



SERVICE BULLETIN

Classification: EM19-004a	Reference: NTB19-057a	Date: April 3, 2020
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ENGINE KNOCK OR TICK NOISE

This bulletin has been amended. See **AMENDMENT HISTORY** on the last page.
Please discard previous versions of this bulletin.

- APPLIED VEHICLES:** 2017-2019 Armada (Y62)
2017-2019 NV (F80)
2017-2019 Titan (A61)
2017-2019 Titan XD (A61)
- APPLIED VIN & DATE:** Armada built before:
JN8AY(*)N(**)K(*) 011355 // March 19, 2019
NV built before:
5BZAF0(***)KN 851114 // January 15, 2019
Titan/Titan XD built before:
1N6AA1(***)KN 518811 // January 10, 2019
- APPLIED ENGINE:** VK56VD (gasoline V8)

IF YOU CONFIRM

A knock or tick noise is coming from the engine.

OR

The customer states a knock or tick noise is heard from the engine area.

ACTION

Refer to **REPAIR OVERVIEW** on page 3.

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 **REPAIR OVERVIEW** 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.

ESSENTIAL TOOL

Tech Cam J-51951

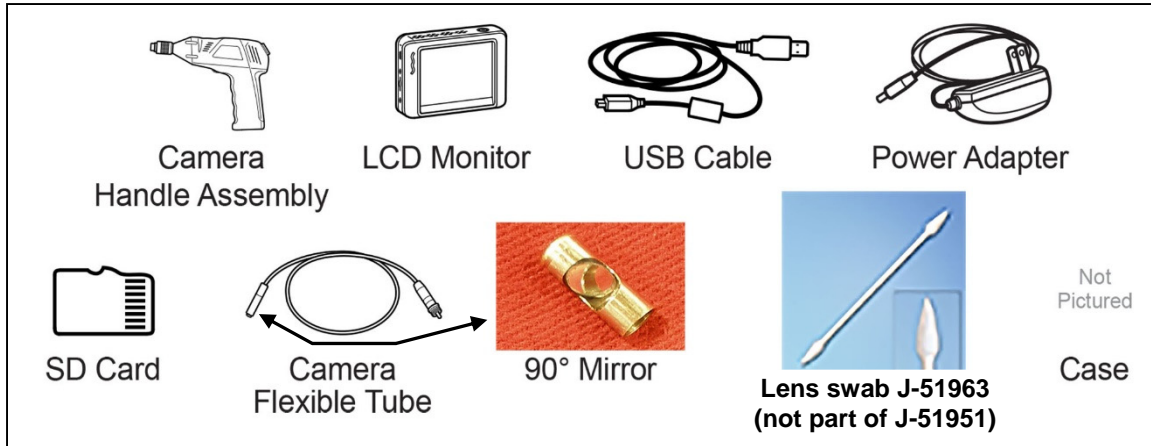


Figure 1

Additional Tech Cam J-51951 kits and components are available from Tech•Mate:
1-800-662-2001 or nissantechmate.com.

REPAIR OVERVIEW



SERVICE PROCEDURE

Inspect the Cylinder Wall

1. 2017 Titan and Titan XD ONLY: Refer to NTB17-053 first.
 - If NTB17-053 has been performed, skip to step 2.
 - If NTB17-053 has not been performed, do so now.
 - If the incident has been resolved (knock/tick noise has stopped) after performing NTB17-053, STOP HERE. This bulletin does not apply.
 - If the incident has not been resolved after performing NTB17-053, go to step 2.
2. Remove the # 7 spark plug.
 - For spark plug removal, refer to the appropriate section of the Electronic Service Manual (ESM).
 - Example: Section **ENGINE MECHANICAL > (VK56VD) > PERIODIC MAINTENANCE > SPARK PLUG > Removal and Installation**

3. Using Essential Tool Tech Cam J-51951, visually inspect the # 7 cylinder wall for scuffing.

NOTE: A few light vertical scratches located randomly around the cylinder bore (if you can still see the 'cross-hatch' honing marks between them) are normal and not an indication of piston scuffing. Heavy vertical scratching concentrated in the area where the piston skirt travels is an indication of piston scuffing.

- If the cylinder wall has scuffing, replace the short engine assembly.
 - Refer to Figure 4 on page 5 for an example of cylinder wall scuffing.
 - See page 7 for warranty information.
 - Refer to the appropriate section of the ESM for short engine assembly replacement.
 - See page 6 for additional short engine assembly replacement instructions.
- If there is **no scuffing** on the cylinder wall, go to **CLAIMS INFORMATION** on the last page (for the "inspection" OP CODE). Refer to the ESM for further diagnosis.
 - Refer to Figure 2 and Figure 3 on page 5 for an example of an "OK" cylinder wall.

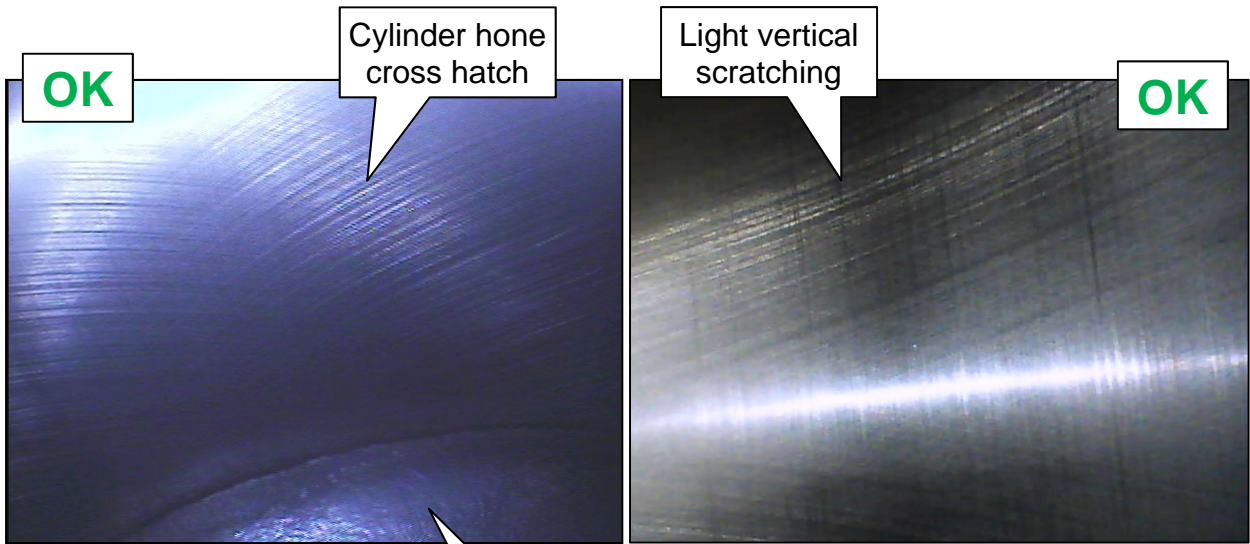


Figure 2

Figure 3

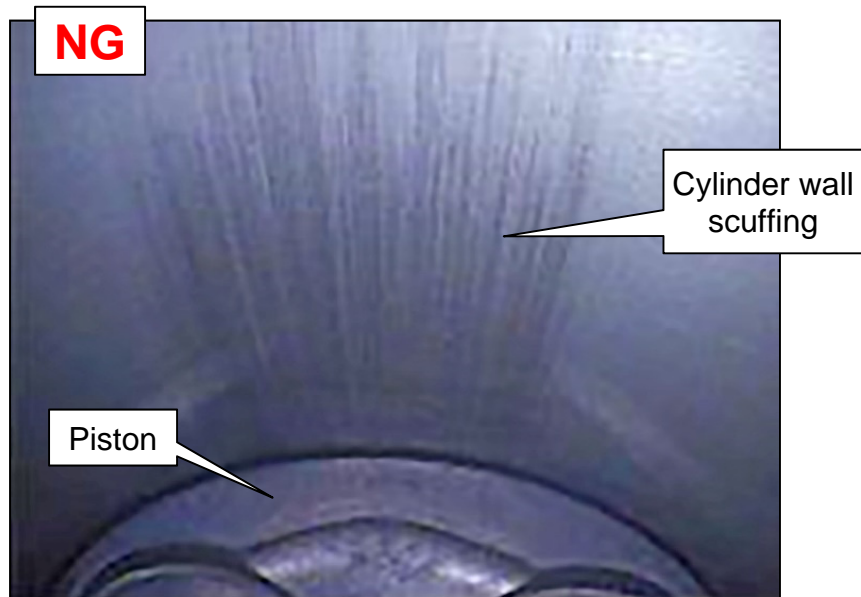


Figure 4

Oil Jet Installation:

- Install the “short” oil jet on Bank 2 (B2) side, and the “long” oil jet on Bank 1 (B1) side (see Figure 5 and Figure 6).
 - The vertical mark should be $90^\circ \pm 10^\circ$ to the horizontal line, while the cutouts face to the upper inward direction.
 - Using a suitable tool such as a small ball peen hammer or brass hammer, tap in the oil jet until it is fully seated (see Figure 6).
 - Sealant is not needed.

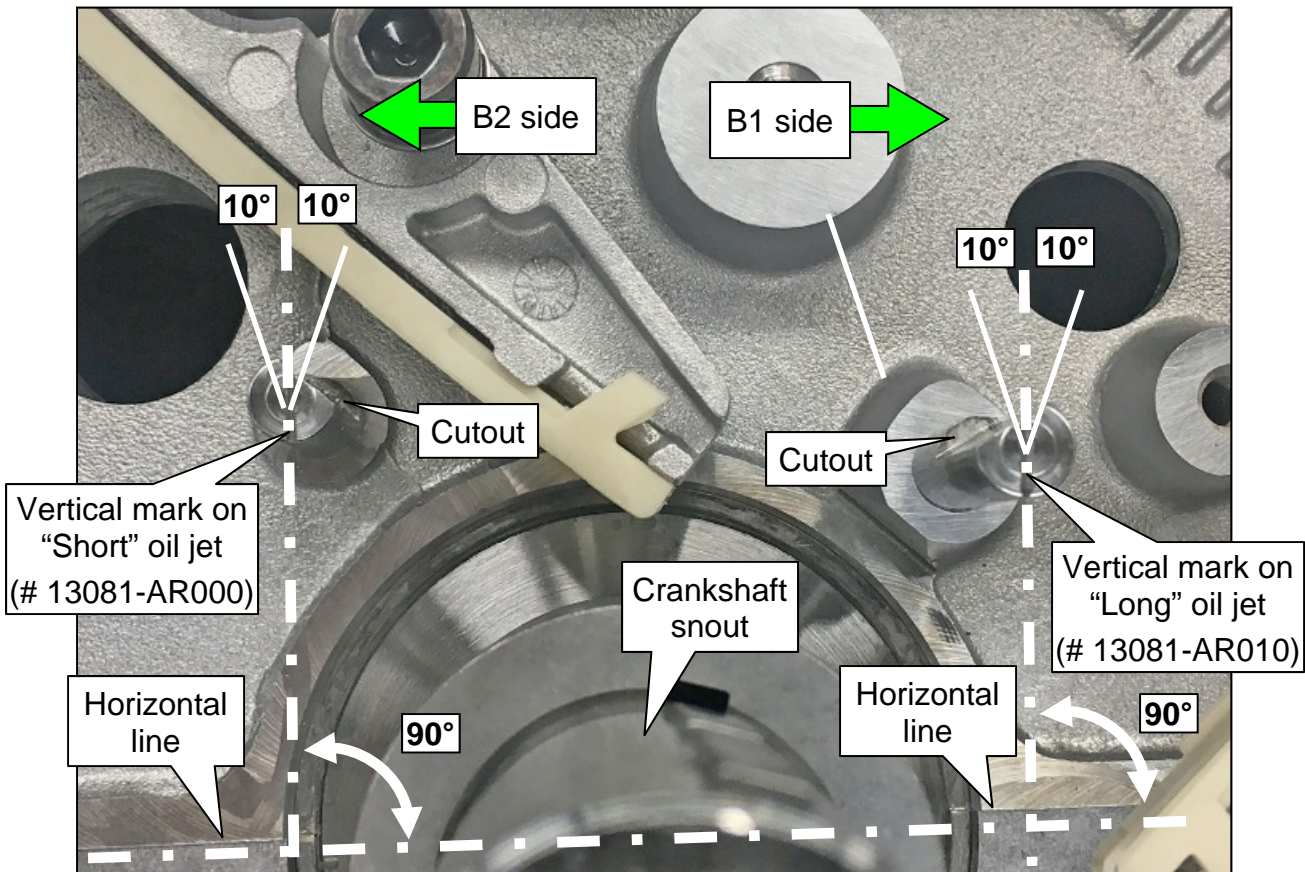


Figure 5

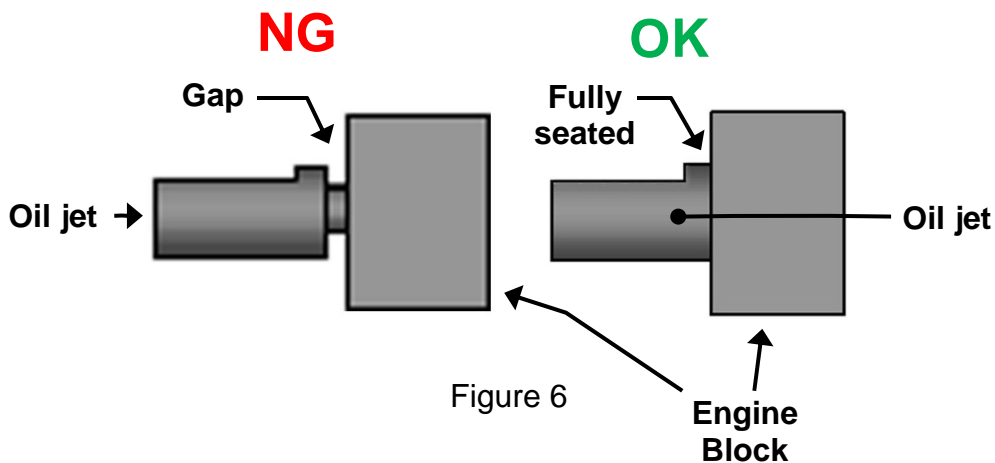


Figure 6

Warranty Related Information When Replacing the Short Engine Assembly

4. Record a continuous video (15 seconds or less) of the area(s) of the cylinder wall that indicates a failed inspection and the VIN on the F.M.V.S.S. certification label (VIN label).
 - Use tool Tech Cam J-51951 as needed (see page 2).
 - Make sure the continuous video has a clear image of the incident area(s) of the damaged cylinder wall and the VIN on the VIN label.
 - The Powertrain Call Center (PCC) may require a live “Tech Cam” session.
5. Complete the PCC Preauthorization Form in ASIST.
 - See the pre-selection screen below.

Powertrain Call Center Pre-Call Start Screen

Dealer Code

17 Digit VIN

PreCall Form

CVT

Engine

LEAF

Update Existing Case

LEAF Repair Complete

Next

Fill out these two lines, select “Engine”, and then select **Next**

Figure 7

6. Attach the video and parts list to the Preauthorization Form.
7. After submitting the Preauthorization Form with the attached video and parts list, call the PCC at **800-973-9992 (opt 1)** for repair pre-approval to replace:
 - The short engine assembly (with oil and oil filter, coolant, etc.).

PARTS INFORMATION

All parts apply to Titan, Titan XD, Armada, and NV

DESCRIPTION	PART NUMBER	QUANTITY
NUT	14094-9BA0A	16
BOLT	14069-JD00A	8
GASKET-MANIFOLD TO CYLINDER HEAD	14035-1LA0A	8
WASHER	13056-31U0A	8
DOWEL-BLOCK TO TRANSMISSION	30412-H1001	2
DOWEL-BLOCK TO CYL HEAD	11022-10V00	4
WASHER-SEAL	21626-32U00	4
SEAL-O RING	15066-AR020	3
SEAL-O RING	15066-AR010	1
SEAL-O RING	15066-6N204	2
SEAL-O RING	21049-AE000	1
GSKT-MAN EXHAUS	14036-EZ30A	2
RING-O	15066-3TA2A	2
GASKET-EXHAUST	20692-24U0A	2
GASKET-ROCKER COVER	13271-1LA0A	2
ENGINE-SHORT (1)	10103-EZ30A	1
GASKET-WATER INLET	13050-7S010	1
GASKET-WATER PUMP	21014-7S000	1
SEAL O-RING	21049-ZL80A	1
OIL FILTER	15208-9E01A	1
GASKET-WATER INLET	13050-1CA1A	1
GASKET-WATER INLET	13050-1CA1B	1
WASHER DRAIN	11026-JA00A	1
SEAL O RING (6.84 MM)	15066-ZL80A	1
SEAL-O RING	15066-7S010	1
PILOT-CONVERTER	12330-16A0A	1
GASKET-CYLINDER HEAD	11044-EZ31A	1
JET-OIL ("short" oil jet)	13081-AR000	1
JET-OIL ("long" oil jet)	13081-AR010	1
GASKET-ADAPTER	16175-1LA0A	1
GASKET-CYLINDER HEAD	11044-EZ31B	1
SEAL-OIL LEVEL GAUGE GUIDE	15066-7S020	1
GASKET-CONNECTOR	21331-7S000	1

- (1) A short engine assembly includes the crankshaft, pistons, connecting rods, etc. It does NOT include cylinder head assemblies.

PARTS INFORMATION (continued)

DESCRIPTION	PART NUMBER	QUANTITY
LIFTER-VALVE	13231-1MC5E	1
SEAL-OIL CRANKSHAFT FRONT	13510-1LA0A	1
SEAL-O RING	16618-1LA0D	1
SEAL-O RING	15066-1LA0A	1
GASKET-ROCKER COVER	13270-1LA1A	1
TUBE ASSY-FUEL	17520-EZ30A	1
GASKET	46237-1LA0A	1
GASKET-ROCKER COVER	13270-1LA0A	1
TUBE ASSY FUEL	17520-1LA0B	1
DOWEL-PULLEY	11022-AD200	1
NISSAN ENGINE OIL-GENUINE 0W-20 SYNTHETIC	999PK-00W20N	(2) (3)
NISSAN BLUE LONG LIFE ANTIFREEZE/COOLANT	999MP-L25500P	(2) (3)

- (2) Refer to the appropriate ESM for dry engine oil and coolant capacity.
- (3) Order Nissan Engine Oil and Blue Long Life Coolant through the Nissan Maintenance Advantage program: Phone: 877-NIS-NMA1 (877-647-6621). Website order via link on dealer portal www.NNAnet.com and click on the "Maintenance Advantage" link.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect # 7 Cylinder w/Borescope	(1)	AX46AA	ZL	32	0.4
Replace Short Block		AA30AA			(2)

- (1) Reference the electronic parts catalog and use the Short Engine Assy (10103-*****) as the Primary Failed Part (PFP).
- (2) Reference the current Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time (FRT).

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
July 22, 2019	NTB19-057	Original bulletin published
April 3, 2020	NTB19-057a	APPLIED VEHICLES section revised, APPLIED VIN & DATE added, NOTE added to page 4, and one NG image removed and one OK image added on page 5