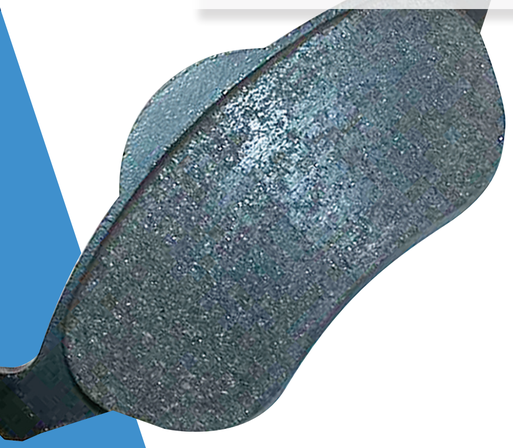
DISC BRAKE TROUBLE TRACER CHART

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 CONTANIMATION

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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