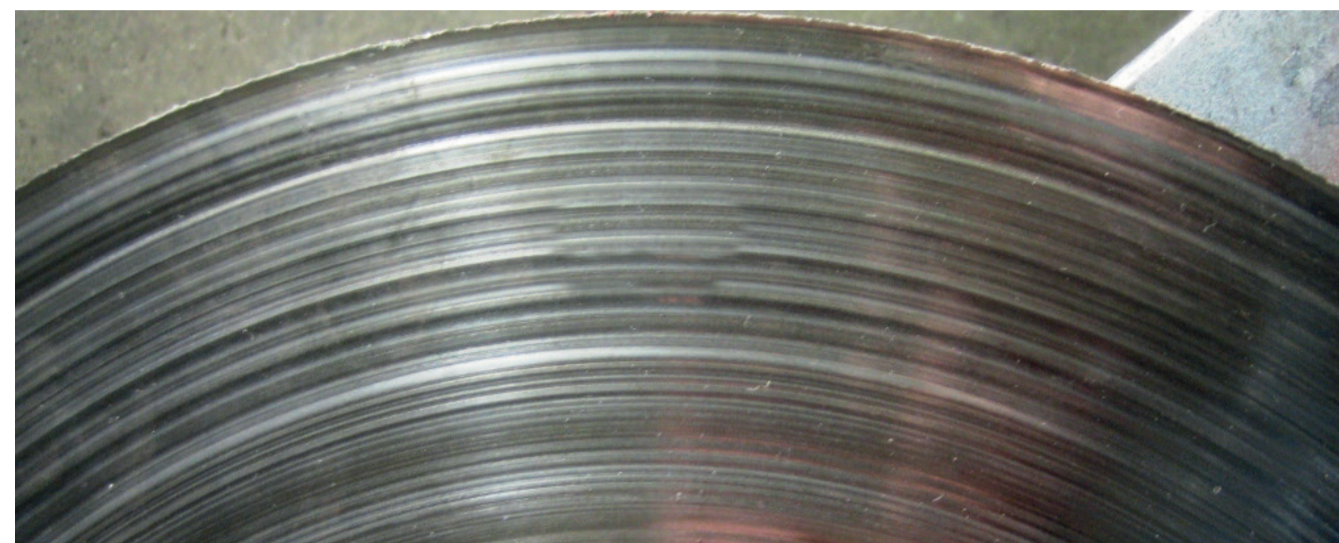




CV TROUBLE TRACER - BRAKE PADS AND DISCS

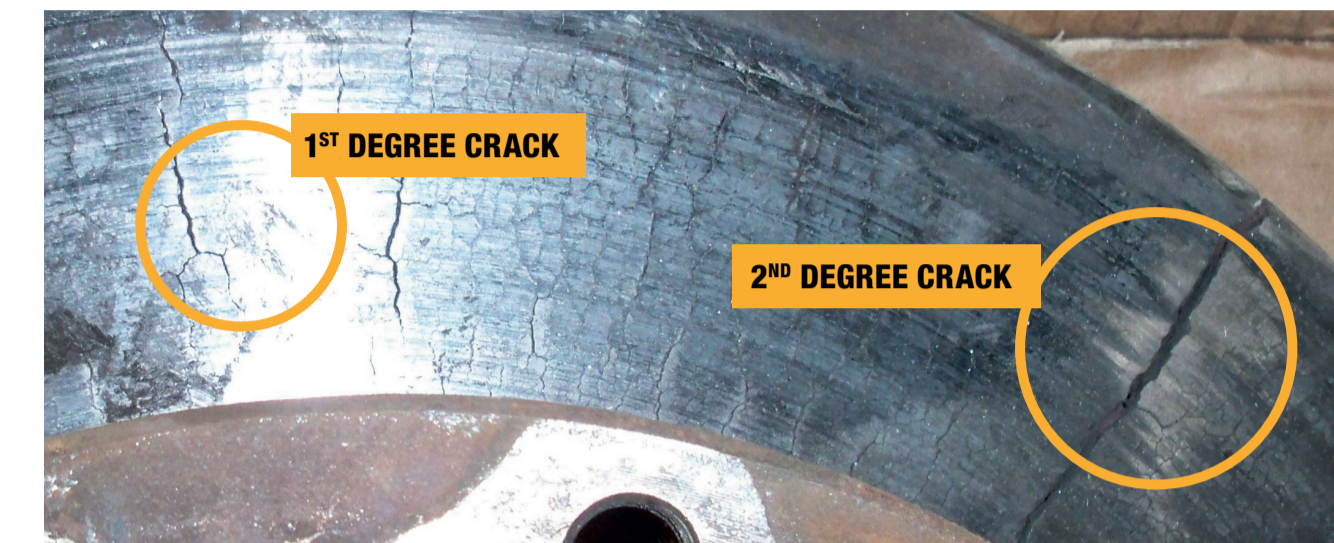
Periodic inspection of the braking system is essential. It is recommended that when it is necessary to replace brake discs it is safe practise to also replace brake pads. Both should always be replaced across the axle.



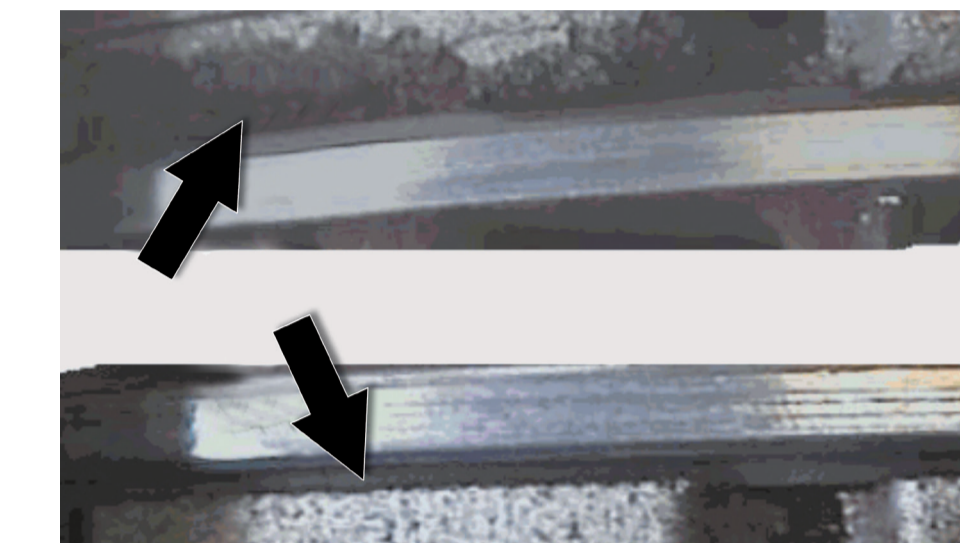
- APPEARANCE** Disc featuring scored surface.
- CAUSE** Pads fitted with friction material too harsh for the disc or new pads assembled on excessively worn out discs.
- EFFECT** Reduction in braking performance and possible imbalance on the affected axle during braking.
- REMEDY**
- Replace the pads.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



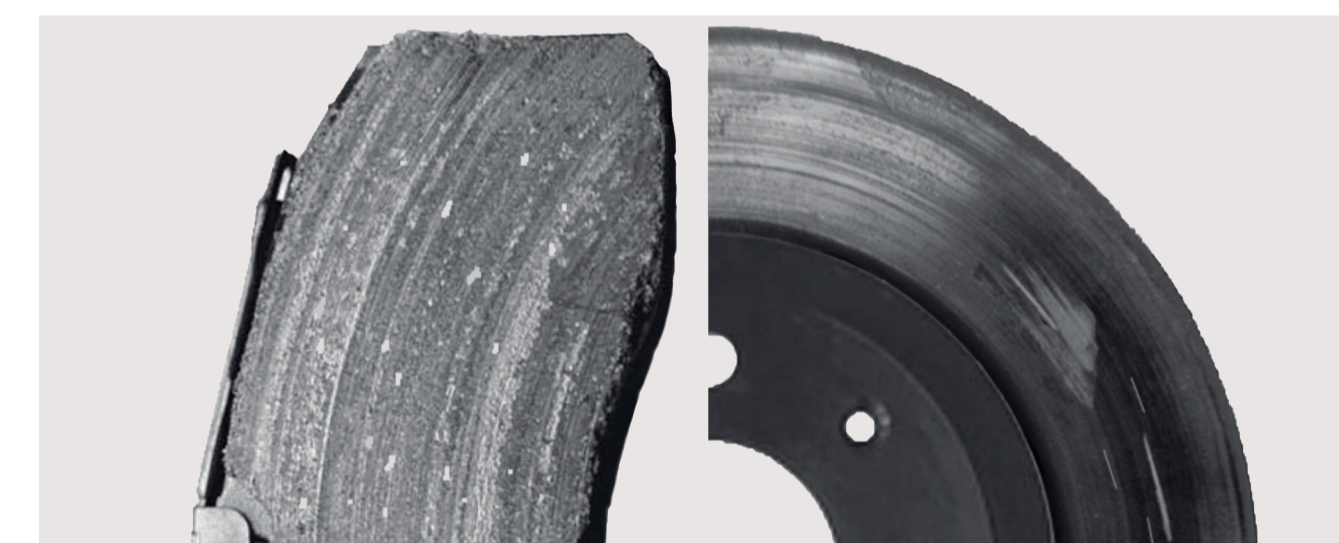
- APPEARANCE** Disc surface features 1st and 2nd degree crack.
- CAUSE** Too intensive use of brakes due to the track features or to the carried load.
- EFFECT** Possible unexpected disc mechanical collapse, particularly with 2nd degree crack.
- REMEDY**
- Compulsory replacement of brake discs and pads, particularly with 2nd degree crack, when one of the cracks is travelling from OD to ID.
 - Brake calipers shall be checked.



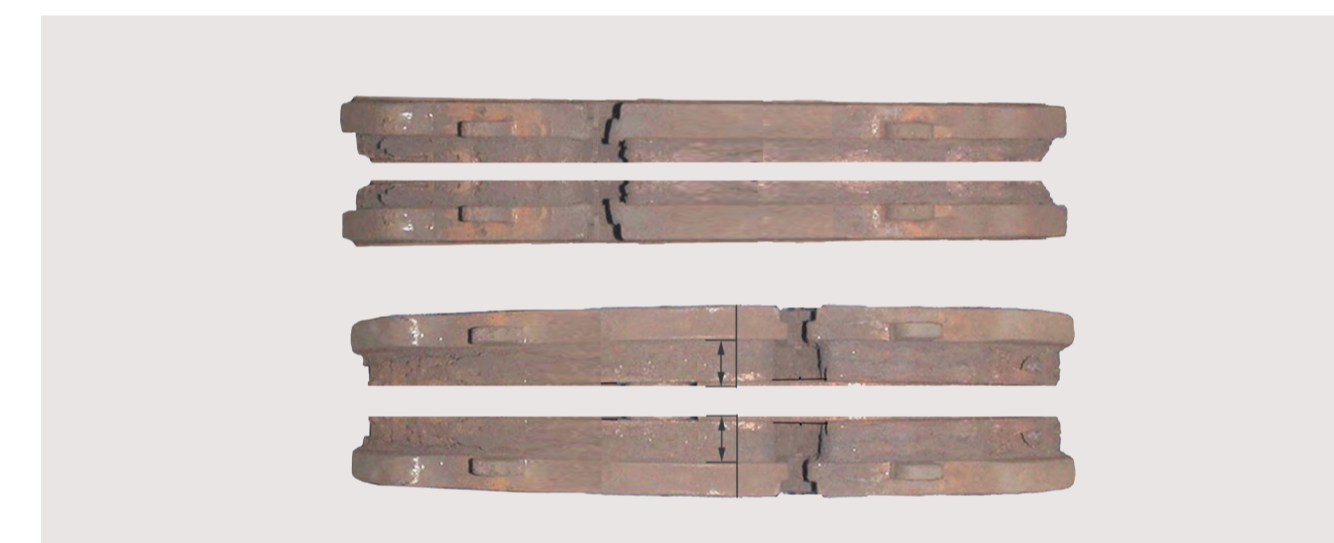
- APPEARANCE** Damaged edges to the friction material (edge-crumbling).
- CAUSE** Brake pad has become stuck in the caliper. The parts used do not comply with the correct sizes and specifications.
- EFFECT** Early pad deterioration and uneven disc wear.
- REMEDY**
- Replace the pads.
 - Check for correct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



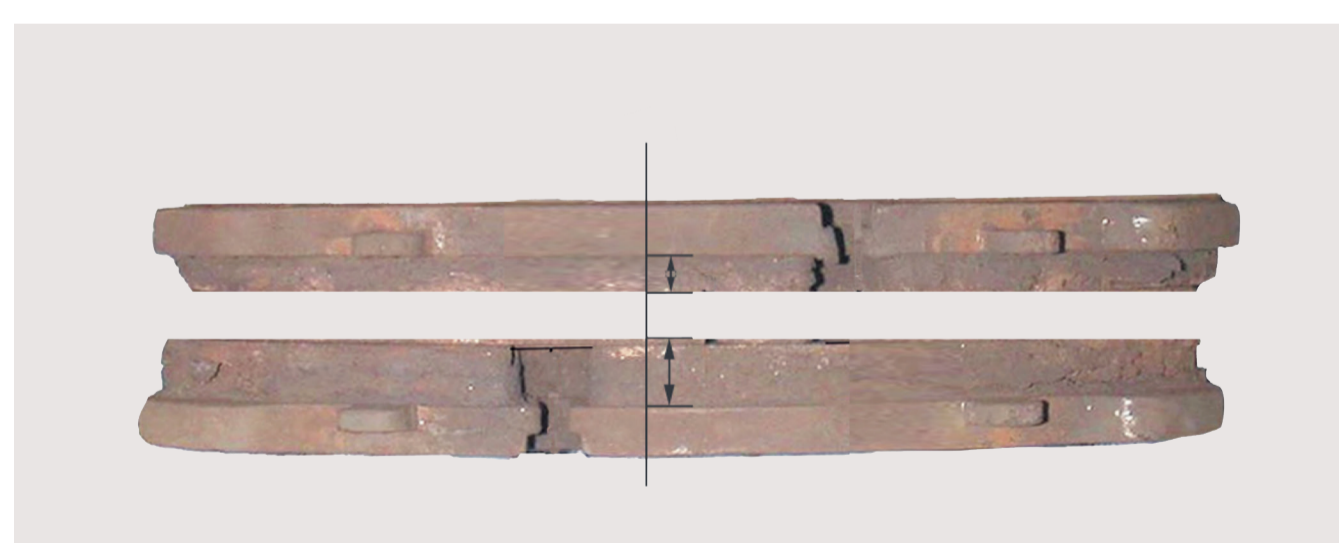
- APPEARANCE** Friction includes metal pick-up.
- CAUSE** High temperature generated between brake pad and disc in wet conditions.
- EFFECT** Wear of the affected brake disc with typical metal rubbing noise during braking.
- REMEDY**
- Replace the pads.
 - Check disc condition and minimum thickness.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



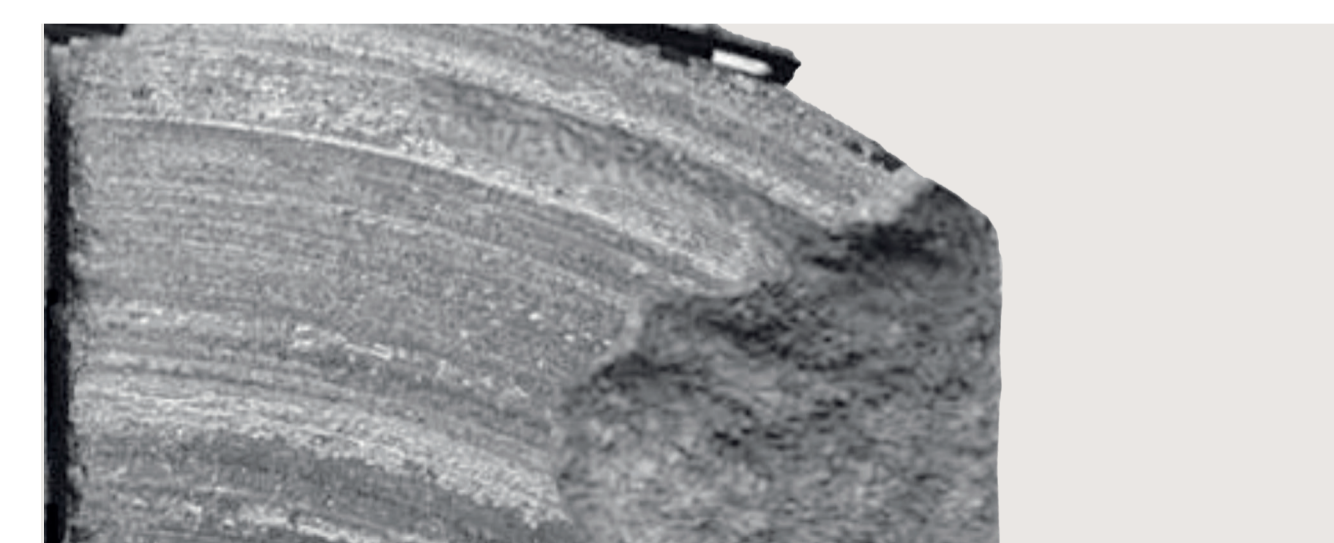
- APPEARANCE** Pad with surface cracks.
- CAUSE** Excessive load or high friction material temperature.
- EFFECT** Possible detachment of friction material resulting in a reduction in braking performance.
- REMEDY**
- Replace the pads.
 - Check for correct caliper operation.
 - Check disc condition and 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.