

# VELOCITY VIEWS

Volume 25

## CSA's Rough River EZ Fly-In

By Rick Lavoie



Jack, Matt, and Joni Fehling pose by their standard Velocity RG after arriving at CSA's Rough River Fly-in.

One of the nicest flying events that Judy and I have attended over the years is CSA's Rough River EZ Fly-in. This annual event is held in Kentucky at the Rough River Dam State Resort. This part of Kentucky is just beautiful country, with rollong hills and lakes.

The event is sponsored by Central States Association and is for all "canard type pushers" (EZs, Cozy, Velocity, etc.). This beautiful State Park has it all, including an airport! No rental car is required, as everything is walking distance from your airplane! Golf course (executive), lake (boat rentals), motel, cottages, great restaurant (Duane and I each gained 10 lbs in 3 days!), are all part of this

neat fly-in state resort. The 3200-ft runway is paved and in good condition too.

We took off from St. Augustine, Florida, Friday morning as a flight of two (Duane and Bonnie in the factory XL, and Judy, Darla, and me in our standard Velocity). At low altitude and climb out, my standard Velocity (Franklin & IVO combo) had the edge in performance. However, at altitude when we leveled off at 7000, the XL excelled by a good 15 kts. My top speed is about 170 KIAS, which, prior to this flight, I thought was great. Afterall, I've been used to having the fastest plane when taking trips with my St. Augustine friends

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## Rough River Fly-in

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*Formation fly-bys were a common sight at Rough River*

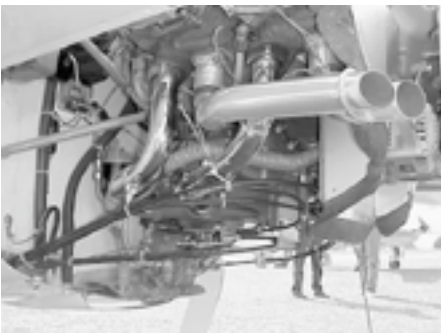
(Bonanzas, Twin Commanchees, etc.). It was a little difficult for me to ask "Duane, can you pull back the power a bit more?". In any event, the weather was just perfect! A short 3 hour flight had us in Kentucky at 11:00 am. We checked into our 2 room cottage, had a fantastic buffet lunch, then watched all the others land. Many of the EZs did formation fly-bys. We even had an EZ perform an aerobatic display. Bonnie counted 6 Velocitys on the ramp, out of about 50 canard pusher types. Dave Teter from Woodbridge Virginia and Jimmy Dallas (& Lynn) from Anderson, Indiana, were among the first Velocitys to arrive. Jimmy and Lynn go to this event every year! We first met Jimmy back in 1993, when Judy and I attended this event in our Long EZ. Jimmy's Velocity was my first face-to-face encounter. I was hooked, and within 6 months picked up my own Velocity kit. The rest is history!

We were more than a bit concerned that Jack and Joni Fehling were not there yet, since they left Florida a day before us. We were all relieved when they arrived that night. Jack had some injector trouble and spent the day at an FBO, trouble-shooting. Speaking of fast airplanes... Jack built a rocket ship! His standard Velocity just accelerates down the runway like a jet. Check out the many photos of Jack's standard Velocity RG and his outstanding engine install. A real work of art!

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*Above and below are photos of Jack Fehling's Velocity RG, and engine installation, taken by CSA's Terry Schubert*



### To Join CSA:

Mail a check payable to Terry Schubert for \$20 (US & Canada), and mail it to 9283 Lindergh Blvd, Olmsted Falls, OH 44138-2407  
CSA is a resource for info sharing between all "canard pusher" type planes and sponsors several social events each year.



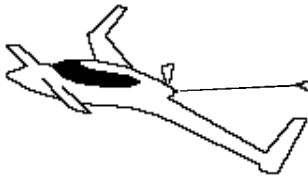
*Jack's electric aileron trim actuator motor installed on his center spar. The photo below shows the trim springs attached to the rod ends.*



### Kentucky Reservation Info:

CSA's Rough River Fly-in, Kentucky. Call Kentucky State Parks to book reservations at "Rough River Dam State Resort Park" or have them mail you a brochure 800-325-1713. Be sure to specify that you are with the "Central States" fly-in. They have rooms and cottages, plus camping right near your plane. The rooms and cottages book real fast! If they are booked up, keep calling to get a cancellation. If you decide to camp, there are two clean bathrooms with a shower at the ramp. We had six Velocitys there in 2000, let's go for more in 2001! Velocitys already booked (that I know about so far): Bonnie & Duane Swing, Judy and Rick Lavoie, Joni, Matt, and Jack Fehling, Jimmy Dallas and Lynn. Check our web site for updated details.

Future event dates:  
September 28 - 30, 2001  
September 27 - 29, 2002  
September 26 - 28, 2003



# FACTORY NEWS

by Duane Swing

## Mark and Nancy Machado

Mark and Nancy have decided to make some changes in their life and are no longer a part of the Velocity family. Their dedication to Velocity and the tasks they took upon themselves have left us a better place than when they came. We will miss them and hope only the best for them as they seek new directions in their lives.

We have elevated Scott Baker into a position as plant manager as his background is a perfect match for this important responsibility. Scott spent several years in a similar role and has blended into our company profile perfectly. Scott can also answer builders questions as he has built a couple of Velocities and is also a CFII.

## Insurance update

Since my last posting on the insurance issue, a new player came into the picture. As a result of some pressure from EAA on Avemco, I got a call from Jim Lauerman, Executive Vice President, of Avemco. Jim wanted to know all the details of the plan I had worked out with USAIG to see if they would want to participate. After several e-mails back and forth, Avemco has agreed to insure the Velocity aircraft if certain criteria have been met. The basis for this insurance is very similar to what I outlined in the last Views. I'll re-state these conditions for your information. Please remember that these are MY recommendations. Avemco has given me their verbal approval but I don't have it in writing yet and some of the qualification may change.

## Pilot qualifications:

Fixed Gear 210 horsepower or less:  
1) Private license  
2) 150 hours total time minimum

3) Factory check-out

Retract Gear 210 horsepower or less:

- 1) Private license
- 2) 200 hours total time minimum
- 3) Complex aircraft endorsement in logbook
- 4) Factory check-out

Fixed Gear over 210 horsepower:

- 1) Private license
- 2) 200 hours total time minimum
- 3) Complex aircraft endorsement in logbook
- 4) Factory check-out

Retract Gear over 210 horsepower:

- 1) Private license
- 2) 250 hours total time minimum
- 3) Complex aircraft endorsement in logbook
- 4) Factory check-out

Notes:

- a) Franklin engine is considered 205

horsepower

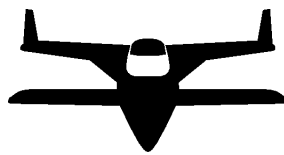
b) Complex aircraft endorsement must be completed prior to factory checkout.

c) Total time may be waved in lieu of 25 hours time in type.

## Aircraft Qualifications:

- 1) Aircraft will have completed the required FAA final inspection.
- 2) Aircraft to be inspected by a Velocity factory authorized inspector and any discrepancies corrected prior to first flight.
- 3) No auto conversions allowed unless approved by the insurance company.
- 4) No IVO propellers unless approved by the insurance company.
- 5) A Velocity conditional inspection (annual) can be used in lieu of this inspection, as long as items 3 and 4 have compliance.

Note: The IVO propeller may be approved when used with the Franklin engine. The insurance companies are reviewing case histories to determine compatibility. The above qualifications may see some changes as the insurance companies and Velocity work out the details.



## February 3rd Factory Open House Workshop Schedule

**Saturday February 3, 2001** - Factory's quarterly open house in Sebastian Florida (X26)

- 9:00am Coffee and donuts
- 10:00am Workshop: TBA
- Noon Lunch
- 1:00pm Workshop: Building Q&A
- 3:00pm Demo rides in the XL

Please be sure to call the factory and RSVP! Friday arrivals can book a room at the Key West Inn at Captain Hiram's here in Sebastian. Call 800-833-0555 and mention Velocity to get a corporate rate. When you call the factory to RSVP, let us know when you plan on arriving so we can make arrangements for transportation, etc.

Check [velocityaircraft.com](http://velocityaircraft.com) for up-to-date details

## Factory News

*Continued from previous page*

Keep in mind that I have no need or intention of forcing our builders to meet "Velocity" standards that are different from what the FAA allows in the "Experimental Amateur Built" category. My only desire here is to provide a way for someone to obtain insurance. If you don't want Avemco or USAIG insurance, or can find another insurance company that will accept the final FAA inspection of your airplane as reason enough to insure you, than have at it. On the other hand, if Avemco and USAIG will only insure you if you and your airplane qualify, than you don't have much choice.

I am presently looking for Velocity inspectors willing to provide this service to our builders. You are not going to get rich, but you will be compensated properly for your work. To qualify you must have already built a Velocity that can meet the standards necessary to qualify for insurance. It would be desirable to also have obtained your EAA Tech advisor status. We have researched the liability issue and have included a "disclaimer" as part of the inspection process. Let me know if you are interested.

I will forward by mail, fax or by an e-mail attachment, the inspection information to anyone who may ask.

### Service Center

Due to ever rising costs we have adjusted our hourly rate for all maintenance work done in our Service Center on customer airplanes to \$50 per hour. Our Conditional Inspection (annual) remains at \$500 for a fixed gear and \$600 for an RG. All additional work needed to correct discrepancies will be billed at \$50 per hour.

### Head Start

The Head Start program continues to be an important part of the future of Velocity. More and more of the new Velocity customers are using this program to gain important knowledge and understanding of the airplane building process. We have



*Aircraft being worked on in Velocity's Service Center*

added an additional 2500 square feet to the existing 7500 for a total of 10,000 square feet. Some of this new space will be used to fabricate the core type fast build wings used on the SUV and Standard Velocity along with supplementing the Brazil wings for the XL.

We have simplified the Head Start program and pricing to reflect the experience gained in the past. Any new customers to the Head Start program can have a choice of either part time or full time help. One week, two weeks, or more...or until the airplane is done and flying. Pricing and conditions for this program are yours for the asking. A very brief summery is as follows: Use of shop, tools, jigs, overhead, coffee and soft drinks, \$150 a week. Cost of technical assistance, \$50 per billing hour. Using the experience from the past, a qualified builder could complete his Velocity with full Velocity technical help in about a 10 week period. Using the above formula and working a 40 hour work week, this figures out to \$21,500. We are also providing an optional 10 hour flight testing program by our pilots for a flat fee of \$1500 including fuel and any necessary corrective adjustment. This option is only for airplanes that are built completely here in our

Service Center.

### Sun 'N Fun 2001

Sign Up for Velocity's Sun'N Fun Dinner – 6:00PM, Monday, April 9, 2001

The Velocity Buffet Dinner will be held on Monday evening, with a social hour starting at 6:00pm (no-host bar), followed by dinner at 7:00pm. Please call Velocity at (561)589-1860 to make your reservation. Advance reservations (paid before March 31) are on sale for \$20 per adult; \$14 for children ages 4 to 12; children under age 4 are free. Dinner reservations received after March 31 and placed up until the time of the banquet cost \$22.50/ adult; and \$15/ child ages 4 to 12.

For those who have yet to attend a Velocity dinner, this is a wonderful time to socialize amongst friends, meet new Velocity buyers, talk with Velocity staff, and listen to interesting guest speakers (no politics, we promise!). Velocitonians from all areas of the country will be in attendance. We know you will have a great time!

The dinner will be hosted in the Ballroom of the Imperial Lakes Country Club located on Shepard Road in Lakeland, FL. (See map in

vol 17, page 12 or online on our web site: [velocityaircraft.com](http://velocityaircraft.com) – click on “News & Events”).

Please RSVP to the factory as soon as possible, so we can give a head count for dinner. A drawing will be held of the early registrants for a special prize to be given away at the dinner. We hope to see you all there!

## Brazilian Wings

Eureka, we have delivered the first 5 sets of the Brazilian wings, with more on the way. All static load testing has been completed with only the actual flight testing needing to be completed. By the time you read this we will have completed the second of the Head Start beginning-to-end airplanes. We will be doing the flight testing of the new wings on Bob Wood's Velocity XL FG. Bob started his XL on October 1st, and we anticipate first flight no later than January 15th.

## Book Reviews

One of my passions in life is to read, something I can't get enough of and yet seldom find the time to enjoy. Stephen Coonts, a lawyer and now a writer of some respect, decided to take a three month leave of absence and fly his 1943 Stearman across our Nation visiting all our 48



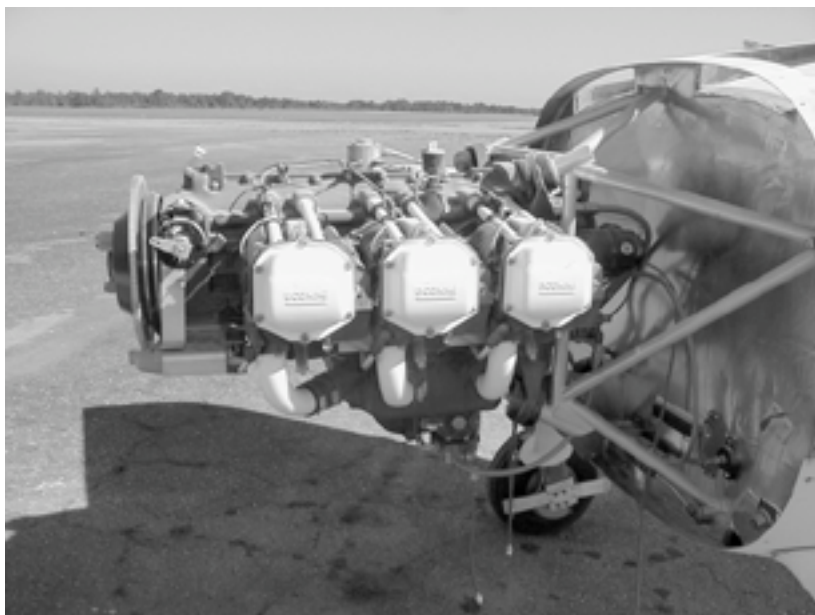
*Bob Wood's Velocity XL FG with a set of the new Brazilian wings being installed.*

states. His narrative of this trip has been bound between the pages of his book, *THE CANNIBAL QUEEN*. It's refreshing to find someone who could afford just about any airplane, content to roam our country in an open cockpit biplane, complete with the constant smell of spent oil, the pounding sounds of the unmuffled radial engine, and the relentless vibrations that try shaking everything apart while navigating with nothing more than a sectional map.

No VOR's, no GPS's, just a watch and the old charts to guide his way. This book is full of the trials of such a trip, the occasional thunderstorms, the fog, the turbulence, the point of no return, the fear of an engine quitting over the most inhospitable part of our country, the loneliness, it's all here for your reading enjoyment.

*LINDBERG*, by A. Scott Berg

I can't begin to describe how much this biography of Charles Lindberg affected me. A hardback of over 600 pages telling of his life from birth in Minnesota in 1902, to his death in Hawaii in 1973. This is a no holds barred account of a life full of adventure, drama, controversy, heroism, tragedy, and seclusion. Most of the material for this book came directly from the notes and diary made by Lindberg, along with detailed information from a lifelong diary compiled by his wife Anne. Some of the more amazing flying feats by Lindberg were done with no modern weather information systems, no radios of any kind, engines that were prone to problems, open cockpit airplanes with no heaters, and only road maps for ground navigation. Lindberg flew for many thousand hours after his historic 1927



*Engine installation on Bob Wood's XL FG Head Start project*

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## Factory News

*Continued from previous page*

New York to Paris flight, with some as long as 26 hours nonstop. (Washington DC to Mexico City) It seemed normal for him to fuel up his Spirit of St. Lewis and fly across the United States with an occasional stop to check out potential new air routes for commercial aviation. At every landing, he was swamped by eager fans and reporters wanting to see and touch this national hero.

After he gifted the "Spirit" to the Smithsonian in '29, he had an open cockpit single engine airplane built for him and his wife Anne, who he taught to fly, and proceeded to fly thousands of hours all over the world, seeking out more new air routes for commercial aviation. I cannot fathom the hysteria surrounding this man and this book can only begin to reveal it to me. He had many other interests as well that included inventing the first ever successful organ by-pass machine that was used extensively in WW II, saving thousands of lives. Here was a man who tried desperately to keep the US out of WW II and yet spent the first part of the war helping design the B24 Liberator. At 40 years of age, he flew over 50 combat missions on the Western front in the P38 as a civilian pilot hired at \$1.00 per year by our government as an advisor. He was also responsible for extending the fuel range of the P38 by over 25% using some of the same techniques pioneered in his Paris flight.

If you have any desire to view aviation from a historical prospective, I highly encourage you to read this book. You will not be disappointed.

### XL RG Supercharged

An XLRG with a Lycoming IO 540 260 horse engine is now flying with a Vortex supercharger installed. We are doing all the flight testing for the first 10 hours with the supercharger disconnected to get all the test data on the engine and airframe documented. After this, we will be



*Supercharged Velocity XL being tested by the factory*

flight testing the installation in a "normalized" mode. That is, we don't want our manifold pressure to go over about 31" for takeoff and a cruise climb of no more than about 27". The slight boost is to offset the power it takes to run the compressor and restore the 260 horses for takeoff performance. If all works as planned, we hope to be able to maintain 75% power up to about 18,000 feet. On an XLRG this should result in a cruise speed of about 260 mph (230 knots). Maximum manifold is limited by an automatic controller that is designed to prevent manifold pressure from going over 31" with full throttle. Power back to 27" manifold pressure and it should hold this pressure up to about 15,000 feet.

Why a supercharger and not a turbocharger? The major advantage of the supercharger is that the package is about 15 lbs. lighter and does not require wild exhaust modifications. An added advantage is the reduction of heat. A turbo system requires the compressor to spin up by using an impeller connected to the compressor. The exhaust is routed through the impeller and thus causes the compressor to spin up, forcing this compressed air into the induction system. The impeller will glow cherry red when in operation, creating a large heat source that must be dealt with by additional air ducting. A turbocharger is also lubricated by engine oil that carries

away some of the heat into the oil system. In many cases the added oil temperature becomes critical to safe operations of the airplane. There are other reasons but this is enough to justify the R & D into the supercharger application.

We will keep you informed as to how it all works and availability. A target price of \$10,000 is proposed.

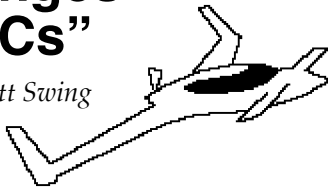
### Fast Build Wings

As reported in the last Views, we have taken over the building of the SUV and Standard Velocity fast build wings. This new department is headed up by Daren Johnson as he has fully recovered from his open heart surgery and is willing to take on this important task. We will also be supplementing the XL wings until we are confident that the Brazil company can keep up with the demand. Daren has found ways to improve the process to keep our costs down. This is important as we have been sending out XL wings that we were actually paying \$1000 more for than our selling price. Even with the improvements in manufacturing, it was necessary that we raise the fast build wing prices to \$11000. Obviously, contracts already signed will receive wings at the old \$10,000 price.

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# Kit Plans Changes "KPCs"

by Scott Swing



*Note: Check the date at the bottom of your page. If it matches the "Date of Change" shown in the KPC, your manual has already been corrected.*

## KPC 137

Affects all planes with concentric elevator torque tube assembly.  
Manual Section - appendix  
Date of Change 12-10-00

The 2" wide slot that is cut into the top of the canard for trim spring clearance doesn't have to be very deep. Basically, the new method of installing the Pitch Trim actuator is as follows:

1. Make both brackets for attachment of the actuator and spring.
2. Make the wood or foam wedge for

- the forward attachment. If using foam, include a 1/8" aluminum plate over it. Tape it in place for now.
3. Making sure you have clearance to top cover, attach the trim spring to the trim spring bracket.
4. Install the attach bracket (channel) to the trim spring as shown and connect the actuator to it.
5. Snap the spring bracket onto the elevator torque tube and set the actuator in place over the wedge or front attach area. Make sure you don't protrude forward of the canard as it is harder to make a cover and install the canard. You may have to cut a notch in the canard to get the trim spring to fit here.
6. Set the elevator at 1 1/2" trailing edge up and attach the spring bracket to the elevator torque tube. Your actuator should be at its smallest dimensions.
7. After attachment of the actuator to the canard, rotate the elevator all the way up and cut your notch for your trim spring just enough so it doesn't inhibit movement.

## KPC 138

Affects all aircraft  
Manual Section 4.4.6  
Date of Change 12-10-00

Change the slot dimension to 3/8" x 1-1/4 (forth paragraph)

## KPC 139

Affects all aircraft  
Manual Section 4.4.1  
Date of Change 12-10-00

Change 79" to 72" The torque tubes come in 12-foot lengths.

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*The photos above and below show "Fast Build" wings under construction at the factory*



**Sign up for Velocity's  
Sun 'n Fun Banquet  
See page 4 for details or  
visit our web site  
[www.velocityaircraft.com](http://www.velocityaircraft.com)**

# Production News

by Scott Baker



*Velocity welcomes two new people to the manufacturing team - Bryan Levering and Mark Crane. Both Bryan and Mark are working in fiberglass parts fabrication.*

Velocity continues to be blessed with an abundance of orders and production is moving along at max-speed as we enter the holiday season. Many, many buyers are taking advantage of Velocity's popular fast-build wing and fast-build fuselage options, expressing their pleasure with the quality workmanship and time saving values that are being provided by experienced Velocity hands. It's impressive to see Chad Holland (fast-build fuselage team leader) and Natalie Femia working to put fast-build fuselages together (sometimes three at a time!) with such rehearsed planning and skill. Fast-build fuselage reservations are now being accepted into March 2001.

In early December, the company took a big step forward in expanding our in-house fast-build wing production by setting up a dedicated Fast-build Wing Department. The Fast-build Wing Department has manufacturing floor space attached to the Velocity Service Center, and is headed by Velocity veteran Daren Johnson. Scott Ashley, formerly in fiberglass parts production, is working full time with Daren to help keep ahead with the demand for fast-build wings.

The first shipment of fast-build wings from our contractors in Brazil (as reported in the last *Velocity Views*) has arrived and looks fantastic in all respects. Scott Swing and "Helping Hand" builder, Bob Wood, have fitted a set of main wings to Bob's XL model – and couldn't be more pleased. The closeness of the fit

of these new wings to the wing strakes was wonderful to see. Flight-testing of a representative set of wings is scheduled for January. Based on experienced observations, we are confident that the wings will meet and exceed our design and performance expectations – so much so that we have begun delivery of the wings (with the caveat – install, but please don't fly the new wings before we finish testing and signal that they are good-to-go). Fast-build XL wing customers now have the option of selecting either molded "Brazil" wings or traditional foam-core wings. In the future we expect to offer XL fast-build wings using the molded design only, and provide foam-core constructed fast-build wings for SUV and Standard models.

## High Performance XL Brake Option

MATCO Manufacturing, the present original equipment supplier of wheels and brakes for Velocity aircraft, has recently introduced a new wheel and brake assembly called the "323 Compound" which provides significantly greater stopping power than their previous

top-of-the-line W600 unit (Velocity continues to provide the W600 wheel/brake assembly as standard equipment for all of its models). Recognizing there may be interest in high-performance braking performance, Velocity is offering the Compound wheel/brake assembly as an optional upgrade for XL models. The Compound assembly was specifically designed for heavier aircraft carrying a lot of landing momentum – and thus looks well suited for "Big Bubba". The unit will fit SUV and Standard model aircraft supporting 600x6 sized tires – however it is our opinion that the Compound may be "too much" brake for the lighter aircraft. We have visions of pilots landing with a touch of brake on landing – causing flat spots on tires or worse.

Recently, a XL/RG was retrofitted with the Compound wheel/brake assembly – and it was found that there were no problems with the mounting and fit of the wheels into the retract position. The axle uses the same standard "Cessna" bolt pattern that is used on the W600 assembly, and is threaded to receive bolts with a drilled head for safety wiring.

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## Production News

*Continued from previous page*

The Compound assembly sells outright for \$1,150 (not including tires and tubes); and is available as a \$399 upgrade option for new XL buyers. Current customers who are interested in purchasing the Compound may "trade-in" their W600 wheels, brakes and axles as long as they are returned in "AS NEW" condition. Please: Velocity cannot accept brakes that have charged with fluid; or that have had braking action applied; or that are blemished to the point where a future Velocity customer might object to receiving the assemblies as new.

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## Open House

Our November 4th Open House was attended by at least 75 builders, potential builders, and some of you who are already flying. Topics covered included a complete discussion of what constitutes an "overhaul" on a Lycoming engine. How to avoid the "traps" in purchasing a used engine and some discussion on the process used in the Head Start building program. Those in attendance had a chance of seeing the "expanded" Service Center facilities and could talk one on one with many of our key personnel. We had attendees from California, Texas, Georgia, North Carolina, Ohio, Idaho, and a couple more states. It always fascinates me when I find out someone came all the way from California, Idaho, or even Georgia just to attend an open house.

If you have never attended one of our "Open Houses," perhaps the next one will be the one for you. Mark your calendar for February 3rd and let us know if you will be here so we know how much food to order. It's all free, so why not?

For more details, see page 4 or visit our web site.

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# AOPA Expo 2000

*By Scott Baker*

With IFR Arrival Reservation Number in hand, our flight to the Aircraft Owners and Pilots Association Expo in Long Beach, CA began in IMC conditions from Santa Rosa (STS), a small towered airport located in the wine country of northern California. With me was Vern Boltz, a former Lancair IV builder who, along with starting a new wine business, is interested in building a Velocity XL. As we taxied N457M, a Velocity XL/RG graciously on loan from Marty Horowitz, ground control advised a 3-hour ground hold was in effect for all IFR flights going into the Los Angeles basin. Rather than wait, we elected to depart IFR to VFR-On-Top and quickly popped through the 1200' tops to a beautiful sunny day. At Bakersfield we worked our way back into the IFR system and ended our 2-hour long flight with an ILS into Long Beach.

Duane and Bonnie Swing greeted us at the manufacturers static display and led us to our assigned spot between two other canard aircraft – a Beech Starship and an AASI JetCruiser. Velocity was certainly amongst nice looking company! Interestingly, many visitors mistakenly believed all 3 aircraft were of the same manufacture and commented on the "family" resemblance (Papa Bear, Momma Bear and Baby Bear). The XL looked great, like a personal "sports car" parked amongst limousines. It was nice to see Velocity friends and builders drop by for a visit: Chris and Patrick Martin, Rodney Brim, Rich Guerra and his Dad, and Ray Flade, to mention but a few.

AOPA kept a fleet of busses running between the Long Beach Convention Center and the Static Display area at Long Beach Airport. Attendance was very good throughout the 4-day event and many pilots were introduced to Velocity and the concept of kit aircraft.

A special thanks to *KITPLANES* Magazine, who invited us to participate in their booth at the convention center and who provided many copies of their magazine with the Velocity SUV on the cover for distribution at our static display.

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### Index of Newsletter Articles

Did you know that there is an index of past newsletter articles? See page 18 for details on how you can download this file!

## Newsletter... Please Help!

Publishing a newsletter with such a small subscriber base is quite a challenge. Keeping cost (and hours spent) down are important. Here are two things that you can do to help Velocity Views:

- **Renew on time!** When you renew late, you cause me all sorts of extra work, as I now need to process each late renewal by hand. There is now a **\$5 late charge fee** for renewals that come in after December 31
- **Pay by check...** Credit card option is **only** for international subscribers (to make currency exchange easy). The time it takes to process credit cards is very very inefficient and costly.



# Safety Corner

Accident & Incident Reports,  
Maintenance & Service Difficulties

## Service Caution Fuel Flow

We are still getting an occasional report of uneven fuel flows into the sump tank from the main tanks. This condition can be caused by a leaking fuel cap, a plugged fuel vent, or a restriction in one of the fuel feed lines. It is important that, as the pilot in command, you visually verify the fuel levels for each of your tanks at least every 30 minutes during flight. If any major imbalance is noted, you should land immediately and find the cause of this imbalance. It is possible that you can have full fuel on one side and still run out of gas if one or more of the above conditions were to happen. It is important that you modify your sump tank with a low fuel warning system, if not already equipped. The low fuel warning should never be used in lieu of the 30 minute check of your fuel system.

## Service Caution Exhaust Systems

Many of you have received a post card from us noting the cracking problems we are having with the IO 540 exhaust. So far we have seen only a couple and are making some changes. Our prototype XL has over 600 hours now and no indication of any cracking. If you're flying, it is important you inspect the weld area around the #5 and #6 short stacks where they are welded to the main manifold. This inspection should be repeated every 10 hours until a reinforcement is welded in place. We can send you the reinforcement for your welding shop to weld in place or you can send the last section of these two cylinder pipes back to us and we will make the weld for you. Just as

important, however, is the fact that we sent out at least three sets of exhaust that will just not fit up to the 260 engine. It looks like the jiggling fixture we use to make these pipes moved enough to prevent the removal of the bottom plug on #1 cylinder and created an interference problem on all the intake tubes. If you were one of the unlucky ones, you can send your exhaust back to us for correction. We are presently changing the jiggling fixture on all IO540 stacks and are shortening the distance between the #5 and #6 short stacks where the bend takes place before exiting the bottom of the cowling. We will be taking about 3" out of this area which will reduce the weight and change the residence frequency of this part. If you would like your exhaust modified, send them back and we will make the change. If you're already flying, this will require you to glass over the existing bottom cowling holes that the exhaust exits and create two new holes about 3" further aft. Please, please remember to put your name on anything you send to us so that we know who to send them back to. Remember, we only need the two pipes from #5 and #6 cylinder, not the whole exhaust system.

We have mentioned this in the past but is worth mentioning again. We have found that if the exhaust does break, some sort of restraining wire needs to be in place to prevent the broken piece from exiting the cowling. It is a good idea to double the safety wire now used for this purpose. In addition, when you flood the engine compartment with the heat from a broken exhaust blasting straight back, there will probably be some damage to anything directly in the path of the exhaust. Keep this area as clean of "things" as possible or heat shield everything in the way.

This holds true for all the fluid lines in the engine compartment. You should also heat shield the push-pull cables that operate the ailerons. The Teflon coating will get soft with the added heat and once cooled down, (after engine shut down) the ailerons will lock up and require replacement. We are now offering an inexpensive auto after-market heat shield for this purpose. Call us for the different sizes and prices or check the "store" section of our web site.

## PZL Franklin Engine Service Bulletin

PZL has issued Service Bulletin number PZL-F/63/2000 for models 6A-350-CI, C1R, & C1L regarding overhaul instructions at 1500 hours TBO. Those of you that own a Franklin should get a copy from your Franklin engine distributor.

## "Bobby Skaggs" Franklin Engine Warning

One of our Velocity builders has informed me about a Franklin engine he purchased from Bobby Skaggs. The Franklin engine was sold as a "0" SMOH. The builder immediately had problems with the engine and sent it off to an overhaul shop for inspection. The engine came to the builder without any work order documentation, no "yellow tags", no indication of any AD note or service bulletin compliance and no carry forward from previous log books. Upon teardown inspection, it was found that the engine could not be considered airworthy and was, in fact, considered scrap. Please be warned that if you have purchased an overhauled engine from Mr. Skaggs, it would be a good idea to have a good inspection completed prior to flight. Mr. Skaggs also sells factory new Franklins and this engine should not be a problem.

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## CFI Notams

by Brendan O'Riordan, CFII, A&P



### 100 Knot Pilot

Most of us have learned to fly in basic trainers. Airplanes like Cessna 152's, 172's, and Cherokee's. Top speed on these type of airplanes may, if your lucky, get you to 125kts in a dive. Some of us continued on from there into faster more complex airplanes and many of us did not. Those of us who did not still have the mentality of "100 knot pilots."

What I mean by "100 knot pilots" is that your reactions and thought process used for flying is operating at the speed needed for a 100 knot airplane. Even though you may think you have cat like reflexes and can handle any situation you run into in your trainer the situation is quite different when we stick that same pilot in an airplane that is 100 kts faster. This is something that affects all areas of flying, from take off to landing.

**TAKE OFF** - In your trainer it is a smooth push in of the throttle, a slow but steady acceleration to about 50 kts and you're airborne with a slight back pressure on the yoke. In your Velocity, takeoff is very much the same except for a few changes. When you push in the throttle you get pushed back in your seat and you accelerate at quite a bit faster rate. It takes almost half the time to reach 70 kts as it did to reach rotation speed in your trainer. Now you have rotated and you are climbing.

Standard practice in most airplanes is to reduce to a cruise climb setting at about 500 ft. With a constant speed prop that is usually 25 IN MP and 2500 RPM. The typical reaction I get from the "100 knot pilot" during training when we get to 500 ft in a Velocity is to first give me a shocked look as if to tell me "We're already at 500ft." After regaining their composure, the "100 knot pilot" will usually get the throttle and prop set as we are passing through 1500 ft AGL. This definitely becomes a problem when we are trying to stay in the pattern to do some touch and go's.

**EN ROUTE** - In your trainer, your time between waypoints en route gives you plenty of time to navigate, check your fuel and take a nap if you didn't have to fly (just kidding.)

In the Velocity, things tend to come up much faster and you have to be prepared for them. This becomes more apparent when you are flying IFR in congested airspace.

Another thing to keep in mind is the fact that you need to plan your descent sooner in an airplane that is not only faster but one that has such a good glide ratio. One thing you cannot do easily is misjudge your descent, reduce the power to nothing and push the nose over. If you do this it doesn't take long for your airspeed to reach your VNE and your alarms on your CHT's start screaming at you for Shock Cooling your Cylinders.

**LANDING** - In your trainer, first off, your pattern is done at slower speeds. In the Velocity we use 90kts in the pattern. Believe it or not, when you are first learning to fly the Velocity we use 90 kt airspeed on base and also on final. This is definitely a little faster than you experience in your trainer. On final, the experienced Velocity pilots correct for turbulence and gusts with quick small corrections. The inexperienced Velocity pilot does best when they just hang on and ride out the bumps otherwise they find themselves behind the airplane which actually

makes the situation worse than better.

I know all you are now saying "How do I get myself up to speed so when I go for training I don't experience these problems?" The best way is to get some time in a high performance airplane. If you happen to get some time in a Bonanza or Mooney this will help you get "Up to Speed" with what you will need to do in a Velocity. Don't worry; when you come for your checkout you will still have plenty to do, learning the differences between a Canard and a Tractor airplane. As you near your first flights most of you spend so much time prepping your airplane you forget to prep yourself. Do not rely solely on your Velocity Checkout to get you back into flying. In the time you spend with us we can only do so much. To get the most out of your training at Velocity come as prepared as you can.

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### 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 **Flifgt Check Out** prior to your first flight! Flight training is available from:

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

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).

# Maintenance Notes

by Michael J. Snyder  
Private Pilot, A&P, IA



I would like to wish all of our customers Happy Holidays and I hope your year has been as nice as mine, having been associated with Velocity for the last year.

The subject I would like to touch on relates to buying pre-owned aircraft and components such as engines. Purchasing a used airplane requires some homework before you fall in love with the ship. When going out to look at a potential airplane I would suggest you have a mechanic in your behalf go along with you who is familiar with the type, to look at the airframe and engine for obvious flaws in construction or installation. When looking at the airframe look for neat and tidy work as far as the glass work, general wiring, plumbing, and appearance are concerned. Research of the airframe logs should reveal what kind of maintenance has been performed throughout the life of the aircraft, such as periodic maintenance, added or removed equipment, etc. In researching the engine log look for routine maintenance such as oil changes, fuel and oil filter inspections and servicing, spark plug cleaning and – for wood propeller installations – retourqing and safetying of the prop bolts. Evidence of routine maintenance reveals that the aircraft was taken care of between

annual Condition Inspections. Look for an A.D. note compliance list. This will show the status of your engine regarding items that must be complied with by either one-time or recurring inspections. These are required whether your engine is a factory engine (unchanged and still having data plate) or one modified in the field (Experimental.) Without this history it is almost impossible to determine if the engine is up to date without partial disassembly for verification. If the engine was overhauled in the field it should list what was done as well as what parts were installed by part number. If your new or pre-owned aircraft is to be inspected for insurance coverage, it is very important that this information is available or you may not be able to be covered. Most of the insurance claims have been engine or engine installation related so this area must be looked at very carefully.

Careful building and safe flying.

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## EAA Copperstate 2000

By Scott Baker

Velocity, Inc. was well represented this year at Copperstate 2000, a regional EAA Fly-In event hosted at Williams-Gateway Airport in Mesa, Arizona. Brendan O’Riordan flew a recently completed and gorgeous XL/RG model belonging to Marty Horowitz (thanks Marty!); and I flew the factory SUV demonstrator to the program. While both aircraft experienced some weather delays, it comes to no surprise that Brendan arrived in the Valley of the Sun several hours ahead of the SUV and was enjoying a cool soda when I pulled into the display area.

For those who have never attended the Copperstate program, Williams Airport has three parallel runways measuring 10,000 feet in length – and I would say is one of the easiest airports to get into – and out of – this kind of an event. If you feel tentative about flying into high traffic EAA events, try Copperstate. The controllers do a good job with separation, the visibility is outstand-



Len and Sue Elsner, pose in front of Chuck Ufkes Velocity at Copperstate

ing, and there is lots of room to maneuver.

Though not quite as large as Sun-n-Fun or Oshkosh, Copperstate drew many of the major manufacturers and vendors that we all know and love. Public and fly-in attendance was reportedly down this year, but you would not say so based upon the interest shown at the Velocity display! Brendan literally had a full flight schedule performing demonstration rides and putting the SUV through its paces during the daily manufacturers’ fly-by showcase. The announcers and the crowd were truly impressed to see this 160hp, fixed-gear Velocity fly screaming by at 200mph!

Others were apparently impressed as well. Congratulations are extended to Jeff Griffin and to Lynn and Sue Elsner, who purchased Velocity aircraft kits following demonstration rides with Brendan. Lynn and Sue (pictured above) are planning to arrive in Florida in late January to take part in Velocity’s Helping Hand Program and complete their project start-to-finish in the Service Center. Our Europa neighbors at Copperstate report that the Elsners are experienced hands at composite construction, complimenting the couple on the work they performed in building a Europa model a short time ago. When I asked Lynn why he selected a Velocity he said, “...four seats, fast, fun to fly”. That says it all.

Thanks go to Velocity friends and builders who dropped by: Chuck Ufkes, Rich Merolla, Pete Wetmore, and Kurt Winker, to name a few!

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# Velocity Service Center Inc. Formed

Scott Swing, President of Velocity Inc., announced the formation of a new corporation. "Velocity Service Center Inc." was formed to meet the growing service needs for an expanding fleet of flying Velocities and builder services. "Basically, all the functions handled at our new service center will be part of the new corporation," explained Swing.

Listed below are the functions part of Velocity Service Center Inc.

## Builder Assistance

To provide builders with knowledge and confidence to build a quality aircraft:

- Builder's Helping Hand Program
- Builder's Head Start Program

## Aircraft Service

To provide owners with service for their aircraft:

- Conditional Inspections
- Pre-buy Inspections

## Flight Training

To provide pilots with training to transition safely to flying a Velocity:

- Factory Check Out

"As more and more builders finish their kits, more Velocities are flying," continued Swing. "This has greatly increased the demand for services relating to the flying fleet. Based on this strong demand, we purchased the building located near Velocity Inc's factory headquarters to house this new business."

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**Sign up!**  
**February 3rd**  
**Velocity Open House**  
See page 3 for details



## Travis Holland Will Run the Head Start Program for Velocity Service Center Inc.

For the past several months we have been trying to find the "right" person to work in our Head Start program that has had experience building the Velocity and can work with the brand new builders. After much discussion, we decided to see if Travis Holland would be interested. Most of you know Travis as the one who delivered your kit to you in that specially made trailer. As it turns out, Travis was getting tired of driving 200,000 and more miles every year and agreed to work with us. Travis not only has build and repaired several Velocities over the years, but has also spent time helping Ron Alexander of Sportair for the Velocity specific workshops. We feel we are lucky to have him available and willing to take on this important part of our Head Start program.

We will be delivering the kits in special made crates using a common carrier as we done before Travis started his delivery service. Cost should be about the same either way. In the event we need to transport a Velocity that has the center spar installed, Travis will still make his rig available and will either do the driving himself or have one of his previous helpers do the delivery. We trust this will not be an issue with anyone.

## Official Guide to Experimental Aircraft Offers free links to Builder's pages

If you have a web page with photos and information about your Velocity building project or flying Velocity, you can publish a link to your page for free.

Go to <http://www.exp-aircraft.com> and click on the "Builders Page" link

# 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.

### Baffle and Bulkhead Fitting Tips

*from Ronnie Brown  
of Cornelius, North Carolina  
173 Elite RG (49% completed)*

I have discovered a neat method of cutting the many baffles and bulkheads to fit the inside contours of the strakes - here's how I did it:

1. Before marking and cutting out the bulkheads from the foam/BID as described in the chapter 14, Fuel System, use the paper templates provided with the kit, mark and cut out the baffles and bulkheads on 3/16 or 1/4" thick plywood. A 2 foot wide x 8 foot long sheet should be plenty since you will reuse what you made for one strake on the other strake.
2. Cut each of these plywood bulkheads and baffles in half length wise cutting out a 1 inch wide strip down the middle. You will get a top half and a bottom half and a 1" long strip. Now cut the 1" wide strips into 5" long pieces. Then attach two or three of these strips to the bottom half leaving 1/2 of the strip pointing upward using 1/2" long sheet metal screws.
3. Now, layout the bulkheads and baffle positions on the bottom strake per the manual. Then work with one bulkhead at a time, putting the bottom half of the plywood pattern in the proper place on the bottom strake.
4. Use a compass with a pencil or fine tipped Sharpie marker to transfer the strake contour onto the bottom half of the plywood pattern. (steel pointer side of the compass is guided along the strake, the pencil or pen side of

the compass is used to transfer the strake's contour to the plywood pattern). Remove the pattern, trim and sand this plywood bottom half until it fits nicely to the bottom of the strake.

5. Use hot glue and some blocks (See Dennis Martin's hints in VV Volume 13, pg 16) to hold the bottom bulkhead in place, put the top strake in place. Now, using small C clamps or those nice small expensive Quick Clamps made by Vise Grip, clamp the top half of the plywood bulkhead onto the 1" wide strips up against the top strake.
6. Now, use the compass to transfer the upper strake contour onto the upper plywood form. Release the clamps, remove the top half of the plywood pattern, cut and sand so that it fits the upper strake contour. Much of this was done through the retractable gear wheel opening. (For the non Retractable Gear Velocities this step will be a bit tougher - but still much easier than trying to cut and fit baffles and bulkheads directly from the foam/BID sandwich!!!)
7. Reinstall the upper plywood form and clamp it up against the upper strake. You could clamp this a bit short to provide the 3/16" gap called for in the manual.
8. Remove the upper strake and remove the bottom and top plywood forms still attached with the clamps and screw the upper plywood to the 1" strip.
9. Now you have plywood patterns which perfectly match the lower and upper strake contours AND they are the exact height they need to be. Use these to cut the foam/BID sandwich.

Only minor sanding will be needed to provide the 3/16" clearance between the top of the foam/BID sandwich and the underside of the strake. By the way, you can reuse these forms on the opposite fuel strake. Just remove the screws holding the top half of the pattern and repeat the process starting with step 3 above. Some minor fitting may be required but this side will go even more quickly.

10. Next, use Dave Black's method of building the flanges for the tops of the bulkheads (VV Volume 7, page 16). Now you have some very nicely fitted strake bulkheads and baffles!

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### What I learned at Lycoming school. Part 3 of 3

*From Dale Alexander, Daly City, CA*

#### Oil Pump

Oil pumps with keyway style are no good, key and groove wears. Oil pumps with sintered style gears are no good due to gear wear. Low volume pumps should have carburized and nitrided gears.

Normal cruise pressure range should be 60-100 psi, some may go up to 115 psi, idle pressure can go to 15-20 psi. AN960 washers can be used for pressure adjustment up to a max of 3 washers in the short tower and 9 washers in the tall tower type. 5 different length and strength springs are available as well. On very rare occurrence, no oil pressure on next morning start up can be carbon trapped in seat between ball and seat.

Service Letter L180A outlines engine preservation for active and stored aircraft.

Service Bulletin 524 covers replacement of sintered iron oil pump impellers and replacement of aluminum oil pump impellers.

Service Instruction 1316A addresses repair of the Vernatherm seat of the oil cooler bypass.

Service Letter L171 lists advantages of spectrometric oil analysis.

Service Instruction 1427B lists how to perform an oil consumption test and what the acceptable limits are.

### Ignition System

Lycoming warns not to clean (with a sand blaster) mass electrode plugs for more than 5 seconds or fine wire for more than 2 seconds.

Although the listed idle speed is 600-650 rpm, do not idle in this range, better to idle at 1000-1200 rpm to keep spark plug up to 800 deg F to keep plug from lead fouling, Service Letter L192B mentions this as well as time to rotate spark plugs.

Prop hub has index mark that matches index mark on ring gear / flywheel. Ring gear has timing marks that line up with mark on starter body. Special tool is available for timing engine, but is pricey at \$400. Timing info should be on Data Plate or Type Certificate Data sheet. Data tag is always "top" of mag. When small inspection plug is removed from side of mag body, red tooth will be seen inside. This indicates the mag "E" (efficiency) gap indicator and should be when the points open. Left mag in dual mag is master mag and left hand points and timing is always set first. With dual mags, both mags must fire within 3 degrees of each other (or one ring gear tooth). Point gap should be .016" plus or minus .002", right mag same plus or minus .004".

Impulse coupling retards timing at cranking speed (150 rpm) and helps mag obtain "come-in" speed.

Coupling can wear and sludge up. Bendix "shower of sparks" type mag

is a good alternative to impulse coupling type of mag.

### Exhaust System

Exhaust port gasket sealing areas that have been eroded away can be resurfaced .010" twice. Use blowproof gaskets to take up the slack. Best gasket to use with an unrepaired surface is called a spiral wound as it is captured with a flange. Lycoming has these gaskets. After resurfacing, need to stamp with amount removed from port face.

When installing exhaust system, tighten from front to rear (from prop to firewall), never other way as this will cause cracks. Lube slip joints with anti-seize. When inspecting the exhaust system, be sure to inspect for true flanges, better if all the same height as this will not put stress on tubing, inspect slip joints and welds for cracks.

Marmon clamps need to be inspected for cracks. Proper way to install clamp is to tighten clamp down, tap piping and clamp with soft hammer to seat piping into clamp, retorqued and run engine. Repeat tightening, hammering and heating until clamp takes proper torque value. Lycoming has had problems with clamps failing due to incorrect assembly. Don't use brass nuts or ny-lock type nuts on exhaust. Use only metal lock type nuts.

If a exhaust stud pulls out of head when tightening exhaust system down, do not tap hole. Lycoming offers 3 oversize studs that simply thread into damaged hole. Oversize studs will have a number stamped on the coarse side of stud (side facing out). #3 is .003" O/S, #5 is .005" O/S and #7 is .007" O/S.

### Intake System

If oil is found in intake tubes, suspect cracked oil pan sump. Normal idle should be 1-14" MAP, full throttle should be 29" MAP. If engine idles rough, inspect for induction leak.

Recommend use of hand primer to start engine to prevent induction fire. Do not use accelerator pump.

### Carburetor

3-5 psi fuel supply. Clean fuel screen at 100 hour intervals. Need to drain float bowl trap every 100 hours. Idle circuit works from 0-1500 rpm. Idle mixture is set by adjusting idle speed to 650 rpm, pull red mixture knob to idle cut-off. RPM should rise to 675-700 then drop. If does not rise, too lean, If idle goes too high, it is too rich. Leaning to highest EGT will give economy cruise. Richen to bring EGT down by 100 degrees for best compromise in power and cruise economy.

### Fuel Injection

Has Bendix system now serviced by Precision Airmotive in Washington, 1-360-651-8282. Flow regulator is not serviceable so don't try. Fuel inlet screen needs to be cleaned at 100 hour intervals. Remove screen from inlet side to prevent dirt from entering system. If engine does not shut-off with engine cut-off, dirt got past screen and got into valve.

If diaphragm leaks unmetered fuel into outer chamber, fuel will bleed into impact tubes. This will cause mixture to richen at altitude.

Installing a "sniffle valve" into lowest part of intake system will allow overprimed fuel to drain from plenum and help prevent induction fires. 2 piece injectors can be disassembled and cleaned. 1 piece and 2 piece injectors are interchangeable. If fuel injector plugs up, fuel flow indicator will show increase in gallons/hour. It will also cause one lean cylinder and all others will be rich. Keep this in mind if spark plugs look remarkably different.

To check fuel volume, remove injectors and with throttle in full position, full rich mixture, boost pump on, should have a pencil point stream. If

*Continued on next page*

## Builders Forum

*Continued from previous page*

any off to one side they can be considered dirty. Clean nozzles with "Hoppies #9 Gun Cleaning Solvent" available at Walmart. Precision Airmotive recommends cleaning every 100 hours, Lycoming recommends only "as required". Fuel injector line nuts are tightened down by hand and then one additional wrench flat only.

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## First Flight N224SM

After a rainout of the original scheduled date of October 6, 2000, a new date of Monday, October 16, 2000, was set for 11:00AM

Tom Jeter, Velocity test pilot, called Sunday evening to change the time to 8:30AM. After an un-restful night's sleep I met with Tom at 8:15AM at the Covington (9A1) airport and we went right to work, checking required paper work & a thorough inspection of the plane. After tightening the nose wheel a little tighter he declared he wanted to go fly.

All the while I grew more tense, wanting to bite off my fist as Tom put some coals on the fire and after a good run-up took his position on the runway. With tears in my eyes, still not comprehending that the moment was actually happening I heard the engine develop full power and off came the brakes. The plane moved. A cloud of emotion totally engulfed me as the plane lifted smoothly and sure footed of the runway as if it had done so many times in the past. It was just another day at a place where planes do what the do. The plane rose swiftly to pattern altitude and as if it belonged there (which it does) the air work began. I just stood there, staring into the still morning sun, in awe, still not believing that my creation, my work, my dream is now reality.

After a few rounds around the air park Tom came in for the first landing, greased it onto the pave-

ment like a cold stick of butter down a hot frying pan. Small problem #1: First attempt at gear retraction failed. I remembered the air speed switch I had disconnected two weeks before because I installed a by-pass to retract the gear while up on horses in the hangar. With that fixed he took off again, retracted the gear and went on with his test flight program.

About 10 Minutes later UNICOM message: Covington UNICOM, N224SM has NO nose gear light. Please advise possible condition of landing gear. My heart fell to the floor, I choked, swallowed hard. "Work the problem, with the ground crew, don't panic (WHAT PANIC!!!), let's evaluate the situation" I said to myself.

On a low slow pass-by consensus was that the gear is down and but not confirmed as locked. Ok, Tom declares and cycles the gear back up, begins his high speed dives, 80 deg. banking maneuvers, another high speed pass, wagging wings on a 200 kts IAS. Ok I think all systems are green.

After about 30 minutes he returned yet again for a couple of touch and goes, then returns for a full landing. He declares the plane fit to fly in all respects.

Here is some data:

Plane Model: Velocity XLRG  
Powerplant: Lycoming IO540, 260 HP.  
Propeller: MT Constant speed prop.  
Cooling: Dual oilcoolers in pilot wing root, one oil cooler inside cabin for cabin heat.  
Cylinder Cooling: 2 NACA Scoops located on top of fuselage connected to air plenum.  
Relative temperature at test time: 82 deg. F  
Relative humidity reported: 35%  
Wind light & variable  
Engine readings:  
1/2/3/4/5/6  
CHT 375/396/360/346/334/380  
EGT  
1260/1272/1250/1260/1219/1300  
OIL TEMP: MAX. 181  
Static RPM: 2675  
After break release: 2750 RPM  
Min. Altitude holding speed: 70 kts

Noted deficiencies:

- 1) Amp Meter readout: inop. Sensor.
- 2) Nose gear down micro switch: adjust by about 2MM
- 3) Prop governor: Adjust 50RPM
- 4) Trim main gear doors by 1/2 - 1"
- 5) Angle of attack indicator: motion range to short
- 6) Left rudder: shim by one washer thickness
- 7) Not enough deficiencies.

At 11:15 AM Tom declared: Have a nice day and a better one tomorrow.

Here I stand before lunch: now what? Time for Lunch.

After lunch I feel better, decide to try my newly acquired skills I earned down at the factory in Sebastian, Florida, 32 take offs and landings in type (BUT IT wasn't my airplane). My thoughts race. THIS ONE IS!!!

Off I go. First take off, good- bye the numbers, jitters; engine looks good. Come around the pattern look good, 110 kts, gear still down. Come around, line up for final. WHERE DID THAT TRUCK COME FROM!!!!, parked on the runway. A city truck decided: TODAY, No No, RIGHT NOW we will check runway lights.

After 3 go-arounds and a call to the airport FBO on UNICOM, they finally got the truck moved.

Now first landing coming up: too fast on final, engine at idle, 105 kts across the fence, go around. Next attempt: Speed cool, 90 kts, too high, go around. Third attempt. Speed cool 90kts across the fence, numbers on the nose, flare - a bit long but ok. Touchdown.

Next take-off: ok. Next landing: cool.

Next take-off, I call my colleague chasing me in a Cessna Skylane. We left for Lawrenceville GA 22 NM away. Enroute fine, landing fine, radio worked, even the VOR worked - I found the airport.

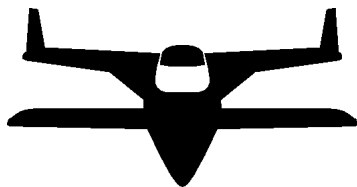
Last flight of the day: to radio shop, install the last radio, static system certification, Encoder certifica-

*Continued on next page*



# Buy Sell or Trade

Velocity parts, tools, kits, flying Velocity's: **Free** and exclusive to *Velocity Views* Subscribers.



Place **your ad** here... FREE to all current subscribers. Individuals selling parts, tools, kits, & flying Velocity's. Your ad will run once per submission. See last page for deadlines. Please do not type text in all caps!

## Velocity '95 std fixed gear for sale

By Velocity builder/pilot. 360TT, 200 HP LIO360, 260 SMOH, 3 blade Performance prop, single axis Nacaid autopilot slaved to hand held GPS, Terra nav/com, glideslope and marker beacon, Terra encoding transponder, DPS fuel watch, 4 station voice activated intercom, 1 Rose electronic ignition, Feb.'00 factory annual, VG's installed. Honest 170KTS cruise, nice airplane, great Xcountry airplane. \$85,000, serious inquiries only. James D. White, 843-671-3755, jiann@hargray.com.

## First Flight N224SM

*Continued from previous page*

tion, etc. Then a relaxing flight home in the Cessna Skylane.

Now, holding a cool one - I declare this A FINE DAY.

John Leder  
N224SM (XLRG) Now serving 3 Cities, 9 airports and 120NM run in my FAA designated sandbox.

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## For Sale

### 1999 Velocity RG



First flight - January 1999  
Total time, aircraft & engine 45 hours  
200 HP Lycoming IO-360, 1 Mag, 1 Jeff Rose electronic ignition  
MT constant speed propellor  
2 Terra TN 2000 Nav receivers  
2 Terra TX 760D Com transceivers  
2 Terra Tri-Nav C course deviation indicators (1 with Glide Slope)  
1 Terra TRT 250D Transponder  
1 Terra AT 3000 Alt. encoder  
Insight Strike Finder, Century 2000 Autopilot, Trimble TLN 1000 GPS reciever, Leather interior  
Reason for offering for sale - Moved to Costa Rica where gravel and dirt runways are not healthy for a pusher propellor aircraft.  
Price \$135,000  
Call Jim Pearce  
USA 321-638-4425 (phone or fax)  
Costa Rica:  
011-506-433-8003 (phone)  
011-506-433-8820 (fax)

## For Sale

### 1989 Velocity FG, Factory Built

- Factory Built in 1989 by Dan Maher, 540 hours total time on airframe, original wings with LE cuffs, IO-360-A Lycoming engine with zero time factory rebuild (now has 40 hours), IFR certified, King 155 Nav/Com, localizer, glideslope, King KT76A transponder, Navaid AP-1 autopilot, marker beacon, PS PM1000 intercom, JPI EGT/CHT engine scanner, new upholstery. Call for info sheet and photos if interested.- \$69,500- Dr. Dale Ingram at home # 904-461-3132 or at office # 904-824-4303, St. Augustine, FL, USA

## Two Engines For Sale

Lycoming IO-540-E1AS  
290 Hp 136 SMOH Top Exhaust w/ceramic coating. Originally set-up for an RG Velocity w/updraft cooling and ram air  
Some engine baffling available,  
Accessories:  
Direct ignition system - ElectroAir  
Low Time: Magneto, Vacuum Pump, Fuel Pump  
SkyTec Starter  
Nevile 51 Amp Alternator  
Chrome Valve cover plates and Tubes  
Engine Test run 5.0 hours, Ready to install  
Asking: \$22,000.00

## IO-540-G1C5

"0" TSMOH - 340 Hp, Lycoming Dealer Assembled (Performance Aero Engines), Direct Ignition System and Low Time Magneto, Low Time Light Weight Starter and Alternator, Propeller Governor  
Asking: \$26,000.00

Request Log information and/or photos from Lynn Swann at Hotubs2@yahoo.com  
Or Phone or Fax: (909) 592-2700

## For Sale: Performance Prop

Three bladed wood--68x68. Pitched for Lycoming 0-360 or could be used on 0-320. 8" extension with crush plate and spinner. Also harmonic balancer, Makes a real smooth unit. Cost new \$2800.00. Will sell as a package for \$2250.00.or best offer. Unit was new when installed and has approximately 5 hrs.on it. reason for selling--installed MT constant speed prop. Call Jerry Robertson at (775) 246-9393. This is a pusher prop removed from a Velocity Elite-173 LW. Allbolts and hardware included.

## Buy Sell Trade

*Continued on next page*

## Buy Sell Trade

*Continued from previous page*

### For Sale: Velocity RG Elite

Kit purchased in 1999. All fast-build options. Spar, keel, RG system installed (about 1/3 of kit completed). Must sell, make offer John Dibble, Yazoo City, MS 662 746 3521 aminetech@dixie-net.com

### Kit For Sale Velocity RG Standard

DMO250, purchased in 1993, delivered in 1994. Wings, winglets, canard and all bulkheads glassed. Engine mount for Lyc IO-360 A1B6D. No instruments or Comm. Contact John Ewins, Danville CA 925-820-3136 voice 925-820-9356 fax



### For Sale

#### 1996 Velocity FG, Elite Doors

1996 Velocity fixed gear with elite doors. IFR equipped, can be seen at the factory in Sebastian. \$79,000 talk to Scott or call R. Westwater at 603-880-4137



### Velocity 2000 XL-RG.

Retractable, IFR. 90 TTSN, Lycoming IO-540 260hp Engine, MT Constant Speed Prop, Cruise Speed 215 mph, Gull Wing Doors, Large Fuel Tanks 84gal +Reserve. Garmin GNS430 IFR Certified GPS/Comm/Nav/Color Moving Map, Century 2000 Dual Axis Autopilot Coupled w/ H.S.I. & GPS, Vision Micro Engine Monitor w/ EC-100 Warning Panel & Audio Alerts, PMA-6000 Audio/Stereo 4 Place w/ Marker Beacons, Bendix King Digital Mode C Transponder & Back Up Comm., TSO'd Flight Group (True Airspeed, Etc.), Super Clock, ELT, Hobbs, Halon Fire Ext. System, Dual Throttles, Infinity Military Stick Grip, Military Spec. Red/White Map Light & Cabin Lights, Strobes, Night Flight, Pre-Wired Audio/Visual Quick Connect, Selling Due To Purchasing An 8 Seat Twin, Price \$195,000. Pictures Available, Christopher Brock 865-389-6108

## We need your input for this newsletter!

- Builder Forum Input
- First Flight Photos
- First Flight Stories
- Velocity Flying Adventures
- Velocity Fly-in Suggestions

Send your photos / stories to Rick Lavoie for the next newsletter!

### Factory Information

Velocity Inc.

Factory & Home Office:



200 W Airport Rd  
Sebastian FL 32958 USA

Ph: 561-589-1860

Builders Hot Line:

561-589-0309

Fax: 561-589-1893

### 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.

### Internet web site:

<http://velocityaircraft.com>

### E-mail addresses:

DuaneS@velocityaircraft.com

ScottS@velocityaircraft.com

ScottB@velocityaircraft.com

BonnieS@velocityaircraft.com

BrendanO@velocityaircraft.com

DarenJ@velocityaircraft.com

MikeS@velocityaircraft.com

- Builder assistance: Scott Swing or Scott Baker
- Sales Qs: Duane
- Billing information: Bonnie
- Schedule flight training: Brendan
- Order parts: Daren
- Conditional inspection or maintenance matters: Mike.

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1st	December 1st
2nd	March 1st
3rd	June 1st
4th	September 1st

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2) **E-Mail** your text file to me: rick@lavoiegraphics.com and please don't type in all caps.

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4) If you **print neatly** so we can read it clearly, we'll type it on our computer for you!

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*Velocity Views*  
is published **Quarterly** by:

**Lavoie Graphics**  
**26 Marshview Dr**  
**St. Augustine, FL 32080-5873**  
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904-461-3146 (fax)  
e-mail: rick@lavoiegraphics.com

*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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