

SHOP TALK

THE NEWSLETTER OF THE SONEX BUILDERS & PILOTS FOUNDATION
SONEXFOUNDATION.COM

Spring 2020

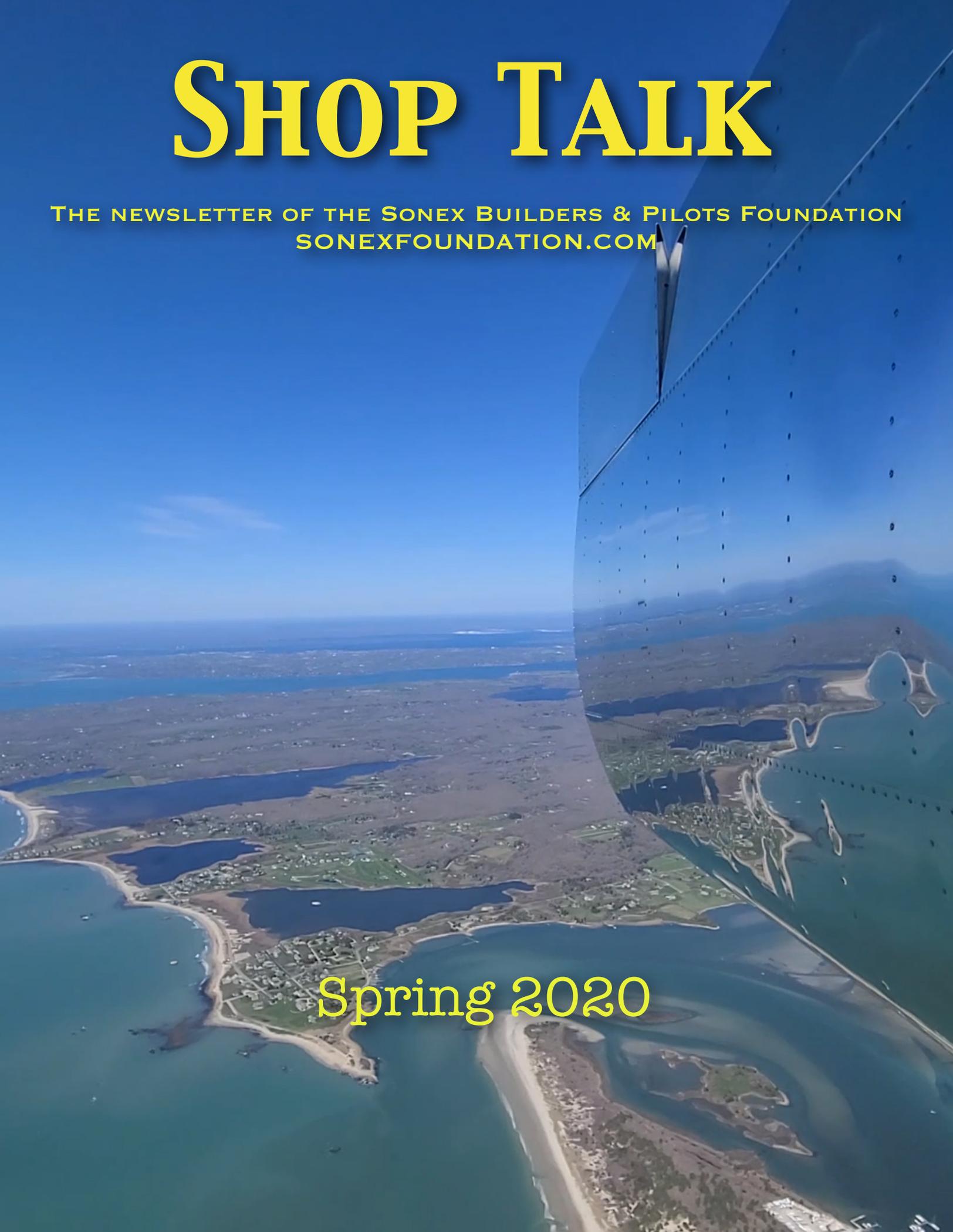


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Vice President – Mike Singleton
Secretary – Dana Baker
Treasurer – Tom Jones
Membership – Dana Baker
645 Members
38 Voting members
www.sonexfoundation.com

Submissions are always welcome at robbie@sonexfoundation.org

Club membership is free, and for those who wish to participate in elections and help direct this member-run organization, a voting membership is \$25 annually. Your donations help us keep the websites running, and allow us to publish this newsletter. We sincerely hope you enjoy it.

From the Left Seat

Robbie Culver, President

I'm back!

As a founding member of the Sonex Builders and Pilots Foundation, I decided to step back in as interim President when the current President, Jason Flint, had to step away for personal reasons. I'd like to thank Jason for stepping up when we really needed someone, and taking the left seat for us.

The way the Foundation is structured, the Board of Directors (BOD) is elected by the voting membership, and the BOD selects the President. So, here I am – again.

I try to balance our ongoing effort to grow the membership with the fact that it becomes easy to “spam” everyone in doing so. It's a balance I am working hard to achieve. You all can help keep me honest in that effort.

In this month's newsletter, we have a great article by Victoria Neuville of Aviation Insurance Resources (AIR) about – you guessed it – insurance! Jim Hicke shares his experience with a quick drain on his Jabiru 3300. Graeme Smith wrote a nice long article about his new-to-him Sonex experience. Michael Farley tells us of life with a Waix, and we introduce a new member of the Board of Directors (BOD).

As a result of the current situation we find ourselves in, we have been holding a weekly “virtual fly-in” using Zoom. If you haven't joined us yet, please do! We have had members from as far away as Australia, Ecuador, and Portugal join those of from the US and Canada. Topics have ranged from builder projects, to a virtual factory tour at Sonex Aircraft, LLC, to various avionics manufacturers doing virtual product demonstrations.

By the way – we are hiring! This position is open, and the pay is....well, there is no pay. It's an all volunteer effort.

Robbie Culver

President, Sonex Builders and Pilots Foundation

Treasurer's Report

Tom Jones

Using primarily PayPal and some personal checks, since reactivating *the "Donate" button* on the Foundation website in late April, thirty-eight people have elected to renew or activate voting membership in the Sonex Builders and Pilots Foundation. That support and influx of accompanying monies has enabled the Foundation to help fund the SonexBuilders.net, the Sonex Podcasts, as well as Zoom licensing and maintenance of the Sonex Builders and Pilots Foundation website. Let's hope that the new PayPal feature which allows for the set up of an automatic annual membership payment will help keep the Foundation fiscally healthy. My feeling, as I have watched paid/voting memberships decline in the past, was that many individuals did not consciously elect to drop their voting membership but simply forgot to renew it. Hopefully the new PayPal auto renewal feature will help resolve that problem. We are certainly grateful to all those who have through renewals and donations have helped the Foundation approach a more comfortable level of on-hand funds.

Sonex Aircraft - A Look Through an Insurance Agent's Eyes

Victoria Neuville, Aviation Insurance Resources (AIR)

Hello, my name is Victoria Neuville and I am an aviation addict; so much so, that I turned it into a career. In my almost decade long career as an aviation insurance agent, my views of the aviation industry have formed differently compared to that of a career pilot. My profession, in addition to 15 years of flying behind me and recently becoming a flight instructor, have introduced me to many great aircraft. One that has always stood out to me was the Sonex line of airplanes.

At first introduction at EAA AirVenture/Oshkosh years ago, the Sonex almost appeared like a toy to me. It was smaller than what I was used to flying then and its boxy build had me curious who was flying these things. I noted, however, that the low build cost could not be beat! It was not until I started speaking regularly with those that have built and flown a Sonex aircraft that I became convinced this experimental aircraft was something special. When Robbie Culver, president of the Sonex Builders and Pilots Foundation asked me to contribute to the

newsletter, I knew I had to give Sonex pilots and owners honest feedback on the status of the Sonex aircraft through the insurance industry's eyes.

As you may have heard, the ever-cyclical insurance market has entered a period of rising premiums with increasing restrictions and training requirements. This is the result of an insurance market saturated with aviation underwriters fighting over your business with one sole bargaining tool: price. The market would not have remained viable without increased rates and a focus on increasing safety. These increases have hit homebuilt, tailwheel, retractable gear aircraft and rotorcraft the most. Increases are averaging 10–30% and sometimes more.

Zeroing in on the Sonex specifically, despite over 600 kits completed, it can be difficult to locate a CFI with Sonex experience to provide the required insurance checkout. Often, a CFI's Sonex time is minimal. In addition, dual instruction is not possible in the single seat Onex or SubSonex. As single experimental aircraft generally are not available, it is nearly impossible to build time in a non-owned Sonex prior to the completion of a build. Quality of training and pilot experience play a large factor in the underwriting of this aircraft. Hence, you will see new-to-Sonex pilots paying a heftier rate compared to that of a seasoned Sonex flyer. As the aircraft popularity grows, hopefully these hurdles will become a thing of the past.

The good news is that aviation is always evolving, and with that, pilots. If we as a group place an emphasis on training and increased safety perhaps the rates will eventually reflect the incredible value of these homebuilt aircraft. Standardized training like the Sonex Builders and Pilots Foundation Training Syllabus is an excellent step in the right direction!

If you are looking to build or purchase a Sonex aircraft, Aviation Insurance Resources (AIR) shops all the major aviation insurance markets to obtain the best available rates on your aviation risk. Call 301-682-6200 or [apply online today](#) to obtain a competitive quote from a knowledgeable agent and pilot!

Quick Drain

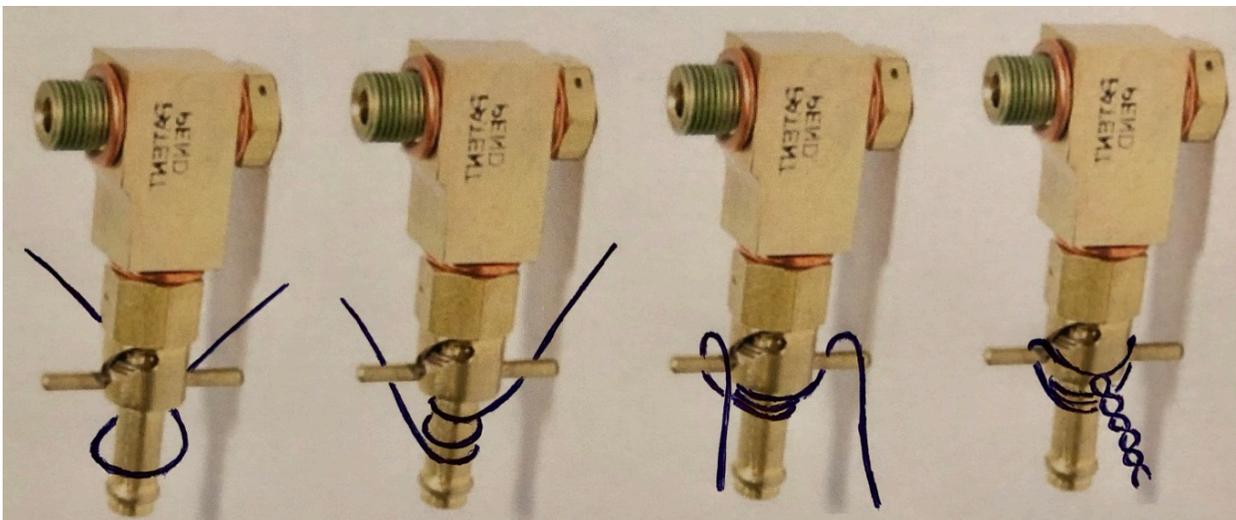
Jim Hicke

I have the Jabiru 3300 and they updated the recommended oil change interval to every 25 hours. Some of my trips exceed that limit and I fly often enough that I wanted a quicker oil change. Aircraft Spruce sells this quick drain designed for the Jabiru engines (search for Jabiru 90 degree adaptor CCA-2485) and I installed one on my plane. I secured everything and did an engine run with the cowling off to check for leaks and everything looked perfect. It was time for a test flight.



I put the cowling on, fired up the engine, and headed for the run up area. During my run up I saw the oil pressure drop to zero. I shut down the aircraft, called the tower, and got permission to push the aircraft back to the hangar. What I saw on the ground was a puddle of oil and an oil trail all the way back to the hangar. I caught it in time to save the engine. After helping the FBO spread some Quick-Sorb on the asphalt I went to work fixing the installation.

It was obvious what had gone wrong; the cowling had pressed up against the quick drain and started the leak. The more the engine vibrated the more the quick drain twisted due to upwards pressure from the cowling and out went all my oil. First thing I did was angle the quick drain such that there was plenty of room for the cowling. The second thing was to figure out a good way to safety the quick drain so this couldn't happen again.



Here is what I came up. I wrap safety wire around the drain tube tight against the bottom of the twist assembly and run the ends around each tang and twist it tight. To test it, just press up on the tangs and make sure it can't move.

Oil changes are now a snap and I can do them by just removing the left side of cowl.

The Engine Stopped - The Fun Began

Graeme Smith

On 25 April 2019 I was short fielding out of Trade Winds on Martha's Vineyard. A beautiful private grass strip nestled in some trees. It was a standard day. The Cessna 150 was light. I had flown the airport twice already in 2019. But this takeoff was not normal. I was rotored in the lee of the trees. The plane sank and I made a snap decision to abort the take off with runway remaining rather than risk not getting out over the trees. I oh so NEARLY got stopped. I tried to ground loop her round as I approached the fence. All that did for me was have me hit the fence to the left. The prop chewed the fence wire. The engine stopped. And so - I thought - did flying for the year.

Next a couple of weeks hectic activity trying to get an AP to give an estimate for repairs on a relatively remote island with one shop. My own AP had looked at the pictures I took, added it all up and was of the view that with an engine tear down, a new prop and probable gear damage - the insurers would be writing me a check. Which they ultimately did. The plane is now somebody's project down in TN.

Now what? Well perhaps it was time to try "something more interesting". Not the best of circumstances - but this would appear to be an opportunity to do something about it. And my mission criteria had been changing. Less need to travel around New England cheaply. It would be nice to do some positive G Acro in my own plane rather than have to rent. Be nice to have less capital sitting in the tie downs - or at least lower operating costs with more owner maintenance. Past lives kayak, dinghy and yacht building left me in no doubt I could build a plane. But at my age (60) - I want to fly rather than build. And passengers are rare. Usually small Young Eagles at local rallies. Once a year camping.

A local pilot friend had both bought already built and built his own RV. He offered wise counsel. Mike Smith at Minuteman in Stow, MA had scratch built his Sonex which I was familiar with. A friend put me onto Robbie Culver who gently grilled me about my experience and criteria and offered sage advice. So, with my mind generally made up – I started scouring Barnstormers. RV4 or Sonex? A Sonex came up first – at 8A6 – Wilgrove Airpark in NC.

I scoured the Sonex Factory website, the Foundation website and joined the SonexBuilder Forum. I gathered as much documentation as I could on putting a Sonex together along with every service bulletin issued by the factory. I ordered the CD of FAA documentation for the plane. Ran a lien check. I reviewed the EAA's purchase and sale agreement for a homebuilt aircraft and had an attorney friend confirm it completely favored the builder. Then I prepared a "walk away" list. This is a tool I use when engaging in significant projects. It serves two purposes. First it is to document certain milestones or criteria that must be met for me to make an investment or to keep going or to stop. A second and very important purpose is to help me walk away if I am getting all starry eyed and carried away during the purchase process. Like personal minimums when deciding to go fly.

A good friend Jeff McGuire agreed he needed an adventure and at crack of dawn on 21st May we strapped on his Cessna Skylane – departed KUUU – Newport, RI, set the autopilot and 5.5 hours later we short fielded into Wilgrove. The three recent wrecks to the side of the narrow runway were a bit sobering. The builder Dennis Wright met us and we repaired to his hangar. And so, to work – starting with the first item on my "walk away list". Copies of the basic documentation of the aircraft. Did it match the FAA copies and did his Repairman's Certificate apply to this plane for the Condition Inspections in the logs? Then the build log and pictures. Airframe, powerplant and propeller logbooks. Dennis had everything ready and we got past that hurdle quickly. Then a review of all Sonex's Service Bulletins and if they had been complied with or if not why? All good there.

Then we took the plane apart. Dennis was completely forthcoming and transparent about his build process – pointing out some bent bits of metal in the back of the hangar that had not made it onto the aircraft and where he had

purchased new metal! On small details where he had gone “off plans” it was principally to improve access for subsequent maintenance, and he shared his engineered criteria. We mirrored and borescoped and measured and inspected. The engine looked clean and Dennis volunteered having had to recently change a cylinder head. Wiring was workmanlike and every wire seemed to be labelled at either end. They even said the same thing at each end of the same wire! We put the plane back together. Dennis asked what I thought? I said I needed to confer with my friend.

Jeff and I stepped outside. The plane had passed every milestone on the “walk away” list and was still looking good. The only remaining item was a test flight. I reminded Jeff of the other reason he was along.

“Jeff am I getting all starry eyed? Should you be hitting me over the head with a baseball bat?”

But Jeff didn’t – he enthused about the build quality, the obvious attention to detail. He liked the open and honest demeanor of the builder as much as I did. We went back into the hangar and told Dennis the bad news. I wanted to go on a test flight.



But first, we broke for a late lunch. Then Jeff and I repositioned the Skylane and Dennis his Sonex to KRUQ – Mid-Carolina Regional with a 5,000ft runway and no obstacles to get out over. It was warm, burbly and late in the day. At half tanks, the Sonex was going to be at maximum gross and Dennis warned we would be step climbing to keep things cool. Preflight, safety brief and off we went to some lakes to the east where the school planes practiced. We flew around while I watched numbers on the EFIS, checked for Carbon Monoxide in the cabin (none) and watched how Dennis flew her. Then my controls. A few Pilot Induced Oscillations while I found where on the stick to hold her and not over control and then round in some steep turns – they were not great – but they were not awful either. Even at maximum gross she was quick and nimble and when I got her straight and level and let go – she flew almost straight, almost hands off. She needed a hair of left rudder to keep the ball centered. Dennis mentioned he had never got around to fitting the rudder trim tab and just flew with the touch of his foot on the rudder. We were throttled back to 3,000 and trucking along at 99KIAS. Not much more to find out at this point. We went back to KRUQ, landed and pulled off on the ramp. As silence fell Dennis asked what I thought?

There have been times in my life when after the right amount of preparation and work – the stars line up – and my gut tells me so. Nothing had felt wrong. Dennis was a straight shooter, the plane looked well-built and she created a “Sonex Smile” when you flew her. This plane had the throttle in the left hand, stick in the right, a bulged hood and a left turning engine. Same as a Spitfire less 920hp. I could go look at others and what would that do for me? Anything else I was going to find out about this plane was going to be on my dime.

“Dennis – I’d be honored if you would let me be the next custodian of your aircraft.”

We shook on it, I gave Dennis a deposit to hold the plane a month and Jeff and I strapped on the Skylane, set the autopilot and we spent 5 hours getting back to Rhode Island – landing at dusk.

And then a very frustrating month for both me and Dennis. Dennis had to be out his hangar at the end of June and needed me to get a move on. I had a lot of work projects needed attention while trying to find a 3-day weather window to

bring the plane back to Rhode Island. Transition training was going to have to consist of a good read of the syllabus, a little brush up tail time – but in an RV4. AVEMCO will insure anyone – but it took Victoria Neville at AIR to find me an underwriter who would insure me at a price I thought reasonable. They also agreed to negotiate when I offered that I take a Flight Review every year and that I would fly the Sonex Training Syllabus with a CFI and as a Flight Review in the plane. Price came down and their initial 10 and 10 with a CFI and solo was reduced to 5 and 5. Mike Smith came up with a CFI he knew who had Sonex time.

I crunched several flight plans and routes to get home with very conservative fuel minimums and 5,000ft runways. Not so much for the length. But much more for the WIDTH I might need. Finally, on the 27th June I drove an overnight one-way car rental to KRUQ to meet up again with Dennis. He flew in. I caught some video of his last landing in the plane. He greased it.

I was glad I was travelling light. The plane was FULL. Dennis had agreed to supply “some spares” with the plane. He wasn’t kidding. We spent three hours just going through the plans, manuals and boxes and boxes of parts he had strapped into the plane. Outlining what was what, where it went and what I needed to know. I made a raft of notes and took countless photographs. By the time Dennis was done – my extensive list of questions was redundant. The FBO at KRUQ was kind enough to loan us a shade hangar to work in – fee – “Just top off before you go”. I gave Dennis the certified check for the balance and we signed the paperwork. It was midafternoon and thunderstorm cells were still popping away up north. I wasn’t going home yet – though the afternoon cool off at around 16:00 looked like it might offer a window to get part way home.

So first I piled all the spares into the car, preflighted slowly and then spent 30 mins taxiing around the ramp getting used to the sight picture and the lack of a turning circle. More than once I had to stop the engine, climb out, pick the tail up and turn the plane around and then carry on. I also spent some time thoroughly learning two of the screens of the Engima EFIS so I could monitor the engine and my airspeed and attitude. Actual navigation would be by iPad.

Once I had that sorted out – there was no getting away from it – the runway was waiting. I taxied down to the active only to have the wind swing 180 as I did. I

couldn't get round on the narrow taxiway and had to stop, get out, pick the tail up and taxi back the other way. Glad no one was about.....

And then the first take off. I didn't let her fly off – I should have let her fly off – but no – I picked the tail up. Even with my Tiger Moth experience of a left turning engine – I over controlled the tail swing. Glad I was on a wide runway! I climbed out and elected to get some airwork in the practice area before some pattern work. I set up on a lake for a heading and flew some slow flight. Discovery – you really must abuse this plane to get her to drop a wing. She prefers to just burble the stalled wing at you and mush downhill. Lots of steep turns till I got it somewhat dialed in. They were steeper than 45 degrees and less than 60. In the end about 50 where I could – at least initially – get the plane to stay on speed and altitude and I started to hit my wake. I tried some power on stalls. Then some slips in landing configuration. I initially missing how slippery the plane was and how a slip doesn't necessarily get the plane dirty enough to slow down as well as sink. Then I flew some 'go arounds' at 3,000ft AGL while I got the workflow down. I was sure I was going to need this one.

Back to the pattern and what might be best described as three full stop crunches with full taxi backs, seasoned with two go arounds. Funnily enough it was not the sight picture close to the ground that was bothering me – I just wasn't getting slowed down enough and spent some time on my tailwheel with the stick in the pit of my stomach waiting for the mains to agree I was slow enough for them to drop to the surface. I had been misled by Dennis's lack of flaps till the last minute – in his workflow because we were at maximum gross and sank and slowed easily with the nose up. But only one up and putting in flaps late – I was diving fast for the runway and wasn't slowing down. It wasn't awful. Just used a lot of runway.

Back to the ramp, pack the plane, fuel her and go look at the weather. My "three-day window" to get home was not looking so good. The remainder of Friday was good and the cells to the north were dissipating as the day cooled. But Saturday and Sunday were no longer looking very flyable. And how tired was I?

I decided to fly a two-hour leg to KOFP – Hanover County in VA just NW of Richmond. The 5,400ft runway met my criteria and it put me well into civilization

and hotels and rental cars – should I need. I launched and within 30 mins overtook the remains of the tail of a cell which was dropping the last of its heavy rain up ahead of me. I was just a little annoyed! I called a pattern entry to the strip that was below me and as I turned towards it – the tails ahead broke up and I could see clear through. I cancelled my landing and trucked on for Hanover County. The landing was OK and I taxied in for a top off and a weather review. Hanover County may be a midsize regional used to the Learns and Citations – but boy did the Sonex turn some heads. The lineman had to be shown where the fuel went.

Three hours of daylight left. Two hours to my next 5,000ft runway at KMIV – Millville in NJ, threading a narrow gap just SE of the Washington SFRA and NW of the restricted areas at Patuxent Naval Air Station. Go or not? I felt GREAT. Go! I threaded the gap and as I came up on Dover Air Force Base on the Delaware. I was way above the Class Delta. Listening in they were conducting pattern work – so I called in just to identify myself and confirm I would be staying high. Now normally Dover are glad to hear this and might even give you a squawk for a few moments while you pass them by – but this controller didn't want to know and told me if I wanted flight following to call approach. Oh well so much for trying to help.



As I descended into New Jersey – the lights of the Atlantic City casinos were bright on the right wing and with a better idea of fuel consumption and plenty still in the tank I decided to keep going for 31E – Eagles Nest on the Jersey Shore. I knew the airport well, having flown relief flights into it after Superstorm Sandy, could be sure someone would put me up for the night and the fuel was cheap! Though only 3,700ft long – there is a nice long approach in over the marsh to get my speed controlled and I got my first greased landing in the plane. I fueled, looked at the weather and....



It was a classic “Get-There-Itis” trap. Home was just two very familiar hours away. It would be night when I got there. And Saturday and Sunday were now looking unflyable. It had been a very long day already. In a new to me plane. Stop for the night, rent a car, come back later. Good Decision. But the last landing had been awesome. I was still full of energy (though it might dissipate quickly). Well hydrated and my supply of energy bars was holding up. I have flown this stretch countless times and the airports are all familiar if I decide to divert. Gut check – Go.

The plan was simple – It was CAVU and all airports ahead were reporting CAVU. I could go high into a good tailwind at 7,500ft and overfly the New York Class

Bravo while cutting the corner with a glide to land from the overwater portion. I launched in the last of the light and climbed hard while following the Jersey Shore north. Way to the west in the last of the twilight I could see Saturday's weather beginning to form. As I climbed, I kept listening ahead to all the airport ATIS – and all were reporting CAVU. Climbing in the dark through 6,500ft – the world below disappeared. Darn. I levelled off, kept the wings level and let back down again gently. The lights of the Jersey Shore showed up again. Whatever fleecy puff I had just been in, there were probably more and 6,500ft was not going to get me over the New York Class Bravo. Negotiating a VFR Bravo clearance was a lottery. I continued letting down while flying the shoreline and planned on KBLM – Monmouth County on the north end of the Jersey Shore. But it was clear ahead. I could see Sandy Hook and downtown Manhattan. So, I pointed the nose down, slid under the Bravo shelf and aimed for the Verrazano Bridge at the mouth of the Hudson. I pulled up the Helicopter Chart on the iPad – required to fly the Hudson Special Flight Rules corridor. I zipped over the bridge and arrowed for the Statue of Liberty heading north while calling the reporting points at “Clock”, “Intrepid”, “GW Bridge” and “Alpine Tower”. At Sing-Sing prison I hung a right and headed east. Newport was just an hour ahead. I still had a good two hours of fuel on board.

We are not going to say a lot about the night landing at Newport. It was another keep the stick in your gut and ride it out one and I'm glad it was dark, no one saw it. But I was home.

Next day at the airport open house the plane won “furthest to fly in”.

Flight

KRUQ – KOFP – 31E – KUUU

559 NM

6.9 hours PIC / Solo / Tail / Cross Country.

1.5 night.

3 landings. 1 at night.

Make: Dennis H Wright

Model: Sonex

Serial Number: 1153
Registration Number: N360GS
Date of Certification: 24 November 2015 (as N581DW)
First Flight: 6 December 2015

Graeme Smith took his first flying lesson in a WWII Tiger Moth at a Battle of Britain Airshow in the UK in September 2010. He is currently a 2000-hour PPL - tail and complex endorsed and has trained for and flown some 27 types. Based at KUUU - Newport State in RI he flies Young Eagles in the EAA program and is a volunteer for the FAASteam/WINGS program. In past lives he has been a Whisky Blender, Youth Worker, Tall Ship Captain, Yacht Builder and currently owns a Computer/ Business consultancy.

Life with a Waix: Continuing the Journey of Waix #0056

Michael Farley

I have been told by a great many people that change is a never-ending part of life, and I can't help but agree. While perhaps not quite as concrete or totally accurate as "The only things guaranteed in life are death and taxes", ongoing evolution is certainly part of life.

The same can be said with my Waix, legacy kit #0056. After I purchased this kit, used but never started from the original owner in autumn of 2009, I began an intensive 2.5 year build (mostly in my single car garage) and was able to begin test flying my Waix in April of 2012. A few short months later I was able to accomplish a major personal goal which was to fly my own creation to EAA AirVenture, held every summer in Oshkosh, Wisconsin. That trip was very special to me and those memories will be held in my heart for the rest of my life!

A short while later, the "evolution" part of my Waix's life began as I started small changes and upgrades as my time and budget allowed. As discussed in a previous "Shop Talk", I performed cosmetic surgery on the leading edges of my wings and replaced the leading edge skins with new, undamaged ones (the original ones were completely airworthy but had enough hangar rash from the building process I wanted them replaced). A few years later, evolution struck again when Sonex Aircraft, LLC began offer the turbocharger upgrade kit for the VW based AeroVee engine. I jumped at the opportunity for additional power, purchased the kit, and installed the turbocharger on my airplane.

Over time, I have changed the EFIS display from the older monochrome Stratomaster Ultra XL to the newer style Xtreme Mini, replaced cracked wheel pants, added interior pieces, polished for an unimaginable number of hours, and a host of other small changes and updates that I saw fit. I will say though; despite the number of small and large changes I've made to my Waix, my love of flying it has never wavered! The airplane is a joy to fly and brings a smile to my face every opportunity I get to spend some time aloft.

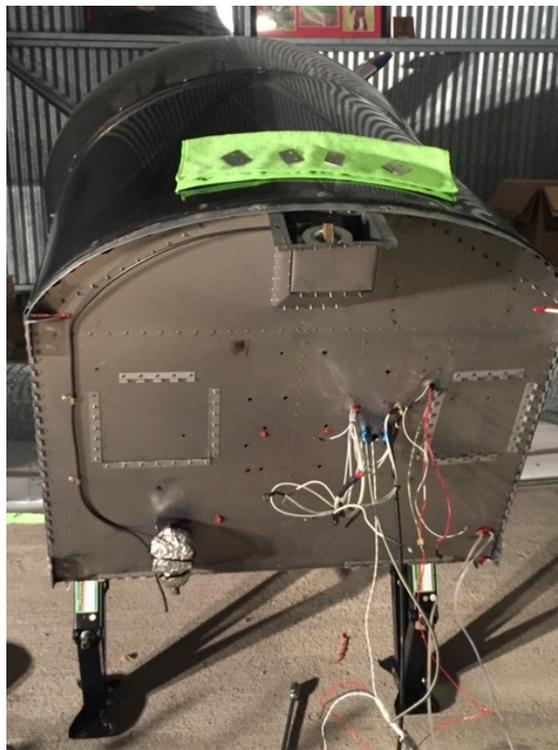
Last spring I began planning the next phase of the evolution to my airplane, perhaps to be the biggest modification yet. While I love the AeroVee for its simplicity, ease of maintenance, and cost, I admitted to myself there were times I longed for an increase in power. While the airplane was perfectly suited for myself alone, I knew that if I wanted to take either of my quickly growing boys with me on a regular occurrence, I would need to figure out a way to get some more power under the cowling (by this point I had removed the turbocharger and was flying the airplane with the normally aspirated AeroVee). After reviewing the available options, I decided that I would slowly start purchasing parts I required to swap engines on my Waix. My plan was to remove the 80 horsepower AeroVee and install a 120 horsepower Jabiru 3300 engine in its place.



One of the last flights I took with the AeroVee. This was just after Christmas.

I started out several years ago with the purchase of an Jabiru 3300 standard gear engine mount, prop spinner and cowling (just in case the old one didn't fit) from my friend and fellow Waix builder Eric Seber. Later that summer I purchased the larger sized AeroInjector and cooling baffle kit from Sonex Aircraft, LLC and finally last August I ordered a new Prince P-Tip propeller from Prince Aircraft. The last item I needed was the engine itself which I purchased from another Sonex owner, Mr. Art Stallings, from central Texas. This engine was shipped to Arion Aircraft in Shelbyville, TN for a complete rebuild to prepare it for my airplane.

I continued flying my Waix throughout the fall and winter months until I finally had all of the pieces needed for the engine swap around the first of February of this year. Finally, after one last enjoyable flight with the mighty AeroVee I thanked it for a job well done, and began disassembly of my airplane. Off came the cowling, prop, cooling baffles, sensors and probes, and finally the AeroVee itself was removed and set aside. Not stopping there, I also removed all of the firewall accessories and eventually removed the AeroVee engine mount from the firewall. Needless to say, the fuselage looked very odd with nothing mounted on the firewall!



All AeroVee parts and VW engine mount removed. Very strange to see this!

Once all the VW parts and accessories were gone, it was time to begin reassembly. By some miracle (or really good welding jigs), the new Jabiru 3300 engine mount went right back into the same location the old engine mount was removed from without difficulty, and it was a perfect fit! I was even able to reuse the exact same engine mount spacers to install the mount permanently. I was also treated to another pleasant surprise when the landing gear legs slipped right into the new mount without difficulty, thus saving me a lot of work and allowing me to get the airplane back on its gear quickly and easily.



New Jabiru engine mount and freshly overhauled Jabiru 3300 just installed

Once the engine mount was installed, I installed the freshly overhauled Jabiru 3300 engine onto the mount so I could begin fitting associated hardware around it. Firewall access for new components were considered, and everything that may need eventual replacement was installed on firewall standoffs for ease of access. Sensor wiring was quick and easy, as was most of the cooling baffles I fabricated for the cylinders. I did discover that the cowling I had been using with the AeroVee was not going to fit over the Jabiru without major fiberglass “surgery”, so I ultimately chose to install the new cowling I had received with the engine mount.



New cowling and cooling baffles being fitted

After finishing a large list of small final details, the day came where I pulled the Waix out of the hangar, tied it down, and fired up the Jabiru for the first time. Thankfully it fired right up, idled perfectly, and all of the sensors seemed to be working properly. After a few short test runs to check for a properly tuned engine it was time to install the cowling and get the Waix back in the air!

One note for those of you who are curious; an engine swap such as this certainly counts as a “Major Change” as specified in the aircraft Operating Limitations. Accordingly, I had already contacted the local FSDO and received permission to re-use my original Phase 1 testing area for the new 5 hour Phase 1 testing time I would need to accomplish. I also contacted my insurance agent to make sure the insurance underwriters were aware of my engine change, and to ensure I would have uninterrupted flight coverage during testing hours. Thankfully, both the FSDO and the insurance underwriters had no issues with the change.



First flight with the new engine was a success! Engine runs great!

As I write this, I have yet to complete the Phase 1 testing phase with my new Jabiru engine but so far the engine and airplane are doing wonderfully! The Jabiru 3300 is a more powerful engine and offers better climb rates and faster cruise speeds, especially when ran hard as I break in the new cylinders and piston rings. I have more testing to accomplish before I will be able to release the airplane from the Phase 1 testing time, but that will come in due time. I'm looking forward to flying my Waix as much as possible this summer, and I hope to be able to use the increase in cruise speed to visit with other Sonex builders and pilots whenever possible.

In closing, I want to say this. It doesn't matter how you build your airplane, be it tri gear, taildragger, AeroVee, Jabiru, etc. No matter what you decide it's going to be a great airplane and a lot of fun to fly! Whatever you decide, keep building, ask lots of questions, but remember that once your big day comes and you fly it for the first time, you're going to absolutely love it!

Best wishes and fly safe,

Mike Farley
Waix #0056

New Board of Director Member Introduction

Michael Radtke

Hi all my name is Michael Radtke, and I am a new Board of Directors member for the Sonex Builders and Pilots Foundation (SBPF).

I built Waix N143NM, usually kept at Ryan field in Tucson, AZ. It's been flying for about 6 yrs now, and is a standard gear Waix with a Jabiru 3300.



I stepped up to the board member position because last year at AirVenture we had a special flightline meeting to discuss the future of the foundation and its worth. Jason Flint stepped up as President, and they needed another board member. Nobody else volunteered so I did! I'm happy to help out. I've been a voting member of SBPF since its first meeting on the flightline at Oshkosh EAA AirVenture.

Thanks to Robbie Culver, Michael Farley, Eric Seber, and Carl Orton our first board. The foundation is important as we also joined EAA's Type Club Coalition. There is a meeting every year at EAA AirVenture with all the type clubs present.

Also included is the FAA and NTSB representatives. Robbie graciously asked me to join him for the meeting. Hopefully I can attend again at AirVenture 2021.

The Foundation holds a flightline meeting every year during Oshkosh, a kick off diner at a local restaurant, and a BBQ on Wednesday night for the night airshow. Wayne and Kathy Daniels are gracious to host us at 7th Heaven on the east side of Wittman field at their home/hangar complex.

I would like to focus on safety for the group, and post incident/ accident reports, trends and special interest from the FAA and NTSB.

I spent 35 years in ATC, 10 in the USAF, and 25 in the FAA. I always worked with the local FAA FSDO to conduct pilot seminars and safety briefings. I hope I can offer some knowledge to the group.

Please consider becoming a member of Sonex Builders & Pilots Foundation

A yearly voting membership is only \$25. Basic membership is free.

Be healthy and safe

Fly safe and see everyone at OSH AirVenture 2021!

Builder Report

Billy

Royersford PA

Sonex 1723

Plans built

Tailwheel

Dual Sticks

Started just about two years ago.

Corvair 3.3 125hp built in November with a break-in run, Sensenich prop 54/60, plans built aluminum fuel tank.

Steam gauge altimeter, air speed, rate of climb, and VDO RPM gauge with built in volt meter. MGL 4 channel EGT/CHT gauge, O2 sensor with air fuel mixture gauge, Mini iPad mount, Garmin GTX-327 transponder and encoder, uAvionics Echo ADS-B out and GPS.



Differential cable brakes and modified full swivel Scott tail wheel. Standard canopy with bonded sides (no rivets), also Exterior canopy handle to open it.

My plane came together rather quickly in a year and a half and all plans sheets are pretty much completed. And now I've been working on all the stuff not generally in the plans. (Wiring, ADS-B, and the little things). I built this in my cellar with a 36" exit door so after I assembled everything I could in the cellar, it all came apart to get it out. Now I am assembling in my garage and ready for re-fitting of everything and firing it up. Paperwork just started. Hopefully first flight by August.



I did a preliminary weight (no wings on, exhaust, prop, or intake) and it came in at 425 lbs.

The most challenging thing for me was all the things after the plans were completed.

I chose a Sonex because I wanted to scratch build and the plans are excellent. Also I'm pretty cheap. Barely \$6000.00 in the complete airframe including hardware, panel maybe \$2300.00, Firewall forward a little different. Lol. My grandson Max has put in lots of hours too. He's been with me 3-4 days a week since he was born three years ago.