

# Outbound Progress Report

## 3-29-17

### First production run of D and Z spars Arrive

We are stocked up and ready to start processing spars for the Outbound wings. Production will begin once we have completed the final stages of static testing and initial flight test. The spars are exceptional quality, straight, and measured to spec. They will be a joy to CNC machine and assemble. The spars will come with all machining completed and ready for the builder to begin assembly.



### Tail Cone Skins Fitted

The tail cone is composed of 7 skins, all machined to final shape and holes located in final hole size. The top skins will be provided pre-formed to eliminate any tricky forming. This does impact packaging to some point, but the advantage is more consistent assembly with much smoother appearance. The window cut out will also be standard on the skins just aft of station 3.





### **Wing Assembly**

The main spar will come with the special shaped doubler already installed by the factory. This is pilot drilled and final drilled once fitted to the cockpit cage.



The final version of the Wing Truss has been fitted. Final static testing, in full load path simulation, showed the truss went well past the 14,800 pounds required to meet 9 G's at 1800 lbs. The test was halted when the static test stand started to deflect. This occurred at 16,000 pounds.

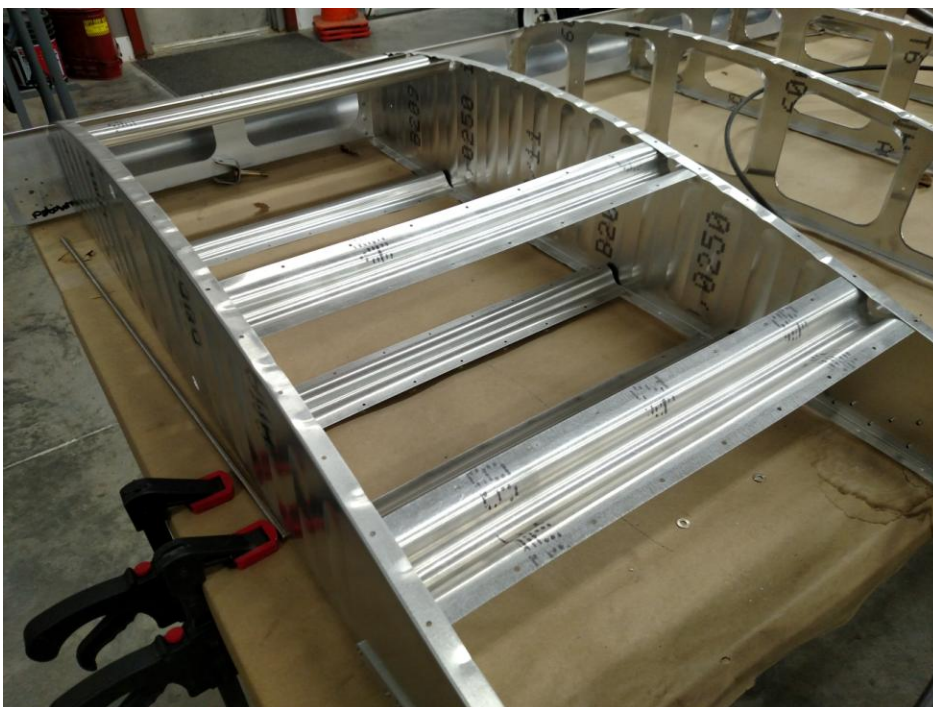
Wing Truss, Lift strut and fitting undergo full on static testing.

Some are asking why 9 positive and 6 negative? It is not to promote the Outbound as an aerobatic plane, but one that you can safely push to higher gross weights. To be a great akro mount, you need optimization in areas that dull the main mission, which is a fast cruising STOL with lots of payload. The extra load margin will also allow us to possibly expand the design into a four place. The extra margin comes with a minimal weight and cost impact due to the dual spar wing.



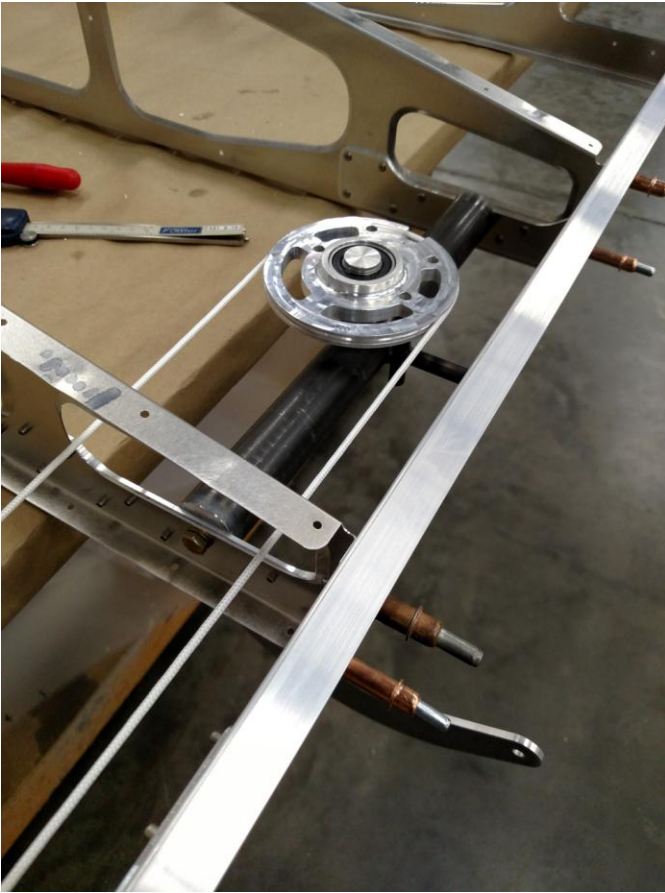
Wing truss bolts into the wing at the exact strut load path angle.

Later in the year we hope to have ready the 45-gallon fuel system. Provisions are made to install the larger tanks post assembly. This will be a matter of removing the wings and drilling out rivets. Those who want to start with the 32 gallon system can finish, fly and up-grade later.



End root rib is design for easy removal for tank replacement.

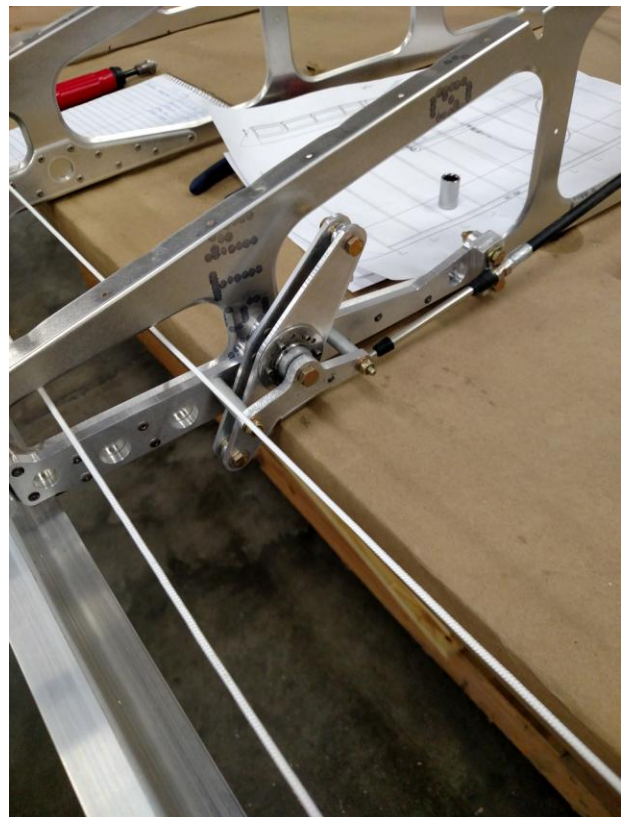
The aileron pulley assembly features super simple install and rigging. There is a rigging pin to lock the system into neutral.



Bell crank for aileron features a rigging pin, and extra large bearings for long life and smooth light action.

The big slotted flaps use an extra strong Teleflex coupled to a bell crank. This keeps all the flight loads on the cable in tension. Both aileron and flap actuation is internal, only the very streamline hinges are in the breeze. This means there is no need for push pull tube exit fairings, that cause drag and require extra build time.

Flap bell crank features a heavy duty Teleflex cable and adjustable push pull tube.



Close up of rear spar attach and flap hinges.



That's it for now, thanks for tuning in....more to come, RJS