

Reference:

ITB15-017

Date:

April 21, 2015

VOLUNTARY SAFETY RECALL CAMPAIGN QX56/QX80 AND M56/Q70 FUEL PRESSURE SENSOR

This bulletin supersedes ITB12-010.

CAMPAIGN ID #: R1417
NHTSA #: 14V-683
APPLIED VEHICLES: 2011 – 2013 QX56 (Z62)
2014 QX80 (Z62)
2011 – 2013 M56 (Y51)
2014 – 2015 Q70 (Y51) equipped with V8 engine

Check Service COMM to confirm campaign eligibility.

INTRODUCTION

Infiniti is conducting a voluntary safety recall campaign on certain specific 2011 - 2013 model year QX56, 2014 model year QX80, 2011 - 2013 model year M56, and 2014 - 2015 model year Q70 vehicles to re-torque the fuel rail pressure sensor. This service will be performed at no charge for parts or labor.

IDENTIFICATION NUMBER

Infiniti has assigned identification number R1417 to this campaign. This number must appear on all communications and documentation of any nature dealing with this campaign.

DEALER RESPONSIBILITY

It is the dealer's responsibility to check Service Comm for the campaign status on each vehicle falling within the range of this voluntary safety recall which for any reason enters the service department. This includes vehicles purchased from private parties or presented by transient (tourist) owners and vehicles in a dealer's inventory. **Federal law requires that new vehicles in dealer inventory which are the subject of a safety recall must be corrected prior to sale. Failure to do so can result in civil penalties by the National Highway Traffic Safety Administration.** While federal law applies only to new vehicles, Infiniti strongly encourages dealers to correct any used vehicles in their inventory before they are retailed.

Infiniti Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. **NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Infiniti dealer to determine if this applies to your vehicle.**

REQUIRED SPECIAL TOOL J-51813

- This tool is used for the QX56 / QX80
- Additional tools can be ordered from TECH-MATE at 1-800-662-2001.

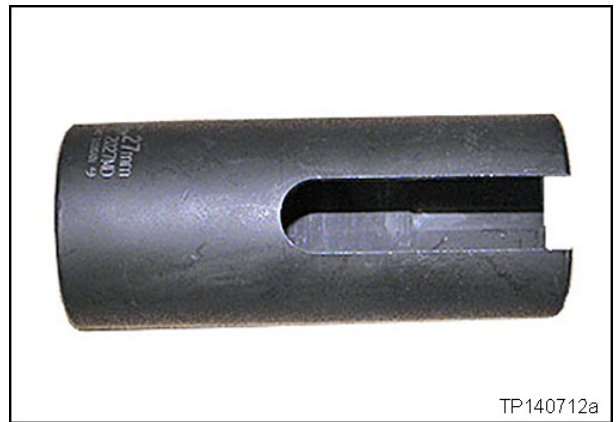


Figure A

REQUIRED SPECIAL TOOL J-50991

- This tool is used for the M56/Q70.
- Additional tools can be ordered from TECH-MATE at 1-800-662-2001.

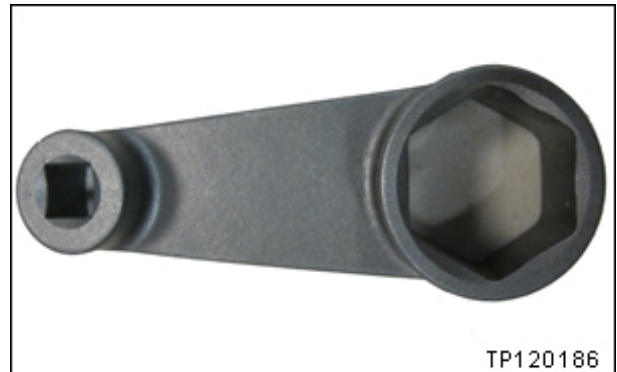


Figure B

SERVICE PROCEDURE

Go to page 10 for the M56 / Q70 Service Procedure

QX56 / QX80 Service Procedure

WARNING: The exhaust and other vehicle parts may be hot. To prevent burns, it may be necessary to allow vehicle parts to cool or wear protective clothing before performing this repair.

1. Put the transmission selector in Park.
2. Set the parking brake.
3. Make sure the ignition is OFF.
4. Raise the vehicle.
5. Disconnect the exhaust in the locations shown in Figure A1.

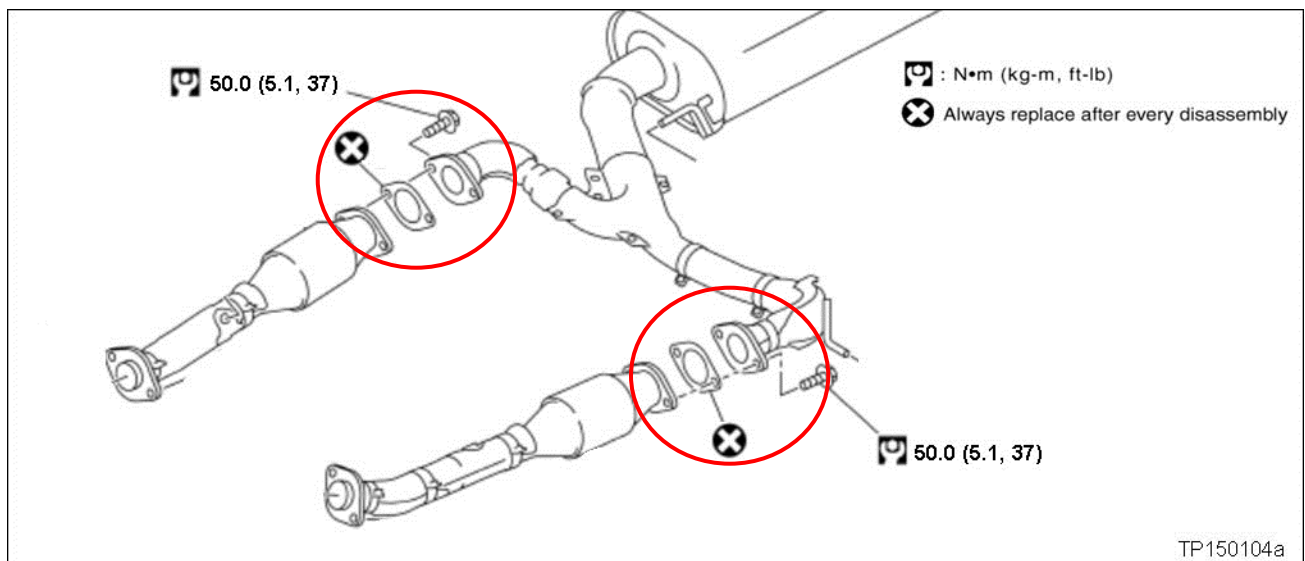


Figure A1

6. Place a pole jack to support the transmission/transfer case.

- For 4WD - place a pole jack under the transfer case in the location shown.

NOTE: Placing the pole jack to the right side (passenger side) of the transfer case as shown will keep the pole jack from interfering with the torque wrench later in this procedure.

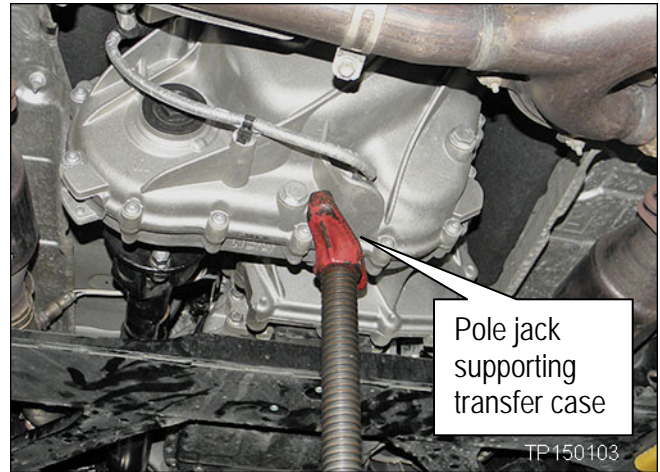


Figure A2

- For 2WD – use a block of wood and pole jack to support the transmission as shown.

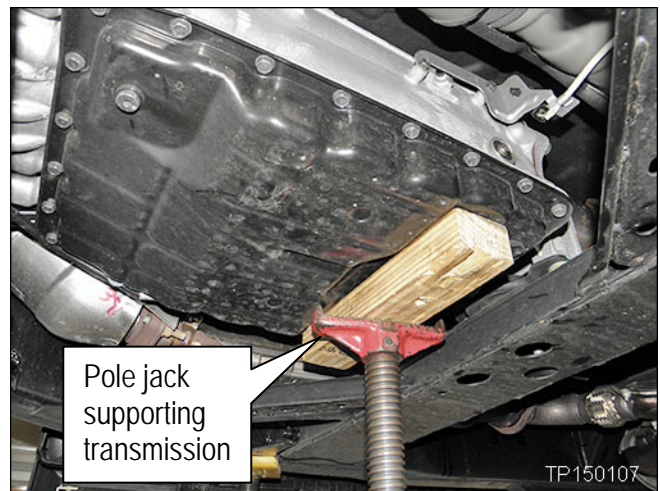


Figure A3

7. Remove the rear engine mounting cross member.

NOTE: The insulator does not need to be removed.

Image of 4WD transmission, 2WD is similar.

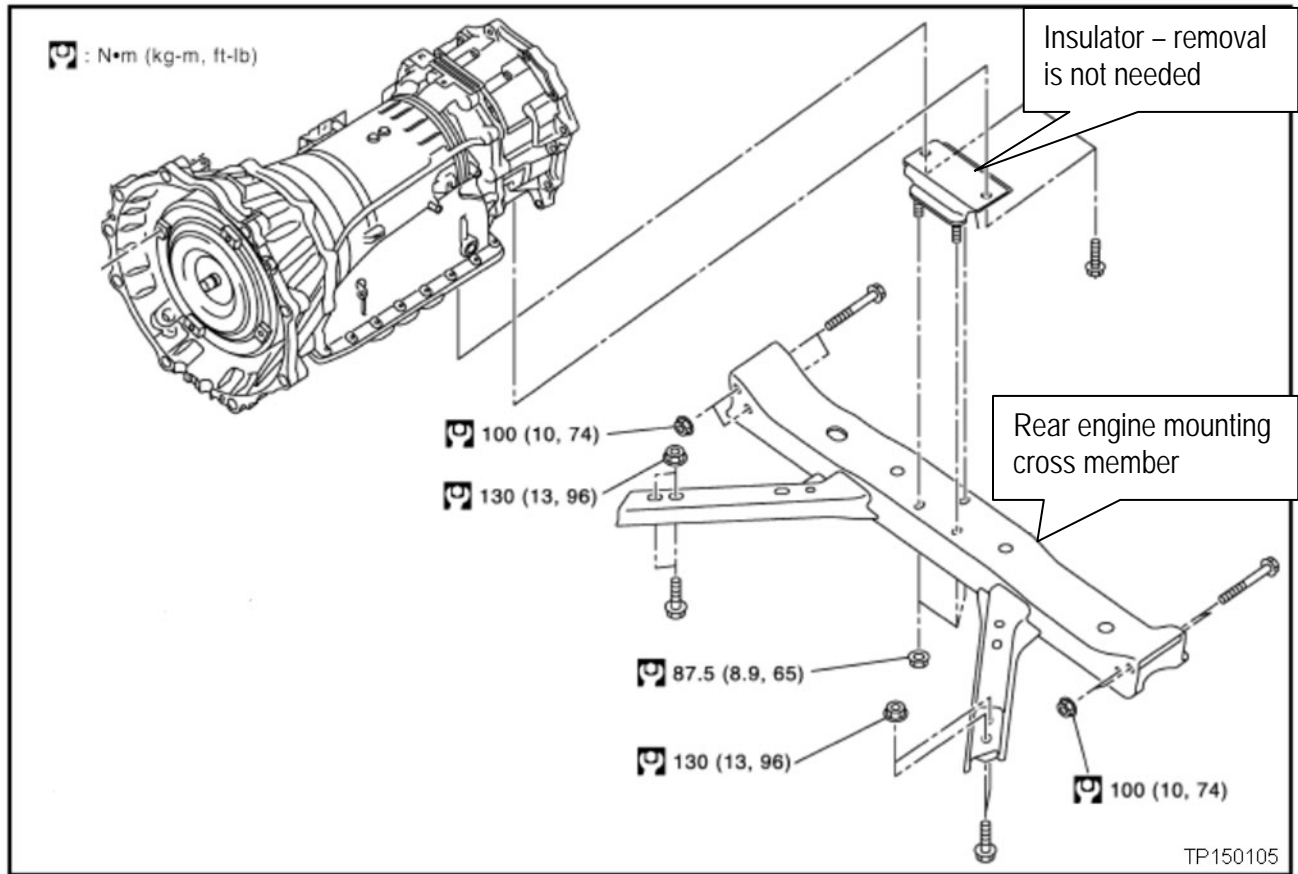


Figure A4

8. For 4WD only:

- a. Mark the mating flange on the front propeller shaft to the transfer case.
- b. Remove the bolts connecting the front propeller shaft to the transfer case.

Reassembly torque: 80 N·m (8.2 kg-m, 59 ft-lb)

NOTE: The propeller shaft to transfer case bolts and nuts are one-time-use. Do not reuse.

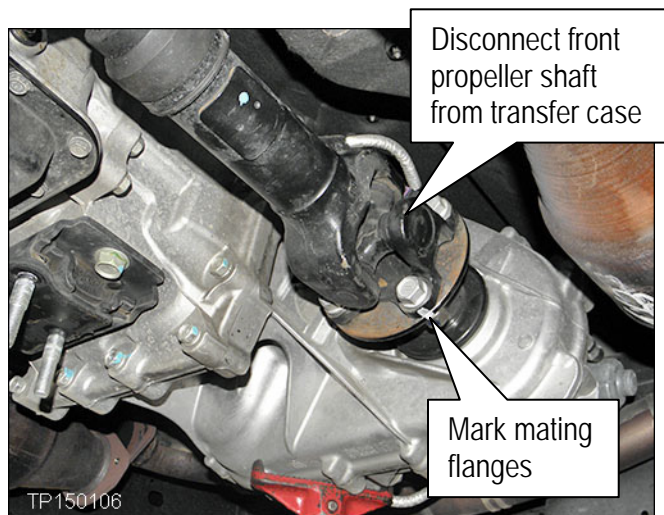


Figure A5

9. Lower the pole jack, allowing the transmission / transfer case to lower.

- Lower as much as possible without allowing the rear propeller shaft to touch the frame.

Image of 4WD, 2WD is similar

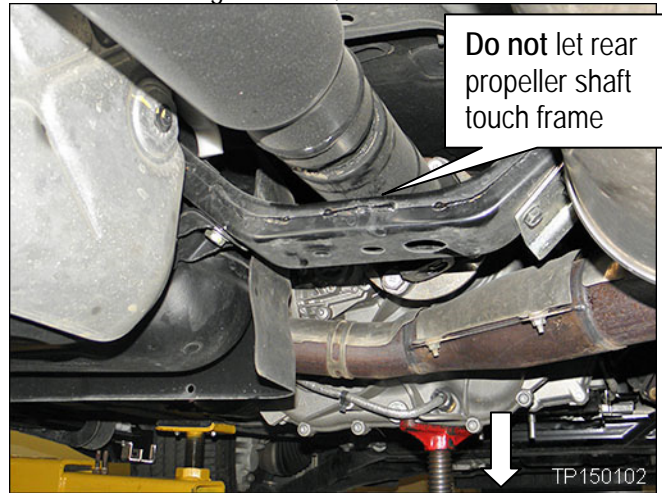


Figure A6

10. Locate and remove the bolt shown in Figure A7.

Reassembly torque: 113 N•m (12 kg-m, 83 ft-lb)

NOTE:

- This is a “transmission to engine” bolt. It also holds a bracket with 1 or 2 vent hoses attached.
- The vent hoses do not need to be disconnected from the bracket.

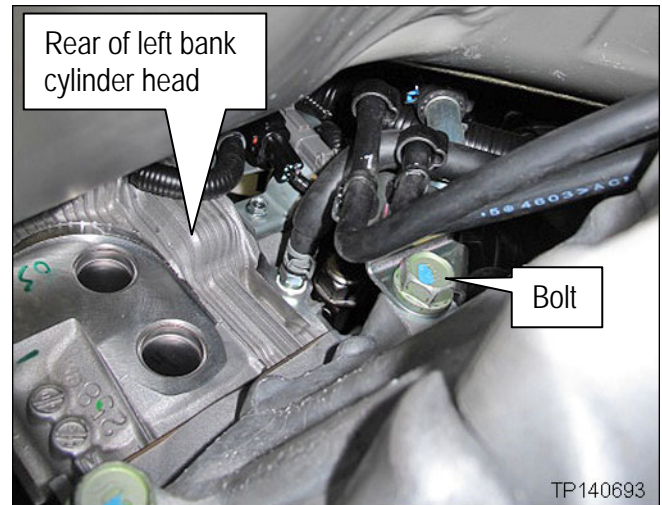


Figure A7

11. After the bolt is removed, position the bracket, with vent hoses attached, out of the way.

12. Locate the fuel rail pressure sensor shown in Figure A8.

NOTE: In the following steps you will fit special tool J-51813 onto this pressure sensor.

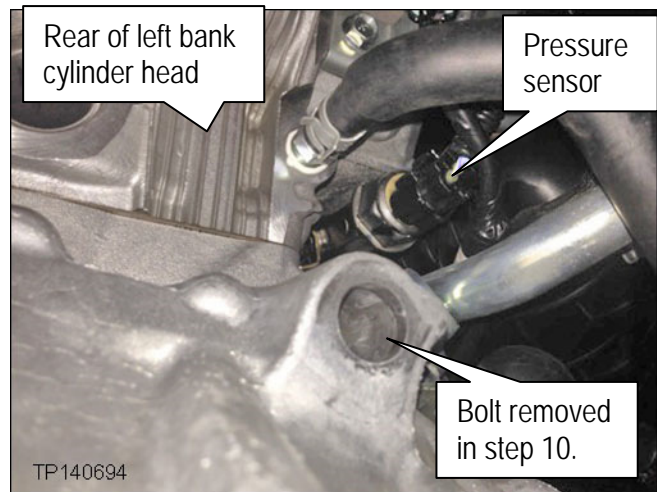


Figure A8

13. Connect special tool J-51813 to a ball type universal joint as shown in Figure A9.

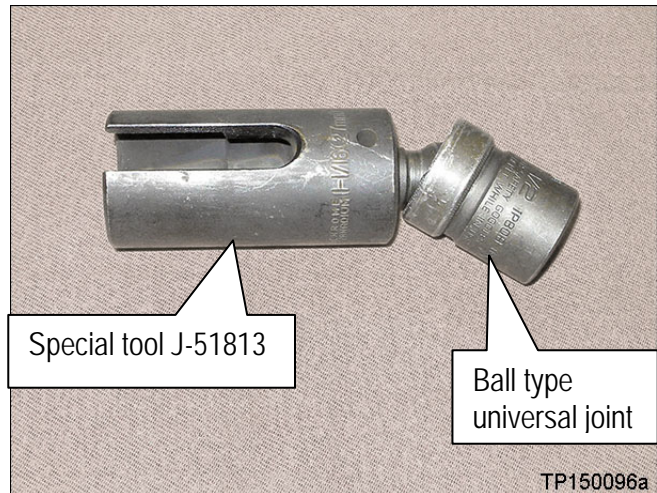


Figure A9

CAUTION:

- Do not use a standard type universal joint.
- If a standard type universal joint is used, the correct torque may not be applied.

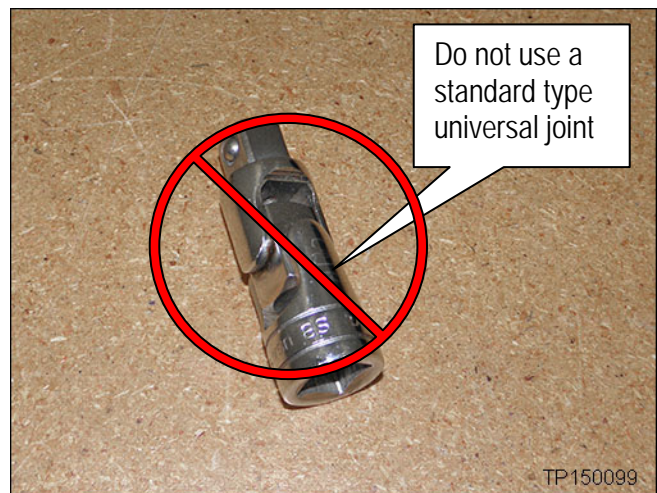


Figure A10

14. Fit special tool J-51813 with ball type universal joint on the pressure sensor.

- Make sure the socket and universal joint are above the cooling hose (see Figure A10).
- The slot in the side of special tool J-51813 must be positioned to accommodate the sensor harness.

NOTE:

- Special tool J-51813 should be fitted onto the sensor before attaching an extension.

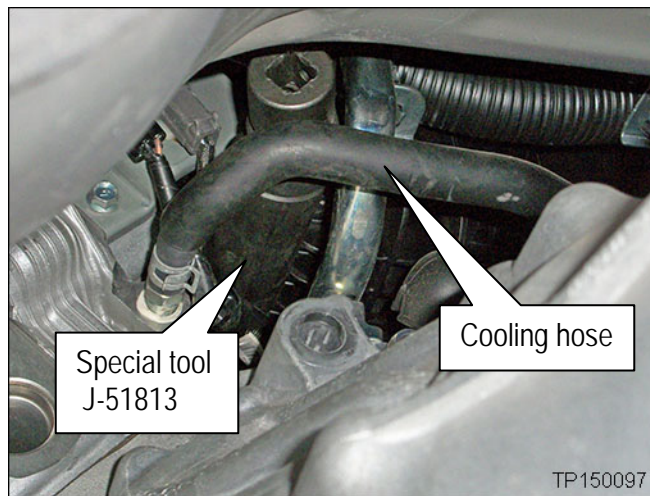


Figure A11

15. Slide the extension up the driver side of the transmission toward the engine, and then connect to the ball type universal joint.

- Use an extension that is about 3 feet long.

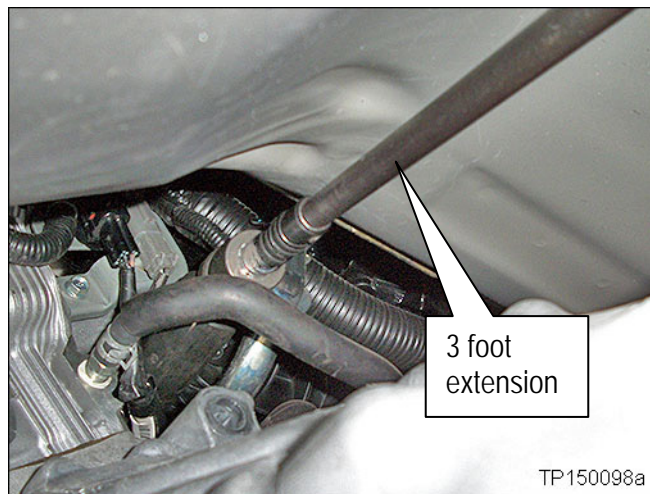


Figure A12

16. Attach a torque wrench to the end of the extension.
17. Torque the pressure sensor to:
50 N•m (5.1 kg-m, 37 ft-lb)

CAUTION: Make sure:

- The torque wrench is set to the correct torque setting.
- Special tool J-51813 stays completely fitted on the pressure sensor while performing the torque procedure.
- If special tool J-51813 is not completely fitted on the sensor, the correct torque may not be applied.



Figure A13

18. Re-install removed parts in reverse order.
 - Make sure to use new bolts and nuts for the propeller shaft connection.
 - Make sure to use new gaskets for the exhaust connections.

END

M56 / Q70 Service Procedure

WARNING: Never open the cooling system when the engine is hot. Serious burns may occur from hot high-pressure engine coolant escaping from the cooling system.

NOTE: During this procedure you will remove several similar size bolts with different lengths. It is important to keep track of which length bolt goes in which location.

1. Write down the radio station presets.

Presets	1	2	3	4	5	6
AM						
FM 1						
FM 2						
SAT 1						
SAT 2						
SAT 3						
	Bal:	Fade:	Bass:	Treb:	Speed Sen Vol:	

2. Release fuel system pressure as follows:
 - a. Turn the ignition ON.
 - b. CONSULT-III plus.
 - c. Perform FUEL PRESSURE RELEASE in ENGINE WORK SUPPORT.
 - d. Start engine.
 - e. After engine stalls, crank it two or three times to release all fuel pressure.
 - f. Turn ignition OFF, disconnect CONSULT-III plus.
3. Remove the battery cover.
4. Disconnect both battery cables; negative cable first.

5. Remove the engine cover.
 - a. Remove 2 bolts.
 - b. Use hand pressure to carefully pull UP at the mounting locations shown in Figure 1m.
 - Pull up on the **driver side first**, then pull up on the passenger side.

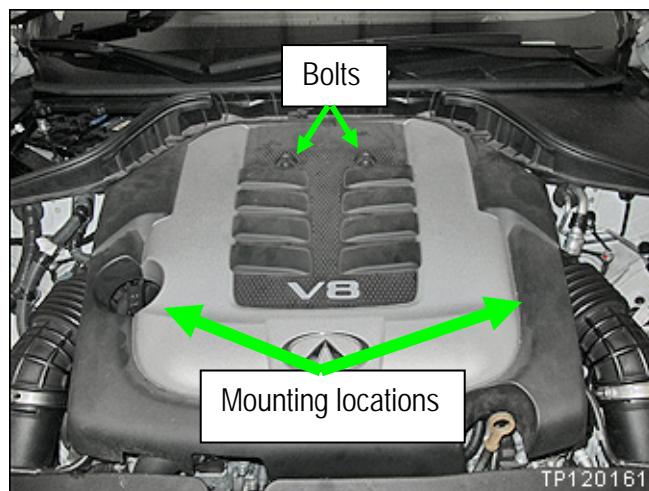


Figure 1m

6. Remove the air intake tubes; both sides:
 - a. Loosen the spring clamps and disconnect the hoses from the air intake tubes.
 - b. Loosen clamps at each end of the air intake tubes.
 - c. Remove the air intake tubes from the engine.

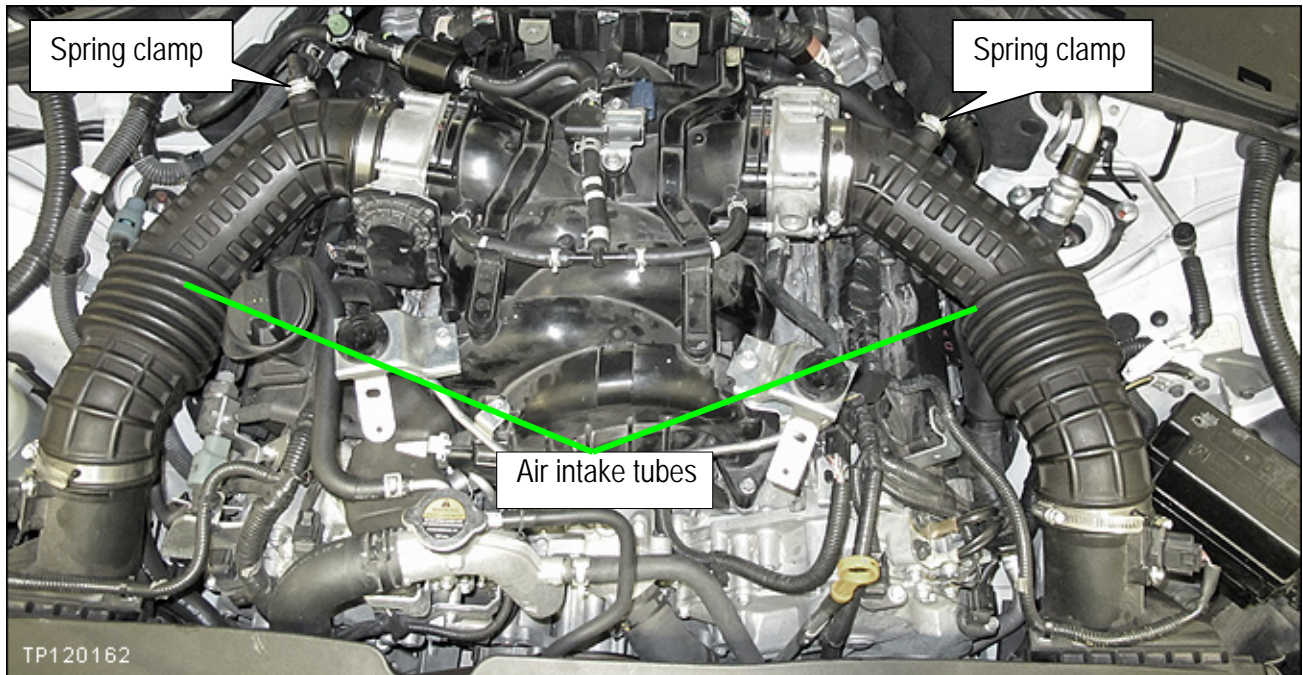


Figure 2m

7. Remove the engine cover brackets.
 - Each bracket is held on with 1 bolt.

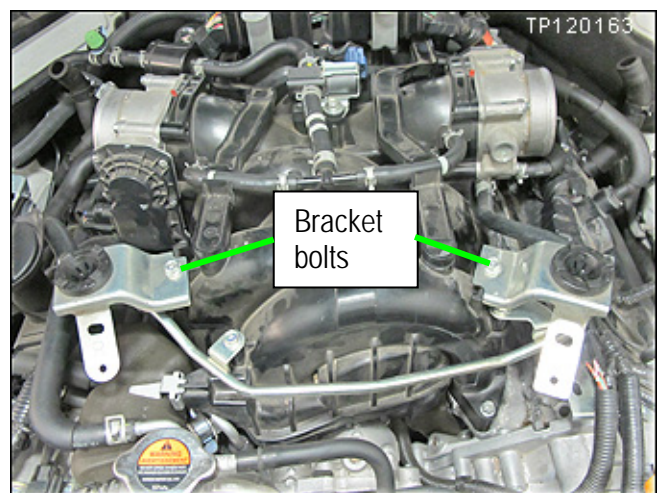


Figure 3m

8. Remove bolts securing the coolant pipe.

WARNING: Do not loosen or remove spring clamps on coolant hoses. Hot coolant may come out if the engine is hot.

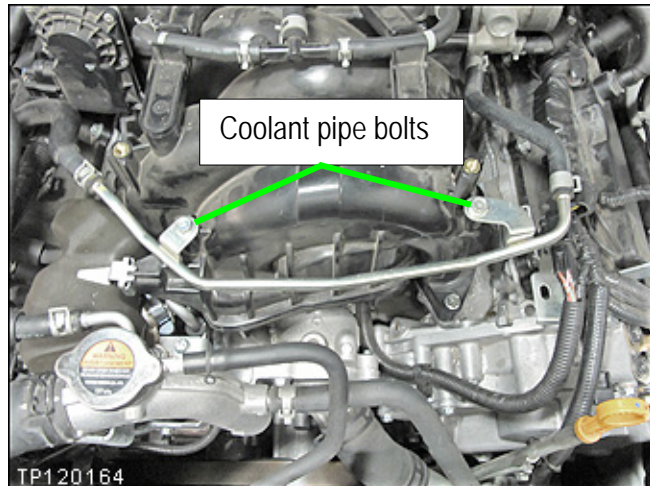


Figure 4m

9. Remove both throttle bodies:
 - Driver side shown; passenger side is a mirror image.
 - Leave coolant hoses connected to the throttle bodies.

WARNING: Do not loosen or remove spring clamps on coolant hoses. Hot coolant may come out.

- a. Disconnect electrical connectors from the throttle bodies.
- b. Remove the mounting bolts (4 on each throttle body).
- c. Pull the throttle body away from the intake manifold and place it to the side, away from the manifold.
- d. Cover the intake manifold openings with clean rags to prevent debris entry.

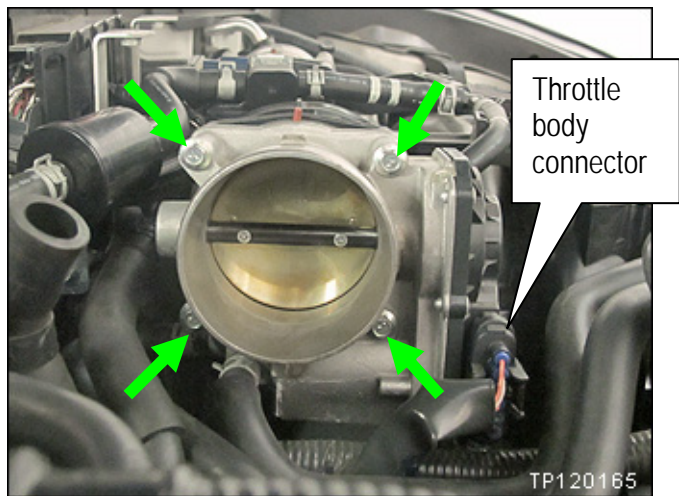


Figure 5m

10. Disconnect EVAP solenoid electrical connector (see Figure 6m).

11. Disconnect EVAP service port hose and position hose out of the way (see Figure 6m):

- a. Loosen spring clamp and disconnect hose from EVAP solenoid.
- b. Use a medium flat blade screwdriver to carefully push UP and remove EVAP valve from its mounting bracket.
- c. Position service port hose out of the way.

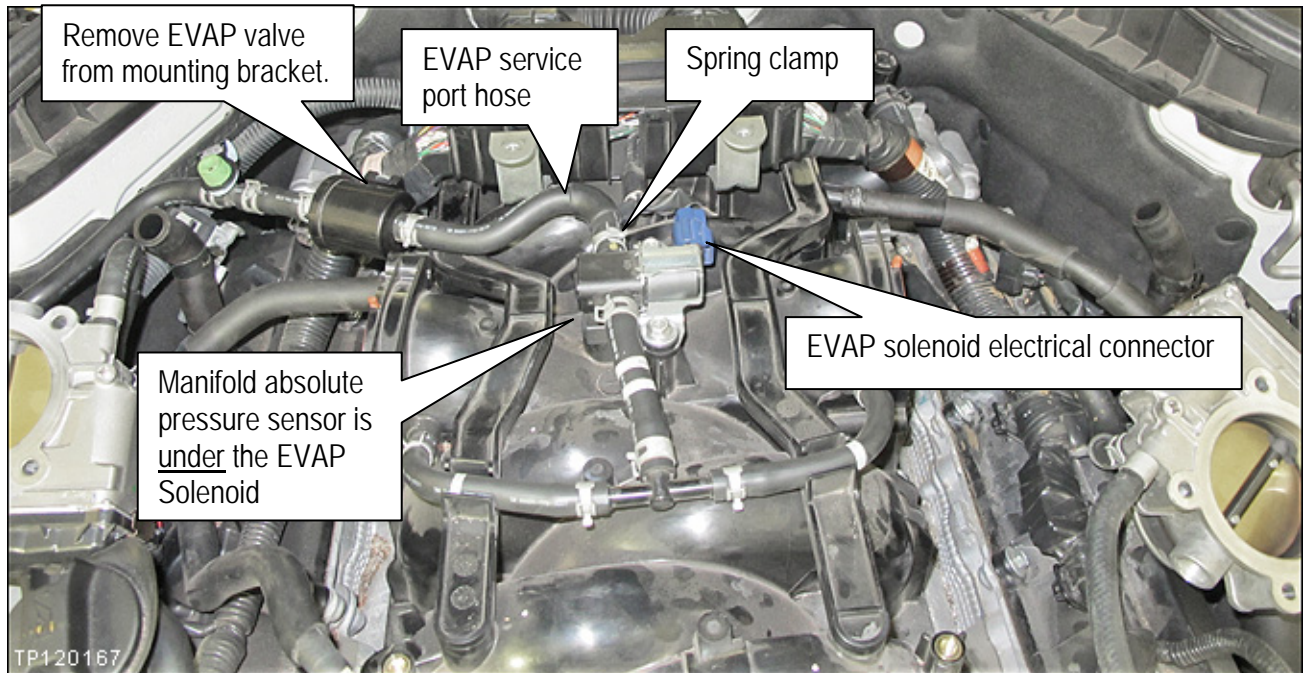


Figure 6m

12. Disconnect manifold absolute pressure sensor electrical connector.

NOTE: The manifold absolute pressure sensor is under the EVAP Solenoid (see Figures 6m and 7m).

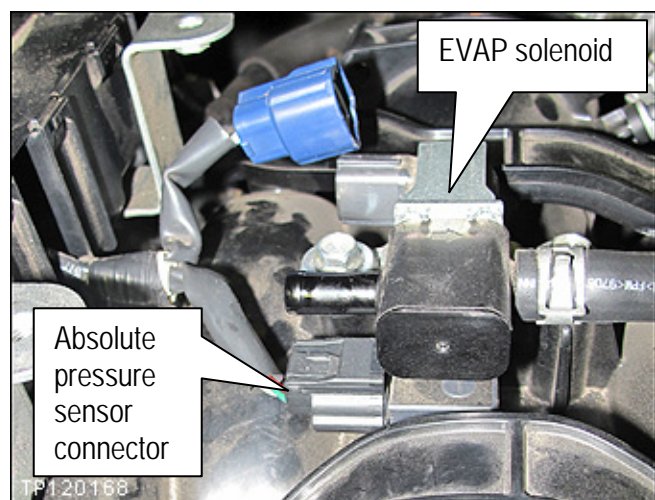


Figure 7m

13. Remove 2 harness bracket mounting bolts shown in Figure 8m; passenger side of engine.

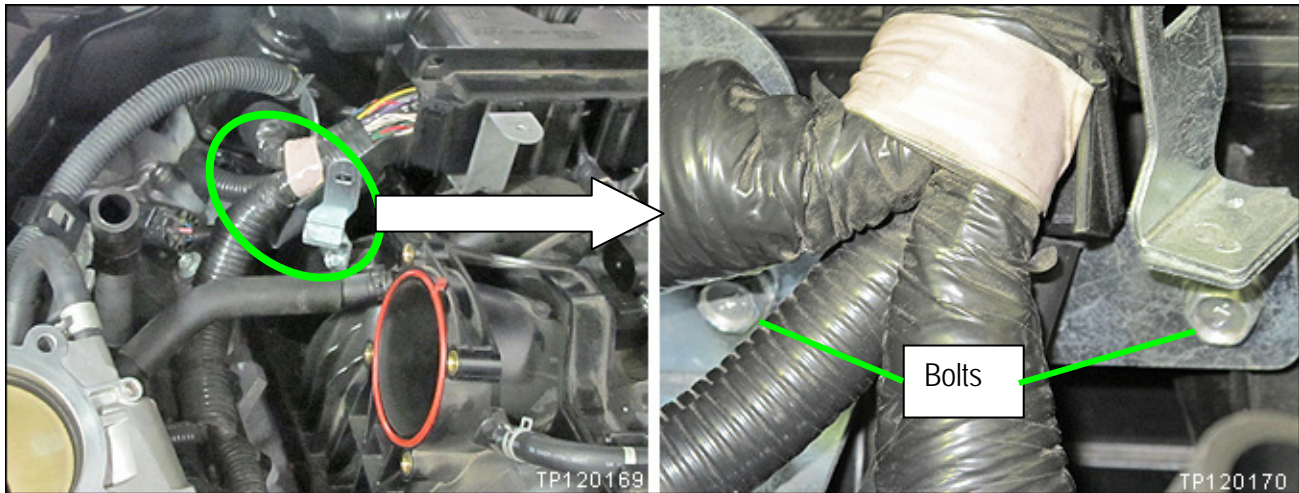


Figure 8m

14. Disconnect the positive crankcase ventilation (PCV) hoses from the intake manifold; both sides (see Figure 9m).

- a. Loosen spring clamps.
- b. Disconnect hoses and position them out of the way.



Figure 9m

15. Disconnect main harness from the intake manifold bracket as follows:

a. Remove 2 bolts securing main harness to bracket.

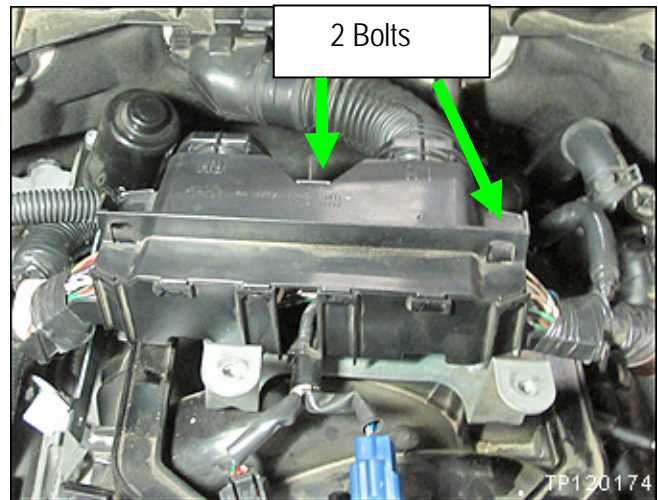


Figure 10m

b. On the bottom of the main harness, use needle-nose pliers to pinch and release 2 clips.

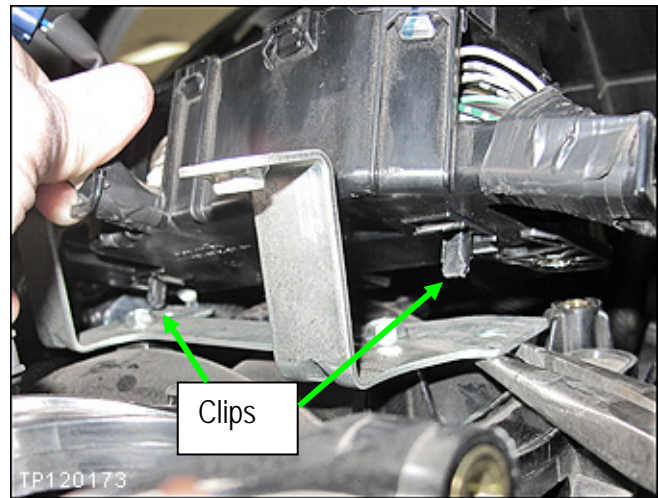


Figure 11m

16. By hand, remove the fuel pump foam insulator shown in Figure 12m.

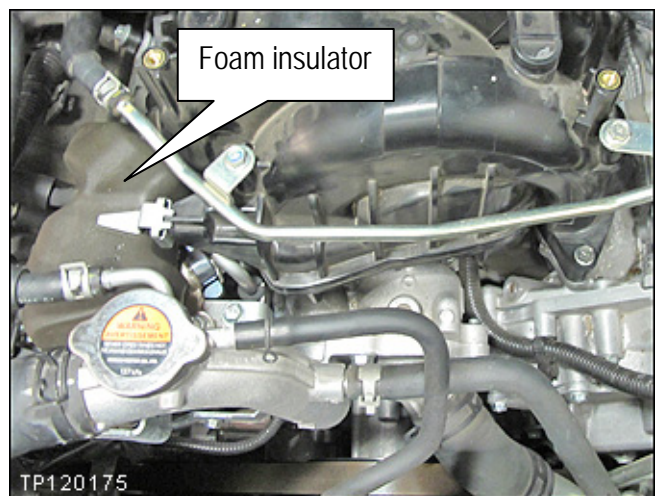


Figure 12m

17. Remove 1 bolt securing coolant pipe to rear of intake manifold; driver side.

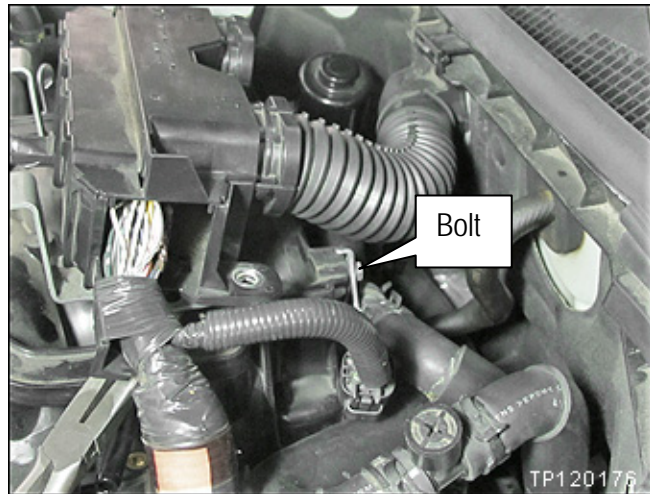


Figure 13m

18. Remove 10 bolts securing the intake manifold to the engine (see Figure 14m).

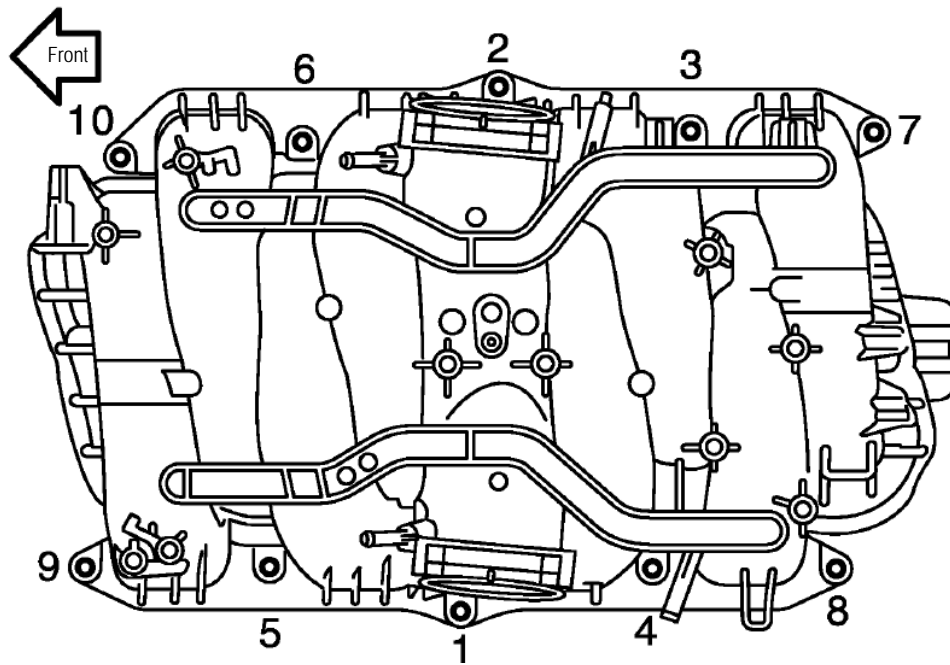


Figure 14m

19. Lift the front of the intake manifold UP and pull it forward approximately 4 inches.

NOTE: With the manifold in this position you can access the brake booster vacuum hose and tie-clip attached to the rear of the manifold.

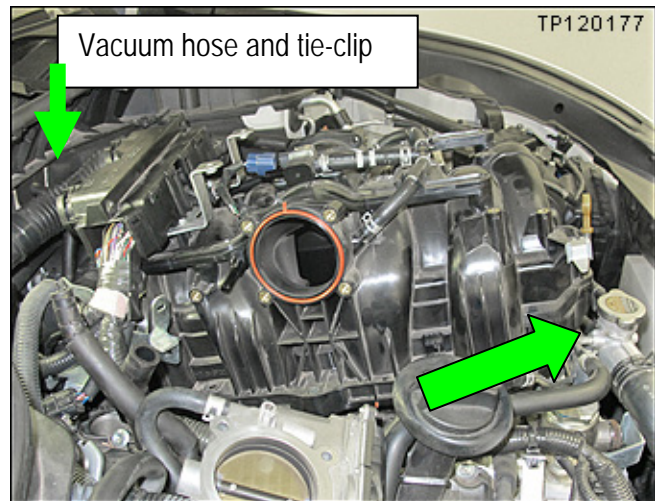


Figure 15m

20. Disconnect the brake booster vacuum hose from the intake manifold:

- a. Look behind the intake manifold (see Figures 15m and 16m) and locate the hose.
- b. Loosen the spring clamp and disconnect the hose.

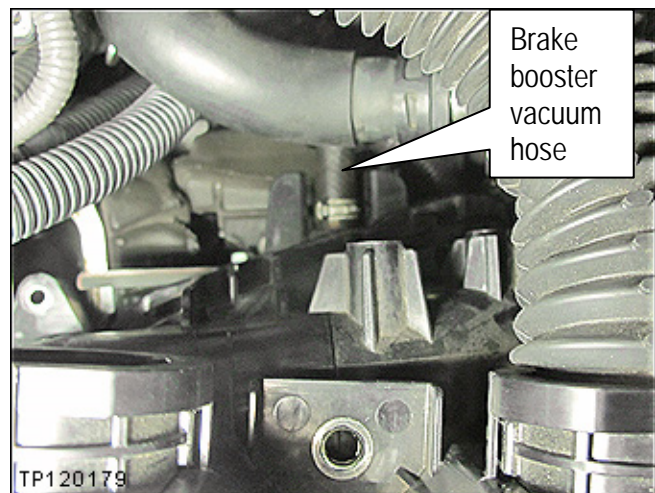


Figure 16m

21. Disconnect or cut the harness tie-clip at the back of the intake manifold:

- a. Look behind the intake manifold (see Figure 15m and 17m) and locate the tie-clip.
- b. Disconnect or cut the tie-clip.

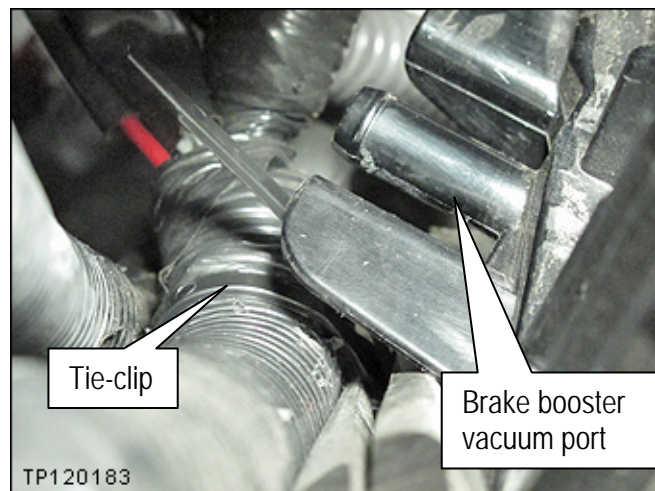


Figure 17m

22. Remove the intake manifold from the engine and place clean rags over the intake ports to prevent debris from entering the engine.

23. At the back of the intake manifold, remove the harness tie-clip.

NOTE: A new tie-clip will be installed on the harness before installing the intake manifold.

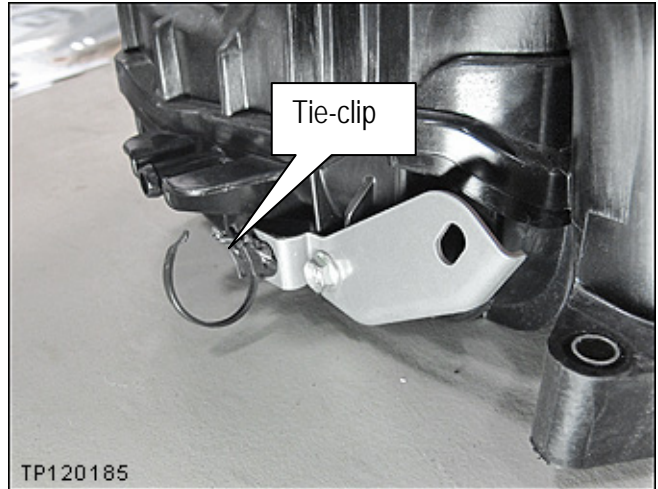


Figure 18m

24. Remove insulators covering the fuel rails.

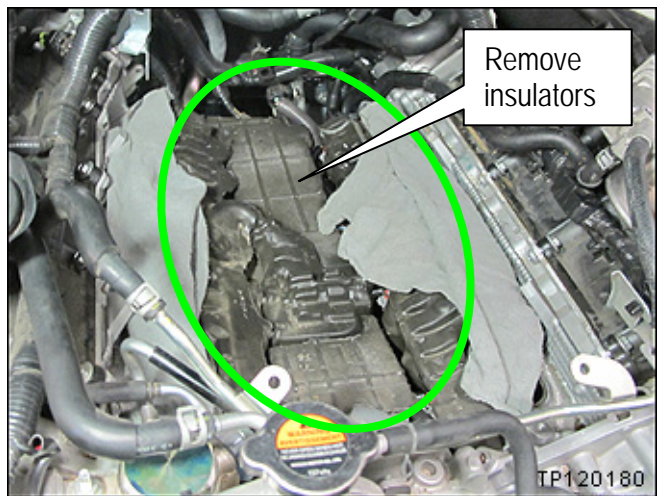


Figure 19m

25. Disconnect fuel rail pressure sensor electrical connector:

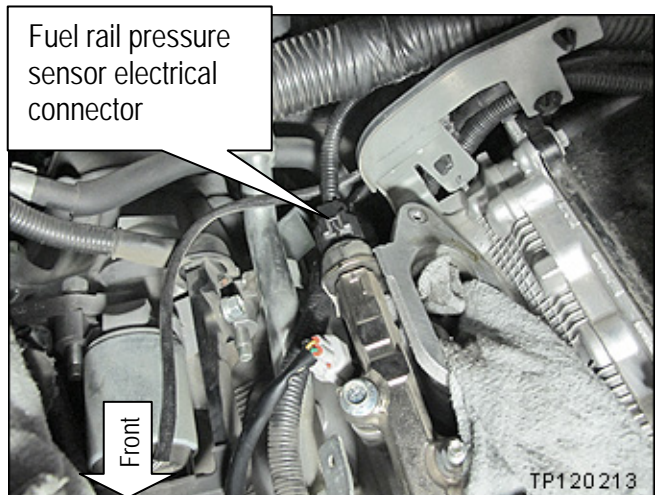


Figure 20m

26. Torque the fuel rail pressure sensor as follows:

- a. Measure the length of your torque wrench between the center of the handle and the center of the square drive as shown in Figure 21m.

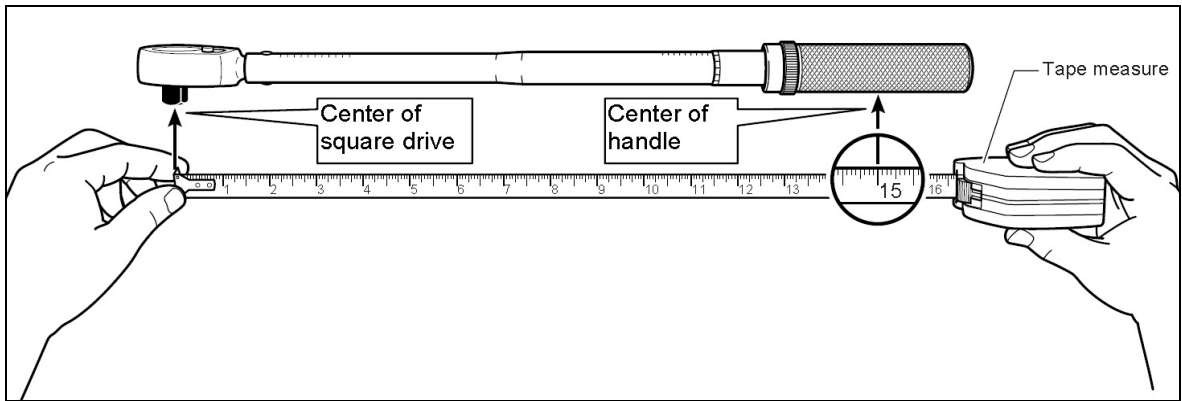


Figure 21m

- b. Set the torque wrench using the following chart.

Torque Wrench Length-Inches (see Figure 21m)	Set Torque Wrench To:	Torque Wrench Length-Inches (see Figure 21m)	Set Torque Wrench To:
8	36.4 N•m (3.64 kg-m, 27.0 ft-lb)	16.5	42.3 N•m (4.23 kg-m, 31.0 ft-lb)
8.5	36.4 N•m (3.64 kg-m, 27.0 ft-lb)	17	42.5 N•m (4.25 kg-m, 31.5 ft-lb)
9	37.5 N•m (3.75 kg-m, 28.0 ft-lb)	17.5	42.7 N•m (4.27 kg-m, 31.5 ft-lb)
9.5	38.0 N•m (3.80 kg-m, 28.0 ft-lb)	18	42.9 N•m (4.29 kg-m, 31.5 ft-lb)
10	38.5 N•m (3.85 kg-m, 28.5 ft-lb)	18.5	43.0 N•m (4.30 kg-m, 32.0 ft-lb)
10.5	38.9 N•m (3.89 kg-m, 29.0 ft-lb)	19	43.2 N•m (4.32 kg-m, 32.0 ft-lb)
11	39.3 N•m (3.93 kg-m, 29.0 ft-lb)	19.5	43.3 N•m (4.33 kg-m, 32.0 ft-lb)
11.5	39.6 N•m (3.96 kg-m, 29.0 ft-lb)	20	43.5 N•m (4.35 kg-m, 32.0 ft-lb)
12	40.0 N•m (4.00 kg-m, 29.5 ft-lb)	20.5	43.6 N•m (4.36 kg-m, 32.0 ft-lb)
12.5	40.3 N•m (4.03 kg-m, 30.0 ft-lb)	21	43.8 N•m (4.38 kg-m, 32.5 ft-lb)
13	40.6 N•m (4.06 kg-m, 30.0 ft-lb)	21.5	43.9 N•m (4.39 kg-m, 32.5 ft-lb)
13.5	40.9 N•m (4.09 kg-m, 30.0 ft-lb)	22	44.0 N•m (4.40 kg-m, 32.5 ft-lb)
14	41.2 N•m (4.12 kg-m, 30.5 ft-lb)	22.5	44.1 N•m (4.41 kg-m, 32.5 ft-lb)
14.5	41.4 N•m (4.14 kg-m, 30.5 ft-lb)	23	44.2 N•m (4.42 kg-m, 32.5 ft-lb)
15	41.7 N•m (4.17 kg-m, 31.0 ft-lb)	23.5	44.3 N•m (4.43 kg-m, 33.0 ft-lb)
15.5	41.9 N•m (4.19 kg-m, 31.0 ft-lb)	24	44.4 N•m (4.44 kg-m, 33.0 ft-lb)
16	42.1 N•m (4.21 kg-m, 31.0 ft-lb)	---	---

- c. Attach special tool J-50991 to your torque wrench – use an extension if needed.
- d. Torque the sensor to the specified torque.



Figure 22m

NOTE: Make sure to keep the extension tool (J-50991) straight (in line) with the torque wrench as shown in Figure 23m.

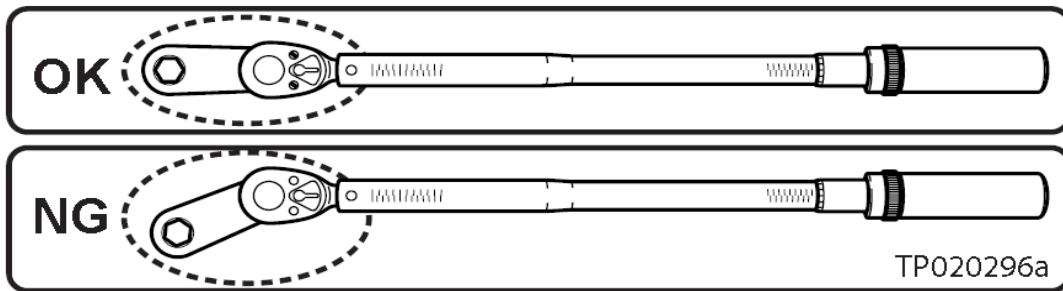


Figure 23m

- 27. Re-connect the fuel rail pressure sensor electrical connector.

IMPORTANT: You cannot see or connect this connector after the intake manifold is installed.

Tighten Additional Fuel Rail Connections Before Reassembly

28. Torque the bolts shown in Figure 24m:
11 N·m (1.1 Kg-m, 97 in-lb)

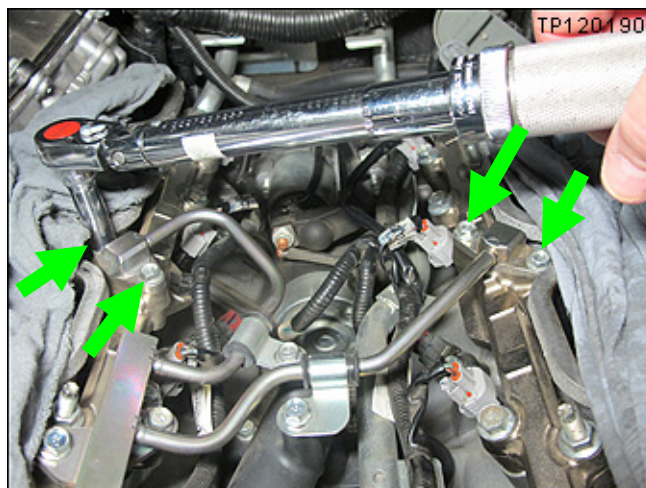


Figure 24m

29. Torque the flange nuts shown in Figure 25m:
33.4 N·m (3.4 Kg-m, 25 ft-lb)

- Use a short 19 mm crowfoot wrench.

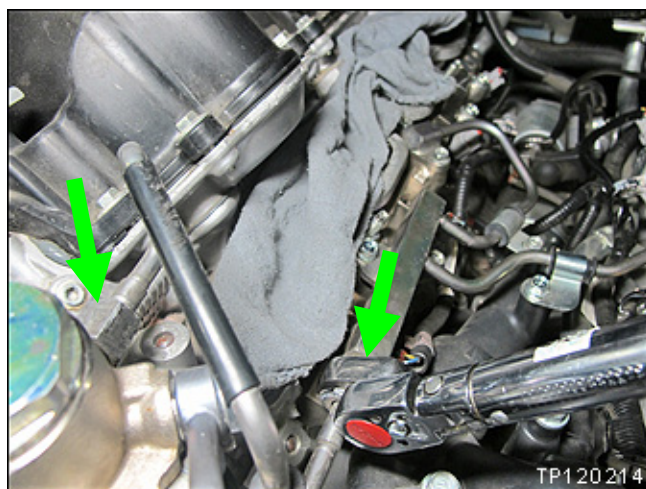


Figure 25m

30. Reinstall insulators covering the fuel rails.

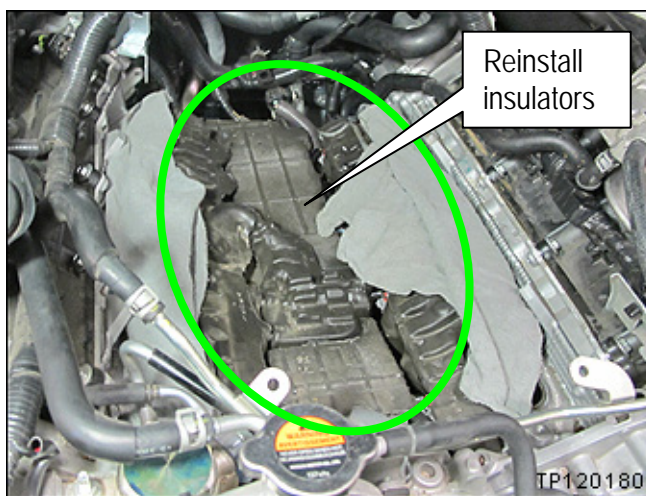


Figure 26m

Reassembly

31. Install a new tie-clip on the harness at the center rear of the engine.

- Tie-clip P/N 24225-C9901.
- Look for witness marks on the wiring harness made by the original tie-clip.
- Make sure the mounting clip is facing toward the intake manifold.

NOTE: This tie-clip will replace the one that was cut off in step 21.

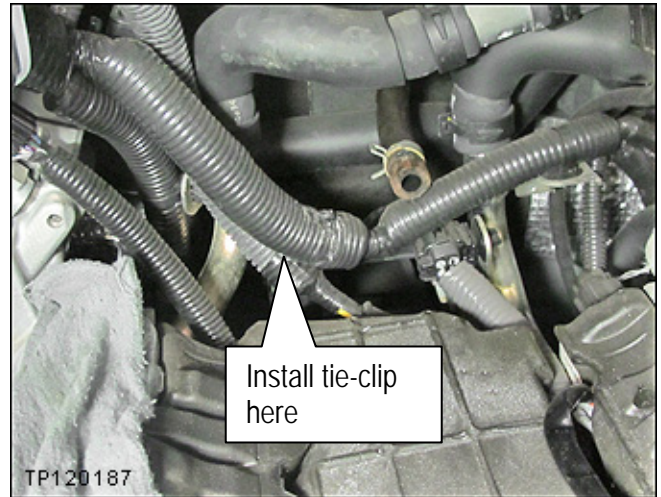


Figure 27m

32. Install new intake manifold gaskets.

NOTE:

- For vehicles in dealer inventory (less than 125 miles), new gaskets are not needed.
- Clean and inspect the old gaskets.
- Make sure gaskets are not torn or cut and they are installed properly.



Figure 28m

33. Reinstall all parts removed in reverse order.

Reassembly Tips / Information

- Attach wire harness on passenger side of intake manifold (see Figure 8m) before installing intake manifold bolts. This will prevent the harness from being pinched under the intake manifold.
- Start intake manifold bolts by hand and then tighten in the order shown in Figure 29m:
Torque to 10.8 N•m (1.1 Kg-m, 96 in-lb).

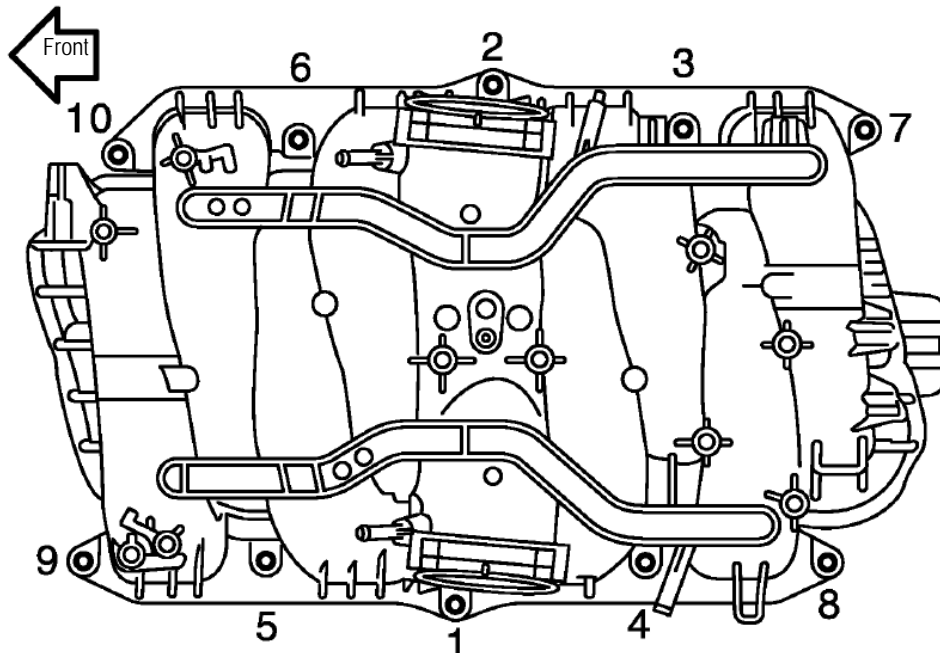


Figure 29m

- Install new throttle body gaskets.

NOTE: For vehicles in dealer inventory (less than 125 miles), new throttle body gaskets are not needed. Clean and inspect the old gaskets. Make sure gaskets are not torn or cut and they are installed properly.

- Start throttle body bolts by hand and then torque to 10 N•m (1.0 Kg-m, 89 in-lb).
- Make sure engine cover brackets are installed on the correct side.
One is marked with an "L" indicating Left side (driver side).
One is marked with an "R" indicating Right side (passenger side).

- Before installing the engine cover, check the following items:

Wiring harness tie-clip and brake booster vacuum hose secured
Main harness secured to intake manifold
Rear coolant pipe secured to intake manifold
EVAP hoses, EVAP solenoid connector, and manifold absolute pressure sensor connector secure
Throttle body harness connectors secured
Driver side and passenger side Intake air tube clamps secured
Front coolant pipe secured to intake manifold
Fuel pump foam insulator installed
Engine cover brackets secured to intake manifold
EVAP valve secured

34. Reconnect battery cables, positive cable first, and install the battery cover.
35. Keep foot off of the brake and cycle ignition OFF > ON, wait 3 seconds, > OFF. Repeat 3 times to build pressure in the fuel system.
36. Start the engine and make sure no warning lights are ON, and confirm the engine will rev past 4000 rpm.
37. Reset the clock and radio station presets.
38. Reinitialize each auto-up power window as follows:
 - a. Turn ignition ON.
 - b. Open window all the way DOWN.
 - c. Pull all the way UP on the switch and HOLD (close the window completely), continue to HOLD for 4 seconds after window is completely closed.
 - d. Confirm auto up/down operates correctly.
39. Inform the customer they will need to reset their ADP (Automatic Drive Positioner).

END

PARTS INFORMATION

MODEL	DESCRIPTION	PART NUMBER	QTY	
QX56 / QX80	Propeller Shaft Bolts	37120 – 5X05A	4	
	Propeller Shaft Nuts	37171 – AL60A	4	
	Exhaust Gaskets			
	2WD	2011 – 2012	20692 – 24U00	2
		2013 – 2014	20692 – 24U0A	
4WD	2011 – 2014			
M56 / Q70	Manifold Gasket	A4035 – 1MC0A	1 (set of 8)	
	Throttle Body Gasket	16175 – 1CA0A	2	
	Wiring harness clip (tie-clip)	24225 – C9901	1	

NOTE: For vehicles in dealer inventory (less than 125 miles), new gaskets are not needed. Clean and inspect the old gaskets. Make sure gaskets are not torn or cut and they are installed properly.

CLAIMS INFORMATION

Submit a Campaign (CM) line claim using the following claims coding:

QX56 / QX80

CAMPAIGN (CM) ID #	DESCRIPTION	OP CODE	FRT
R1417	Re-torque Fuel Rail Pressure Sensor	R14172	0.9 hrs.

M56 / Q70

CAMPAIGN (CM) ID #	DESCRIPTION	OP CODE	FRT
R1417	Re-torque Fuel Rail Pressure Sensor	R14178	1.7 hrs.

OWNER'S LETTER (typical owner's letter)

Dear Infiniti QX56 Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Infiniti has decided that a defect which relates to motor vehicle safety exists in certain 2011-2013 Model year Infiniti QX56 vehicles. Our records indicate that you own or lease the Infiniti vehicle identified by the VIN on the inside of this notice.

Reason for Recall

Infiniti recently discovered that on some of the affected vehicles, the fuel pressure sensor connection may not have been tightened to the correct specification. As a result, the fuel pressure sensor connection may loosen gradually due to heat and vibration. If this occurs, over time, a small amount of fuel may leak from the fuel pressure sensor connection which could increase the risk of a fire in the presence of an ignition source.

What Infiniti Will Do

Your Infiniti retailer will retighten the fuel pressure sensor to the proper torque specification. This free service should take less than an hour to complete, but your Infiniti retailer may require your vehicle for a longer period of time based upon their work schedule.

What You Should Do

Contact your Infiniti retailer at your earliest convenience in order to arrange an appointment to have your vehicle repaired. Please bring this notice with you when you keep your service appointment. **If you notice a fuel smell in the cabin of your vehicle, please bring your vehicle into an Infiniti retailer for repair as soon as possible.**

If you have additional questions you may contact Infiniti Consumer Affairs Department, P.O. Box 685003, Franklin, TN 37068-5003. The toll free number is 1-800-662-6200. You may also submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Thank you for your cooperation. We are indeed sorry for any inconvenience this may cause you.

