Team Rocket

www.F1Aircraft.com

Team Rocket Newsletter August 13, 2019

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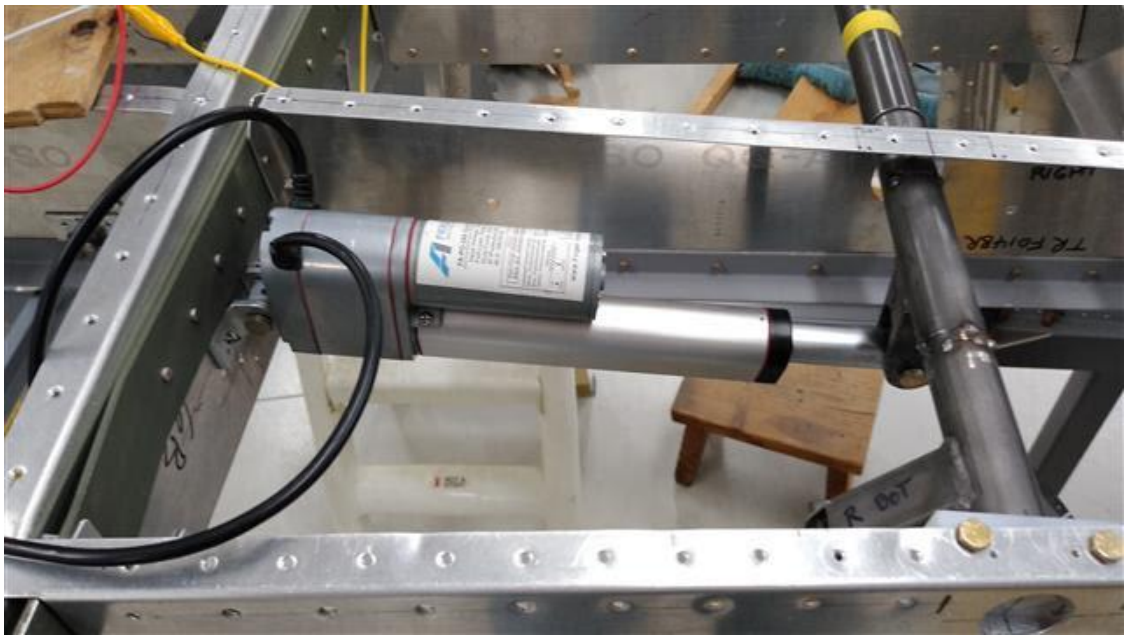
Frazier F4 Raider fuselage:

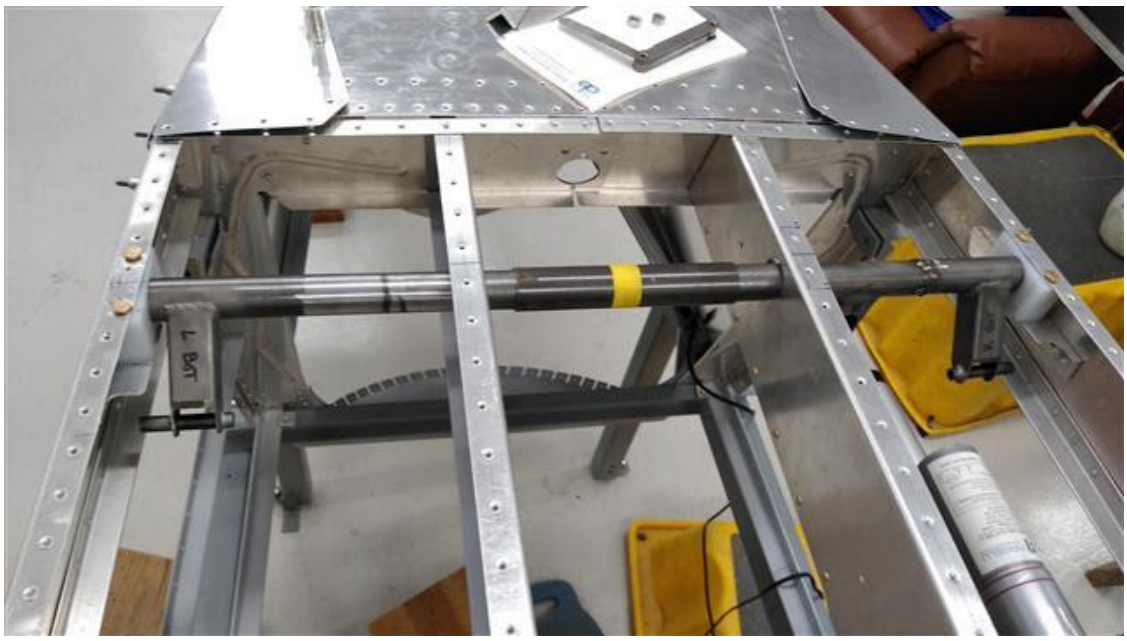
My fuselage is finally out of the jig. I went ahead and put it on the gear so that it would be easier to display at Oshkosh. That's a bit out of normal construction order, but it works.

It also gave folks an idea of what a QB fuselage would look like, less the gear installation, of course.

So, if you're interested in a QB fuselage, this is what you likely can expect from the QB shops. You can contact the shops directly using the info in the Builder's Assistance link on our website.

For those choosing this route, be sure to read and understand the FAA requirements for registering your bird. These are touched on below in the "FAA rules, regs, and best practices for registration" section.





Flap Progress Update:

The photos above are a bit out of date, but they still convey the general idea.

I received the "F" brackets back from machining today. We should be able to send out the first few pre-production prototypes to interested builders soon.

The steel parts will be powder coated, the aluminum parts will be bare, the actuator is included, along with a drilling template guide, "F" bracket, HDPE blocks, angle brace, hardware, and general instructions.

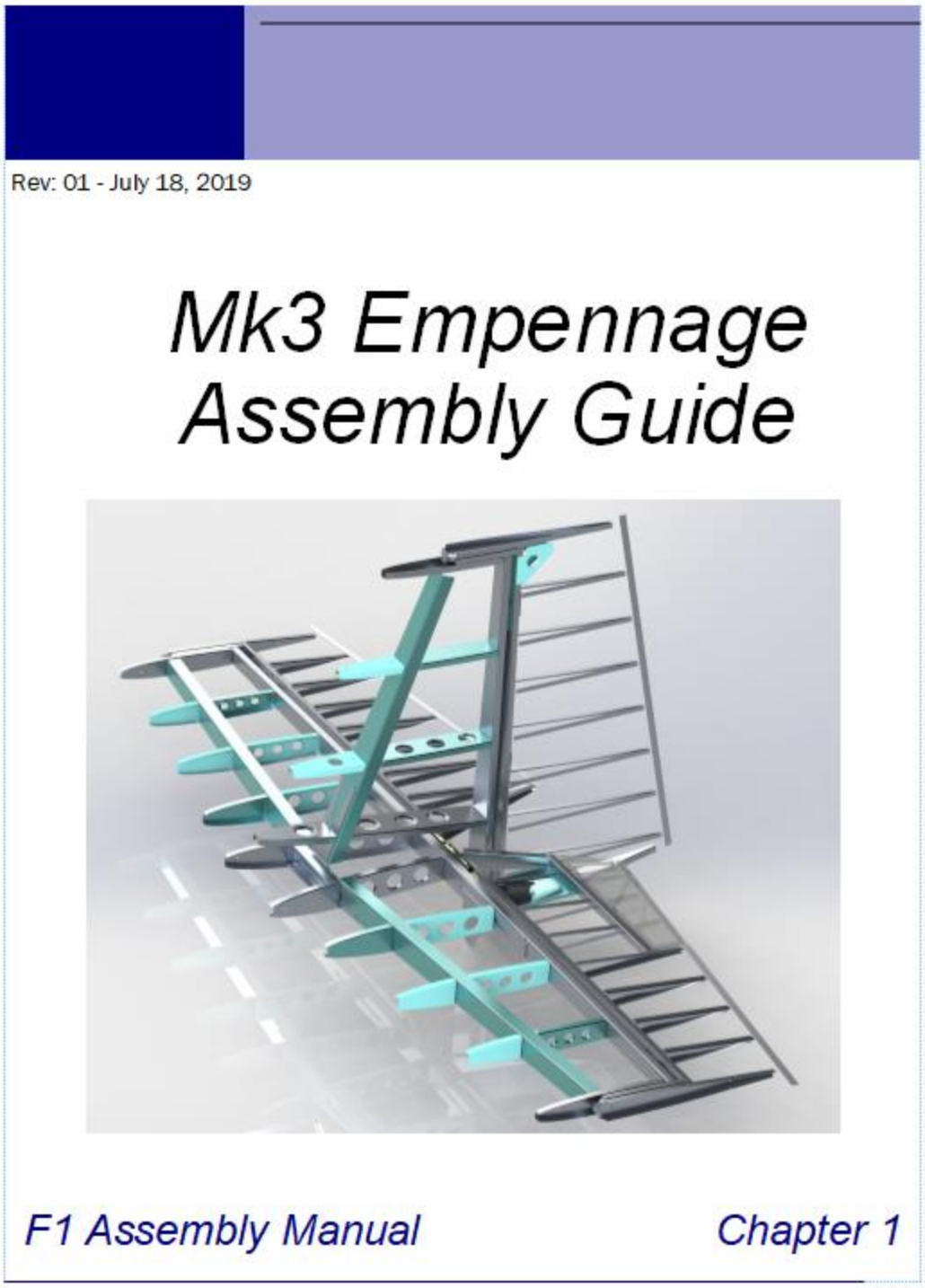
You will need to provide limit switches, or wire it into your compatible Garmin, or similar, avionics magic box.

The actuator limits itself in the retracted position. However, it is advisable to consider installing a "crowbar", or similar fail-safe circuit tripping device to prevent the actuator from over extending. It's quite powerful and might likely damage itself, or the related components.

Mk 3 empennage kits here now:

We've been out of stock on Mk 3 kits for several months. The big crate full of Mk 3 empennage kits arrived while we were at Oshkosh.

For those who were waiting, we'll be in touch as soon as we can get the parts sorted and packed for delivery. Thanks for you patience.



The long awaited Mk3 assembly manual:

After many false starts, and a lot of help from our builders, we were finally able to put together the assembly manual for the Mk3 empennage. Use the manual in conjunction with your other sources of information, a healthy dose of common sense and patience, and you should do just fine.

As a wise man in Texas used to say "Read the ****ing manual!" Well, now there's no excuse not to do so! But seriously, read it, then think about it, then read it again. Make notes all over it with how YOU plan to proceed.

The empennage manual, and loads of other information, may be found on our Dropbox info cache folder: Dropbox photo and info cache

Kindly keep the dropbox link to yourself. If it gets hacked, or encounters bandwidth issues, I'll move it all to a much less accessible place. I suggest that you periodically download a copy to your PC and access it offline.

Gear leg installation and alignment tips

The original manuals need a bit of updating in the gear leg installation and alignment section. Until they're updated, here's a few tips:

1) The inner cone area in the engine mount gear leg socket has to be rust free, and particle free too (clean). It is necessary to grease this area to prevent corrosion. HOWEVER, you MUST wipe the tapered area of the gear leg socket to remove ALL excess grease. You want a thin, almost non-existant, layer of grease to protect from corrosion, but not enough grease to prevent the gear leg from seating in the taper.

Do not add grease to the titanium gear leg. It doesn't need it.

Note: *It is the taper that secures the gear leg and NOT the large nut. The nuts ONLY purpose is to draw the gear leg up into the taper.*

2) Check tightness (50 ft/lbs) of the large nut at installation, 10hrs and again at 25hrs, and every year (annual time) too. As the gear heats/cools, and rumbles down the runway, the gear leg will continue to seat itself in the taper for a period of time.

3) Wheel alignment should NOT be done as shown in the manuals. The benchtop procedure produces variable, and usually poor, results. It is FAR BETTER to set the wheel alignment when the aircraft is nearly complete, with about 1600# on the wheels, and the tail on the ground.

We recommend using the gear leg clamps shown in the photo above to hold the initial, coarse alignment while constructing the aircraft. Then when the aircraft is nearly complete, follow the instructions in the gear leg socket clamps PDF file

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Aerobatic gross weight

There is a misleading statement that somehow crept into some of the older manuals, and possibly other literature, regarding the aerobatic gross weight (AGW) of the Rockets.

The gross weight of an F1 has always been 2000 pounds. However, the gross weight should never be confused with the aerobatic gross weight, which is much less.

We will attempt to more closely define the proper number in the future. It is expected that the true AGW will be somewhere around 1600# In other words, no aerobatics with a passenger.

No aerobatics with a passenger has always been the recommendation for these aircraft and will remain that way. Physics doesn't care what you WISH you could do, and the FAA says parachutes are required for acro. There simply isn't any prudent way to bend the laws of physics, or the FAA regs.

Also, get proper training before attemping any areobatics, regardless of what you fly.

Rules, regs, and best practices for registration

I talk to the folks at the FAA on an irregular basis. Today I chatted with one of the local inspectors about the 51% rule, bills of sale, and registering your new baby once the time comes.

There are some IMPORTANT things that you need to do to make this go smoothly. I'll hit a few here, but this list is not intended to be exhaustive. Your FSDO may interpret the regs differently (although you'll never get them to admit it) so it's always a good idea to develop a working relationship with your inspector, or DAR, so you don't overlook important details that they want to see from you. Do this early in the process!!!

At a bare MINIMUM, do these things:

1) Join the EAA. Not required by the FAA, but they look very highly upon anyone who is a member AND makes use of EAA resources. Here's an example: https://eaa.org/eaa/aircraft-building/building-your-aircraft/while-youre-building/registering-your-homebuilt-aircraft

2) Keep an accurate builders logbook. You WILL have to prove that you built the plane. Photos, log entries, receipts, test pieces, fabric swatches, and any other similar tidbits soothe the FAA inspector (or DAR) and make them gleeful. Positively giddy. They are here to help you, so make their job easy.

3) Visit the FAA website when you're ready to reserve an N-number. Do this well ahead of time, at least several months, so that you positively have the N-number you want reserved in your name.

4) Visit the FAA website and take a look at their registration requirements. There are many places to look. Here's one: ***FAA order 8130--2J***

Pay attention to appendix B which details the documents that the FAA requires to register your project.

You can also get assistance from the EAA with your registration. They can provide various publications, assistance with questions, and help guide you through the process.

5) You MUST have the proper bills of sale for the kit(s) that you buy. I can provide a bill of sale for the kit(s) that you purchase from Team Rocket. That's an easy one. HOWEVER, if you buy kits from other individuals, or other kit manufacturers, **YOU** must make certain that you also get the necessary bills of sale.

What that means is that you'll want to be sure to ask for a signed form AC8050-2 from anyone, including any individual who sells you a second-hand tail kit, wing kit, etc. ***Read that last sentence again!***

6) Determine if your project meets the 51% rule. This can be important if you've picked up kits, parts, or assemblies from various second-hand sources. The FAA provides this document to help you along. ***Amateur-Built Fabrication and Assembly Checklist***

7) Other useful links:

- Hints for Homebuilders video series
- EAA technical counselor program
- EAA Amateur Built Sourcebook

Team Rocket kits have been successfully registered many, many times. Be sure to do your due diligence up front to avoid any problems later.

Oshkosh 2019

Yeah, I know it's called Airventure now, but it's still simply "Oshkosh" to me. As near as I can tell, 2019 was the 34th time I've attended. Dang. Talk about something to make you feel kinda old!

Airventure 2019 started with a deluge on Friday and Saturday. Campers were stuck in the mud and arrivals were mostly stopped until Monday unless you had a parking reservation on a paved ramp.

Blake (www.flyboyaccessories.com) and I were moved about ¼" mile south from the previous homebuilt display area. This new area previously had some buildings that were overdue to be torn down. The new spaces are quite nice. Hats off to the EAA for getting the new area ready in time for the show, and the deluge! Happily our spaces dried out very quickly.

We were blessed to have several builders helping us at the Team Rocket display. Darryl Hudec, Milanka Hudec, Ray Ward, Jurgen Fuchs, Paul Romano (not in photo) and several others were gracious enough to help answer questions and generally keep me from passing out. It's a long week, and plenty hot too!

Ray Ward brought his newly constructed, first flight 12-23-18, F4 Raider to the show. Ray is on the left. I'm on the right. I was very happy to have it on display at the Team Rocket booth. Ray even had the boot cowl and main cowling off for most of the week so that interested persons could see the insides. That was very nice!

Darryl Hudec, who arrived home from picking up his QB fuselage this past weekend, is known to be a meticulous builder, and possibly wound a bit tight (like all of us!). Darryl was presented with an award during the show, complete with a certificate and a metal sign. From now on, the mantra shall be ***"Keep Calm, and build the plane."*** After all, real emergencies happen in the air, not during the construction. Having said that, Darryl is a GREAT guy, and doing a GREAT job on his F1. I'd fly anywhere with him. From left to right: Paul Romano, Darryl Hudec, and Vince Frazier.

Everyone wants to sit in one!

Ray Ward gives an F4 Raider cockpit tour to one of Van's employees. I missed his name, but this is cameraderie as it should be! Aviation owes a huge debt to Dick Van Grunsven. We're all better off because of the great designs, and spin-offs, that have happened through his vision.

Meanwhile, next door at Flyboy Accessories...

Blake Frazier is interviewed by Steve Ashby from *Kitplanes* magazine for their daily news email. You can see the interview article here: Young entrepreneur building his business at Oshkosh If you think I'm a proud papa, you're right.

Everyone needs their 15 minutes of fame

A random camera crew showed up, mic'd me up, and proceeded to interview me for some mystery show that will allegedly show on the Fox Sports network next April. I can't really say much more, because I don't know anything more!

Sheesh, this is getting ridiculous!

Yet another camera crew showed up on Sunday morning as Ray Ward and Jurgen Fuchs were preparing to leave. I think Ray and Jurgen put them up to it. I don't know what they were filming, or if it will ever be aired anywhere, but they also interviewed me, then shot some extra video of me reinstalling the glareshield in Ray's plane. If I'd have known, I'd have showered and shaved before we started working on the plane!!

Oshkosh calorie requirements

It's critically important to maintain hydration and calorie intake during the long, hot, grueling show. There are many ways to accommodate your body's needs, but we've found that barley and hop based energy drinks seem to work well. Also, a new found love of mine.... Vegemite. Yeah, that nasty brown Australian stuff... is actually quite good on crackers with the proper adult beverage.

KMTO mushrooms

An Oshkosh tradition and a great place to fly-in for lunch. KMTO is Mattoon, IL. Check the NOTAMS because they are working on the runways and taxiways.

The Airport Steakhouse is the place to get GREAT food when traveling by air or car. Julie is always our waitress and she is a hoot. Order a giant tenderloin and a basket of mushrooms... enough for 2, or more... and enjoy your meal while watching the airplanes come and go.

FlyLEDs - available from www.flyboyaccessories.com

Paul McVitty, shown here watching the aircraft with Blake Frazier, provided the Vegemite mentioned above. On the right is Michael Scholz, our favorite intern/shop assistant.

More importantly, Paul is the brains behind the FlyLEDs aircraft lighting. His products are truly amazing... and BRIGHT. Yet, they don't create any radio static, popping, or hiss, like some other well known LED products. Check them out.

QB fuselage

QB fuselages are in very limited production. Very limited. Nonetheless, they're beginning to trickle out into the world.

Darryl Hudec did indeed move his QB fuselage in the container that you see in the photo. He claims that the streamlined shape increased the MPG on the way home. I'm suspicious, but it does look like a giant wheel pant.

Tapered wing update

Paul and I are busy stamping test ribs, trying to optimize the process. Once we are confident in the stamping process, we'll see about getting the first prototype ribs stamped.

Meanwhile, a super individual, who shall remain unnamed for now, was able to form 4 sets of spar C-channels for us. The other primary spar components can be easily cut on the water jet, or other CNC. I can do those here, and have already cut a set of mock up parts out of plywood and trim coil aluminum. I plan to hang the spar mock up parts in my man cave.

Using the forum -vs- using the telephone

I've been overwhelmed with phone calls since Oshkosh. On one hand, that's good, but on the other hand it absolutely means that I can't get other, very important, work done. Particularly, if the caller wants to chit-chat. I like chit-chat, but I just can't spend 30 minutes on each call. :(

While it's great to be able to get a question answered on the spot, it is also good to have a record of your question for others to see.

I want to take a minute to remind everyone that we do have a Team Rocket forum. I'd really like for general questions to be posted to the forum. If you have a time-critical question, you are welcome to contact me, preferrably via email. As a last resort, you can use the telephone. If I can, I'll answer.

Never, ever send me a text. Nothing ever invented wastes more time than texting.

Thanks,
Vince

CLASSIFIED ADS

The classified ads are a free service. You are responsible for any transactions you may make. Team Rocket and Frazier Aviation do not endorse, approve, disapprove, or do any background checks related to these ads.

New in box, Josh Smith's Mk3 empennage kit was shipped in late 2017 or early 2018. It is complete and untouched, but technically "pre-owned." Josh is asking $3000 OBO.

The older kits are substantially the same as the newest kits. The very minor differences include the lack of pre-punched stiffeners, and a few other very minor tweaks to hole layout, trim tab skin, but nothing detrimental to the overall kit.

Contact:
Josh Smith
817 Spur Ct.
Rocklin, CA
95765
joshuasmith.362@gmail.com
858-752-9761

Ray Ward has a completed and flown Mk3 empennage for sale. Ray removed the Mk3 tail in favor of a custom built RV-4 tail. The RV-4 tail is several pounds lighter, which enhances rear seat capacity, but the Mk3 had no problems.

Contact Ray for details.

Ray Ward 843-263-5816
4luscombes@gmail.com

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http://www.skyterrier.net/N904DC/index.html

MANY more photos and info on the website URL above.

2005 RV9A - $74,000 - ***Note: this is a price increase from last month due to a substantial amount of work done to the aircraft.***

TTAF 586 SMOH 1,185
STOH 335 [new ECI cylinders]
Annual due 08/2019

Lycoming 0320 160HP
Sensenich fixed-pitch

VFR. Avionics: Glass Panel
Garmin G3X Classic (2)
GTX 335 ADS-B Out Transponder
GMC307 2 Axis Autopilot with
GDL39 ADS-B IN Receiver
GSU25 AHARS

GMU22 Magnetometer
GTP59
GTR 200 Com Receiver
GSA28 Servos (2)
GEA24 Engine Monitor
GDU370 PFD; GDU375 MFD (with XM receiver)
GI-260 Angle of Attack Display w/Garmin AOA Pitot
new Carbon Panel (rewired 2017)

Contact Steve Eberhart, friend of family, at 812-422-4525

Email to: steve@newtech.com

Name: Mark Pankhurst
Email Address: mpankhurst@sgl.com
EngineType: IO540-K1B5
Price: 16,500.00 USD
Comments: 300 HP engine recently removed from Canadian certified aircraft, 1597.1 TSOH in 2007, removed due to 12 year calendar time. Engine was running well and was inhibited per Lycoming Service letter.
Contact Mark at 613 521 9626 ext 142
Ottawa Canada

Please note: The angle valve engines will not fit in a stock F1 cowling. They are also too heavy for an F1. Thanks, Vince

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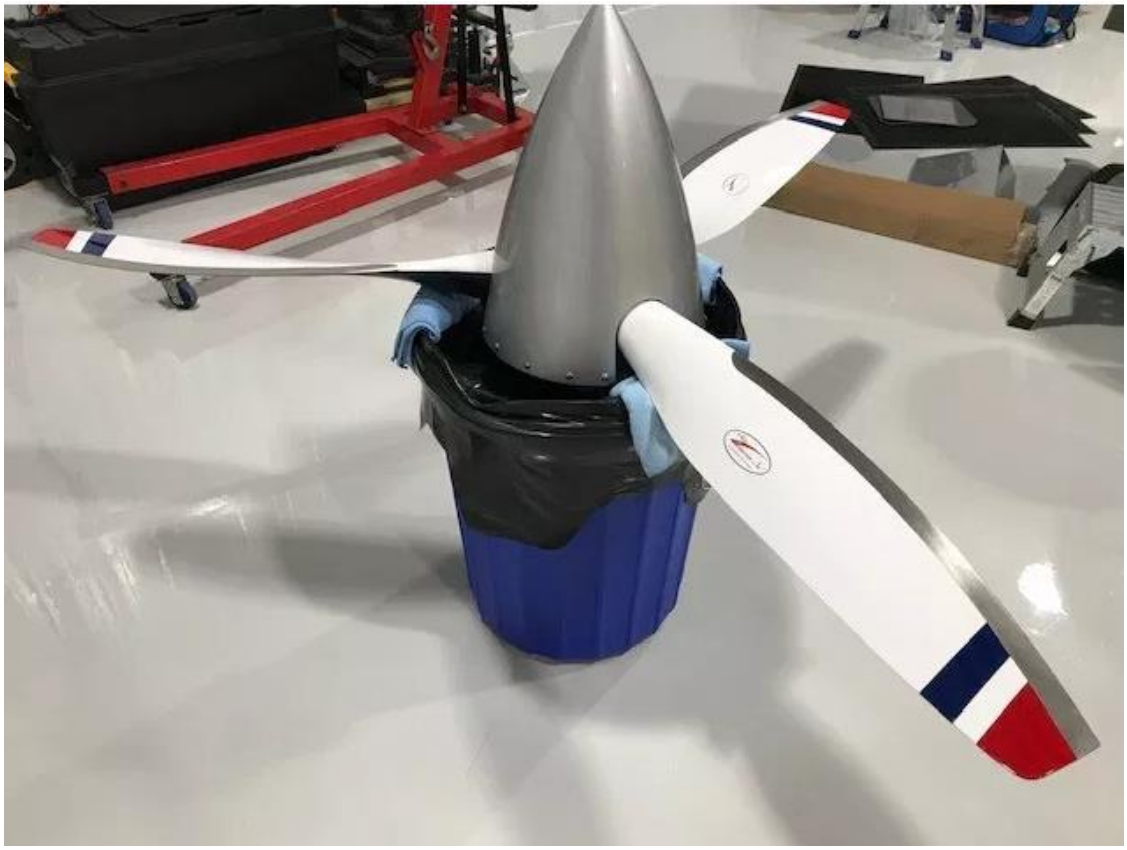

AeroComposites 3 Blade Propeller
Absolute top of the food chain in composite propellers. Supported by American Propeller in Redding, CA.
Heavy duty McCauley type hub. No ADs.
Experimental 76” prop fits IO540
Fits Rocket, RV-10, etc.
Fresh hub overhaul and brand new blades. Essentially new propeller for an unbeatable price!
$6000 OBO
Brad Hood
Clark County Regional Airport KJVY
Jeffersonville, IN
502 649-8326

Until next time, fly safely and build on!

Thanks,

Vince Frazier
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