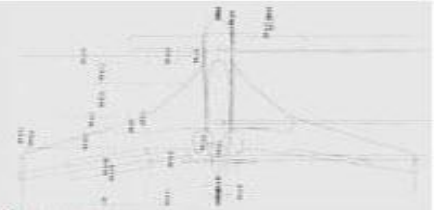


Squadron III

The only monthly dedicated All-Canard flyers newsletter
for events, resources, updates and more in the canard flying world.



July 2018

Volume VIII, Issue 7

Picture of the Month:



Bill James' very clean Varieze

RUTAN TIME:

Steve Briggs built an early Varieze – he commented: *"I might pass along an early Oshkosh memory... Burt was giving a tent presentation and his mom and dad were present. One of the things his mom said was that quite memorable. She told an early Burt story of a time when he was paid for work/chores he had done. They took him to a model store with his pay. Instead of coming out with a nice snap together model he came out with a bag full of balsa wood, glue, paper, tape and wires. Right there, she said, they knew he was a special kind of aviator."*

Promoting the Breed:

THE BIRTHDAY PARTY:

Tonya and Beagle worked up a Burt & Dick's Birthday Party at Coeur D'Alene for June 29-July 1. It was much more intimate and Burt had enough time to talk to

about everyone who was there, which was a great treat for everyone. He fell into a wonderful deal on the show house on the lake, and he's hung up all his awards and posters and photos from the years of developing all the planes. He had a Mavic Drone connected to his iPhone:



(what a view)

Burt used the drone to take this photo of "the cabin":



Tonya had help from her family and dancing girlfriends and they did a bang up job with food, entertainment, transportation and arranging some places for several guys to doss down in the Rutan "Condo" wing and a couple of their friends also threw open their homes for a number of lucky guys; two guys slept in their vans seen in the photo above. (Beagle got the assignment on the 28th to find people who could cancel their hotel rooms without fee. Several were already on the road, flying to Idaho.) We had guys jet in from the East Coast, Sorenson brought his wife in his Defiant from Virginia, by way of Friday Harbor, WA (the weather was a challenge getting out of the Seattle area) and Bill James brought his lovely Varieze three hops from Texas (see the photo of the month, above) leaving Texas a day early - which proved lucky with the bad Rocky Mountain's weather on Friday, and Bill's arriving early gained him a parking spot in Burt's Honey Badger hangar along with SkiGull, Dick Rutan's Berkut and later my Berkut - so 4 hangered planes weren't in the EZ line up photos below. We moved all the extra planes out of the hangar on Saturday to make room for the large crowd that came.



Dick's Berkut, New SkiGull skis in fabrication in the foreground.



Sorry for the fuzzy photo, but the event was not so large that we couldn't all spend some time with Burt, Dick and Tonya.

Burt spent hours talking about all manner of things, opening up for questions to a large group at his house after dinner – then on Saturday he and Dick took the mike and talked for hours more while a video historian team videoed various people and Burt



Then Squadron member Joe Person took the SkiGull up and flew it as we all watched
- it looked great!



Note the original white ski section and the added retractable main wheel compartment, the deeper vertical tail and outboard verticals which lead into electronically trimmed augmentation rudders which nicely keep the plane from hunting.

The weather in Seattle prevented a few pilots from flying, but they drove the 7 hours+ to the party - however a few intrepid Seattle folk and Sorenson made it and the weather on Sunday was wonderful:



High ceiling on Saturday.

Canards in attendance:

Long EZ: N666BA (Brian Amendala) WA
Varieze: N95BJ (Bill James) TX
Berkut: N360BK (Burrall Sanders) CO
SkiGull: N375BT (Burt Rutan) ID
Varieze: N45CR (Ed Hanley) NV
Berkut: N268DK (Dick Rutan) CA
Cozy III: N655DK (Jorgen Skovbjerg) CA
Varieze: N17EZ (Bill Wittig) WA
Berkut: N73EZ (David Orr) CA
Long EZ: N180EZ (Andrew Amendala) WA
Long EZ: N57JP (James Price) ID
Defiant: N57KS (Steve Sorenson) VA
Long EZ: N747MS (Mike Sabourin) WA
Long EZ: N24ND (Ray Schreiner) CA
Cozy IV: N97TL (Shawn Brennemann) CA
Velocity: N561WH (Bill Hawley) UT
Varieze: N506D (Dave Kolstad) CA
Cozy IV: N287R (Dennis Rose) CA
Cozy IV: N787T (Tom Kennedy) CA (hidden behind the Cessnas...?)
Varieze: N2077W (Gil Hutchinson) OR

California	8	Long EZ	5
Washington	4	Varieze	5
Idaho	2	Cozy IV	3
Texas	1	Berkut	3
Oregon	1	Cozy III	1
Colorado	1	Defiant	1
Nevada	1	SkiGull	1
Utah	1		

(Total 18 canards plus 4 backwards airplanes including SkiGull)

Arriving by other means:

Bob Asis, Long EZ, wife and 2 others by car WA
 Chad Bays, canard interested, UT
 Stephen Briggs, by RV9 NH
 Todd Cramer, Varieze, family by Bonanza AZ
 Jon Davis new Velocity owner by jet VA
 Tim Dyer new Long EZ owner by jet NC
 Ed Hanley Varieze refurbishing by van NV
 Henry Herbert Cozy IV by car WA
 Tim Iverson Dragonfly by truck CA
 Tim Lumpp former Cozy IV, with wife by jet NV
 Joe Person, Varieze (Cozy IV proj) by car WA
 Kerry Shaw, BerkeEZ project by truck CA
 Stuart Smith UT wife and daughter by Mooney UT
 Jim Wixson by van from OR

Please excuse Beagle's forgetting people - I sometimes know faces, I sometimes remember names, and I seldom remember faces and names unless I have a photo to work with and can log it on my computer. My memory is so bad that I've had one guy kiss me at two different canard events to shock me into remembering his name in the future...let's see, who was it, although I admittedly forgot his name this time too afterwards I was shocked so much. But please tell me if you came and I forgot you, so I can update the list. And if you really weren't there tell me that too. You can imagine how a memory limited guy struggles with people who didn't tell me they were coming...

I actually put together a little list with photos for Burt. I can send it to you if you suffer "David Orr's disease", as my workmates used to call my condition.

CALENDAR - Canard Events in RED:

July 6-8, 2018 Arlington Northwest EAA Fly-in (AWO) www.ArlingtonFlyin.org
with Canard Flyout to ? on Friday or Saturday evening?



Another old photo.

There are usually two choices for the traditional **Canard chow run while at Arlington:**

1. Friday Harbor (KFHR) on San Juan Island. 3400' strip, and about a 10-minute walk down the hill to town. Several restaurants, and for those who

have been before. The deck space of the new Downriggers is a fair bit bigger than the predecessor building.

2. Bremerton (KPWT). Restaurant on the ramp. Good basic chow, and pretty decent fish & chips (last time I was there). Past flights to KPWT entailed a bit of an aerial tour - Puget Sound Naval Shipyard, Seattle waterfront/skyline, Boeing Everett Facility (KPAE). Local sunset for Arlington on July 8 will be approximately 2106 local time. In bad weather, the guys have gone to a restaurant 10 minutes NE of Arlington for dinner together.

Plan on going to this. Muster on the taxi apron adjacent to the canard parking area before the reopening of the field (end of show), and be prepped to go as soon as the field reopens. Talk to Joe Person 425-481-3645 ezejoe@comcast.net and/or Tom Staggs 425-531-1776(Cell) tjstaggs@frontier.com .

Those coming from California to Arlington, see if you might enjoy going together with "the usual crowd": .

95 SULLIVAN, TIM "**BLACK CLOUD**" & ANGELA 3100 Degolia St., Placerville, CA 95667 530-417-0761(Cell) 530-622-7754(H to 10p.m.) timpvtf@pacbell.net Long EZ:N7999H "**Wildfire**" O-320-D2G 160 hp 375 hrs. Placerville Airport (PVF)

July 8th, 2018 or the 15th weather day UK EZ Flyin Dan Gay, 011 44 493 301534 dansmusic@me.com Seething Aerodrome (EGSJ): *"...the Canard Fly-in at Seething is planned for Sunday the 8th of July, with an alternate bad weather day for the 15th. B and Bs can be organized for those staying overnight. Once again Dianne is sorting the buffet and BBQ. She does amazing food and you won't be disappointed. It is still to be decided if we will be having the competitions and prizes this year, but we will keep you posted. All aircraft are welcome, so tell whoever you think might be interested in a fun day out."*

(Some of last year's comments: *Our very own Rough River of sorts. I posted all the info on our Facebook Page and will keep you updated on how thing progress. Hopefully we will get some good video and photos of the event."*



Jul 13, 2018: Mojave Airport's museum *Plane Crazy Saturday! 10 a.m. - 2 p.m. Free admission! 3rd Saturday of every month.*

Jul 22, 2018: SARL Air Venture Cup Air Race Mitchell, SD to Oshkosh, WI (KOSH) <http://sportairrace.org/sarl/>

Jul 23-29, 2018 OSHKOSH www.AirVenture.org

The Velocity guys have a webinar about going to Oshkosh that is very thorough for the first timer: In VOBA's Reiff Lorenz's words: "It is public and searchable on YouTube, so anyone can find it there. Here's a direct link that you can provide to the Canard Squadron list:

<https://youtu.be/2BADMMdyEqA>"

Bob Tilley 225-301-4300 "There is a **Composite Workshop at Oshkosh!!!** I was to help Rick Hall this year". Then Rick went and could NOT make it this year. ☐. So I get to make a wing by myself(sort of). So I am asking if there are any new builders who are about to start their canard or wings that could assist. They would then be experienced to do their stuff. Call, text or email if you want to help, even for an hour would be OK. I would like to create as much buzz around the shop as possible. It has been dead for about 12 years till Rick restarted it last year. I now have 4 new us to help full time. It would be good if we could get some experienced folks to stop in and offer advice."

A guide from last year: An EZ flies in at 5:30 PM Sunday, July 23rd, 2017 over Ripon. <https://www.youtube.com/watch?v=XbbLXDX6BlM&feature=youtu.be>



Boy I need a new photo - I see Paintball in there.

July 24, 2018 11:30 to 1pm: Hertzler/Schubert forum at racer parking.

"There has again been interest in attending another OSH moving flight line Bull Session so Gary Hertzler and I will repeat that. The C-A survey showed a split between early and late in the week. We have decided to offer 2 sessions. Again Thursday July 27, 10am -11:30am. We will start where the Air Venture racers are parked at show center. If you want decent audio for your recorder, bring a clip-on mic for us to wear. The irritating flight line PA speakers are very loud."

July 24, 2018 5pm (movie to follow) COZYGIRRL's Dinner. So for the 10th year we'll do another Early Birds Spaghetti Dinner. BYO Beer. \$10 "donation". Seeing everybody together makes this event worth it every year! Location will be at our campsite on North Doolittle providing we get our usual spot, otherwise we will put out the word via grapevine where we will be located, as always look for the little red truck. Please, no animals! IMPORTANT! Picnic tables are never guaranteed so bring a chair if you are able to scrounge one. You will need your chair and maybe a blanket for the movie next door, schedule not published yet 8:30 PM -10:00 PM or stick around and socialize! Send us an RSVP: CozyGirrri@aol.com

July 25, 2018 11:30 – 12:45 Workshop Classroom B: Klaus Savier:
Canard Aerodynamics Revisited.

July 25, 2018: Velocity Dinner COOKOUT Dinner starts at 6pm and will once again be catered by the SOS Brothers. We will have a private tent, with tables and chairs. Arrive as early as 5pm. We have use of the tent until 9pm. You will have plenty of time to eat and visit before the night airshow begins. The location is close to the AirVenture show, at [the SOS Brothers "beer balloon;"](#) an easy walk; near parking and bus stops. The cost stays at \$20 per person, if paid by July 13th. The cost will be \$30 per person after July 13th.

<http://VelocityOwners.com/oshkosh>" (Reiff@Lorenz.com)

Current list of attendees:

Lisa & Matthew Avila, Randy Barkley, Jerry & Linda Brainard, Al Bryce, Roger Byers, Stephen & Susan Cabiroy, Ron Chalifoux, Christopher Collins, David Dugas, Brett & Elizabeth Ferrell, Barry & Mark Fluckey, Gerry Hatch, Garret Hooper, Bob Huntingford, Loretta, Thomas & Tom Irion, Nick Jones, Carl Lawrence, Melissa & Reiff Lorenz, Bryan McCartney, Ingrid Meier, Dave Nelson, Keith Pickles, Nancy, Sean & Mark Riley, Kathryn Roberts, Deilyn Osby Sande, Donald & Jade Smucker, John Trautschold, Robert Trent, Jeff Turner, Hannah, Hiroo & Mikah Umeno, and John Youngblood.

July 26, 2018, 11:30am – 1pm: Hertzler/Schubert forum at racer parking.
see above (24th) for details.

July 27, 2018 11:30–12:45 Workshop Classroom B: Klaus Savier: *Electric Engine Controls/ Flight Efficiency.*

Jul 27, 2018 at 1:00 PM Marc Zeitlin Cozy Forum.

Post-Flyin Contact information:

16 June 2018 Wonderboom Airport, South Africa Canard Flyin,
(I've seen photos of an earlier flyin so this must be the second.) The video is unique and photos that follow are great too – supplied by VOBA: Member Reiff Lorenz has put it in usable form:
"Great video! Looks like it was a fun event. I'm posting a link to the video for those who read the forum via email. The embedded video does not render on some email clients.

<https://youtu.be/8DTy4NEuIMA> "

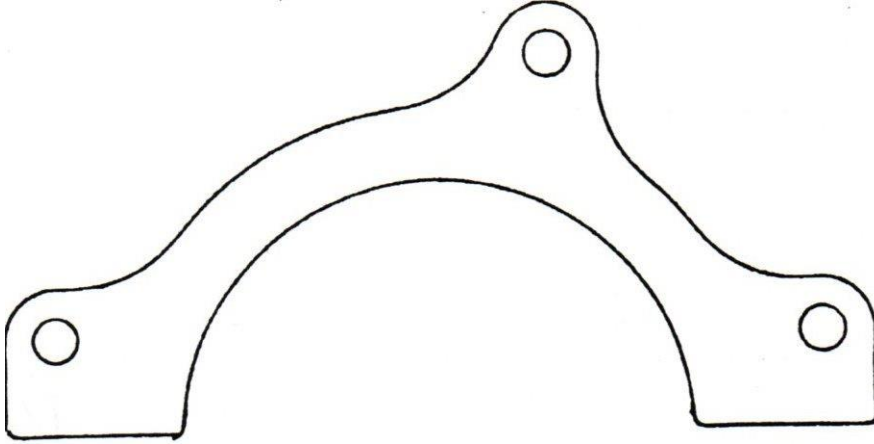
Beagle matched these with a later article and lists – in parking order:
Velocity:ZU-CYJ (Marco Schmidt), Long EZ: ZU-FFR(Who's?) Long EZ:ZS-VUF (Walter DeGraaf), Long EZ:ZU-FMX (Member Dave O'Neil) Velocity ZU-USA (Member Riaan Van Neikirk) Velocity ZU-DZU Eddie Scholtz or Schultx) and a 6 cylinder Velocity project in a hangar.

Riaan Van Niekerk and passenger Markus vd Westhuizen are OK after an off field landing in O-540 powered VelocityXLFG: ZU-USA on the way to his home on the West Coast of Southern Africa – in Namibia. With Rego Burger's crash mentioned in the last mailing, this wonderful fleet has been hard hit this past few weeks.

Non-Builder owner advice:

What would your first indication be if you blew out your main seal - I know, I've done it - it's the engine slowing as the bearings start seizing up, (or with a glass panel, sudden oil pressure loss) - you don't see 6 or more quarts of oil blowing away in a pusher.

Some of the newer guys may not know that on a pusher the smart move is to put a "retainer" on the "nose" of the engine to catch and hold the seal in the case. That way you won't suddenly lose all your oil before you know you have a problem - not being able to see the oil flushing away is something unique to a pusher - although on a tractor if you were over water, I'd want a retainer there too. This sketch is from the library item 23CS20 Apr 1993, Central States issue 30 page18; "Crankshaft Seal Retainer", by John Nicholson.



We used to drill holes in the fat lobes in the "nose" of the engine (Accessing the "nose" through the holes in the crank shaft face) and tap them for #10 bolts.

In Memorium:

Michelle Fink report's Al Fink's condition: *"Just a quick note to let you know that Al is in failing health. He was diagnosed with dementia shortly after we moved to Idaho in 2015. He was admitted to hospice care last week and is hanging on. [Al] is on comfort medications including Morphine are being administered. Al's sister, brother-in-law and niece are driving over tonight from Seattle, so I won't be taking care of all alone. A hospice nurse visited today and advised me to focus on comfort care...Please let the flying community especially, Squadron and SoCal, know Al's condition. Sadly, I don't expect him to last much longer."*

Builder's Help Desk:

Velocity only for slop...Andy Millen's offer: *"For those with the center stick. The factory connection for the control stick to the aileron torque tube uses a brass or bronze bushing. The bushing is inserted into the aluminum torque tube. The connecting bolt goes through the bushing and through the control stick. This is a simple, low cost solution for the connection. However, with use the bushing will waller the hole in the torque tube and slop will creep into the system. This is a known issue. (I'm not sure if that's a southern word, Beagle would say "egg out"...Beagle posted the factory has a larger bushing available. I don't know if it is a permanent fix, or will do the same thing over time. Using Renè Dugas solution, I have made a support. It clamps over the bushing and onto the*

torque tube. It provides a solid, flat surface for the control stick to work against. I tested the installation on a friend's Velocity. It is still under construction. It was very easy to get to and with the right tools it can be installed in about 30 minutes. Pictures and video below.

The saddle on the stick must be removed.



It is milled from 2024 aluminum. Harder than 6061. I made a few extra in case others might want one. I'm selling the kit for \$45 plus shipping. I only have a few, so when they are gone, they are gone."

<https://m.youtube.com/watch?v=AIzoWJg7u7c#>

Key Maintenance Tip:

Vance Atkinson has tested his fix to a problem that only showed up after about 30 years with his design of a Trim System. While this is not the Strong Pitch Trim so many have, you need to study the system you have to see if Vance's strong recommendation applies to your plane's system. If you send me a photo of the pitch trim motor, I can likely tell you which system you have. Beagle has not heard anything of this sort related to the Strong Pitch Trim system - But Atkinson added: "It's a really good idea to drive *WHATEVER TRIM SYS YOU ARE USING* to the max and see if you can override it (on the ground). In my case, I drove it to the physical aircraft stops (elevator) but didn't realize the motor could still drive the screw-ball servo even further, compressing the last bit of spring and jamming it...."

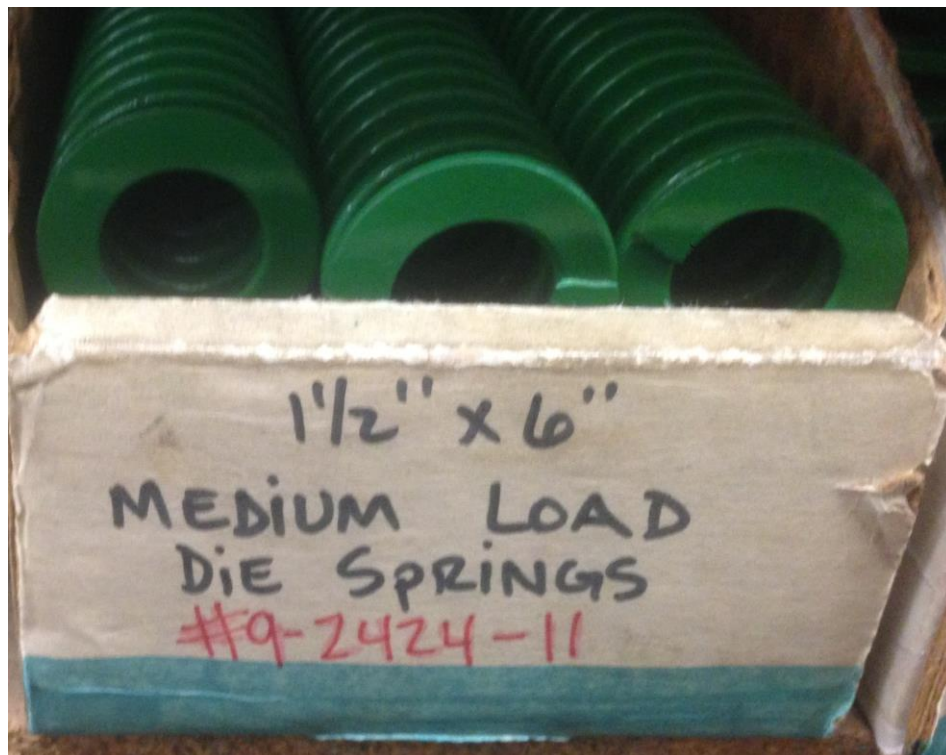
Requests to Individual Members:

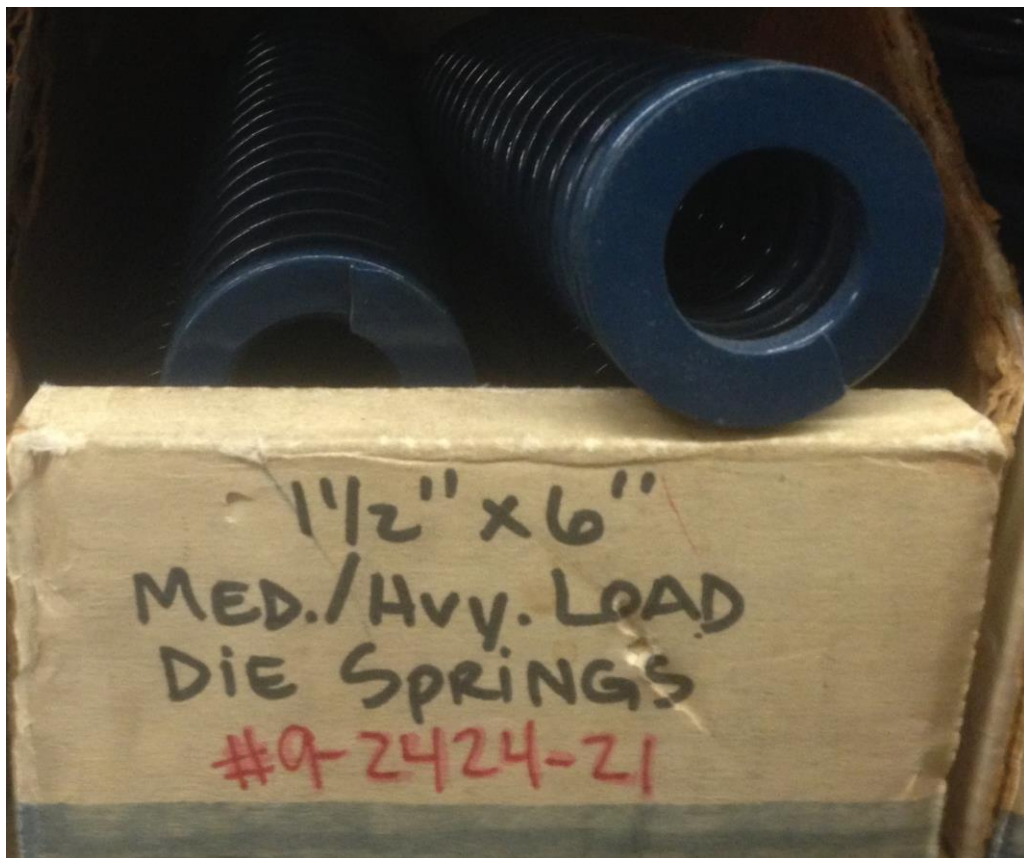
Someone asked me about stronger springs for the nose gear - they were finding theirs allowed the nose to drop too much. Over the years I have nose springs that are painted copper, yellow and red, I could use someone's confirmation that the copper was the stock Varieze spring, the yellow the Long EZ spring, the red was the Cozy IV spring.

Here's what I used to have in my spares right now:

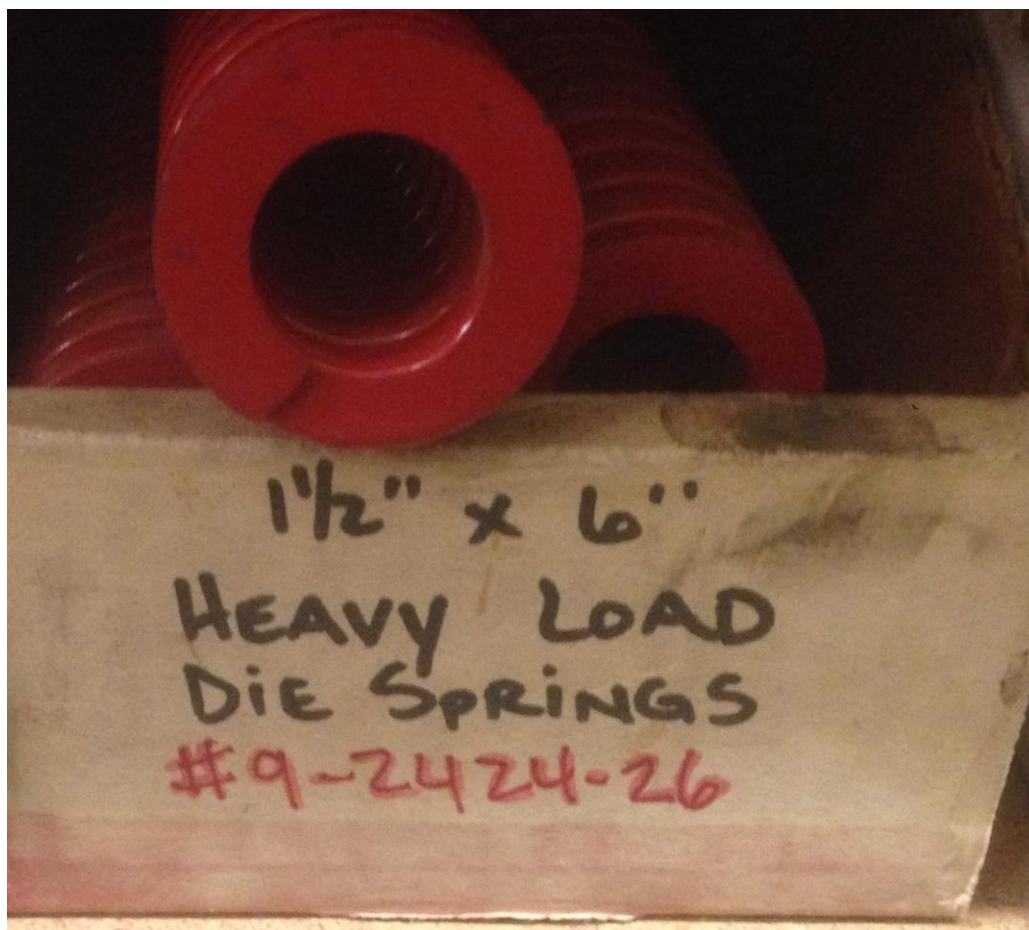


The other copper springs I have, are likely softer ones for a light Long EZ. However, I think I found I needed either a red or yellow spring to stiffen up the nose. While I was at a local professional repairman's hardware store I took photos of the 3 that I saw there - no yellow spring and at least now I know how that set of springs is graded:





1 1/2" x 6"
MED./Hvy. LOAD
DIE SPRINGS
#9-2424-21



1 1/2" x 6"
HEAVY LOAD
DIE SPRINGS
#9-2424-26

What the flyers are doing:

Dan Gay on two British flyins: He has gotten into a great brochure for the Yarmouth airshow - his brochure is available at Library item 3MS60. See also the calendar section above for the later EZ flyin at Seething, UK. His video promo for the Yarmouth Airshow is at: <https://www.youtube.com/watch?v=O7A6l4p-4ac&t=9s>

Christo Tracy, was Hartfordshire: "Indeed, e-Go is having a bit of a hiatus. I qualified from University in 2015, and am currently designing aircraft interiors for Airbus as a Structural engineer. I've also taken up hang gliding in a big way, and try to fly my Eagle most weekends that the British weather allows!"

Steve Harmon, Filer, ID: Nose seal replaced and air filter clogged, issues:

"Thought I would report on the nose seal repair. Two weeks ago I flew to Seattle for the weekend. Interesting flying around the clouds getting into the coastal basin. On my way home while over the cascades with no place to land my motor all of a sudden started to run really badly, so I pulled on carb heat, hit the aux fuel pump button and went full rich the motor smoothed out and I continued on - feeling like I might live to another day I continued on. As the trip continued, to keep the motor running right, every so often I had to throttle back and play with the mixture. When I finally got close to home I could only get 2000 rpm or the motor would sputter. After landing and thanking the God of Abraham, Isaac and Jacob that I was still alive. I took the fuel filter off and found nothing in it. I blew through it and could-barely get air through it. My fuel filter is an Earl's filter I bought from Marc Z a few years back when he went fuel injected. I found that the sintered bronze filter was somehow plugged even though I could see nothing plugging it. I bought a new sintered filter element, what a difference. Air easily blows through it.

I also installed my nose seal yesterday. It was pretty easy just as everyone said; clean the crank shaft really well, wrap tape around the prop flange. I made an aluminum bar with a smooth bolt sticking out the side I stuck in the bolt holes and pried the seal around the flange after heating it in boiling water; it took two tries. Holidays coming up to get it all back together and then test it out.

ps: I have the wheel pants on now. They gave me at least 15 knots on my trip to Seattle. My plane used to be okay, now it is a hot rod. I have seen 193 knots ground speed a couple of times and the plane takes more thought to slowing down in the pattern as it is much faster. Now all I have to do is sand them and paint them. I would recommend to all you guys out there to build you wheel pants before you consider your build done. It is a real pain to go back to doing fiberglass work after a three year break. Much easier to do all the glass work and finishing while you're still set up to do it..." **Beagle: Agreed on getting all the glass work done before you fly. But our experience was that you don't paint for a year - leave it in primer until everything is settled, wing trim, cowls and wheel pants...be sure to get all the oil off things and paint then.**

Buly Aliev on the modifications:

"No wonder fewer and fewer people are finishing their projects. Everyone is spending time and effort, trying to complicate a solution of a non-existing problems. Can't wait for someone to come up with an invention on how to make his

own tires. I flew my Cozy IV for 10 years to the Bahamas, left it out for 10 days at the time at strange airports without locking. Never had a lock on it. If someone is hell bent on getting inside, they will use a crow bar and cause lots of damage. Your sophisticated, remote controlled AI augmented locking system will do nothing to stop a skilled thief. Use your time to finish your project and go flying. Life is short." Beagle: From the time when we had Squadron II, 100 builders at Santa Monica, we calculated that every change to the plans takes 4 times as long - still true. Alternate engine work added years...massive changes. Working with buyers, I think I also find that people who do auto engines tend to tinker with all manner of plans changes, making the plane even less valuable to a new owner.

Andrew Anunson, Pound, VA on creative electronics:

"Did anyone see that Russia paint job EZ on the EAA cover recently? It is FULL of electronics. It's completely dependent on boards and computers.

I have two older cars, fun weekend cars that are inexpensive to purchase, operate, and repair (my 15 yr. old's '91 VW Cabriolet and my wife's 2004 BMW 330Ci convertible). The mechanical parts on both cars still work very well but the electronics are getting old. The computer circuit boards have endured many heat cycles and are known to fail. Owners fix them by getting other old parts from donor cars. Wire insulation is crumbling, circuit boards short circuit, and more cars get recycled.

While I realize that we will all use replaceable electronics for our panels, ignition systems, and actuators... we need to consider the fact that any cheap electronic may have a lifespan of 2-5 years. Good stuff perhaps 10-20 years. Use proven hardware wherever possible... auto manufacturers like reliability but even their top shelf electrical stuff has a relatively short lifespan. At a minimum, make certain that any short life item (electrical) is easy to replace with an easy to find item." Beagle **Note:** Dave Ronneberg told Beagle he was aghast at the massive amount of innovation in that Berkut. It looked heavy and the owner claimed speeds way below what Berkuts usually attain.

Formation

My local guys keep promising to train me in formation - Cookie took Paul Booth to Coeur D'Alene - so we brushed up on some formation process - Beagle's deliberately ahead of "the line" for photos:



Taken by Paul Booth over the lake south of Coeur D'Alene.

New members:

Joining:

97 McHENRY, MARK 8012 Birnam Wood Dr., McLean, VA 22102-711 703-862-7495 (cell) mmchenry@sharedspectrum.com Long EZ:N58MT 1000 hrs O-235-L2C
Manassas Regional Airport (KMNZ)



Photo from Mark McHenry

Joining:

00 MILLIN, ANDY & THERESA 228 Cushman St., Plainwell, MI 49080-1349
amillin@net-link.net Vel XL FG:Ch20 N114MV <http://www.kal-soft.com/velocity>
Padgham Field (35D)

"There have been many problems found and solved by the EZ community. I like to look for solutions there. Look back to the main landing gear deformation problem. A lot of good information and solutions came from the EZ guys. I would be honored to be on your mailing list."

Changes in E-mail:

Mike Stauber, Manhattan Beach, CA staubercapt@gmail.com
Tim Dyer, Mebane, NC skytimdyer@gmail.com
Jim Kaercher, Alaska & Prescott, AZ azakguy@gmail.com

New Address:

95 SPREUER, KEITH "**FLIPPER**" & TERRI 818 Main St #101,
El Segundo, CA 90245, 310-692-5648 (Cell) kspreuer@gmail.com Structural
Engineer, Cozy IV:N91KS 750 hrs Subaru EG33
<http://www.ez.org/pages/kspreuer/> Hangar E2, Compton Airport (KCPM)

Added to the Electronic Squadron Library:

9MS14 Apr'18 Whitman Pressure Switch Manual
16CZ2: Apr & Jun 2018: Alternative to Strong Pitch Trim system by Zeitlin, Strouk, Anunson and Atkinson. Final Atkinson resolution recommended.
23AV1 May 2016 Heat Shields for Homebuilts as told by Larry Vetterman (Exhaust Mfg.)
23EM32: Dec 1999: Discussion on Ivo-Prop not for canards yet by Honey Nelson
23VV7 3rd Qtr. 1999, page 14: "Update on my Ivo Prop and Franklin Engine" by Rick Lavoie.
23VV17 6/18 Discussion on 80 hours with IvoProp by Hiroo Umeno, Chris Barber, Andy Millen on one accident, Brian Michalk.
31FA14 Jun 2018: Discussion on ICAO flight plan by Greg Haack and Canadian step by step instructions forwarded by Phil Johnson
31FA15 ICAO document on aircraft marks
31FA16 Jun 2018: Powerpoint on ICAO flight plan by Tom Brusehaven

Oh and Trivia:

Careful low flying:

Beagle is against low flying in any airplane, however the airshow circuit, if briefed and done carefully, can be done safely - this video shows a careful plan - there is the danger of bird strikes so close to the ground, and with our wonderful plane you could exchange speed for altitude if you had an engine problem, and pick your runway or taxiway - if you know the safe altitude to turn back to the airport - the video doesn't show much turbulence which you often find in the tropics - Afif Saybe's routine was done in Honduras.

<https://youtu.be/8Y3yzry6r98>

From Last issue:

More on the ICAO Flight Plans from Greg Haack, Signal Hill, CA:

"Regarding the ICAO flight plan and the equipment descriptions there's a HELP

document attached. The two biggest changes seem to be for the navigation equipment and the ADSB equipment. For those who have upgraded they can usually get the appropriate suffixes from the equipment manual(s) or by contacting the manufacturer's support group. My airplane now has a rather long list of suffixes that describe its capabilities. Those would be included in the OTHER INFORMATION box.

FLIGHT PLAN FIELDS

AIRCRAFT ID:
Aircraft ID must always be formatted as 1 letter followed by 1-6 alphanumeric characters. Approved call signs and flight identifiers may also be entered here, such as CAP1073.

FLIGHT RULE:
Within the ICAO flight plan, this may be VFR, IFR, YFR, or ZFR. IFR and VFR are understood, however for YFR and ZFR know the following:

- YFR is for flights beginning under IFR flight rules followed by one or more changes in flight rules.
- ZFR is for flight beginning under VFR flight rules, then followed by one or more changes in flight rules.

For both YFR and ZFR, the point where the flight rules change must be noted in the route of flight. This point of change determines when the flight plan will be sent to ATC as appropriate.

FLIGHT TYPE:
(Optional) Recommended for proper handling. Select the appropriate description of your type of flight:

- S for scheduled air service.
- N for non-scheduled air transport.
- G for general aviation.
- M for military.
- D for DFR.
- X for other flight types.

NOTE
If an X is used, a reason for special handling must be listed in the Other Information field, using the STS/ subfield.

WAKE TURBULENCE:
Wake turbulence is designed to auto-populate with the correct wake turbulence category for your aircraft.

AIRCRAFT TYPE:
Aircraft type should be formatted as 1 letter followed by 1-3 alphanumeric characters. If you are unsure of what to enter, place ZZZZ into the field and explain further in the Other Information field prefaced with TYP/.

DEP, DEST & ALTS:
The entries may be entered into their respective fields and all contain the same requirements. FAA mandated ICAO changes now allow for the entry of any 2-11 alphanumeric identifiers to be placed into the Dep, Dest, or Alternate fields. Acceptable entries are Airports, NAVAIDS, Waypoints, Fix Radial Distance or Latitude/Longitude entries.

PILOT WEB TIP CARD ICAO FLIGHT PLAN FILING

The FAA provides guidance on ICAO flight plan filing in the Aeronautical Information Manual (AIM) under Chapter 5 Paragraph 5-1-9.

The [Leidos Pilot Web](#) ICAO flight plan form is fully FAA and ICAO compliant. This, combined with help dialogs, Aircraft Equipment and Airport Identifier search windows, makes the Pilot Web ICAO flight plan form a quick, easy and effective way to familiarize yourself with, and file the ICAO flight plan.

FLIGHT PLAN FIELDS Cont'd CRUISING SPEED:

This field differs from the domestic flight plan mask and can be prone to errors. This field accepts speeds in three formats:

- Knots, entered as N, then 4 digits.
- Mach, entered as M, then 3 digits.
- Kilometers Per Hour, entered as K, then 4 digits.


AIRCRAFT EQUIPMENT:
This field requires accurate entry of all radio, navigation and approach equipment on board the aircraft. The following are general guidelines to consider when filing:


- An equipment entry of N establishes what an X would do for domestic. It tells ATC that your aircraft is equipped with NO RADIOS OR NAV EQUIPMENT.
- An equipment entry of S establishes the standard set of equipment of VOR receiver, VHF radiotelephone, and an ILS receiver.
- If equipped with DME this must be entered as D. This is not encompassed by other equipment entries.
- If equipped with GPS or GNSS, an entry of G is required.
- Equipment R is required for RNAV performance-based navigation. An entry of R in the equipment field will require further data entry into the Other Information field. The flight plan form will auto-populate PBN/ into the Other Information field as a placeholder for PBN values to be entered.
- An entry of Z for OTHER will also require further data entry into the Other Information field, generally prefixed by NAV, COM or DAT.

SURVEILLANCE EQUIPMENT:
This field is only for transponder and/or ADS equipment entries. An entry of N denotes no surveillance equipment, which tells ATC that your aircraft is equipped with NO TRANSPONDER OR SURVEILLANCE EQUIPMENT.


LEVEL:
Level is the ICAO equivalent to altitude in the domestic flight plan form. Entries in this field include:

- Altitude, entered as an A followed by 3 digits. This is for altitudes below 18,000 feet and entered in hundreds of feet such as A095.
- Flight level, entered as an F followed by 3 digits. This is for flights at or above 18,000 feet and entered in hundreds of feet such as F240 for flight level 2-4-0 or 24,000 feet.
- VFR may be entered to indicate varying VFR altitudes; no digits are needed.
- VFR/ddd (where ddd are digits) may be entered as an SFRA filing altitude as well as an indication of VFR/On-Top. This entry is made as VFR followed by 3 digits for the intended VFR altitude.





http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/flight_plan_filing/



<https://www.1800wxbrief.com/Website/resources/hello.pdf>

For a "typical" canard airplane that has a navcom the info to put in the AIRCRAFT EQUIPMENT box is "S" for standard VOR/ILS.

For a "typical" canard that has a transponder with altitude encoder, in the SURVEILLANCE EQUIPMENT box put "C" for modes A and C.

I also have a number of slides from a LEIDOS webinar I joined several months ago that I'll attach that should provide more explanation. If you file flight plans with LEIDOS (i.e. 1-800-WXBRIEF) most of the flight plan can be filled in using **drop down boxes** that provide some guidance. There's also information on the LEIDOS website (1800WXBRIEF.COM)." Beagle has the slides referred to above as: **31FA14**

Phillip Johnson, a British Member pointed out a step by step approach available for ICAO flight plans as normally filed in Canada: <https://www.wikihow.com/File-a-VFR-Flight-Plan-in-Canada>

FLIGHT PLAN FIELDS Cont'd

ROUTE OF FLIGHT:
File the route of flight using a combination of published routes, latitude/longitude, and/or fixes. Consecutive fixes, lat/long points, NAVAIDS, and Waypoints should be separated by the characters "DCT", meaning direct. A published route should be preceded by a fix that is published on the route, indicating where the route will be joined. The published route should be followed by a fix that is published as part of the route, indicating where the route will be exited. No entry of DCT shall be used before a SID or after a STAR.

OTHER INFORMATION:
This field can be considered the catch all for the ICAO flight plan. Any information or data that needs further clarification or supporting details should be entered into this field. As mentioned previously for other fields, the Other Information field is the location for data such as PBN values prefaced with a PBN/. Also detailed aircraft type, departure, destination or alternate locations should be entered here if ZZZZ was used in their respective fields prefaced by their proper identifier. Like the domestic flight plan, plain language remarks are entered here prefaced with RMK/.

TOTAL ESTIMATED ELAPSED TIME:
Total time enroute. Entered as 4 digits.

FUEL ENDURANCE:
Fuel on board. Entered as 4 digits.

PERSONS ON BOARD:
This field must be entered as follows:

- For US flights, a 1-30 alphanumeric entry with spaces or backslash allowed. Or as TBN for To Be Notified if the number of persons on board is not known at the time of filing.
- For international flights, a 1-3 numeric entry, or TBN if necessary.

AIRCRAFT COLOR & MARKINGS:
Like persons on board, it must be entered as follows:

- For US flights, 0-24 alphanumeric, space and backslash is allowed.
- For international flights, the color may be entered along with any significant markings and separated by a space.

EMERGENCY RADIOS:
(Optional) May be used to note any emergency radios or transmitters which are on board.

- U for UHF denotes 243.0 MHz.
- V for VHF denotes 121.5 MHz.
- E for ELBA denotes Emergency Locator Beacon Aircraft or ELT.

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FLIGHT PLAN FIELDS Cont'd

SURVIVAL EQUIPMENT:
(Optional) It may be used to note any categories of survival equipment on board.

JACKETS:
(Optional) This entry will give details as to the types of life jackets carried on board.

- Light denotes jackets equipped with lights.
- Fluorescent are jackets equipped with fluorescent.
- UHF & VHF denotes the types of radio capability for each jacket.

DINGHIES:
(Optional) The amount, capacity of each dinghy, their color and whether or not they are covered is noted in this field.

NOTE
Even though the Emergency Radios, Survival Equipment, Jackets, and Dinghies fields are noted as optional, it is highly recommended they be included in each flight plan, if on board the aircraft.

SUPPLEMENTAL REMARKS:
This is the location for all other plain language remarks, up to 80 characters, regarding emergency equipment.

PILOT IN COMMAND:
Pilot In Command may be entered here. This information is also stored in the Pilot Contact Information field, populated from your Pilot Web profile, and retained with the flight plans history.

FOR MORE INFORMATION
For more information about the Leidos Pilot Web and all your flight planning needs, visit:
<https://www.youtube.com/playlist?list=PL7hKAOXKwcd-m97PnT3Mn93BkV>

SFRA Flight Plans may be entered in their appropriate format using the Leidos Pilot Web. Ensure proper format is followed.

Flight plans intersecting the DC Flight Restricted Zone-DC FRZ must be called in to Leidos Flight Service (866-255-7410). Pilot Web does not allow users to File, Amend or Activate FRZ Flight Plans

Education on ICAO Flight plan from one of our own:

"I saw in the Squadron newsletter about confusion with the ICAO equipment section. The equipment is explicit in the ICAO form, listing all the capabilities your aircraft has.

Com - is the VHF Radio Telecom Facility (V)

Nav - VOR capability (O)

ILS - Can fly an ILS (I)

GPS - How capable? (G Basic, if you have ADS-B you need info in Field 18 also)

So in Field 10, you have NAV/COM with ILS capabilities, a GPS and ADS-B capabilities: insert: VOIG

Surveillance field 10

B2 -1090 ES or U2 - UAT

Using the FltPlan.com or 1800wxBrief forms will help find your right codes.

Field 19 had rafts and other items.

I did a presentation for a group of pilots on the ICAO form:

<https://docs.google.com/presentation/d/1SZ11RcALNkZWUTOzO1W0sFvAETrwMqn830sPknFWsQ0/edit?usp=sharing> "

Thanks Tom.

In case it wasn't clear in the last mailing:

Joe Person built or helped build a few of the parts/components for SkiGull, along with control system component fatigue testing.

Another hint on Foreflight "Glide function":

Beagle described the "Glide" function using Foreflight - something to add is that before your flights, simply "Pack" your planned route so that it has estimated winds aloft to get the best glide range ring.