



Classification:

EM13-002

Reference:

ITB13-009

Date:

March 25, 2013

2011-2013 QX56; WHINE NOISE FROM ENGINE AREA

APPLIED VEHICLE: 2011-2013 QX56 (Z62)

IF YOU CONFIRM:

A whine type noise is coming from the Bank 2 (B2) side of the timing chain system.

- The noise is best heard from the high pressure fuel pump area.
- The noise should increase in frequency with engine speed (RPM).
- If the noise does not increase with engine speed, the timing chain system may not be the cause. Refer to the appropriate section of the Electronic Service Manual (ESM) for further diagnosis.

ACTION:

Replace the B2 oil jet and **both** timing chains listed in the **PARTS INFORMATION** section of this bulletin.

- Always replace all seals, o-rings and gaskets.
- Replace timing chain related components as necessary.
- For repair procedure, refer to the **SERVICE PROCEDURE** section of this bulletin (starting on page 3).
- Use Oil Jet Remover/Installer Kit J-51269 for oil jet removal, inspection, and installation.

NOTE: Essential Service Tool Oil Jet Remover/Installer Kit J-51269 will ship to all Infiniti dealerships before the end of April 2013. If an Oil Jet Remover/Installer Kit is required prior to receiving the Essential Service Tool, contact TECH•MATE at 800-662-2001 for short-term loaner tool information.

Oil Jet Remover/Installer Kit J-51269 contains:

- J-51269-1 Remover
- J-51269-2 Installer
- Gauge Pin – GO/NO-GO

IMPORTANT: The purpose of **ACTION** above is to give you a quick idea of the work you will be performing. You **MUST** closely follow the entire **SERVICE PROCEDURE** as it contains information that is essential to successfully completing this repair.

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.

PARTS INFORMATION

DESCRIPTION *	PART NUMBER	Qty
JET - OIL TIMING (Oil Jet)	13081-1LA0A	1
CHAIN – CAMSHAFT (B1)	13028-1CA2A	1
CHAIN – CAMSHAFT (B2)	13028-1LA2A	1
LIFTER – VALVE	13231-1MC5E	1 **
SEAL – OIL CRANKSHAFT FRONT	13510-1LA0A	1 **
SEAL – O RING	15066-6N204	2 **
SEAL – O RING	15066-AR010	1 **
SEAL – O RING	15066-AR020	2 **
SEAL – O RING (6.84 MM)	15066- ZL80A	1 **
OIL FILTER	15208-31U0A	1
WASHER – DRAIN (Drain Plug Gasket)	11026-01M02	1 **
Nissan Liquid Gasket (sealant)	999MP-1217HP	(1) (2)

* For parts related to, and needed to, complete this repair i.e. timing chain guides, refer to WIN FAST or your Electronic Parts Catalog.

** Always replace after every disassembly.

(1) Bill out Nissan Liquid Gasket 1217HP (sealant) as **expense code 009**.

(2) Order Nissan Liquid Gasket 1217HP (sealant) through the Infiniti Maintenance Advantage program: Phone: 877-INF-IMA1 (877-463-4621). Website order via link on dealer portal www.NNAnet.com and click on the "Maintenance Advantage" link.

CLAIMS INFORMATION

** If determined during Inspection that the oil jet **cannot** be replaced, refer to the online WFRM for claims coding information for short block replacement.

2WD Models

Submit a Primary Part (PP) type line claim using the following claims coding:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and install Oil Jet and Timing Chains – 2wd	13028-1CA1A	AX40AA	ZL	32	10.1

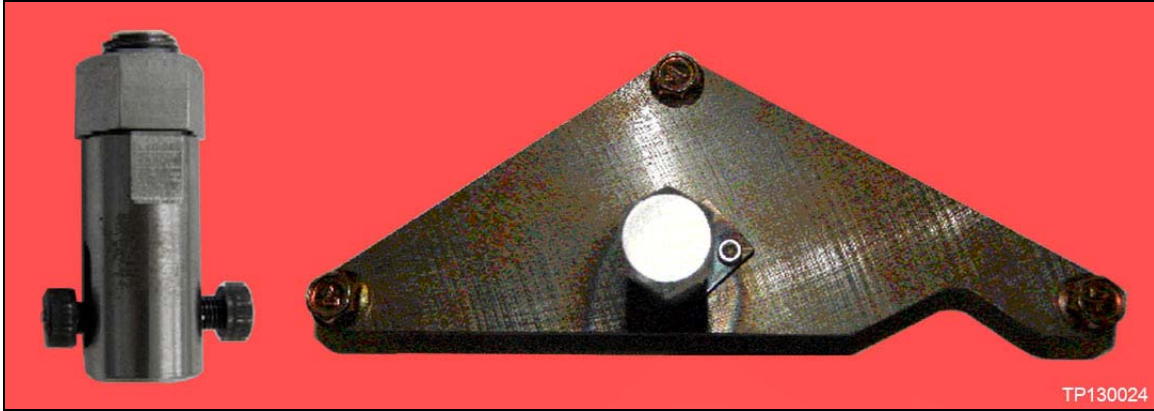
4WD Models

Submit a Primary Part (PP) type line claim using the following claims coding:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and install Oil Jet and Timing Chains – 4wd	13028-1CA1A	AX41AA	ZL	32	12.4

Expense Code:

EXPENSE CODE	DESCRIPTION	MAX AMOUNT
001	Oil	\$18.50
009	Sealant	\$8.00



Oil jet remover and installer; dealer tools may differ slightly

SERVICE PROCEDURE

Remove Oil Jet

NOTE: For easier viewing, repairs are shown on a removed engine. There is no need to remove the engine from the vehicle to perform this repair.

1. Write down all radio station presets.

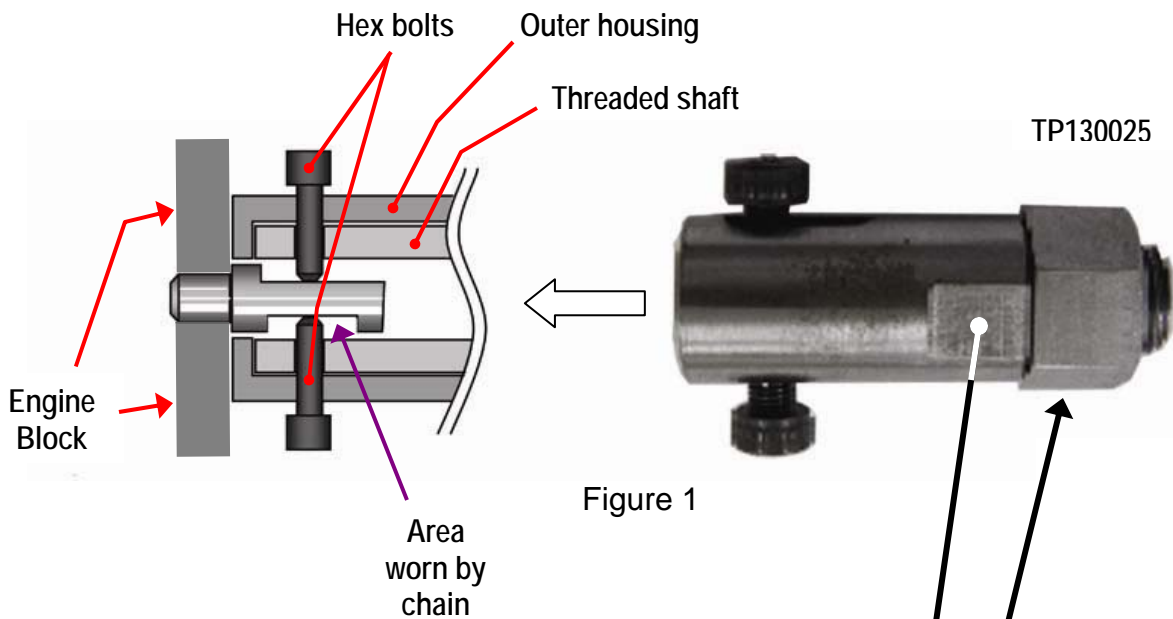
Presets	1	2	3	4	5	6
A						
B						
C						
SAT						

2. Disconnect both battery cables, negative cable first.
3. Remove both B1 and B2 timing chains.
 - Refer to the **B ENGINE > EM Engine Mechanical** section of the ESM.

IMPORTANT: Follow all related Warnings, Cautions, and Notes in the ESM.

NOTE: If the crankshaft is determined to be 360° off from 0° TDC on #1 cylinder compression stroke after removing the front timing chain front cover, put the crankshaft pulley back on, and then rotate the crankshaft 360° (when camshaft and crankshaft sprocket mating marks are aligned).

4. Remove the B2 oil jet using Remover Tool J-51269-1 (see Figure 1).
 - a. Install the remover tool onto the oil jet and flush against the engine block (see cutaway, Figure 1).
 - Align the hex bolts to contact the oil jet's flat and worn sides.
 - Slide the threaded shaft all the way in the outer housing.
 - b. Hand tighten both hex bolts with an allen wrench.
 - Tighten enough to keep the remover tool from slipping, but no more.



- c. Hold the remover tool's outer housing with a wrench while turning the nut clockwise.
 - This procedure will extract the oil jet from the block.
 - If the oil jet is not extracted on the first attempt, steps 4a - 4c will need to be performed a second time.



- d. Determine if oil jet replacement is possible by inserting the gauge pin into the block's hole:
- If the gauge pin cannot be inserted in the hole more than 3 mm, oil jet replacement can be completed. Go to **Install Oil Jet** below.
 - If the pin can be inserted more in the hole than 3 mm, this repair cannot be performed. Replace the "short engine" (short block) assembly.

NOTE: The gauge pin comes with essential tool J-51269 Oil jet Remover/Installer Kit.



Figure 3

Install Oil Jet

1. Insert the new oil jet into installer tool J-51269-2.
 - See page 1 for tool information.

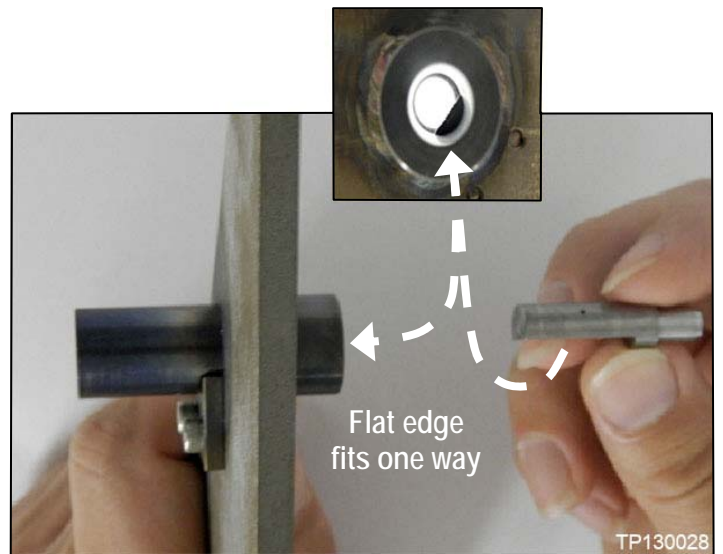


Figure 4

2. Mount the installer tool to the block.
 - With the oil jet inserted in the installer tool, position the other end of the oil jet in the block's hole, and then align and finger tighten the three bolts.
 - Finger tighten the bolts enough to position the installer tool flush to the block.

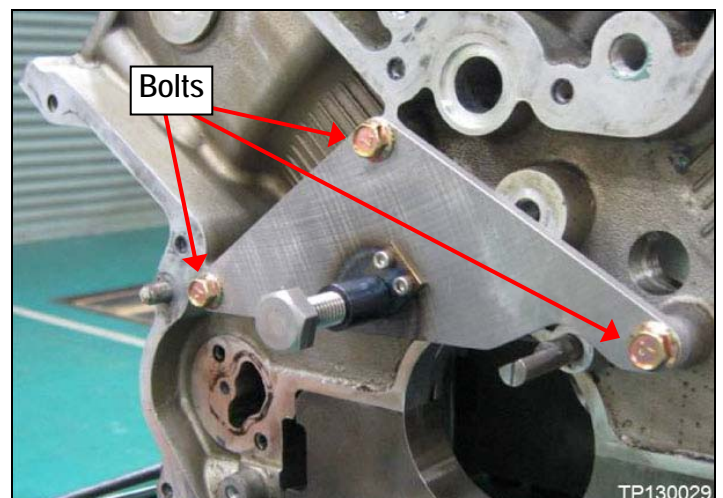


Figure 5

3. Install the press bolt with your fingers until it bottoms out on top of the oil jet.
4. Next, tighten the press bolt two (2) full turns.
 - Confirm the oil jet is centered and aligned.
5. With a suitable tool, hand tighten, but not over-tighten, the three bolts.
 - Make sure the installer tool is flush with the block.

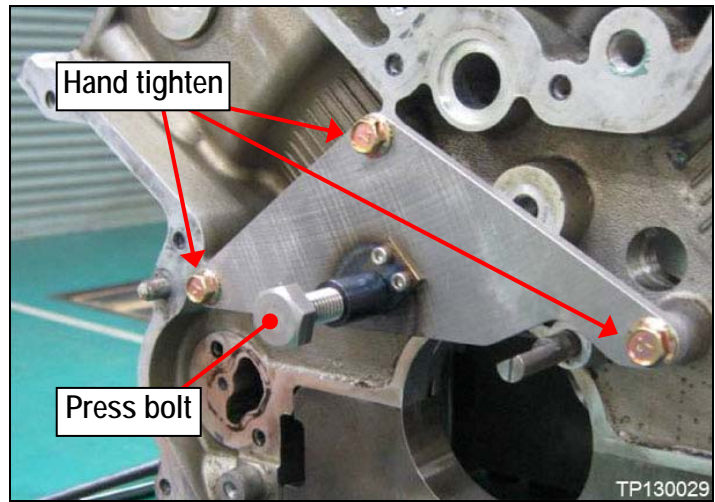


Figure 6

6. Tighten the press bolt until the oil jet bottoms out on the block.

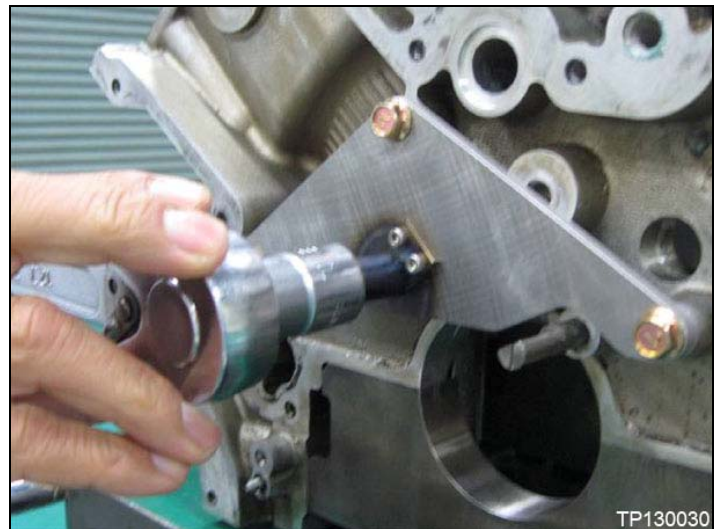


Figure 7

7. Confirm the following:

- The notch on the oil jet is within $\pm 10^\circ$ of the 12 o'clock position.

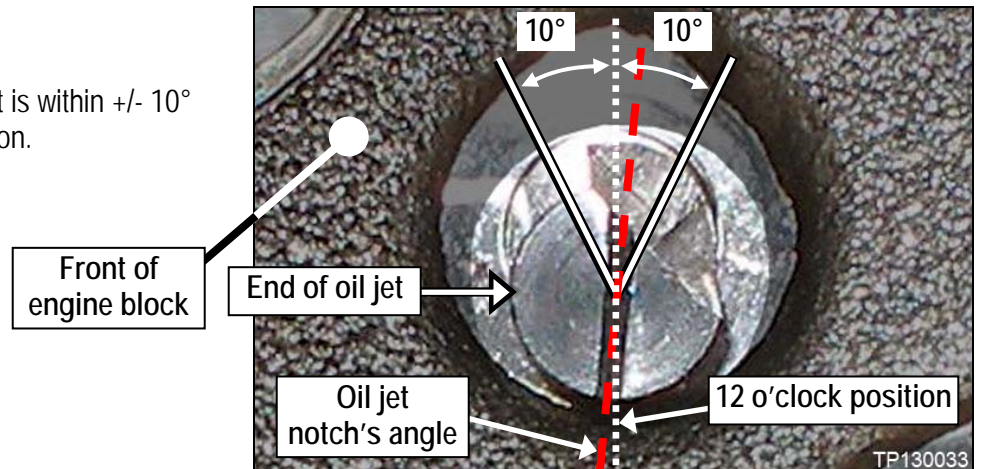


Figure 8; example of installation

- Confirm the oil jet is flush with the block.
 - If the oil jet is not properly installed on the first attempt, steps 2 - 7 will need to be performed a second time.

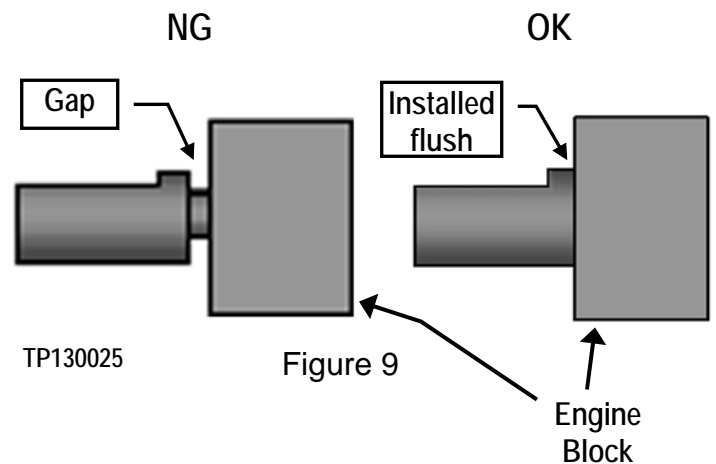


Figure 9

8. Once proper oil jet installation is confirmed, reassemble the engine with new B1 and B2 timing chains.

- Always replace related seals, o-rings and gaskets as noted in the ESM.
- Replace timing chain related components as necessary.
- Refer to the **B ENGINE > EM Engine Mechanical** section of the ESM.

9. Install the battery cables, negative cable last.

10. Reprogram the radio presets.

11. Reset / initialize all applied systems i.e. power windows, clock, sunroof, etc.