

## January 10, 2019 – Sport Copter M2 update



Sport Copter M2 on our website

<http://www.sportcopter.com/Gyroplanes/M2/tabid/217/Default.aspx>

2019 Greetings Sport Copter Pilots and Fans!

It's been a wild rollercoaster ride since Oshkosh 2018! We expected then to have our M2 prototype flying in the Autumn, but unfortunately have experienced several causes for delay out of our control:

- 1) Rotax delayed their 915iS by over a year. We only got ours just before Summer 2018.
- 2) Our composite fabricator delayed delivery of body mold tools before Oshkosh.
- 3) Jim got very sick in late July, and is still recovering from three surgeries. Jim only recently got back his Airman's Medical, and is steadily getting back to his former robust condition. He is now flying several times each week, weather permitting.
- 4) Our composite mold tool fabricator has had continued delays. We visit them 2x/week for Quality Assurance, to make sure that M2 tools are made to our standards.
- 5) Jim and Evan have significantly honed what was already a very good M2 into something even better:
  - pre-preg carbon tail (with a revolutionary internal structure, no hangar rash, stronger than alum.)
  - adjustable rudder pedals from SCII, and with improvements
  - heavier duty rotorhead/torque tube with larger bolts
  - slightly wider polycarbonate doors for more cabin comfort
- 6) Rotax just announced an AD affecting 767 motors (including our own 915iS for the M2 prototype) to replace the sodium-filled exhaust valves. They don't yet have the new valves in stock, so it will probably be a few weeks before we can run up. Although it's yet another vendor snag out of our control, we'll be busy doing other things until the Rotax tech arrives to install the new valves.

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**We are currently finishing up the M2's unique pre-preg carbon-fiber tail in January.**

Also, we are modifying the M2 for a secondary engine [147hp Aeromomentum AM15-HP](#) (a dependable Suzuki water-cooled 4-cylinder 1.5 liter 16-valve SOHC with EFI and FADEC of comparable power:weight of the Rotax 915iS for \$10,000+ less, and with a higher 1500 hour TBO).

Below are some recent photos of the prototype.

We'll have more to share with you in just a few weeks! Meanwhile, safe flying!

Sport Copter, Inc.

[www.sportcopter.com](http://www.sportcopter.com)



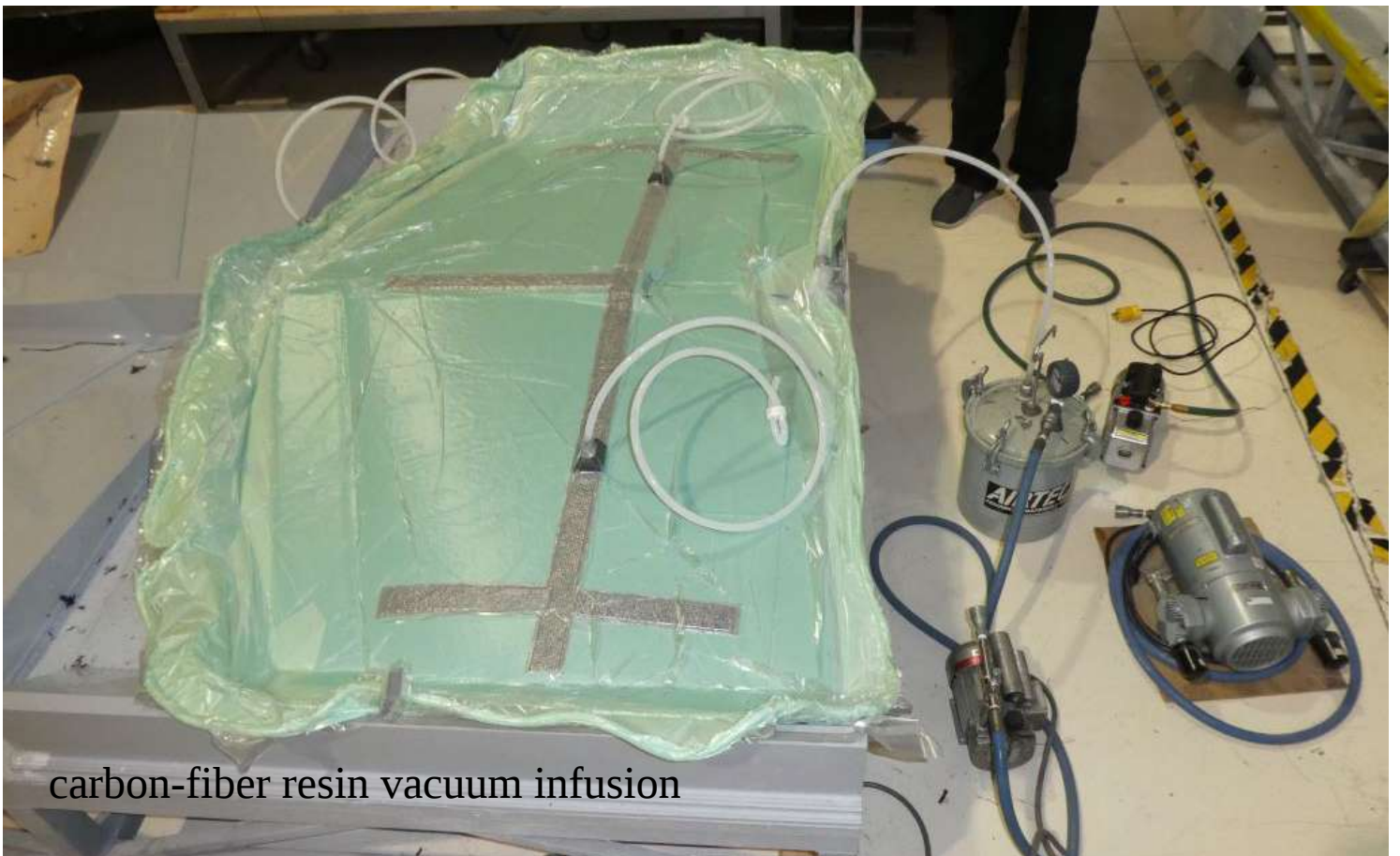
tail vertical stabilizer and outboard stabilizer base being CNCed by our composite fabricator



finished tool, after 6 stages of waxing



laying up the carbon-fiber mold



carbon-fiber resin vacuum infusion

mold after its 12-hour first bake cycle

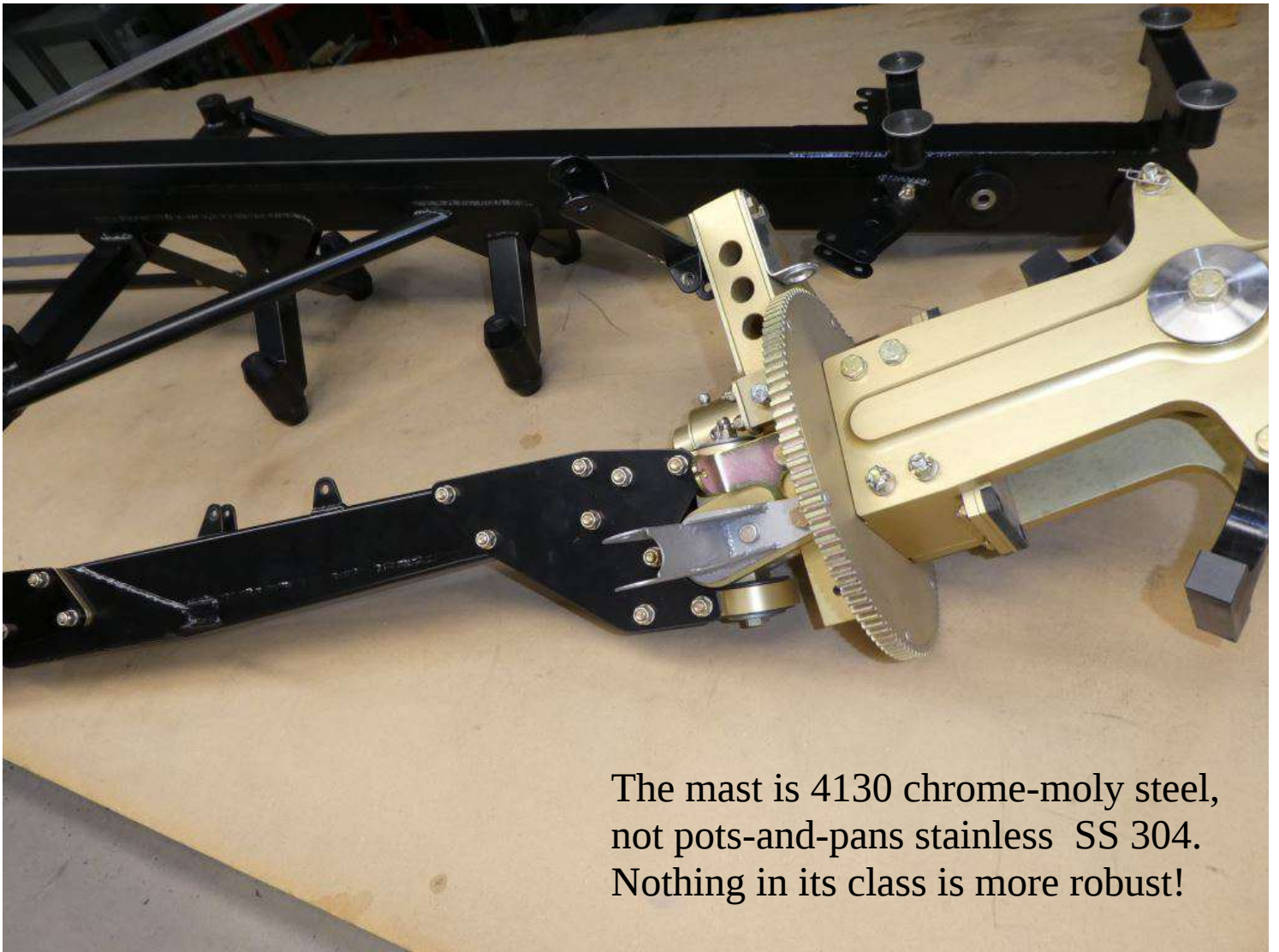


precision TIG welding



What it takes to make our rudder pedal system!





The mast is 4130 chrome-moly steel, not pots-and-pans stainless SS 304. Nothing in its class is more robust!





other gyros

Aircraft Materials (4130 chrome-moly steel, 6061-T6 aluminum)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sport Rotor Technology (Aerospace materials/bonding)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heim-jointed Hub Bar (blades find lead, lag and coning angles)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rotorhead (polymer/Teflon bushings, shock-isolated)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prerotator (flex-shaft, 300+rrpm, takeoff <100')	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Main Gear Suspension (actual shock absorbers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nosewheel (free castering, trailing link, anti-shimmy)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Differential Toe Brakes (hydraulic caliper disks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adjustable Rudder Pedals (for occupants from 4'11" to 6'5")	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Control System (Humanized Roto-Control, not oversensitive)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rotor Brake independent of Air Trim system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Folding Mast, Removeable Tail Boom (for transport or storage)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Carbon-fiber pre-preg body and tail	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ergonomic Cyber Seats with impact cushioning	<input checked="" type="checkbox"/>	<input type="checkbox"/>

