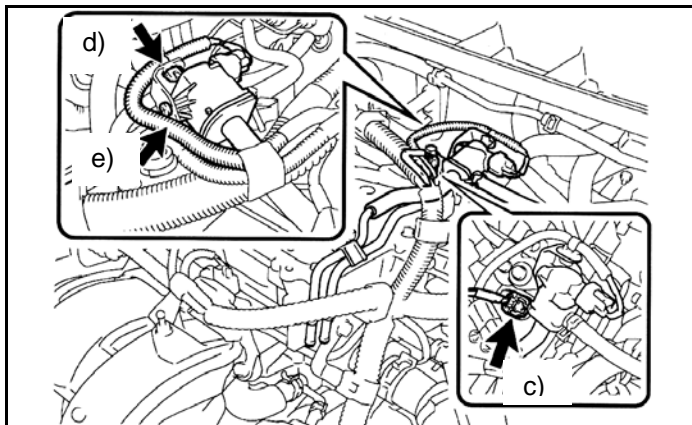
[2009MY Scion xD](#)

2. REMOVE THE AIR TUBE

Corolla & Corolla Matrix



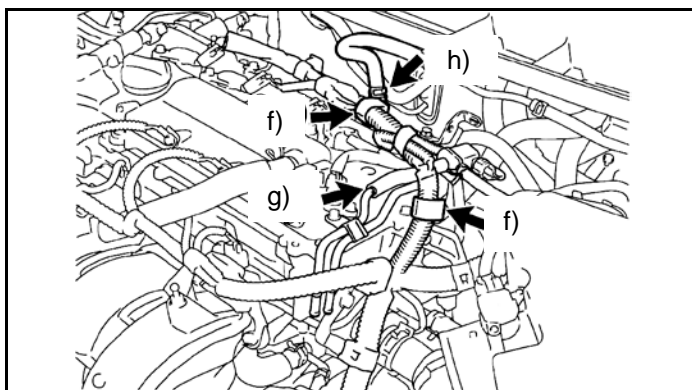
- a) Remove the clip and disconnect the No. 1 vacuum transmitting hose.
- b) Remove the No. 1 fuel vapor hose.



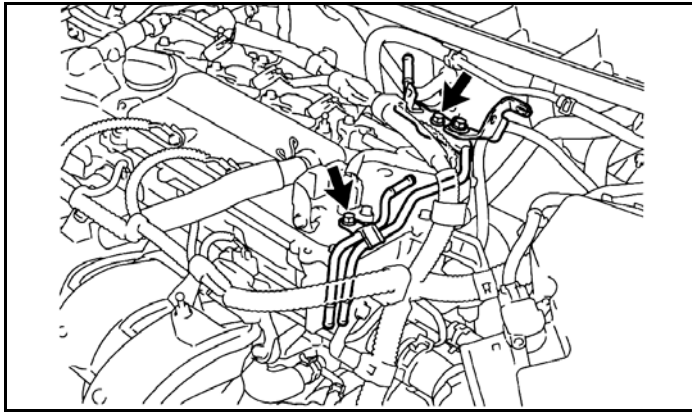
- c) Disconnect the crank position sensor connector.
- d) Disconnect the wire harness clip.
- e) Remove the screw and the vacuum switching valve.

NOTE:

If the screw cannot be removed, remove the bracket bolt for the duty vacuum switching valve instead.



- f) Disconnect the 2 wire harness clips.
- g) Disconnect the duty cycle vacuum switching valve fuel vapor feed hose from the air tube.
- h) Remove the clip and disconnect the union to connector tube hose.

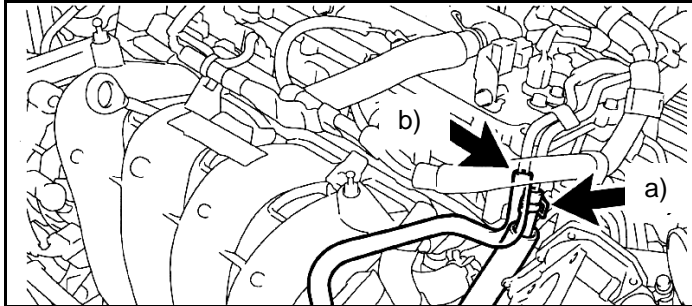


- i) Remove the 2 bolts.
- j) Remove the air tube, while ensuring that it does not come in contact with the crank position sensor and wire harness.

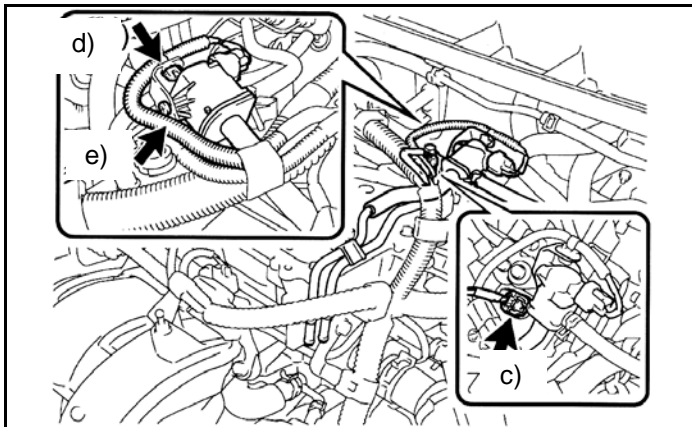
NOTE:

Damage to the crank position sensor and wire harness may occur if contacted by the air tube during removal.

SCION xD



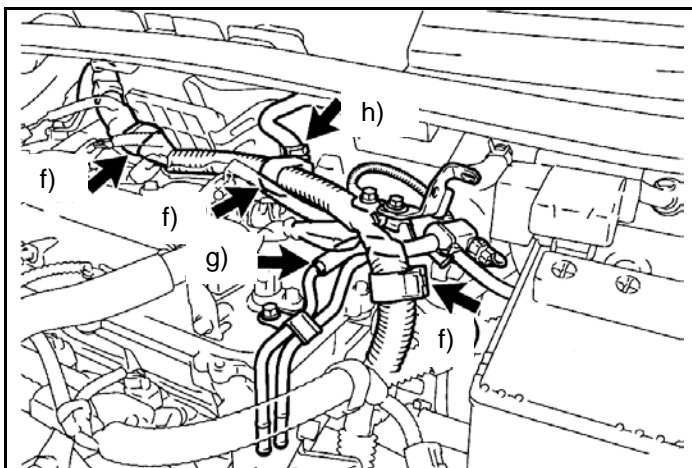
- a) Remove the clip and disconnect the No. 1 vacuum transmitting hose.
- b) Remove the No. 1 fuel vapor hose.



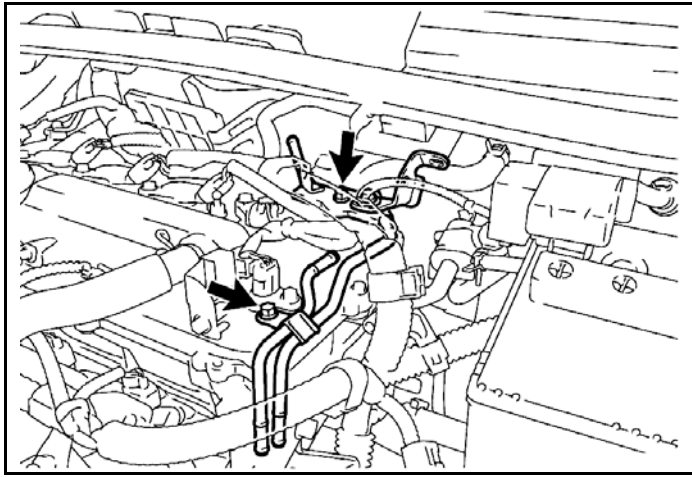
- c) Disconnect the crank position sensor connector.
- d) Disconnect the wire harness clip.
- e) Remove the screw and the vacuum switching valve.

NOTE:

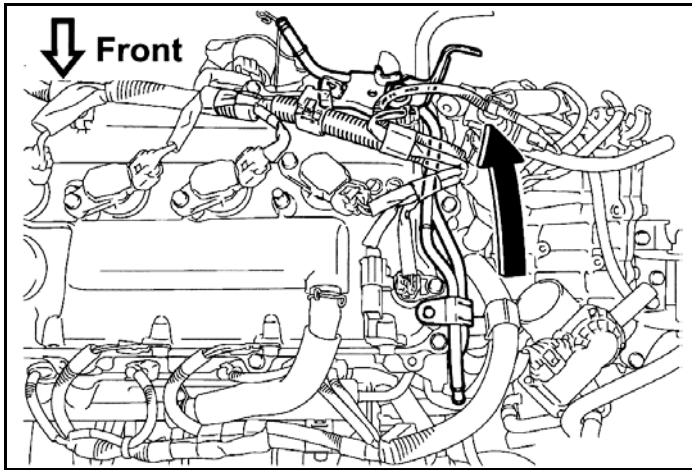
If the screw cannot be removed, remove the bracket bolt for the duty vacuum switching valve instead.



- f) Disconnect the 3 wire harness clips.
- g) Disconnect the duty cycle vacuum switching valve fuel vapor feed hose from the air tube.
- h) Remove the clip and disconnect the union to connector tube hose.



i) Remove the 2 bolts.



j) Remove the air tube by moving it towards the rear of the vehicle, and ensuring that it does not come in contact with the crank position sensor and wire harness.

NOTE:
Damage to the crank position sensor and wire harness may occur if contacted by the air tube during removal.

3. INSTALL THE NEW INTAKE MANIFOLD

Refer to the Technical Information System (TIS), applicable model year Corolla, Corolla Matrix or Scion xD Repair Manual:

[2009 MY Corolla](#)

[2009 MY Matrix](#)

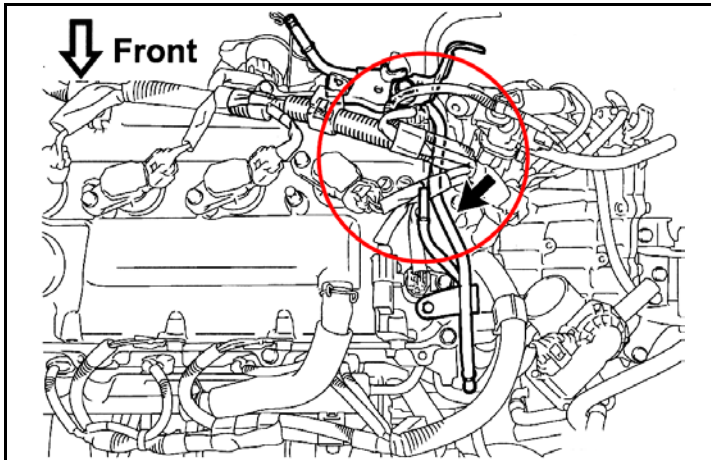
[2008 MY Scion xD](#)

[2010 MY Corolla](#)

[2010 MY Matrix](#)

[2009MY Scion xD](#)

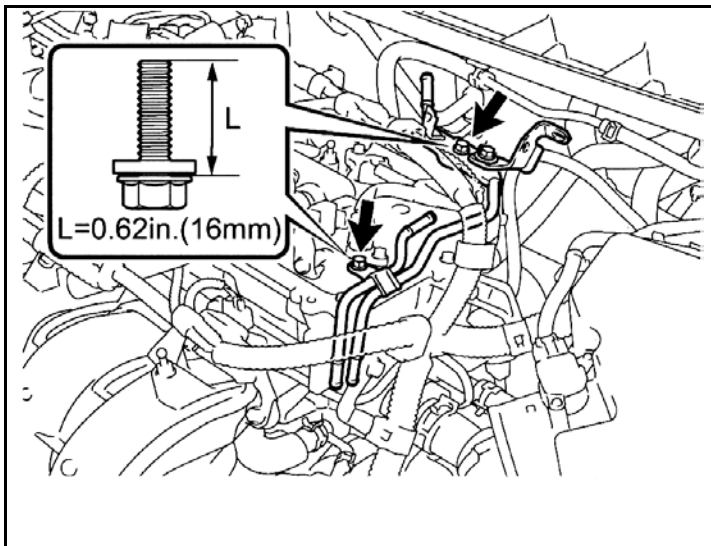
4. INSTALL NEW AIR TUBE Corolla & Corolla Matrix



a) Install the **NEW** air tube.

NOTE:

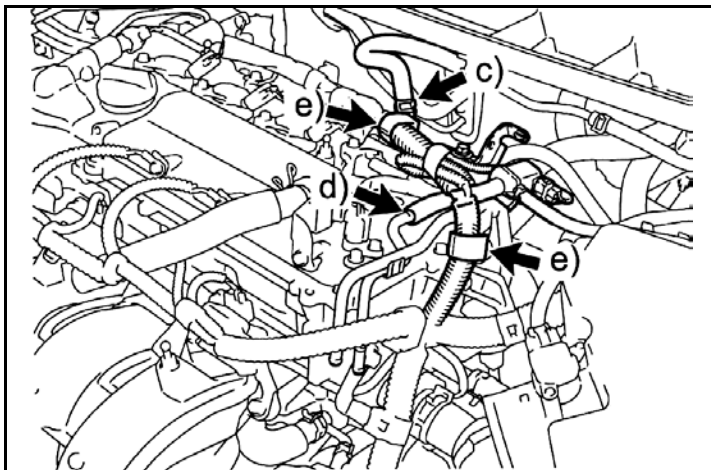
- Make sure not to pinch the wire harness when installing the air tube.
- Set the air tube underneath the wire harness as shown in Illustration.



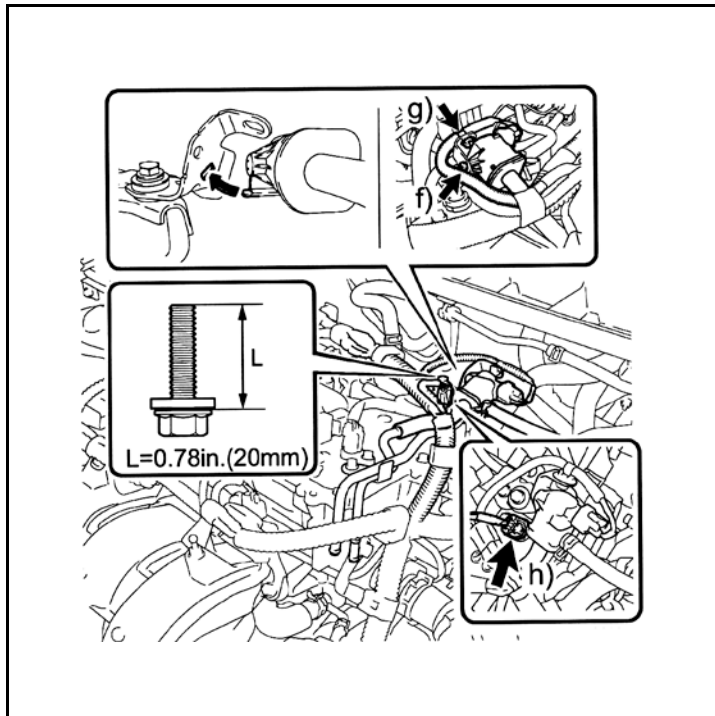
b) Reinstall the 2 air tube bolts and torque to **10 N·m (102 kgf·cm, 89 in·lbf)**.

NOTE:

- The bolt for the air tube bracket is shorter [L = 0.62 in. (16 mm)] than the one for the duty vacuum switching valve [L = 0.78 in. (20 mm)].
- If the bracket bolt for the duty vacuum switching valve was removed, make sure to use the correct one during reinstallation.



- c) Reconnect the union to connector tube hose and reinstall the clip.
- d) Reconnect the duty cycle vacuum switching valve fuel vapor feed hose.
- e) Reconnect the 2 wire harness clips.



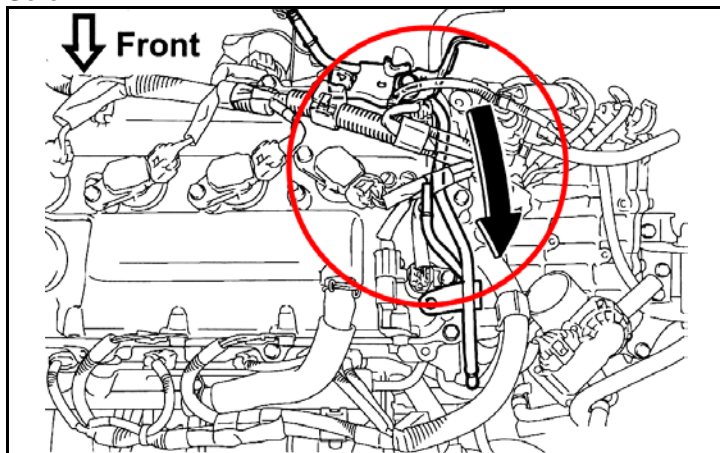
f) Reinstall the vacuum switching valve and screw.

NOTE:

- If the bracket bolt for the duty vacuum switching valve was removed reinstall it and torque to 5.9 N·m (60 kgf·cm, 52 in·lbf).
- Make sure to use the correct bolt, as the one for the duty vacuum switching valve is longer [L = 0.78 in. (20 mm)] than the one for the air tube bracket [L = 0.62 in. (16 mm)].

- g) Reconnect the wire harness clip.
- h) Reconnect the crank position sensor connector.

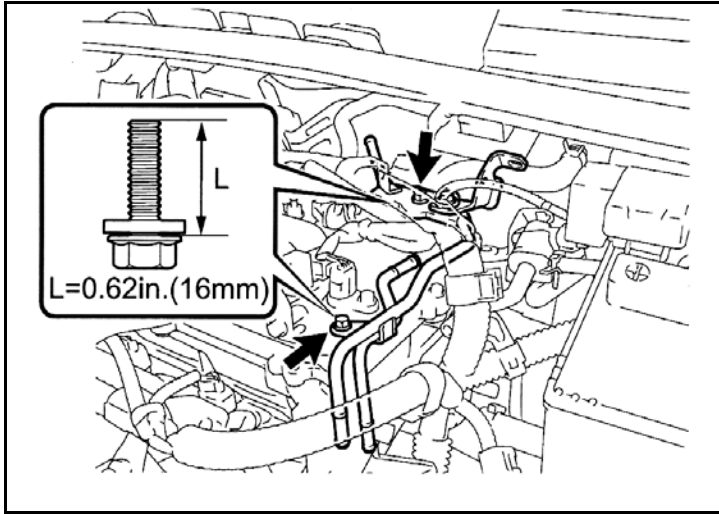
Scion xD



a) Install the **NEW** air tube.

NOTE:

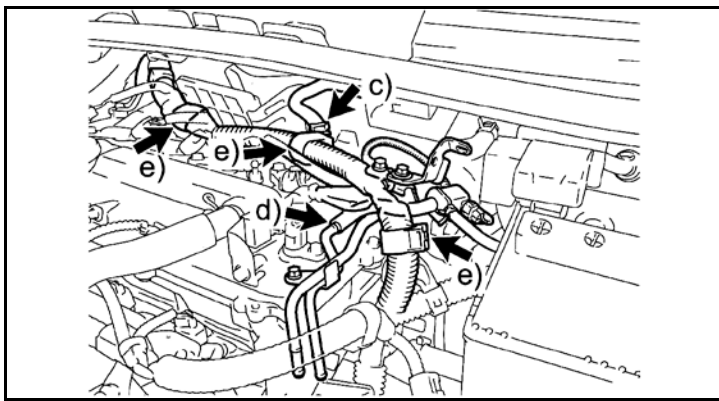
- Make sure not to pinch the wire harness when installing the air tube.
- Set the air tube underneath the wire harness as shown in illustration.



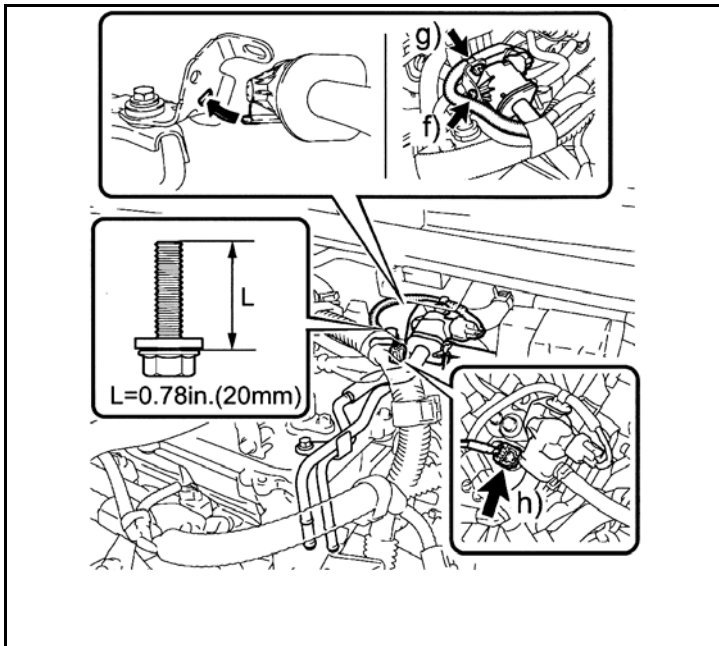
- b) Reinstall the 2 air tube bolts and torque to 10 N·m (102 kgf·cm, 89 in·lbf).

NOTE:

- The bolt for the air tube bracket is shorter [L = 0.62 in. (16 mm)] than the one for the duty vacuum switching valve [L = 0.78 in. (20 mm)].
- If the bracket for the duty vacuum switching valve was removed, make sure to use the correct bolt during reinstallation.



- c) Reconnect the union to connector tube hose and reinstall the clip.
 d) Reconnect the duty vacuum switching valve fuel vapor feed hose.
 e) Reconnect the 3 wire harness clips.



- f) Reinstall the vacuum switching valve with the screw.

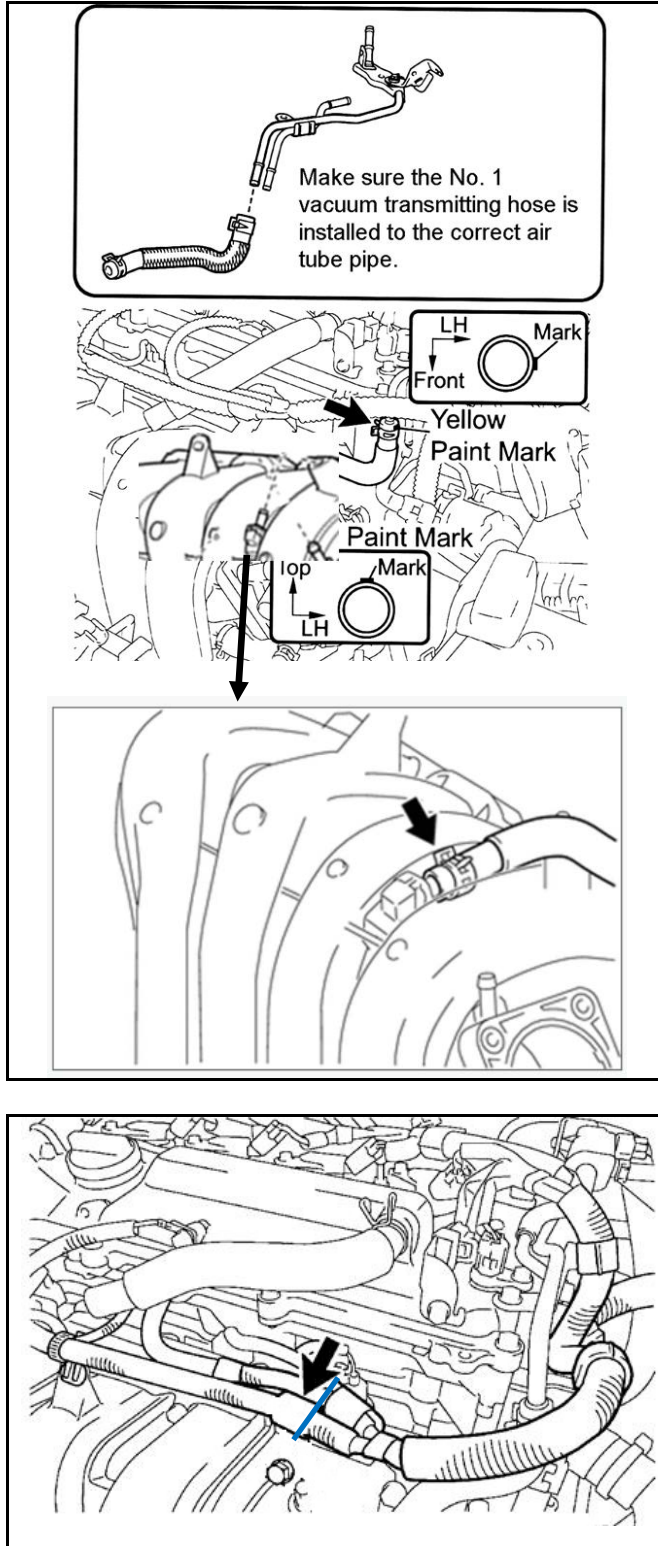
NOTE:

- If the bracket bolt for the duty vacuum switching valve was removed reinstall it and torque to 5.9 N·m (60 kgf·cm, 52 in·lbf).
- Make sure to use the correct bolt, as the one for the duty vacuum switching valve is longer [L = 0.78 in. (20 mm)] than the one for the air tube bracket [L = 0.62 in. (16 mm)].

- g) Reconnect the wire harness clip.
 h) Reconnect the crank position sensor connector.

5. INSTALL THE NEW NO. 1 VACUUM TRANSMITTING HOSE

All vehicles



- a) Using 2 **NEW** clips, install the **NEW** No.1 vacuum transmitting hose so that its **yellow paint mark** faces outward, and the **white paint mark** faces upward as shown in the illustration.

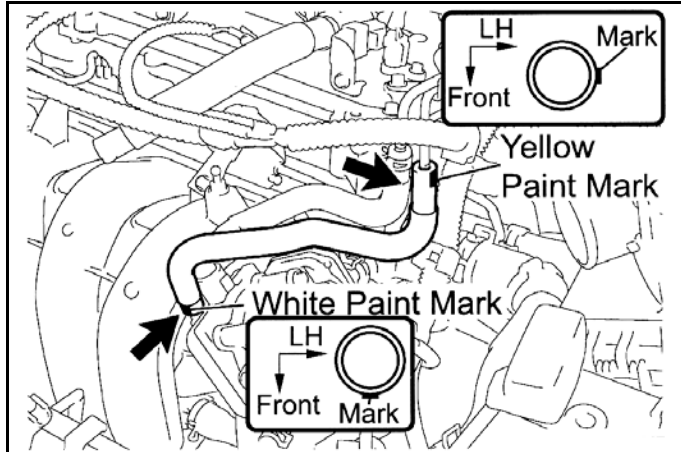
NOTE:

Make sure the No.1 vacuum transmitting hose is installed to the correct air tube pipe.

- i. Remove the bracket from the intake manifold.
- ii. Open the clip and remove the bracket from the wire harness.
- iii. Tie-wrap the harness to the other harness bundle.

6. INSTALL THE NEW NO. 1 FUEL VAPOR FEED HOSE

All vehicles



- a) Install the **NEW** No.1 fuel vapor feed hose so that its **yellow paint mark** faces outward, and the **white paint mark** faces the front as shown in the illustration.

7. FINAL INSPECTION

- a) Check for DTCs. If DTCs are present, confirm the code(s), view and record the freeze frame data and perform repairs as necessary.
- b) Test drive the vehicle to inspect for warning lights, drivability issues, etc.

VI. APPENDIX

A. RECALLED 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.