Replacement and Resurfacing of Brake Linings

Job No. 42-22

A. Replacement of Brake Linings

1. If the brake linings are worn down to a thickness of approx. 1.5 mm, they must be replaced. In our workshops the brake linings are bonded to the brake shoes without riveting in a special process under pressure and at a temperature of 160—180° C. To make sure that the bonding is completely satisfactory, a small corner is cut off every brake lining to make a shearing test. The bonding of the brake linings requires much experience and expert knowledge and is not possible with the equipment available in repair shops. For this reason only brake linings bonded to brake shoes are supplied by way of exchange.

2. If in countries outside Germany it should be difficult to import brake shoe assemblies, it is possible to use special linings that can be riveted to the brake shoes. Completely remove the old lining, together with the cement, from the brake shoes (grind off the lining or, if necessary, chisel or file it off). After the surface of the brake shoes has been thoroughly cleaned of all traces of cement, the brake linings and the brake shoes must be drilled according to the drillhole digram below. If the brake linings are already provided with rivet holes, the drillhole pattern is transferred to the brake shoes and holes are drilled accordingly (Fig. 42-22/1).

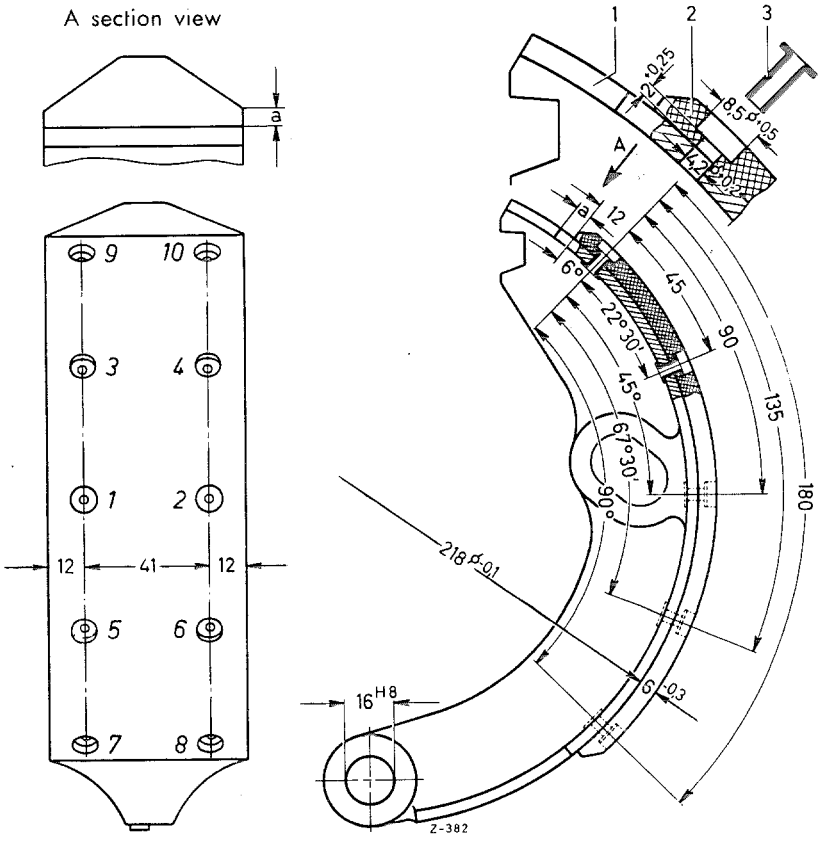

Fig. 42-22/1

Core location diagram for 65 mm brake shoes

1 Brake shoes
2 Brake lining
3 Tubular rivet

a = Distance between brake lining and toe edge
at rear brake shoe = 2 mm
at front brake shoe = 4 mm

Note: The medium center distance between the holes on the 50 mm brake shoes of the 1st version rear wheel brake on Model 220 b is 32 instead of 41 mm and the lateral distance is 9 instead of 12 mm.

Coat the brake shoe surface with sealing compound and rivet the brake lining to the shoe by means of tubular rivets (3) Part No. 183 990 02 95.

The riveting sequence is shown in Fig. 42-22/1. Start in the middle of the lining 1, then install the rivets 2,3 etc. This procedure is necessary in order to make sure that the brake lining snugly fits the whole surface of the brake shoe.

Use only the brake linings approved by our works.

When riveting the brake linings to the light metal brake shoes on the rear wheel brake, please note the following: after drilling the holes, use a 4×8.5 mm ⌀ shank cutter to mill holes nos. 1, 2, 9, and 10 (Fig. 42-22/2) in the web and the shoe reinforcement down to the standard brake shoe thickness of 5 mm so that tubular rivet Part No. 183 990 02 95 can be used for all bores.

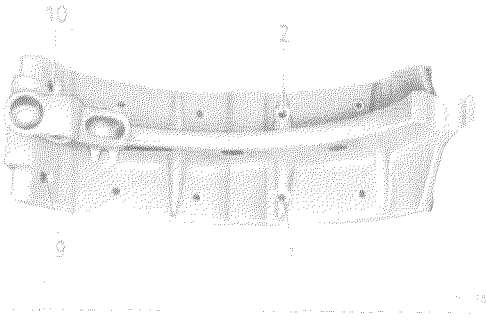

Fig. 42-22/2

B. Reconditioning of Brake Linings

The brake linings must be reconditioned if the surface shows glazed spots or signs of overheating, or if the wear pattern of the linings is unsatisfactory.

1. Reconditioning with sandblasted brake drums

The best method of reconditioning brake shoes is the use of sandblasted brake drums. The brake drums should be lightly sandblasted with a medium-size grain. If a special set of sandblasted brake drums is not available, the drums of the car to be repaired can be used since such lightly sandblasted brake drums loose their roughness after a few brake operations. The brake should then be worn in on a trial run by carefully applying the brakes several times.

Note: Soft brake linings. e. g. Johns-Manville linings cannot be reconditioned by means of sandblasted brake drums since the roughness of the brake drums would produce scores in the brake lining even when the brakes are applied very carefully.

2. Reconditioning with precision-turned brake drums

Soft brake linings are reconditioned by means of precision-turned brake drums. The roughness produced by the turning operation is sufficient to obtain a satisfactory wear pattern on the brake linings even after a few braking operations.

3. Reconditioning with the Zanchi turning attachment

The Zanchi turning attachment can be used for both soft and hard brake linings. If the attachment is used properly, a good wear pattern of the brake linings can be obtained.