VELOCITY VIEWS

Volume 33

Branson Missouri Fly-In

by Duane Swing

Nine Velocitys on the ramp during Friday's welcome cookout at the Branson Fly-in.

FOR THOSE OF YOU WHO ATTENDED the Branson Fly-In, it goes without saying that "a great time was had by all." We started with a Friday afternoon cookout at the airport as we greeted those who were flying in and those who drove. Weather to the south was lousy and many of those who were going to fly to the event just could not make it. Even so, we had over 50 by final count that made the effort and 9 Velocities setting on the ramp. Saturday morning we all got together for a group photo and a social hour followed by a trip on the Branson Belle paddle wheel lunch show. A Branson trip would not be complete without an evening at the Andy Williams Theatre with Andy and Glen Campbell doing their thing. From then on, it was everyone for themselves. Many paired off to see one or more of the many shows available to those who visit this historic part of southern Missouri, while some used this time to just relax from their grueling schedules.

All in all, this was a fun fly-in with many things to do and see and a must-do for some future Velocity get-together. We thank Lynn and Sue Elsner for taking the time to make it all happen.

In this issue

Photos from Branson MO

Pictured above are Lynn and Sue Elsner from Nebraska, who organized this event A great big thank you for all their hard work!

In the photo below, Duane Swing poses alongside his beautiful wife Bonnie.

Becky & Wes Rose (above photo) flew their XL from Michigan. It was a nice surprise to see the Rose's in attendance, both still suffering from their recent helicopter accident. The below photo shows Lynn & Jimmy Dallas from Indiana. Jimmy is one of Velocity's first kit builders, and attends many of our events! Jimmy's great sense of humor and story-telling ability usually attracts a fun group around cocktail hour.

by Duane Swing

Insurance Issues

I received a call today from Falcon Insurance informing me that from now on anyone wanting renewed coverage for his or her airplane will have to undergo annual "factory" recurrence training. John Allen of Falcon indicated that this ruling was coming down from the underwriters and included numerous higher performance single and twin-engine airplanes like the Bonanza A36 and Cessna 210. I questioned him about the ability of Beech or Cessna to perform "factory" training and he said that, in their case, a local CFI could perform the training. I suggested that Velocity Inc. could prepare a checklist for any CFI to use in judging the ability of our pilots to complete a satisfactory performance evaluation by his or her local CFI. John thought this was a good idea and passed it on to his underwriters. The underwriters have agreed and we are now preparing this information for them.

Once all is approved, a pilot wanting to renew insurance through Falcon would be required to have completed the initial "factory" flight training program and an "annual" review by his or her local CFI using the checklist we will supply to you. The CFI review can also be coupled to your bi-annual if desired, to lessen the financial burden. As always, we here at Velocity can also perform the CFI review if this is your desire.

Let us know when your insurance company requests this training and we will send the information to you.

Stolen XL RG Velocity

Our demo aircraft, N457M, is gone. The airplane was placed in a hangar on the South Lakeland Florida airport on a Sunday evening and by Monday morning it was nowhere to be found. The airport was host to an EAA fly-in on Saturday and lots of people looked over the airplane. It is believed that someone from this gathering must have been responsible for the theft. The FAA, DEA, and the local Sheriff's office are conducting the investigation. If anyone out there notices a beautiful XL setting on the ramp with tons of Garmin radio gear, give us a call.

Replacement XL RG

Scott and I have been working overtime to prepare a replacement Velocity for the one stolen. There will be many departures from the normal aircraft, designed to provide an even better aircraft than the one it is replacing. The first thing of importance is the engine. We are using the Continental 310 horsepower IO 550 engine. This is the same engine used in the Columbia 300 and the big engine Cirrus aircraft. We are going one step further, with the addition of the full FADEC system. This will eliminate the mixture control from the panel and provide the optimum mixture and spark advance to achieve the best possible fuel economy. It does for the aircraft engine what the auto engines have been doing for many years.

The next big change is in the rear seating. We have modified a bench type seat with a 60/40 split in the seat back and moved the whole thing forward about 7 inches. This allows for an easy three across rear seat for smaller people and provides plenty of baggage space. With one of the rear split seats backs folded down, the baggage area is an impressive 48 inches wide and 50 inches front to back, plenty of room for three adults and three sets of golf clubs or loads of baggage. If this works out OK, we will make it available for any new purchasers of the XL.

The third big change is in the rudder assembly. We managed to modify our existing system to make it work just like your average Cessna. Dual articulating rudder peddles with toe brakes. This will allow full rudder deflection without the fear of getting onto the brakes. Cross wind take-offs and landings should be much easier due to the additional rudder available. The down side is that using the rudders as speed brakes will no longer be possible.

If this system proves to be as good in practice as it appears in theory, we will make it standard equipment on both the XL and the Standard aircraft in the future. Pilot side toe brakes will be standard with co-pilot toe brakes as an option. We designed the whole thing as a bolt in replacement for the system you have now. We have not set a price but expect something in the $1000 range. It is interesting to note that a much more complex system is used in the Korean XL and their system has a list price of $4,600.

The last thing will be the instrument panel display. We will be using two of the Blue Mountain 8" X 11" flat screen EFIS systems. This will give our demo customers, who usually ride in the right seat, the same display the pilot sees. Since we are now dealers for this system, why not give it a boost?

There are other less obvious changes that will be incorporated but these are incidental to the rest.

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A&P Talk

by Brendan O'Riordan, CFII, A&P

Over the last few years we have made some basic changes to our kits that would be beneficial to install in older Velocities. Most of these changes have been in the engine compartment but there are a few airframe changes that we have done as well.

In the Velocity Service Center we have stopped using standard automotive fuel filters. These seem to work fine but they usually are not serviceable so it is hard to open them up to see if you are getting any junk from your fuel tanks. We have started using serviceable aircraft fuel filters. The one shown in the picture (above right) is made by Airflow Performance. It is a maintainable filter with a 125-micron stainless steel screen. This allows you to clean it every few hours when first flying. Fuel filters should be installed before the fuel pump.

Another item that we have started using on all of our airplanes is a fuel shut off valve. This is something that makes maintaining your fuel filter easier. I remember changing automotive fuel filters and trying not to fill the back of the airplane up with gas. You will also notice the shut off valve in the picture (to the right middle) is connected to a cable. This cable runs to the front of the airplane so that, in the case of an emergency, you can shut off the fuel feed to the engine. If a fuel shutoff valve is installed without a cable connection it will need to be safety'd in the

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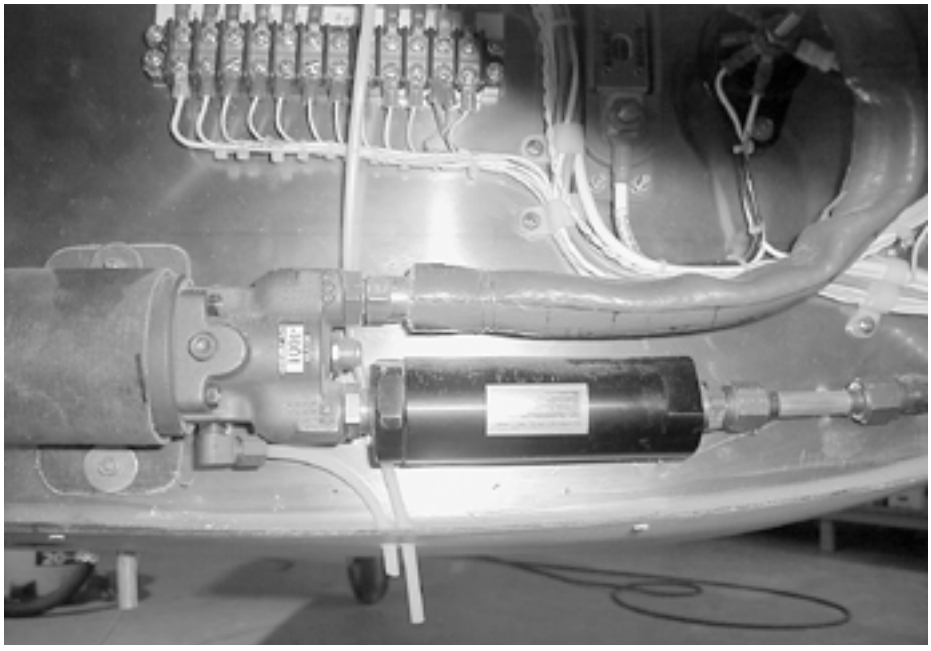

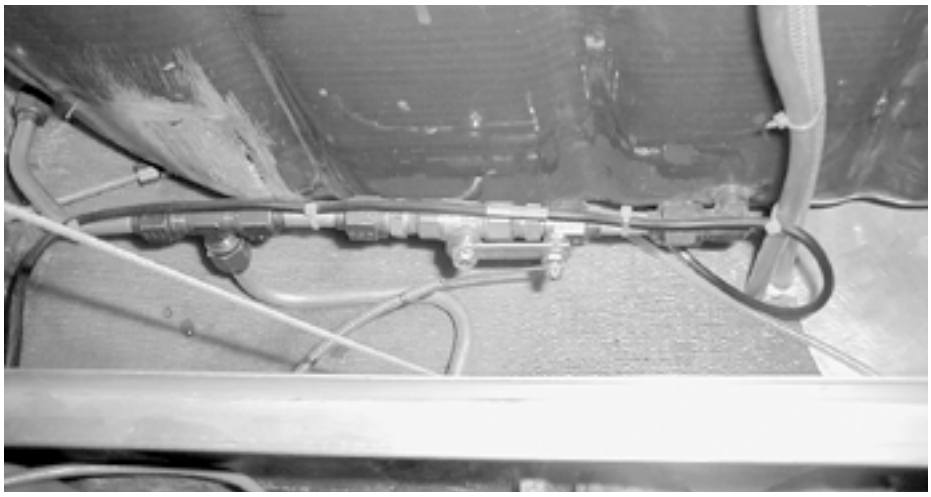

A&P Talk

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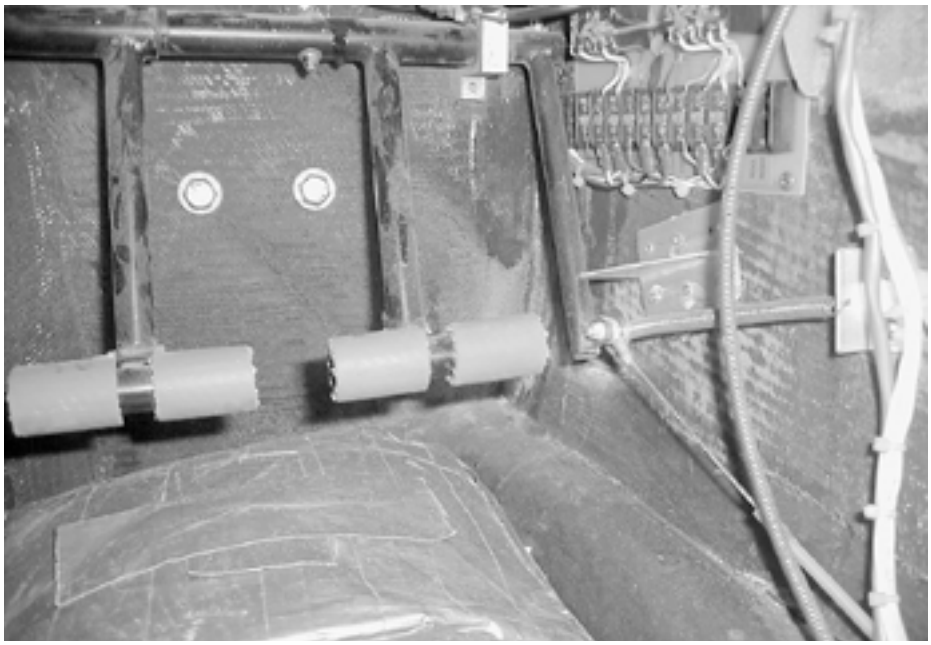
open position for normal operation.

Another item, which we have talked about before, is fire sleeve used on all flammable fluid lines in the engine compartment and on your aileron cables (see bottom photo on the previous page). The reasons for using fire sleeve are self-explanatory. If you happen to have an exhaust pipe crack you have temperatures up to 1500 degrees Fahrenheit in the engine compartment, which can melt the sheathing on your aileron cables or melt through aluminum lines to oil or fuel.

There have been a few changes with airframe items as well. The most important one is the use of a change in the pulley holder for the RG main gear. Now there is a small guard that is welded to the back of the holder. This guard prevents the cable from coming off the pulley should your RG cable go slack. The holders shown in the picture below have their pulleys removed for clarity.

We have also started using AN-111 cable bushings in the rudder system. For those of you with RG's the AN-111's are used for you main gear cables. The center hole in the AN-111 is 1/4". We use a 3/16" bolt with a bushing to attach the AN-111. The bushing around the bolt is slightly taller than the AN-111. This allows you to tighten up the 3/16" bolt and still allow the AN-111 to turn. Installing your rudder cables this way allows you to remove the cable from the rudders when maintenance is needed. The connection is also a smoother connection than what you get with a cable thimble passed through the hole in the rudder arm and crimped (see above photo).



Most of you have already seen the new door gas spring installation. A longer lighter gas spring is used with different mounting points. This allows more leverage to help hold the door up. Another bonus to this installation is that the spring puts less load on the fuselage when the door is closed so you do not have any bulging of the fuselage with the door closed. The gas spring goes over center when the door is about 8" from closing so when the door is down the spring is actually pushing the door in (see photo below).

All of these improvements are easily retrofitted to flying Velocities. If taken one at a time they are quick easy weekend projects that in the long run will give you a better airplane.

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Manuals

Most of you have seen the new chapters for the Manual that have been posted online. The remaining sections are being added now and the complete manual should be available online after the New Year. There are only 16 chapters in the new manual where the old one had 21 chapters. The chapters have been rearranged and combined to group the information better. This is so the builder does not have to hop around the book as much. There are changes throughout the new manual that shows how we are building airplanes at the Velocity Service Center. This manual is current for a Velocity Builder that has just purchased a kit. If your kit is a little older you may see that there are a few parts that have been changed since you bought your kit. The article written about upgrading an older Velocity has some of these upgrades. If there are any questions or corrections concerning the manual please email them to manuals@velocityaircraft.com . On our builders page will be a listing of the old and new sections so builders can see how and where the information in the older manual can now be found.

by Scott Swing

A different way of cutting the cowling to fit the wing trailing edges on the XL's.

This method will help you get a very accurate first cut on your cowling. If your wings are already on, you can support the plane under the spar so it won't change when you remove the wings. Measure the trailing edge of the wings about 1" from the inboard edge to the floor and put a mark on the floor where the tape measure is at. If the wings are off, secure the plane like I mentioned above and install the cowling, trim off the flanges, tack them together, duct tape the outside then glass the inside seam all the way to where the wing will intersect the seam. After cure, remove the tape, sand, micro and glass the outside. Then, make a template out of cardboard of the trailing edge of the wing. Place this template at the proper position along side the cowling with the front parallel with the spar and offset back enough to simulate the actual position of the wing. Trace around the template onto the cowling. In order to insure that the position of the template is correct, measure the trailing edge of your tracing to the floor and mark the floor where the tape measure hits so you can duplicate it later. You can then remove the cowling in one piece. Now when you install the wings, you can measure them as you did above and see if there is a difference in your dimensions. If there is, you can adjust your template and remark your cowling before cutting your slot for the wing. After you cut the hole, you will just sand to fit. When you can get it on, make sure you sand around the perimeter so that it does not touch the wing. At this point you can mark your wing around the cowling so you can prep the wing for the flanges. You can also go ahead and cut you cowling back at the proper position. I just tried this method on the last aircraft and it worked great.

A different way of doing the plenum and duct work on the big Continental

Fitting the plenum on the engine is not that difficult on the Continental but the ductwork can be challenging. Once the plenum is in position, I tape it to the cylinders on all four corners. In order to get the runners in position, they are short on the bottom side and you will see this when you are cutting the notches in them to get the trailing edge of the runner to lie on the plenum top. On the passenger side, I had to trim the inboard side of the front of the runner (part that touches the firewall) in order to swing the rear end over far enough to lay on the plenum just inboard of the side covers. You don't want to complicate things by having to remove one thing to remove another. In any case, you only need to leave 3/4". On the pilot side, it lined up correctly, but, in order to make it parallel with the co-pilot side (side view), I trimmed the trailing edge of the runner and notched it accordingly. You also want to make sure the cowling is going to fit. You will notice that the sides and bottom of your duct does not reach the plenum but we will take care of that in another step. I now hot glued the ducts in position and glassed them directly to the top of the plenum on three sides. I didn't bother coming down the back side of the plenum since I had not cut the runners exactly right. After cure, mark the top of the runners parallel to the cowling cut line about 3" aft of the firewall. Mark the bottom side of the runners about 4" aft of the firewall and connect with a slanted line top to bottom. Cut the runner apart on these lines. The reason for the aft slice cut is for assembly later. Now remove the plenum with the runners attached. At this point you can flip the plenum over and using small pieces of cardboard, span the holes staying at the same angle and running on into the plenum. I just hot glued them to the inside of the runner and butt them up against the plenum. There is more of a gap on the passenger side than the pilot side but that doesn't matter. I also cut a little more of the runner away on the bottom of the pilot side since I wanted to continue the slope and it looks like the molded section starts to come back flat. Where the gaps were small, I just use tape. I then release taped the cardboard so my glass wouldn't stick then glassed the area with 2 BID with a third layer just over the hole. Since I am working on a FADEC engine, I have lots of wires to deal with and had to create an indentation in the runner bottom that I was working on in order to create a path for the wire bundle, for those installing the FADEC, there will be pictures and instructions for this. After cure, I opened up the runners to the plenum and removed the cardboard and tape to clean up the installation. I then re-fit my side covers to fit around the runners that just amounted to a little more trimming. The runners were flanged to the firewall as usual but I also taped the top inside of the runner connected to the plenum and the outside bottom of the same runner. I then taped the pieces back together on the outside edge and glassed a flange from the inside upper section of the runner to the rear and on the bottom back to the rear. Do not go on the sides of the runner with a flange. This gives you two flanges coming off the small runners, one on the outside bottom and the other on the inside top. The only other thing that I did differently was with the oil filler/checker. Instead of dishing down to it, we just welded a thin tube to the cap that was just barely bigger that the cap and was 2.5" long. Then, we cut a hole in the plenum, installed the cap, release taped the tubing, and then glassed to the tube for a perfect fit. Now there is just a tube coming up through the plenum. In order to be

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Builder Hints & Info

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able to turn the tube, we welded in a small cross tube to grab onto.

A more finished interior.

The interiors in our aircraft can be done very nicely but one part of the interior that can be improved is the area around the door pin tubes in the fuselage. These areas are hard to upholster and typically do not look very good. Nate and Rhonda Gutwein came up with a good fix for this. I just used their method on the airplane we are doing here and I will describe the process.

Using 1/16" thick aluminum, make 8 plates 3/4" wide by 1 3/4" long. Round off two corners on the long dimension. These corners will be the inside corners of the plates when they are installed. Once your clearance has been established around the door you should grind down your tubes and surrounding support so that when your plates are installed on top they will be flush or at least no higher than 1/16" above the flange. This would require about 1/16" material removed. Then set your plates on top of each hole and remembering the slot that needs to be left right along the flange for the future molding, mark the position for the 5/16" hole. This hole should be centered on the 1 3/4" dimension but will vary in and out. Drill the hole then lean the drill in the plate until when fitted in each location, a 5/16" bolt will go through. Remember, only one tube is at right angles to the door opening so the rest will need the hole elongated to allow the plates to sit flat. After all 8 plates have been fit; hot glue the plates onto each pin tube location using the bolt to insure alignment. Mix up some dry micro, and fill around the existing mound up to the plates. After cure, sand around the plates down to the surface and make nice smooth transitions. Before you break them back off, drill two holes in each plate into the micro. These holes should be fairly close to the outside edges and in the center of the plate. Don't drill the holes to close to the edge since you will need to countersink the hole and you don't want the countersink to spill off the edge. The only problem area is the rear upper pin tube location that has the biggest angle and when you drill, you will hit the tube. This may require a shorter screw. You can use a #6 or #8 countersink sheet metal screw. Remove the plates and lightly round off the edges so the upholstery will go over the edge. Later when you get these upholstered, you will re-install the plates with the screws to finish off the holes. You could substitute the aluminum with some thin steel.

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Production News

by Scott Baker

Microsoft Flight Simulator fans might be interested in browsing www.simviation.com/fs2000props35.htm. This site features several downloads for the Velocity XL RG.

"Routine" is the word that describes activities on the factory floor this last quarter. Shipments have slowed to about 2 orders per month as we approach the holiday season. The pace will quicken somewhat during January and February based on the volume of new orders that are coming in the door.

Our Fastbuild Wing department has "whittled" down the number of back ordered wings so that we now have a 3-month production lead-time. Many thanks go to all who have been patiently waiting while we did our "catching-up".

From everyone in administration and the factory – warmest wishes for a happy and productive new year!

Developments

While activity on the factory floor is described as "routine" – developments in engines, engine monitoring systems, avionics, and flight displays are charged with excitement.

We are looking forward to the first flight of the new factory XL-RG demonstrator, which features a FADEC (Full Authority Digital Engine Controls) equipped Continental IO-550, 310hp engine. Velocity, Inc. has configured the system to feature a propeller control to offer the pilot the ability to vary the propeller pitch to help with drag (there are also single-lever FADEC systems that automatically control propeller pitch). The FADEC system (finally) brings electronic ignition and mixture control to general aviation. Multiple engine sensors monitor "what's going on back there" and send information to a computer that in turn, constantly adjusts spark advance, duration, and the amount of fuel being injected into each cylinder. Pretty neat. At least four other Velocity builders think the same thing and have placed orders for the big Continental with FADEC. I can't wait for the test flights to begin.

ARNAV, the makers of high-tech Integrated Cockpit Display Systems for commercial, military, and general aviation was very kind to send Bob Brooks, a senior representative for the company, to give a product demonstration at Velocity's most recent Open House (see www.arnav.com). What a system! ARNAV's large ICDS 2000 Primary Flight Display features a pilot friendly EFIS (Electronic Flight Information System) along with an EHSI (Electronic Horizontal Situation Indicator). The Attitude

and Heading Reference System (AHRS) is solid state and is TSO'd. There is much more to the system – including pilot warnings for out-of-limit situations affecting air speed, unusual attitudes, and more. The Moving Map Navigation System has its own database and shows the aircraft's position relative to airports, VOR stations, and ATC air space. It also features a terrain view that depicts what's ahead and offers terrain avoidance warning. Velocity builder Jack Sheehan from the Yorktown area of Virginia has selected a twin ICDS 2000 system for his aircraft … it definitely looks nice! Expect to invest in the mid $40's for a twin ICDS 2000 system with an EFIS, Navigation display, and engine monitoring.

Blue Mountain Avionics is coming on strong in providing EFIS technology for the experimental, homebuilt aircraft market. Velocity, Inc. has given the nod to Blue Mountain Avionics and has elected to feature a twin display EFIS/One system in the new factory demonstrator (see www.bluemountainavionics.com). Given the high cost and (relatively poor) reliability issues surrounding vacuum systems and vacuum driven gyro instruments – the cost of the all electric Blue Mountain EFIS/One system compares quite favorably. We find more and more builders making the decision to eliminate vacuum instruments. The factory SUV that is based at Complesys Aviation at Brown Field in San Diego, California, also features a Blue Mountain Avionics EFIS/One system along with an EFIS/Lite independent backup system. Nice!

We are looking forward to the introduction of J.P. Instruments' EDM-900, an all-in-one digital engine monitoring system featuring a bright orange plasma display (see www.jpinstruments.com). The EDM-900 looks similar in size to Vision Micosystem's VM-1000, however the EDM-900 features color and a few other "goodies" that the VM-1000 does not. The EDM-900 includes a fuel quantity indicator for 2-tanks. It also has a built-in, easy access, data port to download specifics of the last 25 hours of engine operation.

WSI, Weather Services International, has coordinated with UPSAT to offer in-flight, up-to-the-moment satellite transmitted weather information to the MX20 Multi-Function Display. WSI InFlight offers complete continental US coverage at any altitude – continuously updated every 5 seconds. Imagine having NexRad Weather Radar, METAR's, TAF's, and a portrayal of airports that are currently reporting IFR or VFR conditions. Very nice. www.wsi.com

The list of innovative products goes on and on. It's just interesting to see these types of products in general aviation and available to us homebuilders. Who would have "thunk it" as little as 15 years ago?

Velocity November Open House Well Attended

Excellent Florida weather greeted about 60 guests to the Velocity Open House on Saturday, November 2nd. Velocity CFI Nathan Rigaud was busy with over a dozen demonstration rides. Scott Swing hosted a hands-on composite workshop doing the "wheel chalk thing". Scott Baker escorted the group through a factory tour – and Brendan O'Riordan and Frank Ware hosted "mini" talks on aircraft preflight inspection procedures and basic work tools to get you started on your Velocity building project.

A special thanks is given to Bob Brooks from ARNAV, who gave an informative product talk on EFIS systems and cockpit displays. Velocity builder Jack Sheehan offered his aircraft as backdrop to ARNAV's presentation. Jack has installed 2-ICDS2000 ARNAV units in his Velocity XL-RG.

Thanks go to everyone in the "listening audience" who attended the Open House. We appreciate your coming to visit!

AOPA Expo 2002 – Palm Springs, California

AOPA continues to be a friendly and inquisitive crowd when it comes to examining Velocity aircraft for personal transportation. Each year the "AOPA crowd" becomes more and more familiar with experimental, home-built aircraft – and are warming up to the notion, "Maybe I can do this". That feeling was certainly reinforced when it was explained that Chris Martin and his sons personally built the beautiful Velocity XL-RG that was on display. Thank you, Chris for allowing Velocity, Inc. the chance to show off your flying machine!

The AOPA Expo 2003 program moves to Philadelphia, Pennsylvania next year. See you there!

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April 2-8, 2003
Sun n' Fun EAA Fly-in
Lakeland Florida

Mark your calendars to attend the Velocity Sun 'n Fun Picnic Dinner on Friday evening, April 4th. This year's event will be a little different – more informal – and more accessible to Velocity enthusiasts attending Sun 'n Fun. The catered picnic dinner will be hosted in Activity Tent #2, which is located near the open-air pavilion in the southwest area of the grounds. Lots of fun – lots of comradeship. - menu and more details to follow … hope to see you there! Velocity will conduct two Sun n' Fun forums (in Forum Tent #9), both at 11:00am on Thursday, April 3rd, and again on Sunday, April 6th. See our website for details...

CFI Notams

by Nathan Rigaud, CFII

Checklist for the Velocity Aircraft:

When you arrive at the airport, the first thing is to look at is the overall condition of the airplane. Check for any big parts missing, damage to the plane, and fluids leaking (oil, fuel, brake fluid). With checklist in hand, you will start with the preflight as stated. The checklist below is the one that we use at the factory for our checkouts. It is a very basic checklist. We find that the more you look outside during flight, the better you handle the airplane. We like to keep it short and right to the point, but in the same time, do all checks necessary for safe flight. If you do not have a checklist, feel free to copy and use this checklist for your Velocity.

Quick story...

A student and I were out training in the XLRG. About 10 miles out from the airport I told the student to look out the window on his side, and as he looked, I pulled the gear pump breaker. He did not see what I did and he continued to fly and enter the pattern. We were on downwind and I told him to do his downwind checks at this time. I said no more. He started with gas, fuel pump on, then gear down. As he selected gear down, he had a puzzled look on his face. Instead of working through the problem of not seeing the correct lights, he proceeded to the next step of mixture rich and prop full forward. On base leg I asked him if he was sure everything was ok with the airplane. He said everything felt ok. On final I asked him if he was 100% sure that everything was done and he was happy with the plane. He replied that he thought so. As we approached the end of the runway and he started to round out for landing, I took over the controls and did a go-around. He asked why, and I told him that he just made a gear up landing and made a mess of the plane. I pointed out the breaker that I pulled 10 miles out.

The moral of this story is that if you are not 100% sure of anything during flight, then you need to question it. When you are performing the checklist at any stage, be sure you are finished with one thing before going on to the next item.

I'll have Rick post the following Check List to our website's "Builders Page", so you customize it.

Preflight

Cockpit:

Mags Off
Master On
Pitch Trim Check
Speed Brake Up and Down
Warning Lamps Check
Fuel Check
Outside Lights
Master Off
Canard Bolts and Nuts under the Panel
Elevator Bolt and Nut on and tight
Mixture Idle Cutoff
Stick Free and Correct
Rudder Pedal Area Clear and Free
Airworthiness, Registration, Flight Manual, W&B

Canard and Nose:

Elevator Hinges and Weights Secure
Elevator Free and Correct
Pitot Tube Clear
Static Ports Clear
Nose Wheel

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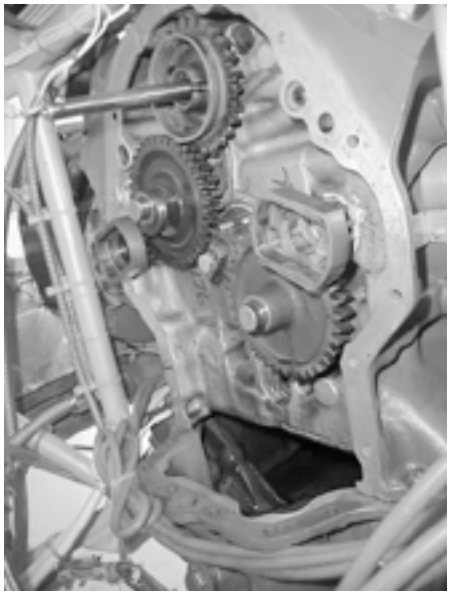
Safety Corner

Accident & Incident Reports, Maintenance & Service Difficulties

Lycoming released an AD (2002-23-06)a few weeks ago that applies to all of us that own IO-540's. It requires replacing a zinc-plated bolt that retains the crankshaft gear. Of course the bolt that needs to be replaced is not a simple one that is easy to get to. They probably hung this bolt on a piece of string and built the engine around it. Needless to say the accessory case needs to come off for the change and in some cases the sump. If the sump needs to come off the engine has to be pulled from the airplane because the two bottom engine mount tabs are part of the sump. The attached picture shows the crankshaft gear bolt with the accessory case removed.



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Velocity Check List

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Proper Inflation
Wheel Pants Secure
Proper Tension on Wheel
Hatch Covers Secure

Right Fuselage and Wing:

Fuel Caps
Visually Check Fuel Quantity
Check O-Ring Condition
Secure Cap
Vortilons Secure
Leading Edge Check
Vertical Fin Check
Rudder
Check Free and Correct
Return Spring Secure
Hinge Pins
Aileron Free and Correct
Hinge Pins
Right Main
Fairings/Gear Legs Condition
Brake Pads
Tire inflation and Condition

Left Fuselage and Wing:
(Same as Right Fuselage and Wing)

Aft Fuselage and Engine:

Fuel Sump Drain Check
Oil Level / Secure Stick and Door
Cowling Condition and Screws
Exhaust Tubes Secure
Aft Cowl Opening Clear of Debris
Inlet Ducts Clear of Debris
Alternator Belt Check
Propeller Check for Nicks, Cracks, Erosion
Engine Area, No leaks

Engine Start (Cold)

Mixture Rich
Throttle Open 1/8 inch
Master Switch On
Fuel Pump On for 1 Second
Mags On
Propeller Clear
Brakes On
Starter Engage
1000 RPM
Oil Pressure Check

"Check List" Continued on next page

Kit Plans Changes "KPCs"

by Scott Swing

NOTICE
No KPCs this issue...

Flight Check!
Be Safe!

Velocity Service Center Inc. offers flight training for builders/pilots to safely learn how to transition into flying a Velocity. Get a **Flight Check Out** prior to your first flight! Flight training is available from:

- Nathan Rigaud, CFII
- Brendan O'Riordan, CFII
- Scott Baker,CFII

The following Flight Instructors have also been approved by Avemco Insurance:

- Sam DaSilva - Seminole FL 727-595-6384
- Mike Gunvordahl - Burke SD 605-775-2952
- Mack Murphree - Dayton NV 775-246-9364
- Manny Lewis - Scotia NY 518-399-8614

Don't take a chance, get checked out prior to your first flight. Please note that you should be current in some other type of aircraft prior to your Velocity check out. The purpose of the "flight check" program is to transition you from flying other aircraft types (like a Cessna) to a canard pusher (Velocity).

Factory Authorized Insurance Inspectors
Please make note of these individuals:

Name - Location Home Phone / Work Phone

Brian Gallagher - Murrieta CA 909-461-9990 / 909-696-0160
Barry Gibbons - Palmdale CA 661-273-7398
Don Pearsall - Owasso OK 918-272-5551 / 918-474-2610
Mike Pollock - Sachse TX 972-530-8400 / 972-728-2725
Glenn Babcock - Tampa FL 813-677-2543 / 813-604-2637
Wes Rose - Grand Rapids MI 616-772-7235 / 616-530-0255
Jean Prudhomme - Boca Raton FL 954-559-4988
Mack Murphree - Dayton NV 775-246-9364
Gary Stull - Tampa FL 813-949-1297
(Gary is an airline employee and can travel inexpensively)
Mike Watson - Mt. Vernon NY, 914-699-3915 / 201-476-8231

Velocity Check List

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Engine Start (Hot)

Mixture Idle Cutoff
Mixture Rich as Engine Starts
1000 RPM
Oil Pressure Check

Before Taxi

Seat Belts On
Radio Master On

Before Take Off

Controls Free and Correct
Trim for Takeoff
Circuit Breakers In

Engine Run Up

1800 RPM
Magneto Check
Propeller Cycle
Engine Instruments in Green
Suction in Green
Throttle 1000 RPM
Flight Instruments Set
Fuel Pump On
Mixture Rich
Prop In
Speed Brake Up (if)
Doors Locked
Final Approach Clear

Take Off

Maximum Throttle
Rotate 65-70kts
Climb 90kts
Positive rate of Climb
Gear Up

500 Ft.

25 inches / 2500 RPM
Fuel Pump Off/Check Pressure

Cruise

Use you Power Settings
Engine Gauges in the Green

Descent and Landing

Circuit Breakers In
Seat Belts

Downwind Check (GUMP)

(G) Fuel Pump On
(U) Undercarriage Down and Locked with 2 Green (120kts max)
(M) Mixture Rich
(P) Propeller In

Final

Gear Down 2 Green

Clear of Runway

Fuel Pump Off
Speed Brake Up

Shut Down

Avionics Off
Mixture Idle Cutoff
Mags Off
Lights Off
Master Off
Secure Airplane

Emergency Procedures

Loss of Engine Power:

Fly the Airplane
Best Glide 100kts
Mixture Rich
Mags On
Check Fuel Shutoff

Emergency Landing:

121.50 Radio, 7700 Transponder
Master Off Before Touchdown
Mags Off
Fuel Shutoff in the Off Position
Fly the Airplane to Landing

Engine Fire:

Mixture Idle Cutoff
Mags
Fuel shutoff in the Off Position
Land as soon as possible

In-flight Door Opening:

Fly the Airplane
Land as soon as possible

Wheel Brake Failure:
Use the Longest Runway
Land into the Wind if possible
Use the brake only if necessary
Maintain directional control with rudder and good brake

Electric Buzz...

by Wayne Lanza

I'd like to share some ways that we have found to save on instrument and panel costs. The content is based on discussion and actual installations in Velocity's and other aircraft.

I would like to ask that when shopping for panel accessories that you carefully compile the quotes from your choice of suppliers including Velocity. If a sales person doesn't know one radio from another or is more interested in selling you something that you don't really want – remember that it's your money…

RADIOS:

The price of a new com radio ranges from about $850 to over $2,000, used radios are available from just about any radio dealer and you might want to check on factory refurbished radios – King has some really good deals on their equipment and the refurbs carry FULL warranty! One customer bought a KY97 with the install kit and tray this way for about $800 and the KT76A set for

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$900 – not bad! When looking for a NAV/COM or transponder, the same applies.

GPS:

Where do we start here? So many to consider.… We have had good luck with the UPS systems, but I'm sure that the King and Garmin units work fine. The real thing to consider with a GPS is not the initial cost but how much will it set you back to update the data base! If you are flying hard core IFR and need the monthly updates with all the bells and whistles, expect to spend more on updates than the GPS in a fairly short period of time. But if you use the GPS for information only or strictly VFR then you'll be OK with the basic 120 day updates. Please give this issue careful consideration. If you will be adding a moving map to you panel now or in the future, make sure that the output of the GPS will be future compatible with the display. The panel mounted moving maps range in price from about $2,000 to over $8,000, this plus the cost of the GPS and (don't forget) the wiring can really put a dent in your wallet.

AUDIO PANELS:

Do you really need one? Most have the marker beacon built in; if you will need the MB then the audio panel is a justified item. Audio panels run any where from about $1,000 to $1,500, they offer a lot of function for the money and are a presumed requirement for most aircraft. BUT if you are building a fairly simple panel it may not be a necessity, any radio shop can wire a simple Com1/2 switch for a fraction of the cost of an audio panel. Look carefully at intercoms, some offer simple switching and are inexpensive.

RADIO SHOPS:

The big name radio shops are well known and especially remembered by clients when they have been revived in the cardiac ward after seeing the bill… Any decent radio shop will serve your needs, get quotes from at least 4 or 5 shops and decide. They will need a COMPLETE list of the parts for your panel before they can give you an accurate quote – leave anything out and you will pay!

ENGINE INSTRUMENTS:

This is another area that can add up fast. Write down a list of required instruments and then objectively consider what you listed. Comprehensive engine instrumentation can cost as little as $1,000 and exceed $4,500 if you are really out to impress your peers. For example, we have installed a full set of Mitchell gauges in an SUV for about $850. There were only single EGT & CHT probes but a lot of airplanes don't even have EGT or CHT gauges! Then again this airplane could have had all four EGT/CHT's and the selector switches for about $200 more. Another example to consider would be our installations using the JPI Slim Line gauges and the EDM700, the same four cylinder SUV would have about $2,800 in gauges but would also have the benefit of engine monitor/analyzer that would use less panel space.

INSRTUMENT PANEL PREPARATION:

Save money here by preparing the panel before it goes to the radio shop, cutting, sanding & painting are major cost items. We prepare several panels per month and I can tell you that the $2,000+ that we get to prep a panel for the shop is well earned. But there is a big caveat with panel prep, especially if you put a lot of stuff in it – you will need to have every thing on hand to verify that every thing will fit! I am offering this advice to you so that you can learn from our mistakes, at our expense… Refer t the January 2001 issue of the views for more advice to consider when it comes panel building time.

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Reflections Part III

by Duane Swing

This is a continuation of an article started in Velocity Views 30 & 31 and are the highlights of my life as a pilot.

By March of 1980 I purchased another used Twin Comanche. This was a 1972 CR model that I flew all over the country on business and personal trips. I had the N number changed to N707UP and I used the 7UP terminology for all my radio call ups to our local controllers and tower. My company name was Universal Products so you can see the connection. I see a trip in July 1980 that took our family through the Monument Valley area, down into the Grand Canyon and on to Los Vegas, Los Angles, San Francisco, and then on to Oshkosh for the 1980 convention. I remember the trip well as we flew the entire 27 hours and never seen a cloud. Part of the trip I was using a road map to see if we could find a famous Indian Reservation. Flying along at 1,000 feet above ground level, I accidentally flew right across a silo based inter-continental ballistic missile launch site. I was sure I would find a police escort ready when we landed at Provo UT for the night, but luck was with us, no feds.

I also remember a rather unusual flight to the radio shop for some radio repair. It seemed only right that I pull the radio out of the panel on the way so as to save a couple minutes of time. The problem with the Comanche was that the right control yoke was directly in the way of the radio stack and in order to remove the radio the yoke needed to be set in a left turn position. No problem on the ground but what about in flight? The radio needing removed was an old Mark 12 and it had an 8" pig tail on the rear of the radio that was plugged into a mating cable. This was used instead of the now customary case plug-in. I made

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a couple trial runs by turning into a hard right turn followed by the necessary left turn so I could remove the radio between the rams horn of the yoke. The trials were successful so it is now time for the real thing. A right turn was completed followed by the left turn and I pulled the radio right through the horn until the 8" pig tail caught on the back side of the radio case and the radio stuck half in and half out and right in the middle of the yoke horn totally preventing me from returning to level flight. I was trying to turn the airplane back to level and the pressure on the radio prevented me from shoving the radio back in. The airplane completed one complete roll until I could neutralize the pressure on the yoke and slide the radio back into place. What some people won't do to save a couple minutes.

I had heard a lot about the "Q" tip propeller modifications used on a couple airplanes at the time and submitted my plans to the FAA for an STC for the Twin Comanche. This mod bent the final 1" of the prop back 90 degrees and made the airplane much quieter and slightly faster. I did obtain the STC and sold the mod to many Comanche drivers for many years after. Two years ago I gave the STC to Hartzell who still sell the modified propeller to the Twin Comanche tribe.

I kept the Twin Comanche until October 1983 and had logged by now over 5300 hours, with over half this time in twins and over 800 hours actual instruments.

About this time a friend of mine who owned an Ercoupe called me to see if I could fly over to Louisville with him to pick up his newly purchased Alon A2A. This was another version of the Ercoupe with the 100 horse Continental engine and a couple kids' seats in the back. My devious mind went to work as I was going to fly his new A2A back and he would fly in the old 85 horsepower totally worn out Ercoupe. He departed first with me right behind in the A2A. Soon after departure we switched over to the flight communication frequency and I told him that for some reason the A2A was just not as fast as his old coupe and he would have to slow down for me to catch up. He started asking questions as to how his new 100 horsepower airplane would be slower than the old 85 and I just said I didn't know, but it was. All the while I was flying very low and off to his right side doing about 30 mph more than he. He never seen me as I pulled further and further away from him. After a few more minutes, I again announced that he was still pulling away from me and he would have to slow down even more. By now he was flying about 75 mph and I was wide open doing about 120. As more time passed, I told him that I didn't know what was going on but he was still pulling away from me and would need to slow down even more for me to catch up. After a few minutes he ask how I was doing as he was now down to 60 miles per hour. I said it looked OK and I would be able to keep him in sight until we got home. It was difficult talking to him on the radio for fear I would explode in laughter any minute. He was on the radio several times more just not believing his new airplane would only go 60 miles per hour. I arrived home in the A2A, put the airplane in the hangar, had lunch and was taking a nap when he finely landed. You could probably have heard him yelling his displeasure at me a mile away when he found out what I had done to him.

As I tell these stories, I am reminded of even more funny things I done over the years. I remember a trip to Indiana in the Aerostar following my partner who was flying the Aztec. After about 10 minutes in the air I jokingly told him I was having trouble flying so slowly. We often talked about the speed differences of the two airplanes and he loved the Aztec so much he would not fly the Aerostar. I slowly climbed to about 2000 feet above him and with full throttle nosed the Aerostar over into a dive. When I was down to his altitude I feathered the right engine and passed about 50 feet off his left side doing about 100 knots more than the Aztec with one engine feathered. His comments on the air to air frequency are not repeatable.

On October 20, 1983 I flew our experimental Q2 for the first time. If you remember, the Q2 was a two-place composite equal span canard kit sold by Quickie Aircraft Company. I purchased the kit with engine, prop and necessary VFR flight and engine instruments for under $7,995. Believe it or not, this was the list price. Scott was working on his master's degree at the time and in our spare time we built the airplane in my basement and garage. Total building time to first flight was about 6 months. We won several awards with the airplane at both Sun-N-Fun and at Oshkosh and when Scott completed his masters degree, he was ask to bring the airplane to Mojave CA and work for the Quickie Company.

Bonnie will never forget one trip we made in the Q2. We flew down to Florida for a vacation (why would anyone do that with so many airplanes to choose from?) and on the way back got into a lot of rain in KY. (Can you imagine flying IFR in a little two-seat VW powered homebuilt?) I had filed an IFR flight plan from Macon GA to Dayton OH and about 50 miles from Lexington the rain got so heavy that I couldn't hold altitude any longer. My speed was decaying and I continued to descend even though I now was running at full power. It soon became apparent that I would not have enough fuel or altitude to go any further than Cincinnati and I altered my flight plan and requested an IFR "R" nav approach "direct" to the airport. Yes, the Q2 had an IFR approved King

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KLN 80 system. No approach here at all, just direct to the center of the airport. As soon as the tail came down after landing, the engine quit for lack of fuel. Upon further examination, the propeller looked like a toothpick. The leading edge was totally eroded away by the constant beating of the rain and was soft like balsa wood. (Now you know why Bonnie does not like to fly with me) Scott and I later converted to the new style canard and Continental engine. It is interesting to note that Scott and I still do the annual on this airplane for the present owner and it has now close to 1000 hours flying time. Scott and I had other interesting trips in the Q2 but I'll let him tell his story in his own words.

In March of 1984 I purchased yet another Twin Comanche N7902Y. This was also a 1972 CR model and was, at the time, one of six airplanes my two partners and I owned. Two Twin Comanche's, Dutchess, straight tail Arrow, T tailed Arrow, and the Skybolt. In addition, I was ferrying a large variety of airplanes for an aircraft sales company and I see entries for trips in two different Bonanzas, Cessna 210, Cessna 310, Cardinal RG, Skymaster, Mooney 201, Mooney 231, Mooney Mite, Mooney Mustan, (the first pressurized general aviation single), three different Barons, a Travelair and a couple homebuilt. In early 1985 I sold the Twin Comanche and bought a Cessna 310 and yet another Twin Comanche. The Twin Comanche was one of the last built and was fully deiced, rather rare for this airplane. The last Twin Comanche was going to be another STC airplane for me as I contracted with Beryl DeShannon to build a sloping windshield for better aerodynamics. Beryl never finished the project and I sold this airplane to Leo Laudenslater. Leo was a seven-time world aerobatic champion and was later killed in a motorcycle accident. This particular Twin Comanche came from England and the aircraft logs and other paperwork consumed four rather large boxes. Every flight the airplane made was logged along with the requirement for all the radios to be removed at certain time periods for a full bench check and log book entries.

By 1987 I was flying just about every kind of airplane the aircraft dealer could buy and I see trips in several Barons, Mooneys, Senecas, Cessna 206 and others. I remember the 206 trip well and Bonnie remembers it too. We had flown commercially to Dallas to visit our daughter Kelly and drove over to a small grass strip in northeast Dallas to pick up the 206 for our return trip to Dayton OH. When we arrived at the small grass strip, it was quite apparent the grass had not been mowed for a long time. Weeds three feet high everywhere. The 206 was, in its previous life, used as a skydiver plane and was absent the right door, all the interior, three seats and holes in the instrument panel which once held instruments. The owner/seller assured me he could find the seats and door someplace in the attic but suggested strongly I stay above the airport for a considerable amount of time, as the airplane had not flown in over four years. He did mow me a departure path and away we went. The only radio in the plane was inoperative and 20 minutes into the flight the alternator quit. We (I) decided to continue to our first fuel stop to see how things would work out. After fuel and a couple quarts of oil we just got the engine started before the battery was completely dead. We now had another four hours of flight time ahead and either we would have to land in Dayton after dark with no lights or make a stop someplace before dark and try to get the engine started the next day. We (I) decided to forge ahead and land after dark. Once arriving in Dayton, I remembered the runway lights at this small airport were activated by the airplane radio, which I didn't have. The moon was bright so a night landing was made anyway with no runway lights and no aircraft lights. (Now you know why Bonnie doesn't fly with me anymore)

It was also during this time I bought and built a Glasair. I was the third owner and the only thing done prior to my purchase was the wheel pants were glassed together. I purchased the RG option and proceeded to build the airplane. With most of the work done, a friend stopped in and offered me more money for the airplane than it was worth and suddenly it was gone. Our first Velocity was started soon after.

I was also flying part time for a friend who owned a Cessna 414 and a Turbo 210. His company had a contract with Bob Evans to build restaurants in the eastern US and he was not a pilot. What's interesting here is that he was a lay minister in the Mennonite church and all his workers were also Mennonites. They would arrive for a trip all dressed in the traditional black pants with suspenders, long sleeve white shirts, beards and the big black wide brimmed hats. I remember picking up seven of these workers from the main terminal building in Louisville KY and you can just imagine the looks and comments we got walking through the terminal and on out through the "general aviation ramp" in single file on our way to the airplane.

One of my Baron trips was also quite interesting. My aircraft broker friend called me to see if I could fly to Abilene TX to pick up this "super" aircraft. He said it had one engine with 43 hours and the other with 156 hours all since major overhaul and numerous mods including super long-range tanks. After checking out the airplane I flew non-stop to Dayton OH with a tail wind in about 5 1/2 hours. The next day the mechanic called me to ask if I had stopped enroute. When I told him I had not, he said that the right engine showed NO oil on the dipstick and the left engine was down to 4 quarts.

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At first we just assumed improper brake-in. Later we found out that the seller (who had went bankrupt) had sold the good engines and replaced them with two run-out engines and swapped the data plates to agree with the logbooks.

Another unusual trip in February 1988 was a trip from Brownsville TX to Dayton in a Cessna 185 on amphibian floats. This was another one of my aircraft dealer "deals." When I got to the airport, the mechanic told me he had been running "Milk Oil" in the engine for the past couple days because all the valves were sticking. (I don't to this day know what Milk Oil is) He said the airplane had been sitting outside for a couple of years and not only had the valves been sticking but the retract system for the gear was frozen into the down and locked position. He, too, suggested I stay close to the airport after take-off "just in case." He then proceeded to tell me that the nose wheel casting on one of the floats had broken off from the last flight and that it had been welded back together by the local mechanic. He suggested I be very careful in selecting runways and taxiways that were smooth. (As if we can tell from a map) This airplane had a cruise speed of 100 knots on a 300 horse Continental engine and a fuel burn of 18 gallons per hour with a maximum of 48 gallons usable. 2 1/2 hour legs were about all I could plan on and the trip took forever.

Numerous other trips were made during this time frame for both my business and for my friends aircraft sales business. One in particular will be a lasting memory. My aircraft sales friend called me in February of 1988 to see if I could go to Boston to pick up a Cessna 310 for him. The morning of my return was very cold but clear skies all the way back to Dayton. In pre-flighting the 310 I noticed the cabin heater resting in the baggage compartment not hooked up to anything. The owner told me he had told the buyer that the heater was in-operative and had been removed for repair. I took off for Dayton knowing this was going to be a cold trip. Outside air temperature was right on 0 degrees at 8,500 feet as I headed west. To say I was cold is an understatement at best. I had put my feet on top of the glare shield to try to get some sun to my frozen feet and then I realized with about two hours to go that my bladder would not last the whole trip. The only thing I could find in the airplane for relief was a burp bag behind the co-pilot seat. I lifted up in the pilot seat and proceeded to take care of my problem and OOH what a relief it was. As I started to seal up the bag, I noticed it was totally empty. It had a hole in the bottom and had saturated the seat I was suspended only inches above. I slipped into the co-pilots seat and completed the trip to Dayton. I arrived late in the day and parked the airplane on the ramp and noticed the left seat to be frozen solid. Three days later I ventured to the airport about two hours after the mechanics had pulled the airplane from the frozen tundra into the hangar for the annual inspection. The airplane had been frozen from the time I landed until now. The mechanic ask me how I could stand flying the airplane all the way from Boston with that despicable smell in the cockpit. It's times like this that saying nothing and walking away with a huge grin on my face was my best response.

By now my log book is showing over 6200 hours and over a hundred different airplane types. So many, in fact, that I was no longer logging all my flight time by type and would skip weeks of entries to save me the time of logging them independently. During this time period Scott and I built our first Velocity, which was completed sometime in late 1988. We designed the retract system from this first Velocity and the entire airplane was destroyed only days from first flight by a fire in the building which we were building in. This was an emotional set-back for us as we had done all the work over a period of about 15 months and all went up in smoke. We had no insurance on the airplane and didn't feel ready to start on another. We did, however, due to pressure from Velocity builders who wanted the RG system, build our second Velocity and in August of 1989 flew N125V for the first time. This would be the first flying RG Velocity. It took Scott working almost full time and me working part time about 7 months to build the second one. Remember, there were no molded bulkheads, no pre-build options, no videos and pretty sketchy instructions. This airplane had the older narrow cord wings and was FAST. We could get over 200 knots true air speed at 7500 feet. I noticed one entry on a trip Scott and I made to Miami. IFR at 7000 feet we started picking up ice over the mountains and had to climb to 10,000 feet to get above the icing level. What we found was an unusual ice accumulation. The windshield did not pick up any rime ice and remained clear throughout the flight. The hang-down canard tips had ice building up on the inside of the tips at right angles to the airflow. Really odd looking and is why we re-designed the canard tips to the up-sweep. The rest of the flying surfaces had the normal ice build up on the leading edge and we lost probably 15 knots of flying speed with the ice. At 10,000 feet the sun was shinning and the ice simply eroded away over the next couple hours.

It became apparent there were a lot of Velocity people out there who wanted someone to help them build their airplanes so Scott and I started looking for a place where we could set up our own builder assist program. Our search ended by buying an airport in Philipsburg Ohio. This is a suburb of Dayton and about 7 miles west of Dayton International. This airport was home to about 60 hangared airplanes and had an abandoned building on site that was pre-

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viously used by the Civil Air Patrol. This building became our new home. My aircraft sales friend went together with Scott and me in the purchase of the airport. Scott hired a couple helpers and was working full time by now on the assist program. I was working part time and still traveling all over the country in my business interests. We could build 3 airplanes at the same time in heated and air-conditioned comfort and completed seven Velocity models before we made the move to Sebastian.

Other airplanes I flew during this time were the A36 Bonanza, a WACO, Piper Clipper, Beech Skipper, Cessna 172 XP, turbo Twin Comanche and all the Velocities we completed in the new facilities.

One particular Velocity had an unusual history. After the restrictions were flown off, I delivered the airplane to the new owner in Ft. Lauderdale FL in May of 1992. Later, he had us install the first Subaru SVX engine in the airplane and later the Franklin 220. He then sold the airplane to a new owner who told me he was a farmer and needed the airplane to fly back and forth between Melbourne and Lakeland where he was buying a berry farm. A couple weeks later I was watching the news and this Velocity was a feature on national TV. The airplane had crossed the border of Mexico near El Paso quite low and right over a Park Ranger station. The Park Ranger notified the DEA who immediately set up a chase that lasted all the way to Detroit Michigan where the owner ran out of gas and made an emergency landing in a city park. He slid into a cement park bench and was killed instantly. The residents appeared at the crash almost immediately and proceeded to fill their pockets with as much marijuana as they could handle until the police arrived. The pilot had flown over 1500 miles on the 85 gallons of usable fuel with a cockpit stuffed full of pot. This was an average of over 17 miles per gallon at a ground speed of almost 175 miles per hour. This fact did not go un-noticed by the drug trade.

The turbo Twin Comanche was another unusual story. My aircraft broker friend called me about this time and ask if I could pick up this airplane he had just purchased. The airplane had been hangared in a dirt floor building for several years and had not been flown for the last couple years. Out of annual, full of dirt and grime, dead battery, flaking paint, no fuel, -- just a miserable airplane. After filing for a ferry permit, pumping 50 gallons of fuel into the airplane and washing enough dirt off the windshield to see out, I departed for Dayton Ohio. It was a cold fall day so I cranked on some heat. A couple minutes later I'm looking out the windshield and a big black snake stuck his head out through the defroster duct, looking me right in the eyes. It then began inching his (or her) way out the duct directly toward my face. Yelling, "get back" and waving my hands did nothing to slow his progress. I immediately shut off the heater and prayed he would go back into his hole. (I hate snakes) After what seemed like an hour, he slowly backed his way into the defroster duct and was gone. No sooner had he retracted than I felt a shake in the airplane. The right engine sputtered a couple times and quit. I had made it a point to practice single engine procedures on a regular basis and it was not a problem securing the engine and proceeding on to Dayton. Scott and I would later take this same airplane on a cross country trip and experienced two more engine failures enroute. In both cases, we were able to re-start the engine and continue our trip.

It is now late June/early July of 1992 and Dan Maher wants to know if Scott and I would be interested in buying Velocity. Dan was having health problems and needed to sell the business. For most of you, this is where our story starts. For Scott and myself, we needed to sell an airport, sell two other businesses and get rid of two homes. This was all done in a reasonably short time and I arrived full time in Sebastian around the middle of July. My logbook at that time showed just over 7,000 flight hours; 3700 of which were single engine and the rest twin. Since that time I have added an additional 1300 flight hours give or take a few hundred. I have crossed the US certainly over a dozen times and made numerous trips to Oshkosh and other air shows destinations. Flying has always been one of the most enjoyable activities imaginable. When the bug hit, it hit hard for me and the result has been a lifetime of aviation. It's strange, perhaps, to some of you, but I remember often filling an IFR flight plan for a 30 minute flight in or above the muck, common in Ohio, just to go to lunch in Cincinnati, or Muncie Indiana, or some of the other airport restaurants around the area. For those of you who haven't progressed this far, let me tell you there is nothing as thrilling or satisfying as an IFR trip with an instrument approach to minimums and to break out at the missed approach point and see the runway centerline only a quarter mile away.

As I said a few months ago, it is time for a change. I need to stop and visit some of the places I have flown over for the past 38 years. My life in aviation has been about as complete as one could imagine. Some of the above stories certainly point this out. As to flying, I don't think I will ever give it up as long as my health is OK. I have totally enjoyed my involvement in aviation and with the many of you who I can honestly call my friends. God bless you all for making our lives more meaningful and more fulfilling.

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Editor's NOTICE
I have posted Duane's entire story on velocityaircraft.com on the "Builders Page" for those who may not have Volumes 30 + 31

Builders Forum

Builders Forum is full of tips, information and letters ("material") supplied to *Velocity Views* Newsletter from individuals that are Velocity builders (or want to be builders). It is provided as "**USE AT YOUR OWN RISK**" material. Neither Velocity Inc. (The Velocity Factory) nor *Velocity Views* Newsletter (Lavoie Graphics & Rick Lavoie) have endorsed this material, and disclaim any liability for the use of this material. Individuals who use this material for the operation, maintenance, or construction of their homebuilt aircraft do so at their own discretion and at their own risk. Any variance from the builders manual is high risk.

Navy Weekend... No Enlistment Required

By John & Rose Ward

N120RJ was invited to showcase the Young Eagles Program at the November 2002 Blue Angles Homecoming Air Show. A major concern was the paper work associated with getting permission to fly to a military airfield which turned out to be no problem. FALCON Insurance to the rescue. Within five minutes of my phone call they had faxed Department of Defense form DD-2400 to the Naval Facilities Engineering Command in Washington D.C. and the appropriate military office at Navy Pensacola. This grants permission to land at U.S. military fields for a year if one has a reason to be there.

We were assigned a PPR number and a ten-minute window for arrival at the airfield. We must have been the first show plane on the schedule. Pensacola Approach said, "Remain clear of Class 'C' airspace and say again your destination." After several "standbys", the PPR number to Pensacola Approach, a similar call from a Chinese YAK and a U.S. T-28 got us switched to Sherman Tower. No problem with runway length here but my depth perception gets a little confused when comparing our 80' by 2,600' runway with a 200' by 8,000'. A reassuring comment from the tower was a report that the arresting gear had been removed from the approach end of the runway. Okay for tail hooks but little Velocity nose gear tires and overrun arresting gear don't mix too well. No slouchy FBO to help with parking at Sherman Field. After clearing the runway we were told to follow the "Follow Me" truck. Big lighted sign in the back of the truck was about as fancy as my avionics package. Knowing where to park was no problem.

It wasn't long until an audience showed up, military guys, (and the show is not until tomorrow) to look at an airplane that fit right in with the futuristic look and style of many military aircraft. They wanted to try the +12/-9G loading! Since the plane is in primer and not upholstered the interior looked military - except for the CD player. The Velocity was parked between a Chinese YAK and Navy F-14. Navy and Air Force had about thirty aircraft on display and I think we were the smallest and the Air Force G-5 Galaxy the largest. In addition to the "Follow Me" truck they had a school bus for crew transportation. We got more attention than most - well okay - the Blue Angles got a little more attention than the Velocity.

The two-day event, with several air show performances, surprised the EAA by all the Velocity attention. Interested parties with children were siphoned off to the Young Eagles for future free introductory flights. The Blue Angles, along with other performances, military fly-bys and static displays made a great Air Show Weekend.

••••

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Builders Hot Line:
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Builders HOT LINE

Please remember that on weekends and after hours, we do not answer the 561-589-1860 phone number. Our unlisted builders hot line is 561-589-0309 and, if we are here, this is the only number we will answer.

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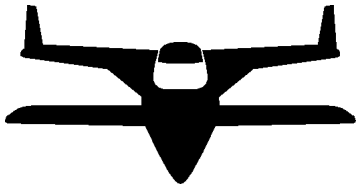

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- Velocity Flying Adventures
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PLEASE!
Send your photos / stories to Rick Lavoie for the next newsletter!

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3rd	July 15th
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2nd	March 1st
3rd	June 1st
4th	September 1st

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1) Send it on a 3-1/2" disk, a CD, or a Zip 100. This saves us from re-typing all that text. Don't format your text, just give us raw text, with no underlining, bold, or any other type of formats.

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Velocity Views
is published Quarterly by:
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Velocity Views newsletter is published by Rick Lavoie / Lavoie Graphics as an agent for Velocity Inc. (the factory). Prior to printing, the factory reviews each volume published for accuracy.

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VELOCITY VIEWS

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