

VELOCITY VIEWS

Volume 24

Oshkosh 2000: Dave Lincoln's Velocity Wins Outstanding Workmanship Award



Lincoln's air conditioned Velocity "Dee Dee", has a Franklin 220, MT prop, dual light-speed ignition, dual electrical, Terra avionics, color moving map GPS, and much more.

They say life begins when the kids move out and the dog dies. This is the position I was in back in 1992 at Sun'n Fun. All of my life I have been a tinkerer and builder. At the age of twelve I tore the shelves out of my mothers pantry to use for frames for a boat. This was not received well by my dad. Over the years I have built several racing boats, and hot rods, but an airplane, now this could be a real challenge.

When I told my wife I had arranged for a test flight in that funny looking plane with the engine on the wrong end, she promptly informed me that I was not going to build an airplane. She was all too familiar with my hair brained ideas



Pictured at the right, Dave Lincoln accepts his award at the Oshkosh awards ceremony.

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and as she said "Delta can fly us anywhere we want to go for the rest of our lives for that kind of money"! After much begging and pleading she agreed to go with me for a test flight. The four hour drive to Sebastian was tense to say the least. She wouldn't even talk to me. The day was perfect, smooth air and the spectacular view over the Atlantic. Of course Scott was quick to show Ruthie how easy it was to fly a Velocity, why the plane practically flies itself. I also pointed out that we could fly to her sisters in Ohio in as little as five hours. The trip home was much more cordial. Halfway home she said "Honey, if you want to build that plane I will take over the yard work so you can have the weekends to work on it" Halleluiah!

One other little problem I had to resolve was I had never flown an airplane before. I was sure this would be no problem, after all Scott had shown us how easy it was.

July 1st 1993 I picked up my wing kit and started what turned out to be a seven year project. I am sure my building process was similar to those of many other builders. We all have some of our own things we have done to personalize them. One of mine was putting in air conditioning. Many other pilots and builders thought I was nuts. You don't need air conditioning, after all when you get to altitude it's cool anyway. The problem is in Florida it's hot eight months of the year and you are not always up to altitude. The biggest problem with air conditioning was how to get enough air over the condensing coil. This is difficult because you need a lot of air over it when you are stopped or taxiing. When you get to 40 or 50 knots the natural air flow does the trick. I solved this problem with a three position door. It is open 4" at speeds between zero and 40 knots and closes to 1-1/2" at over 40 knots. It then closes anytime the air conditioning is off. This way I have no drag penalty at altitude. I use the air every time I fly. When I take one of those guys flying that told me I



Dave's panel is a rosewood laminate with 6 coats of satin varnish

didn't need air conditioning I tell them if it's too cold in here I can turn it off. When I am busy with the tower and my prelanding check list and forgot to turn it on, they are quick to ask "is it okay to turn the air conditioning on now?" The other significant change I made was to the cowling. I took advantage of the narrow profile of the Franklin Engine to "sweeten" the lines of the cowling and get a better airflow to the propeller.

By Sun'n Fun 2000 I had my test flying completed and ready to enter the Big Florida Airshow. I could only stay three days as work was calling and I left thinking I had not won anything. The judges had said they would let me know if I was needed at the awards ceremony and I had heard nothing. After I had been home about a week a package arrived. It was a plaque for "Best Interior".

Between Sun'n Fun and Oshkosh I flew and worked on my plane to try and make a few small improvements.

The flight to Oshkosh was uneventful until about the middle of Kentucky, when the engine started running very rough. I decided to land at a small airport at Tomkinsville that had only one hangar on it. I found the problem was a bad coil, but how do I fix it? Fortunately one of the local pilots, Clyde, happened to be there when I

landed and drove me all over the place in his pick up. We must have put on 100 miles on it. With much feverish work and FedEx, I was able to get back in the air in just a day and a half. When I approached Oshkosh I was surprised at how little traffic there was. Just lucky I guess. As I was flying the downwind for 27 I was catching a Bonanza so I moved away to get more room between us. The tower called and said "Velocity close it up with the Bonanza", which I did. Next the tower said "Bonanza turn base, Velocity turn base" then "Bonanza turn final, Velocity turn final and land short". Now I was getting very close to the Bonanza. I landed as short as I could and tower said "nice job". I pulled off on to the grass and taxied to canard parking area. The next day when I arrived at my plane and was cleaning it, a golf cart pulled up and the driver asked if I was the owner of the plane. I said I was and he informed me that he was with the NTSB and that the Bonanza I was landing with the day before had hit his wing and bent it up pretty bad. What a surprise, I still don't know how he did it or what happened.

The weather at Oshkosh wasn't very good this year, off and on rain and low ceilings. It was hard to keep my plane clean for the judges. Ruthann and I spent a lot of time talking to other airplane enthusiasts.

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Rose's New Velocity: A Big Hit at Oshkosh!

Well, we made it to Oshkosh, and what a great time we had. We were still finishing some odds and ends on the interior the morning that we left. Crossing Lake Michigan in a new plane sure keeps your attention. All those "funny" noises get louder over the middle of the lake.

We had the plane on display at the Velocity Booth from Tuesday through Monday. I had a great time talking with builders, prospective builders, and just tire kickers about the type of paint, the interior, the instrument panel and the added features we installed on the plane. The number one question that was asked is how I got from all those parts and pieces Travis dropped off on my door step to setting here at Oshkosh in 13 months. I'm going to try to outline how I approach a project of this size and maybe some of the ways I

work can be of help to other builders. I started working a couple of months before the kit was delivered by getting my shop organized; cutting table built, rack for the cloth, work tables made and anything else

I thought might come up during the build time, including getting someone to mow our lawn. Room is another big thing. You need as much as you can get. Move whatever you

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They all seemed to like my plane, but I really didn't think I had much of a chance to win anything with all those beautiful airplanes. On Monday we had been at the air show almost a week. This was the day we were going to fly back to Florida but the weather was overcast and drizzly so we decided to go to the air show and try to leave Tuesday or Wednesday, weather permitting. When we got to my plane and I took off the tarp I saw a note stuck to the plane. It said " you have been selected as an award winner". What a thrill and surprise. The trophy presentation was that evening in the Theater In The Woods. I felt very honored to have been awarded the plaque for Outstanding Workmanship in the kit build category.

Building the plane was, for me, a lot of fun. I just really enjoy building things. But to be selected for an award at Oshkosh was a truly special moment in my life.

Dave Lincoln

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Wes Rose upholstered the interior for N949WR with high quality tan leather. The workmanship is outstanding. In front of the two back seats is an LCD display to allow the rear seat passengers to watch the in-flight DVD movie. Where does the flight attendant sit Wes?

Photos & captions by Don Parsons



Wes Rose's new Velocity XL RG was one of two completed Velocitys that were on display at the Velocity booth at AirVenture 2000. Wes has done an impressive job in finishing out this aircraft. It attracted enough of a crowd, you can literally see the well worn path to its doors in the grass. Wes (included in this photo) spent much of his time at the show answering questions.

Oshkosh: Rose's Velocity

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can out of your way. Don't focus on one part at a time. I kept 4 or 5 assemblies going at any one time. That way when one part is tied up curing, or you need something from the hardware store or you're unsure what the instructions are saying, you can move to one of the other parts and keep your shop time productive. Keep a running list of things to do. Keep adding and crossing off as you build. Look ahead, order the parts and material well in advance so they will be there when you are ready for them. And, probably the biggest thing, is to do something everyday of the week, even if it's only cutting cloth for the next lay-up. Once you are there working you will probably keep going.

I also had a lot of positive comments on the Interior and Panel. There again, a lot of planning ahead was done long before the interior was installed. When I had the plane upside down working on the fuel strakes and finishing the bottom work, the headliner templates were being made and any brackets and fasteners were put in at that time. Same with the instrument panel. Antennas and wire routing was all planned out as I was building the plane. Order your avionics well in advance. We ordered all of the equipment in November, 1999. I was flying off my restrictions without a full panel in May 2000. That's a long wait.

The instrument panel itself raised a lot of questions. It is equipped with a full Garmin stack audio panel, two 430's and transponder with S-Tec 55 auto pilot and Sierra Flight System. It is a true glass cockpit. The Sierra Flight System is a 3D primary Flight Display with a second display used for GPS moving map and engine monitoring. It would take the rest of this newsletter to go through all of what it can do for you. I will describe my flight home from Oshkosh. That Monday, the field changed back and forth from

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Above: Wes Rose's very impressive high tech instrument panel drew rave reviews at Velocity's Oshkosh display. Photos below show the Rose's beautiful finish and interior.



Events & Sales Scoop

by Nancy Machado



EVENTS

Brendan and Duane attended the NW EAA Fly-In in Arlington, WA, this year. This is considered the third-largest EAA event of the year. Many of our local builders stopped by to check out wasssuuuppp with Velocity! If you missed the event this

Oshkosh: Rose's Velocity

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VFR to IFR all day. I got out VFR about 2:00 p.m. and flew 30 miles east to Manitowoc and landed. The ceilings were down to 1500. I filed IFR from there for 9000 ft. back across Lake Michigan which kept me in the clouds and rain all the way home. With the Sierra Flight System, I put the airport I was going to, the runway I wanted to land on, turned the Terrain on and I had a visual on the primary display of the runway in front of me 50 miles out. And in the clouds, the second screen showed me the approach I was to fly to final. On final, a series of boxes come up on the display. I just flew through them. It is impressive.

I just want to add building, flying and all the people we have met has been a great experience for Becky and myself. Hope to meet more of the Velocity Family at future fly-ins.

Wes and Becky Rose

year, try to make next year's – a fun fly-in that is well attended and in a great location.

Our week at Oshkosh was good and bad. The weather certainly didn't cooperate for many of you trying to fly in and also for our demo ride schedule! Sorry to disappoint many of you that hoped for a ride in the XL.

The Velocity dinner turned out to have a record number of attendees. The Swings and Machados were desperately trying to come up with more tables, chairs and gifts! What a good feeling for us to have all of you attend and support us at this show.

The last Open House on August 12th featured Johnny Murphy, the local DAR, and Bob Warner representing the EAA as guest speakers. Around 60 guests were present to hear these two dynamic gentlemen.

In between those two speakers we gave several demo rides at a reduced cost. At one point I counted eight Velocitys out on the ramp. Thanks to all of you who support our Open Houses! The next Open House is set for November 4th. The subject of that open house is yet to be announced.

More Fly-Ins:

September 9 & 10 we had display space at EAA's Golden West Fly-In, held in Sacramento, CA, this year. Mark and I attended this show, eating some of Mom's home cooking and seeing family, friends and many of our West Coast Velocity owners. It's been ten months since we've been back "home" and needless to say, we really had a great working vacation!

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Above: Johnny Murphy leads the morning workshop before about 60 Velocitys

Below: Eight Velocitys flew in for the September Open House



Events & Sales

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Next came the 37th Annual National Championship Air Races in Reno set for Sept 13 – 17 – what an exciting event! Nothing like the sound of power charging through the skies. This is the first year Velocity had displayed in the pit area of the races.

Kitplanes

Look for Velocity SUV to be on the front cover of *Kitplanes* soon. The Velocity Service Center will also be featured in the article.

SALES

The following new Velocity kits will soon be delivered. Any in your neighborhood?

Bill Barker, The Woodlands, TX, XLRG

Larry Lambert, Zephyr Cove, NV, XLRG

Mario Ponton, Chicago, SUV

Dennis Spivey, Lansing, IL, Velocity LW

Dave St Clair, Laguna Woods, CA, Velocity RG

Rick Wallace, Butler, PA, SUV

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by Duane Swing

Insurance Update

Many of you have called to let us know that Avemco will not offer insurance to any new customer for the Velocity. In some cases, they have refused to renew insurance for those who have been insuring with them for years. This is a result of a company called Houston Casualty who underwrites Avemco and many other insurance companies that in the past insured the Velocity. Why has Houston Casualty withdrawn from this market? They are currently paying out 4.5 times as much in claims as they have been receiving in premiums. Velocity is not the only one to suffer high claims in comparison to the premiums. Lancair, especially the IV and IV P models, Glasair III, Thunder Mustang, S51's and others are way up there also. In most cases Houston Casualty has refused to cover these

airplanes. Why not just raise premiums to keep the books in balance? According to Houston Casualty it is just not worth the effort. Why are there so many claims for the Velocity when we promote the safety aspect of the canard design? As you all know, stall/spin is not the problem. Where then can we point as the major cause of Velocity accidents and high payouts for the insurance companies. Let's look at some of the major accidents we have had that has resulted in these high payouts. According to our best estimate we have had over 10 accidents that happened within the first 10 hours of flight. Some were a result of pilots with no canard experience getting the airplane airborne on the first high speed taxi and losing control. Some were mechanical problems with the engine or fuel systems that resulted in off field landings. Some were caused by very low time pilots in high performance airplanes with no check out. We know of a couple that were the result of the elevator not having enough travel for a proper flare. Even after the 10 hours, we have seen some rather unusual reasons for accidents. Hot days, high density altitude, and a loaded Velocity with a fixed pitch prop is not a healthy condition to find yourself in. The insurance industry agrees. We have had one propeller failure due in most part to very poor maintenance and poor judgment on the part of the pilot. We have had a nose gear fail due to the builder not putting in the overcenter strap. This accident did considerable damage to the Velocity but also to other airplanes tied down on the ramp. Pilot judgment is also a major player in this accident record. We know of several accidents caused by the pilot just not using his head and trying to salvage a poor approach with too much speed and overshooting the available runway. We have more



Above: Velocity demo rides were very popular during AirVenture 2000. Although available flights booked up quick, weather during the week wasn't very cooperative. Flights on some days were greatly delayed. Terry Parsons from Houston TX and Brendan O'Riordan wait for the field to open for departing VFR flights for the first Velocity demo ride on Thursday.

than one accident caused by very poor or non-existent maintenance on a flying Velocity.

I think you get the picture. The question is what can we (Velocity) do about it? No one out there who has read the *Velocity Views* has any doubt about my feelings about this. I have promoted factory training from the day we arrived here. Some of you couldn't understand why you should travel all the way to Sebastian to get checked out in an airplane that seemed so easy to fly. Some of you just didn't want to spend the money to get this training. Some of you elected to find other ways of getting the checkout. I have also mentioned that, in my opinion, too many accidents are caused by the builder not giving his (or her) airplane that final inspection necessary to prevent some future accident from happening. Once we get in a hurry to get to the flying stage, often some critical part is left out or left undone.

Here, then, is the bottom line. I have had several meetings with a representative of the EAA and with different insurance companies who have, in the past, insured experimental airplanes and have narrowed down the search to USAIG. In our case, they are represented by Falcon Insurance company and I have been working with John Allen in their Austin office. (800-880-4545) Here are the "conditions" I feel are necessary to obtain liability only or liability and hull insurance on your Velocity. USAIG will probably want to modify some of the conditions and I will report the final decision when available to me. Remember, USAIG, like most insurance companies, normally qualify pilots. This will not change and there is no way for me to be sure you "qualify" until you ask them for a quote. The more flying time you have, the more ratings you have, the number of hours flown in the past 6 months, the type of airplanes you have been flying and the type Velocity you are intending to build all are factors on your ability to obtain insurance. The question I asked USAIG was if a private pilot with under 100 hours total time and no high performance time

would qualify for insurance in our VG equipped SUV with only a factory check-out, the answer was yes, but..... This gives me some encouragement.

Conditions:

- 1) SUV with VG's. Private license and factory check-out.
- 2) Standard Fixed Gear. Private license with a minimum of 100 hours and a factory check-out.
- 3) Standard Retractable Gear. Private license with a complex endorsement, a minimum of 150 hours and a factory check-out.
- 4) XL Fixed Gear. Private license with a complex endorsement, a minimum of 150 hours and a factory check-out.
- 5) XL Retractable Gear. Private license with a complex endorsement, a minimum of 200 hours and a factory check-out.
- 6) Non builders or second owners will be required to attend a one day work session at the Velocity factory to gain necessary knowledge of the systems and maintenance requirements.

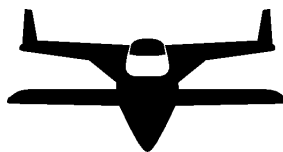
A factory check-out is usually a couple hours ground and 2 to 10 hours flight time depending on the

pilot's learning curve. We will not let you go until we feel you can handle all flight conditions and emergency procedures.

The amount you will pay for insurance will be determined by many factors including your total time, your accident history, your ratings, your desired coverage etc. Desired coverage will be limited to no more than the approximate aircraft value. No inflated hull coverage will be allowed. Expect deductibles for hull to be about 3% to 8% of the insured value and hull rates in the 3% to 8% range. Also, don't expect liability limits greater than \$1,000,000 single limit with \$100,000 per passenger.

In addition, the aircraft must be inspected by a qualified factory representative and a log book entry made. A report will be sent to USAIG. This inspection will be in addition to any FAA requirements. You can also expect the insurance will be limited to engines that are specifically built for aircraft applications. Also, if your engine has no logs to prove compliance with AD notes, insurance will not be issued. If your engine was overhauled by a shop

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November 4th Factory Open House Workshop Schedule

Saturday November 4, 2000 - 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.

Factory News

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using uncertified parts with no yellow tags, insurance will not be issued. If we find a bunch of lamp cord or PVC auto wiring in place of quality aircraft type wiring, insurance will not be issued. We would expect to see good common sense used in the building process and adherence to reasonable standards if insurance is going to be issued. If we do this, it is reasonable to assume our accident rate will go down and the insurance costs to go down with it.

We can't "guarantee" to USAIG that your airplane will never have a mechanical problem, nor can we guarantee to them that you will use good judgment in the operation of your Velocity. We can, however, feel confident all our pilot/owners will benefit.

There obviously must be some cost to you for the inspection service. We have not decided yet how to handle this and will let you know later how we plan on implementing this service. Our check-out cost will remain the same at \$100 per flight hour plus a couple hours of ground time covering emergency procedures, system analysis and other important factors regarding the Velocity.

The one day non builder/second owner workshop will cost a flat \$350

One of the conditions we will present to USAIG is the use of the Velocity Service Center to quote and repair aircraft that are damaged. With our nationwide delivery service, we can pick up just about any damaged Velocity anywhere in the US. This is a valuable cost savings to the insurance company. As an example, we quoted the repair of a Velocity that departed the end of the runway on a hot, high density day. Our quote of \$12,000 was \$40,000 less than the next lowest bid. Insurance companies like to hear this.

THE NALL REPORT

Every year AOPA sends me the NALL report on aircraft accidents. It

is interesting to note that the major cause of deaths in small aircraft continues to be the stall/spin (referred to as maneuvering accidents). Even more important to me is that in the general aviation certified aircraft, the percentage is 26.4%, about the same as the year before. In the experimental aircraft, however, the number goes up to an amazing 35.7%. This is up 5% over the previous year. First flight problems combined with high wing loading is not a good combination. The Velocity was not then, nor will it be in the future, part of this statistic.

SERVICE CENTER Helping Hand

We reported in the last *Views* our progress in building a Velocity XL RG in 60 working days. Well, the airplane is finished and is flying. We actually took a little more than the 800 hours intended but most of this was because it took longer to build the wings than to build the airplane. We had about a two week delay due to the wings not being ready when we were. The airplane is presently getting the 40 hours restrictions flow off before Dick Affenit takes his bird home. Dick has reported in the "Builders Forum" his experience in this process (see photos of Dick's Velocity to the right).

Will we do it again? We have promised Robert Wood we would work with him on a similar program with his XL FG. After this, we will evaluate the program and see if we can justify the manpower for such a program. The work load for Scott and myself is just too much to include building airplanes full time. We have also spent a considerable amount of our time on the airplane after the first flight was out of the way. Most of the "adjustments" needed after the first flight included faulty EGT and CHT gauges that I have spent at least 8 hours or more finding out the problem was not in the installation but both black boxes for the units failed in the first hour of flight. Then the amp gauge decided to work backward, then the altimeter decided to jump around during climb requiring replacement, then



the nose gear sequence valve decided to quit, then the dump valve decided to spring a leak. Almost all the glitches were not caused by anything Scott or myself could have prevented, but caused us days of our time to correct. How does one get reimbursed for such extra time? The customer shouldn't have to pay for it, the manufacturer of the instruments or controls would never cover such extra costs and so we are just stuck with the bill. To prevent such from happening in the future would require adding the extra time before we start.

Head Start

We are presently evaluating our Head Start program and will be making some major changes. It is our intention to establish a one week or two week program that combines part of the Helping Hand with the Head Start. The plan is to place a full time employee with the customer and get as much done in one week as would be possible in three or four weeks helping on a part time basis.

The cost for the program is \$2500 per week and will include the use of our Service Center, all necessary tools and 40 hours of our technical staff. It will be set up to provide as much training as possible so that at the end of the week, the customer will not only have a lot of his airplane completed but will also be well trained to continue the process once his airplane arrives at his home. If even more is desired, a second week can be scheduled. It would be our desire to limit it to two week sessions, to give our staff the time necessary to complete some of the other duties expected of them and to get some relief from the pressure this type of program causes. More two week sessions can be added as desired by the builder. As an added benefit, we can make our 35 foot air conditioned mobile trailer available at a cost of only \$15 per day. Call us for all the details and we can send you the information.

WIRING HARNESS

We have now completed the second prototype of a complete drop in wiring harness. This harness contains all the normal wires needed for the airframe wiring of your Velocity. It consists of #2 battery to starter wire, #2 battery to engine ground wire, alternator output and field wires, strobe/nav light wires, (no wires to wing tip) fuel pump wires, all normal engine function wiring, grounding blocks, connector boards, 60 amp firewall mounted alternator output fuse block, etc. Where necessary, the wires have terminals attached and are ready to connect to the various appliances. All wire and terminals meet aircraft criteria. The harness will also have a complete computer generated wiring diagram for future trouble shooting. We just installed one in our airplane, and, with one person, it took about 4 hours. Our target price is \$1000. It should be noted that the wire and terminals alone cost almost \$800. They should be available within about 60 days.

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Production News

By Mark Machado

OVERVIEW

Several changes and some new products are on my mind this quarter, so let's get right into it. It's difficult to make "production" sound interesting, but I'll do my best.

Daren Johnson Update

Great news! Daren's open-heart surgery went well and he is back to work full-time. His biggest problem is accommodating everyone who want to look at his scars! We're certainly glad to have him back. As most of you know, Daren is our Manager of Parts and Inventory and as such is responsible for all parts orders here at Velocity. If you have a parts request, a backorder concern or feel something was inadvertently left out of your initial kit delivery, give Daren a call. He can be reached through the normal office telephone number of 561-589-1860 or via e-mail at darenj@velocityaircraft.com

Fast-Build Wings

Our Fast-Build Wing program here at Velocity continues to improve. Our delivery difficulty with our import Fast-Build Wings appears to be resolving itself. As I write this column, 5 sets of import wings are on a ship heading for Miami. Once these wings arrive, we intend to do some additional testing, including flight testing, before the initial group is sent out to our patient customers.

In addition to the testing we will be doing to this initial group of import wings, we also must do a small amount of assembly work on them, in-house, before they are shipped out to you. The import wings are shipped to us with the winglets not attached to the main wing. An ingenious method of attaching the winglets to the wing has been developed, but once the winglet is attached, here in Sebastian, it will be permanent.

Several builders have asked if the winglets can be a de-mountable component. Unfortunately our answer is No! Due to the loads involved, the connection is critical and only the

best structural adhesives are used. If fact, they are so good, you'll never get them apart!

In addition to the import wings, the company is increasing our production of in-house Fast-Build foam core wings. Due to the demand for Fast-Build wing product, we find it absolutely necessary to supplement the delivery of our import wings. To put it bluntly, we cannot get enough import wings to meet demand. As such the company has committed itself to producing a quantity of foam-core wings, here in Sebastian, to meet the demand, as well as meet the requirements of those individuals who are currently awaiting back-ordered wings.

Presently, we are producing about 2-4 sets of foam core wings here locally per month, with our short-term goal being a level of 5-6 per month. Hopefully in my next column I can say we have met our goal!

I mentioned in my last column that we had developed a "universal" spar that allows for the installation of either the import or foam-core wings on your airplane. Production of that spar continues and many have been shipped. In addition, we have developed a set of machined, aluminum "wing templates" that allow you to build the fuel strakes without the wings attached!

These templates are being offered to everyone who has a set of Fast-Build wings on backorder at no charge. If you feel you are a candidate and are ready to start building your fuel strakes, give Daren a call and he will ship you out a pair. I think you'll like what you see. Quite frankly, it will make the fuel strakes a whole lot easier to build. Just think, you can build the entire fuel system without having to constantly walk around a 31' wing!

New Product

Lately the factory and several of our builders have been experimenting with a new fuel sealant coating system called Jeffco 9700. Our testing has revealed we like it! Basically it is a replacement for the manual-direct-

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Production News

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ed activity of using several wet layers of EZ-Poxy to seal the internals of your fuel strakes. The Jeffco product is an epoxy as well, but with chemical resistant properties that are superior to the EZ-Poxy.

Now please, I'm not at all saying the EZ-Poxy is bad! There are literally thousands of Long-Ez's, Cozy's, Vari-ezes, Velocitys, etc. etc. that are flying around with EZ-Poxy type materials in their fuel tanks and they are doing just fine! On the other hand, occasionally a new product may come on the market that just might do the job a little better. We think that product is Jeffco 9700. At this time, we are not making it a standard part of our kits, but are offering it as an option. The price for a one-gallon kit (which should be sufficient to do the strakes of an XL) is being priced at \$125. If you are interested, give Daren a call and we'll ship it out.

A word of caution. Although this material is very nice to work with, has an opaque appearance that makes it obvious whether you have good coverage or not and fills pin holes very well, its pot life is short. Quite frankly, very short! Bottom line: Have all of your ducks in a row before attempting to use it and mix small amounts. If you do, we think you'll like it!

Scott Baker

In the last Velocity Views, Scott Baker was introduced as the new Service Center Director. We are very pleased to announce that Scott Baker has indeed arrived here in Sebastian (all the way from California), but his duties have been slightly modified. Duane and Scott are having so much fun in the Service Center they decided they didn't really need anymore help, so I snagged him! Just kidding of course, but it is true that at least initially Scott Baker will be working on the "production" side of the house and taking over the job of Purchasing Agent. Scott will have many other responsibilities in time, but initially his main focus will be purchasing. It is an area we need to

organize better and Scott has more than willing to take on the task.

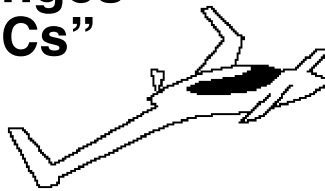
If you have special order items that we are handling for you (i.e. avionics, props, engines or anything not listed on the web in our Velocity Store catalog), give Scott a call. He can be reached at the normal business telephone number or via e-mail at scottb@velocityaircraft.com.

Just a side note, we now have three Scott's working here at Velocity. Nancy thinks we should call one of them "Bob". You want to vote?

....

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 133

Affects all aircraft
Manual Section 20.2.7
Date of Change 9-14-00
Eliminate paragraph 2 which describes rudder travel. Reference Manual Section 12.2.1 for proper rigging. This was changed in newsletter 23 - KPC 127

KPC 134

Affects all RG aircraft
Manual Section 6.2.3
Date of Change or addition 9-14-00
This is really just an addition to the original placement of the sequence valve. In newsletter 17, Al Gietzen had a very good method of installing the sequence valve. It was on page 15 and showed pictures that would help you install it that way. We have done it this way and it worked great. We used the aluminum bracket that is supplied with the kit instead of the fiberglass one that Al made up. Overall it was a better method and

we may decide to eliminate the other method.

KPC 135

Affects all Planes with pre-molded bottom winglets
Manual Section 3.4.0. (4.0) (end of chapter 3)
Date of Change 9-14-00
We have added glass to the sides of the pre-molded winglets so you do not have to install any ribs.

KPC 136

Affects all Planes with Speed Brake
Manual Section 2.1.6
Date of Change or addition 9-14-00
Add a note: The linear actuator should be roughly perpendicular to the top slope of the keel. This is not critical if something is interfering with it or if the actuator brackets make it too long to fit that way.

.....

Builder Hints and Information

by Scott Swing

Rudder Rigging

It seems that lately many of the planes coming into the shop have needed some adjustment of their rudder / brake system. We have also been getting calls about it. We will try and explain what we want to achieve in the system and ways to get there.

1. Whatever rudder deflection we get, we want it right away. We want the rudders to activate at first movement of the pedal.
2. We want to make sure that we don't bottom out the pedal on the canard bulkhead at full braking.
3. External rudder horns and internal rudder horns on the small wing demand special attention. There is a good chance that you will bottom out the cable before full braking is achieved. There are ways to take care of this.
4. You will want as much rudder as you can get before the brakes take effect. We say, "as you can get"

Continued on next page

because the geometry of the system only allows so much.

How do we make sure these things mentioned above get taken care of?

1. The first thing you do is to ensure that full brake does not bottom out the pedal. This is adjusted with the aluminum block that is screwed onto the shaft of the master cylinder. We usually adjust it so that the shaft actually lacks being flush with the block by about 1/8". This means that it is buried a little. This should keep your pedal from hitting the bulkhead under full braking.

2. Now you need to adjust the static pedal position. Recently, to get the most rudder, we have been removing the roll or cotter pin to allow the tubing to come out a little further. This can give you about 1/4" more movement of the pedal and rudder. You can slide the tube back until the blocks are slightly exposed. This is the static position of your pedals and you will need to position those stops along the side of the fuselage to touch the two arms that come down for cable attachment.

3. Since your pedals are now at their static position, you can adjust your rudder cables so that they are as close to tight as you can get without deflecting the rudders.

If you do these things, you should activate the rudders at first pedal movement yet not bottom out the pedal on the bulkhead. It will also get you the proper travels we talk about in the manual.

Rigging the RG gear system

You must be patient when adjusting the cables and linkages for the gear system. Improper rigging could cause a problems down the road. The gear system is very simple but there are certain things you must remember.

1. The connection at the top of the main gear for the over-center linkage must be loose enough to allow movement yet tight enough to eliminate

slop front to back. The same goes for all of the bolted cylinders and linkages that have movement.

2. Remember that the sockets, when installed properly, captivate the gear with little side movement. When testing the system, the gear will be tight against the sockets just before the linkage finishes to lock. If it is not tight at this point it will be too loose when it is locked. In an extreme case, if the linkage moves too much and the cables are tight, it could pull on the lock arm and cause a big problem if you see what I mean.

3. In the main gear system remember that the cables are adjusted when the gear is in the down and locked position. The spacer length determines the up position of the gear. Don't cut corners and tweak the cables to pull the gear up higher.

4. You also should check that in the up position, the connection between the cylinder and the cables, the three rod ends, are not in a bind. This would show up if one cable were tighter than the other or if you look at the connection and it is offset beyond its limits.

5. On the nose gear, down position is determined by the adjustment of the rod end on the cylinder. Make sure that you are not too far over-center since that will load the cylinder and the connection much more when you mess up a landing. Also, the 1/4" thick aluminum safety strap that goes across the keel needs to almost touch the over-center linkage when the gear is down and locked.

6. The spacer length adjusts the up position.

7. The nose gear doors are adjusted with the cylinder closed. You should then be able to extend the gear doors to the end of the cylinder travel. You may have to remove some of the swing arm and the gear door flange to get the door all the way open without jamming. The slide guides need to be installed when the gear doors are fully open and the cylinder is fully extended. You may need to file the slot on the upper end of the slide guide so that it isn't binding up when the gear doors are up.

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Maintenance Notes

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



Along with the once a year annual condition inspection there are other items that are required to be attended to. F.A.R. part 91.207 deals with E.L.T requirements. Every 12 months the E.L.T installation must be inspected for operation including the G-switch, which activates the system or an impact, condition, corrosion, battery condition or date and basic installation as well as a proper Logbook entry stating so. This item is not listed in the F.A.R part 43 App.D that itemizes your annual or condition inspection.

F.A.R part 91.411 states the Aircraft operating in controlled airspace under IFR must every 24 months have each static system, each altimeter and each automatic altitude reporting system tested and inspected and found to comply with appendix E of F.A.R. part 43. These test must be conducted by a facility with these qualifications. Civil aircraft operated under IFR conditions are also required to have VOR equipment checked every 30 days and the is all called out in F.A.R part 91.171

F.A.R part 91.413 deals with transponder test and inspections that are required also to be conducted every 24 calendar months by an appropriate facility. This require-

Continued on next page

Maintenance Notes

Continued from previous page

ment pertains to aircraft operating IFR or VFR regardless.

I would suggest you obtain a copy of these general Operating & Flight Rules (Federal Aviation Regulations) for details and exemptions. It is the Pilot's responsibility to see that these details are complied with and entered in your maintenance records.

After being involved in looking at a lot of Velocity's, I have noticed both in "pro-built" and amateur built airplanes that proper techniques are not being used when installing A.N. hardware. Primarily in control systems when using ball-end rod ends the ball does the rotating and pivoting. So please be sure the AN bolt is tight against the bearing and attaching part (bell crank, horn, horn, etc.). Also where the ball-type rod end is used (flight controls and engine controls) use a large O.D type washer to prevent loss of control if the rod end were to fail-and this does happen from time to time-and it is a requirement on certified aircraft.

I also see a lot of bolt installations that are bottomed out. Meaning that the nut is tight on the bolt but bottomed out on the threads so there is not sufficient clamping pressure on the part. Primarily on flight control torque tubes, etc. So adding a washer to a bolt that is too long in grip length will repair the installation and prevent holes from enlarging and control slop.

I hope these maintenance and operating tips will help you in building and maintaining your airplane.

Careful building and safe flying.

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Notice Your 2001 Subscription for Velocity Views is now due!

*See page 16 for details
Avoid the \$5 late charge*



Safety Corner

Accident & Incident Reports, Maintenance & Service Difficulties

Accident Report

It is important in the building of an airplane that certain "conditions" be met that will insure years of trouble free flying. The pilot/builder is (or should be) responsible for building the airplane correctly and maintaining it in as good a condition as possible. That includes anything that, if done wrong or not at all, could result in a problem in the future. We had just such a case yesterday. The pilot/builder had not yet installed the throttle operated gear horn on an RG Velocity. The pilot was distracted with a change in runway and a request to "keep it in close". The majority of the damage was to his brand new M-T prop. How many times have you heard the adage, "there are those who have and those who will land gear up". This pilot is now one of those who have. On a secondary note, we have received several calls from customers who had read on the "Reflector" that one of our planes had a "gear collapse" on landing. I tend to have thin skin when I hear this kind of thing. HIS GEAR DID NOT COLLAPSE". Most of this information came from the initial NTSB report which repeated what the builder/pilot told the tower. The NTSB did not investigate anything, they just repeated what the tower told them. The builder was going to contact the NTSB and make it quite clear that the gear did not collapse. Insurance companies look at these reports the same as our builders do.

Service Caution

We just got a report of another pilot door on an Elite opening in flight. Door stayed attached but he lost the inside cover plate. He said he wasn't aware of any factory type fix for the problem. He also does NOT subscribe to the *Views* because in his words, "I am flying my air-

plane now and didn't think I needed the *Views*." Oh how wrong he is. As you know, all our safety information comes to you through the *Views*. The FAA does not have a system for AD's for experimental airplanes and our only avenue to get this information to you is through the *Velocity Views Newsletter!*

Back to his door problem. We do have a fix and it has been available for almost two years. If you are flying an Elite or an XL and have not installed this safety catch you need to call us immediately and order this part.

Duane

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Please Note

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 inefficient and costly.

CFI Notams

by Brendan O'Riordan, CFII, A&P



Most builders anxiously work towards the day that their airplane will take to the air for the first time. After checking every nut and bolt and making sure everything is just right they begin their flight testing. Being very cautious they take little flights into the air on short "runway hops." Soon enough you have your airplane in the air flying and you finally see the results of all your work. The idea that this is a brand new airplane that should be flown cautiously shouldn't end after your first flight.

The FAA grants airworthiness certificates to amateur built experimentals with the idea that there are phase one and phase two limitations that the airplane will be flown in. Phase one is either a 25 hour or 40 hour fly off period. Since there are not any certified prop/engine combinations for pushers, that leaves Velocity owners with the 40 hour period. For this fly off period you are restricted to a certain distance from your base airport, usually 25 miles, and you are not allowed to carry any passengers. There are reasons why the FAA limits what you can do when you first start flying your airplane. Primarily it is for the safety of the general public but it is also for your safety as the pilot.

Quite a few builders get frustrated with the idea of having to stay around their airport for 40 hours of flying. To some of us to fly 40 hours off an airplane seem like it would take forever. But it may take time for some problems to surface.

In a high vibration environment like an airplane those nuts, bolts and screws that you checked carefully may start to loosen or back out after some time in the air. New or overhauled engine are also things that sometimes take a few hours to show problems. A few years ago I was flying a Piper Seminole that had an overhauled engine that had less than 20 hours on it when it decided to eat its own oil pump and lose oil pressure. Well I was lucky that I had another engine and I was by an airport. Oil leaks will usually start to show up after about 10 hours of flying and most of the time can be traced to loose valve covers or lines that can easily be tightened. You are also flying an airplane with a new fuel system. Remember all the sanding you were doing when you were finishing up your airplane. Even though you took the greatest care to keep your tanks sealed, some of that dust will work its way in. Here at Velocity we will first fly our airplanes with two clear automotive filters in the lines coming out from the tanks. After every flight we check those filters and when we have flown a few hours without seeing any debris we will remove the small clear filters and put in one larger filter. In experimental airplanes we are also given the option of putting in alternative ignition systems. An airplane that I recently did a first flight on had an electronic ignition that had a pick-up on the crankshaft by the starter ring. After flying the airplane for a few hours we found the wire running to the crank trigger was being chewed through by the starter ring and probably would have gone on the next flight. If you have an RG you have one more thing to worry about. Most builders will have 50 - 100 retracts on their airplane before it flies. On a third flight of a new XLRG, I had a problem with the main gear not fully extending and locking into place. We make it a rule not to put the back cover on airplanes we are flying for the first 20 hours so we can see the gear and the sump tank. We found that the gear sockets were too tight and that the air loads kept the gear from fully extending in flight

with speeds over 110 kts.

It is common on a new airplane to have things to get right before the airplane is ready to go anywhere. If you talk to pilots that work for Cessna and Piper they will tell you the same things. If you follow a regiment of flights that are followed by inspections of the airplane you will keep yourself out of trouble. If you stay close to your base airport during these first few flights, in the event that something does happen, you know the area and the airport and have a better chance of dealing with an emergency.

Another part of the phase one flight restriction that I have seen people bend the rules on is the idea that only the pilot or required crewmembers are allowed to be in the airplane during phase one. What is a required crewmember? Well when you have a single engine airplane you will be hard pressed to explain to the FAA that your buddy sitting in the copilot seat is a required crewmember. Things like this never are a problem until something goes wrong. I have had people tell me that their DAR said that it would be ok for me to have someone in the plane to monitor gauges. No one, not even an FAA inspector can give you the ok to break the FAR's. If you get caught the FAA will not accept this as an excuse. The FAA does this for a reason and we all know what that reason is. In the event of an accident there will be only one person in the plane instead of two.

Phase one restrictions are imposed by the FAA for a reason. We want to be able to keep ourselves, others and our airplane out of harm's way. If common sense doesn't keep you from going on a long cross country or taking your buddy up for a ride right after getting your plane into the air, maybe the fact that your insurance will be null and void if anything were to go wrong will stop you. If you ever had a problem your insurance company first will look at how they can get out of paying up. Breaking the FAR's will void all insurance policies so keep that in mind as well.

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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.

The 60 Day Wonder

From Dick Affenit

People continually pass by the hanger where we are building and they are jokingly referring to our project as the “60 Day Wonder”. Well, neither part of that title is factual. We were hoping to finish in 60 working days but we feel that it took a little longer than that. It’s difficult to say exactly how many days. My time has been accurately timed but Scott’s participation is so fractured by answering the phone and dealing with in-house problems that it’s impossible to figure his project time.

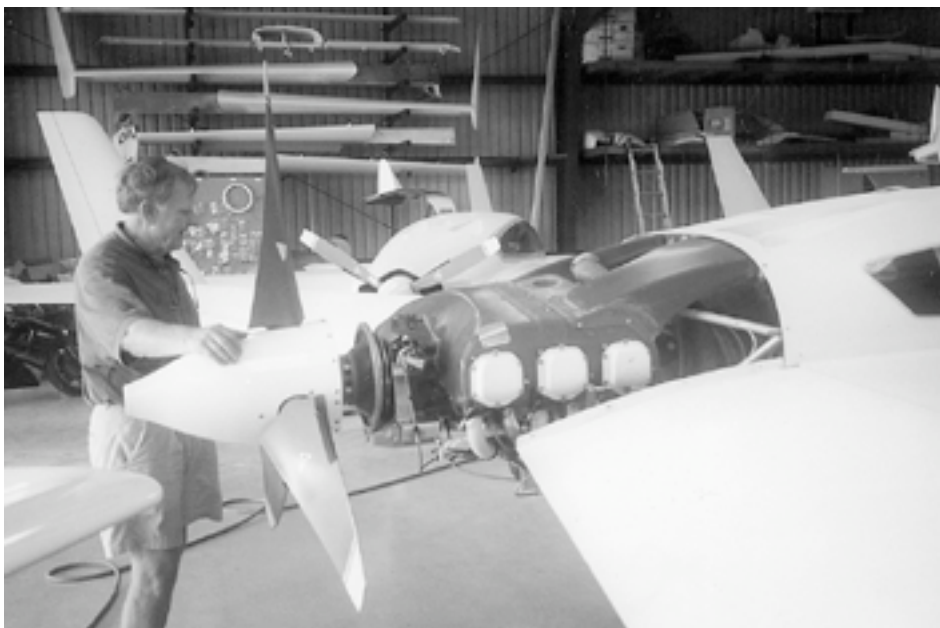
As far as the “Wonder” part, they are way off base. I have had extensive aviation experience in the Military, the Executive Business and the Airline Industry but I have zero experience in the nuts and bolts end of the business. I will never forget the look of disbelief on Scott’s face when I said that I had never used a riveting tool or an air tool.

Fortunately, I have been able to learn, but a “Wonder” I will never be.

To update you on our progress, Scott tested the aircraft during the middle of August, I flew it for 10 hours and just completed the 10 hour check. We have had a lot of minor problems that have been gradually fixed but the overall health of the machine is excellent. It is scheduled to be painted on the 26th and 27th of August and hopefully I will be home shortly thereafter.

I have to thank the entire Velocity staff, Duane and Bonnie and Mark and Nancy for their help and hospitality. Also thanks to Mike Snyder who gladly answered a thousand questions and never lost his patience. But I would especially like to thank Scott Swing who had to suffer my ignorance and who helped my dream come true.

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Dick inspects the power plant on his new Velocity XL

Franklin Update & Tips

From Rick Lavoie, St. Augustine FL

Judy, Darla and I just returned from another flying adventure – to Laramie Wyoming – in our Velocity and have good news to report regarding reducing CHTs for any engine. Prior to this modification, my number 4 cylinder would reach max CHT of 392°F, when I went full power and leaned to peak EGT + 50°F. This is now a problem of the past! “Peddle to the metal”, my hottest CHT is now 350°F.

What did I do? Simple... at Scott’s suggestion, I replaced my 4” SCEET Aeroduct with fiberglass airways to my cooling plenum. You will need to buy some 4” metal dryer vent duct to use as a mold. Pictures are worth a thousand words, so please reference the photos below to see what I ended up with:



The above photo (plenum sitting atop my tool box) shows the modification to my cooling plenum. I extended the fiberglass almost all the way down to the intake scoops for my lower cowling. I needed to have some give to allow for engine movement, so I kept about 3” of SCEET Aeroduct at the intake scoop. The SCEET slips into the plenum when I install my lower engine cowling.

Originally I had made it with no SCEET, but it was too difficult to remove my lower cowling.



The above two photos show my lower cowl standing in two different upright positions. The top one shows the intake scoop, with the SCEET attached. Notice the "air ramp" around the lip of the air intake scoop (another Scott suggestion). The next photo also shows the exhaust pipe hole, with silver metal tape to deflect heat. Under the metal tape, I epoxyed a layer of "fiberfax", then Red RTV, then the metal tape. This protects your cowling from the engine and exhaust pipe heat. I have 470 hobbs hours on my Velocity and no sign of damage to my cowling from the heat yet!



The above photo shows the plenum installed on my Franklin. Smooth air flow and low air resistance is the key to great engine cooling. Also, I coated the inside of my duct with epoxy to make it real smooth. For an even better way to do this, refer back to an article in Vol 12, page 14, written by Travis Holland and Hugh Hyde.



Changing Matco Brake Pads

At Sun N Fun, Duane and I spoke with Phil Mattingly about a problem I had in the installation of replacement brake pads. I followed the Matco instructions exactly and purchased the tool they recommended. On 1 set of brakes, two of the pads call for 4-6 brass rivets. In order to install them, I had to use a pipe to add leverage. Obviously, something is wrong. I suggested to Phil that maybe he should be using a 4-5 rivet. He agreed to go back to the shop and check this out and get back to me. When you install the 4-4 rivets, they install just fine.

Well I never heard back from Phil (I also sent him a reminder e-mail), so I still wanted to make you aware of this problem, in case you need to change your brake pads.

I can report that I am delighted with my Velocity and Franklin /Ivo combination. I cruise at an honest 200 mph (170 kts.), burning 10 gal per hour. We made our last trip from St. Augustine FL to Laramie Wyoming in 8.7 hours with 1 stop in Arkansas each way. Not bad for something I built in my garage!

Here are the numbers:
 At 8,000 ft, OAT = 59°F, slight headwind, 151 kts indicated, GPS ground speed 167 kts, true speed 173 kts, fuel burn 9.6 GPH, oil temp 167°F, 2500 RPM, 23" MP, oil pressure = 54 psi, EGT/CHT for each cylinder:
 #1 = 1310/313, #2 1240/304, #3 1270/318, #4 1230/340, #5 1200/305, #6 1190/301

Oh, there is still one problem in owning a Velocity. If you are in a big rush at airports, then this is not the plane for you. Everytime and everywhere I land, a crowd of aviation lovers always gather to take a look and ask some questions!

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What I Learned at Lycoming School.

Part 2 of 3

From Dale Alexander, Daly City, CA

Lubrication

Service Instruction 1014M list lubricating oil recommendations. Lycoming states that Straight mineral oil does not lube as well as Ashless Dispersant (A/D) type of oil, but is best for break in purposes.

There has been confusion as to what various viscosity values mean.

Aviation	SAE
65	30
80	45
100	50
120	60
140	70

Lycoming oil additive LW16702 is a TCP based (Tri-PhenylPhosphate) that is used at a ratio of 1oz/qt of oil. Aeroshell 15w50 has this additive already and is recommended. If Aeroshell is not used, use the Lycoming additive to prevent damage due to extended storage and from corrosion.

Maximum oil temperature is 240 deg F. Recommended operating range should be 160 to 200 deg F, 180 deg F is stated as best.

When replacing the oil filter, to ease next removal it is highly recommended to coat oil filter O-rings with Dow Corning #4 silicone grease. Cutting open the oil cleaner will allow inspection of the metal particles trapped inside. Metal that may be inside include:
 Aluminum from piston pins, oil pump housing or gears.
 Steel from the cam, followers or spun bearings.
 Bronze from the tach drive bushing.
 How much is too much metal? If the amount found can cover _ square inch, one should be concerned.

< To be continued in Vol 25 >

INVOICE

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Renewal

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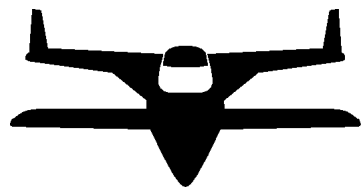
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For Sale 1999 Velocity RG

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 \$145,000
Call Jim Pearce
USA 321-638-4425 (phone or fax)
Costa Rica:
011-506-433-8003 (phone)
011-506-433-8820 (fax)

Zip Code Change

Velocity View's Postal Zip Code has changed from 32084 to **32080**

For Sale: Velocity RG Elite

Kit purchased in 1999. All fast-build options. Spar, keel, RG system installed (about 1/3 of kit completed). \$45,000.00 OBO
John Dibble
Yazoo City, MS
662 746 3521
aminetech@dixie-net.com

For Sale Velocity XL RG Kit

Fast Build Wings
RG Pre-wire
Landing Light
2 Oil Coolers
Low Fuel Warning
Original Factory Price: \$51,218
Approx. 300 hrs work by professional builder completed (\$10,000 value):
Windows installed
Spar installed
Firewall installed + much, much more!
\$49,000 OBO
Contact: Hannes Raudner,
Clarksburg, MD
301-972-0071 or e-mail to
Hannes@excelaration.com

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, 3 blade performance prop (plus an extra 2 blade spare prop). 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

For Sale: Velocity N747DF (XL/RG)

PLANE: Velocity Extra Large, retractable gear. A real beauty, interior and outside. Exposed at Sun N Fun 99. 4 seater.
Empty weight: 1640 lbs
Gross weight: 2900 lbs
Useful load: 1260 lbs
92 gallons fuel
Cruise: 180 Kts
Max speed: 210 Kts
Landing speed: 65 Kts
Range at 75%: 1240 NM
First flight: Aug. 10, 1998
140 hours since

ENGINE:
Lycoming IO-540 260hp
Millenium cylinders
Slick magneto and electroAir ignition
Bendix servo AIRFLOW
Lightweight starter
60 amp alternator
Halon fire extinguisher system
MT 3 blades prop

AVIONICS:
Full IFR, Century 2000 Autopilot 2 axis, Century Flight Director, Century NSD-360A Navigation display, Appollo GX50 IFR-GPS, Narco DME 890, 2 Terra COMM, 1 Terra NAV, 1 Terra Transponder, 1 AT-3000 Encod., 1 PS Engineering PMA-6000MS Audio panel, VM-1000 Engine Monitoring System, (Vision Microsystems), 1 Vertical Card Compas, Annunciator System, Ameri King AK-450 ELT Multi-function Clock, Airspeed Indicator, Attitude Gyro, Altimeter (inch and milibar), Turn Coordinator, Directional Gyro, Vertical Speed Indicator, Door pump / seal, Alternate Static
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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.

Internet web site:

<http://www.velocityaircraft.com>

E-mail addresses:

- DuaneS@velocityaircraft.com
- ScottS@velocityaircraft.com
- MarkM@velocityaircraft.com
- BonnieS@velocityaircraft.com
- NancyM@velocityaircraft.com
- BrendanO@velocityaircraft.com
- DarenJ@velocityaircraft.com
- MikeS@velocityaircraft.com

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

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