

**Friends, Donors, and Fellow Lovers of Liberty,**

As you will read, we've made some changes here at Atlas Arms.

## **We moved the company to Northern Arizona.**

As discussed in the previous update, this **new location affords us a great deal of industry contacts and opportunities** as Arizona is host to many companies in the firearms space. With the move, **I am now working full time on our projects**, of course with the Dagny Dagger as top priority. While progress has been faster since the move, I am now much more limited in my ability to fund the project myself so charitable donations are still of critical importance. We are still planning to relaunch the funding campaign around armor penetration demonstration as soon as possible.

## **Our test bench is finally complete.**

We've been working since the beginning of this year when we launched the crowdfunding campaign to assemble the very specialized ballistics testing equipment we need to develop the Dagger to completion. **We now have a mobile test lab** we can drive into the Arizona desert to conduct testing, complete with a canopy to shelter us and the equipment from the elements. Built around a universal receiver used to test chamber pressure, it took us until the end of July to source the separate parts and devices in an affordable manner, and then until the end of September to extract from the companies who built the components just how we should tune the equipment. At one point, an "engineer" at the sensor manufacturer indicated that he believed 9mm Luger to be a non-tapered cartridge! Needless to say, we've been very frustrated to have the project stalled by the poor technical service and documentation of these manufacturers who sell such expensive, specialized, and refined tools. It would be quite dangerous to proceed in developing exotic +P and +P+ loads without a good measure of the pressure. Photos and videos of the test lab have been posted to social media to satisfy popular demand.

**We have been actively testing with our full rig for the past 3 months.** We know that many have expressed interest in seeing even more content of what we're doing, and we know that such media helps promote interest in the project, but every minute we're tangling with media, we're not making technical progress. So **we are looking to on-board a media manager**, if you would like to volunteer. **We would also greatly benefit from help managing our website and email system.**

In the spirit of our public interest research, and since we now possess pressure-testing capability, **we have started pressure-testing commercially-available ammunition** labels, and will post a report on our findings to atlasarms.org. Already we've found that many loads labeled "+P" are actually standard pressure. We are open to requests for ammo labels to test via email, however this does consume time and ammunition isn't free, so your request will shoot to the front of the line if you send us the ammo or donate the cost of a box and shipping. The Dagger is priority #1 and **we will not allocate any funding away from DD9 development**. Also, since our equipment is calibrated to NAS3 casings, we will only be testing labels cased in NAS3 for now.

## **We have purchased a CNC lathe.**

We've found contract machining in the area of our new home to be far more expensive than in Knoxville, at >\$30/prototype. In consideration of that astronomical, ongoing cost, lack of care and control at contract shops, and lead times exceeding 2 weeks every batch, we decided it was worth the substantial investment of time and funding to bring prototype production in-house. As I write this, I am spending most of my time preparing the lathe and associated tooling, delaying testing and test progress for the time being, but this will greatly speed progress overall.

## **If we shot a current prototype into Class IIIA armor, it would penetrate.**

However, the gun wouldn't cycle to load the next round and the jacket would shatter prematurely. I believe we need to fix these features for our big demonstration, and so with regret, I have made the decision to **postpone the penetration demonstration until the beginning of 2020**. I look through my window to snow-covered rooftops as I write this, and while we can arrange for some testing farther into the Arizona desert or at an indoor range, the Flagstaff winter complicates testing and especially a demo shoot. As well, the full patent is due in January and my time in December will be devoted to writing it myself to save our limited budget, though under the advice of a notable libertarian patent attorney. Atlas Arms is devoted to open-source philosophy, but the patent is a defensive measure, and will also cause the federal government through the patent office to publish the project, shielding us from prosecution in states which bar the publication of weapons-related knowledge.

## **Dagny Dagger Technical Work and Progress:**

- **We are investigating 3D printing Dagger jackets**

Ever since the project went public, people have conflated DIY machining of the Dagger with 3D printing, and we've been continually asked if it can be printed. Unless you have a metal printer the core is beyond printing, but the jacket may be possible. We've been working with a member of the gun printing community to print the jackets. Initial results look promising. Stay tuned on this.

- **We have found the perfect powder load**

As reported in the first update, the very light recoil of the Dagger hampers proper case ejection and auto-loading. But through tedious inquiry and experimentation, we've identified a powder type and charge weight which not only cycles the gun reliably, but also maximizes power.

- **We understand bonding dynamics much better**

We did confirm through continued testing the relationship between jacket/core fit is critical for effective bonding. Now at maximum pressure, some prototypes still fracture before reaching the target, but we're making good progress on this front as we continue to experiment with adhesives and refine jacket structure.

- **A significant jacket redesign is awaiting production**

The new design is better tuned to the new powder load and structurally-superior to prevent premature jacket separation/shattering. We will produce these as soon as the new lathe is ready.

That's all I have to report today. I expect the next update to be the penetration demo.

As always, I'd like to express our appreciation to all of you donors. It would be very difficult to support this project exclusively on my own dime, and I thank you sincerely. Please keep spreading the word about the Dagny Dagger project, and connect on social media if you have an account.

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