

Maintenance and repair instructions, updated on 25. July. 2007

Content:

1. maintenance and repair (general information)
2. maintenance (lubrication and dedusting)
3. trouble-shooting (pieces of paper etc. in the printer)
4. trouble-shooting (by the aid of the test program)
5. repair (disassembling and assembling)
6. function test (by the aid of the test program)



1. Maintenance and repair (general information)

Maintenance rate: The printer PDM 170-X (1/2/3/4) has a need of low maintenance.

In order to extend the life cycle and to improve the MTBF/MCBF values we suggest:

- to grease all sliding parts every 2-3 years
- to dedust the printer when necessary or every 2-3 years as usual (depending on the used paper this service could be necessary earlier or later).

To remove the printer out of the vending machine

Please refer to the manual of the manufacturer of the vending machine and look for the chapter describing the change of technical components or equal.

- First all papers must be pulled out by means of the service function of the vending machine. If this is not possible due to a failure, all papers must be torn off or be cutted.
- There is no mechanical lever to feed in or to pull out paper without software.
- After a failure it could be wise to cut the papers at a distance of approximately 5 cm away from the printer and to have the printer with the rest of the paper repaired. This will facilitate the search of failures.
- The printer can be easily removed from the vending machine. Normally it is fixed by a hook or a knurled head screw. Please refer to the manufacturer manual of the vending machine. Pull the printer 2 mm in the direction of the vending machine door and take it away upwards.

To insert the printer into the vending machine.

Please refer to the manufacturer manual of the vending machine:

- Insert the printer into the 4 slots of the bracket and push it 2 mm backwards.
- Normally it will be fixed by a hook or a knurled head screw. The papers can be feeded by the means of the service function of the vending machine.

Repairs:

- Repairs should only be done by qualified personnel. The necessary training for the search of failures, the use of the test program and the disassembling of the printer will take 2 days.
- For repairs the printer can be sent to: **PRINTON GmbH**
Ohrsbergweg 1
D-69412 [Eberbach](#)

2. Maintenance (lubrication and dedusting)

Dedusting:

- The printer should be brought to the maintenance division in the normal work position and without heavy vibrations.
With a vacuum cleaner with flexible tube, the dust can be removed carefully.

We suggest to use a small adapter for the vacuum cleaner with a tube of about 5 mm diameter and a bigger one of about 12 mm. Both with a length of about 20 cm.

- **Never use compressed air for dedusting!!** The dust could cover the bearings and other critical places like sensors.

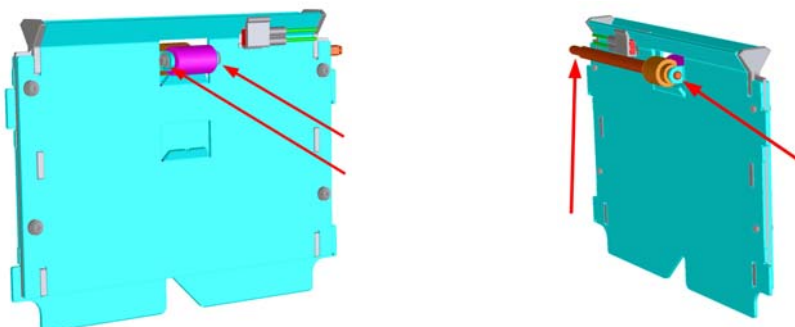
Lubrication:

- To extend the live cycle and to improve the MTBF/MCBF values, we suggest to grease all the sliding parts of the printer every 2-3 years or in the case of a failure.
- Oil must never get into the paper feeding system or in electronic parts. As access to the bearings is difficult, the lubrication should only be done by qualified personnel and with appropriate oil. If this is not possible, the lubrication should only be done when the printer is disassembled.
- As to oil, we suggest: *Blasol 158* (also 00158)
You can find it in the internet when you look for *hydraulic or industrial oil*.
Suppliers addresses: Please refer to the company's representation of your country.

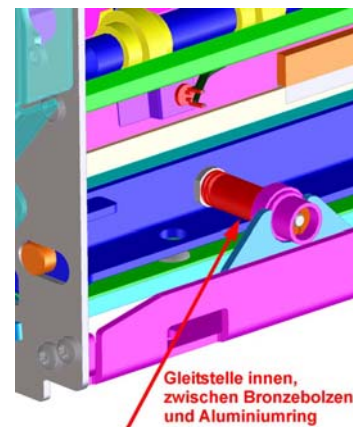
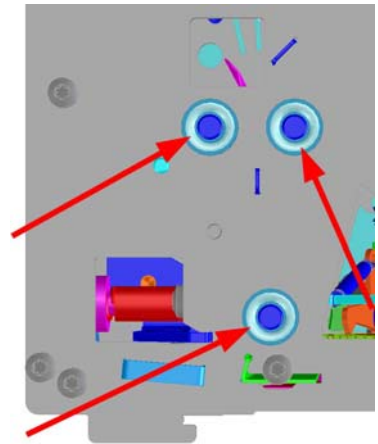
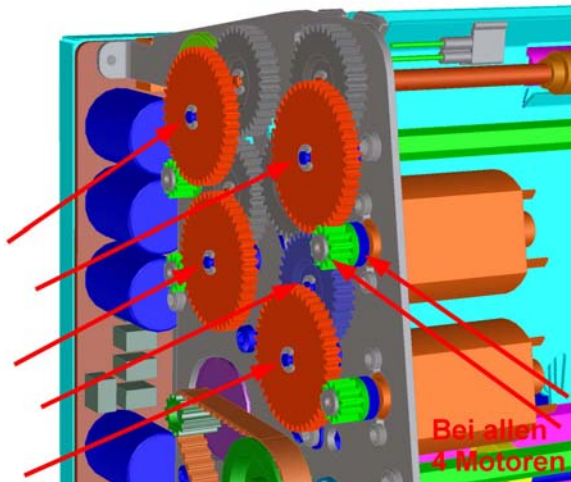
Blaser Swisslube AG,
CH-3415 Hasle-Rüegsau
www.blaser.com

- **Bearings are:**

Bearings of the stack sheet metal

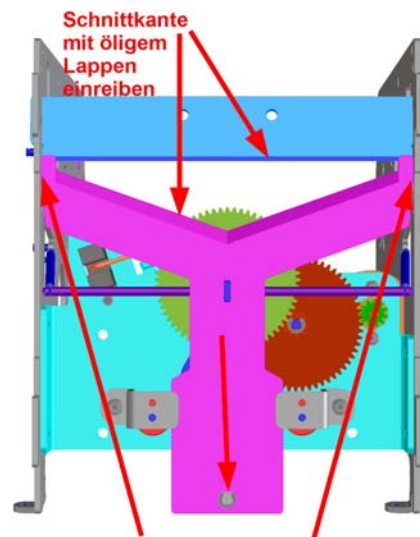
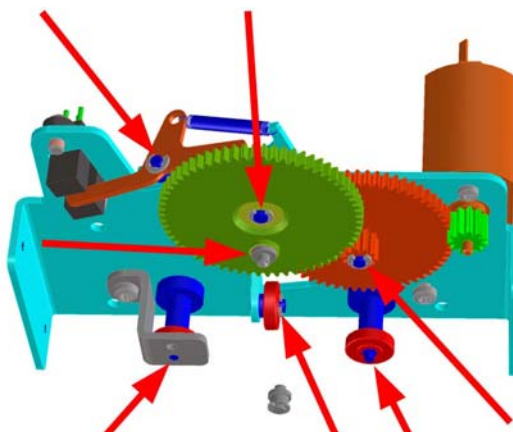


There are bearings of the gears and bevels with plate spring above the motor and roller bearings on both sides.



There are also bearings of the cutter drive mechanism and the cutter friction surface.

Please note: After the assembling or disassembling all blank (grinded) cutter parts should be rubbed with an oily tap.



3. Trouble-shooting (pieces of paper etc. in the printer)

To remove pieces of paper by the means of the test program of the vending machine:

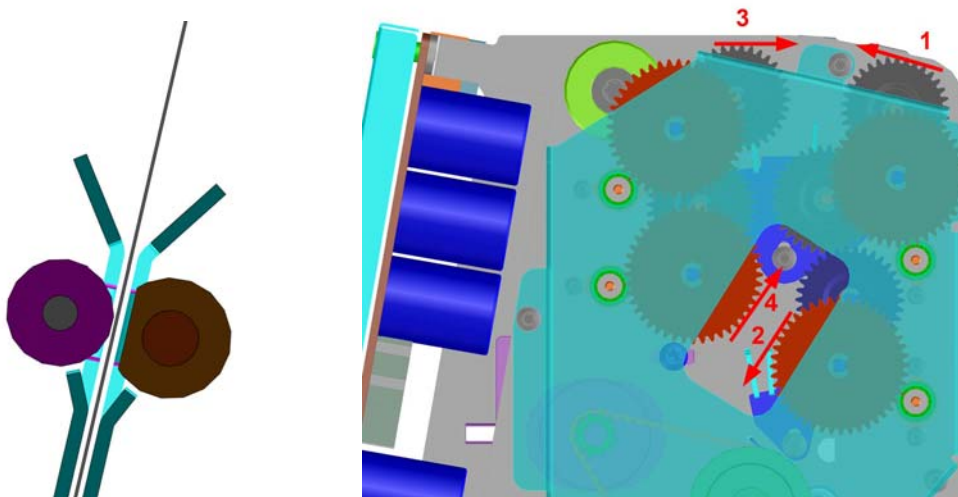
- If the paper pieces are long and can be allocated to a paper format, it is the best to remove them by commands of the paper feeding system of the vending machine or the testprogram of the printer.

To remove paper pieces or glue strips manually:

- Small paper pieces or glue strips etc. can't be removed by the aid of the software of the printer. The best is to push them away by a stiff paper stripe or by the use of tweezers.

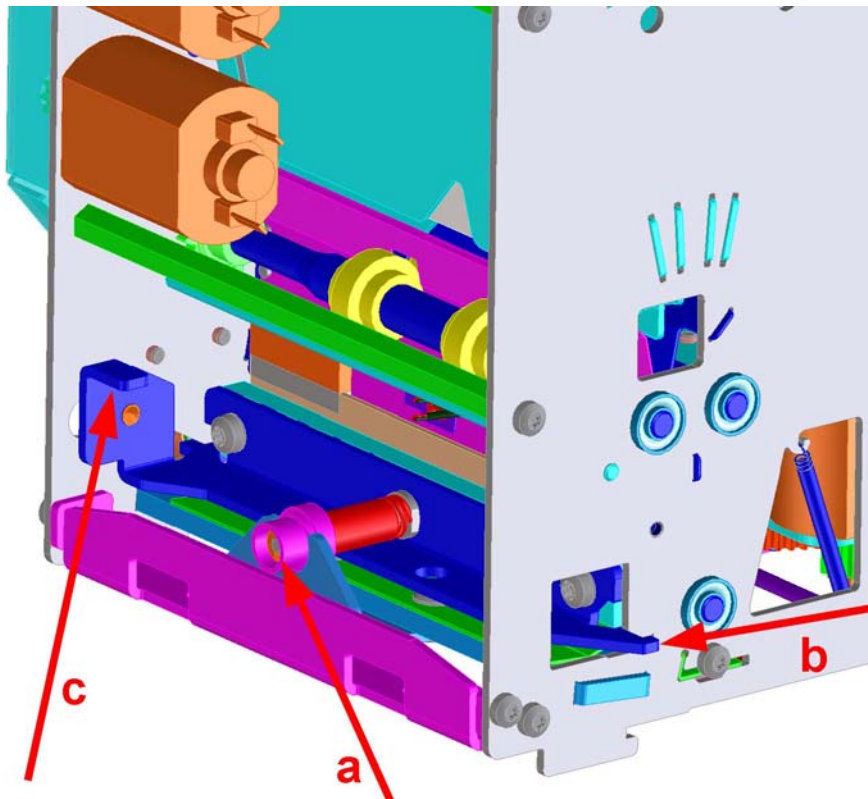
Please be careful: Do not damage the cutter blades!

- The fixture of the paper must be opened manually. The appropriate fixing spindle 1-4 must be turned in the direction of the arrow by the gear so that the inner area and the paper channel is open. To test whether the paper channel is open, a paper stripe can be pushed into the paper channel. Please note: The fixtures of the paper format 1 + 3 are on top, the fixtures of paper format 2 + 4 are below. To understand the principle and to see the rotation direction of the gears, please look at the following pictures.



- If the paper strip is long and jammed between the fixation spindle and transport spindle, it is better to rotate the conveyor belt simultaneously with the thumb. Open the fixation spindle and rotate the conveyor belt downwards. Most often the paper can be pushed away downwards. If this is not possible, push it away by the use of a stable piece of paper.

- Removing the thermo printer head: If a glue strip sticks on the print roll, the thermo printer head can easily be removed:



a: Push the aluminium pressure ring with the thumb or a bolt against the spring, turn it up and remove the spring.

Important: Never exchange the spring system with one of another printer. Otherwise a new adjustment could be necessary.

b: Use the finger to push the print head fixture in the direction of the arrow and simultaneously push the printer head.

c: with the lever to the right side.

Now the printer head can be removed. It is still connected to the printer by the cables. Do not unplug the plug and do not damage the cable and the printer head.

- Now the print roll is visible. By turning the belt wheel the glue strip can be found and removed. In this way you can also find damages of the print roll.

4. Trouble-shooting (by the aid of the test program)

Please refer to the description of the test program, the training and the corresponding documentation and also to chapter 1 describing the maintenance and the repair. There you can look for **repairs**: for example training efforts (time).

5. Repair (disassembling and assembling)

- Repairs can only be executed by qualified personnel. We recommend a printer training.
- Please refer to the training, corresponding documents, drawings and part lists and also to chapter 1 describing the maintenance and the repair. There you can look for **repairs**: for example training efforts (time).

6. Function test (by the aid of the test program)

After the repair or disassembling a function test is necessary.

Please refer to the **documentation of the test program with hardware check** (it is a part of the test program and its training). The trouble shooting is a part of chapter 5 “repair”.