

# CARTRIDGE UNCLOGGING PROCEDURE

A cartridge jam in a Cube3/Ekocycle printer can occur for different reasons:

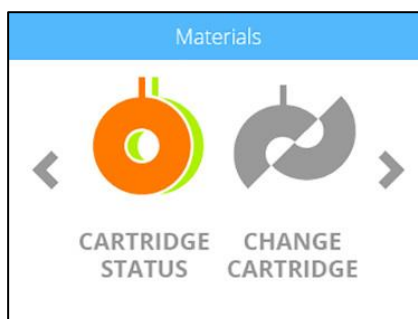
- Z-gap adjusted too tight
- Unleveled nozzles (different z-gap)
- Corrupted file (undetected by software)
- Conversion processing error in the software
- New cartridge unpurged (unload/reload several times to allow purging).
- Heating element issue

To prevent a cartridge jam from happening, make sure of the following:

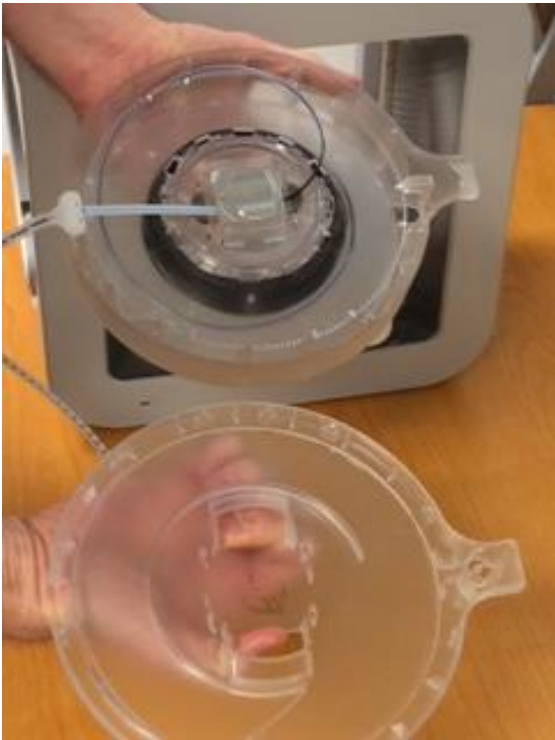
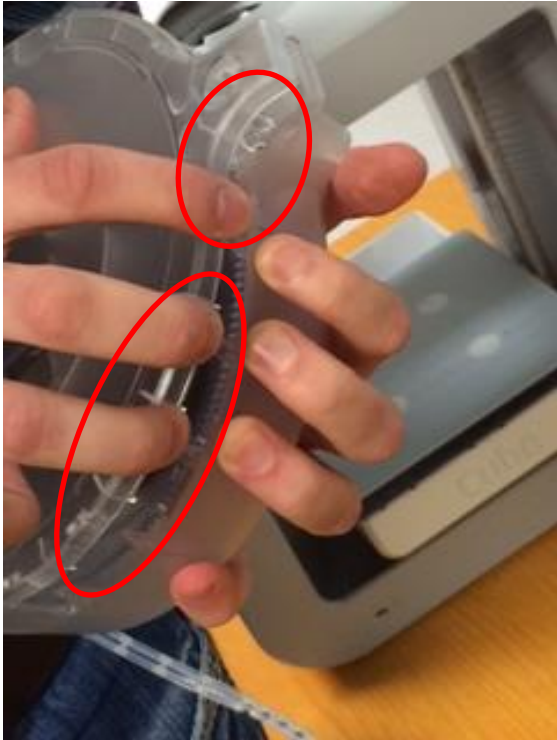
1. Firmware (printer) and software (computer) are updated.
  - a. Latest versions available here:
    - Cube3: <http://cubify.com/support/cube/downloads>
    - Ekocycle: <http://cubify.com/support/ekocycle/downloads>
2. Cartridge is properly installed, and there are no visible damages present.
3. Machine is properly calibrated.
  - a. Nozzles are leveled (<https://www.youtube.com/watch?v=HngK3FKxVAE>)
  - b. Z-Gap is well adjusted (<https://www.youtube.com/watch?v=JgTs4DfNXjQ>)

Now that the machine is set up, please follow the procedures below to unclog the cartridge:

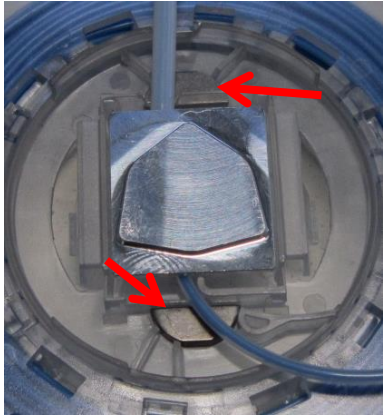
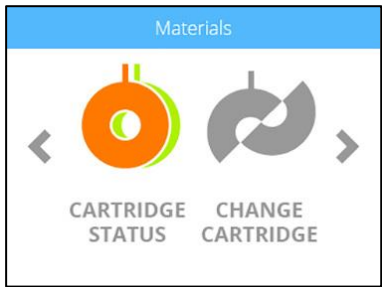
- Uninstall stripped cartridge from the printer by using the “Change Cartridge” option in the Setup menu.



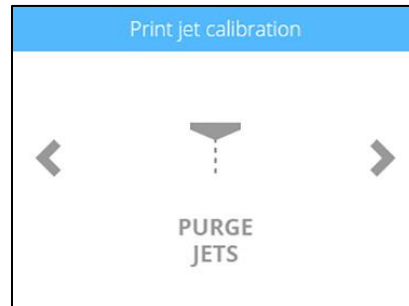
- Once the cartridge is unloaded, open the cartridge cover by first pulling on all the tabs around the edges, and then use force to pull the cover from the center tabs. It may take a lot of force to pop it open, but the cover will eventually come off without breaking.



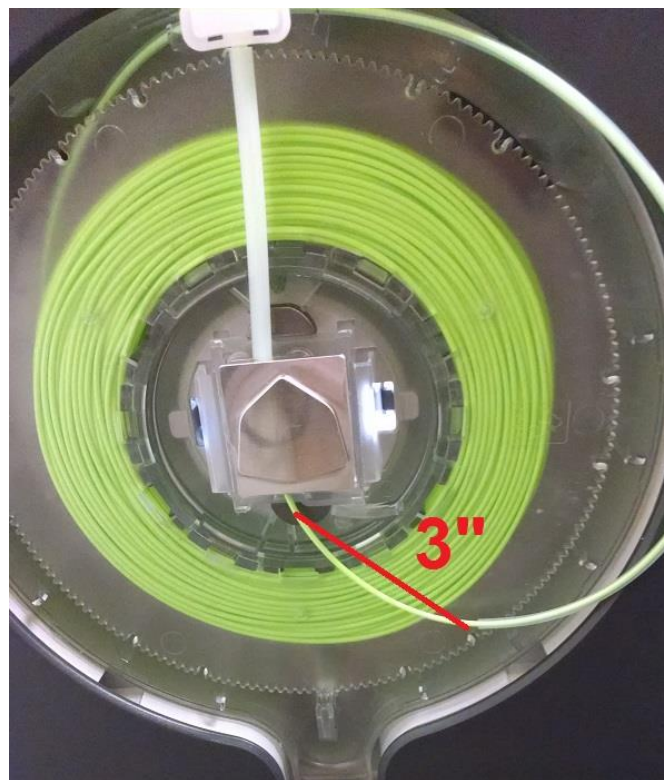
- Re-install the cartridge into the printer without the cover, following the “Change Cartridge” option. Make sure the sheath tube is not twisted, and both woodruff keys are in place (half circular magnets that keep the cartridge in place).



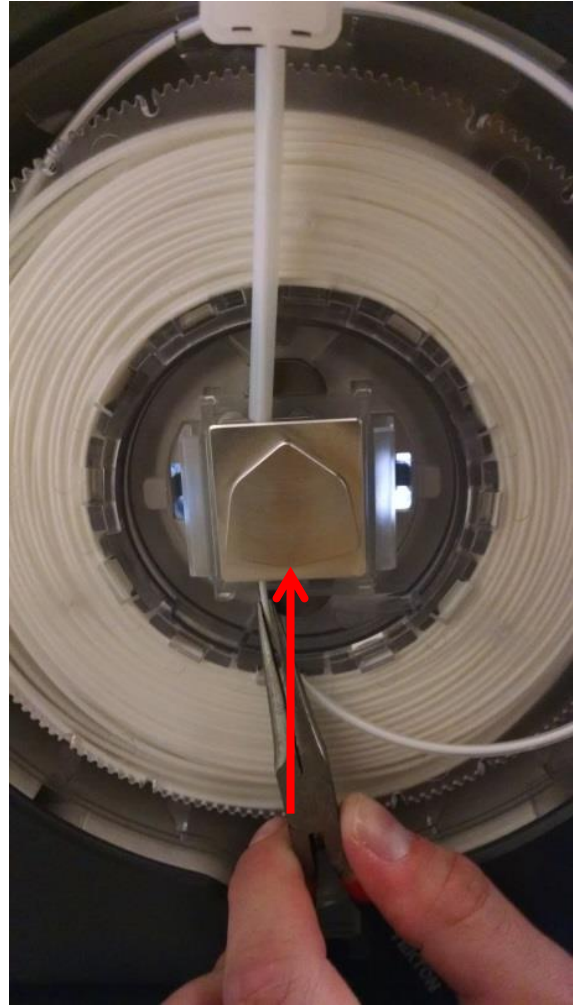
- After successfully re-installing the cartridge, go to the “Purge Jets” option in the Setup menu, and select the side where the jammed cartridge is installed. The print jet will move to the center and the screen will say “Please wait while purging”.



- The print jet will heat up for about 2 minutes. Take this time to gently pull down the bottom guide tube away from the metallic plate (gears), so you can access the filament.



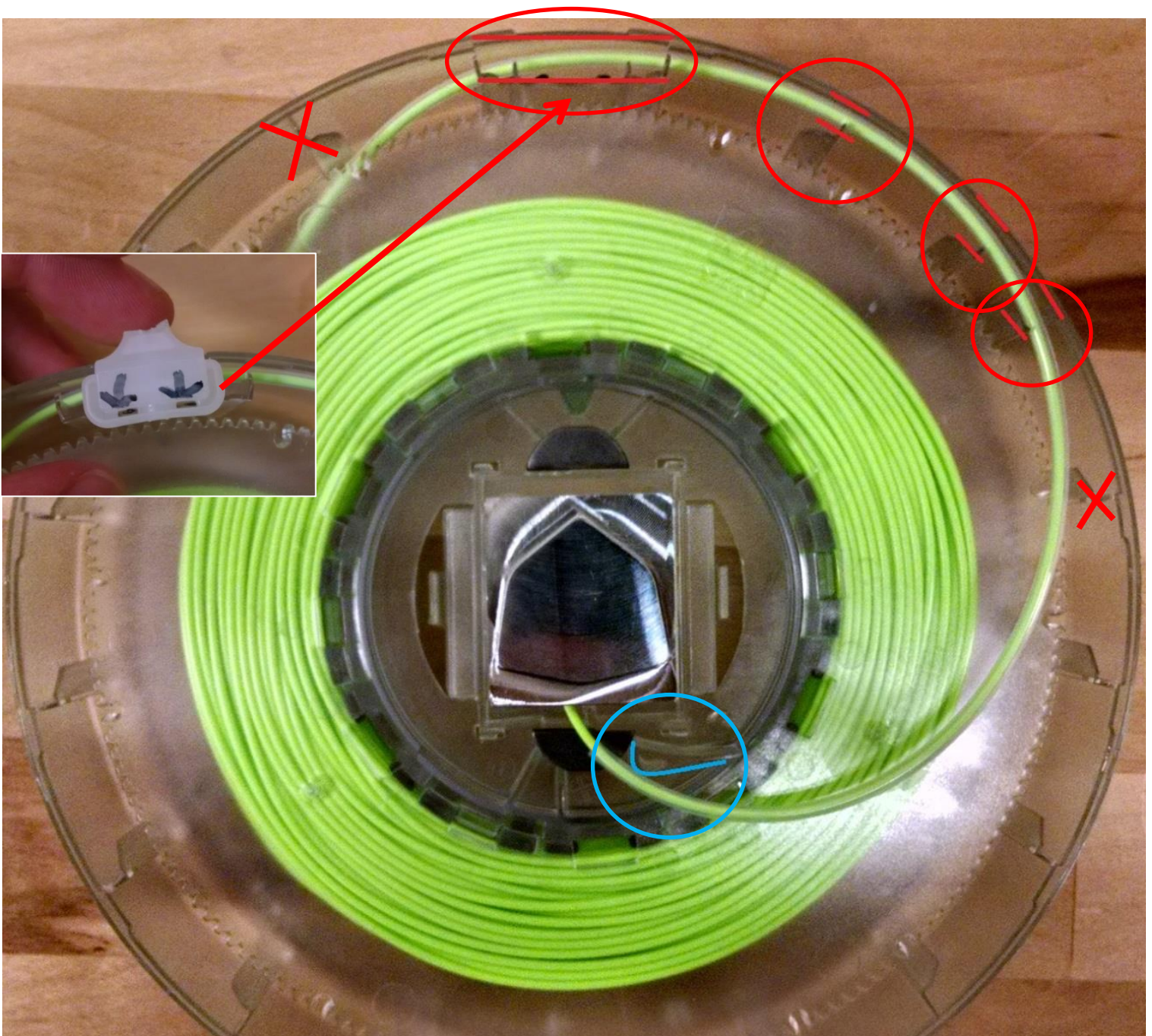
- Once the print jet reaches temperature, you will hear the gears rotating in an attempt to purge filament. This is when you will **carefully** push the filament straight upwards into the metal insert (you can use the pliers to push the filament) until you feel that the gears can grab the filament and pull on its own. The jet should be ejecting a constant string of material.



- After about 30 seconds the purging will stop, cool down and then exit the screen automatically.

## Putting the Cartridge Back Together

- Uninstall the cartridge using the “Change Cartridge” option.
- Using the picture below, place the filament guide tube only in between the cartridge ribs that are circled in red and the body avoiding the areas crossed out with a red X. Note the spacing of guide tube and metal insert, the guide rib (circled in blue), slack of material, woodruff keys and the bottom part of the sheath that sets into the cartridge ribs. Failure to do so will most likely strip the cartridge again.
- Once filament guide tube and sheath tube are in correct position, place the cartridge face on top of the cartridge body and push down to snap into place (be sure the filament guide tube isn't on top the blue guide rib but on the side of it and just outside the insert).



- With the reset cartridge, once again follow “Change Cartridge” procedure as if it were new. If unclogging done correctly, cartridge will purge freely and print successfully.

\*RE-SLICE ALL FILES WITH LATEST SOFTWARE BEFORE PRINTING\*