Team Rocket 10-9-2024 newsletter

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Drool... wow.

What a great shot! Sure, we're all getting tired of seeing Darryl's plane... but what a shot. (Just kidding... I love seeing Darryl's plane.)

This is a reduced size photo. If you want a full size one, please contact the photographer. The photo is by EAA photographer, Connor Madison.

This month's **Sport Aviation** magazine, which is a publication put out by the EAA, www.eaa.org, features Darryl Hudec's F1 Rocket. If you don't get this magazine, find a copy and have a look at the article. It's very good.

I'm sure that I've mentioned this before. Forgive me, but there are always new readers who haven't heard the story, which is touched on in the article:

Darryl, who is quite a craftsman, had never built an airplane before. Even though I warned him that the process would include a steep learning curve for a first-timer, he dove right into the project.

As he mentioned in the **Sport Aviation** article, he called me frequently to ask various questions. Questions about how to build the airframe are pretty straightforward. However, the question " *How am I going to do that*?!" comes into play more often when installing the various systems.

There is room for a LOT of customization with the various systems. I mean this isn't an RV-12, right!? Putting all of those expensive parts, i.e. engine, instruments, upholstery, prop, and so on depends on what parts you've chosen. And you have to make them all play nicely together!

It was during many of these phone calls that Darryl and I would discuss the various options for installing various bits and pieces of the various systems. More than a few times I had to simply say " *You'll figure it out*" which isn't an answer that puts a satisfying end to a phone call. Darryl (and others) would (and will) call my lineage into

question occasionally. But in the end, Darryl did figure it out... and has the accolades to prove it!

In summary, building an F1 or F4 isn't any harder than it was 30 years ago. But it isn't a kit that you can put together by blindly following a well-defined manual like many of the more "modern" designs out there have. The customization that is part of the F1s and F4s means that you'll have plenty of head scratching to do as you build YOUR dream aircraft.

It's worth it.

Tailwheel Problems
by Darryl Hudec

The Tire

The tailwheel on my airplane has been a little bit of an issue for me lately. It's a small component but, it deserves some elevated attention.

There are a lot of choices for tailwheels on the market. Blake at Flyboy Accessories has some nice offerings as well as Spruce and other vendors. I started with the 7 inch diameter Condor setup. The upside for me was that it is pneumatic, meaning it has a inner tube and absorbs bumps. Also, it weighs only 34 oz. The downside has been; it has a tube that is bound and determined to lose air pressure. I've had three flats in 150 hrs however, I haven't had a flat since making sure the tire pressure remains at 50 psi. The good news is that the tire side wall is stiff enough that I was able to continue operations even with a flat tailwheel.

I decided to try the offering from Spruce. It's a castor wheel made by R&K. The tire/wheel is the six inch diameter offering with balloon rubber. I liked that description because it sounds springy. I called R&K to ask them about the wheel. The guy I talked to acted a little surprised that their castor wheel was going on an airplane as he indicated the wheel was rated for three mph. The bearings are NOT sealed. There is a grease fitting on the side of the wheel. I didn't like the idea of pumping the inner cavity full of grease. I can just see that crap getting everywhere. I removed the bearings and hand packed them. The bearings seem a little cheap. I machined a couple of bushings as the hole id is ½ inch and the Tow bar bolt is 3/8 inch. The wheel is also a little heavy weighing 44 oz.

Blake has a similar offering referred to as the Deluxe Tailwheel Tire. It's a lighter wheel but it looks to me like the rubber was a little thinner which would be a little harder and not absorb bumps as well. Also, it has good quality sealed bearings. I didn't try it because I wasn't crazy about spending 120 bucks on another wheel.

I flew the airplane with the R&K wheel. A little of the smoothness was gone. I could feel the flaws and bumps in the taxi way transfer through the fuselage. On landing, I swear I could hear that thing spool up to the around 3700 rpm landing speed. After experiencing the smoothness of the pneumatic tire, I've kind of decided to go back to it. I'll carry an extra tube and some co2 cartridges for inflation if needed.

Tow Bar Bolt

by Darryl Hudec

Blake offers the Tow Bar Bolt which allows a tug to attach to the tail wheel. It is a great accessory except for that pesky cotter pin. I was continually hammering, bending, cutting, pliaring, etc to keep that thing from hanging up on the tow tug receptacle. I noodled on it awhile and came up with, for me, a good solution to the problem.

First I used a drill press to enlarge the cotter pin hole to a 29 drill then tapped the hole with

a 8-32 tap. Next I used a small cutoff wheel to slightly enlarge the gaps in the castle nut. Only a few thousandths is required. A trip to the aviation department at Ace Hardware

completed the project with a stainless 8-32 x ½ set screw. Now I don't have to kick the tug off the Tow Bar Bolt.

Note: a roll pin, or safety wire, may also cure the problem mentioned above. Vince

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Gear leg shimmy problems

Gear leg shimmy plagues many of the RVs and Rockets. We aren't alone when it comes to having this problem. Some aircraft don't have any issues at all, while some aircraft seem to be dancing fools.

Sometimes both gear legs are involved. Sometimes only one is prone to shuffling.

Typically, installing a set of wooden or fiberglass shimmy dampers minimizes the problem... but not always.

I'd like to get as many data points as possible from anyone who is flying a Rocket, whether an F1 or an HR2, and would even appreciate comments from RVers... though I'd prefer that they not enter anything in the survey.

The survey link below does not require that you enter any personal info, nor does it collect your IP address, shoe size, or Internet history. The survey providers take your privacy seriously because they cannot allow the surveyor to know stuff that they ought not know. I don't care about who gives an answer, so you can enter your name in the comment section if you'd like me to follow up with you. The survey should be open for 2 weeks. Assuming that I get any relevant info, or even if I don't, I'll report back on the findings in the next newsletter.

Please take the survey if you have a flying Rocket-type aircraft: Gear leg shimmy survey

Thanks

One press brake wasn't enough, so we bought another one. We also bought a smaller, brand new Langmuir press brake for the smaller stuff, i.e. steel weldment parts.

We also bought a nice Webb CNC mill.

Sheesh... we got the toys!

Hey, you know what they say about someone who dies with the most toys. Well, they're still dead, but their heirs get to have a big auction! Let's hope that doesn't happen anytime soon.... 0:

RV-9 wings and tail for sale

See my ad on the Van's forum: RV-9 wings and tail

Basically, these wings and tail parts are nearly to the QB stage. If you're looking to build an RV-9, well it's not a Rocket, but I'll understand. You should snap these up immediately!!!!

Located in Kokomo, IN. Contact Vince for more details, more photos, etc.... act fast.

$6750 OBO cash. The buyer will get the paperwork to transfer the Van's s/n also.

Vince vincefrazier@gmail.com

RV-4 completed wings

Partly converted for F4 use.

$3500 OBO. They need to go!

Contact Vince vincefrazier@gmail.com

These wings include sealed fuel tanks, and are of good workmanship. They could be converted back to RV-4 use if needed. All splice plates, flaps, ailerons, etc. are included. I have the s/n and it should be able to be transferred to the buyer. Not everything is shown in the photos.

F1 Rocket Sport wing partial kit and complete Mk3 tail kit

This is a one-time only item. When it's gone, it's gone. These parts are NOS and untouched. Probably not even dusty because they've been in the sealed boxes since January 2022.

The parts in the photos above are typical, but not the actual parts, which are in sealed boxes. Not all of the parts are shown.

The Sport wing partial kit consists of:

- F-004 fuselage bulkhead set for the Phlogiston spar, with splice plates
- **Phlogiston** rear spar set
- **Phlogiston** main spar set
- Sport wing ribs - large tanks - Sport wing rib set - **55 gallon tank option** - includes additional tank ribs, 54 ribs total (*note: 42 gallon tanks are standard)
- Sport wing leading edge skins - Sport wing leading edge skins for 55 gallon fuel tanks

These are the primary components of the Sport wing. You'll need flaps, ailerons, main skins, and various other small parts, but the primary structure is there.

The Mk 3 tail kit includes:

- Everything needed to produce the current version Mk3 empennage

The buyer will be assigned a builder number.

Price $17,500

Contact Vince vincefrazier@gmail.com

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