



SERVICE BULLETIN

Classification: EM09-007	Reference: NTB09-128	Date: November 16, 2009
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PATHFINDER / XTERRA / FRONTIER; BUZZING / WHINING NOISE FROM TIMING CHAIN AREA

APPLIED VEHICLES: 2005-2010 Pathfinder (R51) VQ40 engine ONLY
2005-2010 Xterra (N50)
2005-2010 Frontier (D40) VQ40 engine ONLY

IF YOU CONFIRM:

There is a high frequency buzzing / whining noise coming from the secondary timing chain system.

- 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:

1. Replace **both** secondary timing chains and **both** secondary timing chain tensioner "shoes" with the ones from the **PARTS INFORMATION** section of this bulletin (on Page 2).
2. Change the engine oil and filter.
3. For repair procedure, refer to the **SERVICE PROCEDURE** section of this bulletin (starting on Page 3).

IMPORTANT: The purpose of **ACTION** is to give you a quick idea of the work you will be performing. You **MUST** closely follow the entire **SERVICE PROCEDURE** (starting on Page 3) as it contains information that is essential to successfully completing this repair.

Nissan 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 Nissan dealer to determine if this applies to your vehicle.

PARTS INFORMATION

DESCRIPTION	PART NUMBER	QTY
Engine Oil Filter	15208-9E000	1
Drain Plug Washer	11026-01M02	1
Secondary Timing Chain	13028-ZK01C	2
Tensioner Shoe	13097-ZK01C	2
O-Ring, Front Cover	15066-2Y510	2
O-Ring, Front Cover	15066-5E510	2
Crank Shaft Seal	13510-7Y000	1
ThreeBond 1217F (sealant)	999MP-1217FPP	(1) (2)

(1) As needed (shop supply).

(2) ThreeBond 1217F (sealant) is available from the Nissan Direct Ship Chemical Care Product Program: Phone 1-800-811-0502, Fax 1-770-218-0148, Website order link via dealer portal www.NNAnet.com or direct www.NissanChemicals.com

CLAIMS INFORMATION

Frontier VQ40 Engine

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
RPL Secondary Timing Chains & Both Tensioner Shoes	13028- ZK00B	AX25AA	ZL	32	4.6

Xterra

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
RPL Secondary Timing Chains & Both Tensioner Shoes	13028- ZK00B	AX25AA	ZL	32	4.4

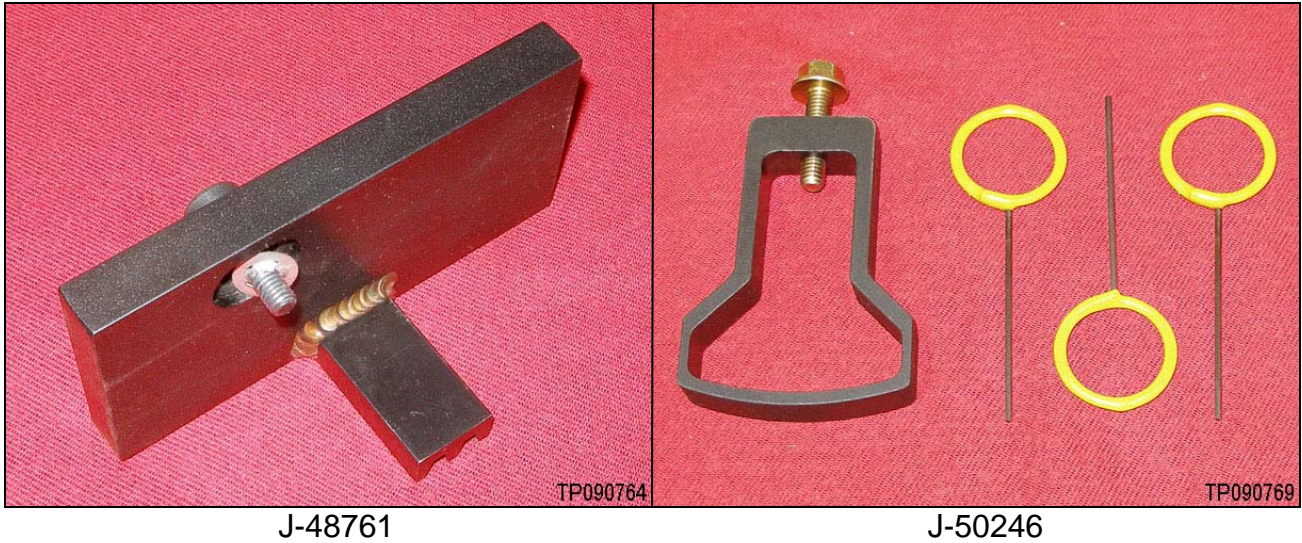
Pathfinder VQ40 Engine

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
RPL Secondary Timing Chains & Both Tensioner Shoes	13028- ZK00B	AX25AA	ZL	32	4.6

Expense Code:

EXPENSE CODE	DESCRIPTION	MAX AMOUNT
001	Oil	\$15.60



Tool J-50246 (Tensioner Shoe Installer and Chain Tensioner Pins) is considered "Essential" and will be shipped to each dealer on November 5, 2009. Your Non-Vehicle account will be charged \$29.85 plus applicable taxes and freight.

Essential Tool J-48761 (VQ40 Ring Gear Stop) was sent to dealers May 2007.

SERVICE PROCEDURE

Write down all radio station presets.

Presets	1	2	3	4	5	6
A						
B						
C						

2. Disconnect both battery cables, negative cable first.

- Remove the secondary timing chains. Refer to the Electronic Service Manual (ESM) if needed.

NOTE: It is not necessary to remove the valve covers or intake collector.

- Before removing the crankshaft pulley, set it to 0° Top Dead Center (TDC).
- Use Tool J-48761 to secure the flywheel / flex plate when removing the crankshaft pulley and camshaft sprockets. Figure 1 shows J-48761 installed on an AWD vehicle.

NOTE: The camshaft sprockets' bolts will be removed and installed while being held by all three (3) timing chains.

- If the crankshaft is determined to be 360° off from 0° TDC on #1 cylinder compression stroke after removing the front timing chain case (front cover), put the crankshaft pulley back on, and then rotate the crankshaft 360° (when camshaft and crankshaft sprocket mating marks are aligned).
- Use the chain tensioner pins (pin) from Tool Kit J-50246 to hold all three (3) chain tensioner plungers. Figure 3 on Page 5 shows a pin used on B2 tensioner.

NOTE: The primary timing chain will be reused. If the original markings are not legible, it is recommended to mark this chain to all three sprockets with "white-out" or suitable marking before removing.

- Remove the Secondary Timing Chain Tensioner Shoes (shoe) by evenly prying with a couple pocket screwdrivers or suitable tool where shown in Figure 2.

NOTE: Leave the pins from Tool J-50246 in each tensioner until the timing chains are installed.

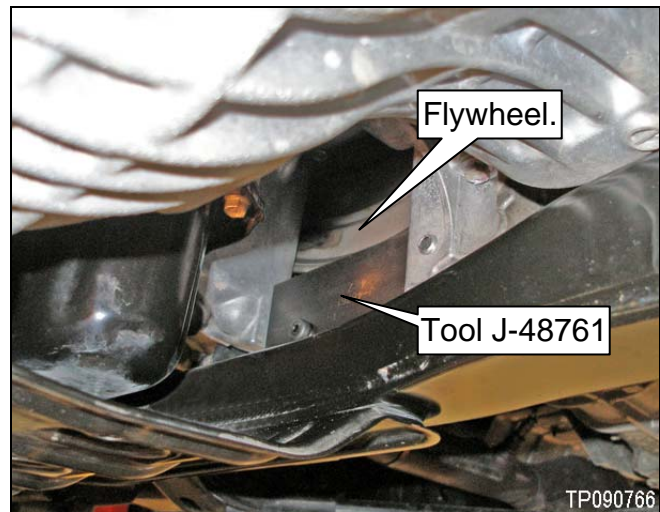


Figure 1

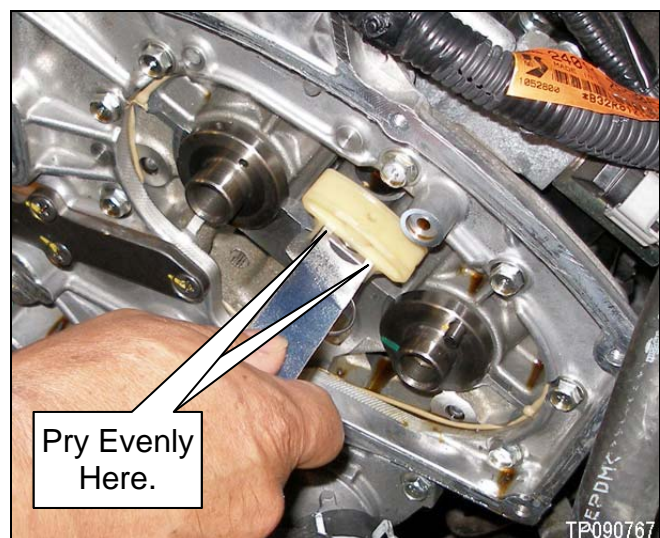


Figure 2

5. Install the new shoes to the tensioners with Tool J-50246 (see Figure 3).

- Tighten the bolt until the shoe is fully seated.

CAUTION: Tighten the bolt no more than necessary.

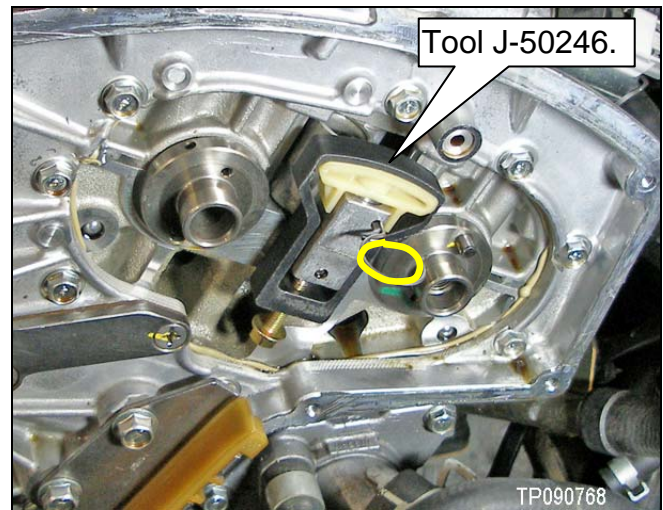


Figure 3

6. Install the new secondary timing chains. Refer to the ESM as needed.

7. Reassemble the rest of the engine and vehicle. Refer to the ESM as needed.

- Torque the camshaft sprocket bolts with all timing chains installed and Tool J-48761 holding the crankshaft.
- Make sure all three (3) pins are removed before installing the front cover.

8. Install the battery cables, negative cable last.

9. Reprogram the radio presets.

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

