

Removing and Installing Pistons in Brake Calipers

Removal

1. Remove brake caliper from vehicle according to instructions outlined in sections applicable to removal of the front and / or rear disc brake, Points 1 - 4.
2. Remove brake line connecting both housing halves.
3. Remove the 4 Allen-head screws in the brake caliper and separate both housing halves.
4. Remove clamping ring which secures dust cover.

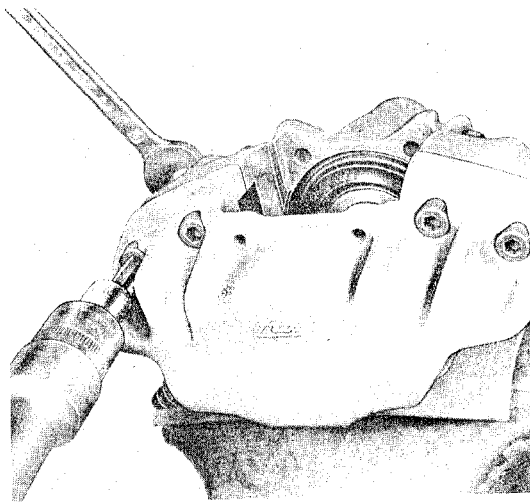


Fig. 42

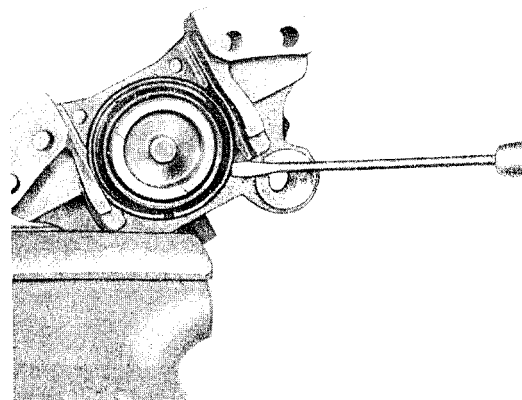


Fig. 43

5. Remove pistons from the cylinders by applying compressed air (max. pressure 2 atm. or 29.4 psi) to the inlet opening; during this operation, keep the piston from popping out by using the piston depressor (P 83) or by holding the housing half with the piston facing the work bench.



Fig. 44

3. To ease assembly and to provide protection against corrosion, the cylinder bore, piston, and piston seal should be treated with a thin layer of ATE brake cylinder compound.
4. Insert piston seal in the groove provided within the cylinder.

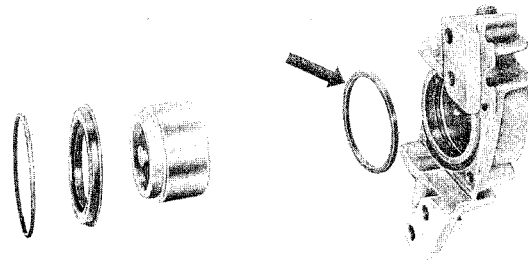


Fig. 45

6. Remove the piston seal from its groove (make sure not to damage the groove).

Note:

Handle the housing half with care so as not to damage the flange surfaces. Clean all parts in alcohol. Components of the self-adjusting mechanism cannot be exchanged; if found defective, the whole piston unit must be replaced.

5. Using the piston gauge (P 84), install the piston in such way that the stepped-down part of the piston pressure area faces towards the brake disc's rotational entry.

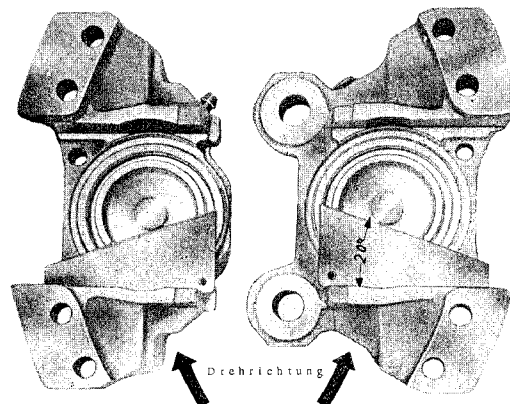


Fig. 46

Installation

1. Check cylinder bore and piston for possible damage; defective parts must be exchanged.
2. A new piston seal, dust cover, Allen-head screws, spring washers, and nuts must be installed whenever the unit has been disassembled.

6. The piston gauge must be inserted into the brake caliper always from the direction of the axle's center and the stepped-down part of the piston must line up with the slanted edge of the piston gauge. When aligning the pistons in the front brake calipers, the right-angle edge of the gauge is placed on the bottom edge of the caliper. When aligning the rear brake calipers, the right-angle edge of the gauge is placed against the upper edge of the calipers. Fig. 47 shows a brake caliper for the front brake.

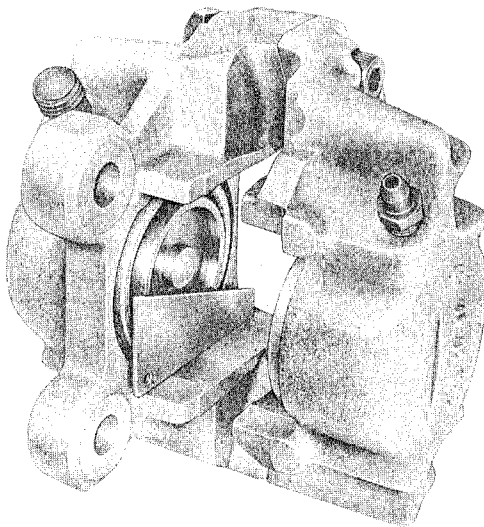


Fig. 47

7. Once again clear the flange mating surfaces of both housings with alcohol and bolt the two halves together. With the nuts tightened only slightly, align both housing halves in such way that the machined surfaces within the brake pad well are flush one with another.

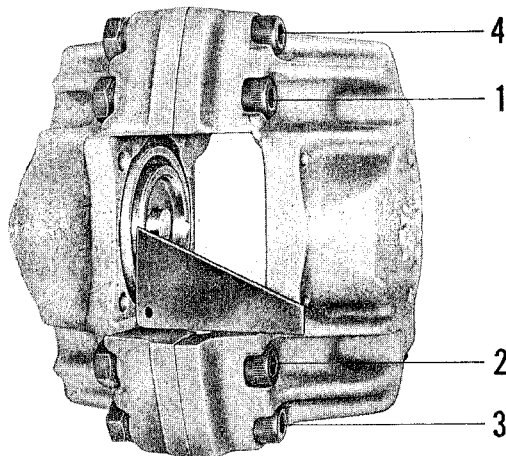


Fig. 48

8. Tighten the bolts in two stages (in first stage, apply 50% of the specified torque, in second stage 100%) and in the sequence shown in Fig. 48.

Torque Specifications:

Front brake calipers, Allen-head bolts M 8 x 50 (10 k): 3,4 mkg (24,6 lbs/ft)

Rear brake calipers, Allen-head bolts M 6 x 45 (12 k): 1,8 mkg (13,0 lbs/ft)

When tightening the Allen-head bolts, mount the caliper assembly in a vice provided with protective jaws by holding the caliper by its mounting ears. Make certain that the mounting surfaces are not damaged.

9. Install dust cover and clamping ring.
10. Install hydraulic line connecting both housing halves.
11. Install brake caliper assembly in vehicle by adhering to the instructions outlined in the section dealing with disc brake installation, page ST 25 or ST 31, respectively.

Caution:

The banjo brake line connector in the front brake caliper should not rest against the milled edge of the housing. To prevent this, it is necessary to select a gasket of appropriate thickness for insertion between the caliper housing and the banjo connector.