



Typical brake disc and brake pad damage patterns and their root causes

Good brakes save lives!



The consequences of choosing the wrong or low-grade brake parts can be dramatic. Only use the brake components specified for the given vehicle application. Brake system repairs may only be performed by skilled and trained personnel. Adhere to the vehicle or brake manufacturer's specifications at all times.

When installing new brake components, observe the following:

- Always replace brake pads along with brake discs.
- Always replace all brake discs and pads per axle.
- Be careful to bed in new brake discs and pads properly.
- Avoid unnecessary heavy braking on the first 200 kilometres.
- Brake performance may be lower on the first 200 driven kilometres.

Check for functional reliability after installation:

- Pump brake pedal until it becomes stiff.
- Pedal travel must not vary at constant pedal load after pedal has been depressed several times.
- Check wheels for free rotation.
- Check brake fluid level in expansion tank and top up, if required.
- Perform check stops.



MEYLE Platinum Disc: All-new finish. No degreasing. Fit and go.

All MEYLE brake discs come as ready-to-mount assemblies, most of them featuring the locating screw. They do not require degreasing and are resistant to rim cleaners. Cutting-edge paint technology made in Germany provides MEYLE Platinum Discs with long-term anti-corrosion protection while adding a brilliant appearance. Further refinement of the tried-and-tested MEYLE finish has led to environmentally-friendly production processes.

MEYLE Platinum Discs – the safety solution engineered by one of the industry's leading experts in coated brake discs.



Overheating of the mating friction surfaces

The problem:

Brake pad fails to disengage and rubs against the disc. This can cause the brake system to overheat.

Causes:

- › Brake pad seized
- › Brake piston stuck in calliper
- › Driving with depressed brake pedal, e.g. when going downhill

Possible consequences:

- › Reduced brake performance due to vitrification of the brake pad surface
- › Unpleasant noise
- › Brake disc deformation resulting in brake wobble and brake judder
- › In the worst case, the brake disc friction surface may peel off

MEYLE's *advice*:

Use mounting paste and ensure all parts move freely during installation. Avoid unnecessary disc brake drag.



Score and groove marks on disc brakes

The problem:

Score and groove marks on brake disc friction surfaces.

Causes:

- › Foreign objects between brake disc and pad (dirt, road salt, etc.)
- › Corrosion
- › Overly soft brake discs
- › Low-grade brake brake pad material
- › Excessive strain on brake system

Possible consequences:

- › Limited/reduced braking power
- › Unpleasant noise

MEYLE's *advice*:

Ensure brake system is free of foreign objects during installation. Use high-quality brake components from MEYLE. Replace brake pads along with brake discs!

Corrosion



The problem:

Severe rust formation on brake discs and pads.

Causes:

- › Climatic effects (e.g. road salt, moisture)
- › Extended periods of downtime with parking brake engaged
- › Brake piston stuck in calliper
- › Brake piston not fully returned to retracted position

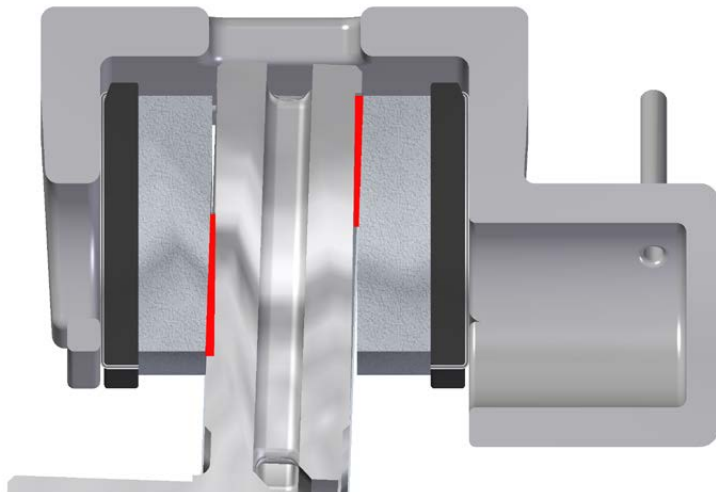
Possible consequences:

- › Vibration and brake judder caused by brake disc deposits
- › Noise generation
- › Reduced braking power
- › Overheating of brake discs and pads caused by rust spots

MEYLE's *advice*:

Avoid extended periods of vehicle downtime with parking brake continually engaged. Ensure all components are free-moving. After extended periods of downtime cautiously apply the brakes to unlock the brake system and ensure rust spots have been removed.

Wheel hub run-out



The problem:

Asymmetrical wear of brake disc front and rear sides. Formation of bluish-black hotspots.

Causes:

- › Brake disc fails to fit flush against wheel hub
- › Misalignment of functional axes
- › Wheel hub misalignment in relation to brake calliper

Possible consequences:

- › Pulsing brake pedal/judder
- › Shaking steering wheel
- › Reduced braking power
- › Wear limit reached prematurely

MEYLE's *advice*:

Brake discs must be installed clean, dry and degreased. Check wheel hub for true running prior to brake disc installation.

NOTE: Any existing wheel hub run-out is doubled owing to the larger brake disc diameter. Using a dial gauge with adjustable magnetic base allows you to check for installation-induced run-out directly on the car instead of performing a test drive.

Asymmetrical wear of brake disc front and rear sides



The problem:

Brake pad is pressed unevenly against brake disc.

Causes:

- › Brake pad seized
- › Problems during installing
- › Anti-squeal shims out of place
- › Brake calliper positioned incorrectly

Possible consequences:

- › Asymmetrical wear of brake disc front and rear sides
- › Reduced braking power
- › Pulsing brake pedal/judder
- › Shaking steering wheel
- › Possible noise generation
- › Wear limit reached prematurely

MEYLE's *advice*:

Ensure all components are free-moving. Ensure correct positioning of brake calliper. Observe mounting instructions.

Contaminated mounting face, pressure marks and corrosion



The problem:

Plane-parallel installation is not or not fully possible.

Causes:

- › Failure to clean wheel hub mounting face correctly
- › Dirt or rust particles trapped between brake disc and hub
- › Grease/paste from foreign objects trapped between brake disc and wheel hub

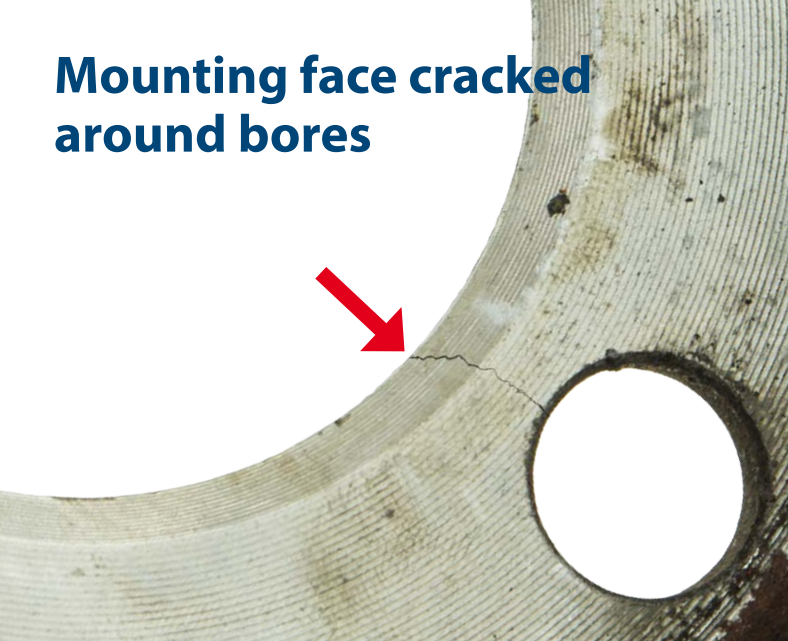
Possible consequences:

- › Asymmetrical wear
- › Pulsing brake pedal/judder
- › Shaking steering wheel
- › Reduced braking power
- › Wear limit reached prematurely

MEYLE's *advice*:

Mounting face must be clean, dry and rust-free. Check wheel hub for true running/run-out prior to brake disc installation. Using a dial gauge with adjustable magnetic base allows you to check for installation-induced run-out directly on the car instead of performing a test drive.

Mounting face cracked around bores



The problem:

Formation of cracks in area surrounding wheel bolt holes.

Causes:

- › Excessive torque to tighten wheel nuts and bolts
- › Failure to tighten wheel nuts and bolts in correct order
- › Lack of plane-parallel alignment between wheel hub and brake disc

Possible consequences:

- › Brake disc shakes immediately after installation
- › Mounting face deformation (cracks might not be visible)
- › Brake disc cracks under load

MEYLE's advice:

Adhere to tightening torques and sequences specified by the manufacturer. Ensure plane-parallel installation. Using a dial gauge with adjustable magnetic base allows you to check for installation-induced run-out directly on the car instead of performing a test drive.



We make braking a safe experience.

MEYLE Platinum Pads offer maximum driving comfort to exclusive standards.

Specially designed to suit the needs of luxury models, SUVs and light commercial vehicles (LCVs) MEYLE brake pads set the benchmark in premium brake technology. Dispensing with copper and heavy-metal compounds MEYLE Platinum Pads offer a best-in-class friction coefficient. Outstanding responsiveness and stable braking even at high temperatures along with extremely low noise levels are the key features which put the latest generation of MEYLE brake discs in a class of their own. MEYLE Platinum Pads ensure short braking distances and stable braking in any situation.

Naturally, MEYLE Platinum Pads are ECE R90 type-approved and virtually all are fitted with MEYLE 3L shims.

www.meyle.com



Your source for MEYLE parts:



Caution:



- These instructions are for information purposes only and are no substitute for the specifications of the vehicle manufacturers.
- Repairs may only be performed by properly trained staff.