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PRINTING WITH THE FROG

OK, the frog does not make miracles and you will probably get a few jams, but it is easy and fast to get over them and continue with the print.

What follows only applies if you print with TheZeroBeast firmware.

1. Jams from a bad sensor reading.

Caused by the buildup of hairs or fluff in the roller cavity that do not let the roller roll. Yes, the FrontTrap does really work well as a trap for hairs and bits. If you are getting repeated sensor misreadings and you see nothing to clean, there might be a ball of fluff behind the roller or hairs rolled in its shaft. Hairs could be very difficult to see sometimes. Open the BackTrap to check and clean. In the worst cases you might have to open the TopCover (3 bolts) to clean well, or even check the bearing's shaft.

Machine behaviour: Pauses, retracts filament all the way to the MMU2, shows tip (usually perfect) and waits.

Solution. Fix the tip if necessary, pull back the filament. Open front trap and clean well all the fluff and hairs in the cavity. Make sure that the roller can roll easily. Hairs could be difficult to see. Check also the blade's movement. There could be debris blocking the slot under the blade. Close the front trap. Press the button in the MK3. The machine will load and you'll have to press the button again to start printing. Watch out for whatever gets stuck in the tip after reloading. Better clean it before the extruder gets to the wipe tower.

2. Any jam that causes a MMU2 halt, recognized by a flashing led in the device, can usually be solved by first: fixing the root of the problem, second: putting the filaments ready in the load position and third pressing the middle button of the MMU2..

Some example of these jams are:

- Jams from a false PINDA reading

Occurs when unloading. Caused by the buildup of hairs or fluff in the PINDA ball area, dragged by the filament tip from the extruder when retracting.

Machine behaviour: Filament retracts too much. Machine pauses. Led flashes in the MMU2

Solution: Free the Festo connector in the MMU2. Push the filament through. If it doesn't go straight through the selector you might have to open the MMU2 and put the filament tip through the hole. The tip of the filament should clean all the rubbish of the PINDA in the selector on its way out. Check the PINDA light. Pull the filament back to the load position. Fit the Festo again and push the middle button in the MMU2.

- Jams from a grinded filament.

Usually occurs when loading but also when unloading. Caused by a grinded filament for whatever reason (a bad sensor reading, a tangled filament in the spool rollers, a tip too thick to get out of the extruder, etc.)

Machine behaviour. The machine behaves exactly like in the case of a false PINDA reading, except that you'll find no fluff in the PINDA ball and the filament could be anywhere in the machine.

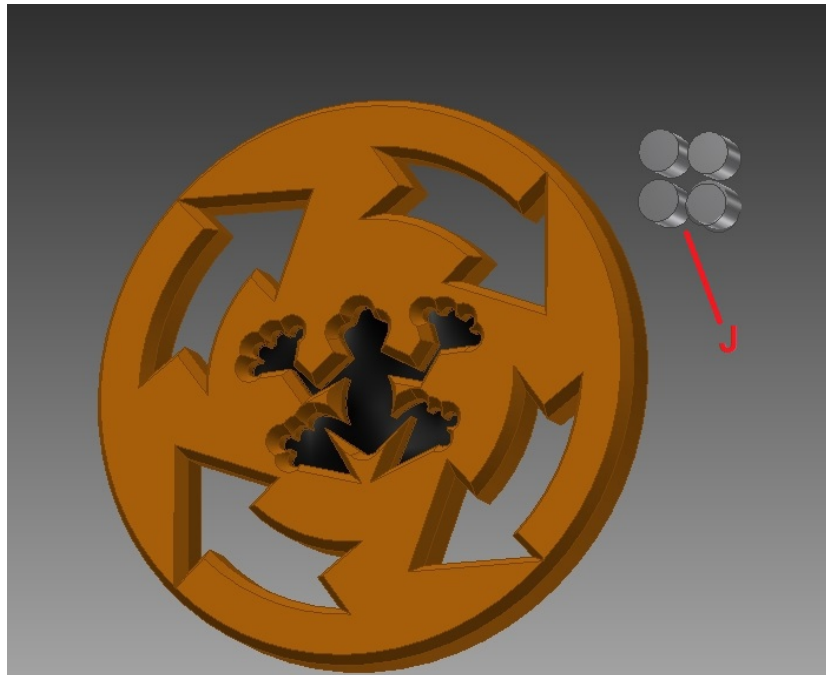
Solution: Check if the filament is grinded. If it is, just cut the damaged part, place the filament in the load position, secure the Festo and push the middle button of the MMU2.

When you are printing with The Frog, if the machine pauses, you fix whatever you think it was, restart again and then the machine stops again (could be the next load or the next time the machine uses the same filament), this means that whatever it was the reason that caused the first pause (a “dirty” roller, a grinded filament,...), it was not correctly fixed the first time you tried.

However, with The Frog you should have very few jams, and you should be able to recover swiftly from all of them.

BONUS

TheFrogSpinner



Ready to tackle your first unassisted (hopefully) multicolor print? Just a few filament changes so you can see that The Frog really works. And now that the spools are loaded, why not PETG? Are you afraid or what? Don't bother about settings. Just use PETG defaults with TheZeroBeast touch.

I usually slow the printing speed to maybe 50% on the first layer when printing a small and intricate part like this.

Once you print it, you'll need to glue four of those little magnets to the back of the spinner to attach it to the stepper.. No, my psychiatrist says there's nothing wrong with me liking magnets...

And now that you are getting maybe a little more confident, and although it is completely unnecessary, you can print that FrontTrap part with the MK7 logo in other color, just for the show off!! STL files are BONUS2A and 2B. It's just a few more filament changes, only to get warm. Take a look while it's working. How do you like those tips? Open the FrontTrap. Any debris accumulating? If there's debris there, that may give you an idea of how much are you going to need to tend the machine (open the FrontTrap and clean) with that particular filament. I'd call it preventive cleaning maybe? The nice thing is that it can be done without stopping the printer.

There you are. Your MMU2 is finally working.