Friends, Donors, and Fellow Lovers of Liberty,
It's late April now and we've yet to begin production. It seems there's a time when every hardware start-up disappoints in delivering on-time to expectations. Now is that time for us, or rather it became apparent in February we weren't going to reach our goal of beginning production in March which I presented to you in the last update. So I am compelled to explain to you what's going on over here and why our release is delayed.

Here's the story:

In December of 2020 I visited several machine shops in Oklahoma (where we'll be located long-term) capable of producing our cores and jackets to line-up production partners far ahead of our production operation. The **parts are quite challenging to manufacture, and few shops are qualified** because:

- The tolerances required for bullets are particularly tight
- We require very high volumes (millions of parts annually)
- Costs must be controlled to match typical ammunition pricing
- Neither copper nor polycarbonate are typical for a production industry accustomed mostly to steel, brass, and aluminum.

Despite these challenges, **I found 2 good options**, multi-spindle screw machine shops in OK who could deliver our high volumes of both parts at acceptable cost and precision.

February 2022, shortly after I moved to Texas, we contacted both shops to order parts, on-schedule for an end-March production start. Both **shops had become completely swamped** with oilfield production as oil prices reached new highs, coming off the Covid bust. In addition, industrial parts demand is unprecedented as the entire world attempts to make-up production time lost during Covid shut-downs. We then combed through every shop in Texas which might have been able to produce cores and jackets and found the same **production capacity shortages everywhere**; no one would quote our parts.
Eventually, Michael hatched an excellent plan. If the booming oil industry was filling all capacity in OK and TX, we would look for production capacity in a region of dead industry– Detroit; no one is building very many cars right now. Fruitful as the plan was, **we found a manufacturer for the cores**, albeit at a **cost of more than 2-3X the original quotes** from the OK shops, the now-booming machining industry taking its toll on the cost in addition to higher cost of labor relative to Oklahoma and economic realization of 25% inflation (when fairly evaluated). We are now only standing-by for a technical go/no-go from a second competitive prospective core producer before issuing the go-ahead for production of the first batch of cores from one shop or the other.

On top of excessive difficulty securing production capacity, we are also **plagued by unprecedented materials shortages**. As the world shut-down for 2 years and even now the back-log of cargo ships waiting in harbors to off-board continues to increase, certainly you've heard of or seen first-hand shortages in food, vehicles, and consumer products. Industrial supplies are no exception to the trend and the embargoes on Russia are exacerbating. Not long ago, copper stock was available in enormous quantities on 2-day lead times but is now significantly more expensive on lead times of 2-3 months. As even machine shops themselves

are finding difficulty with materials sourcing, Michael has been sorting through logistics to find the cheapest, logistically-sound source of copper stock to manage costs.

Still, **no shop has quoted jacket machining**, citing lack of experience with polymers, the complexity of the geometry compounding the difficult tolerances, insufficient capacity to meet part volume, politics/legality surrounding firearms, and/or necessary pricing of >$1 just for jacket machine time separate of material costs or core machining. So in desperation, **we have turned to injection molding**.

I had not seriously considered injection molding before 5 months ago because text-book tolerances for the process are an order of magnitude larger than the requirements for the jacket and experience developing products for injection molding further informed my disbelief in the possibility. However, we made contact with a molding house set to attend SHOT show who claimed high confidence in meeting the lofty specifications. Investigation since then indicates they're likely one of the only few molding houses on the entire continent willing to undertake the project, though we are also negotiating with another to assess ability. We had hoped upon learning that molding might be possible to keep it as a cost-saving measure to be implemented after launching the product with machined jackets, as the **start-up time and capital associated with molding is extraordinarily high**, especially pushing the technology to its limit as our jackets require, but it seems it's our only option in the present economic weather to keep the projectiles commercially-affordable. We hope to choose a molding house in the next week, and then will commence a **4-month lead time** before receiving jackets in-hand. The associated capital investment represents most of the funding originally allotted to build our production operation and take us through the first production batch, so we've had to secure additional capital and take time to wisely consider associated decision points.

What does all that mean for commercial and open-source release?

- Lead times for injection molding drag the start of **production and open-source release out to August or September**.
    - **We may release the open-source manual before then**, but work toward turning profit has to be prioritized at this point. We may also include more in the V.1 manual if it waits for commercial release.
    - We will have all that time to develop our comercial assembly machine, a task that's been on-hold since the production logistics emergency.
    - We have also **resumed investigation of DIY SLA jacket printing** and may be finished for inclusion in the manual.
    - The Ghost Gunner lathe project may be developed for DIY core production (more on this below) in this time or shortly thereafter.
- Fortunately, per-part cost of molded jackets represents such savings over the original machining quotes that **pricing models of the finished product haven't changed** despite enormous inflation and increase in core cost.

Injection molding may unlock a new feature of the technology!

Through injection molding, composition and properties of the jacket may be altered much more easily than through machining. This opens a wide array of aesthetic options for us, but

also the option to add yet another functional feature to the already-extensive list of unique and appreciable facets of Dagny Dagger technology. The functionality will take time to develop and we have to keep it secret for now, but we're all very excited to tap into even more potential of the novel design. You'll be the first to hear when we can publicize.

Defense Distributed has approached us to finish the GG Lathe.

A few weeks ago, DD arranged a meeting to propose help for me to complete the Ghost Gunner lathe attachment which I've discussed in previous updates to outfit the machine for turning operations such as DIY production of our cores and other bullets. We're enthusiastic about the possibility of such an arrangement to make good on our intention to deliver GG code at some point while DD seeks to enable DIY suppressor components. Unfortunately for all interested parties, we've found Cody unwilling to bindingly agree to an arrangement he initiated and we're wary of a history of deception and dubious credit-claiming so it remains unclear if any cooperation will be reached. Either way, **DD's interest assures the concept will be developed** sooner or later no matter who receives credit. What matters most to me is that it will enable us to deliver on our intended turn-key DIY solution. Thanks to JS at DD for his feedback on our present design and his work on the GG platform.

Keychains are finished.

I'm very glad to be finally finished with keychain favors! Much thanks to Lauren for putting in about as much time as I did to get them done. We will ship them out in order discussed in the last update. To donors of at least $50, **we'll email you from** **donations@atlasarms.org** a link to a product page on our site to purchase them along with a coupon code for the full value so you just have to pay shipping. We don't care to use government mail, but the flat-rate, low-cost function will greatly simplify the fulfillment of these favors as our shipping and logistics operation is not yet set-up to handle such large volumes. Indeed the keychain fulfillment has been a trial run for a few aspects of our assembly and logistics processes and infrastructure.

Premium Dagny Dagger release is on indefinite hold.

As if the other economic factors which are retarding release of copper-core projectiles aren't enough, our special armor-penetrating alloy has a strong cobalt component while most of the world's supply of **cobalt is mined in Russia**, now behind Biden embargoes. Where the alloy was already on 9-month lead times and cost us ~$1.30 per projectile in core material alone, lead times are now in **excess of 1 year and cost has risen an additional 80%** already. We simply cannot price a bullet made with such alloy to be near-competitive with typical utility ammo, and can't source material to produce much of it at all. We will produce it in **limited quantities** at high cost (**~$6/rnd**) when possible, but **don't know when that'll be**. Similar to the initial release of new KelTec models, it'll exist in the world, but you're not gonna get it unless you put up a very high bid. Of course you donors of $100 or more will receive first access, but we will try to increase access for all you friends and donors in light of the scarcity. However, at this point I personally recommend that you make use of your vouchers and advanced-access

donation favors to secure multiple boxes of our copper-core ammo rather than wait for a single box of the premium Dagger, and I know you won't be disappointed in it.

We may release a gun lube product.

Our projectile assembly operation makes use of an uncommon lubricant chemistry which, despite increased cost, is superior in nearly every technical aspect. We are testing its performance as a firearms lube and will publish our results. If favorable, we'll bottle it for commercial sale.

It's been an incredibly anxious couple months for us dealing with derailed manufacturing plans and associated manufacturing crisis and delays, but the situation is calming and optimism has returned to previous highs. "What doesn't kill you makes you stronger" and we feel it as we've implemented better manufacturing practices ahead of schedule and discovered new utility to weather the storm. Our chief responsibility is to you friends and donors who have spent social, temporal, and/or financial value to bring us the success we've enjoyed to this point. We owe nothing to anyone but all of you who receive these updates, and the debt and responsibility weighs heavy on me every day we haven't delivered. We hate very much to disappoint on expectations we've shared with you, but there's not much if anything we can do about it when nation-states wage this economic warfare against us all, except to negate the states themselves, bit-by-bit, as this project was initiated to accomplish among others like bitcoin.

They bomb individuals like us simply going about our lives. They steal the fruits of our labor to purchase more such indiscriminate weapons which they smugly prohibit for us ourselves. They debase and rot-away what value reserves they allow us to keep. They block mutually-beneficial trade which maintains peaceable relationships and aligns interests around the world, severing hand-shakes with swords. I spent 3 years building this before they threw these recent wrenches into the mix and we count ourselves grateful to survive. But how many 100 millions of dreams, livelihoods, life-savings, and decades of work have been irreparably destroyed? How many billions can't afford to eat or as healthily? How many can no longer find the hardware availability or spare the cost of life-saving or -bettering medicine? All to decide if some such individuals will be exploited by oligarchs born in Kiev, USSR or those born in Moskau, USSR. Or even only to wag an impotent finger of disapproval at such a faction.

What can we ever do to better this world, enrich it, free it, and console its sorrow but to carry our individual responsibility to chip-away at the oppressive monopolies these tyrants leverage to keep us all in chains of poverty, scarcity, and stagnancy. Still, not with the initiative destruction of our oppressors, but with productive creation.

As always, we greatly appreciate your financial and social support which has made all this possible. Reach out any time by email or through Twitter.

--Austin Thomas Jones
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