RVator's Log

Newsletter of the Twin Cities RV Builder's Group

March 2008

In this issue…

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Upcoming Events

March 28: Yep, it's almost Spring!! Join us for our March meeting with our special guest Alan Jesmer from Precision Airmotive. Coffee, goodies, and all the usual fixins'. Hope to see you there!!! Details on page 8.

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Minnesota Wing
Van's Air Force

Pres: Doug Weiler, 651-398-1184, dcw@mnwing.org

Sec/Treas: Jim Lenzmeier, 651-633-8488, jlenzmer@msn.com

Shop Notes

-Doug

In case you have never noticed, building (and flying) an RV is not for the fiscally faint of heart. This is not a cheap hobby (as many of our spouses will attest to). Most of us are pretty middle class folks so building an RV requires some serious financial planning. There is a constant balance to be struck of what we'd like to do and what we can realistically afford. And that is true with just about anything. Last summer the battery in my wife's 2000 BMW died so I started shopping around for a replacement. I've dabbled a little in BMWs (there are wonderful cars… kind of akin to automotive RVs… sporty, fast, and also a little pricey). I joined the local BMW club when we got her car and found a group of guys pretty much like our RV club: lot's of knowledgeable motor heads always willing to help out. I put out some feelers to the club as to where to get a reasonably priced replacement battery other than shelling out the $200 plus at the local BMW dealer. In short order, one of the members emailed me and said he has a wholesale arrangement with Sears Imports and he would have a new BMW battery at his house next the day for $110. DEAL!!

The downside was that his house/shop was about 50 miles west but an appointment was made and I met him the next day after work. As I drove around to the back of his house, he was waiting outside his shop. It was probably equivalent to a 4-car garage and it was chock full of several vintage BMWs in various states of disrepair awaiting restoration. But I was taken aback at his current project. He was putting the finishing touches on a 1972 BMW 2002 that he had been working on for 3 years. It was literally brand new. In fact, he said just about all the parts were new from bumper to bumper. It was an absolute work of automotive art. The paint was a polished bright orange with a new engine, glass, tires, and interior. It was a jewel. We talked a lot about his work and I mentioned that I had built an experimental airplane and we discussed out respective passions. He lamented that he really had a lot of money tied up in his 2002 and the tally was approaching $20,000. As I headed out the door with my new battery, I decided not to tell him that twenty large doesn't get you very far along on an RV project. Everything is relative!

When I kicked around the idea of building an RV-7, I finally came to the conclusion that one expensive, all encompassing hobby was about all I could afford. Retirement was only 9 months away and it was time to REALLY get serious with the master financial plan. Some changes needed to be made. I had a perfect 2004 BMW 330i that was my summer fun car. It had been babied, pampered, and only driven under day, VFR conditions in the summer. It's a cool car but my passion for it was now tempered with the new enthusiasm for the RV-7 project. I really wasn't all that involved with the BMW club so the conclusion was that selling the 330i was about the only way to do another RV. Plus the reality is that we all know the true price of an RV project has to include any one of these "options": new kitchen, new furniture, and nice vacation just to keep everyone happy. It all adds up.

So on a cold January evening, the new owner of the 330i came to pick up my baby. It had been stored in the RV shop for the winter and I know it had to go in order for me to get going on the project. Fortunately the buyer was a BMW club member -- a real car who promised a good home. So now, with careful planning and the eventual sale of the RV-4, I think I should be able to swing the construction of the RV-7 and still ride off into the sunset of retirement in my ragged-out 15-year-old Saturn. Not cool, but that RV-7 sure will be!!

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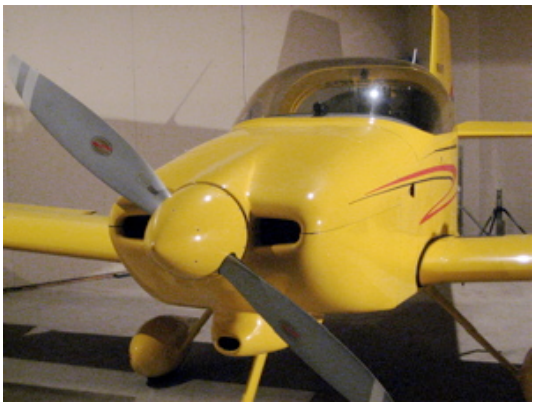
Another Ambitious Project

-Tom Berge

The summer of 2000 was the start of the next phase of life for me. Karen and I had just sold our business and with me being on a one-year contract to hang around during the transition, plans were forming in my head. A year or so prior, I had won a prize at one of the RV yearly picnics for a nice discount off a TruTrack autopilot. What better way to use it than build another RV.

Two years later 369TB was flying and 4 ½ years have gone by since with lots of flying adventures, and yes, as of January 1, 2008 I finally retired. So it took an additional 6 years or so to retire. Who's counting? During this time, I have found myself involved with a few RV projects. One mission was to replace an instrument panel as well as install an autopilot for Doyce Graham in his RV6A. It was quite a job tearing out old stuff to put in new stuff and I now have a new appreciation for what avionics technicians go through. I've also done a few pre-DAR inspections to help catch the inevitable oversights that a second set of eyes can catch. Currently, I am assisting another builder with finishing his RV7A from the electrical system onward. And another project I just agreed to is to build a set of fuel tanks. So much for retirement!



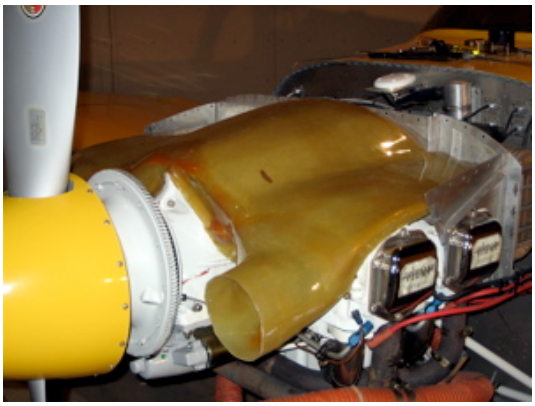
The requisite "before" photo

If there is one thing that has always bothered me about 369TB, it has always suffered from high CHT's. The higher I fly, the hotter it gets. I'm talking 8000 ft and temps in the 390 range with OAT around 70. And this is lean of peak EGT's. Oil temps were also high, but was solved by replacing the Positech cooler with a Niagara cooler. Why the issue? I don't know. I have dual electronic ignition and perhaps it's the additional advance. I've cleaned up the cowling exit air area and trimmed it back with very little benefit. I've also added louvers with the same result. Climbing to higher altitudes always leads to high CHT's and requires me to step climb. Not a lot of fun.

Last September, on a return flight from the Black Hills, at 7500 ft, 72 degree OAT, three of my cylinders were 395 to 405. Enough! With retirement around the corner, I decided to try something radical like changing the cowl. That's right! Change the darn thing. Reading up on the Holy Cowl and pressure plenum, and the claims of much improved cooling, as well as the sweet siren song of more speed, I sent in my money. What better way to abuse my newfound extra time than to immerse myself in a project of this size.

My plan is to carefully chart the differences I encounter along the way. So far, the installation of the Holy Cowl has been on par with Van's cowl. I have approximately 20-25 hours so far in the project and the cowl is essentially finished with only minor cosmetic touchups left to do. That would be known as pinhole filling. Drat! During this part of the project I can reinstall my original cowl and go fly, which is why I chose to do the short version of the Holy Cowl. I just can't quite go cold turkey on this flying thing. The next step involves the pressure plenum and once I start, I'm grounded.

Increased performance claims are often hard to qualify since there are so many variables that affect the outcome. Engine power, drag, prop efficiency, etc all contribute to make one RV faster than another. The best way to see the difference is to take a known flying example and, through very careful before and after testing, do a comparison. My plan is to do just that. Below is a chart of the speeds and temperatures I charted flying with my original cowl.



Preliminary fit of the Sam James plenum

The performance data was taken at wide-open throttle and all out speed. Once I have completed the transformation to the new cowl, I will run the same set of tests to compare the results. This is a good way to test the claims. This new data will be in the next issue of the newsletter. My ultimate goal is to solve my cooling issue. And if, by some chance, I'm faster, I'll learn to deal with it. Stay tuned.

Test parameters (Van's OEM cowl):

Pressure altitude:	8500	OAT:	31 deg F
Manifold pressure:	21.8" Hg	RPM:	2600
Takeoff gross weight:	1602	Test weight:	1582
IAS:	154 kts	TAS:	174 kts
Fuel flow:	10.2 gph	Oil temp:	188 deg F
AFS % hp:	78%		

	Cylinder 1	Cylinder 2	Cylinder 3	Cylinder 4
CHT	349	355	342	357
EGT	1372	1389	1386	1359

RPM vs IAS in knots:

21.8" mp / 2400 rpm:	149 kts IAS
21.8" mp / 2500 rpm:	152 kts IAS
21.8" mp / 2600 rpm:	154 kts IAS

A trial fit of the "Holy Cowl"

This is supposed to the "fun"

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MN Wing Update

-Doug

Yeah, I know… your buddies are emailing you every day from Florida or Arizona with the usual "hey, I was out golfing yesterday" narratives. But a little artic air hasn't slowed us down all that much. Here's some of the latest MN Wing news that I have heard on the grapevine…

Hangar partner **Paul Hove** has his RV-7A back from the paint shop in Cambridge, MN. It is just a basic white Imron for the time being. Paul's painter did an excellent job with the tedious fiberglass and fill work and the end result is very nice.

Trick Communications in Hudson, WI has designed a vinyl graphic layout, which should be in place shortly.

This note from **Gary Specketer**: "I thought the folks might be interested in how my RV10 is progressing. I moved it from the garage to the hanger 40 miles away yesterday for final assembly. 90% done and ?% to go.

I am building it in Georgia in the winters only. I started in 2004. We will return to MN when you guys tell me it has warmed up. Yes, I am a wuss."

From **Kevin McCormick** in Glenwood, MN:

I was scheduled for my airworthiness inspection the second week of November. It ended up getting delayed. I went out to

the airport the week before to run the engine and do some more taxi testing, but found the battery dead. For some reason I could not get it to hold a charge. Ordered a new battery that night and it ended up getting very cold before I received my new battery and decided to put it away until spring. Re-scheduled my inspection for May 5th.

Bernie Weiss' RV-7A is coming right along. He and Tom hung he engine a few weeks ago (IO-360 from American Engines in Tulsa). The panel is essentially finished with dual Chelton EFIS boxes and other assorted goodies that command a vast array of electrons.

Treasurer's Report

-Jim Lenzmeier

The 2008 dues notice was sent out under a separate mailing in January. If you didn't get one, that's because you are paid up for 2008 so you are off the hook. In May we will be updating our membership lists and unpaid members will be dropped. So now is a good time to the time to send in that check.

Here is our balance sheet for 2007. Our expenses are pretty straightforward as you can see. In case you have not noticed, we are not the most formal group on earth so we have been somewhat remiss presenting a formal balance sheet in the past. Our apologies!!

Dates	Item	Pay-ments	Receiv-ables	Balance
Jan.	Beginning balance			$3,642.11
2007	Dues collected		$1,820.00	$5,462.11
2007	US Postage	$214.59		$5,247.52
2007	Printing	$798.91		$4,448.61
Spring	Funeral flowers	$56.98		$4,391.63
Spring	Club meeting / food / coffee	$130.52		$4,261.11
Summer	Club meeting / food / coffee	$87.54		$4,173.57
Spring	Room rental for meeting	$40.00		$4,133.57
Fall	Club picnic / food supplies	$246.15		$3,887.42
Fall	First Flight Plaques	$527.18		$3,360.24
Nov.	Club meeting food / coffee	$99.37		$3,260.87
Dec.	Ending balance			$3,260.87

Tail Tales

-Doug

For those of us enouying the first "real" winter in Minnesota in a couple years, it has been a mixed blessing. It's been great for skiing, snowmobiling, or sitting in an ice shanty waiting for Mr. Walleye come along. For our small contingent of hard core RV flyers, it has been frustrating. Our usual Saturday morning breakfast flights have been just about non-events. Seems like just about every Saturday has been consistently rotten. 22DW has been languishing in the hangar (along with my RV piloting skills). But it has been good for RV building. Dare I admit when the gloomier it gets, I actually enjoy a few hours out in the shop. Turn up the heat, turn on Minnesota Public Radio (note that Bob Collins!) and I am fired up and ready to rivet.

For this born-again RV builder, it has actually been a new adventure. As I said, I really had no big intention to do this again and have almost totally ignored the "building" side of the RV world for the last 4 years. For this "first generation" builder, the tail kit is a marvel.

I think I spent 4 or 5 months building the RV-4 tail kit way back when. The building log records hours and hours of jigging, drilling, cutting, trimming, and on and on. Seems like Van's early RV-4 tail kit instructions were best ignored since I was totally confused anyway. But I have been following the building sequence of the RV-7 explicitly and the workflow is logical and efficient. I continue to be amazed how perfect this all fits together. Holes line up, skins line up, nothing seems to

be in the way of anything else (I was always drilling and/or riveting myself into a corner on the RV-4). The big difference is that I have 100% more confidence in doing what I am doing. I can recall hours of agonizing over the RV-4 on what is now trival items (did I really think that a primer that will withstand a space shuttlee re-entry was a necessity?)

Peter Fruehling and I have ordered our QB kits together so they can be shipped here at the same time and in the same truck (via Partain Transportation). Delivery is scheduled for June although it could be a little sooner than that. Thus there is no big rush on the tail (I have the horizontal and vertical stabilizers completed and the rudder is ready to rivet.) So I am taking my time and putzing along at my leisure on those IFR Saturdays. I'll keep you posted…

Flyin' and Stuff

-Tom Irlbeck,
bearintheair01@gmail.com

First of all, I want to say "Bear" and I are surviving well in south Florida. The old girl has almost 1300 hrs on her, and she is aging well, like a good bottle of my favorite wine, Vines-Blackberry Merlot.

I've sent along a picture for you to verify, we are suntanned and well. You might notice I've got the girl covered with numerous covers. My original covers rotted out after 8 years. I

had to use a couple of different bolts of fabric, they were on sale, and not enough on one bolt to do tails and wings. Then I got to thinking, dangerous but fun, I would make the tips a different color too, to help identify left and right wing tips. The morning that I took the pictures it was a bit cool, 73 degrees, but I don't suppose I'm going to get many sympathy cards from the MN Wing.

Last Monday, while taxiing out for takeoff with a reporter from our local TV station, I heard the tower "chewing" out a flight of two that had just departed. The tower was manned by one controller and was transmitting on two frequencies, which is pretty common at the smaller airfields, and that is why I heard part of the conversation. The controller told the lead, to get his wingman to turn off his transponder, and he was lagging too far out, while in his airspace. He said the flight has to stay within ½ mile, as a "flight of two". Anyway, this got me to thinking about what is the right way to taxi and depart as a flight of two or more aircraft, and stay on the straight and narrow with the controllers. Some of my old Navy Fighter Pride comes through, and I can remember my skipper, one of the Navy's finest, saying "Look sharp and don't screw up, or you're going to have the weekend duty." Believe me, you don't want to miss chasing the girls on the weekends!!

Now jump back with me around 44 years. How lucky I was to be in the Navy's flight training program. Our first experience with formation training was in the T-2A Buckeye at Meridian, Mississippi. We had just completed the basic flight training in the good old T-34 Mentor at Saufley Field just north of Pensacola, Florida. I don't remember how many hops (my logs are back in Wisconsin) we had in formation work, but I had just received my lasts issue of the "Hook", a beautiful quarterly publication updating what the Navy's pilots, squadrons and carriers are doing, and they had an article on training and formation hops. Would you believe, they talked about the 18 hops in the formation syllabus. Those 18 hops were very intensive, fast paced and set the law down about the right way to fly formation. I had roughly 1800 hrs in the military, and I would estimate that I have done around 1500 formation flights, during my military flying.

A real life test of your formation flying skills were tested in the in-flight refueling operations, often referred to as a "plug", and I estimate that I have over 350 refueling plugs. A refueling plug requires a steady hand because a probe has to slide into a "basket that is around 2 feet in diameter (should have been 10 feet in diameter), not to fast, not to slow, in any type of weather, and many times at night. Sometimes you "plugged" when you were dragging 12-500lb bombs around before a strike, sometimes after having just flown an Alpha strike, where everything in the world was shot at you, or

sometimes just after you had a "bolter" and you were too low on fuel for another pass at the deck. Plus if you missed the basket on your first pass, it would cost you a 12 pack and the whole squadron would know. To set the stage, turn down the lights, put on some slow music, and then picture Rose O'Donnell asking you for a dance, that's pressure!!! Oh, I forgot to mention, you couldn't see the probe on the F-4. The engineer that designed the probe system on the F-4 had just come out of Admiral Rickover's Engineering School (he didn't like pilots, or anyone that wasn't a submariner) and wanted to give the pilots a challenge. So the probe was about 120 degrees aft, on the port side of the pilots view, at head height, three feet out from the canopy.

While you are flying formation on the tanker, mentally picturing where the probe is, obeying law #1.,"Don't take your eyes off the tanker for even a second", you are trying to put your imaginary probe in a basket, to get a couple thousand pounds of "really needed fuel". Oh, and yesterday you just got a letter from your girl friend saying she really misses you, shucks I miss her too!! Well, I might have gotten a little sidetracked, but what I was getting too, formation flying, be with one other aircraft or a big gaggle, it offers some unique problems and procedures to make the flight go smoothly and increase the safety factor, otherwise there is no reason to fly formation, outside of the factor that it is just plane fun.

A couple of years ago, I went to one of Stu McCurdy's formation seminars at the Lakeland Air show. Too say the least, I was very impressed. Stu does a VERY professional, complete job of teaching formation flying. His program, Formation Flying Incorporated is geared toward tight, multi plane air show formations. If you are going to fly formation in any air shows, you need a formation check out and "Card". I would just like to bring up some techniques and procedures that are for the general pilots flying out to breakfast, and do not want to "tuck in tight", and try to put the Thunderbirds to shame. I want to pass on Stu's e-mail, which was given to me by Tim Mahoney, otumccurdy@earthlink.net. I haven't been there yet, so don't have any words of wisdom regarding it. But, I do recommend everyone to take a look at Doug Reeve's www.VansAirForce.net, then click on F.A.Q./downloads, that will get you to Stu McCurdy's "RV Supplement to T-34 Formation Flight Manual". Download it, read it, and put it under your pillow, and with you pilot/aircraft flight manual for you aircraft.

Now we'll talk about you and me going to breakfast on a Saturday morning, meeting up with another aircraft en route. Naturally, someone has to be lead, and it might not be the pilot with the most experience. Sometimes it is a good idea to give another pilot the lead, to gain experience. I like to do that, and then evaluate, and most of all give suggestions as to what the lead could have done to make life easier and safer. The FARs under 91.111 Operating Near Other Aircraft, don't give much guidance, and for good reason, because there are numerous formations. The regulation does state that both pilots have to be aware of the flight operations of the other aircraft. So, let me advise you now, do not sneak up on another aircraft, and join up on him/her. You will be violating REGs, and it is plane stupid!!!

OK, we've decided we aren't going to be stupid. A little pre-flight brief will go a long way, to help the flight go smoothly. We've determined who is going to be lead, and then decide who is going to be 2 or 3. Decide on en route frequencies, usually 122.75, and just as a reminder, only the lead should squawk 1200, others to stay on STBY. When you contact ground tell them you're a "flight of two". I always repeat the "flight of two", especially when cleared for takeoff. A suggestion about taxing, DO NOT taxi in the middle of the taxiway, or right behind the aircraft ahead of you. Lead will usually taxi off to the right or left of centerline, then next aircraft will taxi on the opposite half of the taxi way. This offsets the aircraft ahead of you a little and gives you better depth perception AND if the aircraft ahead of you stops, and you don't recognize the stop, at least you won't chew up his a_ _, with your prop.

This happens more often than one might want to admit. A friend of mine did it down here last year with his Pitts; he ate up his buddies tail feathers on his C-210. Before switching to tower, I try to get thumbs up from everyone, to know that they are ready for the take off. When switching frequencies, I will come up and say "one here", or flight call sign, "Bear one" then two should just come back with a "two" or "Bear two". As we are cleared for takeoff, lead has to take the downwind side of the runway, so as not to have his prop wash roll back into the next aircraft. If more than two aircraft, number 3 and 4 will give the second aircraft more spacing, than a two flight. This second flight should be separately called as a flight of two, but once rendezvoused would be part of lead flight. Sometimes a sharp controller will allow the 4 aircraft on the runway at once, or as the two lead aircraft are departing. Be careful, and I don't recommend a closer spacing than 2,000 for the second flight, from the previous departure. Did you know the runway lights are usually spaced at 200 foot intervals, and I use them a lot for distance referencing? The spacing for a two flight should be around 500 feet, for the second aircraft to start rolling. Remember the lead is moving around 80mph and accelerating at the 500-foot area, and I think it will end up at about 1000 feet on climb out when you use the 500-foot marker to start your roll.

Back to briefing, you might want to mention a planned altitude and airspeed for the rendezvous. I recommend 135 mph for rendezvous airspeed, because the RV's maneuvering airspeed is close to that, and it gives you plenty of "wiggle" room. When departing controlled airspace, I will do a "running rendezvous", which is usually turn on course and then a wings

level attitude rendezvous. Number two should be a couple hundred feet off set, makes it much easier for lead to pick up wingman and to recognize closure. Outside of controlled airspace, I recommend a turning rendezvous with about a 20-degree bank, because then as lead I can see everyone better, and you can give a few suggestions. Now here is where we don't want to get in trouble with the tower or controlled airspace. After research by "Bob", my tower man, he stated in his 7110.65 Controller Handbook, it states a formation is considered to be aircraft that are within ONE mile of lead, and within 100 ft of altitude. So my recommendations are: DO NOT go out together as a flight of more than TWO when in controlled airspace. (Unless you have gotten your formation card.) It keeps things simpler, and you won't run into the problem of getting strung out, or over 100 feet apart in altitude. As soon as clear of the controlled airspace or outside of the traffic pattern at a non controlled airport, I like to switch to "tactical", check in and keep track of everyone.

Some words of wisdom as a flight leader. First of all be cautious, you are responsible for the safety of the flight. Brief the flight, so as the least experienced pilot will gain experience and be able to advance in the realm of flying around other aircraft. Plan ahead, and be extra smooth. Be aware of the other aircrafts performance factors in your flight, mainly so you are not stretching the performance limitations of the engine or aircraft, ask questions if you have any doubts. Be aware of fuel usage and requirements, especially of switching tanks so as not to run a tank dry. Remember, formation flying is a major distraction from normal operations. If a couple of other aircraft are going to join up in route, I like to let them know that I will be at 135mph, and at what altitude. Joining up at the lower altitude is easier, because you will have better land references. If the flight is higher, a navigation fix will work, especially airports that are not controlled.

I like to turn on the landing lights, and will sometimes use my smoke for identification. A 10 degree banked turn is what I like to use. Never reprimand actions in the air! Only after a flight is complete, should a "briefing down" be given. Positive input in the air will usually improve performance. Try to give other aircraft priority to their space, you will find this approach will give you more time to be smooth and safer in your flight operations. There is much satisfaction gained by trying to improve someone else's skill level.

Now as a wingman, your first responsibility is to make sure your flight leader doesn't get shot down by a sneaky Mig pilot!!!! Actually that isn't such a wild request. Do you realize that 82% of mid air collisions occur from the rear! This comes directly from the mouths of the AOPA ASF (Air Safety Foundation). Also 45% of collisions occur in the traffic pattern, and 2/3 of those are in the landing phase. Soooo, let's make it simple and ask the wingman to keep his eyes out for ANY traffic, and always state it immediately to the flight leader, especially to the rear, which to any fighter pilot is the greatest threat.

Now the rest of the wingman's responsibilities are simple, "Do what the Flight Leader tells you!" Actually it is a little more complex. I'm going to recommend that you don't get closer than about 200 feet, until you get some "close" in flight instruction, and individual flight instruction from a qualified flight leader. So, now we know we are going to stay around 200 feet out, usually about 45 degrees aft of lead, and slightly lower. Which side? Well, if the sun is in your eyes, go over to the other side. If you have any glare or something is making you uncomfortable, let lead know, and switch sides. Side by sides, it is usually easier on the side the pilot flying, to have lead on that side. At 200 ft, you will have your hand on the stick and throttle, 98% of the time. Speaking of throttles, recognize that the 8-lever quadrant is desired, push pull are OK, but the Verniers are a NO-NO.

The 2 % time is allotted for fuel tank changes, engine monitor, or a few seconds of time off lead to adjust your hat. If anything else is going to be done, ask lead if it's OK to back out to around a 1000 ft, and do your thing. For long range flying, say a couple of hours, I find the wingman can position out near the abeam position at about ½ mile, basically same altitude, and that will work out good. A good rule to fly by is to stay in an area that the lead can see you, the wingman easily. In the landing pattern, I would recommend the 1000 aft and slightly off set to the outside of the pattern, for good positioning. The lead should be landing a little long, so the wingman can land in the touchdown zone. Sometimes as lead, on shorter runways, I will pull off on the downwind side of the runway to give the wingman use of the full runway. If at a controlled airport, always let the lead, take the lead inbound, so as not to confuse controllers. Confusing controllers will always cost you a 12 pack, so hope you get smart and sharp controllers. At uncontrolled airports, the fastest and safest way in is acceptable for both aircraft.

Now, I'll guarenteeeee you that I have forgotten something important, AND that important item just might want to kill you!!! You have to realize that I'm almost 65, and I'm retarted, or is that retreaded, or retired. Flying out to a destination with another aircraft is fun. My big BUT here is it takes a little more concentration, and I recommend that you keep your head on a "swivel", not only to protect your butt, but so as your flying partner wants to go flying with you again.

The RVs are one of the most desirable aircraft to go fly with another aircraft, because we have a great view AND a great airplane. Take care of yourself, your wingman, your flight leader, and your plane.

Tom & "Bear"

Minnesota Wing – Van's Air Force
65 15th Ave. SW
New Brighton, MN 55112-3454

First Class

Minnesota Wing March Meeting

Sat. March 29, 2007, 10:00 am – noon
Dick Nordquist's Hangar
275 Palomino Lane, Lino Lakes, MN

It seems that much of the innovation in general aviation is being directed at the amateur-built aircraft market. A significant portion of the attention has been focused on the rapid-fire pace of avionics development . But new innovations are also showing up under the cowl and our March meeting will highlight the new technologies being developed by Precision Airmotive in Washington State. Our guest will be product support and marketing manager Alan Jesmer who will be traveling here specifically for our meeting. This is will a unique opportunity to hear about Precision's new fuel injection, electronic ignition, and FADEC systems.

Let's plan for a great turnout!!! Feel free to bring a guest or guests and learn what's new in GA power plant management.

And of course, our usual exquisite cuisine of coffee, pasties, and assorted goodies!!

Driving directions:

Take I-35W north and exit on County Road 23 (exit #36). Cross over 35W and turn left on Apollo Drive (just past the gas station). Turn right at the stop sign on to Lilac Street. Turn right on Palomino Lane to 275.

Phones: Dick's hangar: 651-783-8859 or his cell at 651-895-4545, Doug's cell: 651-398-1184

SEE YA THERE!!!!!