

7 Functional Things Our 3D Printers Have Done In Prince George

Lots of people are surprised to find people working with 3D printers in Prince George. We hear a lot about the crazy things being made with printers around the world, and they're always being brought up whenever I talk to anyone about what I do and the technology. It's always about bio-printing organs, or metal printing airplane parts, and it's usually followed by "so you're just limited to plastics?"



Sometimes I feel people think all our machines do is make piles of stuff like this.

I would hardly call it that, there are tons of applications for the plastics we are "limited" to. Here are seven examples of projects done with our 3D printers in Prince George:

1) Gauge Pod

This one was more of a personal project, but nonetheless, it showcases the versatility and functionality of what we do. I just upgraded the carb on my car, and bought a new multi gauge so I could tell what kind of air/fuel mixture I was getting during the tuning process. There weren't any readily available gauge pods online that I liked, and mounted in the proper place in my car, etc. so I made my own. It almost feels like a superpower when you can say to yourself "hey, so this thing doesn't exist anywhere...I guess I'll just make one."

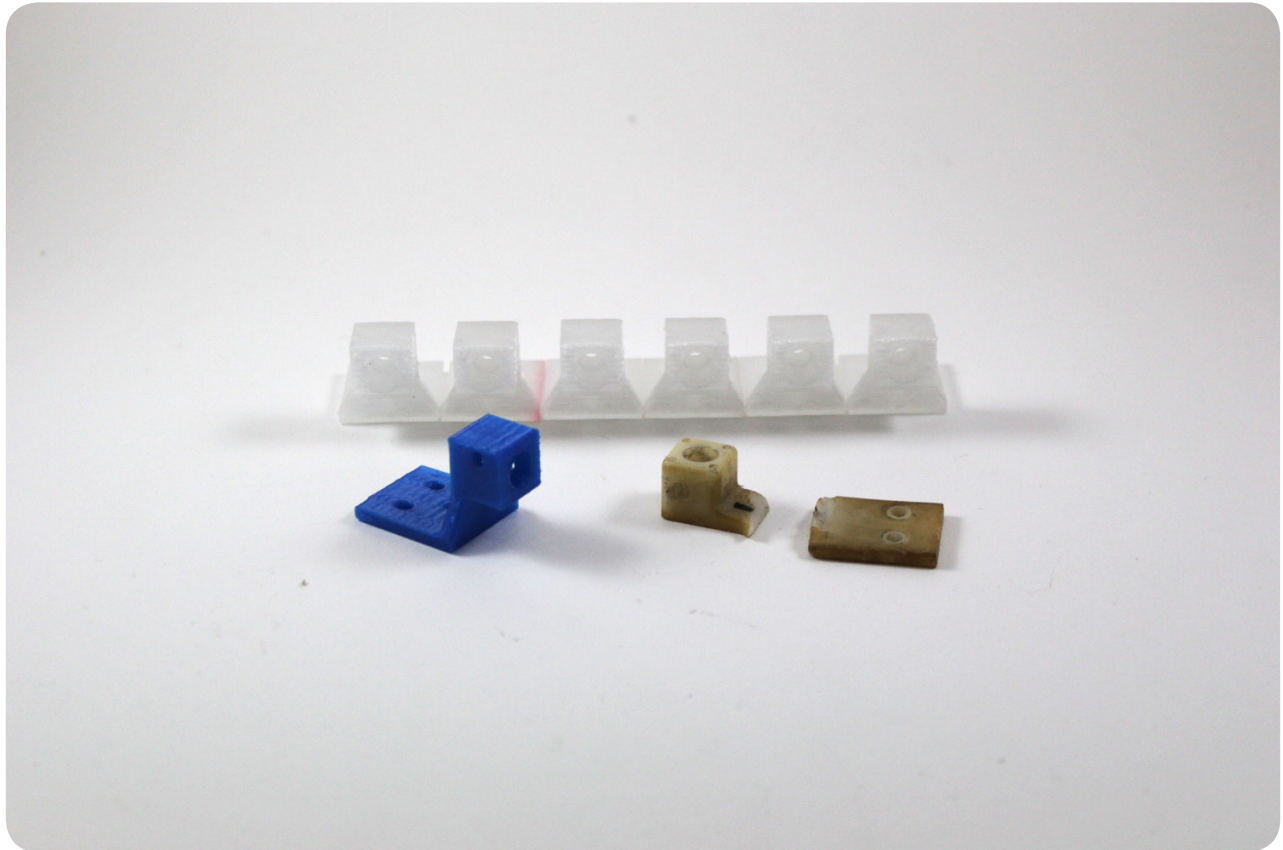


The scientific way to jet a carb.

2) Switch Actuator

For anyone who has ever worked on anything that has little plastic bits that break easily, you'll like this one. The part in question is from a piece of heavy equipment; all it does is actuate a micro-switch. I had done another project for the company that owns the

equipment, and they came back. My guess is because it saved them time trying to find replacement parts, paired with our abilities to make improvements on the new parts to make them stronger and last longer. You can see in the photo where the old piece broke. We widened the joint, and added a gusset during our redesign to make sure the parts last longer and the machines have more up time in the future.

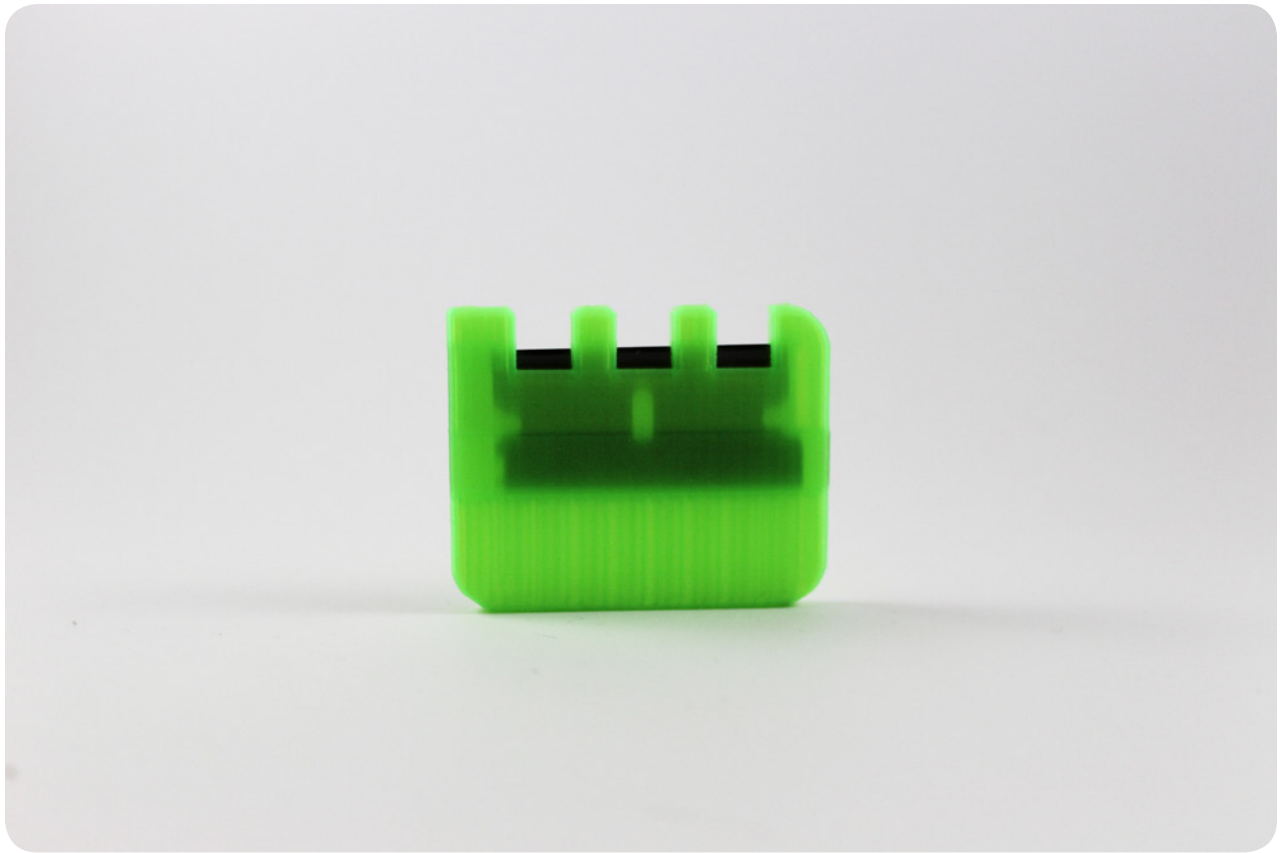


Saving time and money one replacement part at a time.

3) Ski Scraper Sharpener

Skiers and snowboards will understand the struggle of the wax scraper sharpener. Dull wax scrapers are the bane of your existence, especially if you wax your gear a lot. Just like a dull knife makes you work harder to cut vegetables, a dull scraper makes it a giant pain to get excess wax off your base. The main problem with the scraper sharpeners on the market is price, because they're such a nice item you can expect to pay up to \$50 for one. With my trusty printer, I set out to design a simple solution that was in the \$10 range, and just like with the gauge pod earlier, I ended up with something that fit the bill. There is a "Will It Print

Wednesday” episode about it you can find at youtube.com/users/vectorfinesse.



The savior for dull wax scrapers everywhere.

4) Vacuum Attachments

Thanks to desktop 3D printers, nothing is obsolete. Our vacuum cleaner still worked great, but over the years the tubes started to wear out and fall apart while you were using it. The vacuum store didn't have anything for our specific model, so we ended up getting some "universal" parts for it. Needless to say the parts did fit on the top end, but the bottom was another story. A few measurements and an hour and a half of printing later, the vacuum was alive again, and didn't fall apart whenever you picked the head up off the floor.



The solution.

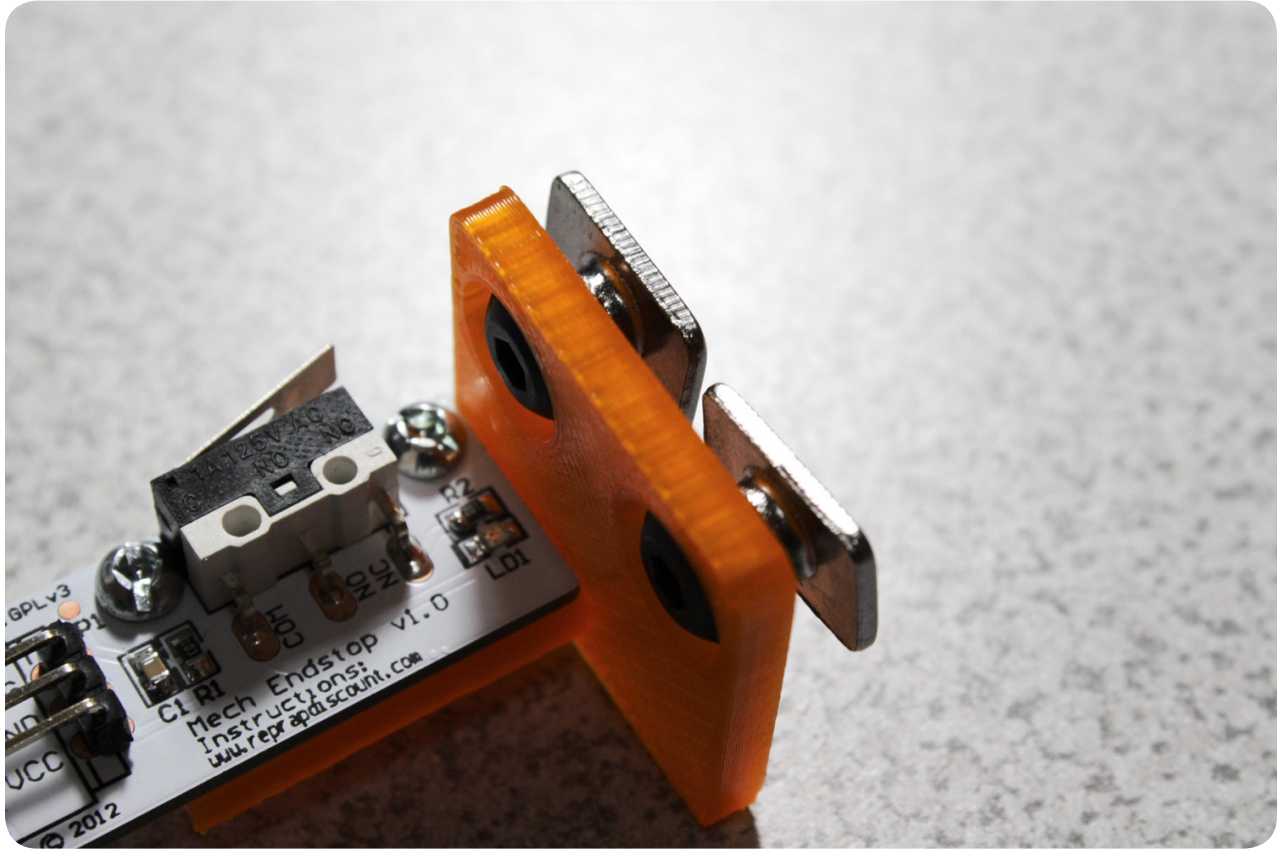
5) Key Fob

Who has had the key ring break off their key fob before? One person had enough of their broken car starter remotes, and had us design them a new one with a much thicker key ring. Aside from making the ring thicker, we also made it replaceable should the improved version ever break; all we have to do is print out another key ring and they're all set.

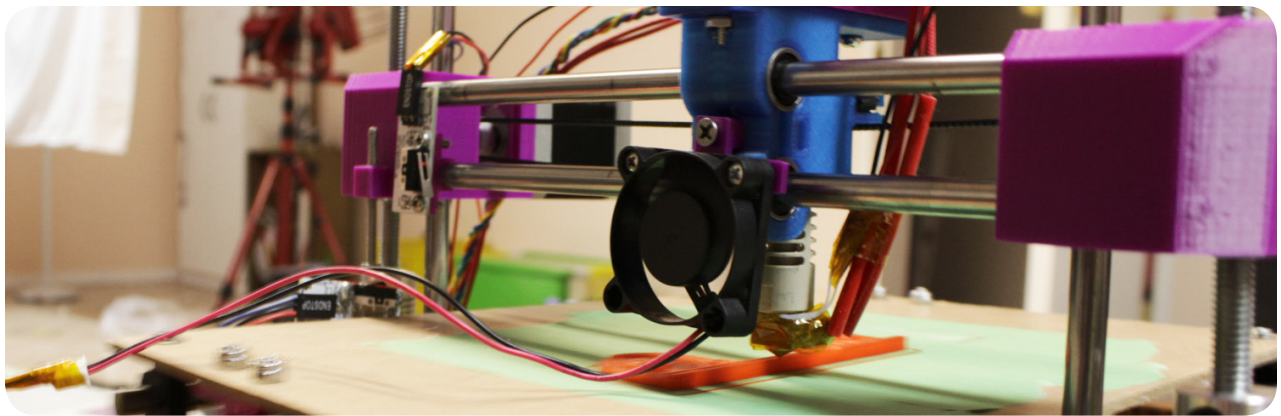


Warm toes and remote clones.

6) 3D Printer Parts



In true RepRap form, our machines have not only made upgrade parts for themselves, they've also put out parts for at least four other machines. Our RostockMAX made the parts for a Printrobot, the Rostrong in our shop, the one at Makerlab 2RG, and an Eventorbot for a young local maker. There are so many complex parts that a printer reproduces with ease, it's going to be a serious tool in the hands of the masses.



The machines are coming.

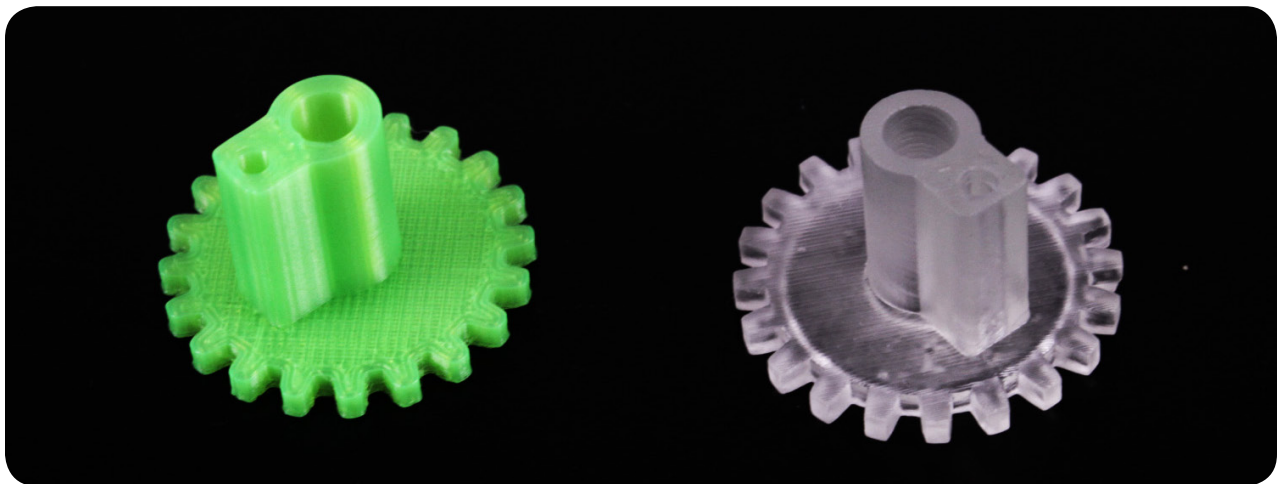
7) Replacement Gears

The last one on our list is a little bit special.



A unicorn.

When it was brought to me, it came with the message: “this is the last one of these in the world, don’t lose it, we need half dozen more.” I took it back to the workshop, reverse engineered it, and printed the replacements. It’s a huge to think after the company had been searching high and low, they got in touch with us they and had half a dozen previously unavailable parts in hand within a week.



Unicorn clones.

Now to bring this all back down to earth for a second. I'm not saying these machines are going to fix everything and solve all of the problems for everyone (at least not yet), but as you can see from the list of problems the machines have solved, there are some very real applications for the technology in everyday life and there are definitely uses for 3D printers in Prince George.

At this point in the early adoption phase is no one really knows where it's all headed, kind of like the internet in the 90's. Our only certainty is huge impact it's going to have on the world.

John Makowsky – Owner, Vector Finesse

The original blog post that this document is based on can be found at: <http://vectorfinesse.com/7-functional-things-done-by-our-3d-printers-in-prince-george/>