

1 Important instructions and safety instructions

1.1 General Information

This publication describes maintenance and repair of the disc brakes PAN 22-1 including the individual operations and work processes required to replace components using available repair kits.

! This publication is directed at trained service technicians employed at workshops for commercial vehicles.

Before you begin with maintenance, repair, replacing a part etc., carefully read all the safety instructions as well as the repair and maintenance instructions included in this publication. These instructions must be observed to avoid personal injury or material loss.

WABCO only guarantees the safety, reliability and performance of its products and systems if all instructions, notes and safety instructions are observed.

! **Before you perform any work on the vehicle (repair, maintenance, replacing parts, etc.), you must ensure the following:**

Only trained and qualified personnel may perform repairs on the vehicle.

Always follow specifications and instructions of vehicle manufacturer.

Always comply with the Company and national accident prevention guidelines and Health and Safety regulations.

Wear any necessary protective clothing.

The workplace has to be dry, as well as sufficiently lit and ventilated.

1.2 Safety instructions

WARNING



Reduced braking effect or brake failure

Danger of accidents

- Regularly check the wear limits of brake linings and brake discs.
- Replace worn, scorched, glazed, or oily brake linings immediately.
- Immediately replace worn or damaged brake discs.
- Always replace all brake linings and brake discs on an axle.

WARNING



Rolling vehicle

Danger of accidents

- Position the vehicle on an even surface and secure it against rolling away with brake wedges.
- Only use approved devices to jack up and secure the vehicle.
- Ensure that the gearbox is in neutral and that the hand brake is applied.

CAUTION



Risk of injury due to hazardous dusts

- Do not clean any soiled areas of the brake with compressed air or other high-pressure devices.

CAUTION



Risk of injury due to heavy load

- A second technician must assist during removal and installation of the brake.

CAUTION



Risk of injury due to brake action while working on the brake

- Attach a clearly marked note on the steering wheel saying that work is being performed on the vehicle and that the brake must not be touched.

CAUTION Risk of injury: Crushing of fingers

- Only grip the brake on the outside with your hands while moving the brake calliper or working on the brake.
- Do not use motor-driven screw tools.

CAUTION Risk of injury due to falling brake parts

- Use suitable equipment, such as a vice, to clamp the brake when performing repairs on the brake outside the vehicle.

1.3 Repair and maintenance instructions

For good handling and braking characteristics it is essential that the disc brake be in flawless technical condition.

- If cast parts have been heavily damaged or are severely worn, (cracks for example), replace the entire brake following the instructions.
- Do not open the clamping unit on the brake calliper, and do not unscrew the fastening screws on the clamping unit cover.
- Do not apply the brake when brake linings have been removed.
- Do not use compressed air or other high-pressure devices when cleaning the brake or the vehicle. This may result in the risk of personal injury or hazardous dusts. Rubber parts of the brake could also be damaged.
- Only use original WABCO parts and approved brake linings. An exploded view of replacement parts is found in the annex of this document (see chapter 8.2 "Exploded view of the replacement parts", page 33).
- Only use grease contained in the repair kits.
- Perform the repair work using only the recommended tools. Do not use motor-driven screw tools. Tighten screws and nuts only with the speci-

fied spanners, applying only the specified tightening torque; refer to the table in Annex (see chapter 8.1 "Widths A/F and tightening torques", page 31) for the corresponding positions.

- Perform a concluding roller test stand test having completed the repairs. If no roller test stand is available, conduct a test drive with brake action tests.
- Do not perform full braking, with the exception of emergency braking, during the first 50 km after new brake linings have been fitted. Also avoid continuous braking over longer periods. Ensure that the driver of the vehicle is informed.

1.4 Symbols used**DANGER**

- Imminent hazard situation which can cause serious personal injury or death if the safety instruction is not observed.

WARNING

- Potential hazard situation which can cause death or serious personal injury if the safety instruction is not observed.

CAUTION

- Potential hazard situations that can cause minor or moderate to severe injury, or material loss, if the safety instruction is not observed.



Important instructions, information, or tips that you should always observe.