Recapping the feedfinger 12.2.2016 Arsi Saukkola
of Gestetner 300-400 series stencil duplicator

Worn-out feed finger, rubber thickness 6.5 millimetres, edges have become dull.
In the left, rubber plates taken off with a snap-off knife.

New rubber plates cut out of 8 mm thick, soft natural rubber sheet, 40±5 shore.
This beige-colored rubber is available in most technical rubber stores.
You may show them the original feed finger, and they will surely recognize this material.

You would not want to use black rubber, because that will stain the paper.

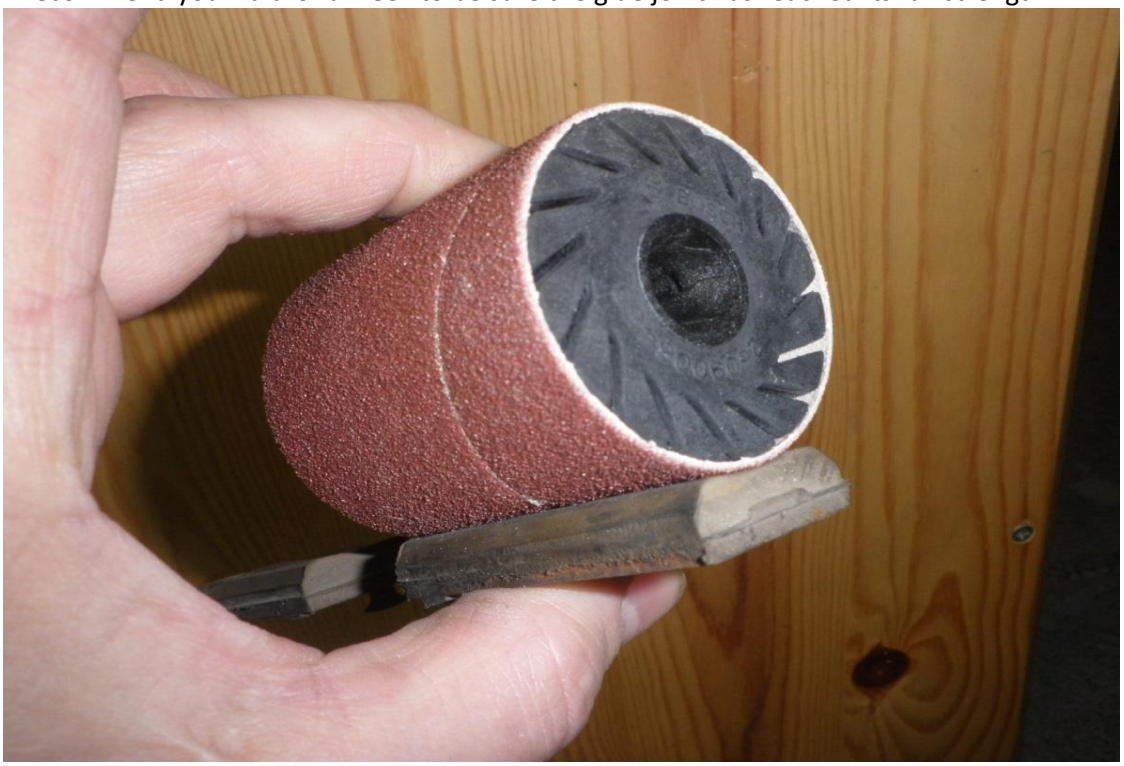
For each feed finger, you will need 2 pcs. 64 mm x 24 mm of natural rubber sheet.

This natural rubber is said to be one of the easiest to join into metal, using ordinary contact adhesive, like Bostik A3. Here, two blocks of wood are cut to help in making an even pressure when glueing.

Clean the metal surface free of any old rubber residues, to make it even.
Then clean the rubber and metal surfaces with ethanol or isopropyl alcohol.
After the alcohol residues have vaporized and the surfaces are dry, spread Bostik evenly on both surfaces. DO NOT PRESS THE PIECES TOGETHER AT THIS TIME.
Wait for 5 to 15 minutes, or until the surfaces no longer stick to your finger.
Now, carefully direct the rubber blocks, one ofter other, straight onto the metal.
AFTER THIS DONE, YOU CAN NO LONGER ADJUST THE POSITION OF THE RUBBER SHEET.

Now place the feed finger assembly between the two wood blocks, and evenly set them in a bench vise. Use considerable force, the 8 mm rubber may be pressed to, say, 6-7 millimiters thickness.
Keep the pressure on for 5 to 10 minutes. The joint will be 50% strong within a day, and 100% strong within a week.

The forming of the feed finger surface can be done by grinding.
I recommend you wait for a week to be sure the glue joint has reached its full strength.



When compared with an original feed finger, it can be seen that a diameter 48 mm grinding wheel is a perfect fit to make the groove in the feed finger.
Use coarse, No. 80 grinding wheel.

Here, the Bosch grinding machine is firmly attached in the bench vise.
This job calls for a very steady hand. If you press the rubber too hard on the grinding wheel, it will stick in, and you will have wounds either in the feed finger, or your own fingers. If you grind for too long time, the rubber may become hot and sticky.

I chose not to try too hard to make an exact copy of the original feed finger at this first trial. Rather I wanted to see how the grinding works. And actually, it did not turn out too bad.

The new rubber, in the left, is not as symmetric as the old one. But it is much thicker, and the edges touching the paper are much sharper than in the worn-out finger.

The refurbished feed finger was fixed into a Gestetner 360 duplicator, which had suffered of feed errors. Now, after some 300 copies run, not a single feed error occurred. The same print was made two times on the same side of the paper, to check the feeding accuracy. The accuracy was usually ±1.5 millimeters, which is quite satisfactory for this machine.