

Changing the charging belt on a 370060 van de Graaff generator

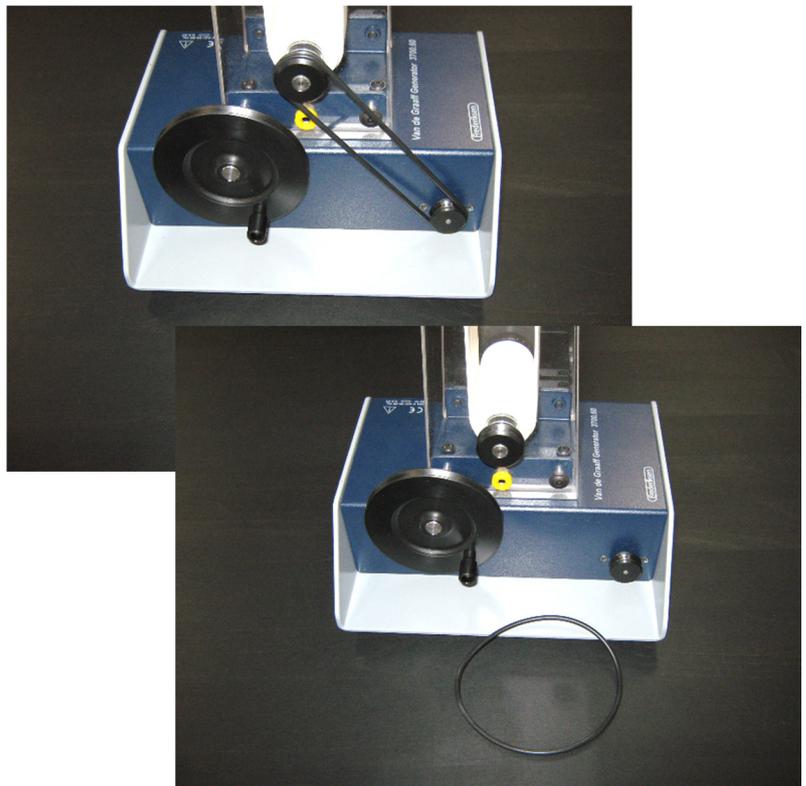
You will need the following:

- A 2.5 mm hex wrench. (The small 1.5 mm hex wrench included with the van de Graaff is for securing the safety plug adapter – not for this work.)
- Gloves. Avoid getting finger grease on the belt and the rollers.
- Talcum powder. (Included with the van de Graaff.)



This is a description of the disassembly of the van de Graaff.
Re-assembly simply reverts the procedure.

1. Remove the drive belt to the motor.

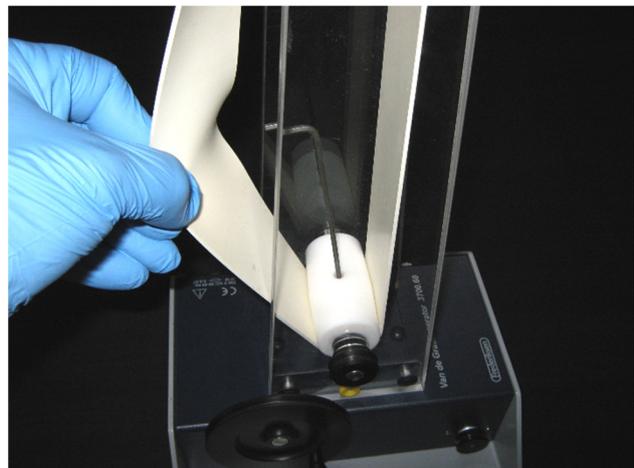


2. Remove the top of the dome.

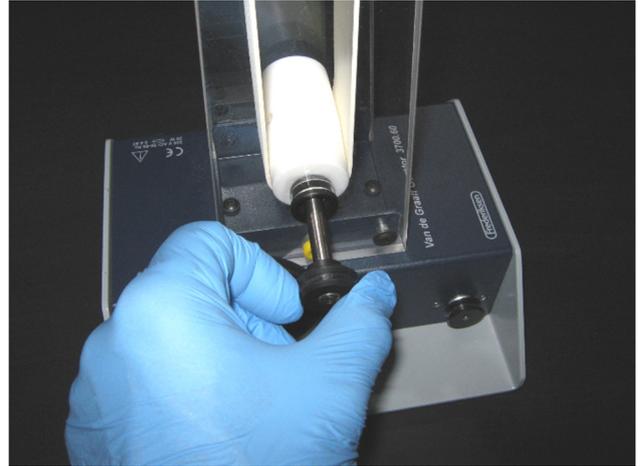


3. Loosen the screw that fixes the lower roller to the steel axle.
The screw should only be turned a few turns

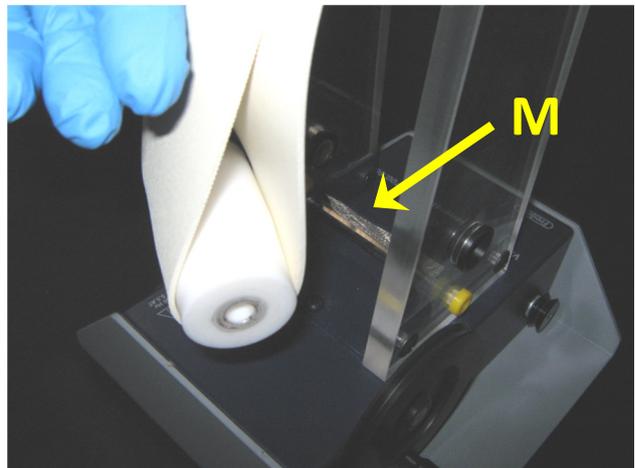
When re-assembling:
Don't tighten the screw too much.



4. Pull out the axle.
Take care not to damage the fine metal mesh (M) below.
Nothing should ever touch the mesh.



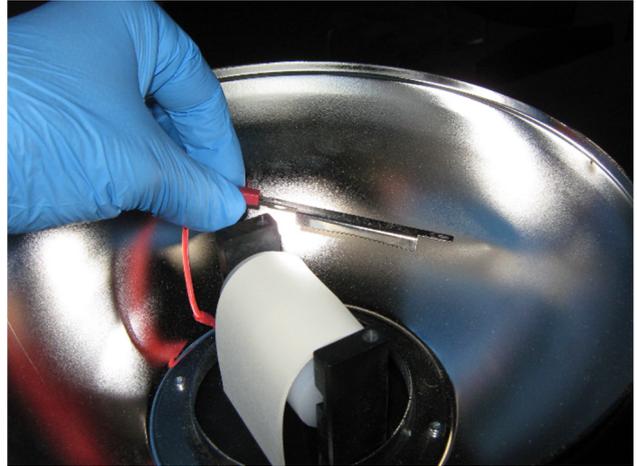
5. Remove the lower roller.



6. Remove the screws that hold the comb at the top.



7. Move the comb out of the way. No need to remove the cable.

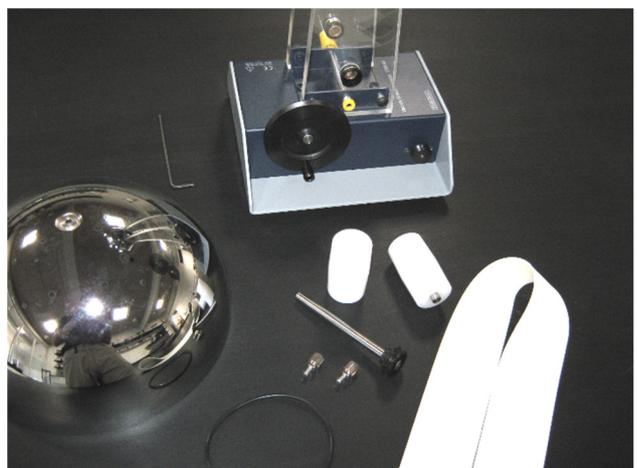


8. Slide the top roller and the band sideways of the bearings.
Pull the belt up through the hole in the bottom of the dome.



9. Everything ready for re-assembly

Note: When the new belt is mounted, its smooth (slightly shiny) surface must be on the inside towards the rollers.

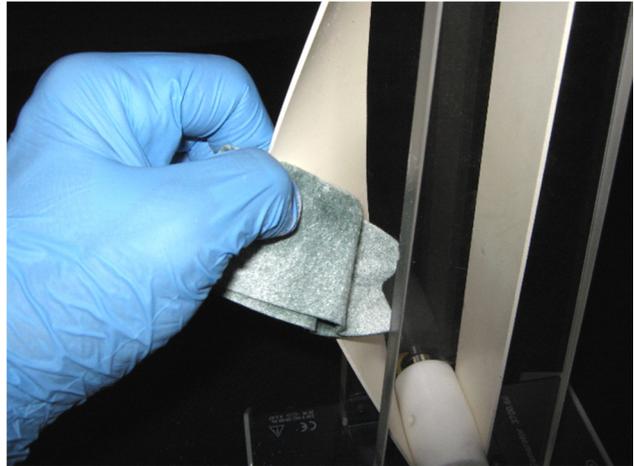


It is a good idea to make sure the rollers are clean (use benzine^[1] or isopropyl alcohol).
In case the belt is greasy it can also be cleaned with benzine.

10. After re-assembly:

The van de Graaff will not work correctly with a completely clean belt.

Apply a *small* amount of talcum powder on the inside of the belt. (The cloth in the talcum powder container may in fact carry too much powder in it.)



[1] Benzine or petroleum ether is a flammable, hazardous substance and should be handled with care in a well-ventilated area. Don't confuse it with benzene (H₆C₆) which is both highly toxic and carcinogenic.