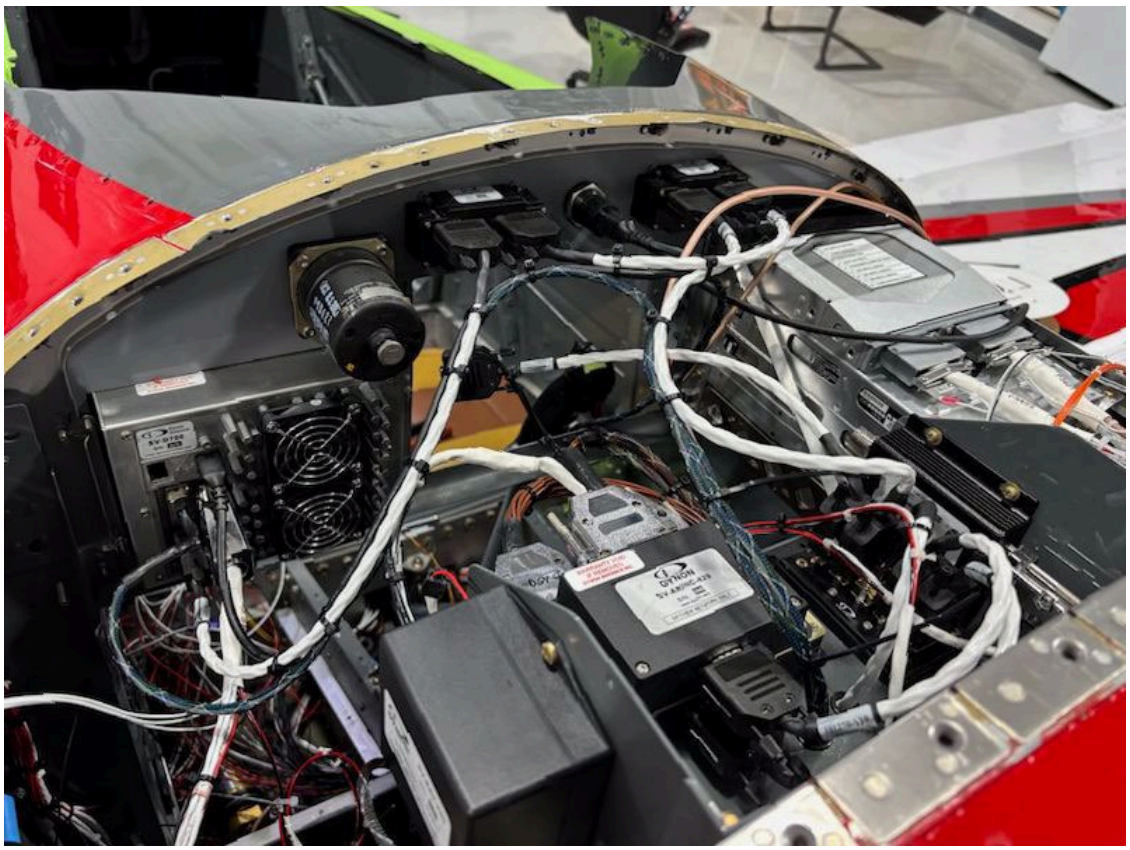
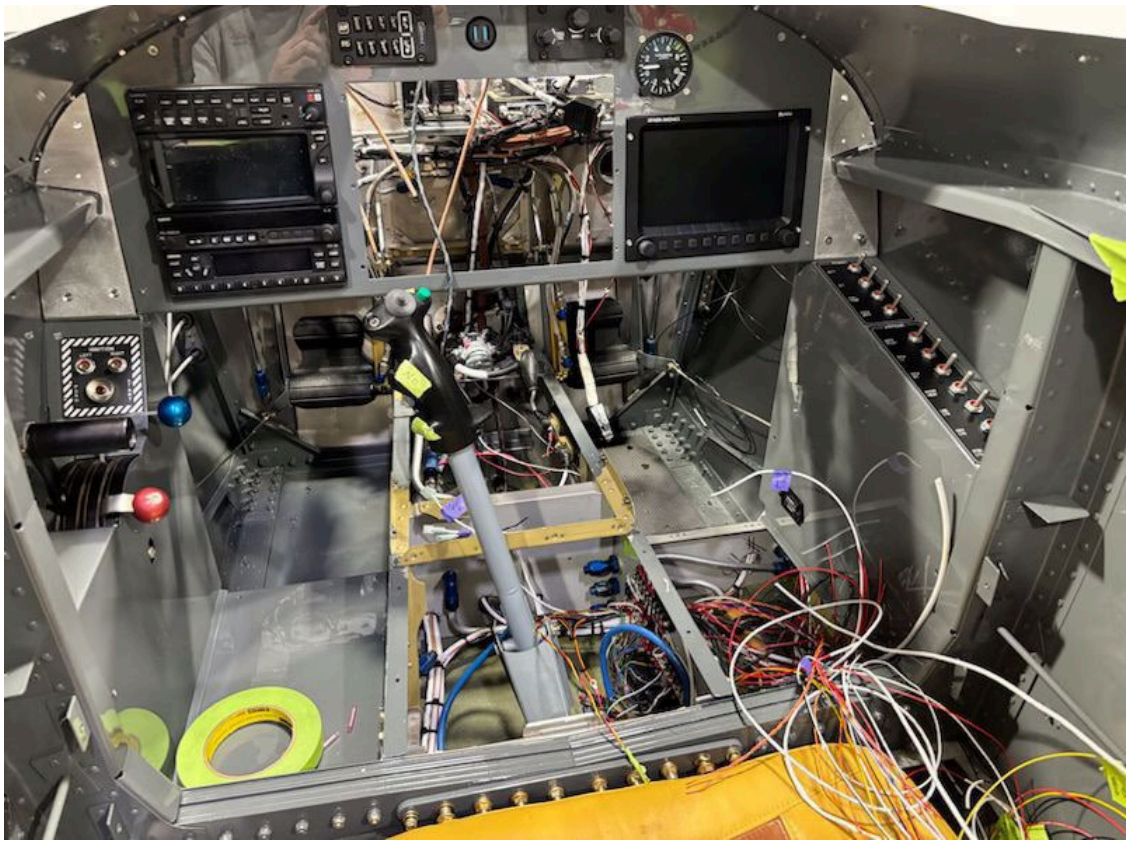
Team Rocket
www.F1Aircraft.com

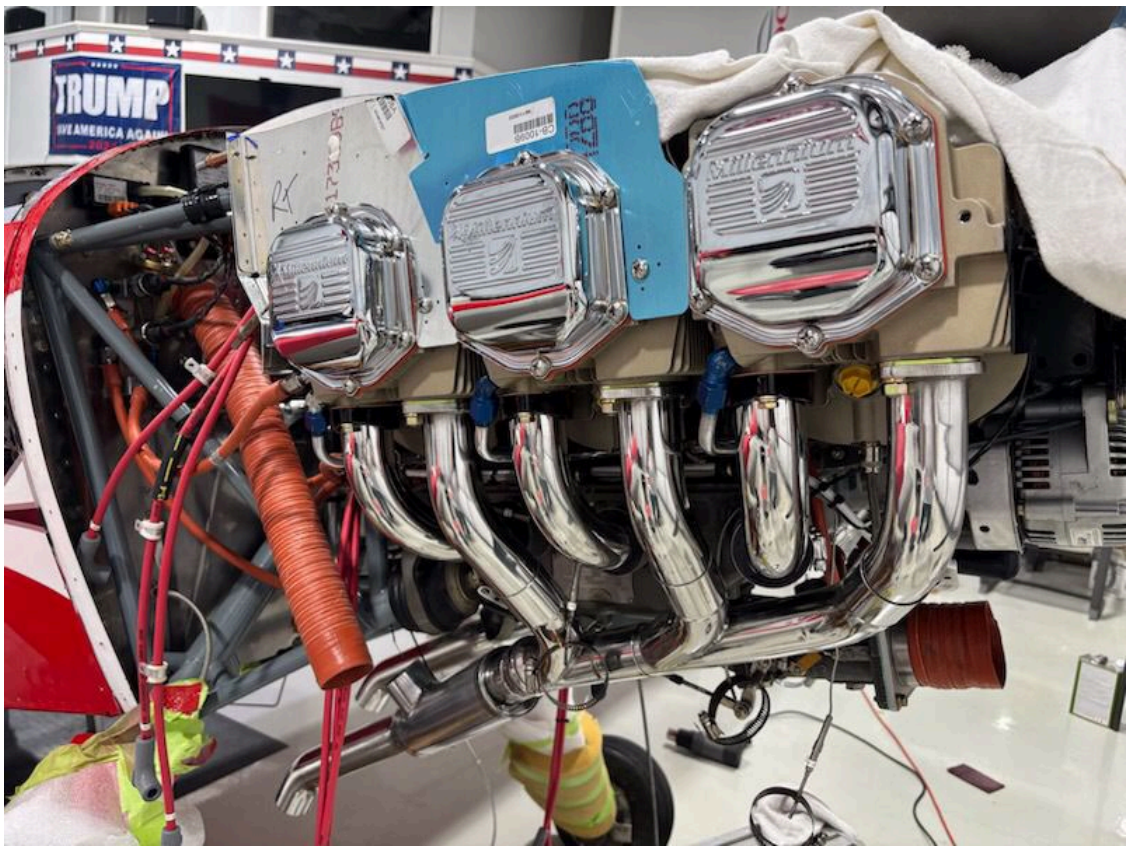
Team Rocket newsletter - 4-5-2024

In this issue:

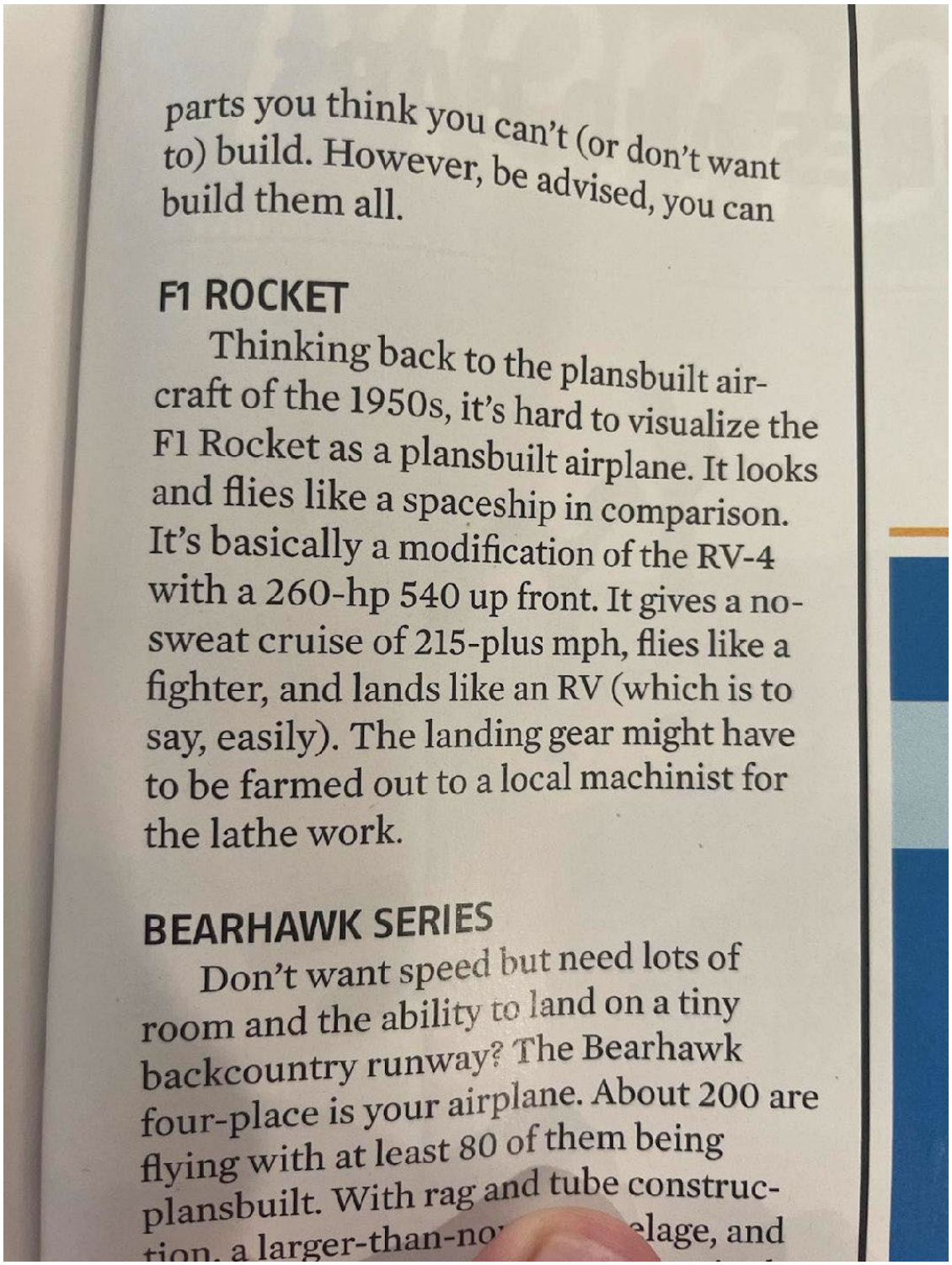
- Brad Hood project photos
- A scratch built F1 Rocket?
- Todd Nichols F4 Raider flies
- Flap motor squawk
- F-wing update - control surfaces
- Other stuff for sale







Brad Hood is reworking another F1 Rocket with his usual magic: polished everything, new panel, new paint, and a million other "Wow! Look at that!" tricks. Brad hopes to be flying soon.



parts you think you can't (or don't want to) build. However, be advised, you can build them all.

F1 ROCKET

Thinking back to the plansbuilt aircraft of the 1950s, it's hard to visualize the F1 Rocket as a plansbuilt airplane. It looks and flies like a spaceship in comparison. It's basically a modification of the RV-4 with a 260-hp 540 up front. It gives a no-sweat cruise of 215-plus mph, flies like a fighter, and lands like an RV (which is to say, easily). The landing gear might have to be farmed out to a local machinist for the lathe work.

BEARHAWK SERIES

Don't want speed but need lots of room and the ability to land on a tiny backcountry runway? The Bearhawk four-place is your airplane. About 200 are flying with at least 80 of them being plansbuilt. With rag and tube construc-

tion, a larger-than-no elage, and

A scratch built F1 Rocket?

Page 95 of the April 2024 issue of SPORT AVIATION magazine certainly caught my eye. An article by veteran writer, Budd Davisson, about the possibilities of plans building various homebuilt aircraft surprisingly included the F1 Rocket. The F1 Rocket has traditionally been a QB kit until we began producing parts to put together SB aircraft in 2017.

I guess I was surprised because even the Harmon Rocket IIs weren't plans built, but are conversions of an RV-4 kit.

Mr. Davisson mentioned that you might need the local machinist to help fab the gear. That might be accurate for the HR2 gear, but the F1 titanium landing gear require much more than simple lathe work. You'd also need a large mill, special fixtures, and some serious motivation. You'd also need the matching gear leg sockets, which have an inside taper, a gap, then straight bore, are made in 2 pieces, and then welded together, and then given a final reaming after welding the assembly to the engine mount. It's not a simple system!

I am unaware of any plans available to build the form blocks required to stamp out all of the parts needed. Not that it's impossible, there are always builders out there with mad skills who can build anything (not me!), but for the average builder, plans building an F1 or F4 isn't really feasible.

OTOH, any press is good press and Mr. Davisson's comments on the F1s flying like a spaceship, or a fighter, and landing easily.... well, who can argue with that!?

Overall, Mr. Davisson's article was very good. I'd be happy to offer him a cold drink should he drop in at Oshkosh to see how our new tapered wing is progressing. :)

Todd Nichols flew his brand new F4 Raider recently.

Todd writes:

I couldn't be happier with the way it flew. A couple electrical squawks which are easily remedied in an hour.
Takeoff was uneventful. My RV-4, which I love, but it *(the RV-4)* is a delightfully twitchy SOB. The F-4 had no twitchiness around any axis at all. Was both incredibly solid and nimble. I have to say that I was impressed with the overall balance of the plane.

It's got a 228hp IO-360 *(angle valve)* with about 3 hours on it. So it I was trying to find a balance of keeping my power up to heat up the engine for break in vs pushing first flight limits.
Taking off the first time, the airplane is rigged perfectly. Hands off with NO roll rate at all. Looking back at the elevator, the elevator horn vs the horizontal, there was only about 1/4 to 1/2 an inch difference. With a little weight in the back I think it'll be perfect.

I cannot get over the handling characteristics of this plane. Both light, nimble, and stable. Again, I think I was expecting RV-4, which it was not. Huge improvement!

I have a ground adjustable GT - 3BL prop, which I have adjusted to a rough pitch of 73° giving me a static run up of about 2150 rpms.

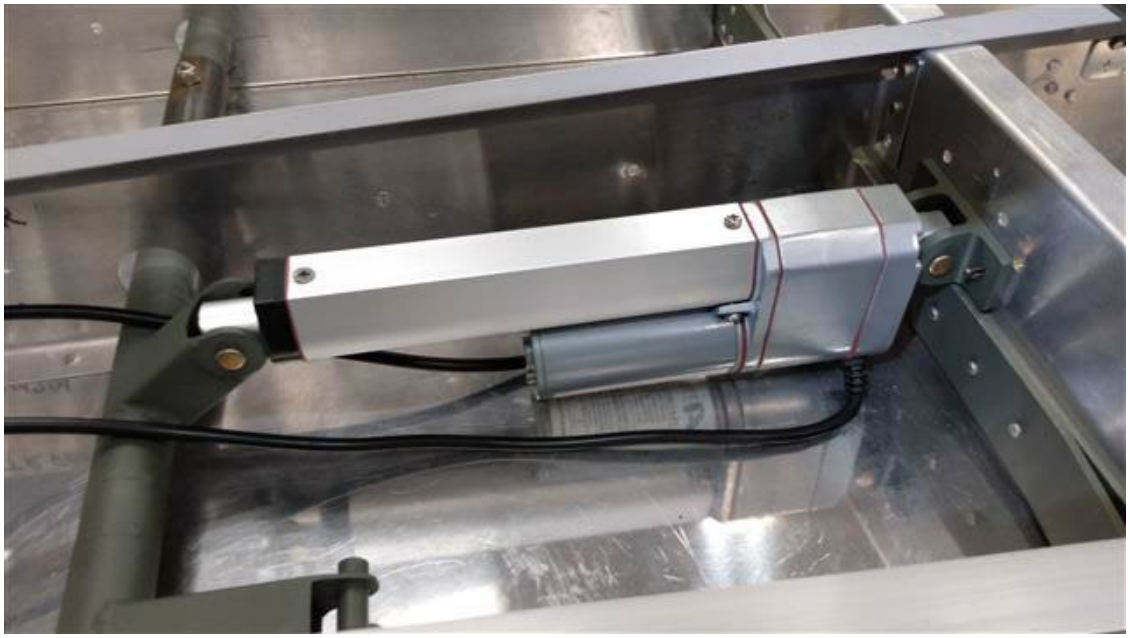
Once in flight, my plan was purely to get it off the ground, fly for 30 mins about 2500 feet above Roosterville, get the engine hot, fly a number of box patterns to calibrate the airspeed, and land.

At the prop setting I have, I was roughly turning 2600 rpms but my manifold pressure was all the way down to 20 inches. So obviously I have it way under-pitched. With the current setting of pitch, I was averaging 150kias in my box pattern at roughly 55% power (estimated). So power wise, there is a lot left on the table. I'll have to play with the pitch a bit.

After it sat, I started back up and the engine was acting up. I think there is something stuck in the #1 fuel injector. Easy fix hopefully. Either that or oil is getting past rings and fouling the plugs. Most likely it's FOD from 6 years of building.

All in all, a very successful flight. The airplane exceeded all my expectations in every way.

Todd Nichols

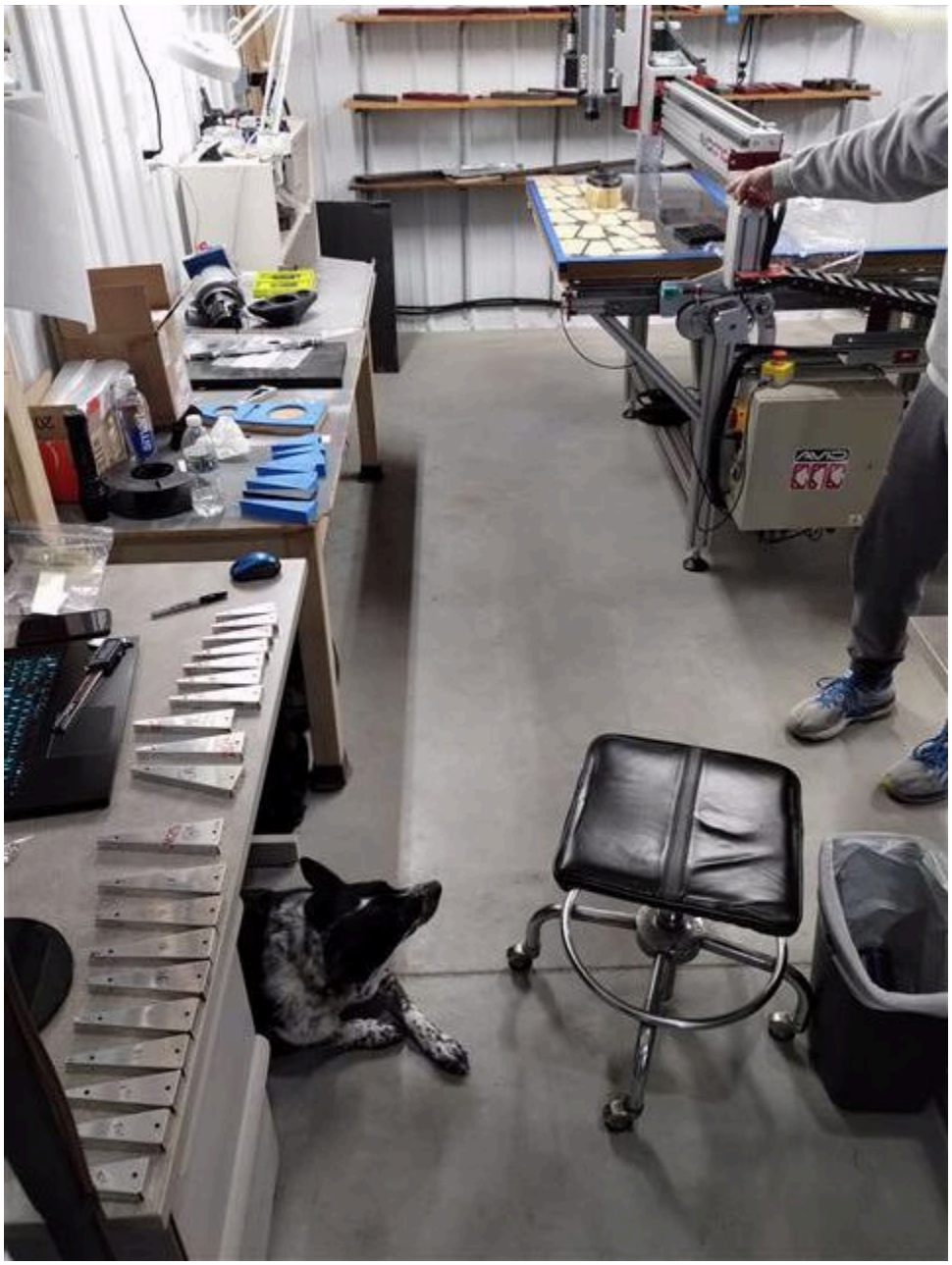


Flap motor squawk

Todd Nichols reported an issue with his flap motor linear actuator. His flaps retracted spontaneously in the air. Obviously that isn't something we want to happen!

I updated the installation document to discuss one possible cause. It is possible to unscrew the actuator shaft during construction. This could leave inadequate thread engagement. This could have caused the problem that Todd saw, but I can't confirm that.

Please refer to the "UTF Flap installation guide - rev 2.pdf" document which may be found in the Dropbox info cache in the "z -PDFs and other text information" sub-folder.



F-wing update

The F-wing control surfaces are being fabbed up in the shop. In the photo we see a bunch of the relatively small aileron ribs on the left, guarded by Jade the vicious killer.

In the background, we see the blue, 3-D printed form blocks. All I can say is that 3-D printing is a game changer that allows very quick updates to be made while prototyping parts. And you can make things that you'd otherwise spend hours on... like form blocks. This is too dang cool.

And on the upper right we can see the CNC router that just spit out the flat blanks for the aileron ribs. Also too cool.

That's Toby on the right, cowering in fear, while Jade growls softly. Toby had better just get back to work. LOL.

The real Jade... a sweetheart.

Items for sale. Some are repeated from the last issue:

See the previous issues for details. The previous issues can be found in our Dropbox repository or at [Team Rocket newsletters]

- F1 QB kit, all original, untouched, complete kit, Sport wing, $89,000 OBO Contact Vince for more info. Photos above are of this QB kit, but only show a fraction of what's included. More info at F1 QB kit for sale
- RV-4 completed wing - partly converted for F4 use. $6500 OBO. Contact Vince
- Luscombe 8F. Contact Ray Ward 4luscombes@gmail.com 843-263-5816

Vince Frazier,

Frazier Aviation Products LLC
7237 South State Road 75
Cutler, IN 46920-9617

www.f1aircraft.com
812-449-0230 cell (no texts please)
We are a Team Rocket authorized distributor

www.flyboyaccessories.comwww.cleavelandtool.com
to reach Blake:
toll free 1-888-835-9269
or 1-888-8FLYBOY

View this email in your browser
You are receiving this email because of your relationship with Frazier Aviation Products LLC.
Please reconfirm your interest in receiving emails from us. If you do not wish to receive any more emails, you can unsubscribe here.

This message was sent to ammenti@sbcglobal.net by vince@f1aircraft.com
Frazier Aviation Products LLC, 7237 South State Road 75, Cutler, IN 46920-9617

VerifiedUnsubscribe℠ Unsubscribe | Manage Subscription