

Project Summary

P18463

Built & Test Prep Review

Risks

1. Device Wobbles
 - a. Choose testing cable - will a fishing line mimic our cable's behavior accurately?
 - b. Cable should become rotation-free in steady state
 - c. Worse Case: Need to research ways of isolating this rotation
2. Generator Efficiency & Output do not meet Requirements
 - a. Need to transmit the rotational energy to a 3mm driveshaft.
 - b. Could be difficult with larger, extended blades.
 - c. Worse Case: Need to research and order higher quality motor
 - i. This could invoke other design changes to accommodate new size.
3. Water Breaches Housing
 - a. O-rings, threads, silicon sealant, etc. should be enough.
 - b. Possible incorrect application of silicon or fitting of o-rings.
 - c. Worse Case: Redesign dimensions of housing to better accommodate the parts we receive if necessary.
4. Drill is not strong enough to penetrate local ground.
 - a. Heavy duty plastic should be enough, but it is designed as a sand drill. It may not penetrate hard, dry dirt.
 - b. Worse Case: CAD a drill piece and potentially have the part machine shopped.
 - i. Could become a resource risk. Should address ASAP for shop delays.

Key Progressions

1. Detachable Fins
 - a. New customer requirement
 - b. Will cause packaging to be much cheaper/smaller
 - c. Single design for now, but can look into fins for varying conditions
2. Bill of Materials Finalization
 - a. Vetted BOM to reduce cost and hone in on best options
 - b. Ordered and are tracking indicated parts - picking some up
3. Test Plans
 - a. Verified data collection sheets for each of the necessary tests.
 - b. Tied each test back to customer and engineering requirements.
4. Project Schedule
 - a. Rough outline to the end of the year
 - b. "Sub-Phases" breakdown
 - c. Shooting for fully functional prototype at the end of Week 10

Key Action Items

1. Receive and verify all ordered parts
2. Identify and order any remaining parts necessary
3. Schedule pool area for testing
 - a. Review email with Chris
4. Successfully complete electrical testing with repeatable and desirable measured results
5. Successfully assemble the device housing and complete waterproof testing
6. Design (CAD?) packaging
7. Continue to track active risks and problems

Questions for/from the Guides?