

Impulse rings and wheel bearings

When preparing to carry out brake repairs, it is always important to check the bearings and impulse rings. Wheel bearings and impulse rings are not always integral parts of the brake disc hence they are not always included in the purchased parts package. If they are damaged in any way, replacement components should be bought separately.

If the impulse ring has been damaged, the ABS light will illuminate, an error code is stored in the diagnostics and the ABS will be inoperative. The following are the most common causes of failure of the impulse ring.

**Cause:**

Contamination by environmental influences (e.g. water, salt and dirt)

**Effect:**

Rust accumulation on the surfaces of the toothed segments can damage the ring gear, thus leading to incorrect speed information from the wheel speed sensor.

Cause:

Incorrect installation due to improper use of tools (hammer, screwdriver, etc.)

**Effect:**

Incorrectly applied installation forces can damage the bearing or impulse ring

Cause:

Excessive use of lubricants

**Effect:**

Too much lubricant leads to an accumulation of dirt and abrasion

Cause:

Use of metallic-based lubricants (e.g. copper paste)

**Effect:**

The metallic particles contained can chemically react with water and salt, thereby increasing oxidation levels and causing sensor failure and system malfunctions.

Installation instructions

Such brake disc models require a great deal of extra care and precision when repairs are being carried out by the mechanic. Incorrect installation can lead to damage being caused to the bearing and impulse ring and will influence the length of a wheel bearing's service life or they can cause malfunction of the anti-lock braking system.

Always follow the manufacturer's instructions and if in doubt, replace!!

If there is axial clearance of the wheel, droning or grinding running noises is a sure sign that damage has occurred to the wheel bearing and it needs to be replaced. The following are the most causes and effects for problems with wheel bearings.

