Hints on brake repairs

Disc brake pad

Separation of the brake pad
The brake pad is coming away from the base plate

CAUSE:
→ Thermal overload
→ Underlying rust
→ Ill-fitting brake pad leading to distortion

Thermal overload
Brake pad damaged by overheating. The bonding agents in the brake pad are destroyed and the material breaks up

CAUSE:
→ Guide sleeve is seized or jammed
→ Brake caliper piston is stiff
→ Extreme driving patterns or continuous braking
→ Brake pad seized

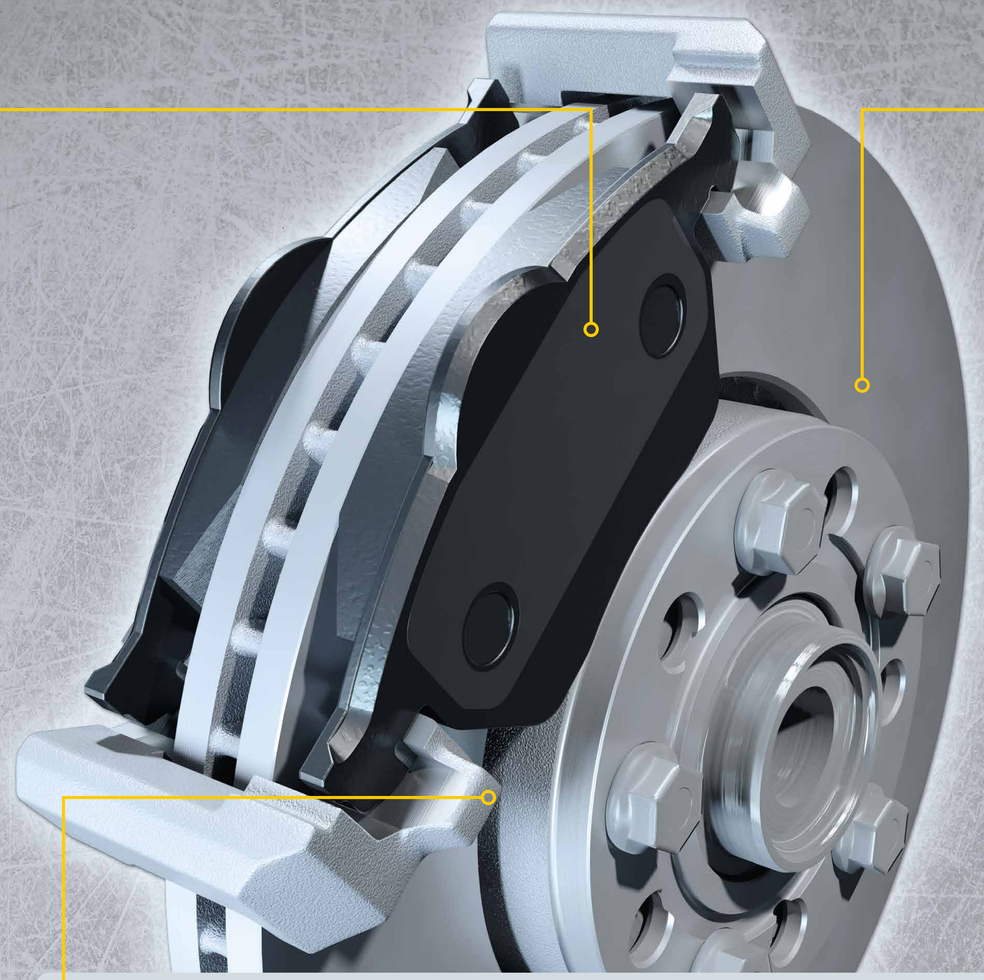
Worn patches and scoring
The surface of the brake pad exhibits marked scoring and signs of wear

CAUSE:
→ New pads were mounted on old, worn brake discs
→ Foreign body between the brake pad and the disc
→ Environmental influences (salt, dirt, etc.)

Excessive wear
Brake pads are worn down to the base plate

CAUSE:
→ Inadequate maintenance
→ Inspected too infrequently
→ Continuous braking while driving downhill

NOTE: All these brake pads need to be replaced!

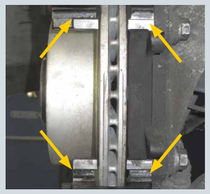


Maintenance information

To ensure proper functioning we recommend you to:
→ Always have brakes repaired only by qualified technicians
→ Comply with the installation information provided by the brake and vehicle manufacturers
→ Comply with the product's instruction leaflet
→ Use only verified and approved brake pads
→ The brake discs on an axle should always be replaced together
→ Always install new brake discs with new brake pads
→ The supporting surface of the wheel hub should be flat, burr-free, clean, rust-free and undamaged
→ Use the prescribed tightening torques
→ Check the level of brake fluid in the expansion tank and fill it up if necessary
→ Renew brake fluid at the prescribed intervals; if necessary have it tested
→ Once the brakes have been repaired, press the brake pedal several times up to two thirds of the way down to enable the brake pads and pistons to take up their working positions
→ Because brake discs and brake pads need to adapt to one other, use the brakes with moderation for a running-in period and comply with the manufacturer's instructions
→ Avoid unnecessary sudden braking in the first 100 km

Mounting instructions for coated brake discs
→ Do not remove the brake disc's surface protection
→ The layer of varnish on the friction ring does not affect braking performance

Cleaning and lubrication



Cleaning the parts of the brake caliper
Use only brake cleaner for normal cleaning of brake calipers and supports. Carefully remove corrosion on the guide surfaces with a brake caliper brush or file.

NOTE
Mechanical damage to guide surfaces and dust shields must be avoided at all costs!

Optimum use of lubricants
To ensure proper functioning, before assembling the brake apply a thin layer of grease to the brake pads, the cleaned sliding surfaces of the brake caliper support and the contact surfaces of the brake pads.
Use only metal-free, heat-resistant, non-conducting brake lubricants for this purpose.

NOTE
Metallic-based lubricants can cause ABS sensors to malfunction or facilitate electrochemical reactions leading to premature corrosion.

Brake discs

Overheated brake disc / judder marks

CAUSE:
→ Serious overheating of the brake disc
→ Violent or sudden braking

EFFECT:
→ Noise and vibration when braking from high speeds

Brake disc discolored from standing

CAUSE:
→ Brakes used only infrequently
→ Leaving the vehicle parked for long periods, coupled with environmental influences give rise to corrosion and deterioration of the surface of the friction ring

EFFECT:
→ Brake noise
→ Signs of juddering

Friction ring not uniformly thick

CAUSE:
→ Axial runout when braking only slightly

EFFECT:
→ Juddering when cold

Scoring of brake disc

CAUSE:
→ Overloading
→ Effects of dirt
→ Bad quality brake pads

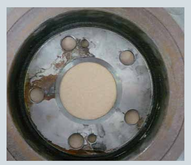
EFFECT:
→ Reduced braking effect
→ Noise
→ Increased wear

Rust underneath the contact face of the brake disc rotor chamber

CAUSE:
→ Faulty assembly
→ Wheel hub not properly cleaned

EFFECT:
→ Non-uniform thickness
→ Lateral runout

Cracks near the brake disc rotor chamber



CAUSE:
→ Wrong torque
→ Faulty assembly

EFFECT:
→ Reduced stability
→ Noise
→ Steering wheel flutter

NOTE: All these brake discs need to be replaced!