Tips & Technology
For Bosch business partners

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Brake technology

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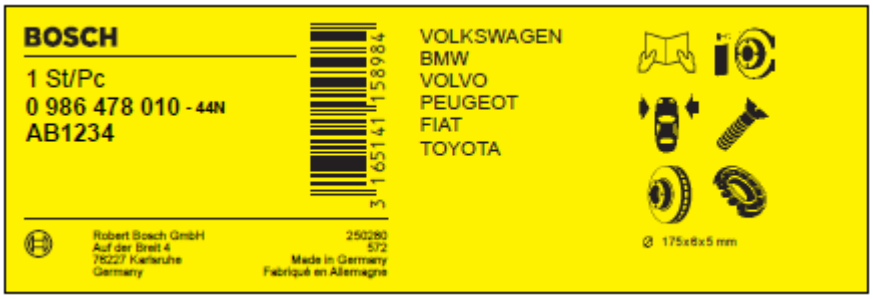
Characteristic features of brake disks

Characteristic features of brake disks

The packaging in which brake disks are supplied is provided with a label showing pictograms to indicate the characteristic features.

Example of a label:



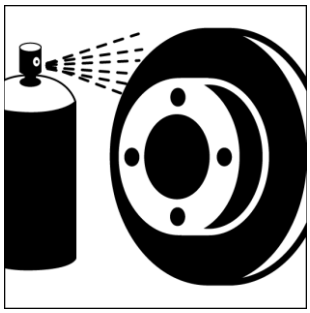
High carbon technology

High-carbon brake disks are made of grey cast iron with a high carbon content for use in particularly tough conditions. These products have a higher thermal conductivity level. This reduces both lateral runout and disk distortion.

Bolts

Use should always be made of new bolts on replacing brake disks. This symbol on the pack indicates that the bolts are included in the scope of delivery. The bolts for these brake disks do not have to be ordered separately, thus saving time.

Corrosion protection

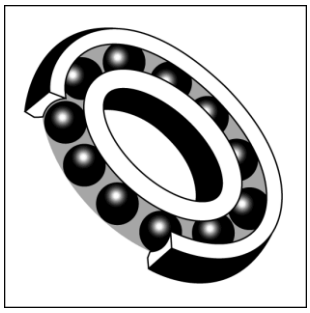


Long-term corrosion protection is provided by brake disks supplied with aluminium or zinc dust coating.

Coated brake disks require no further treatment prior to fitting. There is no need for cleaning as is the case with oiled brake disks for example. After fitting, the brake disks should be bedded in by braking ten to twenty times from a moderate speed.

It is important to ensure that the protective layers are never removed by machining operations such as sanding or brushing.

Integrated bearing



Brake disks and brake drums with integrated wheel bearing and wheel speed sensor are precision-manufactured pre-assembled components supplied ready for fitting and guaranteed to ensure fast and accurate repair work. The following installation instructions must be heeded to attain an optimum component service life:

- Remove components such as the brake carrier, brake pads/linings, brake caliper and the wheel. Slacken off and unscrew the hub nut/hub bolt, unplug the wheel speed sensor connector and detach the brake disk/drum with integrated bearing.
- After removing the old parts, check the stub axle for wear, damage and corrosion. Stub axles have very tight tolerances and are not to be re-worked. Damaged or corroded stub axles must be replaced.
- Clean the stub axle and lubricate or grease lightly. Do not use any joining agents or the like.
- Take the new brake disk/drum with integrated wheel bearing out of the packaging. If fitted, do not remove the transportation or dust cap until immediately prior to installation.
- Fit the brake disk/drum with integrated wheel bearing on the stub axle by pressing gently by hand on the bearing inner race. Never apply force and take care to avoid tilting. The bearing inner race must be easy to fit. Tools (in particular striking tools) are therefore not required and should not be employed.
- Mount the thrust washer in the correct position if applicable, fit the new hub nut/bolt and screw home by hand. The brake disk/drum must be constantly turned when doing so to ensure exact centering of the bearing components. **ATTENTION: Never use an impact screwdriver.**
- Tighten the hub nut/bolt to the correct torque (as specified by the vehicle manufacturer), paying attention to the vehicle manufacturer's instructions for the tightening operation. The tightening torque must be precisely observed. The vehicle must not be standing on its wheels and here again the brake disk/drum must be constantly turned when doing so. **ATTENTION: Never use an impact screwdriver.**
- To avoid the risk of damage, the ABS sensor is never to be exposed to magnetic fields.
- Fit the remaining components such as the brake carrier, brake pads/linings and brake caliper, wheel speed sensor connector and the wheel on the vehicle.