

# Driveline Vibration Under Deceleration Around 10 - 30 mph

**Service Category** Drivetrain

**Section** Drive Shaft/Propeller Shaft

**Market** USA

Toyota Supports  
 ASE Certification 

## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2016 - 2019	Tacoma	VDS(s): CZ5AN, GZ5AN, SZ5AN Engine(s): 2GR Drive Type(s): 4WD Transmission(s): 6AT

### **SUPERSESION NOTICE**

The information contained in this bulletin supersedes Service Bulletin No. T-SB-0171-16.

- The Repair Procedure section has been updated.

Service Bulletin No. T-SB-0171-16 is obsolete and any printed versions should be discarded.

## Introduction

Some 2016 – 2019 model year Tacoma vehicles equipped with an automatic transmission may exhibit a vibration felt in the seat, floorboard, and/or steering wheel between 10 – 30 mph, caused by a driveline vibration under deceleration. Follow the Repair Procedure in this bulletin to address this condition.

### **NOTE**

- This Service Bulletin ONLY applies to 4WD models equipped with 6AT. Do NOT use the spring part number found in the Service Bulletin for ANY manual transmission vehicles or PreRunner models. This could lead to NEW, currently nonexistent issues.
- If the vehicle is installed with an aftermarket suspension/body lift or leveling kit, this Service Bulletin does NOT apply.

## Driveline Vibration Under Deceleration Around 10 - 30 mph

### Production Change Information

- This bulletin applies to all 2016 – 2019 model year Tacoma vehicles NOT equipped with the TRD Off-Road package option.
- This bulletin applies to 2016 model year Tacoma vehicles equipped with the TRD Off-Road package option produced **BEFORE** the Production Change Effective VINs shown below.

CAB TYPE	PRODUCTION CHANGE EFFECTIVE VIN
Double	5TFGZ5AN#GX040536
	3TMGZ5AN#GM039554
	5TFCZ5AN#GX040121
	3TMCZ5AN#GM039538
Access	5TFSZ5AN#GX017523

#### NOTE

ALL TRD Off-Road package vehicles produced AFTER the effective VIN change use the same springs in production as the countermeasure part numbers listed in this Service Bulletin. Do NOT follow this Service Bulletin for TRD Off-Road equipped vehicles produced AFTER production change effective VINs provided in the production change information table.

### Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
SU1903	Install Steering Wheel Damper and Measure Joint Angle	1.1 (Damper = 0.6) (Measure Angles = 0.5)	45816-60030	9B	57
SU1904	Install Steering Wheel Damper, Measure Joint Angle, and R & R Leaf Springs	2.1	48210-04700 48210-04810 48210-04710 48220-04340 48220-04450 48220-04350		

#### APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 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.

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### Parts Information

CAB TYPE	PART NUMBER		PART NAME	QTY
	PREVIOUS	NEW		
Double	48210-04700 48210-04810 48210-04710	48210-04840	Spring Assy, RR RH	1
	48220-04340 48220-04450 48220-04350	48220-04480	Spring Assy, RR LH	1
	Access	48210-04700 48210-04810 48210-04710	48210-04830	Spring Assy, RR RH
48220-04340 48220-04450 48220-04350		48220-04470	Spring Assy, RR LH	1
All		45713-35040	Damper, Steering Shake	1

### Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Digital Angle Gauge*	<a href="#">01815-00102</a>	1

\*Essential SST.

**NOTE**

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

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### Repair Procedure

1. Confirm the vibration condition exists under the following conditions.
  - Coast down or during braking
  - Speeds between 10 – 30 mph
- A. Does the vehicle exhibit a vibration under the conditions described above?
  - **YES** — Review the Note below and continue to substep B.
  - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

**NOTE**

- Some level of driveline vibration is normal in ALL vehicles.
- The following method can be used to confirm if this bulletin applies to the vehicle.
  1. Remove the rear driveshaft.
  2. Shift into 4WD HI.
  3. Test-drive the vehicle.

- B. Does the vehicle exhibit a vibration under the conditions described in the Note above?
  - **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
  - **NO** — Continue to step 2.

2. Remove the steering wheel pad.

**CAUTION**

Wait at **LEAST 90 seconds** AFTER disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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

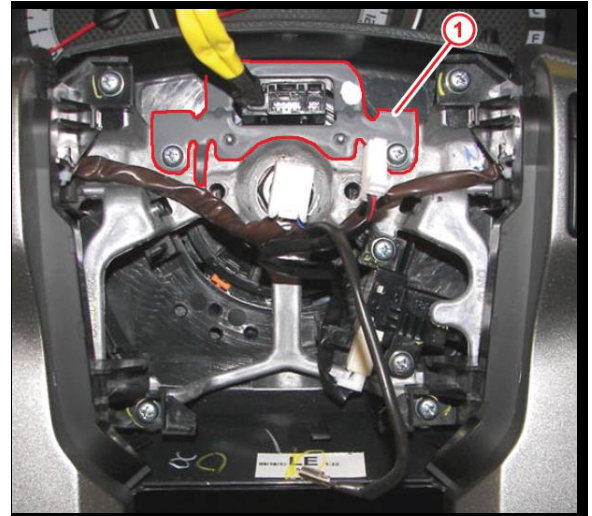
- [2016](#) / [2017](#) / [2018](#) / [2019](#) Tacoma:  
*Vehicle Interior – Supplemental Restraint Systems* – “Supplemental Restraint Systems: Steering Pad: Removal”

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### Repair Procedure (continued)

- Remove the steering wheel switch wire harness retainer bracket (ONLY for vehicles with steering wheel mounted switches).

**Figure 1.**



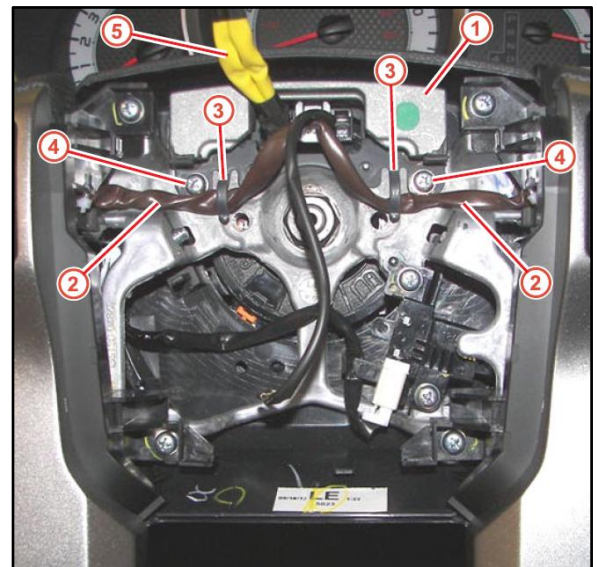
<b>1</b>	<b>Steering Wheel Switch Wire Harness Retainer Bracket</b>
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- Install the steering wheel damper with two NEW screws in the locations shown. Torque: 2.35 N\*m (24 kgf\*cm, 20.8 in\*lbf)

**NOTICE**  
When disconnecting ANY airbag connector, take care not to damage the airbag wire harness.

**NOTE**  
Secure the steering wheel switch wires to the steering wheel damper bracket hooks as shown.

**Figure 2.**



<b>1</b>	<b>Damper</b>
<b>2</b>	<b>Steering Wheel Switch Wire Harness</b>
<b>3</b>	<b>Damper Bracket Wire Retainer Hook</b>
<b>4</b>	<b>Screw</b>
<b>5</b>	<b>Driver Side Airbag Wire Harness</b>

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### Repair Procedure (continued)

5. Install the steering wheel pad.

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

- [2016](#) / [2017](#) / [2018](#) / [2019](#) Tacoma:

*Vehicle Interior – Supplemental Restraint Systems* – “Supplemental Restraint Systems: Steering Pad: Installation”

6. Raise the vehicle using a drive-on hoist or wheel alignment rack.

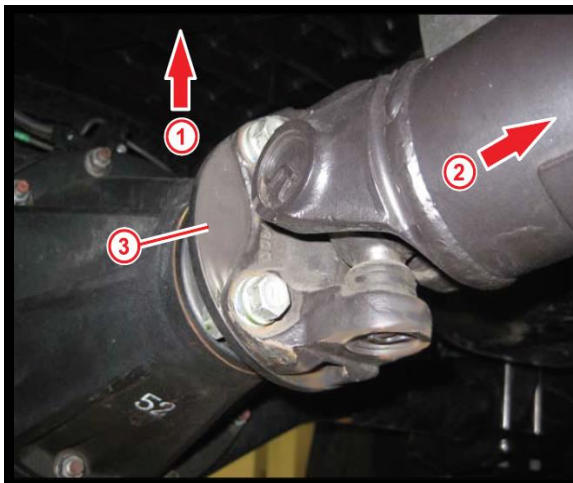
**NOTE**

Vehicle suspension **MUST** be at ride height.

7. Verify which flange type the vehicle is equipped with.

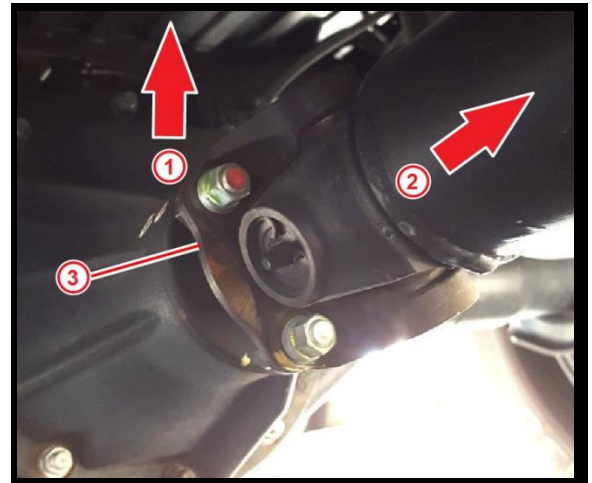
- Large flange (Figure 3) — Continue to step 8.
- Small flange (Figure 4) — Go to step 9.

**Figure 3.**



<b>1</b>	Up
<b>2</b>	Front
<b>3</b>	Pinion Flange

**Figure 4.**



<b>1</b>	Up
<b>2</b>	Front
<b>3</b>	Pinion Flange

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### Repair Procedure (continued)

8. Measure the pinion flange angle (F/A) — **Large Flange Type**.

**NOTE**

Make sure to wipe off the area BEFORE taking the pinion flange measurement.

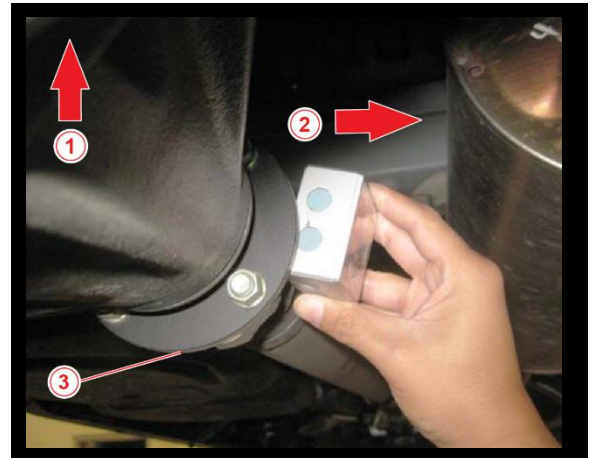
- A. Place the digital angle gauge against the flange surface.

- (1) Ensure the digital angle gauge is firmly against the flange to obtain an accurate pinion flange angle as shown in Figure 5.

**Figure 5.**



**Figure 6.**



1	Up
2	Passenger Side of Vehicle
3	Pinion Flange

- (2) Record the pinion flange angle (F/A).

**Figure 7.**



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### Repair Procedure (continued)

9. Measure the pinion flange angle (F/A) — **Small Flange Type**.

A. Remove the propeller shaft.

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

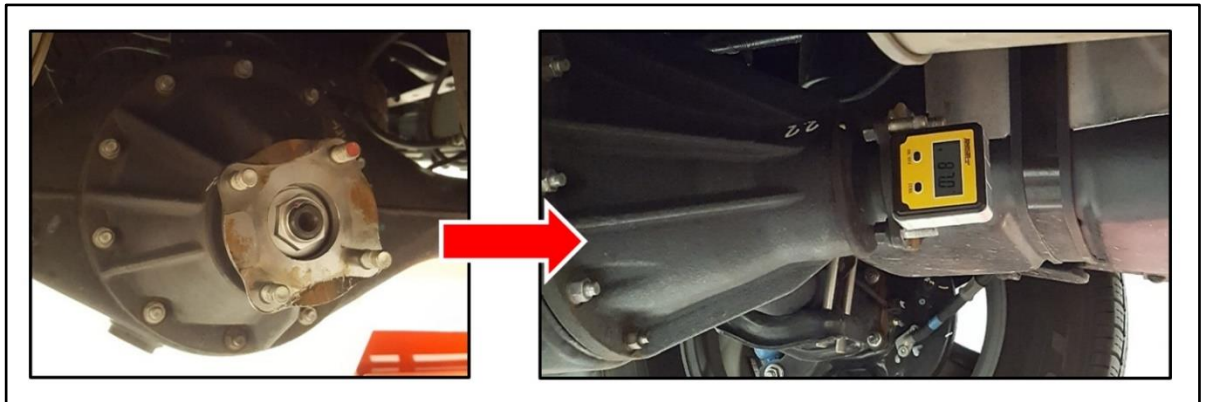
- 2016 – 2019 Tacoma:

*Engine/Hybrid System – Propeller Shaft* – [“Propeller Shaft: Propeller Shaft Assembly \(for 4WD\): Removal”](#)

B. Place the digital angle gauge against the flange surface.

Ensure the digital angle gauge is firmly against the flange to obtain an accurate pinion flange angle as shown.

**Figure 8.**





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### Repair Procedure (continued)

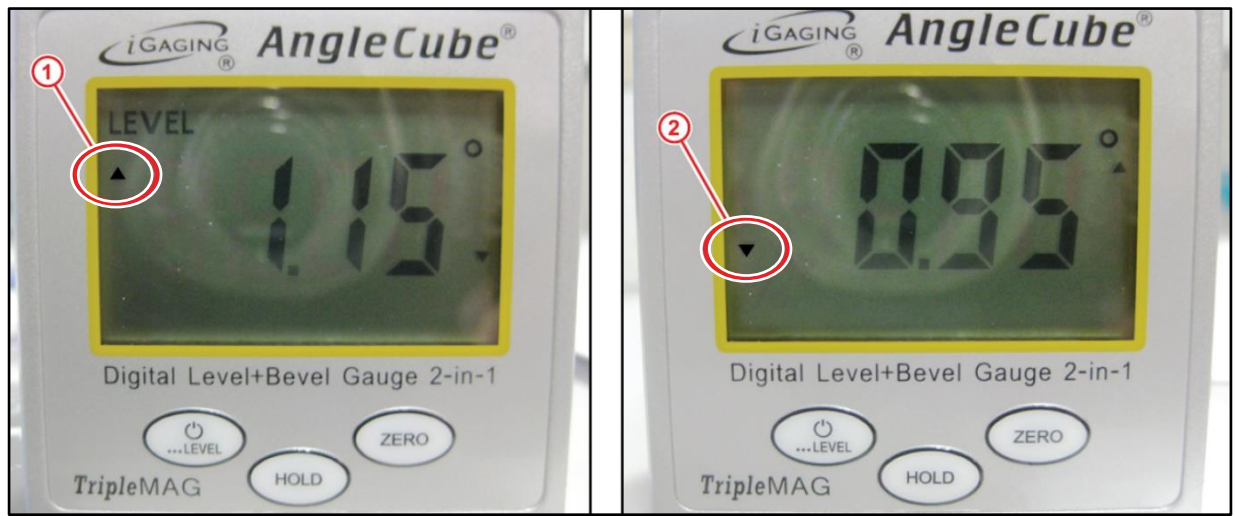
10. Measure the propeller shaft to pinion joint angle (J/A).

**NOTE**

ALL measurements MUST be taken from the passenger side of vehicle facing the driver side. Refer to Figure 9 to ensure that the angles measured have the correct positive (+) or negative (-) values assigned.

- An arrow pointing up indicates a positive (+) angle. In the example on the left, the angle measured is a positive 1.15 (+1.15).
- An arrow pointing down indicates a negative (-) angle. In the example on the right, the angle measured is a negative 0.95 (-0.95).

**Figure 9.**



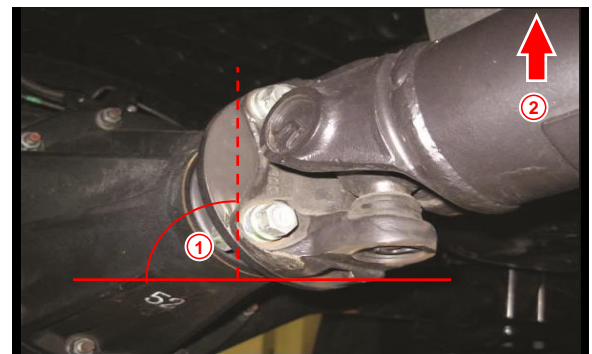
<b>1</b>	<b>Up Arrow (Positive)</b>
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<b>2</b>	<b>Down Arrow (Negative)</b>
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11. Measure the propeller shaft angle (P/A).

- A. Rotate the pinion flange (as shown in Figure 10) to the correct position (as shown in Figure 11).

**Figure 10.**



<b>1</b>	<b>90°</b>
<b>2</b>	<b>Up</b>

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### Repair Procedure (continued)

- B. Use the digital angle gauge and measure the angle of the rear section of the two-piece propeller shaft. Ensure the digital angle gauge is placed along the centerline of the propeller shaft as shown in Figure 11.

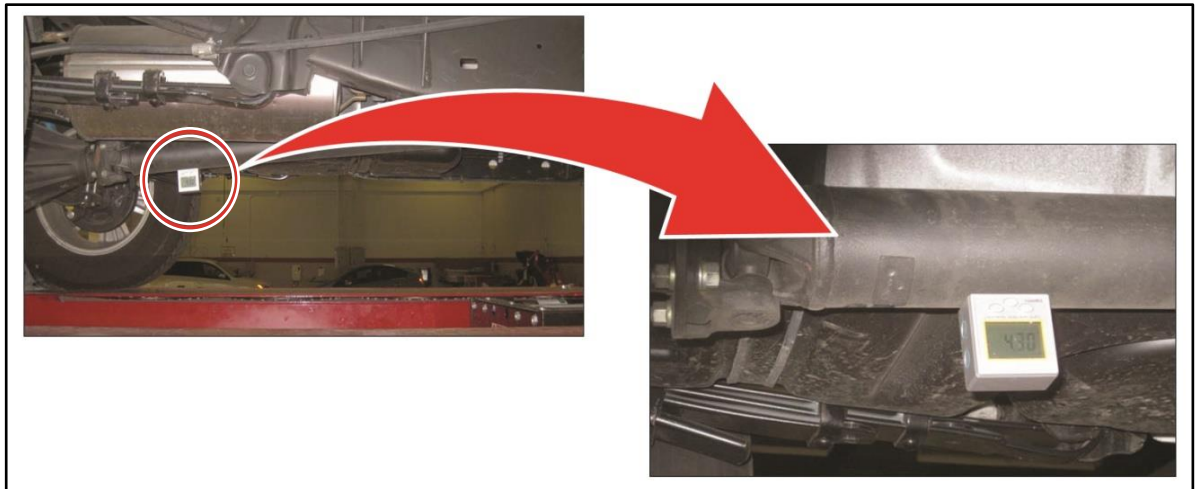
**Figure 11. CORRECT Placement of Digital Angle Gauge**



**Figure 12. INCORRECT Placement of Digital Angle Gauge**



**Figure 13.**



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### Repair Procedure (continued)

- C. Record the propeller shaft angle (P/A).

**Table 1. Joint Angle Worksheet (Pinion Flange Angle Minus Propeller Shaft Angle = Joint Angle)**

PINION FLANGE ANGLE	-	PROPELLER SHAFT ANGLE	=	JOINT ANGLE
F/A	-	P/A	=	J/A
	-		=	

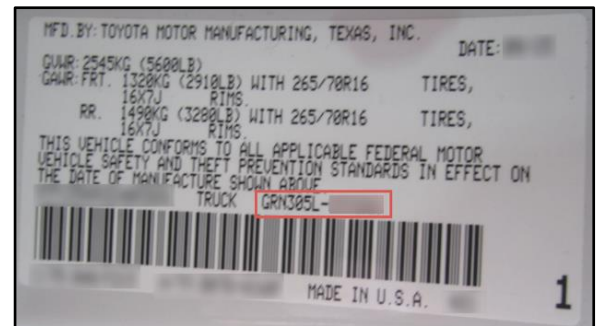
**NOTE**

Joint angle (J/A) can be a negative (-) value.

12. Verify if the vehicle is equipped with standard or firm ride suspension.  
 Look up the factory option codes (accessories) in vehicle history on TIS.  
 Does the vehicle have option codes **CW, OF, OC, PT, or PY**?
- **YES** — The vehicle has firm ride suspension.
  - **NO** — The vehicle has standard suspension.

13. Verify the vehicle's model code (**Katashiki**).  
 The model code can be found on the Vehicle Identification Label in the driver doorjamb as shown.

**Figure 14.**



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### Repair Procedure (continued)

14. After the joint angle, spring type, and model code have been verified, refer to the table below to determine if the joint angle is in specification.

**Table 2.**

MODEL CODE	CAB TYPE	GRADE	TYPE	JOINT ANGLE RANGE SPECIFICATION
GRN305L-PRTLHA	Double	Limited	Firm	+1.41° to +3.41°
			Standard	+1.38° to +3.38°
GRN305L-PRTSHA		Any	Firm	+1.41° to +3.41°
			Standard	+1.38° to +3.38°
GRN305L-CRTSHA	Access	NOT Off-Road Package	Firm	+1.7° to +3.7°
		Off Road Package	Standard	-0.6° to +1.4°
		NOT Off-Road Package		+1.67° to +3.67°

- A. Is the joint angle in specification?
- **YES** — Continue to substep B.
  - **NO** — Go to step 15.
- B. Test-drive the vehicle between 15 – 25 mph and confirm the level of vibration has improved under deceleration or acceleration.

Did the vibration condition improve?

- **YES** — STOP! The applicable repair steps have been completed.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

## Driveline Vibration Under Deceleration Around 10 - 30 mph

### Repair Procedure (continued)

15. Replace the leaf spring using the part information in the following table:

**Table 3.**

MODEL CODE	CAB TYPE	GRADE	LH PART NUMBER	RH PART NUMBER
GRN305L-PRTLHA	Double	Limited	48220-04480	48210-04840
GRN305L-PRTSHA		Any		
GRN305L-CRTSHA	Access	NOT Off-Road Package	48220-04470	48210-04830
		Off-Road Package		
		NOT Off-Road Package		

**NOTE**

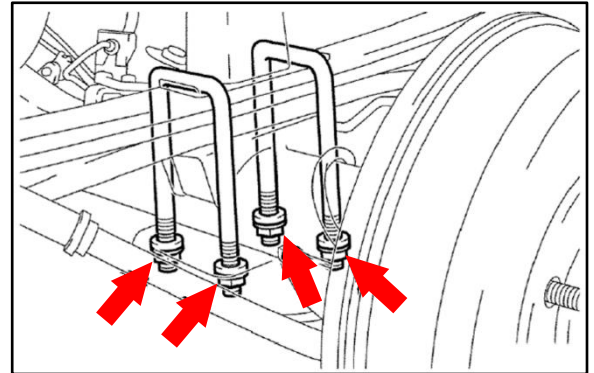
When tightening the U-bolt nuts, make sure to set to the following torque:

**Torque: 60 N\*m (610 kgf\*cm, 44 ft\*lbf)**

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

- 2016 – 2019 Tacoma:  
*Suspension – Rear Suspension –*  
*“Suspension: Rear Leaf Spring:*  
[Removal / Installation](#)”

**Figure 15.**



**NOTE**

Fasteners for shocks and leaf spring bushings should be tightened. Then, torque for these joints should be set while the vehicle is on the ground.

16. Test-drive the vehicle between 15 – 25 mph and confirm the level of vibration has improved under deceleration or acceleration.