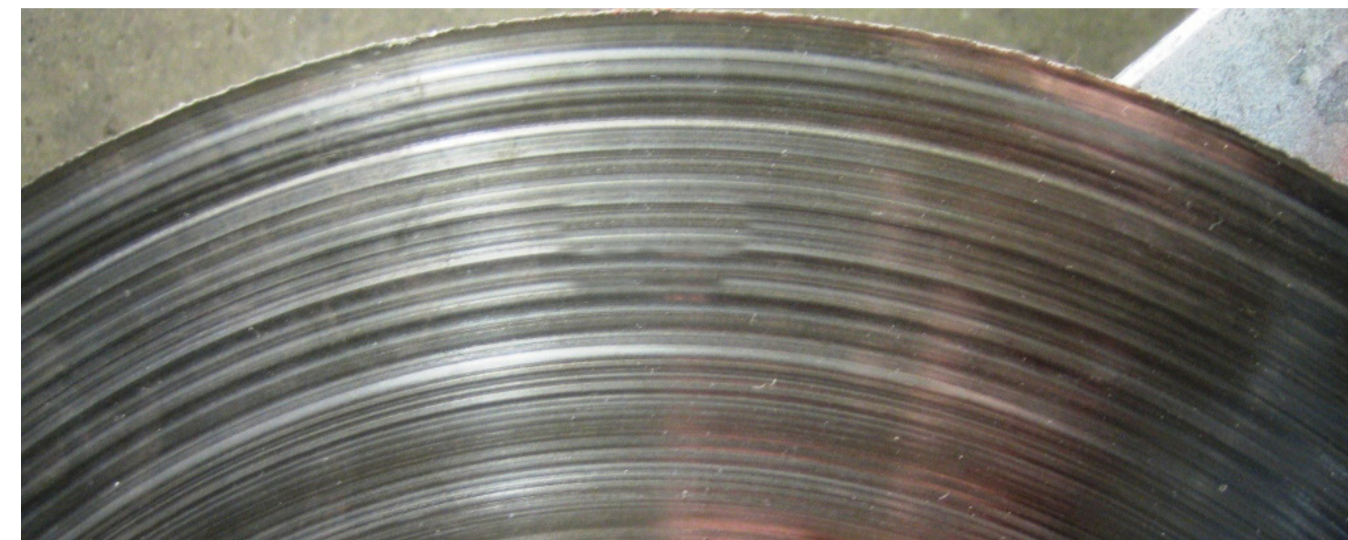


CV TROUBLE TRACER - BRAKE PADS AND DISCS

Periodic inspection of the braking system is essential. It is recommended that when it is necessary to replace brake discs it is safe practise to also replace brake pads. Both should always be replaced across the axle.



APPEARANCE Disc featuring scored surface.
CAUSE Pads fitted with friction material too harsh for the disc or new pads assembled on excessively worn out discs.
EFFECT Reduction in braking performance and possible imbalance on the affected axle during braking.
REMEDY

- Replace the pads.
- Check disc condition and minimum thickness. If necessary, replace the disc.
- Check for the quality of the spare parts used.



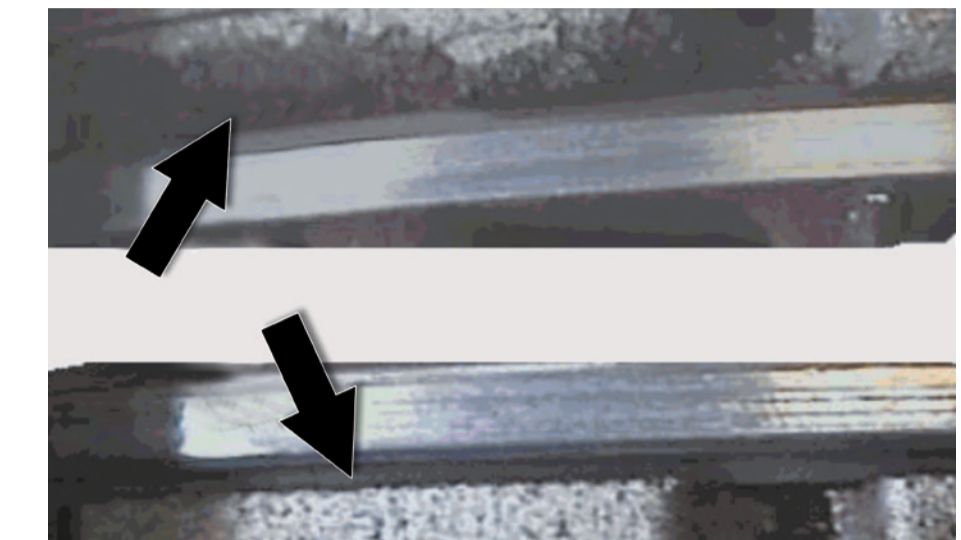
APPEARANCE Excessively worn out discs and pads.
CAUSE Possible contamination of the friction material by sand, mud or earth or incomplete return of the caliper gear.
EFFECT Excessive wear of one or more brake pads, resulting in damage where the pad has not been fitted with a wear indicator.
REMEDY

- Replace the pads.
- Check disc condition and minimum thickness.
- If necessary, replace both discs on the axle.



APPEARANCE Disc surface features 1st and 2nd degree crack.
CAUSE Too intensive use of brakes due to the track features or to the carried load.
EFFECT Possible unexpected disc mechanical collapse, particularly with 2nd degree crack.
REMEDY

- Compulsory replacement of brake discs and pads, particularly with 2nd degree crack, when one of the cracks is travelling from OD to ID.
- Brake calipers shall be checked.



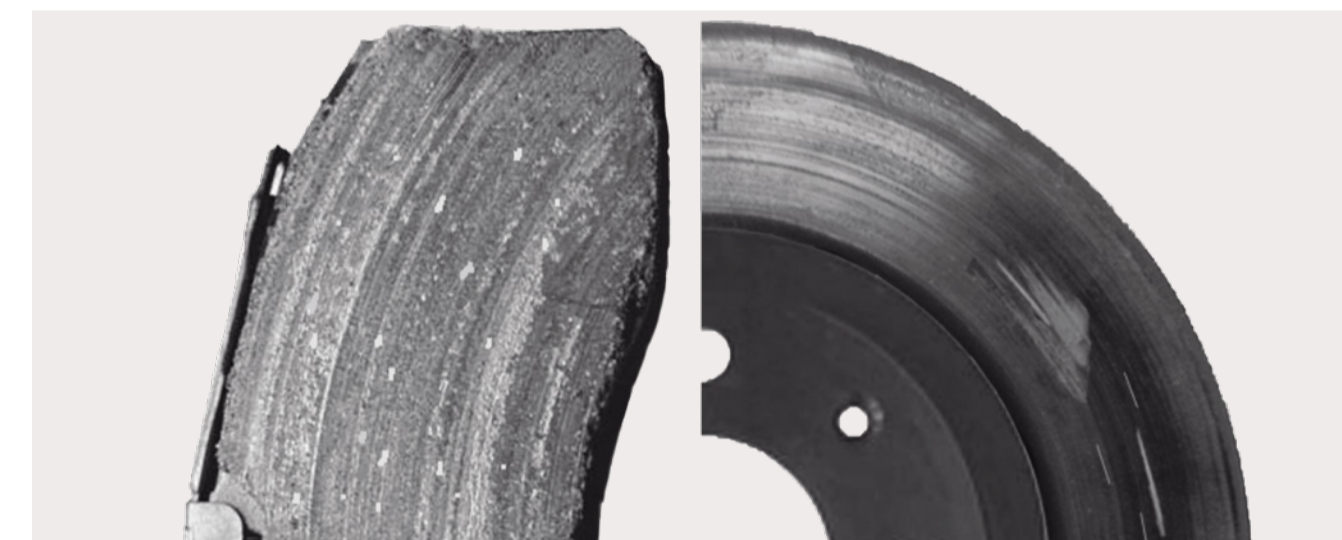
APPEARANCE Damaged edges to the friction material (edge-crumbling).
CAUSE Brake pad has become stuck in the caliper. The parts used do not comply with the correct sizes and specifications.
EFFECT Early pad deterioration and uneven disc wear.
REMEDY

- Replace the pads.
- Check for correct caliper operation.
- Check disc condition and minimum thickness.
- If necessary, replace both discs on the axle.



APPEARANCE Contaminated pad friction material.
CAUSE Contamination by an oily substance or solvent.
EFFECT Reduction in braking performance and possible imbalance during braking.
REMEDY

- Replace the pads.
- Check the discs on the axle.
- Identify any fluid leaks from the hubs or other nearby components.



APPEARANCE Friction includes metal pick-up.
CAUSE High temperature generated between brake pad and disc in wet conditions.
EFFECT Wear of the affected brake disc with typical metal rubbing noise during braking.
REMEDY

- Replace the pads.
- Check disc condition and minimum thickness.
- If necessary, replace both discs on the axle.



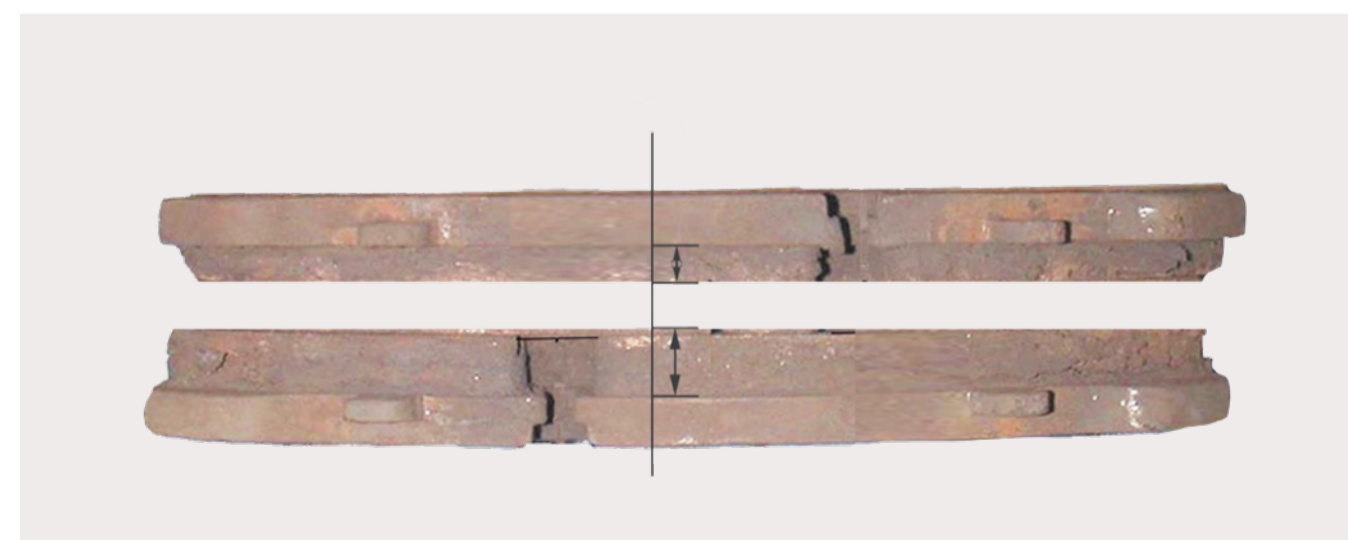
APPEARANCE Pads on the same axle featuring uneven wear.
CAUSE Incorrect return of one caliper on the same axle.
EFFECT If the axle involved is the directional one, this fault may result in vehicle instability during brake release.
REMEDY

- Replace the pads.
- Check for the proper caliper operation.
- Check disc condition and minimum thickness.
- If necessary, replace both discs on the axle.



APPEARANCE Pad with surface cracks.
CAUSE Excessive load or high friction material temperature.
EFFECT Possible detachment of friction material resulting in a reduction in braking performance.
REMEDY

- Replace the pads.
- Check for correct caliper operation.
- Check disc condition and minimum thickness.
- If necessary, replace both discs on the axle.



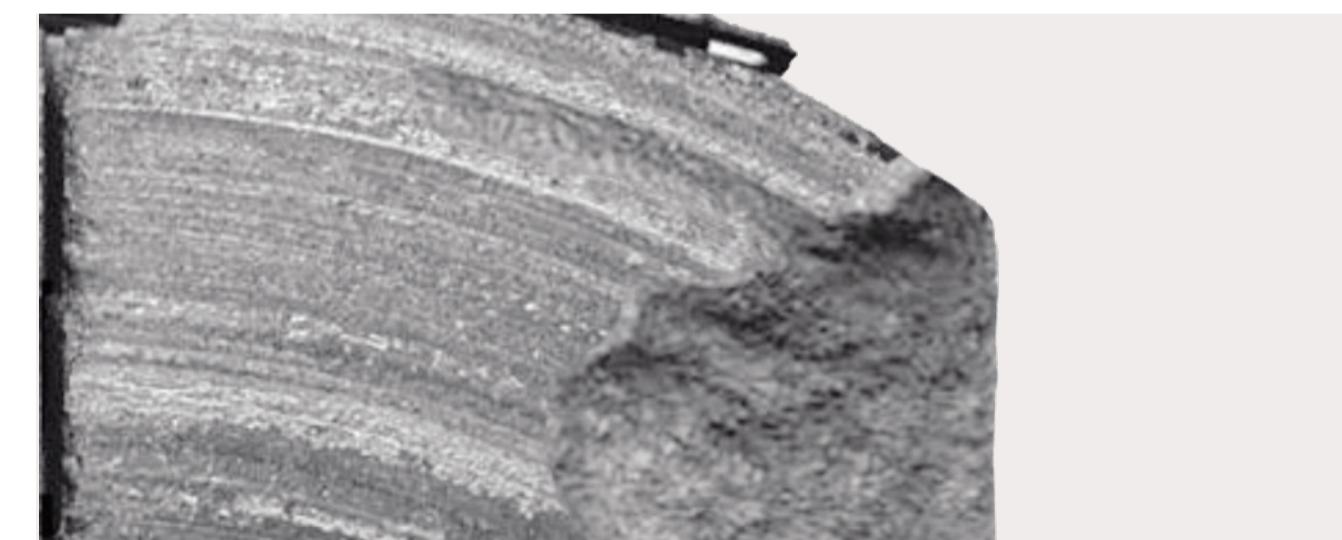
APPEARANCE Uneven brake pad wear.
CAUSE One of the calipers has become stuck or does not return correctly to the rest position.
EFFECT Reduction in braking performance and possible imbalance on the involved axle, during braking.
REMEDY

- Replace the pads.
- Brake calipers should be checked.



APPEARANCE Glazed pad friction material.
CAUSE Very low duty applied on the brakes, i.e. brake applications with low speed and low pressure.
EFFECT Reduction in braking performance and typical noise (squeal) while braking.
REMEDY

- If glazing is not too heavy can try to recondition the surface by some mileage of medium/hard brake duty, otherwise replace the pads.
- Check the disc condition and minimum thickness.



APPEARANCE Detached friction material.
CAUSE Possible excessive load or heavy braking, along with the choice of unsuitable parts.
EFFECT Reduction in braking performance and typical noise (squeal) while braking.
REMEDY

- Replace the pads.
- Check the disc condition and minimum thickness.
- Despite having a wear indicator, it is necessary to check the pad condition every normal garage brake control visit and/or every six months.



APPEARANCE Blue stripes on the disc indicating a physical change due to overheating.
CAUSE Intensive use of brakes for prolonged braking or improper downhill braking.
EFFECT Brake disc overheating which may result in contact surface distortion and cracks.
REMEDY

- Compulsory replacement of brake discs and pads.
- During the first 250 km after replacement, sharp braking should be avoided in order to allow for the correct bedding-in of the newly fitted components.