

Assessment of lining ruptures

Assessment/evaluation of cracks and ruptures in the lining layer of disc brake linings

On the basis of this technical report the expert inspector should be able to visually assess the brake linings for BPW ECO Disc TSB 3709 / TSB 4309 / TSB 4312 trailer disc brakes with reference to crack or edge rupture characteristics. It is still up to the inspector to assess whether or not the brake lining should be replaced. His assessment should include both the visual condition of the linings as well as the overall impression of the vehicle and its operating conditions.

The instructions and regulations in the workshop manual „BPW trailer axles with trailer disc brakes“ must be followed.

The main causes of lining ruptures or cracks are an increased effect of contamination or thermal load on the brake, which can be reduced through improved means of covering or through suitable tractor/trailer synchronisation. If this does not happen, the condition of the brake linings can worsen. This should be checked at regular maintenance intervals and more often than generally recommended.

The warranty service regarding lining damage is not affected by this technical report. Warranty claims always depend on the individual case and its specific ancillary conditions.

Backing plate:

Distortions on the lining's backing plate are not permissible; the linings should be replaced in this case.

Ruptures at the edges of the lining:

The defined areas shown in Figure 1 may display ruptures to the edges under the following conditions:

- Ruptures are only permissible in the edge areas marked (3 mm from the peripheral edges and the central groove and a maximum of 10 mm to the upper lining corners).
- The ruptures are no larger than shown in Figure 1.
- The total rupture surface is no larger than 10% of the total lining surface.
- The ruptures, as shown in Figure 2, are not in the area of the lining connection (2 mm distance from the lining's backing plate).
- There are no ruptures in other areas.

Figure 3 shows a comparison between permissible and impermissible edge ruptures.

The ruptures shown above do not signify a defective product but instead are a sign of normal wear. Therefore, a replacement of the linings is not yet necessary.

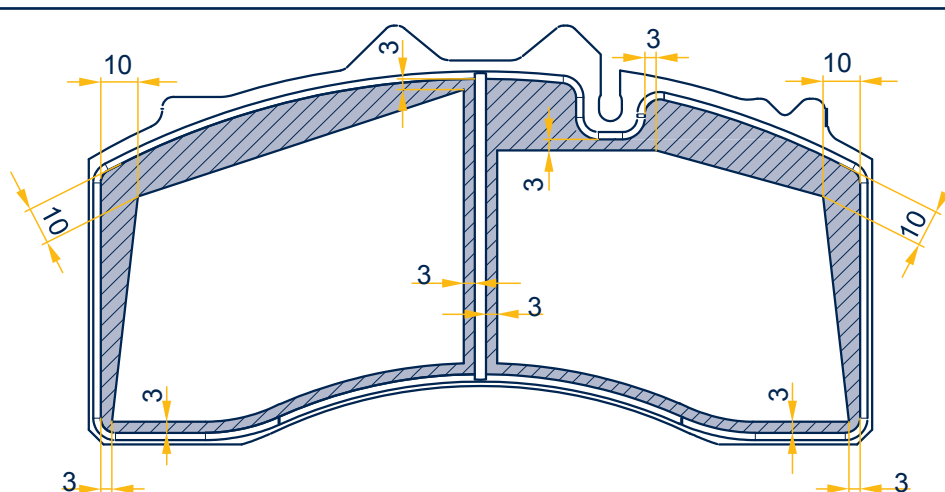


Figure 1: Permissible areas for edge ruptures are marked, but must be no more than 10% of the lining surface.

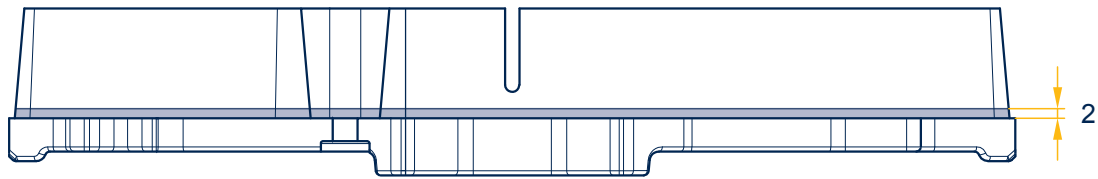


Figure 2: Protected area of the lining connection — no ruptures or stripping are permissible here.



Figure 3: Lining with impermissible



Figure 4: Cracks in the permissible area of the lining surface

Cracks in the lining material:

The cracks in the lining surface shown in Figure 4 are acceptable under the following conditions:

- The cracks do not go all the way to the lining connection area (2 mm above the lining's backing plate), see Figure 2.
- The cracks do not run horizontal to the backing plate.

The cracks shown do not signify a defective product but instead are a sign of normal wear. Therefore, a replacement of the linings is not yet necessary.



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