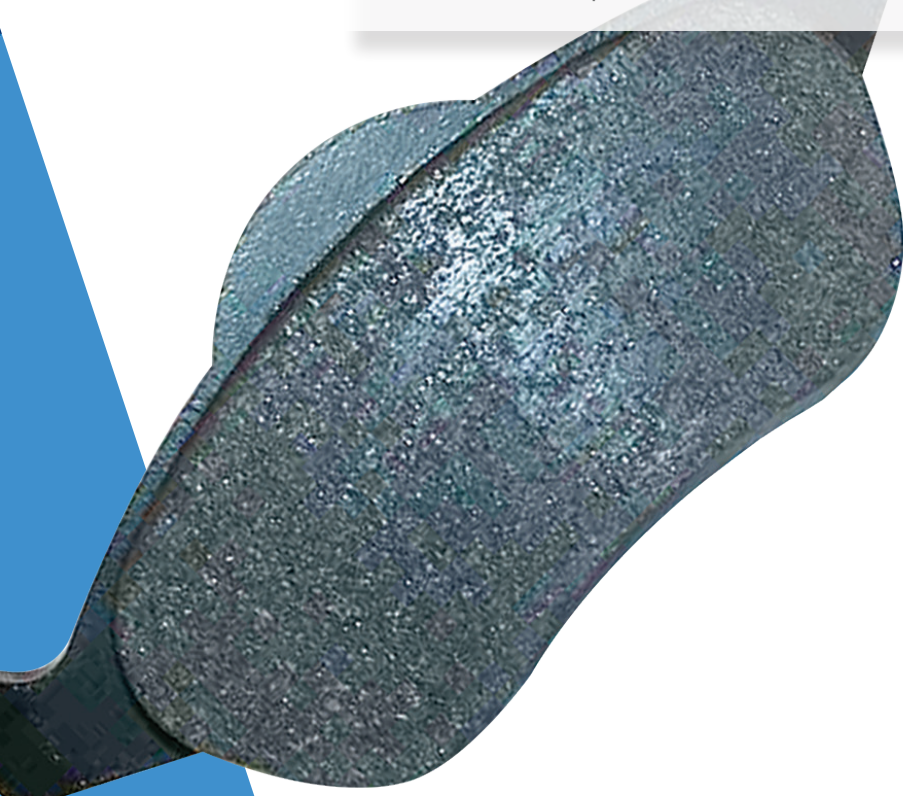


NORMAL WEAR

Recommend periodic maintenance



METAL RESIDUE



- APPEARANCE**
- Metal residue on friction surface
- CAUSE**
- Water leakage, “quenching” of the rotor causes rotor fragments to break away, transferring them to the friction material
 - Particularly noticeable if heavy braking on poorly bedded rotors
- EFFECT**
- Has no detrimental effect on braking performance
 - May cause rotor damage or brake squeal
- SOLUTION**
- In extreme instances, replace rotors and pads

WORN OUT PADS



- APPEARANCE**
- Friction material completely worn out
- CAUSE**
- No periodic control of pad wear
- EFFECT**
- Vehicle may pull to one side
 - Damage to rotor
 - High squeal and noise
- SOLUTION**
- Replace pads

CRACKED PADS



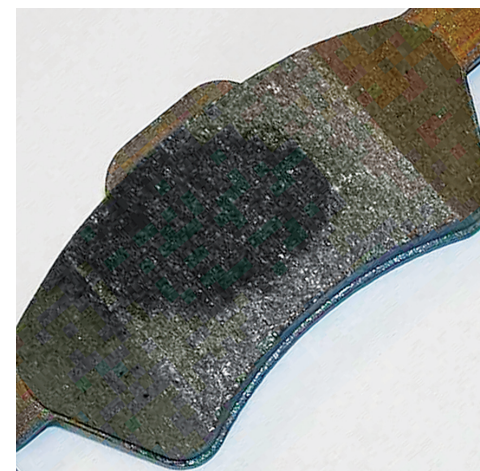
- APPEARANCE**
- Small cracks in center of pad
- CAUSE**
- Stress cracks caused by pads flexing
 - Pads not free to slide in caliper
- EFFECT**
- Piston bends in back plate
- SOLUTION**
- Lubricate caliper slides and guide pins
 - Replace pads

ASHING



- APPEARANCE**
- Partially charred friction material (whitish outer edges)
- CAUSE**
- Prolonged excessive pad temperature due to intensive use or dragging
- EFFECT**
- Reduction in initial braking efficiency
 - Excessive material deterioration
 - Material becomes brittle, chips and cracks
 - Excessive abnormal wear
- SOLUTION**
- Providing the damage is not excessive, pads can be used and will be effective under normal use

SURFACE CONTAMINATION



- APPEARANCE**
- Friction material contaminated with oil, grease or brake fluid
- CAUSE**
- Spillage during maintenance
- EFFECT**
- Vehicle may pull to one side
 - Reduction in braking performance
- SOLUTION**
- Replace pads

UNEVEN WEAR WITHIN A SET



- APPEARANCE**
- One pad within caliper set excessively worn
- CAUSE**
- Caliper guide pins / piston sticking
- EFFECT**
- Brakes pull to one side
 - Uneven, rapid pad wear
- SOLUTION**
- Replace pads and service caliper
 - Replace with new loaded calipers

GLAZING



- APPEARANCE**
- Pad friction surface “glazed”
- CAUSE**
- High intermittent pad temperature for short durations
- EFFECT**
- Temporary reduction in braking performance
- SOLUTION**
- Can be remedied by “normal” use

UNEVEN WEAR



- APPEARANCE**
- Uneven wear on pad surface
- CAUSE**
- Irregularly worn brake disc (wear lip)
- EFFECT**
- Squeal and brake pedal pulsation
 - Premature pad wear
- SOLUTION**
- Replace rotors and pads

BACKPLATE DAMAGE



- APPEARANCE**
- Damaged backplate
- CAUSE**
- Incorrect assembly
 - Excessive force used during installation
- EFFECT**
- Reduced braking efficiency, irregular wear, noise and judder
 - In extreme instances, products will not fit in the caliper
- SOLUTION**
- Replace pads

TAPERED PADS



- APPEARANCE**
- Uneven wear, tapered pads
- CAUSE**
- Distorted caliper
 - Caliper slides sticking
 - Piston sticking
 - Excessive caliper clearance
- EFFECT**
- Premature pad wear
 - Uneven braking pressure
 - Noise and squeal
- SOLUTION**
- Replace pads
 - Service or replace calipers
 - Replace with new loaded calipers

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