

Front Differential Groaning/Grinding Cyclical Noise

Service Category Drivetrain

Section Axle/Differential

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2004 – 2009	4Runner	Drive Type(s): 4WD VDS(s): BU14R, BU17R
2010 – 2015	4Runner	Drive Type(s): 4WD VDS(s): BU5JR
2007 – 2009	FJ Cruiser	Drive Type(s): 4WD VDS(s): BU11F, ZU11F
2010 – 2014	FJ Cruiser	Drive Type(s): 4WD VDS(s): BU4BF, ZU4BF
2005 – 2009	Tacoma	Drive Type(s): 4WD VDS(s): LU42N, MU52N, PX42N, UU42N, UX42N
2010 – 2015	Tacoma	Drive Type(s): 4WD VDS(s): LU4EN, MU4FN, PX4EN, UU4EN, UX4EN

Introduction

Some 2004 – 2015 model year Tacoma, FJ Cruiser, and 4Runner vehicles may exhibit a cyclical grinding or groaning noise coming from the front differential in 2WD that goes away when operated in 4WD. This noise can be addressed by replacing the needle bearing on the left side of the front differential. Refer to the Repair Procedure for Needle Bearing Roller replacement instructions.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
TC1501	R & R Needle Bearing	2.0	90364-35010	91	19

APPLICABLE WARRANTY

- This repair is covered under the Toyota Powertrain Warranty. This warranty is in effect for 60 months or 60,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Front Differential Groaning/Grinding Cyclical Noise

Parts Information

MODEL	MODEL YEAR	PART NUMBER	PART NAME	QTY
Tacoma	2005 – 2015	90364-35008	Bearing, Needle Roller	1
		95381-04045	Pin, Cotter	1
		43425-04040	Ring, Shaft Snap	1
	2004 – 2009	90311-47012	Seal, Oil	1
	2010 – 2015	90311-47027		1
4Runner	2004 – 2015	90364-35010	Bearing, Needle Roller	1
		95381-04045	Pin, Cotter	1
		90521-34003	Ring, Hole Snap	1
	2004 – 2013	90311-47012	Seal, Oil	1
	2014 – 2015	90311-47027		1
FJ Cruiser	2007 – 2014	90364-35008	Bearing, Needle Roller	1
		95381-04045	Pin, Cotter	1
		90521-34003	Ring, Hole Snap	1
	2007 – 2013	90311-47012	Seal, Oil	1
	2014	90311-47027		1

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Ball Joint Puller	09628-62011	1
Drive Shaft Remover Attachment	09520-01010-02	1
Slide Hammer (5 LB.)	09520-32040-01	1
Steering Worm Bearing Puller	09612-30012	1
Handle Set	09950-70010-01	1
Replacer Set No. 1	09950-60010-01	1

REQUIRED EQUIPMENT	PART NUMBER	QTY
Oil Seal Puller	09308-00010	1

REQUIRED MATERIAL	QUANTITY
Toyota Genuine Differential Gear Oil LT 75W-85 GL-5 or equivalent	1.59 qt. (1.5L)

Front Differential Groaning/Grinding Cyclical Noise

Repair Procedure

1. Confirm the Condition is present.

Is the cyclical grinding or groaning noise present in 2WD and **NOT** in 4WD?

- **YES** — Continue to step 2.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

2. Confirm the front differential fluid level is correct.

Is the fluid level correct?

- **YES** — Continue to step 3.
- **NO** — Check for leaks, adjust fluid level and retest. If noise is still present, proceed to step 3.

3. Remove LH front drive shaft assembly.

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

- [2004](#) / [2005](#) / [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) 4Runner:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Removal”
- [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) FJ Cruiser:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Removal”
- [2005](#) / [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) Tacoma:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Removal”

Front Differential Groaning/Grinding Cyclical Noise

Repair Procedure (Continued)

4. Remove LH differential Oil Seal.

Slide Hammer (5 lb.)
SST: 09520-32040-01

Oil Seal Puller
SST: 09308-00010

5. Install the Steering Worm Bearing Puller as shown below in the left side of the differential carrier assembly.

Steering Worm Bearing Puller
SST: 09612-30012

Figure 1.



HINT

Drive shaft may rotate during bearing removal. In this event, grab drive shaft and prevent rotation.

6. Remove LH differential Needle Bearing Roller using the Steering Worm Bearing Puller.

Front Differential Groaning/Grinding Cyclical Noise

Repair Procedure (Continued)

7. Install NEW Needle Bearing Roller with SSTs. Use rubber ended mallet to press new part into differential.

Handle Set

SST: 09950-70010-01

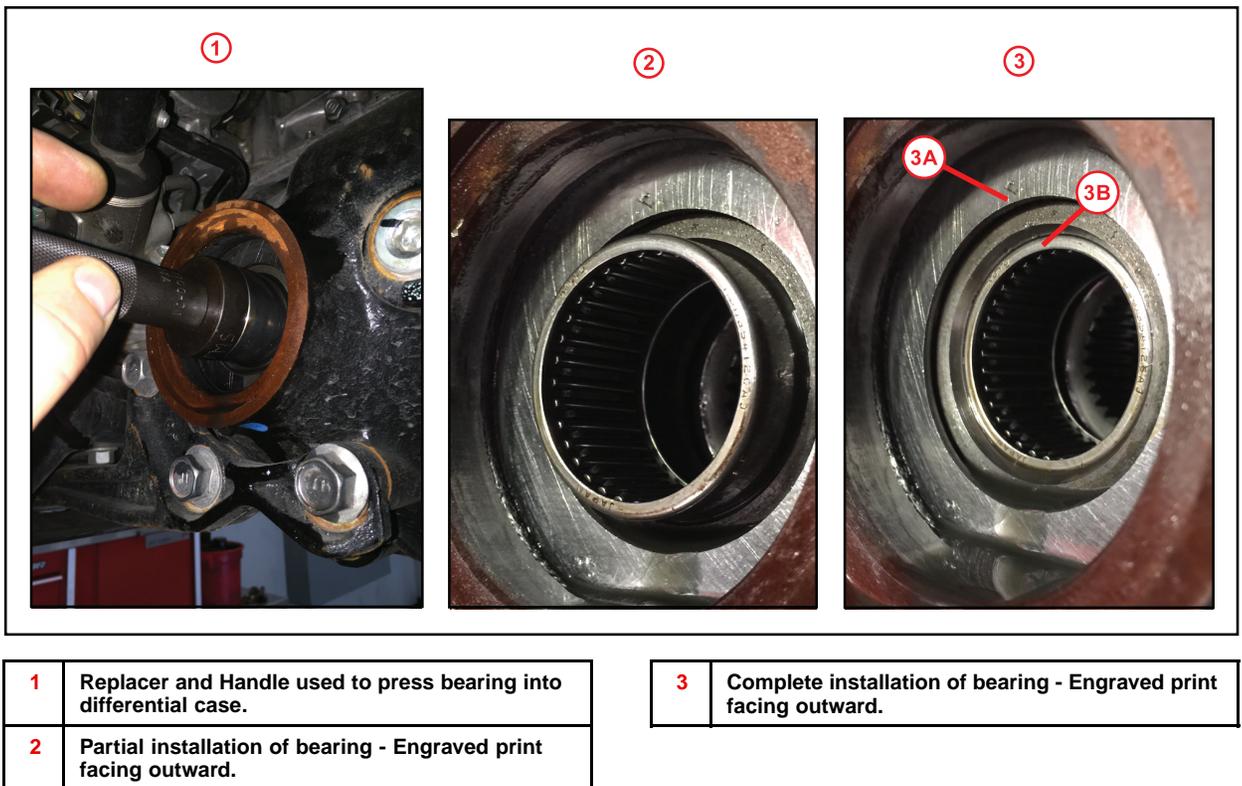
Replacer Set 1

SST: 09950-60010-01 (item no. C3 – 39 mm)

NOTE

- Install Needle Bearing Roller with engraved print outward as shown.
- Installation depth between surface 3A & 3B should be 1.4 – 1.7mm

Figure 2.



Front Differential Groaning/Grinding Cyclical Noise

Repair Procedure (Continued)

8. Replace LH Differential Oil Seal.
9. Install snap ring to front drive shaft
10. Install LH Front Drive Shaft using the applicable Repair Manual.

Refer to TIS, applicable model and model year Repair Manual:

- [2004](#) / [2005](#) / [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) 4Runner:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Installation”
 - [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) FJ Cruiser:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Installation”
 - [2005](#) / [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) Tacoma:
Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Installation”
11. Confirm Repair.