

Technical Information 32/86

Function and Maintenance Instructions Hydraulic- Servo-Brakes

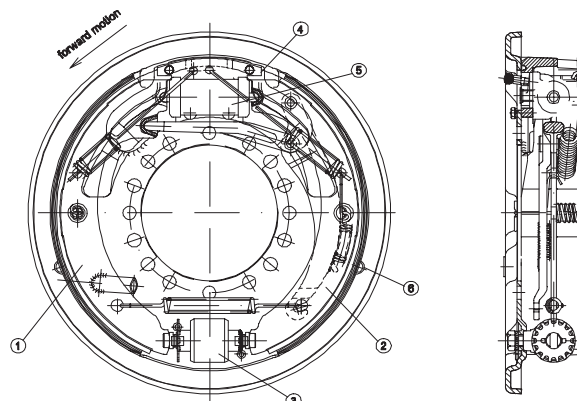
1. Mode of Operation of Hydraulic Servo Brakes

This brake functions along the following principle:

After the spreading of the wheel cylinder, two brake shoes in the brake drum are brought into the contact position, whereby one brake shoe (primary shoe) 1 is carried in the sense of rotation of the brake drum, while the other brake shoe (secondary shoe) 2 is supported against a fixed point at the top of the brake anchor plate 4 or wheel cylinder 5, determined by the lower, floating suspension 3.

Due to the additional force of the over-running brake shoe, the so-called self-energizing (servo effect) of the brake is achieved.

The braking effect is almost identical in both directions of travel.



2. Adjusting Device

The lower suspension 3 is usually made as an adjusting device, using optionally either a mechanical or an automatic version.

Note: The separate instructions provided by the manufacturer Knott must be observed and executed when carrying out any maintenance or setting work.

3. Wheel Cylinder 5

The pressure created by the activation unit is transferred to the brake shoes via the pistons of the wheel cylinders.

3.1 Maintenance:

During the course of every period inspection of the brakes, the wheel cylinder and its connecting components must be checked for leaks.

3.2 Repair Instructions:

After dismantling the cylinder, all individual components and housings must be subjected to a thorough visual check. Repair sets exist for the replacement of individual components. We would urgently recommend you to replace these completely, not only partially.

Important: Ensure that, where mineral oils or synthetic brake fluid are used as an operating medium, sufficiently resistant seal sets are integrated, as otherwise the wheel cylinder may fail to function correctly.

Use only methylated spirit for cleaning the cylinder and its components. Cleaning agents containing mineral oil should not be used under any circumstances.

When assembling, use a suitable assembly paste or fluid, and ensure that parts are assembled in the correct sequence.

In case of faults in the housing which are discovered during the visual check of the cylinder slide way, such as rust spots, furrowing or other damage, the wheel cylinder must be exchanged as a complete unit. A replacement can be ordered from the vehicle manufacturer or brake manufacturer in question by stating the order number.

Once work on the hydraulic unit is completed, check the brake fluid level in the reservoir, top up if necessary, and subsequently carefully bleed at the main of wheel cylinders according to the vehicle manufacturer's instructions.



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4. Brake Shoes

4.1 Maintenance and Checks

The brake shoes themselves are maintenance-free. All that is necessary are occasional checks for damaged parts, and testing for ease of movement of the locking unit.

The thickness of linings must be checked at intervals of no greater than six months, depending on the vehicle application, by means of the visual check via the wear viewhole ±. In case of a minimal residual lining thickness, these intervals should be reduced accordingly in order to avoid extensive damage to the brake or drum.

As, depending on the application, brake linings are used either glued or riveted, differing residual lining thickness should be observed.

Riveted brake lining: Min. residual thickness 1,0 - 1,5 mm over the rivet head at the thinnest point of the lining.

Glued brake lining: Min. residual thickness 2,0 mm at the thinnest point of the lining.

Once these thickness values have been reached, the brake lining must be replaced according to the following instructions.

4.2 Repair or Exchange of the Brake Shoes:

Brake linings / shoes must be renewed or exchanged in case of soiling, uneven wear, insufficient braking performance, or if the residual thickness values are reached.

Note: In this case, all the shoes or linings must be replaced on any axle in order to avoid the risk of uneven braking performance.

Riveted linings must be removed and riveted on by suitably equipped workshops according to the customary regulations.

Important: Only original spare linings from the company Knott should be bought and used for this purpose. If spare parts from other sources are used, the brake and its function cannot be guaranteed.

Glued brake linings may only be renewed by exchanging the brake shoes.

Remark! A Knott original spare part ready for assembly is delivered for exchange purposes. This is supplied by the vehicle or brake manufacturer if the order number is specified.

Important: The use of outside parts or on incorrect gluing on of linings will annul the guarantee cover.

Once repair work has been carried out or new brake shoes have been mounted, the brake should be correctly adjusted in accordance with the instructions of the manufacturer Knott.

5. Brake Drums

If extensive furrowing is detected on examination of the drum running surface, the brake drum can be screwed out according to the vehicle manufacturer's instructions.

In the absence of the relevant instructions, proceed in accordance with the following table, taking the wall thickness into account.

Max. admissible screw-out dimension of brake drums FOR RAVO PART:5014132

brake size	drum dia. (mm)	max. screw-out dia.(mm)
300 x 60	300,0	302,5

It is imperative that both brake drums on any one axle are reworked to the same measurement.

Remark: Excess thickness brake linings must be used for reworked brake drums.

6. General:

Any defects or damage detected on parts not listed here must naturally be repaired or replaced using original spares.

Should you require specifications or more detailed instructions, enquire with the vehicle or brake manufacturer.