

# Understanding Hub Bolts and Hub Nuts

**Service Category** Suspension

**Market** USA and Mexico

**Section** Tire/Wheel



## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2023 - 2024	4Runner, 86, Avanza, bZ4X, Camry, Camry HV, Corolla, Corolla Cross, Corolla Cross HV, Corolla Hatchback, Corolla HV, Crown, GR Corolla, Grand Highlander, Grand Highlander HV, Hiace, Highlander, Highlander HV, Hilux, Mirai, Prius, Prius Prime, Raize, RAV4, RAV4 HV, RAV4 Prime, Sequoia, Sequoia HV, Sienna HV, Supra, Tacoma, Tundra, Tundra HV, Venza HV, Yaris SD THAI-Prod, Yaris THAI-Prod	

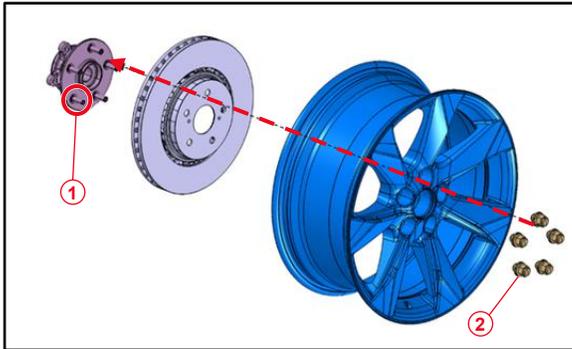
## Introduction

Some 2023 – 2024 model year Toyota vehicles use hub bolts in place of studs/nuts to fasten the wheels to the vehicle. If non-compatible wheels or hub bolts/nuts are installed, there is increased risk that the wheel(s) could come off resulting in a crash. This service bulletin outlines the physical differences and precautions that should be taken when servicing different wheel and wheel fastener types.

# Understanding Hub Bolts and Hub Nuts

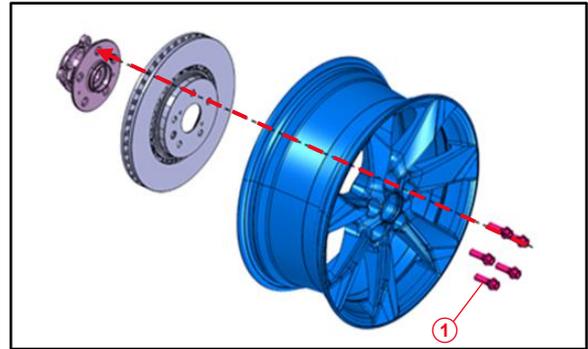
## Introduction (continued)

**Figure 1. Hub Nut**



<b>1</b>	<b>Stud Bolts</b>
<b>2</b>	<b>Hub Nuts</b>

**Figure 2. Hub Bolt**



<b>1</b>	<b>Hub Bolts</b>
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## Understanding Hub Bolts and Hub Nuts

### Warranty Information

#### For USA Market

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	-	-	-	-

#### For Mexico Market

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	-	-	-	-

### Precautions

#### Fastener and Wheel Differences

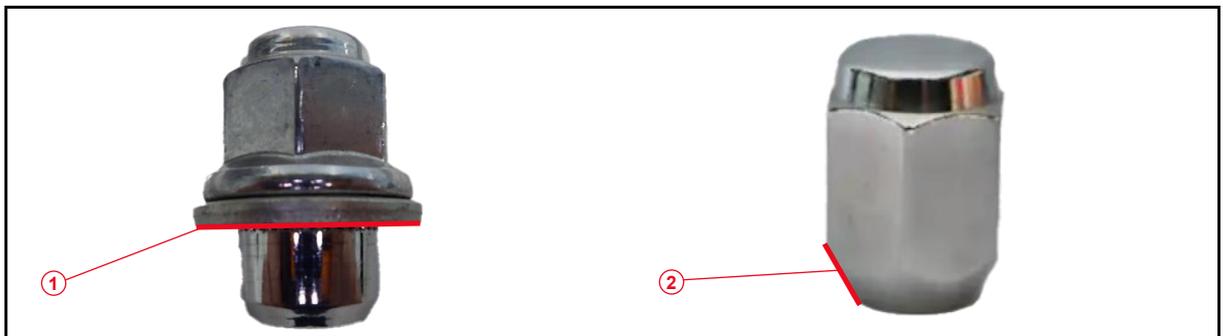
- The genuine hub bolts (Figure 3) have more contacting face (seating face) shapes compared to the genuine hub nuts (Figure 4) shown below.

**Figure 3. Genuine Hub Bolts**



1	Spherical Shape (One-piece Bolt)
2	Spherical Shape (Bolt With Washer)
3	Tapered Shape (One-piece Bolt)
4	Tapered Shape (Bolt With Washer)
5	Flat Shape (Bolt With Washer)

**Figure 4. Genuine Hub Nuts**



1	Flat Shape
2	Tapered Shape

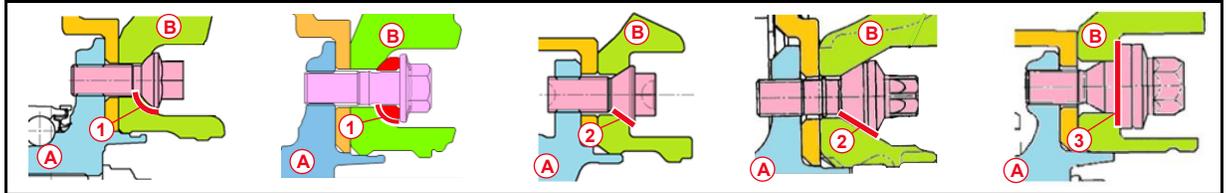
# Understanding Hub Bolts and Hub Nuts

## Precautions (continued)

### Fastener and Wheel Differences (continued)

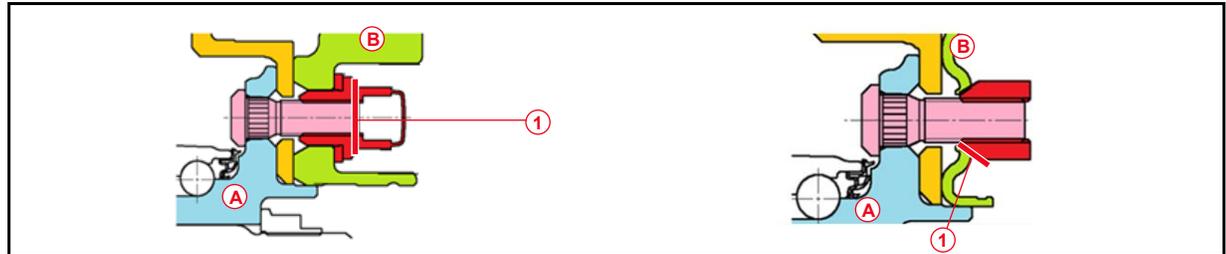
- The mating surface of the wheel is designed to accommodate the genuine hub bolt/nut as shown below.

**Figure 5. Genuine Hub Bolts**



<b>A</b>	Hub
<b>B</b>	Wheel
<b>1</b>	Spherical Shape (Wheel and Bolt)
<b>2</b>	Tapered Shape (Wheel and Bolt)
<b>3</b>	Flat Shape (Wheel and Bolt)

**Figure 6. Genuine Hub Nuts**



<b>A</b>	Hub
<b>B</b>	Wheel
<b>1</b>	Flat Shape (Wheel and Nut)
<b>2</b>	Tapered Shape (Wheel and Nut)

### CAUTION

- Driving a vehicle with non-compatible wheels or hub bolts/nuts may result in wheel(s) coming off, which could increase the risk of a vehicle crash.
- While Toyota does NOT recommend replacing the genuine Toyota wheels and hub bolts/nuts with aftermarket parts, vehicle owners who wish to do so should be advised to ensure that the wheel and hub bolt/nut they decide to use are compatible with each other and their vehicle.
- Aftermarket hub bolts/nuts may appear very similar but may not be compatible with genuine Toyota wheels. Non-genuine parts are NOT covered by Toyota warranty.
- Use ONLY the hub bolts/nuts designed for the wheel used. Genuine Toyota hub bolts/nuts designed for other wheels/models/model year vehicles may not be compatible.

## Understanding Hub Bolts and Hub Nuts

### Proper Wheel Alignment

1. The correct genuine Toyota wheels and hub bolts/nuts should ALWAYS be used together.
2. ANY dirt or foreign matter should ALWAYS be removed from the wheel contact surfaces and hub bolts/nuts.
3. The specified tightening torque should ALWAYS be used.

**NOTICE**

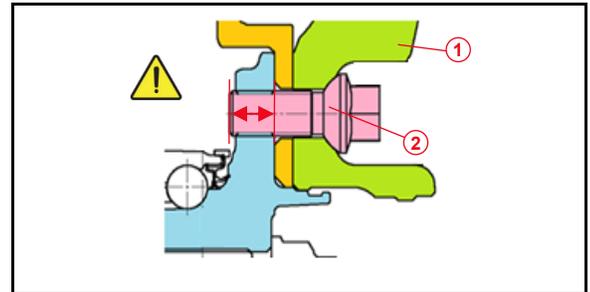
The specified tightening torque may differ depending on models or model year types. ALWAYS consult the repair manual for the proper tightening torque.

4. In the case of hub bolts, proper bolt length is important for correct wheel installation. ALWAYS consult the parts catalog when sourcing genuine Toyota wheels and hub bolts.

**NOTICE**

Using a bolt that is too short or too long may prevent the proper tightening torque from being achieved.

**Figure 7.**



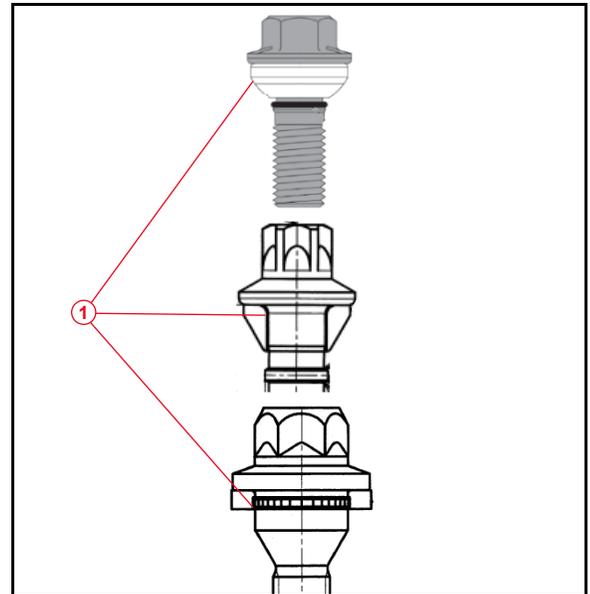
1	Wheel
2	Hub Bolt

5. When servicing or replacing wheels and/or hub bolts/nuts, ALWAYS confirm part compatibility. In the case of hub bolts, some models use one-piece bolts and other models use bolts with washers.

**NOTICE**

- Do NOT assume these bolts are interchangeable, even if the mating surface shape is the same. Always consult the parts catalog for correct hub bolts.
- Inspect the bolts with washers to ensure that the washer is NOT damaged and is correctly installed on the hub bolts.

**Figure 8. Bolts With Washers**



1	Washer
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