



RVator's Log

Newsletter of the Twin Cities RV Builder's Group

Shop Notes

-Doug

December 2015

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Upcoming Events

December 12 – Twin Cities RV Builders winter meeting, Lake Elmo Airport, 10 am.

See page 8.

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**Minnesota Wing
Van's Air Force**

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Landings 101

It was the summer of 1968. Although it was a tremulous time in American history with lots of bad stuff going on, I was more interested in building flight time with a new CFI ticket in my pocket. I was teaching part time at the grass strip in Michigan where I had learned to fly. If memory serves me right, our runway was about 2400 feet long running north/south with just a small fence on the north end.

It was a Sunday afternoon and I was sitting in the office waiting for my next student. The usual airport bums were hanging out, swigging down bottles of orange pop, telling hangar tales and doing what airport bums do on a warm summer Sunday. I happened to glance out on to the airport in time to see a Cessna 150 zip over the fence landing south. It was not one of our trainers. Shiny new Cessnas often came over from the "big" airport to practice "short" field landings on our rolling grass. This guy was WAY too fast. As he flashed by the office, the flaps were up and the nose was down in an attitude that just didn't look right. He floated, and floated, and floated and about halfway down the strip you could see the nose go down with a nudge. In the blink of an eye, the nosewheel hit first and hit hard. Grass and dirt flew as the nosewheel collapsed and the little Cessna flipped on it's back and slid to a stop.

We all ran out to the broken bird. The pilot was out and although shaken, essentially unscathed. He mumbled something about a malfunctioning airspeed indicator and his fear of stalling so he probably was a little fast on approach (no kiddin'!) With the end of the runway coming up, he "pushed it on" with the predicted results. With wrinkles all though the wings and the spar bent, the 150 was totaled.

Fast forward to July 22, 2013. It's a rainy and windy day in New York. A Southwest B-737 is a little high and fast as they land on runway 04 at LaGuardia airport. The first officer is flying and as they enter the flare, the captain grabs the controls and "pushes it on".



There's just something WRONG about this....

The nosewheel hits first with the outcome being plastered all over the nightly news.

A few months after the Southwest accident, RV-7A builder Chuck Hagerty is landing his new machine at Altoona, Pennsylvania. He and his wife are making one of their first trips together. It's a little gusty but something goes wrong. He bounces and somehow the nosewheel hits first. It collapses and he and his wife run off the side of the runway into the grass and they flip over. Chuck wrote a very good book about this and



their subsequent recovery titled "Inverted - Looking Back on Walking Away". I finished his book last month and I can recommend it highly. Chuck talks not only about the agony of wrecking his brand new airplane, but the physical and psychological impact of the accident and he and his wife's long recovery from serious injury.

With all due respect to the emotional toll these accidents had on the pilots and passengers involved, let's step back a moment and talk about landings in general.

The tri-cycle landing gear came on the scene right after WWII. Handling and controllability was vastly improved compared to the "old" taildragger configuration (even though a lot of us hold-outs still relish the skill in wrestling a taildragger RV on to the runway). With the center of gravity ahead of the main wheels, the tri-gear was a LOT more directionally stable than a taildragger. I love this old Cessna ad on right touting the ability to "drive it up and drive it down". Why that new Cessna 172 with its "Land-O-Matic" landing gear sounds easier to handle than your dad's '55 Oldsmobile!!

One of my old instructors told me that the nose-wheel of ANY tri-gear airplane is only there to hold up the nose while you are taxiing around on the ground. None are designed to ever take a direct landing load. Not a Cessna 150, Boeing 737, or a RV-7A.

If you're flying a "dash A" RV, your landings are still not trouble free. Consider:

If you want to land on a short, high, rough, or unimproved airstrip, an -A is not the vehicle of choice. That nosewheel is small! Consider carefully your airport in length and surface.

What about the crosswind? RVs are pretty good but they do require a proficient level of skill if you intend to poke the crosswind limits.

Fly a stabilized approach with the appropriate flap setting. Be on speed, at the proper altitude, as you cross the fence. Once you start the round-out and flare, the stick is smoothly and slowly coming aft to raise the nose for a touchdown on the main gear. If you balloon or bounce, you NEVER push forward on the stick!! You might stop the aft movement and let the airplane settle back down but the idea of "pushing it on" never works well.

And lastly, if you get that "feeling" (and I hope you know what I mean) that things aren't going like you want it, go around!! Look at it this way; you have many years and many dollars tied up in that beautiful RV. You can go around or go somewhere else.

I know this is as basic as it gets, but these nosewheel accidents keep happening. Fly safe and stay off the 6 o'clock news!!

Note: Check Hagerty's book is available from Aircraft Spruce and Specialty. It belongs in any RV builder/pilot's library.



You drive it up! *You drive it down!* *You drive it around!*

Never before an airplane as easy to handle as this. It's easy to hold straight down the runway. Just ease back on the wheel and you're off. You don't have to stall or "drop" in... you can drive in without fear of nosing over. Extra-wide span gear, low center of gravity reduce danger of ground looping. Perfect control from the steerable nose wheel the instant you touch ground... and as you taxi around. Turns on a dime, parks easier than an auto.

THE ALL-NEW CESSNA 172 WITH LAND-O-MATIC* LANDING GEAR!

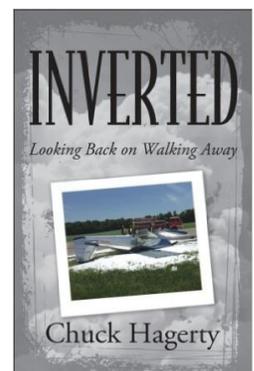
**The feature that's revolutionizing flying*



You must "drive" this airplane to appreciate it!

Words can't tell the whole story. We urge you to drive this new airplane at the first opportunity. It makes flying easier for professionals...even more practical for those who don't have time to become "professional" amateur pilots! It's smart...it's luxurious...but more important, you can see and feel quality engineering and construction in every part...from big, Paralift Flaps to luxurious interiors. Drive the Cessna 172 today. Only \$8,750 f.o.b. Wichita, Kan. See your Cessna dealer (Yellow Pages of phone book) or write: CESSNA AIRCRAFT COMPANY, Dept. F-5, Wichita, Kansas.  Inquire about Cessna lease plans

4 GREAT CESSNAS 170 172 180 310 THE COMPLETE AIR FLEET FOR EVERY BUSINESS NEED!



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Changes.....

- Doug

It's pretty rare we see a change in the upper management of the TC RV Builders. As most of you know, our long serving Secretary-Treasurer Jim Lenzmeier sold his RV-6A last year after a heart issue resulted in the loss of his medical. Last month, Jim made the decision it was time for him to "retire" from his position in the club.



I don't recall exactly when he assumed the duties of second in command from Chris Stenstrom. I do know that Jim has been instrumental in keeping our database up to date and tracking our vast financial resources in a timely manner. I personally

owe him a lot in helping to keep us on an even keel over all of these years. But Jim is not one to slow down. He stays busy tackling a long list of handyman jobs around the house and around the neighborhood plus working on his cabin up north. He is an accomplished bass man on his church's worship team and an equally accomplished grandpa. My gut feeling is you'll still see him around our meetings and picnics. Thanks Jim for the many hours you logged in serving our membership!!



On the flip side, welcome to our new #2, Peter Fruehling. Most of you know Peter from several talks he has done for us. His beautiful RV-7 was finished several years ago and it was so nice Garmin used it as their signature display ship at Oshkosh. That resulted in a gentleman from Cleveland making Peter an offer that was hard to pass up, so the -7 found a new

home in Ohio. Shortly thereafter Peter found my "old" RV-4 was available and brought it home to Minnesota. He kept the -4 at Anoka for the past couple years and really enjoyed flying it, but changing family goals turned his flying objectives in a new direction. The -4 was sold this summer to an airline pilot in Texas. So Peter is currently "between" RVs but keeps current in a flying club at ANE. My prediction is that he'll suffer RV withdrawal eventually but in the meantime, welcome Peter as our new Secretary-Treasurer!

An RV-10 Story

- Ed Krantz, Red Wing, MN



Yup... that's me!

After the move to the airport right before Oshkosh, and a lot of time spent down at the hangar in a last push, the airplane was ready to fly on August 29th 2015. As you may have noticed, the plane's registration number is N829EC. EC represents Ed and Colleen, and 829 stands for 8/29, which is our anniversary. And it is also now the date of the first flight!

Before we get to that, first the week leading up to the first flight... As you can imagine, quite a bit of time was spent finishing things up. Sunday, August 23rd, the FAA representative (called a DAR) came by to do the official FAA airworthiness inspection. Legally, this is the one that counts. With the STACK of paperwork all in order, and the plane assembled as much as it could be with all the inspection panels opened up, the DAR did his inspection and signed me off. At this point, I officially had a legal, airworthy airplane! However, since this FAA inspection was more a cursory look at the actual plane, and more focused on making sure all the boxes were checked, and t's dotted and i's crossed on the paper work, I wanted more tech experts to get eyes on the plane. On Wednesday, I had my tech counselor Gary stop down to give things a good look over to make sure everything was safe for flight. He un-

covered a few small things that I was able to quickly resolve.

I also contacted another tech counselor, Tom Berge, and the guy I choose to be the test pilot, Doug Weiler, to stop out Friday afternoon to get more eyes on everything. Their visits were also very good, as they both found a few more minor issues, and had some good suggestions on how to make some small changes that would help add more longevity to the plane. After the small punch list that we came up with was resolved, everyone was confident that the plane was airworthy!

After a VERY long Friday afternoon and night, I got all the inspection covers closed up, the center console bolted in place, seats installed, cowling installed, and the baggage bulkhead put in place. Even so, Saturday morning, I was still finishing things up installing the wing root gap fairings, and the wheel fairings (with some last minute help from Nick!)



EJ is #2 for takeoff behind the RV!

By about 3PM, Doug had arrived and the fog that had been lingering all morning lifted, and it was time!

RV10 N829EC first took flight at 3:30PM on Saturday, August 29th, 2015. Doug took her up, and flew above the airport (for safety in the event of any engine issues) for about an hour.

The engine is new and getting broken in, so Doug had to fly her at very high power, and was basically flying around in circles at about 200 miles per hour! No major issues were found, it flew well, the engine was smooth, and other than needing a bit of right rudder to stay straight (more on that later), everything was all good! Doug landed, taxied back to the hangar, and the first flight was over!



EJ, Me, Colleen, and Doug

It definitely didn't sink in right away that "I built an airplane, and it flies!" For the first half hour of the flight, I was more focused on the reports that Doug was radioing back and watching the flight track on ADSB... then after everything was coming back good, I started to relax a bit and actually enjoy it! I don't think it fully sank in until the next day!

Sunday, we (Colleen, EJ, my parents, and I) did our annual trip to the state fair. I think it was a good thing to get away from the plane for a day to decompress a bit. I also think it was helpful to get out of the building mindset a bit and start transitioning into the flying mindset.

Monday, after work, the weather was nice, so I drove down to the hangar. After a small adjustment to the nosewheel (this was what was making the plane need right rudder to stay in trim... all better now!), I pulled the plane out and gave it a very good pre-flight inspection. Then I just sat in the plane for about 15 minutes going thru the entire flight in my head a few times... what switches needed to be flipped when, what frequencies I needed the radios tuned to, what power settings I'd be using, airspeeds and altitudes during different parts of the flight, and going thru the various checklists I have.

After I felt sufficiently prepared, physically and emotionally, I closed the door, started the plane, taxied out, did my run-up tests, took the active runway, and took to the skies for the first time in MY AIRPLANE! It was pretty incredible. I didn't know it at the time, but in reviewing the video from my first flight, it's possible that I may have let out a "WOO HOO!" about half way down the runway!

The first flight was great! It took all of my mental bandwidth to keep up with what needed to be done to safely fly the plane, but the more I fly, the more the basics of flying an RV10 will become second nature. I'm also happy to report that of the three landings I made on that first flying day, they were all at least a solid "7" out of 10!

So that's my story. There is still a lot of work to do. Of the 40 hours of phase 1 test flying that are required, 2 are done! I still don't have the rear passenger carpets installed, to leave easy access to the rear tunnel. Same goes for the rear lap belts. The plane is still obviously unpainted, and it will remain so until next April. As I've heard from many builders, homebuilt planes are never REALLY done, but for now, *it's done enough!*

Finally, I can't end this without thanking my family, and specifically my wonderful wife Colleen. This truly wouldn't have been possible without the support that she gave me from the very beginning. This really was a team effort, and even if she wasn't in the garage helping every second, she was making sure that all of life's other little (and big) tasks were getting done. Colleen, you really are the best! I can't wait to take you flying! Maybe EJ can come with too... we'll see!



Wisdom....

- from Mastery Flight Training



TWA
TRANS WORLD AIRLINES

Retired TWA captain and active general aviation pilot Tom Rosen discusses the relative PIC responsibilities of airline versus privately operated aircraft:

I *NEVER* got on an airliner when I was PIC when I was concerned about, or worried about not being able to successfully complete the flight without being in danger. On the other hand, every time I get in my Bonanza I am aware that it is just waiting to kill my passengers and me. It's not that I am afraid of the plane, or concerned about the upcoming flight, or worried about the weather or other factors I'm about to face. I actually continue to love to fly and look forward to every time I am going to fly.

It's more of a **healthy respect for what I am about to undertake**, and the knowledge that **there is little room for carelessness or forgiveness for errors**. I'm solo, and *it's totally up to me*. Having done both for the majority of my life, there is no question that it is far more difficult to safely fly a two-hour flight in my Bonanza than a ten-hour flight in a Boeing.

Dues time!!!!

It's that time of the year!!! 2016 dues are "due". \$15 for another year of newsletters, quarterly gatherings, and unlimited member support! Two methods of payment: print out the following two pages and mail in your check or go to www.mnwing.org and click on **Join the TC Builders** link and pay via PayPal. Many thanks!!!!!!!!!!



Twin Cities RV Builder's Group – 2016

Check one: Renewal New Member Date _____

Personal Data:

Name: _____

Address: _____

City, State, Zip: _____

Phone: home _____ work _____

Email: _____

Employer: _____ Occupation _____

Other aircraft owned: _____ Other aircraft built: _____

Project Data:

Interested in RV aircraft but have not yet purchased plans or a kit: []

Purchased plans but have not started construction: []

Aircraft: (RV-3, 4, 6, 6A, 8, 8A, 7, 7A, 9A, 10, 12, 14): _____

Builder number _____ N Number _____

Project start date: _____ Shop location: _____

Project status (tail, wings, fuselage, finishing kit, flying) _____

Most recent component completed: _____

Powerplant: Horsepower: _____ TSMOH _____

Where did you obtain this engine? _____

Options installed or intended to be installed:

Avionics: _____

Instruments _____

Other options _____

Interior primer: _____ exterior paint: _____

If aircraft is completed, date of first flight: _____

Total time to date: _____

Comments/remarks/other project data (ideas for newsletter articles, builder's tips, meetings, guest speakers.)

NOTE: The *RVator's Log* is published quarterly on www.mnwing.org. You will be sent an email notice announcing the posting of each issue, which you can download.

DUES: \$15 per year

Please return application and a \$15 check made out to "Twin Cities RV Builders Group":

Peter Fruehling, treasurer
12 Island View Lane
North Oaks, MN 55127

612-578-3333, email: peter.fruehling@comcast.net

Twin Cities RV Builders Group
 12 Island View Lane
 North Oaks, MN 55124

First Class

Twin Cities RV Builders December Meeting

Saturday, December 12, 2015, 10 am - noon
Doug and Paul's hangar
41C Mooney Lane, Lake Elmo Airport



Why is there so much confusion on electrical systems? It doesn't have to be all that hard!! Our resident tech counselor Tom Berge will present a talk on how to design a simple and practical electrical system that will meet all of your RV needs. Plus plenty of time for Q&A on any building and flying questions you may have.

Coffee, hot chocolate, and our usual array of Christmas goodies for your caloric pleasure. See you there!!!!

Directions:

From I-94 eastbound, take the Manning Ave. exit and go north 3 miles to Lake Elmo airport. Turn right at the north entrance (just before RR tracks). Follow road past Valters Aviation and just past the Civil Air Patrol hangar turn right. 4th hangar on the left. Flyers can park on grass (or snow!) at east end of hangar row. Restrooms at Valters Aviation.

If lost, please call Doug at 651-398-1184 or hangar phone at 651-779-0747