



# RVator's Log

Newsletter of the Twin Cities RV Builder's Group

## September 2009

### In this issue...

Skytrip 2009	...2
JetFlex	...5
How High Will it Go??	...6

\* \* \* \* \*

### Upcoming Events

**September 26:** Fall is here already???? Celebrate the end of summer with us during our 20<sup>th</sup> Anniversary RV Fly-In and Picnic!!

The tried and true format will remain. Check out all the details on page 8.

\* \* \* \* \*

**Minnesota Wing  
Van's Air Force**

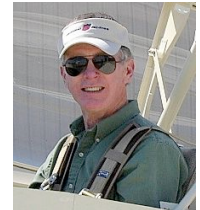
**Pres:** Doug Weiler, 651-398-1184, [dew@mnwing.org](mailto:dew@mnwing.org)

**Sec/Treas:** Jim Lenzmeier, 651-633-8488, [jlenzmer@msn.com](mailto:jlenzmer@msn.com)

## Shop Notes

-Doug

A couple weeks ago I got an email from my good buddy Doug Eshelman down in Nashville. Doug is a NWA (oops, make that DAL) 747 captain who was instrumental in our big move to Minnesota and helped to get my foot in the door at Northwest. Doug's two boys are about the same ages as my guys and when they lived here in Stillwater, we all got together quite often.



Amazing how these kids have this uncanny ability to grow up REALLY fast. When our respective boys were little, they played together and sometimes we would all pile into my Cessna 180 and go flying. Although my guys didn't get the flying bug, Doug's sons Scott and David both learned to fly in the family Cessna 170 and had their sights set on careers in the military.



#1 son Scott is currently in F-16 fighter school in Arizona and #2 son David is in Navy pilot training flying the T-45 Goshawk. It has been fun to follow their respective adventures as they go through the military training process. So when Doug's email showed up with a video of David's first carrier landing and cat shot, I was real excited to check it out.

The video is about 3 minutes long and is a view out the front of the T-45 Goshawk looking through the heads-up-display (HUD). The audio has David's heavy breathing through the oxygen mask (but amazingly slow... I'd be hyperventilating big time!!). BTW, the first trap is flown solo (those Navy instructors aren't stupid). David turns a surprisingly tight base and as the boat comes into view it's about 10 seconds down final. Speed is about 120 knots and he is right in the groove as he crosses the fantail and slams onto the deck. David sounds like someone punched him in to the stomach followed by a frantic "Oh, sh---t". He's on!!

They waste no time and he is directed into position for his first cat shot. The video shows him all lined up... more slow steady breathing (adrenaline level is probably about a zillion percent).



"Oh, here we go, baby" David says as the tension mounts. POW... zero to 130 knots in two seconds. David lets out a whoop and screams at the top of his lungs in total amazement that he is airborne. What a rush!!!!

Tom Irlbeck has told me stories about his Navy carrier days and I have always admired our Navy pilots who I consider the best aviators on the planet. David has his heart set on flying the F-18 and he probably will.

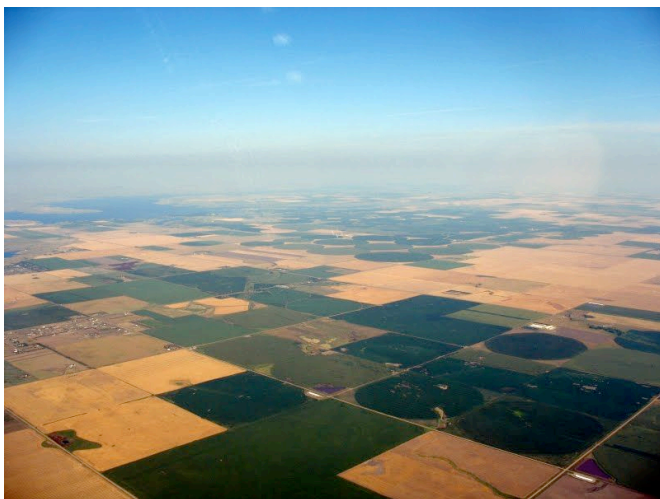
## Skytrip 2009

-Pete Howell

As the parents of 3 active kids, Andi and I rarely get time alone to relax. Not that we are complaining, busy is good in our house, but a week away was gonna be great. Kate was at horse camp in Iowa, Megan was on a school trip to Memphis, and Ryan stayed home to care for the dogs and attend rehearsal for his play.



Monday night, we gassed up the -9A and carefully weighed the baggage – Andi packs light so it was really no problem. Tuesday morning, we were up early and the weather did not look good to get to Steamboat direct. It was clear to Rapid City, so we headed off with the intent to visit Mount Rushmore if the weather did not clear. The trip to KRAP was smooth, cool, and the scenery was, well, boring. You gotta love the Midwest!



We landed at KRAP and soon after, we were ~~assaulted~~ greeted by an older gentleman that had just finished building a -9A. He poured over mine and said some very nice things about it. RV people are good people! We fueled up and checked the weather – they said it was good to Casper. That would be just about right for a lunch stop.

The terrain out of KRAP was initially very pretty:



but it soon turned rugged and desolate:



The O-320 purred on until the desolation broke and Casper appeared, out of nowhere. That was good because Andi was hungry! We topped up and borrowed the crew car to take us to a nice lunch in downtown Casper at Egginton's. These unexpected stops have become a favorite of Andi's (as long as we get good food!)

More WX checking indicated that if we went west, we could get around the storm, so we did. The terrain was once again desolate, but beautiful:

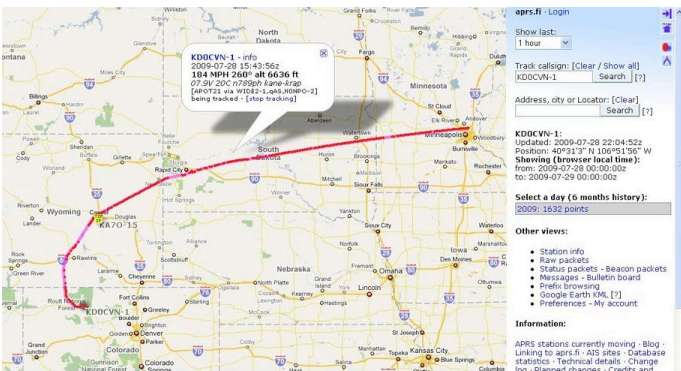


Steamboat Lake State Park:

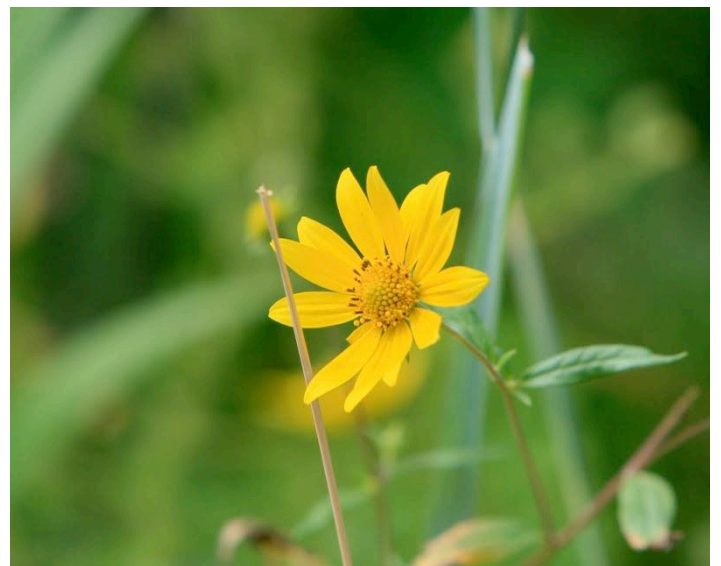


We passed Rawlins, WY, Dixon, CO and Craig, CO before we coasted into the Steamboat STOLPort. 6600ft MSL and 4200ft long. AWOS said wind variable, 18G25. Oh Goodie! The landing was really short and pretty smooth, so lets call it lucky!

The APRS tracker and many friends on the Internet kept track of us....



We hiked many miles, ate too much, and had a ball in Steamboat. The sights were awesome.





**Fish Lake Falls (Lower = Easy):**



**East of Laramie, the hills flattened out.**

**Upper Falls = harder hike!**



**and things became boring again...**

After a great trip, it was time to head back – still part of the fun for me! WX was to be good until we hit Minnesota, so we headed upstairs to 12K for the flight home. There was fog in the mountain valleys, but we were well above it.



The RV performed just great. On the trip home we launched with full fuel right at gross. The -9A jumped off the runway and climbed 750+ fpm. We came home direct, 660 nm and landed with 10 gal in the tanks! It took 4.5 hours. That is a chock-to-chock average of ~147kts on 5.8 gph or 29.1 smpg. We ran LOP the entire trip except for the climb out. The trip out averaged a similar fuel burn @ 139kts. The trip was pretty economical, and lots of fun. No baggage fees, tooth-paste restrictions, or TSA hassles.

Keep smashing rivets or if you are done, get out there and travel. The RV makes it easy, very easy.

## Jousting with JetFlex

-Doug

Potential builders often ask me what is the most difficult part of the construction process. The first topic that usually comes to mind is the terror of cutting the canopy for the first time. Or perhaps it might be wrestling with that pinhole-laden cowling that seems to never fit quite like it should. Others might argue working with fiberglass and all that sticky and gooey resin.

Personally, I hate painting. Around the house, I either bribe my big, strong sons to do it or hire a pro. This bad attitude was ingrained early back in my youth when I decided I was going to paint my VW bug. Now the car was only 3 years old at the time but it had slogged through 3 Michigan winters where the roads were paved with salt from November through April. I was still making payments on it and the rust gremlins were already well on the way to reducing my beetle to a pile of iron oxide. I had no idea what I was doing and I can vaguely remember sanding and sanding, going through rolls

and rolls of masking tape, renting a gun and little compressor and filling my Dad's garage with paint dust. Somehow I neglected to consider that it was about 50 degrees and the paint went on in globs that resulting in a finish that resembled 80 grit sandpaper. But from about 40 yards out, it looked pretty good. But it was an agonizing process.

Since then I've painted 2 other Beetles (a "little" better with experience), shot the interior of a Cessna 140 and 180 and sprayed about two dozen coats of dope on a Champ project. By the time I got to the RV-4, I knew just enough to be dangerous. But I still hated the process... smelly, messy, no doubt bad for your health, and my results could have always been better.

The RV-7 project had been coming along pretty well this year but the interior painting lay on the horizon. I was not really looking forward to it.

Pete Howell told me about a Sherwin Williams aircraft interior paint called JetFlex. I looked it up on the Internet and it sounded intriguing... specifically designed for aircraft interiors, flexible and supposedly sets up really hard. Several builders on the VAF website had used it with generally good results (but it sounded a little tricky). What was interesting was that it came in two configurations: one, a solvent based two-part mix, and a water-based version that is thinned and cleaned with distilled water. I decided to look into the water-based version even though it was against all of my past experience with aircraft and automotive paint.

Peter Fruehling has used water-based JetFlex on his -7 and had good results. He had some paint left over and I borrowed his spray gun (which was borrowed from Pete Howell) and tried it on some scrap pieces. It went on pretty well but it is an unusually thick paint and I really needed a gun specifically designed for such high viscosity paints.

I needed a new gun anyway, so after trolling around the Internet and checking out many forums, I decided on a Sharpe Finex 3000. According to the JetFlex tech sheets, the key is to have a gun with a fluid tip of 1.5 mm. This larger tip would allow the thick paint to flow properly. I also bought a smaller 250cc cup, which I thought would make it easier to handle.



I ordered two quarts of JetFlex in an off-white color that I had selected (my theory is that light colors make the interior look bigger). According to S-W, you don't really need a primer (that was too much of a leap of faith for me though). I did some tests with our trusty old NAPA 7220 self-etching primer and adhesion was not an issue.



I began with all the “small” parts: floor panels, baggage sides, seat backs, and so on. For cleanup and priming, I started with a thorough cleaning of the part with PPG’s wax and grease remover. Next, I use a purple ScotchBrite pad to rough up the aluminum surface and then another cleaning with wax and grease remover. Lastly, two coats of NAPA 7220 self-etching primer (this is a great general purpose primer but the price has more than doubled since I first began using it).



I had read all the tech sheets on applying Jet Flex and they recommended thinning only to a maximum of 25% with distilled water. This still results in a REAL thick mixture compared to previous paints I have used. But with the correct gun and nozzle diameter, it seems to spray well.

Since I had good weather, I sprayed outside. This was my first real experience with a HVLP gun. It is mandatory to have a small, high-quality gauge and regulator right at the gun so you can precisely set the correct air pressure. For the Finex



3000, 29 psi at the gun will result in the 10 psi required at the tip for HVLP application. Using this technique there is practically no overspray. And the water-based JetFlex is practically

odor-free. In fact, Peter Fruehling sprayed his fuselage in his basement without a fan and his wife Beth never knew it (don’t tell!!)

My first parts didn’t come out quite as good as I would have liked. It seemed that I was not getting enough paint through the gun no matter what setting. After scratching my head, I recalled a small filter that is inserted at the bottom of the paint cup. I checked and it was clogged with the thick JetFlex. Removed the filter and all was well.

The end result it is very nice satin finish that flows out over several days (it dries to the touch in about 10 minutes). Sherwin-Williams says it cures to its maximum hardness in about 4 weeks and I believe it. Even after a couple days, JetFlex seems tough as nails.

I still have the interior fuselage yet to finish but I think it should come out great. I’ll let you know.

## How High Will It Go?

*an account of an altitude record setting flight by Terry Jantzi*

*Ed note: MN Wing member Nancy Burkholder purchased Terry Jantzi’s RV-6 in 2001. It may not be common knowledge among new MN Wing members, that this airplane holds the RV altitude record. Here’s the story written by Terry in 1999 and now archived on the VAF website.*

After completing my RV-6, I was curious as to what the absolute ceiling would be. After speaking with Bruce Carter from the Aero Club of Canada, we also determined that I had an opportunity to set a couple of National Records at the same time. My aircraft has a fuel injected 180hp engine with a constant speed propeller. I normally cruise between 7500’ and 10500’ during cross-country flights. I have crossed over the Rockies at 12500’ and circled Mount Robson in British Columbia at summit altitude. These altitudes are accessible within just a few minutes as the climb rate at gross weight is about 1800fpm.



N69NB | Copyright by Timothy Aanerud | 2008-10-04 | MIC | Airport-Data.com

When flying solo the climb rate is close to 2400fpm. Some weeks before Christmas 1998, a friend of mine and I pestered Toronto Centre to let us climb to 18000'. They didn't quite know how to handle the request but finally gave me a pseudo IFR clearance of "cleared to the Waterloo airport climbing to and maintaining FL180". The climb was achieved easily and we were still seeing 400fpm when we leveled off at 18,000'.

With that little experiment behind me I started the process of getting permission to fly above FL180, which is IFR only. I don't hold an IFR rating at this time. It took several levels of Transport Canada bureaucracy until I reached the right person. Along the way I got suggestions like "pack my woolies and head for the North". According to the CAR's, VFR flight is allowed in Class A airspace only with special permission from the "Minister". I finally received my waiver in the middle of January with the comment of "good luck" from Transport Canada.

I had some other requirements to fill before I could attempt the flight. I needed some way of recording altitude, and my first thoughts were a barograph from a soaring club. I was put in contact with Fred Hunkeler who is a glider owner and pilot. He kindly offered to lend me his data logger, which is a digital recorder with a built in GPS receiver and a very sensitive pressure transducer. I had to fabricate a connection to the aircraft static system. The data logger has a small static port on the case. I had determined in the past that my cabin pressure is about 200' higher than ambient air pressure. With the data logger plumbed and wired to the electrical system, I was almost ready to go.

One last detail was the O2 masks. I normally use nasal cannulas, which are more comfortable than masks. However, since they are not to be used above 18,000', a mask must be used. I had several old masks, which were certified to 30,000'. I discovered the old carbon microphone wouldn't work, so I removed it and cut a small slit in the side to slip my headset boom mic in. It works great.

February 15, 1999 was forecast as a beautiful sunny day under the influence of a high-pressure system. Early Monday morning I made my first call to Toronto ACC to coordinate the flight. We agreed on a northwest heading out of Waterloo. I called Flow Control for a flow number and then filed a CVFR flight plan with London FSS. I arranged with Waterloo ATC to mark the altimeter setting for take off and landing. The data logger is calibrated to standard atmosphere so station pressure is required to calculate absolute altitude. The airplane was stripped of all extra weight and 120lbs of fuel were on board, good for two hours. As I was fitting the O2 mask in the cold cockpit I ran into a small problem. The mask was stiff and I wasn't happy with the fit. I couldn't get it tight enough to avoid having my sunglasses fog up from the leakage around my nose. I pulled the strap really tight, pinched it over some hair on the back of my head and clamped it with a wedge lock. That fix worked very well as I had crease marks on my face

for six hours afterwards.

The flight started off runway 32 at Waterloo with an initial clearance of a straight climb out to the northwest to 9000'. I paused for 15 seconds on the runway so the data logger would start the clock for the first part of the flight, which was a "time to climb" to 3000m. I passed through the 3000m mark at 00:06:16. After that I backed off the propeller to 2500rpm. I have an Insight Graphic Engine Monitor installed and was able to keep the engine leaned just to the rich side of peak. Toronto Centre modified my clearance as I went and finally cleared me to FL230. I had to back off on the climb rate from 12000' to 18000' due to high oil temperatures. After 18000' the engine performance was low enough that the oil temps stayed in the green and I increased the prop to 2700rpm. Along the way the various controller's inquired about the airplane and questioned me as to what I was trying to achieve. As I approached FL230 I was cleared to FL270 or what ever I could get. The climb rate diminished to around 100fpm at 24500'. The view was fantastic! I could see Lake Huron, Erie and Ontario with a slight movement of my head.



As I approached 26,000' the controls got quite mushy. Indicated airspeed was down to 55kts., and pulling on the stick just increased the angle of attack. Lowering the nose for a little bit of speed resulted in a 300-400 drop in altitude. The engine was still turning 2700rpm but the manifold pressure was down to 9"hg. and outside air temp was -38C (-36F). I played around for about a minute trying to nurse some more altitude, but the wing wouldn't lift anymore. I was only 60nm away from the field, so the descent was accomplished with a couple of 360's approved by Toronto Centre. Total elapsed flight time was 01:02:00. Final readings from the data logger indicate an absolute altitude reached at 26,137' and level flight was maintained at 25,900'. Between the two cabin heaters and the solar heating I stayed warm for the entire flight. I did pick up a layer on frost on the right side of the canopy, which wasn't in direct sunlight.

Mission accomplished! So much fun, so little time.

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

First Class

## **20<sup>th</sup> Annual Minnesota Wing Fly-in Picnic**

**Saturday, September 26, 2009, 12 noon to ??**

**Sky Harbor Air Park (1MN8)  
N44 31.7, W093 19.5, FGT (115.7) 218 degree radial, 9.0 nm  
Cass Trail, Webster, MN 55088**

Yep, you read it right! This will be our 20<sup>th</sup> annual RV Picnic. The beginning was right here at Sky Harbor Airpark hosted by Jerry and Judy Van Grunsven with about a dozen RVs in attendance. This year our new hosts will be Kim and Ray Furhmann with help from Marilyn Niccum. Directions are easy... the Furhmans are right next-door to the west of the Geisslers (our hosts for many years). The usual brats will be furnished as will pop and all the "support" equipment. Your task is to bring a dessert or salad to pass along. Bring your family and friends as this is our annual gathering to relax on a beautiful grass strip and talk RVs. If you drive, bring a lawn chair for relaxing under the trees.

Fly-ins are welcome of course and RVs are ESPECIALLY welcome!!! Monitor 122.9 for traffic advisories and fly responsibly and safely. (please avoid the farm and home just south of the approach end of runway 12). Any questions, please call Doug Weiler at 651-398-1184.

### **Driving directions:**

**From Minneapolis, south on I-35. Exit at the Elko, New Market exit. East on Cty Rd 2 then south on Cty Rd 46. Then west on Cty Rd 3. You will cross I-35. Take the second entrance to Sky Harbor (Cass Trail). Follow the driveway to the Furhmann's on the left. You can't miss it!**

**If lost, please call Doug at 651-398-1184**