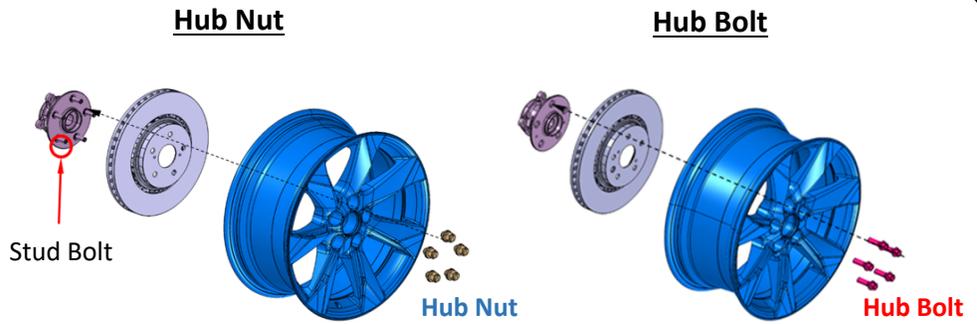


# Understanding Wheel Fastener Types: Bolts and Nuts

Some recent Toyota/Lexus models are equipped with hub bolts, not stud and hub nuts.



The hub bolts have more contacting face (seating face) shapes compared to the hub nuts.

Note: Flat vs Spherical vs Tapered

## Hub Nut



Genuine parts    Genuine parts

"Flat" shape

"Tapered" shape

## Hub Bolt



Genuine parts

Genuine parts

Genuine parts

Genuine parts

Genuine parts

"Spherical" shape (one-piece bolt)

"Spherical" shape (bolt with washer)

"Tapered" shape (one-piece bolt)

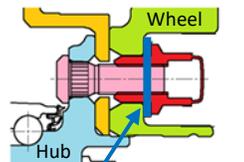
"Tapered" shape (bolt with washer)

"Flat" shape (bolt with washer)

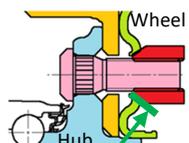
Additionally, the mating surface of the wheel is designed to accommodate the hub bolt/nut.

Note: Flat vs Spherical vs Tapered

## Hub Nut

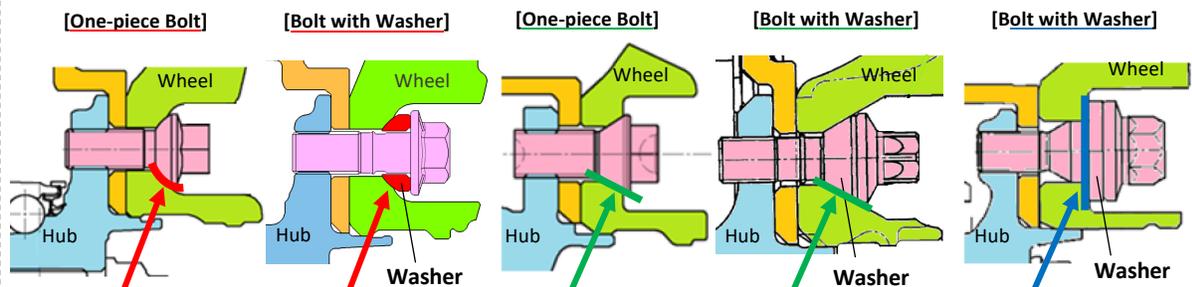


Flat Shape (Wheel & Nut)



Tapered shape (Wheel & Nut)

## Hub Bolt



Spherical Shape (Wheel & Bolt)

Tapered shape (Wheel & Bolt)

Flat Shape (Wheel & Bolt)

# Understanding Wheel Fastener Types: Bolts and Nuts

**WARNING:** 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 Toyota/Lexus genuine 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/Lexus wheels. Non-genuine parts are not covered by Toyota/Lexus's warranty.

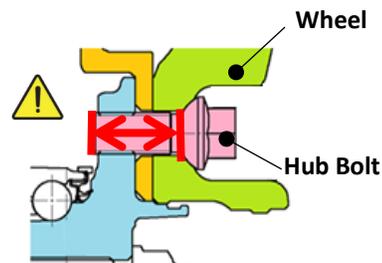
Use only the hub bolts/nuts designed for the wheel used. Genuine Toyota/Lexus hub bolts/nuts designed for other wheels/models/model years may not be compatible.

## To ensure proper wheel attachment:

- The correct genuine Toyota/Lexus wheels and hub bolts/nuts should always be used together.
- Any dirt or foreign matter should always be removed from the wheel contact surfaces and hub bolts/nuts.
- The specified tightening torque should always be used.

**WARNING:** The specified tightening torque may differ depending on models or model years/types. Always consult the repair manual for the proper tightening torque.

In the case of hub bolts, proper bolt length is important for correct wheel installation. Always consult the parts catalog when sourcing Genuine Toyota/Lexus wheels and hub bolts.



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

## 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.

- (1) 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.
- (2) Inspect the bolts with washers to ensure that the washer is not damaged and is correctly installed on the hub bolts.

