

WHEEL FASTENING

Wheel bolts are wear parts!

IMPORTANT DURING INSTALLATION

To ensure optimal retention of wheel nuts, they must be retightened with a torque wrench after initial tightening. After every wheel change, it should be checked after 50 to 100 km whether the torque of the wheel nuts still matches.

The required torque value depends on various factors such as the type of thread, wheel type, or material composition. You can find the exact value in the vehicle documents, but generally, it is between 85 and 200 Nm. In most cases, it is 130 Nm.

TORQUE TIGHTENING

Excessive torque can lead to the overstretching of the wheel bolt and thus to a fracture in the threaded area (see Image 1).

If the torque is too low, the wheel is not securely seated, transmitting vibrations to the wheel bolt. There is a risk of separation in the area of the wheel/hub (see Image 2).

WEAR AND CORROSION

Various types of corrosion, such as surface corrosion (e.g., rust), gap corrosion, contact corrosion, intergranular/transgranular corrosion, or stress corrosion cracking, may occur on a wheel bolt (see Image 3).

To avoid later wear, wheel bolts or nuts should be inspected for damage during replacement. The screw connections should be free of rust or dirt.

CAUTION

Never grease or lubricate wheel bolts/nuts. This reduces the torque coefficient!



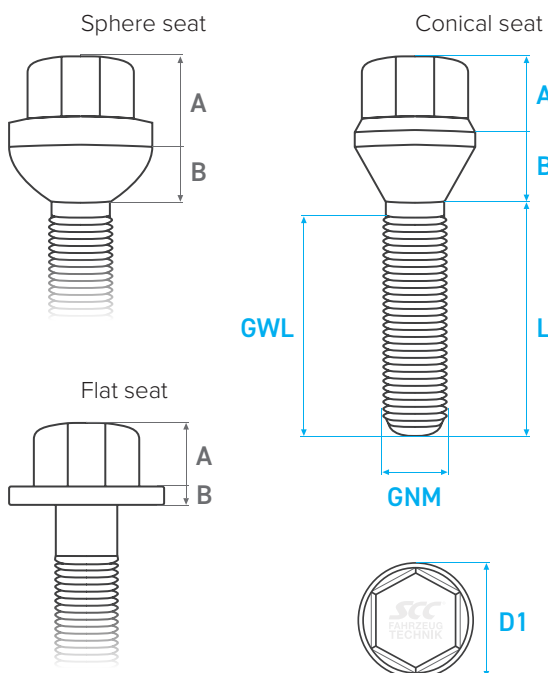
WHEN SHOULD WHEEL BOLTS BE REPLACED?

Wheel bolts are subjected to significant temperature fluctuations during braking, leading to natural wear. **Therefore, they must be replaced every 2 years!**

If corrosion is visible, replace the wheel bolts as soon as possible.

If the wheel is changed multiple times, new wheel bolts are also necessary. The clamping force of the wheel bolts decreases with each change!

Tightening the wheel bolts should be done in the correct sequence - in a crisscross pattern and in several stages. If the bolts are tightened one by one, there is no uniform contact pressure on the hub, and the wheel may become skewed. A clean rotation is no longer guaranteed, and the wheel bolt may break.



CONSTRUCTION AND INSTALLATION NOTES

All threads, mounting surfaces, and wheel hubs must be cleaned and inspected before installation. Threads should not be lubricated or oiled and must be free of corrosion, rust, fractures, and other damage. Corroded, overtightened, or damaged wheel bolts/nuts must be replaced.

We recommend not using pneumatic or impact wrenches for wheel assembly. The final tightening must be done with a calibrated torque wrench to ensure precise and secure installation. Wheel bolts and nuts must be tightened in a crisscross pattern to ensure uniform pressure and alignment.

NOTE: When replacing your wheel fastening components, please ensure that the technical specifications match the originals!



A = Hex height
B = Collar height
L = Total length

GWL = Thread length
GNM = Thread dimension
D1 = Head diameter