

## LUG BOLTS INSTALLATION AND CARE GUIDE

### READ BEFORE INSTALLATION

Please read this entire guide before installation and make sure the fitment is correct for your application.

**DO NOT** use anti-seize on the **lug bolt threads** if you don't understand the adjusted torque values. Using an anti-seize drastically increases clamp-load if the factory torque value is applied. We do not recommend the use of an anti-seize if you are not familiar with the adjusted torque value for your application.

**DO NOT** use air impact wrenches to tighten your lugs.

### 1 CHECK LUG BOLT FITMENT

The most important step to lug bolt installation is making sure you have the right fitment for your vehicle and wheel application. Failure to use the correct lug bolt will cause unsafe driving conditions that can result in wheel loss while driving. Use the checklist below to verify your lug bolt fitment prior to installation.

#### CHECK THREAD SIZE AND PITCH

Each lug bolt has a specific thread size and thread pitch determined by your vehicle specifications. Check your OEM lug bolt against a Raceseng lug bolt by overlaying the lug bolt threads on each other. The threads of the lug bolts should match.

#### CHECK YOUR SEAT STYLE

There are three common types of lug bolt seat styles determined by your type of wheels:

Conical Seat (60 degree taper)  
R13 Ball Seat (13mm radius)  
R14 Ball Seat (14mm radius)

Check your wheels seat style to make sure it matches your Raceseng lug bolts. Using the wrong seat style will cause vibration, loosening of lug bolts, or damage to your vehicle.

#### CHECK MINIMUM THREAD ENGAGEMENT

The thickness of a wheel can differ from factory wheels to aftermarket wheels. For that reason, it's essential to verify that the lug bolts will properly engage the threads on your vehicle's wheel hubs. Follow the steps below to check for minimum thread engagement

##### STEP 1

Unscrew one of your lug bolts. Use the chart below to determine how many turns you should get when screwing in the Raceseng lug bolt.

Refer to our minimum thread engagement chart to determine the number of turns typical for your lug bolt thread size.

THREAD SIZE	NUMBER OF TURNS
M14x1.5	9.5
M14x1.25	11
M12x1.5	8

##### STEP 2

Screw a Raceseng lug bolt in and count the number of turns you get till the lug bolt is tight. Check to make sure you get at least the number of turns listed in the chart.

##### STEP 3

With the Raceseng lug bolt in place, jack up the car and spin the wheel to make sure it clears all of the components mounted behind the wheel hub assembly.

If all of the checklist items above are completed, move to the next phase.

### 2 PREPARE FOR INSTALLATION

##### STEP 1

Park on a hard, level surface and apply parking brake.

##### STEP 2

Loosen the lug bolts one quarter turn but do not remove them from the wheel.

##### STEP 3

Raise up your vehicle following the process outlined in your vehicle owner's manual.

##### STEP 4

Secure the wheel and remove the lug bolts, then the wheel.

### 3 INSTALLATION

We recommend following the **RIST** method:

- R** Removing debris from mounting surfaces
- I** Inspecting components for damage or excessive wear
- S** Snugging the lug bolts in a star pattern
- T** Torquing to manufacturer specifications. Follow all instructions in the order presented.

##### STEP 1

Clean and inspect all wheel hub threads and mounting surfaces before installation. Threads must be free of corrosion, rust, burrs, and damage.

##### STEP 2

Unscrew the seats from the lug bolts. Apply the included anti-seize to the mating surfaces **ONLY** between the top of the seat and the bottom of the lug bolt head. Then screw the seat back onto the lug bolt.

##### STEP 3

Place the wheel back onto the vehicle hub. Match the bolt circle of the wheel to that of your vehicle. The wheel must make full contact with the mating surface of the hub.

##### STEP 4

Install your lug bolts and tighten by hand with your driver or socket in a star, or criss cross, pattern until you cannot hand tighten anymore. Refer to our wheel torque sequence chart below to determine proper pattern and sequence for your installation.

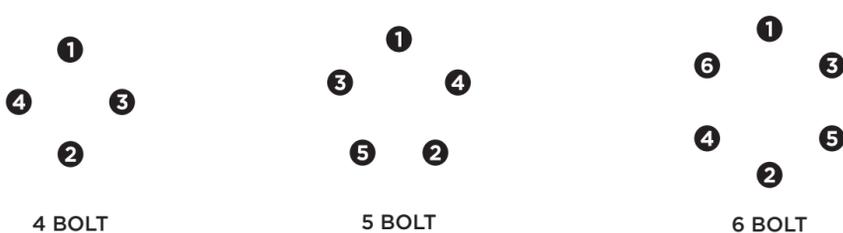
##### STEP 5

Once all lug bolts have been tightened to meet minimum thread engagement and your wheel is sitting flush against the mating surface, lower the vehicle to ground and tighten all lug bolts to the proper torque specifications shown in your vehicle owner's manual. We recommend using a calibrated torque wrench for this step. Refer to our wheel torque sequence chart below to determine proper pattern and sequence for your installation.

##### STEP 6

Always re-torque your lug bolts after the first 25 miles of use. Repeat this every time the lug bolts are removed and installed. Failure to re-torque could result in unsafe driving conditions.

### TORQUE SEQUENCE



### 4 CARE AND MAINTENANCE

#### CLEANING

Wheel acids and degreasers are fairly harsh and we want to make sure you understand what to look for when buying cleaners to detail your car. Look for either PH-Neutral or PVD Safe wheel cleaners. These types of cleaners are acid-free and formulated to be gentle enough for high-end wheel finishes.

When using a wheel cleaner, **DO NOT** let the cleaner soak on the lugs for more than one minute.

When cleaning the lug nuts, **DO NOT** use an abrasive brush or pad. An abrasive pad will scratch the lug nuts.

#### MAINTENANCE

When removing the wheel hardware for servicing the brakes or just rotating tires, keep an eye on the thread condition and check the seat surfaces for marring.

We also recommend checking the torque on all the lug bolts before and after your first drive with them installed.

It is strongly recommended to check the torque values at regular intervals.

**NEED HELP?**

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