

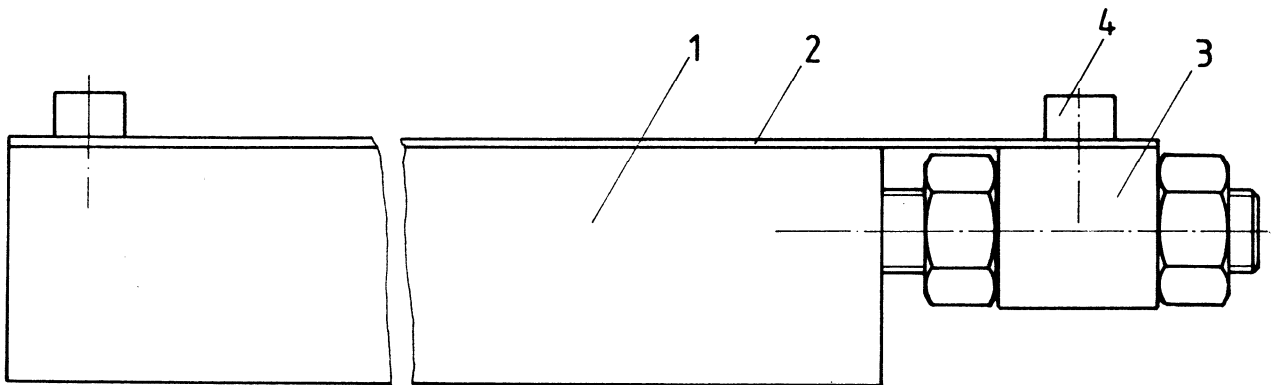
5 Maintenance

5.1 Guideway and Wipers

The grinding carriage runs with hardened rollers on hardened steel straps (2). The steel straps (2) are positioned on the grinding bed (1) and tensioned with the clamping device (3). Wipers are attached to the grinding carriage for wiping off the contamination, water, etc.

Maintenance:

Check the function of the wipers daily. Keep the guideways (2) clean, clean additionally after changing tools if necessary.



At intervals of 2-3 months, the steel straps (2) should be lifted and the space between cleaned and oiled.

For this purpose, first move the grinding carriage to the left side and lift the steel straps on the right side by removing the mounting screws (4). Then clean and oil the left side. After cleaning, clamp the steel straps (2) with the clamping device (3).

5.2 Grinding Support

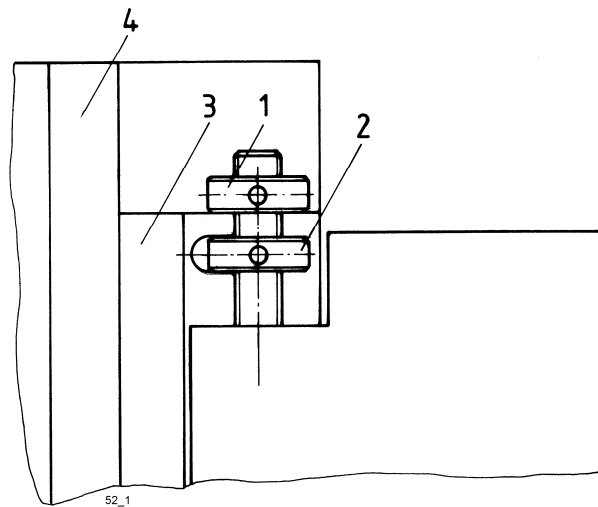
The support plate is guided in a dovetail guide.

Maintenance:

The guide is lubricated by the central lubrication system and requires no other maintenance.

Adjustment:

Guide play for the support plate (4) can be adjusted with a wedge strip (3). Proceed as follows to readjust:



- To reduce the play, move the wedge strip (3) down. To increase the play, move the wedge strip up.

Reduction Of Play:

- Measure the play at the upper end with a feeler gauge. The play should be approx. 0.02 mm.
- Loosen cross hold nut (2) with steel tin (turn clockwise).
- Move wedge strip (3) downward with cross hole nut (1).
- Measure adjustment path of wedge strip (3). A path of 0.5 mm corresponds to a reduction in the play of 0.01 mm.
- Turn cross hole nut (2) upward so that the wedge strip (3) is tensioned tightly between the two cross hole nuts (1, 2).



Note

The wedge strip (3) must be tensioned tightly between the cross hole nuts (1) and (2).

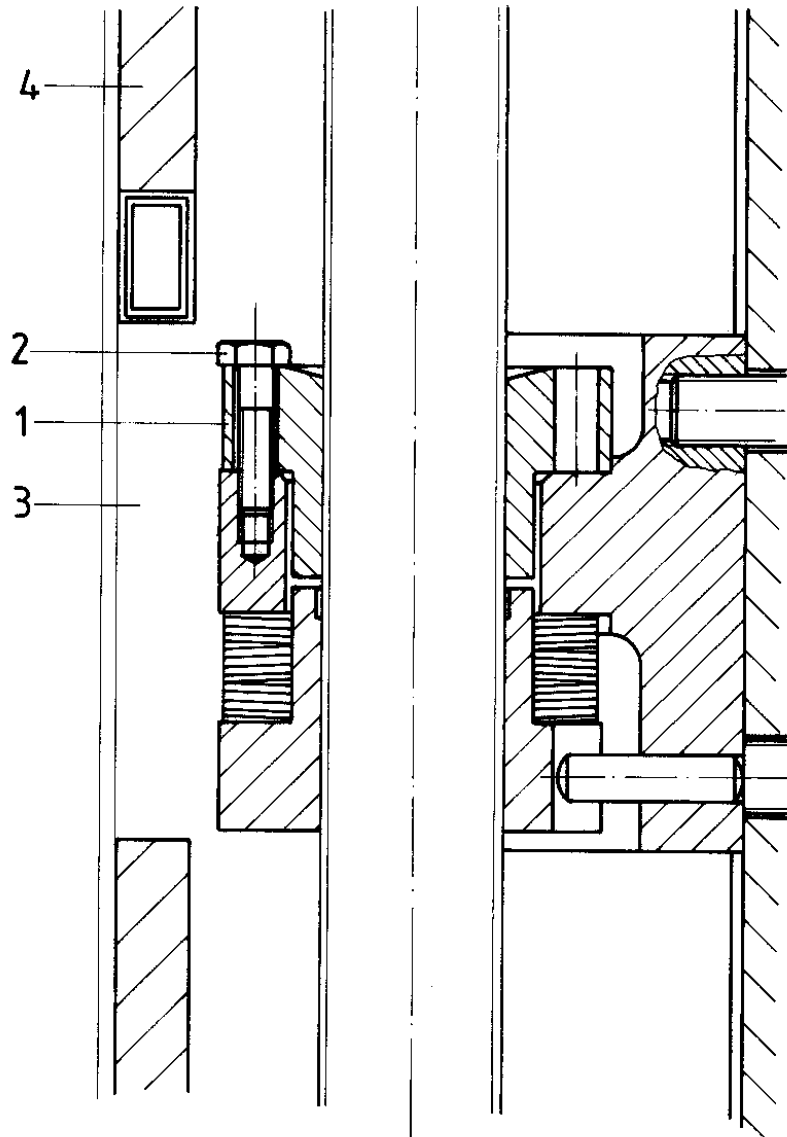
Increasing play:

- Move in opposite direction, i.e. move wedge strip (3) upward.

5.3 Adjustment of Support

The support plate is adjusted by a servo-motor, gear and threaded spindle. A double nut clamped with plate springs is located on the threaded spindle. The clamping ensures adjustment with minimum play. The spindle is lubricated by the central lubrication system; maintenance is not required. If the backlash becomes too great due to wear, the spring tension can be increased as follows:

- Unscrew front plate from support (4).
- Move support plate so that double nut (1) is in area of window (3).
- Remove hex. bolts (2).
- Using pin wrench, adjust upper double nut half (1) one whole counter clockwise.
- Screw hex. head bolts (2) back in.



5.4 Propulsion Drive

The grinding carriage is driven by a servo-motor, V-belt drive, rack and pinion.

Maintenance:

Lubrication of rack (see lubrication chart)

Checking V-belt (tension, condition)

Adjusting backlash in rack and pinion gear:

- Loosen clamping screws (1).
- Turn bearing sleeve (2) until markings coincide.
- If wear is present, turn bearing sleeve until backlash is 0.1...0.15 mm
- Tighten clamping screws (1) tightly.

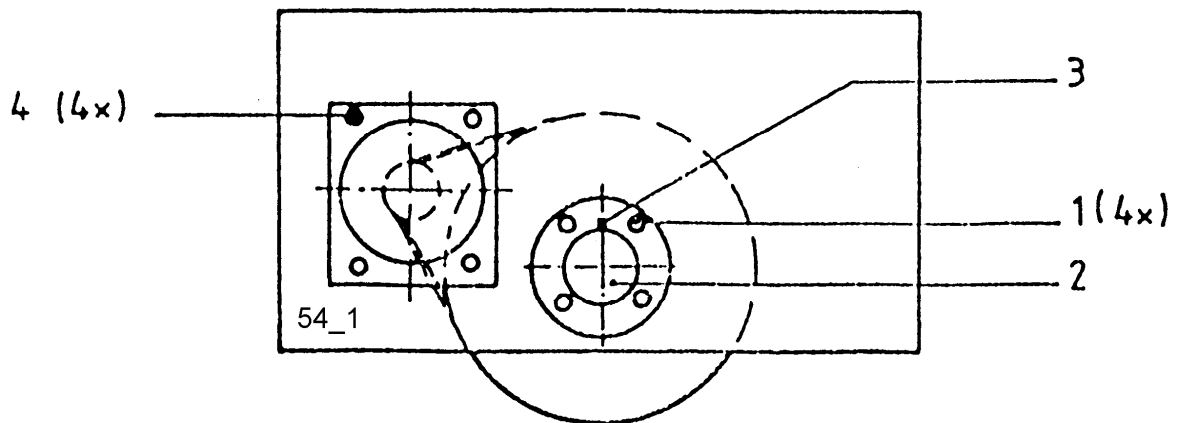


Note

Do not adjust backlash to less than 0.1 mm!

Adjusting V-belt Tension

- Loosen clamping screws (4).
- Pull drive motor (5) outward by hand.
- Tighten clamping screws (4) tightly.



5.5 Rollers

The grinding carriage runs on hardened rollers with self aligning bearings. Adjustment is possible with eccentric bolts.

Adjustment:

Check the lateral play of the guide rollers at greater intervals. If the grinding carriage tends to cant when the direction is reversed, readjust the rollers.

Rollers (6)

The rollers (6) are located at the four corners of the grinding carriage. Adjustment is not required

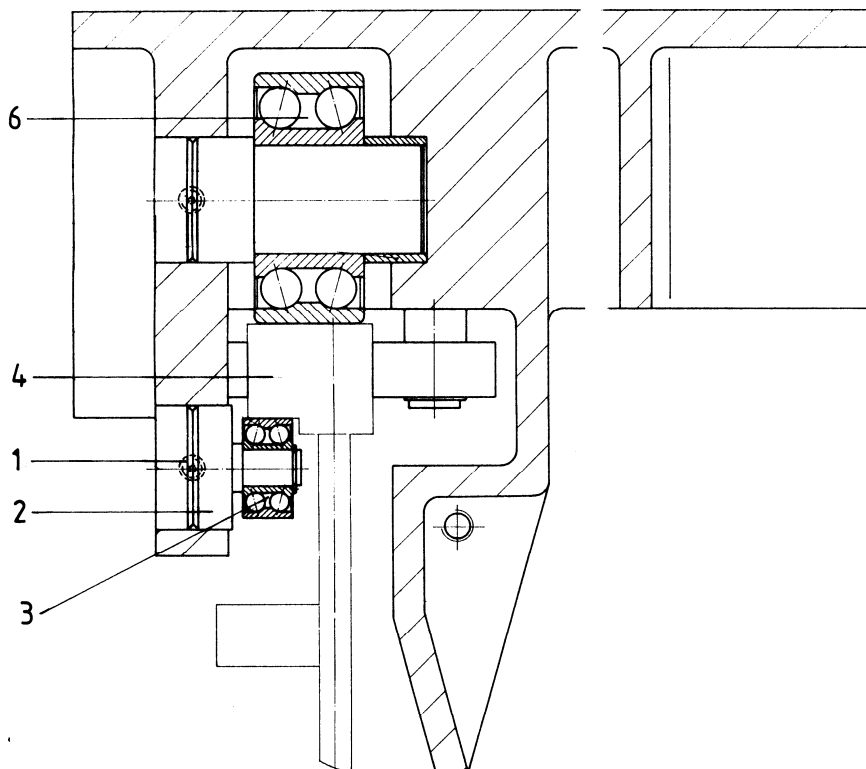
Bottom Grip Rollers (3):

The bottom grip rollers (3) are located at the four corners of the grinding carriage.

The bottom grip rollers (3) should be adjusted so that they make light contact only with the guideway (4).

It should still be possible to turn the rollers by hand.

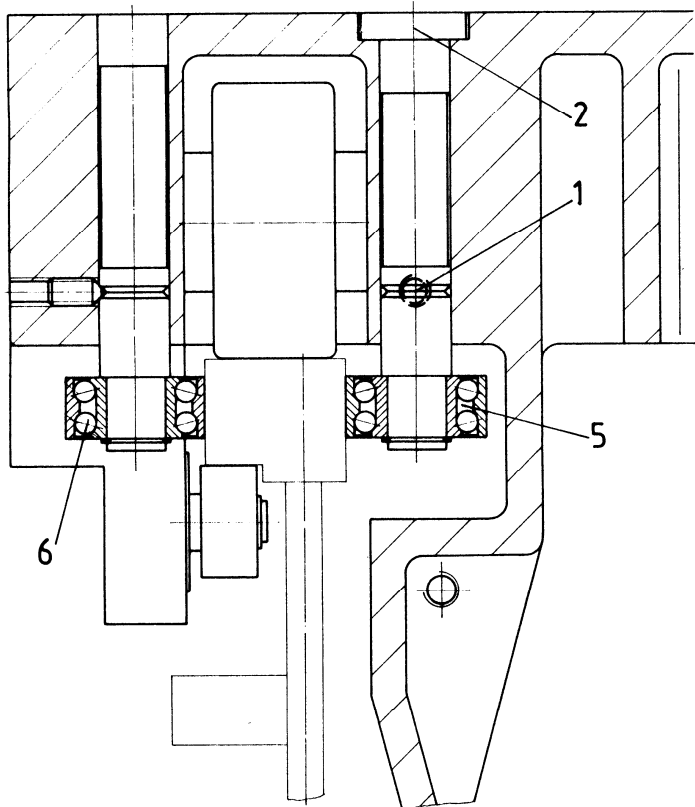
- Loosen clamping screws (1).
- Turn eccentric bolt (2) with pin wrench (2).
- Tighten clamping screws (1).



Lateral Guide Rollers (5):

The grinding carriage is guided by the rear guideway. One lateral guideroller (6) each is located on the left and right on the outside of the rear guideway. The rollers are adjusted so that the grinding carriage is aligned parallel to the guideway. Adjustment is not required. The two lateral guiderollers (5) on the inside rear are adjusted for light contact. To readjust, push the grinding carriage forward against the guideway and adjust the front lateral guiderollers (5) so that they make light contact.

- Loosen clamping screw (1).
- Adjust eccentric bolt (2) with pin wrench.
- Tighten clamping screws (1).



5.6 Cooling water system

Water with a water soluble grinding agent is used for cooling during grinding. Change the cooling water depending on the contamination.

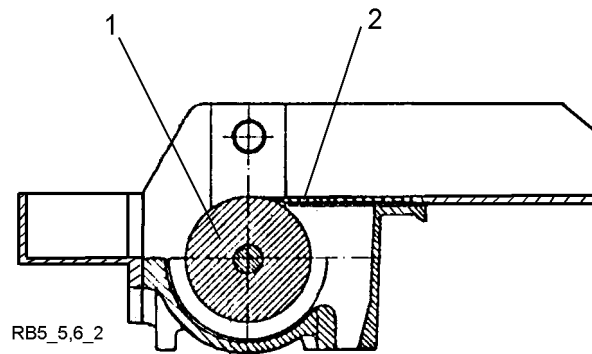


Caution!

Dispose of contaminated cooling water according to applicable local regulations.
Clean reservoir and lines thoroughly.

5.6.1 Magnetic filter

The contaminated cooling water flows through a permanent magnet drum (1). The magnetic particles sticks to the magnetic drum (1) and are pushed off by the wiper plate (2) and fall into a sludge cart.



Maintenance:

- Check wiper plate (2) for wear. If a large gap is present between the magnetic drum (1) and wiper plate (2), readjust the wiper plate (2).



Note!

Ensure that the wiper plate (2) does not press against the magnetic drum (1)

- Clean regularly.
Before longer operating pauses, flush out the magnetic filter thoroughly and remove the discharge from the wiper plate (2).
- Change oil in drive gear according to lubrication chart, Chapter 5.12

5.6.2 Paper strip filter

The contaminated cooling water flows through the paper filter (1) running off of a roll in strip form. The paper filter (1) supported by a combination wire mesh strip (2) forms together with the latter a deep filter recess which allows continuous flow of the cooling water. Deposit of the contamination on the filter paper (1) clogs the filter causing the liquid level to rise. An adjustable float (3) controls transport of the paper filter (1) when the filter recess is full. This ensures that the filter paper (1) is regenerated automatically depending on the quantity of contamination.

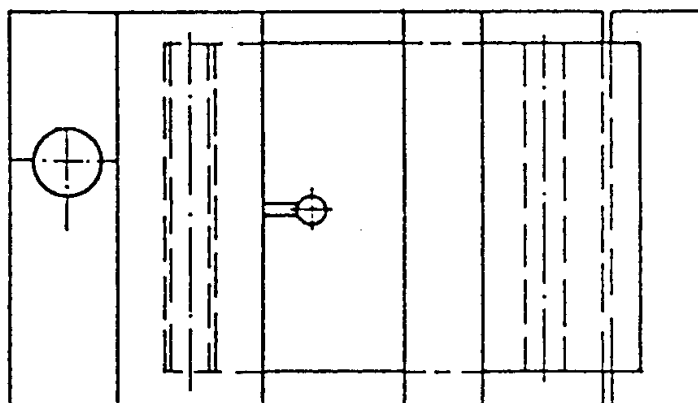
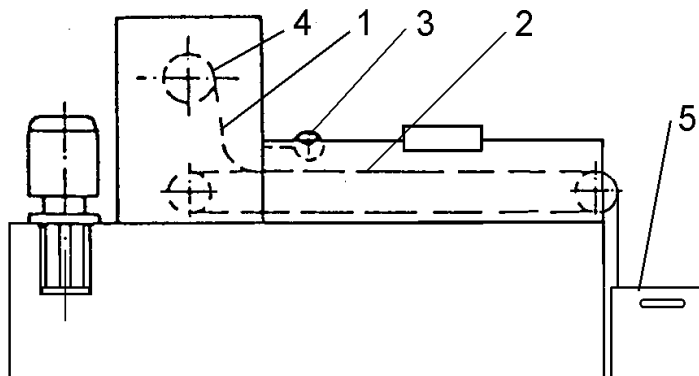
Maintenance:

- Insert new filter paper roll (4).
- Empty sludge box (5).



Note!

When the roll of filter paper (4) is used up, insert a new roll of filter paper immediately, because the cooling water is no longer cleaned without filter paper (1).



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5.7 Dressing Operation

The dressing device is special equipment!

As a rule, dressing wheels are used for grinding rings and segments. The dressing wheels must be checked regularly for wear, concentricity and easy motion.



Note!

Replace worn dressing wheels within sufficient time to ensure that the holder is not damaged.

Single grain dressing diamonds are generally used for circumferential grinding wheels. The diamonds must be checked regularly and turned in the installation whole to ensure uniform wear.

5.8 Electrical Equipment

The switch cabinet is ventilated by a built in fan. Check the filter mats for the vent grate at regular intervals and replace when extremely dirty.

The cables to the grinding carriage lead over a power feed chain. Check these cables regularly for wear or other damage.



Danger!

Replace damaged cables immediately!

5.9 Cleaning

Clean the machine regularly.

Grinding Bed:

Rinse out deposited grinding sludge regularly.

Keep guideways clean, particularly after changing tools.

Magnetic Filter (Special Equipment):

Rinse out the space between the magnetic drum and housing regularly. Check the wiper plate regularly and readjust if required. Clean the cooling rims, cooling air inlets and fans on the motors from time to time.