

Report 7: Filament lubricator

PAN, March 17th, 2021

1. Introduction

The main issue in 3D-Printing is the clogging of filaments in the extruder.

This clogging may appear in the nozzle and in the heat blocker (guiding tube to the nozzle)

With nozzle/heat blocker cleaning and perfect mounting (see Report 6) this helps for a short time, but only with a lubricator a good 3D printing over many hours becomes possible. See: [Universal Filament Filter and Lubricator by CreativeTools - Thingiverse](#)

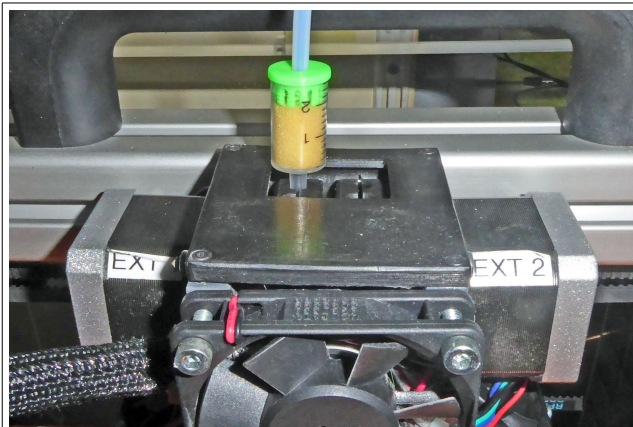
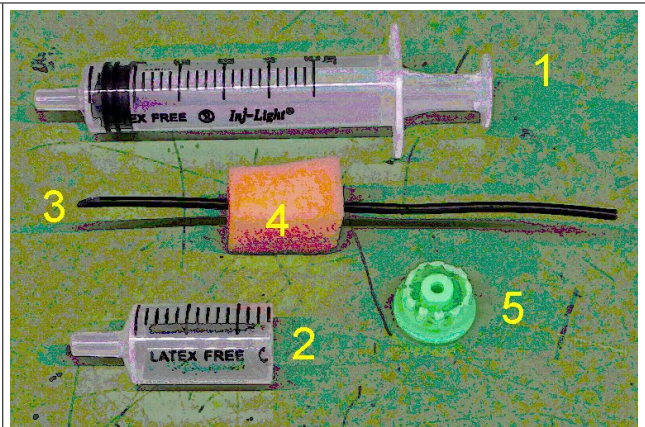


Fig. 1: Lubricator mounted on Extruder



1: 5mL Syringe, 2: Cut Tube, 3: Filament with sharp end, 4: Foam, 5: Cover

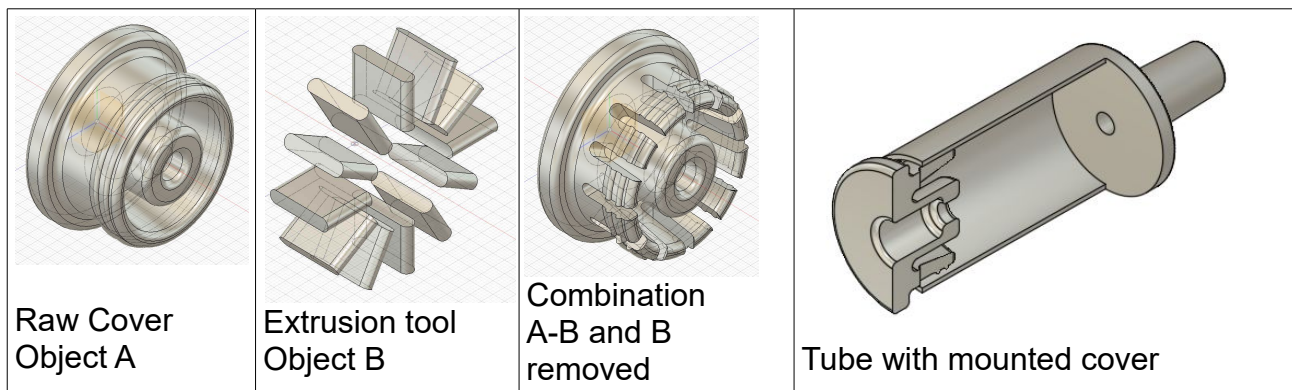


Fig. 2: Fusion 360 constructions

Note the clamps with slots for stress-free mounting into the tube. Best PLA printing with "draft shield", High Quality and a 0.4 mm nozzle. See the STL file "cover with draft shield" [UFO-Doctor \(ufo-doctor.ch\)](#)

For lubrication we use NICRO 666 K-4 Ultra, -30 to + 250 Deg Celsius, a synthetic fine lubricant, but a standard 3 in 1 oil is fine, too!

Good Luck!