Visibility: Cloudy

Current: Strong

Report: We continue to move forward strongly and have great updates, despite coming across some minor setbacks. The engineering team is working around the clock to keep production on schedule. Injection molded parts are the most complex portion of the process and appear to be the bottleneck in the timeline, though this comes as no surprise.

We Secured a 500K Investment:

We are happy to share that we have successfully raised $500,000 in funds. This resource will go to support the purchase of tooling, materials, and production of BLU3's "NEMO." Here is a link to our Press Release on this wonderful news that represents the largest investment in the history of our parent company.

A Few Minor Setbacks:

The part called the pump body, which is the main center section of the compressor, calls for a very complex mold. It has demanded a lot of work from the mechanical engineers as they optimize the design for molding. The molders run what is called a moldflow analysis to determine whether the part will be successful when it is injection molded. A ton of changes have been made to satisfy the moldflow analysis and ensure that the functional design is not sacrificed in the process of making the part moldable. This process has required some back-and-forth ideas with the molders until we could find compromises that satisfy all goals. The bad news is we had hoped to reach this point weeks ago, but the good news is that the molders could begin starting to cut molds as soon as today! This also means that every part is completely ready to be molded.

The production part samples of our battery pack were supposed to have been delivered two weeks ago, and we are still waiting, but we are confident this will resolve soon. The manufacturer found an issue with the injection molding tool that had to be reworked, so that set the sample packs back a couple of weeks. Once the sample packs arrive, we will have to test them to confirm the design is enough for production. The next steps will be for the manufacturer to acquire the appropriate certifications on the battery pack – like CE, UN38.3, and UL2054-2011.

The dive flag samples that we posted in a previous update look beautiful, but the dimensions on the sleeve for the intake tube/flagpole were made slightly too tight; nothing major. We have fresh samples on the way, and we should have this resolved by next week. Once these dimensions are set in stone, our production order will be placed with the vendor.

Production Processes Progress:

Nemo’s compressor is driven by a motor designed and built in-house using sheets of silicon steel wrapped in coils of copper wire. The first production order of coil wire arrived, and the engineering team has already started working with it to “iron” out the motor core assembly process. This is one of the most tedious processes in the entire assembly line, so there’s a lot to be gained with a little ingenuity. Thankfully, our engineering team is very creative and resourceful. Good news is that the first trial run showed the actual labor time to be lower than what we’d originally estimated! Even better news is that we’re already coming up with ideas to make it even faster.

A close second in lengthy production processes is the installation of magnets into our motor’s connecting rod. These magnets are wildly strong when handled individually – that’s why they generate enough magnetic force to compress the air that you’ll be breathing! With power comes responsibility, so we’re in the middle of working on a way to safely and efficiently install the magnets. So far, the process is coming along nicely, but we’re so proud of it that we’ll likely keep it to ourselves as a trade secret – so unfortunately no pictures of this bad boy!

Textiles manufacturing:

We’ve begun manufacturing our textiles – the harness, the handle, clips for the flotation tube, and the backpacks. The first short run of harnesses has been completed, and they’re looking great! Labor time is within our expectations, and we even found a way to wrap up and package the harness without creating any waste!

A nice touch has been added to the backpacks. Rather than a black embroidered wordmark on the backpack, we’ve gotten them silkscreened with a white print of our logo! A much sharper look, in our opinion. What do you think? If you didn’t order your NEMO with a backpack, you’re going to wish you did! Soon these panels will be

getting sewn onto backpacks.

Certifications:

BLU3 is fully invested in conservation and compliance, and we have taken the necessary steps to ensure we are CE compliant. We've hired a professional CE consultant who is taking us through the process for self-certification. The process involves finding the appropriate directives, then identifying the applicable standards and assessing each standard to state why our device passes or does not fall into application of certain clauses. It turns out that since NEMO does not pump at pressures higher than 0.5 bar, it is not subject to the EN1012-1:2010 standard for air compressors! One step closer.

Next weekend, the full EMC test will be performed. Extensive electromagnetic field testing will be done over the course of 4-5 days. This testing is required for FCC, CE, and other certifications around the world, such as C-tick for Australia.

Forecast: There is a long way to go, but the team is as motivated and excited as ever. With the injection molders moving ahead and beginning to cut steel, we're able to devote more of our time to setting up and fine tuning the actual production processes so that once the parts come back, we'll be ready to assemble your NEMOs! At the same time, we're hard at work acquiring certifications so that we can ship the products to you without customs holdups. We have thought of everything to safeguard everyone can fully enjoy this fun yet transformational technology.

– BLU3 Team