

# 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 – 2017	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

### REVISION NOTICE

#### June 8, 2018 Rev2:

- Applicability has been updated to exclude 2016 – 2017 model year Tacoma vehicles.
- The Repair Procedure section has been updated.

#### May 15, 2017 Rev1:

- Applicability has been updated to include 2016 – 2017 model year Tacoma and 4Runner vehicles.
- The Introduction section has been updated.

Any previous printed versions of this bulletin should be discarded.

## Front Differential Groaning/Grinding Cyclical Noise

### Introduction

Some 2004 – 2017 model year 4Runner vehicles, 2007 – 2014 model year FJ Cruiser vehicles, and 2005 – 2015 model year Tacoma vehicles equipped with part-time 4WD may exhibit a cyclical groaning or grinding 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	OPF	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.

### 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
	2005 – 2009	90311-47012	Seal, Oil	1
	2010 – 2015	90311-47027		1
4Runner	2004 – 2017	90364-35008	Bearing, Needle Roller	1
		95381-04045	Pin, Cotter	1
		90521-34003	Ring, Hole Snap	1
	2004 – 2013	90311-47012	Seal, Oil	1
	2014 – 2017	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

## Front Differential Groaning/Grinding Cyclical Noise

### Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Ball Joint Puller*	<a href="#">09628-62011-01</a>	1
Drive Shaft Remover Attachment*	<a href="#">09520-01010-02</a>	1
Slide Hammer (5 lb)*	<a href="#">09520-32040-01</a>	1
Steering Worm Bearing Puller*	<a href="#">09612-30012</a>	1
Handle Set*	<a href="#">09950-70010-1A</a>	1
Replacer Set No. 1*	<a href="#">09950-60010-01</a>	1
Oil Seal Puller*	<a href="#">09308-00010</a>	1

REQUIRED TOOLS & MATERIAL	QUANTITY
Toyota Genuine Differential Gear Oil LT 75W-85 GL-5 or Equivalent	1.59 U.S. qts (1.5 liters)

**NOTE**  
**Additional SSTs may be ordered by calling 1-800-933-8335.**

\* Essential SST.

### Repair Procedure

1. Confirm the condition is present.

Is the cyclical groaning or grinding 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. Remove the 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](#) / [2016](#) / [2017](#) 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

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### Repair Procedure (Continued)

3. Remove the LH differential oil seal.

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

**Oil Seal Puller**  
**SST: 09308-00010**

4. Install the steering worm bearing puller as shown below onto the left side of the differential carrier assembly.

**Steering Worm Bearing Puller**  
**SST: 09612-30012**

**Figure 1.**



**HINT**

The drive shaft may rotate during bearing removal. In this event, grab the drive shaft to prevent further rotation.

5. Remove the LH differential needle bearing roller using the steering worm bearing puller.

## Front Differential Groaning/Grinding Cyclical Noise

### Repair Procedure (Continued)

6. Install the NEW needle bearing roller with SSTs. Use a rubber-ended mallet to press the NEW part into the differential.

**Handle Set**

**SST: 09950-70010-01**

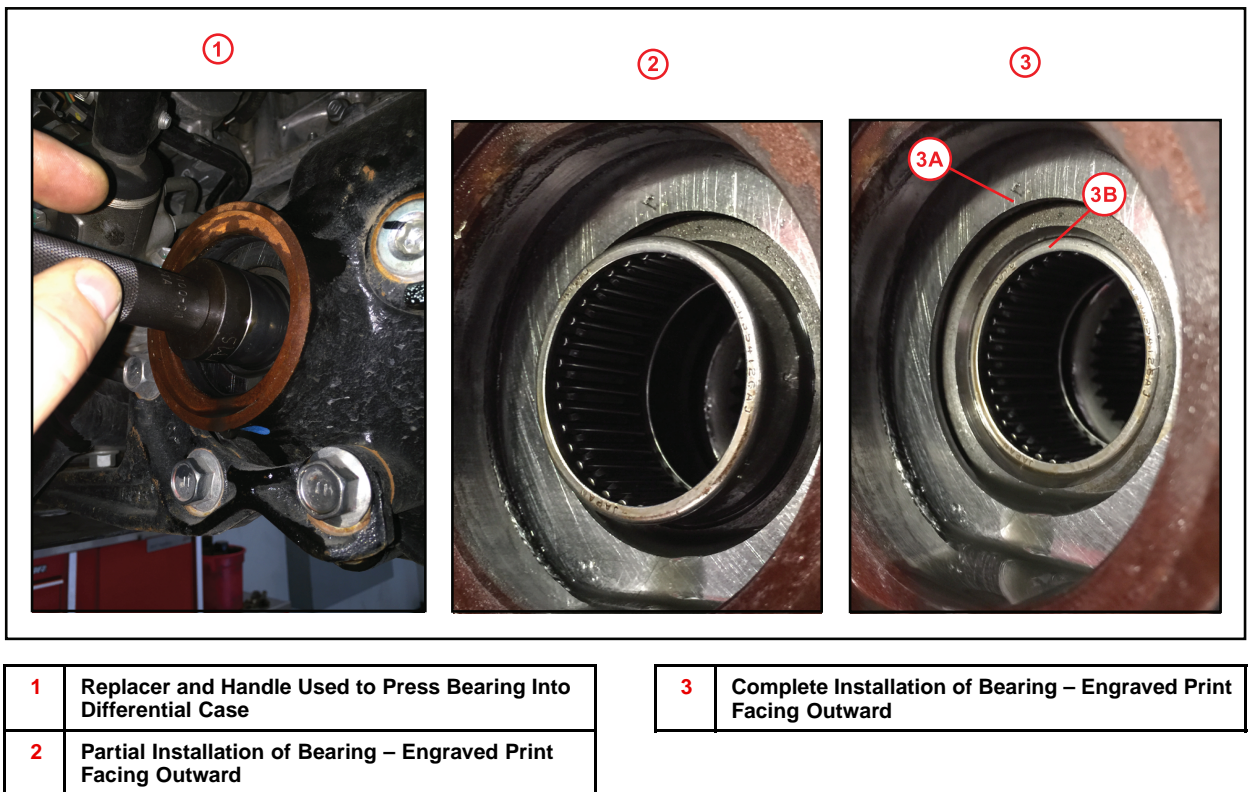
**Replacer Set 1**

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

**NOTE**

- Install the needle bearing roller with engraved print facing outward as shown.
- Installation depth between surface 3A and 3B should be 1.4 – 1.7 mm.

Figure 2.



## Front Differential Groaning/Grinding Cyclical Noise

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### Repair Procedure (Continued)

7. Replace the LH differential oil seal.
8. Install the snap ring onto the front drive shaft.
9. Install the LH front drive shaft.

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

- [2004](#) / [2005](#) / [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) 4Runner:  
*Drivetrain – Drive Shaft/Propeller Shaft – “Drive Shaft: Front Drive Shaft Assembly: Installation”*
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*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”*

10. Confirm the repair.