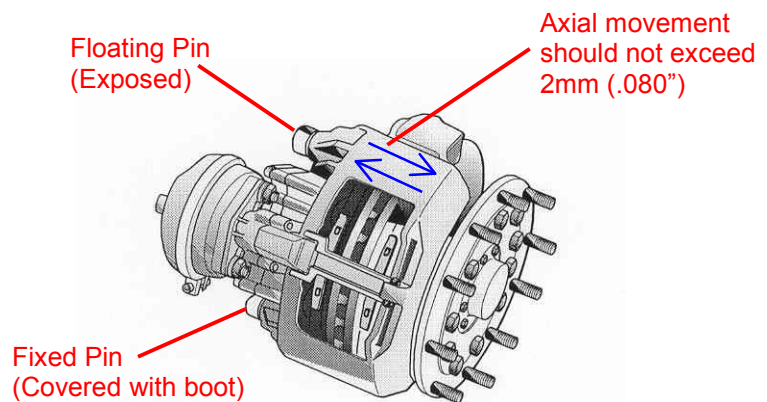


**AIR DISC BRAKES
INSPECTION PROCEDURE**

When a vehicle is equipped with air disc brakes it cannot be inspected using the requirements for chamber stroke or visible lining clearance or lining thickness as specified for drum brakes. The roadside inspector should use the following instructions to determine that the air disc brakes are within proper adjustment and have sufficient pad wear thickness.

Brake Adjustment Inspection:

The air disc brake caliper is designed to move freely, with minimal force, in the axial direction on the two sliding points as identified in Figure 1. The movement in the axial direction should not exceed 2mm (.080").



Pad Thickness Inspection:

The pad thickness can be viewed but would require removal of the tyre and rim. An indicator of the pad wear condition is available by inspecting the floating pin location in relationship to the rubber bushing as shown in Figures 2 and 3. When pads are in new thickness condition, the pin will be exposed 19mm (.75"). When the pads are worn to replacement condition, the pin will be nearly flush to the bushing or within 1mm (.04") of the edge of the rubber bushing.

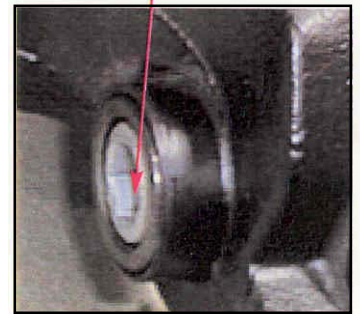
Figure 2

New Pads 19mm (0.75")



Figure 3

Worn Pads nearly flush



Wear Limits of Pads and Discs:

WARNINGS!

1. For optimum safety, stay within the Disc and Pad Wear Limits.
2. If these recommendations are ignored, there is a danger of brake failure.
3. If the Pads are worn down to the backplate or if Disc wear is excessive, brake performance will be severely affected and may be lost completely.

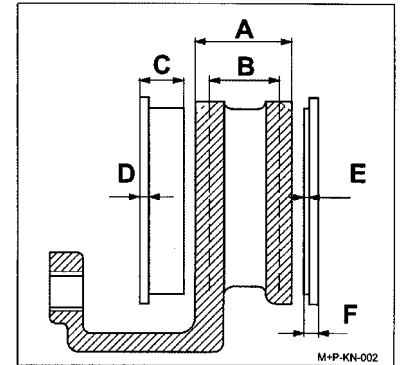
Pads

The thickness of the Pads must be checked regularly dependent on the usage of the vehicle. The Pads should be checked corresponding to any legal requirements that may apply. If no Wear Indicator has been connected this should be at least every 3 months. If friction material is less than 2mm (see E), the Pads must be replaced.

Discs

Measure thickness at thinnest point. Avoid measuring near the edge of the disc as a burr may be present.

- A = Disc thickness (new condition) 45mm
- B = Disc thickness (worn) 37mm. Disc must be replaced
- C = Overall thickness of Pad (new condition) 30mm
- D = Backplate 9mm
- E = Minimum thickness of friction material 2mm
- F = Minimum allowed thickness in worn condition for backplate and friction material 11mm (replacement of Pads necessary)

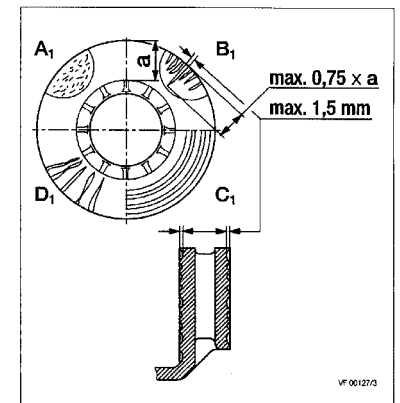


If wear dimension $B \leq 29\text{mm}$ Disc should be renewed together with Pads.
Wear dimension $B = 37\text{mm}$ must not decrease.

Check Disc at each change of Pads for grooves and cracks.

The diagram shows possible conditions of the surface.

- A₁ = Small cracks spread over the surface **are allowed**
- B₁ = Cracks less than 1.5mm deep or wide, running in a Radial direction, **are allowed**
- C₁ = Grooves (circumferential) less than 1.5mm wide **are allowed**
- D₁ = Cracks in the vanes **are not allowed** and the Disc **MUST BE REPLACED**.
- a = Pad contact area



Note:

- In case of surface conditions A₁ – C₁, the Disc can continue to be used until the minimum thickness of 37mm is reached.
- Discs are normally service-free and grinding when changing Pads is not necessary. However, grinding could be useful, e.g. to increase the load-bearing surface of the Pads after severe grooving on the entire friction surface has occurred. To meet safety requirements, the minimum thickness after regrinding is $> 39\text{mm}$.
- In addition, the recommendation of the Vehicle Manufacturer **MUST** be followed.

For The Road Ahead
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