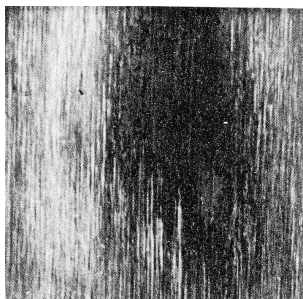


Some of the more common brake and clutch troubles are pictorially presented in subsequent sections; although these faults can affect performance and shorten the life of the components, only in exceptional circumstances do they result in complete failure.

BRAKING TROUBLES

Metal Surface



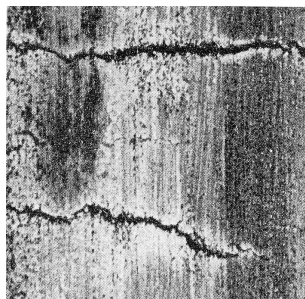
Heat Spotting

Characteristics

Small isolated discoloured regions on the friction surface. Often cracks are formed in these regions owing to structural changes in the metal, and may penetrate into the component.

Causes

Friction material not sufficiently conformable to the metal member; or latter is distorted so that contact occurs only at small heavily loaded areas.



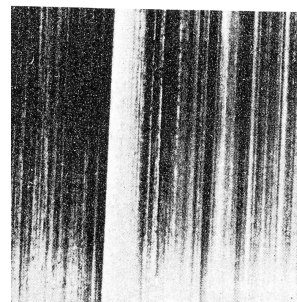
Crazing

Characteristics

Randomly orientated cracks on the rubbing surface of a mating component, with main cracks approximately perpendicular to the direction of rubbing. These can cause severe lining wear.

Causes

Overheating and repeated stress-cycling from compression to tension of the metal component as it is continually heated and cooled.



Scoring

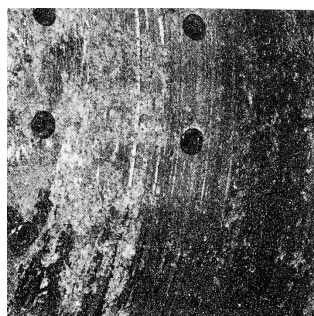
Characteristics

Scratches on the rubbing path in the line of movement.

Causes

Metal too soft for the friction material; abrasive debris embedded in the lining material.

Friction material surface



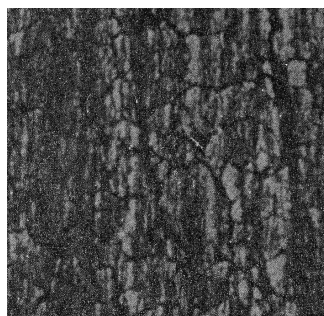
Heat Spotting

Characteristics

Heavy gouging caused by hard proud spots on drum resulting in high localised work rates giving rise to rapid lining wear.

Causes

Material rubbing against a heat-spotted metal member.



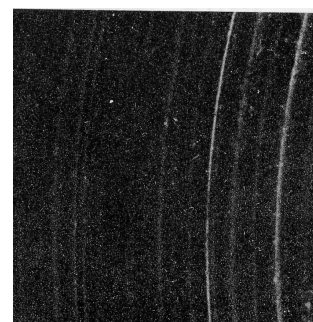
Crazing

Characteristics

Randomly orientated cracks on the friction material, resulting in a high rate of wear.

Causes

Overheating of the braking surface from overloading or by the brakes dragging.



Scoring

Characteristics

Grooves formed on the friction material in the line of movement, resulting in a reduction of life.

Causes

As for metal surface or using new friction material against metal member which needs regrinding.