March - April 2010

RECREATIONAL FLYER

Recreational Aircraft Association Canada www.raa.ca
The Voice of Canadian Amateur Aircraft Builders $6.95

Rob Prior's
RV-6

RAA
RECREATIONAL AIRCRAFT ASSOCIATION
RÉSEAU AÉRONEFS AMATEUR CANADA

from the president's desk

Gary Wolf

CHAPTER STATUS AND CHAPTER NEWS

Thank you to the chapter reps who have been sending in their status reports and chapter membership lists. Both are now a requirement for your chapter events to be insured under the RAA liability policy. If your chapter has not yet sent this in, please encourage the chapter membership secretary to do this in a timely fashion.

Chapter news items may be sent to garywolf@rogers.com for incorporation into the events listings. Also if your chapter listing in the Rec Flyer needs an update, please email that to gregdesign@telus.net

NEW FORMAT PILOT LICENSE DAY APPROACHES

It is now approaching May and many pilots have not yet applied for the new format license booklet. If you have not already applied you might be among the group that on June 30th will not be allowed to exercise the privileges of their Private or higher license. Rec Permit and UL Permit holders can procrastinate until the end of 2010.

ECI CYLINDER UPDATE

RAA recently wrote about the failures of certain ECI cylinder assemblies, caused by a stress riser in the thread that attaches the head to the cylinder. The failure mode is serious, with the head departing the cylinder. Two summers ago a Kelowna member had a fatal crash when this happened over inhospitable terrain, sparking an intensive investigation by the TSB and RAA Canada. ECI limited certain batches of cylinders to 350 hours, assuming stock compression ratio. ECI also sells high compression pistons and these impart greater stresses in the effective cylinder, so expect a shorter cylinder life. There appears also to be a problem with ECI plasma coated piston rings – the coating appears to be separating, with blowby and high oil consumption the result.

At present RAA Director Tom Martin has his cylinders in for checking and rework or replacement at ECI and there is reportedly a warehouse full of customers' cylinders awaiting the same. You should be aware that if you buy a plane that has ECI cylinders, it might be parked on the ground for a large part of the flying season.

IMPORTING HAS ITS PERILS

If you are planning to import a US registered plane to become registered in Canada the vendor must first apply to have it removed from the FAA registry. This can be difficult if he flies the plane to your airport as it must still be registered when the plane flies across the border. Will he trust you enough to agree to a holdback until he deregisters the plane? You as purchaser cannot deregister he plane – only the registered US owner can do this and there have been occurrences of the vendor returning home with the money but forgetting to deregister the plane. The plane then remains in limbo until the vendor gets around to doing the paperwork.

One member found a better method. He used the American Owners and Pilots Association to act as his agent, employing their escrow and lien verification services. For a fee in the range of $500 they first checked to be certain that there were no liens against the plane, and then handled the deregistration and the transfer of funds to the vendor. If you are importing a plane that is on the FAA registry this looks like a good method of satisfying the interests of both the vendor and the purchaser.

www.aopa.org 1-800-872-2672

SPRING RUDDER CABLE CHECK

Recently an RV-4 pilot lost yaw control of his plane upon landing when one rudder cable became detached from the pedal, due to the failure of the cotter pin that safetied the nut and bolt holding the cable end to the pedal. Van's has long been aware of this and issued service bulletin 96-12-1 requiring frequent checks. This is a problem that could happen to any plane. Check yours, whatever your plane. In this occurrence the RV suffered considerable damage as did the two planes that the RV contacted before it came to a halt.

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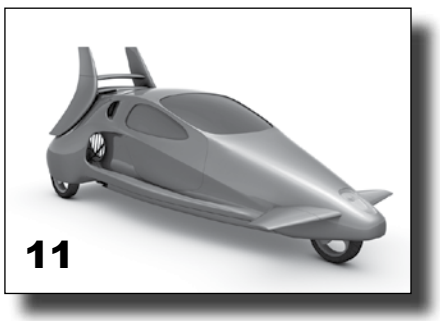
On the Cover: Rob Prior and his RV-6 "Tweety Bird".
Rob Prior Photo.



George Gregory

Due South

Another Canadian RVer Goes to Texas

We all love our RV's, no matter what configuration they are. They are fun to fly, great traveling machines and always give me a renewed sense of life after a flight.

By Gary Wilcox

I EXPERIENCED MY RV-7'S FIRST FLIGHT in January 2009, and now have about 60 hours on the airframe. I have never had a long cross country flight and when the SARL (Sport Air Racing League) started up a few years ago; it was an event that got my attention. My pals Tom Martin and Wayne Hadath always had great stories of the races, and I longed to participate.

Well, the plane is finished; with hours flown off and most of the gremlins dealt with, there was time available to get away from work, and a November race in Taylor, Texas. Hmmmm, things seem to be aligning well! Now the weather gods just have to be nice. Thankfully, they were... kind of. Like I mentioned, I have never been on a long cross country flight before, so there were lots of things going through my mind, what maps, control zones, US Customs, Canada Customs, flight plans, flight routes, weather, weather, weather, the race, the plane performance, my abilities, lots of things. Did I mention the weather?

Anyway, I'm going to go, and time to sort this out one thing at a time! The weather was a little troublesome: we left a day early, crossed the border in Sandusky, Ohio and made it as far as Richmond Indiana, (KRID) before the weather stopped us.

With an overnight stop in Richmond, the front passed through the night (we actually planned that!) and we were airborne at 7am Wednesday. 5 hours later, and a fuel stop, Taylor Texas was under our feet. 25 to 30 knot headwinds the whole trip down!! We were 9.1 hrs down, 6.8 hours back, about 1100 nm each way. We arrived Thursday, forecast for Friday was heavy rain, and they were right. We spent Friday touring some local hangers and a trip into Austin to see the sights devoured the day quickly.

Skip ahead to race day. I was well prepared for the race before I left South-

All of my testing reassured me that this was a solid plane and flying it at full race settings was a non event

ern Ontario. I had the race route entered into my gps, I had flown the course thanks to Google Earth and I had practiced the type of turn I was comfortable with for the race. I flew the plane at full power to see how it would react, and how different the controls would feel. The controls were a bit heavier, but still lighter than the Cherokee 180D I used to own. I also did turns at full power to see what it was like. I admit, I was nervous before this was done. Was my engine going to make it? Was my tail going to depart? Would my wing buckle? Everyone said no, but there was always that little voice asking the questions. All of my testing reassured me that this was a solid plane and flying it at full race settings was a non event. The extra air going through the oil cooler actually made it run cooler than what it does at 23 square. Full rich, balls to the wall, purring like a kitten. Ya gotta love it !

So, here it is, the time has come and the plane is fuelled with an amount of fuel and reserves I am comfortable with (lots extra for me). The ramp is buzzing, pilots are talking, trying to get race ready, and taking extra stuff out of the plane for weight savings, photographers snapping away. I have to get everything completed before the race briefing! I am feeling anxious, nervous, excited... dang... I need to pee.

All the pilots and race staff are thoroughly briefed on race course and rules (which are also provided ahead of time) and given the race order starting with the fastest entry. This is so you know who you are to follow and who is following you should there be any passing on the course. The briefing concludes and all the pilots go to their planes and start up and taxi out in the order given earlier. I am still feeling the way I was earlier but maybe a little more calm and focused. Will I get lost? Hopefully not!!

My start time has arrived, the flagman drops the flag and off I go, headed for the start line 3 miles away for this race. I am following an RV6 and he is clearly in view a couple miles ahead. This is great, I won't get lost as long as I see him, and as long as *he* doesn't get lost. Trust your gps!

Gary's RV-7 flanked by Tom Martin's EVO Rocket (foreground) and Wayne Hadath's on his port side.

Across the start line, full throttle, check engine monitor.....everything is perfect. Oil is 195, cylinders are good temp, EGT is 1325, fuel pressure good: perfect, continue on racing. Frequent checks of the engine reveal it is quite happy running at 100 percent power, and probably blowing some carbon out too.

Turn 1 is now approaching. Will I get the turn right? Yes, no trouble, a complete non-issue. I *do* notice that I am gaining on the plane in front of me, but this is a slow event as we are very near the same speeds. All passing is done to the right side of the forward aircraft, and radio calls of position are made. He is about a mile ahead, both in straight and level flight heading to turn 2 some 20 miles away. I suddenly remember and say to myself "****, I forgot to open my

ram air after take off", I open my ram air door and the plane gains another one inch of manifold pressure and I notice an instant increase in speed. I will be passing the plane ahead... yea, baby!

Once the pass was complete, I thought, hmmm, there goes my tour guide, I am on my own now. The Rockets (Tom and Wayne were two of them) that launched ahead of us are long gone and out of sight. Time to trust my GPS, and I also had a current map of the area with the route on it beside me. No problem, not going to get lost.

On my way to turn 2, pass completed, I find myself in a relaxed state.What happened to all the nerves? I am flying the airplane at full power, the gps has me on track, and the engine is running like a top. The air is smooth, just me and the plane; that feels so good, oh man, does that feel good. I take a look down at groundspeed - 196 knots. This is *very* good.

The rest of the race is much the same as leg 2, I have settled down in a happy spot in my plane, the engine is great and happy running full, navigation is a non-issue, but most important, I am comfortable with racing now. I cross the finish line and head back to Taylor Airport to land. After the race everyone is one the ground recalling their adventure over the past 45 minutes. Every comment is a memorable one. I find myself with adrenaline pumping and I am very excited, not the calm that I felt during the race. To best sum up the race itself, it was not the workload I had imagined. It was simple and at no time did I feel overloaded with tasks, it was completely safe and the most fun I have ever had in a plane (in the air that is). Why there are not 50 RV's out to every race is beyond me. You have to try it, if only just once, you owe it to yourself and your wonderful flying machine to experience this. Mike Thompson operates a first class event, and to all who participate and help with these.....*Thankyou*. My life has become more fulfilled because of it. I had a blast. To all the RV'ers out here...get your tail (and your tail *number*) to a SARL race next year. Even if you're not racing, it is a wonderful event and you will enjoy the people and surroundings and get a chance to exercise your aircraft and your mind.

Even if you're not racing, it is a wonderful event and you will enjoy the people and surroundings and get a chance to exercise your aircraft and your mind.

AIRCRAFT SPRUCE EAST ANNUAL SUPER SALE AND FLY-IN

Peachtree City, GA – Aircraft Spruce & Specialty East will host its annual Super Sale on Saturday, May 22nd from 8:00 a.m. to 4:00 p.m. Our East Coast Facility is located at 452 Dividend Drive in Peachtree City, beside Falcon Field (KFFC).

As in the past, Aircraft Spruce will provide free hot dogs and beverages throughout the day to the attendees. Representatives from a number of leading aviation products, including a range of avionics items, will be on hand to demonstrate and discuss the benefits of their products. These representatives will include Champion Aerospace, Lightspeed, MGL Avionics, Slemp Photography, Flightcom, LPS, Beyerdynamic, Icom, Concorde Battery, Tempest, Zeftronics, Kelly Aerospace, BB Products, Bose, PS Engineering, PTI, Lobster Mount and more.

During this one-day sale, an assortment of popular aviation products will be specially priced to provide additional savings to those who visit the facility. There will also be a number of raffle prizes given out during the day. EAA Chapter 486 from Peachstate Aerodome will be selling the raffle tickets throughout the day to benefit the Young Eagles Program. Falcon Field (KFFC) will be offering discounted fuel and a free shuttle service from the airport to Aircraft Spruce for all attendees flying in to the airport for the event. For detailed information including promotions and activities/seminars scheduled for this day, please visit www.aircraftspruce.com/eastsupersale

View Aircraft Spruce's complete product line at www.aircraftspruce.com. Request your complimentary copy of the company's free 800 page catalog (in print or on CD) and their full color Pilot Shop catalog. For more information, please contact Aircraft Spruce at 877-477-7823.

Looking Ahead / Bill Tee

Wonderful machines, these tail dragging aeroplanes are. I got my pilot license on one and have owned and operated two in my lifetime. I wouldn't have had it any other way. However, I am quick to point out that like any other aviation product they do have their limitations; and one of these is the limited visibility over the nose while taxiing that some of these machines are plagued with. I am fortunate that both my tail draggers were blessed with relatively good visibility over the nose. Not everyone is so lucky!

A friend of mine at the Brampton Flying Club who, for his own reasons wishes to remain anonymous, [we'll just call him Pedro] has a beautiful red and white RV6 tail dragger that is blessed with the usual outstanding performance and characteristics that RV's are noted for.The only thing about this bird that seems to bug Pedro is the lack of visibility past the instrument panel and over the nose while the tail wheel is rolling along on the ground.

Brampton Airport is blessed with taxiways that are only about eighteen feet wide, hardly enough to perform the classic 'S' turns while taxiing to see what is ahead of you. To be able to see past the nose is a definite advantage in avoiding unfortunate conflicts. This factor was brought home some years ago when I saw the results at Fond du Lac Wisconsin of a Commander 114 with the tail chopped off by a P51 Mustang who was taxiing behind on a narrow taxi way and did not have sight of the traffic ahead. The P-51 suffered a slight nick in one prop blade so the owner ferried it home and returned with his N.A.T-28 in order to have something to fly at the Oshkosh show.

Friend Pedro decided that it was time in the interest of safety to correct this situation. A forward facing camera hooked to a screen in the cockpit was his clever inexpensive answer. It has worked great!

Pedro first purchased a wireless automotive back-up camera and screen set from a local automotive supply store and mounted the camera beside the landing light near the outboard end of the right wing. The light produced illumination for the camera at night. Unfortunately this did not work out as well as hoped due to intermittent electrical interference of some sort from an unidentified source. An improvement was needed.

Pedro's next move was to mount a small 3" long by 3/4" diameter wired-in domestic security camera in the

Top: the camera is mounted unobtrusively on the co-pilot's side of the aircraft. Centre: the video monitor sits beside the cockpit mounted GPS; bottom, the taxi light occupies a similar position on the pilot's side of the aircraft.

right hand cooling inlet in his nose cowl. For night illumination a small high intensity light was installed in the left hand air inlet of the nose cowl.

The security camera is hard-wired into the display screen on the instrument panel. In order to do this the screen must have an auxiliary port which of course Pedro's has. Being hard wired the system is now free from interference and produces a clear satisfactory picture.

Problem solved! Pedro can now see what is ahead of him on the ground both day and night. At night time the light illuminates the center line on the taxi way [and edge line if there] and any object a fair distance away that may cause damage to the aircraft or may be damaged if run into. The day time operations are a snap as the camera sees quite well in the ambient light.

In his quest for greater safety Pedro has set an example for other tail dragger pilots to follow.

Safe Flying!

RAA

Alternate Air

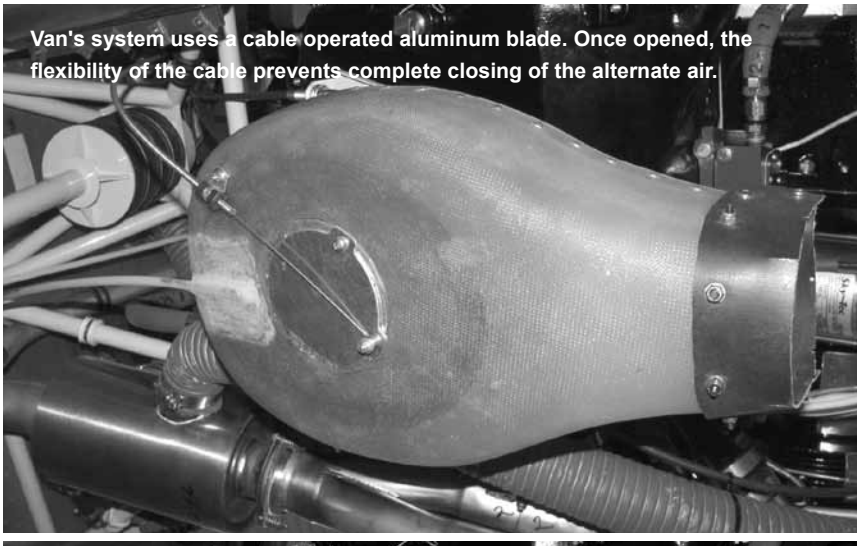
Gary Wolf

AMATEUR BUILT AIRCRAFT must have an alternate air supply available in case the main air passage becomes blocked. A carbureted engine is required to have carb heat and this qualifies as an alternate air supply. A fuel injected engine is not required to have a supply of heated air so a simpler alternate air system will suffice.

At CYKF there are currently two RV-10's under construction, both powered by IO 540's. One uses the Van's manual alternate air system that is actuated by a Bowden cable. The other uses a fibreglass reed valve that has a light spring to keep it closed. Either will qualify as an alternate air system suitable for an Amateur Built aircraft.

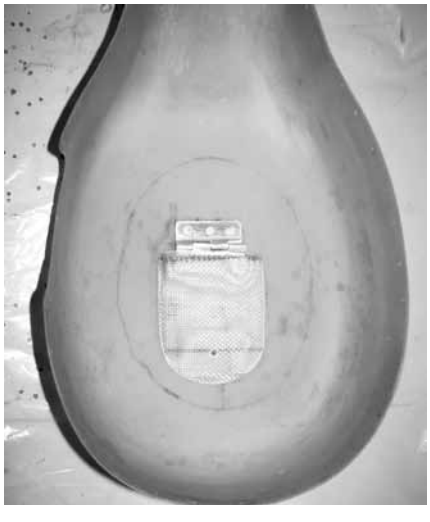
Top, right shows Van's system using a cable operated aluminum blade. Once opened, the flexibility of the cable prevents complet closing of the alternate air.

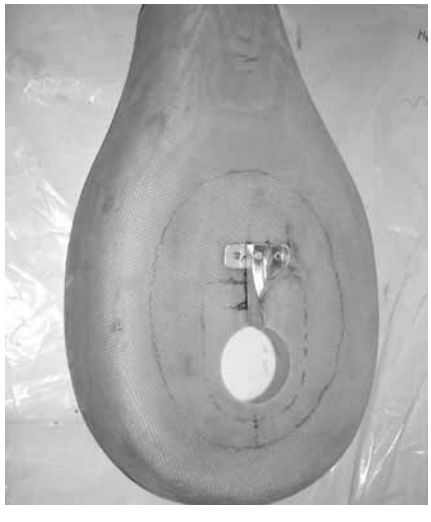
Below that, we see that the system can open the alternate air, but can't fully close it.



Van's system uses a cable operated aluminum blade. Once opened, the flexibility of the cable prevents complete closing of the alternate air.

The Van's cable system can open the alternate air but it cannot fully close it.

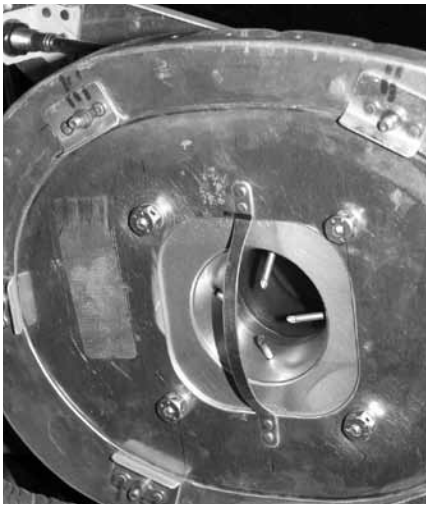




Left: The fibreglass reed is hinged on the inside of the airbox. If the main air passage becomes blocked the hinged reed will open to admit outside air. Centre: An aluminum bracket on the outside of the airbox has a hole for the spring that will pull the reed closed.

Alternate Air / continued

Right: Inside the airbox is a curved bar across the inlet of the fuel injector body. Should the fibreglass reed ever break free of its hinge, this bar prevents the reed from shutting off the airflow to the engine.



HAND PROPPING

Gary Wolf

RECENTLY A MEMBER dropped by to say that he had been informed by a Transport inspector that unless he had a competent person in the pilot seat he was in contravention of the CARs when he hand propped his plane, this despite that he had the tail of the plane safely tied to something solid. The inspector quoted CAR 602.10 and said that he would let the member off but if the fellow did this again he would be charged.

Section 602.10 of the Canadian Aviation Regulations (CARs) governs the practice of hand propping of an aeroplane. RAA Canada contacted Ottawa to see if this inspector was correct in his reading of 602.10. The answer that came back confirms that it is not illegal to hand prop when solo as long as the plane is firmly restrained.

602.10 (1) "No person shall start an engine of an aircraft unless

(a) a pilot's seat is occupied by a person who is competent to control the aircraft;

(b) precautions have been taken to prevent the aircraft from moving; or

(c) in the case of a seaplane, the aircraft is in a location from which any movement of the aircraft will not endanger persons or property.

The response from Ottawa:

"The following answer is based on the assumption that the pilot is alone (no other person on board the aircraft) and is thus hand propping the engine.

Subsection 602.10(1) is an OR proposition, either (a), (b) OR (c). Item (b) addresses the hand propping: "no person shall start an engine of an aircraft unless ... precautions have been taken to prevent the aircraft from moving".

It appears that the inspector had misread the regulation, assuming that there was an implied "and" between (a) and (b). The Ottawa response makes it clear that there is an implied "or" between (a) and (b), and as long as the plane is restrained there is no contravention of 602.10 .

When Gary Wolf dropped me an email telling me that a roadable aircraft display was coming to my town, it caught me off guard. I hadn't heard of any car or aviation shows coming to town, and a quick canvass of my car-nut friends elicited nothing. As it happens, it was a forum on sustainability*; everything solar, electric, regenerative; in a word, getting more for less. An event someone from Greenpeace or Plugged In America would attend.*

By George Gregory

More for Less: Sam Bousfield's Switchblade

I'm sort of oriented this way because I'm an efficiency nut. I like maximum bang for the buck, and by happy coincidence, that usually means something that's better for the environment.

Of course, it's not hard to draw a line from that sort of thinking to a roadable aircraft. Any dual purpose vehicle is going to see some efficiencies: it takes less energy to build one vehicle that does two things than it does to make two separate ones. And then there's the cost of building new roads: an expensive, dirty, energy-intensive effort that requires upkeep while it covers up arable land. You build less roads when people can fly part of the way. And airplanes, as we all know, just need runways; they don't dig up the ground that passes under their wings. For pilots, there's further reasons: practical VFR flight (land and drive through inclement weather), door-to-door practicality, no tie-down or hangar fees, and only having one vehicle to get you around while still scratching your itch to commit aviation.

As pilots, we worry about the declining pilot population. Something that is cool and really useful could go a long way to repopularizing flight with ordinary people. Let's face it: it was cheaper when we were younger, and there is plenty of competition for the discretionary dollar right now. Something that makes aviation an attractive place to spend your money can only do us good.

It really is more for less.

Design Concept

While there are efficiencies to be found, there are bound to be compromises. Many detractors will cite this as an insurmountable obstacle; that such a vehicle, even if technically successful, would be neither a good airplane or car. Every airplane is a compromise to start with; but what of a dual use vehicle? A designer of a roadable aircraft has to look for a whole new way of saving weight, of making components do double-duty, and some interesting strategies to do so have emerged.

One such concept is Sam Bousfield's Switchblade.

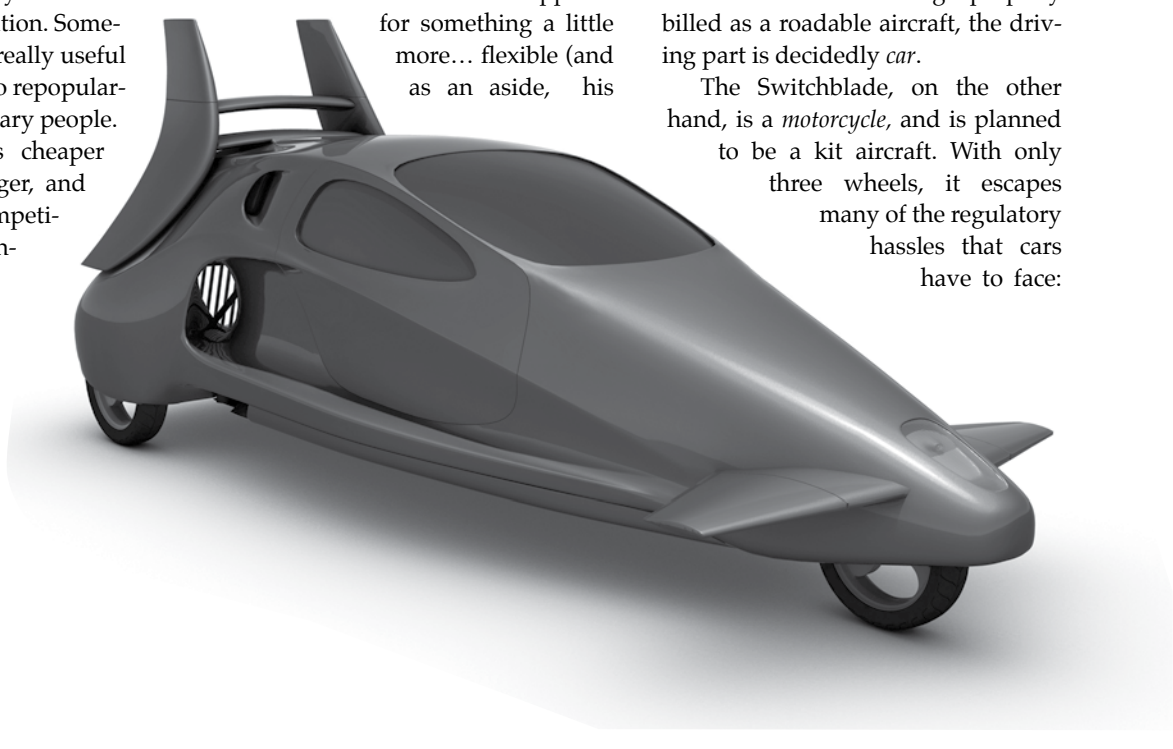
Sam has was attracted to aviation as a young man, but vision issues kept him from military flying.

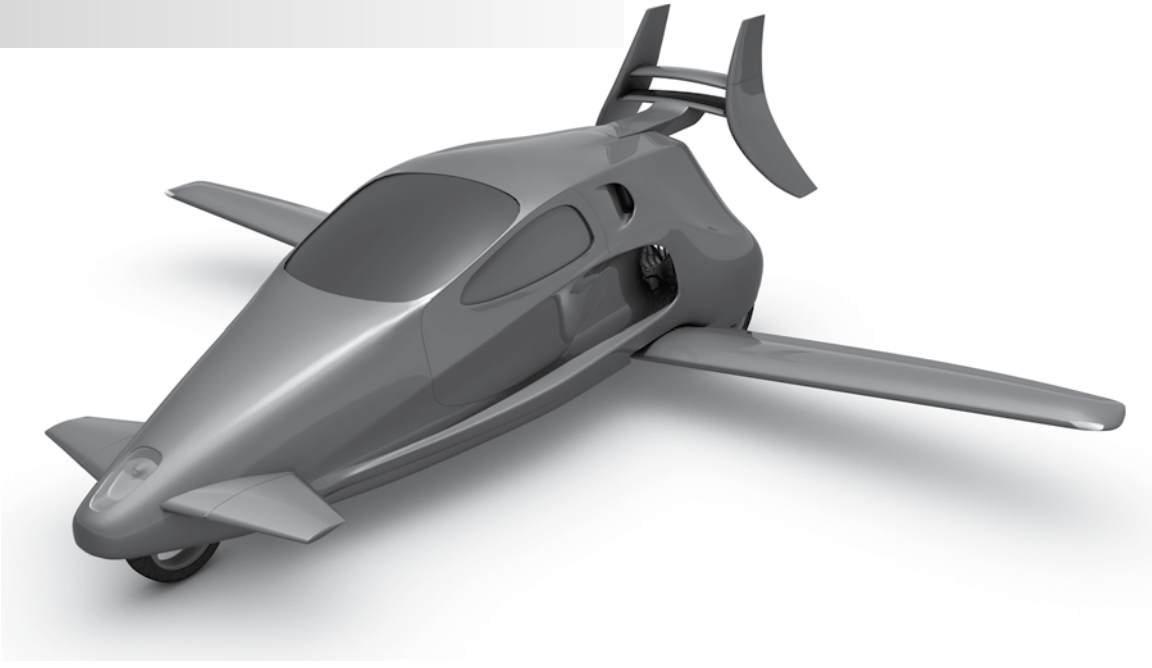
He "always liked to build fast things", so it's not too much of a stretch to wonder if the frustration of sitting in rush hour in muscle cars whetted his appetite for something a little more… flexible (and as an aside, his home airport in Auburn, California is also where one Molt Taylor's original Aerocars happens to live).

I'll point out right at the start that it's an attractive vehicle. Featuring composite construction and a ducted fan, it would look quite at home on the set of Star Wars. For driving, the small, high-lift wings fold forward and tuck into the fuselage behind protective doors; the tail snuggles up against the rear to shorten the car version and weight is moved forward a little, putting extra pounds on the front wheel for driving control. The ducted fan is tastefully buried behind the cockpit.

Comparisons to Terrafugia's Transition are bound to occur, but in my mind they represent two different, equally valid approaches. The Transition is geared towards the light sport pilot market and is priced like a certified aircraft. It's for people with money, no time to spend building, and who want an LSA type aircraft. And the Transition is a four-wheeled vehicle that is designed to conform to Department of Transportation specs for certified cars. Although properly billed as a roadable aircraft, the driving part is decidedly *car*.

The Switchblade, on the other hand, is a *motorcycle,* and is planned to be a kit aircraft. With only three wheels, it escapes many of the regulatory hassles that cars have to face:





airbags, 30 mph bumpers, and other weight-producing appendages that need to be left on the ground.

And because it's a kit, it will be cheaper than something you could buy ready-to-go, an important factor when creating a new market. Get a few of them on the road, and watch how the market develops.

Technical Details

One of the most noticeable attributes of the Switchblade is the lack of conventional propeller. Air flows along the sides of the vehicle towards a ducted fan mounted behind the cockpit. I asked Sam if he expected flow separation here; the air takes a pretty sharp turn aft of the cockpit. He's still finalizing the design of the ducting but feels he's got a handle on it.

The delta trike configuration suits the airplane version, but concerns arise on the road. What of sharp cornering at speed? Sam's had a suspension expert working on the problem, and is assured that given the low, rearwards centre of gravity that there is no tipping risk while maintaining enough weight on the front wheel for control.

I also asked about the small elevator, but it was pointed out that it's a biplane surface and so has twice as much area as would initially appear; further, the boom extends 3.5 feet aft as the wings extend for flight mode. Sam had testing done at DARcorporation of Lawrence, KS and is assured that the area and authority of the pitch surfaces is up to the task.

The Switchblade's MTOW is planned to be 1500 lb. That's a little heavier than the Transition, which must weigh in at 1320 pounds if it's to comply with the Sport Pilot rules; and with the smaller wing, it's not an insignificant number. With a wing loading of about 23 pounds per square foot, it's definitely not Sport Pilot compliant; it's more like a Lancair . The stall is expected to be about 57 knots; that would make the landing speed about 75 knots or 86 mph. The wings themselves are smallish, 8 percent thick high-lift airfoils. Conventional ailerons and simple slotted flaps are planned. The wings, originally planned for powered retraction, are manually stowed in their storage bays safe and snug behind clamshell doors. This makes sense: automatic mechanisms add weight and complexity. And, powered or not, any roadable design is going to centre around how the wings fold up. Some Air Force mechanics at an airshow one day convinced him of the nightmare of maintaining the hinge mechanisms on F-111's, so Sam set out to find a better way. What resulted was an improved hinge mechanism that takes flight loads off the hinge itself while improving maintenance issues.

The projected engines are at this point the Freedom rotary engine (160 hp), the BMW 1000rr (192 hp), Yamaha's FJR 1300 (163 hp) and the Suzuki Hayabusa at 189 hp. This aircraft should have ample power for all projected missions, whether on the ground or in the air. The ducted fan is intriguing in this application, but it seems reasonable: quieter operation, reduced chance of propeller damage, safer (although Sam informs me the fan will be disengaged for ground operations anyways) and, well, it looks cool.

Sam and Martha Bousfield, creators of the Switchblade Roadable Aircraft Concept.

The controls will be conventional by aircraft standards; rudder pedals with a control yoke. Unlike an airplane, (and like a motorcycle) the throttle will be on the yoke as well to avoid confusion between rudder pedals and those normally associated with ground vehicles.

Cruise is projected to be 160 mph, range of 350 miles with side by side seating for two; 50 pounds of baggage are planned. A glass panel is planned both for superior awareness and weight savings; a Garmin radio stack with Dynon glass will complete the ensemble.

The crosswind component is one issue that Sam admits still has him concerned: the wings are so low to the ground that there isn't a lot of room for tipping the upwind wing into the wind for a typical crosswind landing to be done, and for the same reason how far the flaps can extend may be affected. Research, as they say, is in progress.

The kit is expected to cost about $60,000, sans motor and instruments. You'll probably build it for $80-$100,000. Still not cheap, but you don't have to buy a separate airplane. Pretty cool. And one last thing: Sam told me the prototype should be ready by the end of the year, and the first flight is planned for Kitty Hawk.

That's a flair for the dramatic. RAA

For more information, visit their website at http://www.samsonmotorworks.com/

Importing an airplane From the United States

Importing an airplane from the US isn't difficult, but it can be a time-consuming process. The procedure is well documented, the documents available from MD-RA are very extensive and go into every little detail. I won't duplicate them here, but rather I will give an overview of the major points along with any "gotchas" that turned up during my import/ by Rob Prior

General requirements

The basic requirements are simple enough that I'll copy the exact words of the exemption to Chapter 549 here:

"A Special C of A – Amateur-built may be issued in respect of an amateur-built aircraft constructed outside of Canada, where:

-the aircraft was constructed in accordance with standards of the State of construction, and the Minister finds them to be equivalent to [the Canadian standards];

-the aircraft was issued a permanent flight authority pursuant to the regulations of the State of construction, and has subsequently completed not less than 100 hours of air time; and

-the aircraft undergoes a complete inspection for compliance for these standards."

Pre-purchase

Before you write the final cheque, there are a couple of things you should do. These don't have to be done ahead of time, but they could alert you to issues that might arise later during your import.

File a Letter of Intent with MD-RA. This opens a file with MD-RA, and you will be sent a package with all the information you'll need to complete the import successfully. This can even be done before you have chosen the aircraft, just to get the ball rolling.

Have a pre-purchase inspection done on the aircraft. Ideally, this should be done by a third-party with extensive knowledge of the type of aircraft you're considering. Local builders who have completed similar aircraft and local AME's who are familiar with the design are good ▶

DO NOT give the airport of entry unless that's where you want to stay!

candidates. This inspection should include a check for any AD's or Service Bulletins, for the airframe, engine, and propellor.

Get copies of everything. The first inspection you do with MD-RA for an import is a "Documentation Review", so check MD-RA's list and make sure you have copies of everything they need. The paperwork can be scanned and emailed to MD-RA, and the review can be done in a couple of days. MD-RA will check that as far as the paperwork is concerned, the plane is qualified for import. The MD-RA, Transport Canada, and the FAA were all happy with good, legible digital photos of the documents. Sometimes these are better than photocopies.

Gotchas: These do not disqualify an aircraft from import, but the importer needs to be aware that they need to be present before the aircraft will pass a final inspection. Gascolator. Amateur-built aircraft in the US are not required to have a Gascolator at the lowest point in the fuel system, but Canadian regulations do require this. Control Limit Stops. I don't know if this is an RV-specific problem or not, but many RV's imported from the US have been found with no limit stops on some or all of the controls. Data Plate. The original data plate stays with the aircraft, it will not be changed out for a Canadian data plate. Do not remove it, allow the owner to remove it, or deface it in any way.

Pre-transport

Assuming everything went well in the inspection and documentation review, now you get into the paperwork for moving the aircraft from the US into Canada. I will only cover the case where the new owner will be flying the plane into Canada under Canadian markings.

The previous owner must de-register the aircraft in the US. They can call the local FSDO (local to where the aircraft is based) and tell them they wish to de-register their aircraft for export to Canada. There is a form to fill out and send to the FAA Headquarters in Utah, and the plane will be stricken from the US Register. Reminder: Make sure the owner doesn't remove or deface the data plate.

The new owner must register the aircraft in Canada, and choose the new Canadian markings. If you like, you can search for available marks on the TC website and pick a few options, and have them ready when you call TC. TC will need to wait until the FAA updates their database (usually a couple of days).

The new owner must apply to TC for a "Provisional Certificate of Registration and Flight Permit," valid for a set period of time. I arranged for 30 days, as the weather in January was a little unpredictable. Discuss your options with TC, they have some discretion in assigning the time limits. Note that this permit only takes effect the moment you cross the Canada-US border. It is not valid for flight in the US. It will specify a terminus, intended to be your home airport where the airplane will remain until the inspection is complete... DO NOT give the airport of entry unless that's where you want to stay!

The new owner must apply to the local FSDO to issue a Special Flight Authorization, which allows you to move your Canadian-registered aircraft through the US. Similar to the Canadian permit, this permit is only valid in the US. This was the only paperwork I had trouble with during my import, as the expert at the local FSDO retired the week before I called in, and the remaining staff had to learn the process before they would issue any papers to me. Again, ▶

there will be a time limit, but if you already have the Canadian permit you can probably talk them into aligning the US permit to match.

The new owner will need to apply the new Canadian markings, and obscure the US markings, before the plane is flown back. Plan ahead to decide what you'll be doing here. If the plane has the US markings painted on, you will need to cover them. A large piece of peel-and-stick vinyl will do just fine. Similarly, vinyl letters will do for your flight back. Staples sells letters in the correct sizes that will do for temporary markings.

The new owner will have to obtain insurance for the aircraft. Be clear with the insurer that the plane will be imported to Canada on a flight permit, and inspected once it's here. The insurance companies are familiar with the importation process, and know that import requires that the airplane already be "proven" and inspected in the US before you can import it. Note that depending on the aircraft, the new owner may need to show proficiency on type with a checkride and/or dual instruction.

Gotcha: Taxes. When crossing the border in the aircraft, be prepared to pay the PST and GST (or HST) on the purchase price. Note that this applies even if the aircraft was built in Canada, exported to the US, and is being re-imported.

Pre-inspection

Once the aircraft is safely in its hangar in Canada, you're ready to start the final paperwork push. Now is when you make the minor upgrades that will bring the aircraft into compliance with Canadian regs. Gascolator, final markings, etc.

Apart from paperwork, some things need to be done before your final inspection:

Weight and balance. Unless you have a recent weight and balance for the aircraft, or have reason to believe that the weight and balance you have is accurate, you should re-weigh the aircraft.

Fuel flow test. The new owner will have to conduct a fuel flow test, to prove that the fuel system can supply the required amount of fuel in the most critical situation (climbout).

Once the aircraft is safely in its hangar in Canada, you're ready to start the final paperwork push.

Placards. If they aren't present, the new owner will have to placard the aircraft following the requirements listed in the Exemption to Chapter 549.01 that allows the import of Amateur-built aircraft.

Markings. If you placed temporary markings on your aircraft for the flight back, now is the time to make the change to your permanent solution. The requirements for markings are laid out in the CARs. There are a lot of clauses and sub-clauses, but they do boil down to a few simpler rules for amateur-built aircraft. Read through the section on markings and cross off those parts that don't apply, and it'll boil down to what's necessary.

Gotchas: Placards. Amateur-built aircraft in the US are required to be marked "Experimental" in large letters somewhere in the cockpit. If it's painted on, keep in mind that the CARs require that it be removed or obscured before you get the aircraft inspected. A vinyl label may be acceptable here as well.

Gross Weight. The gross weight of the aircraft declared on all forms must equal the gross weight as specified

by the kit manufacturer. No changes are permitted during the import process, and officially if the aircraft was registered at a higher gross weight in the US it can still only be registered at the kit manufacturer's maximum at time of import. There is a process for raising the gross weight of an Amateur-built aircraft after completion, it's not difficult and you may explore that after the import is complete if so desired.

Bonus: The Exemption to Chapter 549 changes the wording to the "this aircraft does not comply with certified requirements..." placard. The wording is shorter, and the exemption only requires that the letters be 3/8" tall if the placard is being placed on the side of the aircraft. If it's inside, it merely needs to be "readily legible from each passenger station."

Flight Testing

Once you've had your final inspection, and you have your Special Certificate of Airworthiness, you're free to fly, with the following initial restrictions:

- Day VFR only
- Aerobatics prohibited
- Climb test required within 5 flight hours
- Climb test report must be submitted to Transport Canada

Note that on an imported Amateur-built aircraft, there is no 25 hour restriction, and no passenger restriction. The aircraft is assumed to be safe, as it has already proven itself through its inspection and flight history in the US.

Gotchas: When you submit your climb test report to Transport Canada, they will take your Special Certificate of Airworthiness and make you a new one. If you want it back on the same day, take it to them early in the morning and not late in the afternoon on a Friday... I almost found this out the hard way.

The costs

So, at the end of the day, what does it cost?

- Reservation of Canadian marks (TC) $50
- Letter of intent (MDRA) $80
- Documentation review (MDRA) $105
- Provisional Certificate of Registration and Flight Permit (TC) $110
- Special Flight Authorization (FAA) $0
- Certificate of Registration (TC) $110
- Final inspection (MDRA) $625
- Issue Special Certificate of Airworthiness $250
- Total: About $1330.

Service d'inspection Représentant du Ministre-Aviation de Loisir (RM-AL)
Le RM-AL va tenir une session d'information aux Les Ailes Québecoises, Aéroport Jean Lesage, Québec, samedi le15 mai, 2010 de 13:00 à 16 :00 hres.
Toutes les personnes concernées par l'Aviation de Loisir sont invitées.
Si vous désirez des informations additionnelles, contactez moi à pierre-fournier@videotron.ca ou au (514) 645-4355

Across Canada

RAA Chapters in Action

Vancouver RAA Chapter 85

On March 20th, chapter 85 had its annual awards banquet at the Delta Town and Country Inn. The turnout was excellent and the food could only be termed phenomenal, featuring prime rib served with yorkshire pudding and potatoes, vegetables and a variety of salads.

A number of awards were handed out during the evening. Notable among them was the Mike Davy Award, the RAA's award to members who have rendered particularly meritorious service to the aviation community. It was presented to member Terry Wilshire, who also received from the chapter the Most Valuable Member Award for his vital service in the success of the chapter's airfield, Delta Heritage Airpark.

The entertainment of the evening was Harry Hardy, a former WW2 Typhoon pilot , who regaled an appreciative audience with a powerpoint presentation with tales of life and missions flown in a Typhoon squadron.

Terry Wilshire is awarded the RAA's Mike Davy Award by Rob Prior for his work with the Greater Vancouver Regional District in the managing of Delta Heritage Airpark.

RAA Scarborough/Markham Chapter

If any chapter members are thinking about going to Sun 'n Fun in Lakeland, Florida, this year (April 13-18), they might get in touch with Bill Phipson (416-431-2009) who is planning to attend. If you have a favourite DVD on an aviation subject, please inform Bob Stobie. These can be very useful if we have a last-minute speaker cancellation. With our new projector and Bob's laptop, these DVDs can provide an excellent video presentation, as was the case with Fred Briggs' "Canada Above And Beyond" at our January meeting.

We wish to thank Bryan Quickmire (<bdq@challenger.ca>; 705-721-9811) for talking to us at our February meeting. Bryan is the Canadian dealer for the Quad City Challenger, which fits very nicely into the Canadian Advanced Ultralight category. He showed us many pictures from a flight commemorating

TERRY WILSHIRE was the recipient of both the Most Valuable Member and the Mike Davy Award for his significant contribution to furthering personal flight for RAA members across Canada and especially for Vancouver's Chapter 85.

In the mid-1990's the chapter's field, Delta Air Park, was threatened with closure. The owners had sold it to the province, who seemed uninterested in continuing its existence as an airfield. Terry's tireless efforts resulted in a public air park run by RAA Chapter 85 under the auspices of the Greater Vancouver Regional District. The relationship between the chapter and the GVRD has been entirely positive and stands as an example of a public facility that actually pays for itself - truly a win-win situation. He is a true citizen of the aviation community that will continue to reap the benefits do his efforts for years to come. Terry's constant effort and vision brought about the established, stable relationship that continues to work for us all.

the 25th anniversary of the Challenger involving 5 aircraft equipped with Puddlejumper amphibious floats made of fibreglass which sell for $5,900. The Challenger can be converted to wheel/skis in about 1.5 hours. The cruise speed on floats is 75 MPH; on wheels, is 85 MPH; stall speed 30 MPH; glide ratio 11:1 The Canadian price for the Challenger kit with the Rotax 503 engine (50 HP, air cooled) is $20,000 with a build time of 225-250 hours; with the Rotax 582 (55 HP, liquid cooled, $7,000 more), the build time is 300 hours. There are 500 Challengers flying in Canada, and 4,000 world-wide; it is the leading ultralight by a factor of 10. We extend our thanks to Brian for his interesting power-point presentation.

We extend a major vote of thanks to Ed Lubitz, our March speaker, for telling us about his exploits with the Silver Dart (edwardlubitz@gmail.com). He and John Taylor did extensive research into the original design; they even managed to obtain some drawings from Alexander Graham Bell's patent application. It was built and flown by Ed last summer at the Lubitz home. They used a covering of dacron (like the Challenger) rather than silk, and a modern 45 HP 2-stroke engine rather than the original V8; ailerons were employed rather than wing warping. The aircraft was trailered to Montreal to the Bombardier factory for an anniversary celebration. Most unfortunately, it suffered some damage when it was blown over by a helicopter. We give our appreciation to Ed Lubitz for his initiative in preserving our aeronautical heritage, and for sharing it with us.

The annual presentation of 'Youngest Pilot Award' by Bill Tee on behalf of RAA Toronto Region Chapter at the 6 March 2010 Brampton Flying Club Wings Banquet, MC'd as usual by Ms Jacquie Perrin of CBC. The award consists of a cheque presented for an hour of flight time in a C172 and is presented this year to 17 year old Gaige Moore, youngest pilot to graduate with his pilot license in 2009 from Brampton Flying Club.

In May or June, we are trying to reschedule Bill Spring (wspring@cogeco.ca) who will talk to us about Hummelbirds; Bill created the original detailed plans of the aircraft first designed by Morris Hummel. Also in June or May, we shall get Jeff Page to talk to us about the flight he and his wife Lesley made to the Bahamas in a C-172 (see COPA Flight, March, 2010).

RAA Flamborough

RAA Flamborough, for those who don't know it, is a small grass strip near Flamborough Centre just north of Waterdown, ON. During the winter months there is no flying as, at the present time, nobody is flying skis. Lots of activity in the hangars, however, particularly on Tuesdays and Saturdays when things start to hum. Member Jim Anderson, who has almost finished his Glastar, but keeps gettting behind a little from all of the time he puts in helping others to get their projects moving, recently purchased from a builder in Naples FL an 85% replica of the WW1 fighter SE5A. Jim's brother has time on an SE5A so will fly the machine up when the weather becomes suitable. This machine has many special features and hopefully we can spotlight it in an article during the summer.

London - St. Thomas

The March 2010 meeting was

continued on page 32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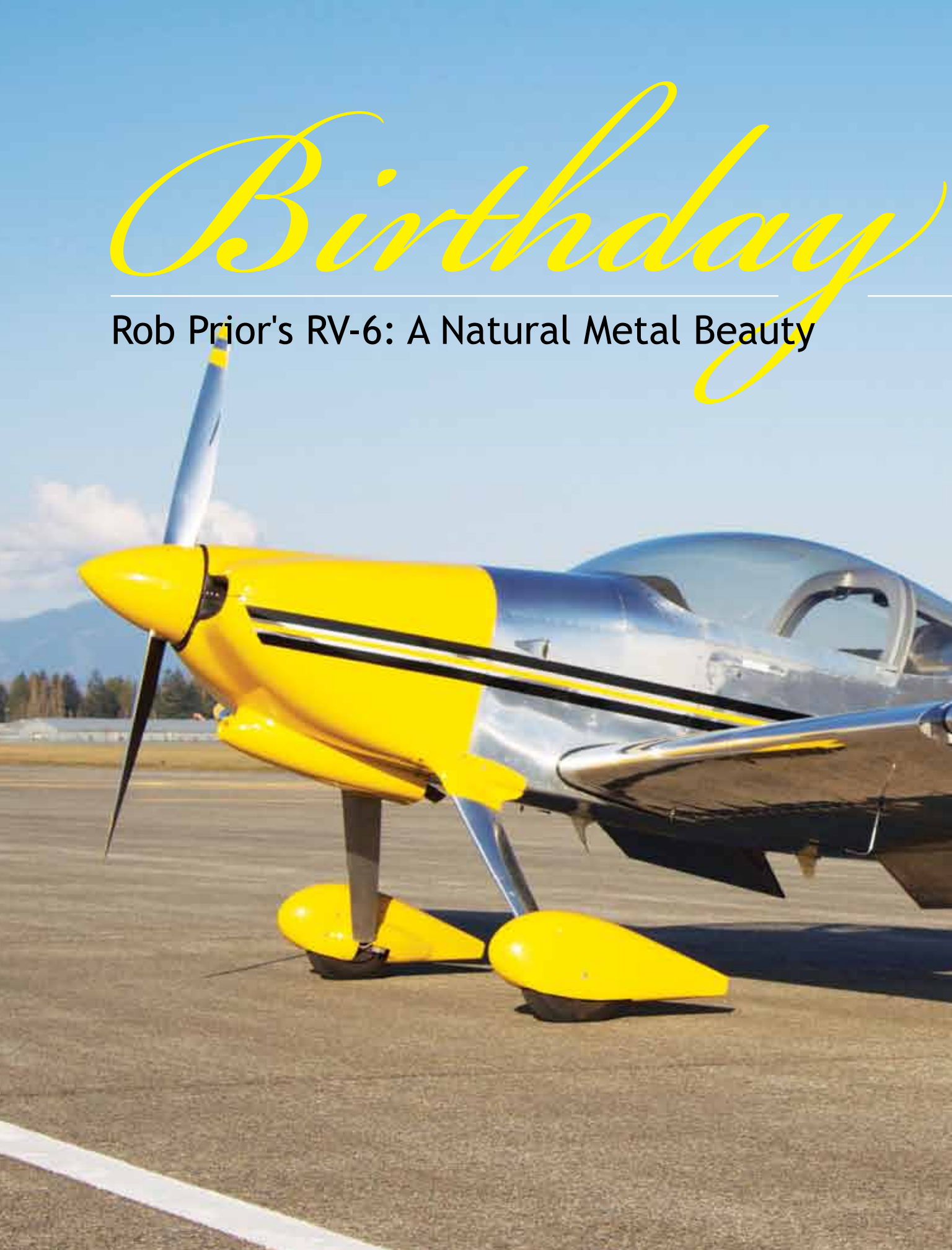
Birthday

Rob Prior's RV-6: A Natural Metal Beauty



Suit

I'VE ALWAYS HAD THIS THING about natural metal airplanes. Maybe it's because my first airplane ride was in a polished Cessna 170; or perhaps it's my love of '30's-era air transport: sleek silver Electras and DC-3s still take my breath away. When I saw the pictures of Rob's new acquisition I was impressed. While a modern design, it looks nice in a classic sort of way.

By George Gregory / Photos by Rob Prior

And what to write about Richard VanGrunsven's airplanes that hasn't already been said?

With nearly 7,000 completed aircraft, it certainly rates as one of the most popular homebuilt series ever offered to the public. And small wonder: they do so many things well.

Docile, predictable handling while remaining sporty; a fast cruise while retaining the ability to get in and out of grass airports with short strips. His designs feature solid, conventional construction, the kits are reasonably priced, and they just look nice. What's not to love?

The RV series dates from the 1970's. The RV-3 was the first, with Richard making partial kits himself out of a shop behind his house in Reedville, OR. The company grew, hired employees, and moved to North Plains, Oregon before settling into their present 60,000 square foot facility in Aurora, Oregon.

The RV-3's sparkling performance quickly garnered a considerable following, and soon requests were bouncing around for a two-seat version, hence the tandem seat RV-4. But flying is a social experience as well, and demand for an efficient touring aircraft became apparent. By the mid-80's the RV-6 arrived on the scene, first as a taildragger, then as the tri-geared RV-6A. Careful attention to aerodynamic detail meant that the side-by-side design paid a rather small drag penalty; the RV-6 is only 3 miles per hour slower than its tandem sibling.

We all know that Van went on to design the RV-7, 8, 9 and 10 as well as his entry into the Light Sport category with the RV-12. There's even a motorglider (predictably dubbed the RV-11) in there somewhere. But that's another story.

One of the neat things

about being involved with the magazine is that I can often mooch, guilt-free, rides in nice airplanes if I write an article on someone's new ride. When I heard that Rob Prior had bought one - lovely, natural-metal RV-6 - I immediately put him on my watch list, patiently waiting until the paperwork was done before putting my plan into action.

Finally weather and timing coincided and we were able to book a sunny spring afternoon to commit aviation.

This was not my first ride in an RV. I'd had my first taste with George Worden's RV-4 back in the 90's, and then Ron Eagleson's RV-8A some years later. But this was my first taste having as good a view as the pilot, and I looked forward to the experience.

Rob bought the airplane from Jay Easterday in the town of Caldwell, Idaho - by happy coincidence, an easy day's flight from greater Vancouver. Built in 1996 by Robert Sipes of Silverdale, WA, it passed from him to a second owner in Oregon who had only flown a few hours on it before losing his medical; Jay bought it from him and flew it for a while before work obligations forced the sale to Rob.

It had about 500 hours on the airframe at the time of sale and was usually flown pretty regularly - about 3 times a week. Its various owners took good care of it, and the airplane has never been bent. The only things that needed tweaking upon import into Canada were control stops for the elevator, re-installing and re-torqueing of the engine mount bolts, a few clamps and an AD on the rudder pedals.

Entry into the airplane was not problematic. There's a space between the seats that served as a handy place to put one's foot while resting a hand on the back of the canopy frame. All that's left is to lower yourself into your seat and strap in. We were settled in a few seconds and after the obligatory checks, Rob started up.

We taxiied out to Delta's run-up area with a few S-turns, though I could see over the nose if I craned my neck. Taller sorts (I'm only 5'-8") would work less at it, but it was hardly a problem.

Noise levels were about what I expected - certainly not any worse than my 172, and the ANR headsets Rob handed me helped further.

Takeoff is normally accomplished without flaps, and Rob likes to accelerate to 100 knots in ground effect before climbing out. The tail was up in a few seconds and once airborne the climb settled down to about 1200 fpm at sea level. The engine, a wide-deck Lycoming 0-320 E2D of 150 horses, pulls Rob around the sky at 150 knots (about 170 mph) at 2350-2400 rpm, and the fixed pitch prop allows a maximum rpm of 2600. He says it maxes out just shy of 200 mph.

We made it out to the north practice area in no time flat, and started to explore the RV's capabilities.

The handling didn't surprise me; it had the same quick, light feel of the other RV's I'd flown - even right down to the stall, which had a definite break but was straightforward and easy to power out of. Pushrod activated control surfaces mean there is no slop in the connections, and the surfaces are proportioned to give a delightful harmony to the controls.

It's easy to lose a few hundred feet if you're not paying attention, and I felt like I was wandering all over the sky because the response is just so darned quick. If I supposed to impress Rob with my piloting acumen, I failed miserably. I commented (weakly) that an airplane like this is bound to make you a better pilot because it teaches you to pay attention. Rob graciously agreed.

We explored steep turns, slow flight and a delightful yank-and-bank session just because... it's the right thing to do in an airplane like this. One of the things that continues to amaze me about these aircraft is how they can be so light and quick on the controls without feeling twitchy. It's like the aircraft is on rails until

you tell it to do something, which it then does with alacrity. A pure joy to fly.

Too soon, we had to head back. Believe it or not, I actually had a date to take a couple of friends up in my Cessna right after (so many planes, so little time...). It was certainly a day for flying.

Delta was beneath our wings in short order and we proceeded into the pattern.

The view over the nose was fine right into the flare, at which point peripheral vision must come into play. The landing gear handled it all with a minimum of fuss and we were down.

They are more than just a good airplane; Van Grunsven's airplanes have indeed become a standard.

Rob's plane is a fun flyer.

The cockpit is pure analog for day and night VFR operations. Avionics include a VALcom, ICOM A210 radio, a Garmin AERA 500 gps, a Collins mode C transponder and a PS Engineering intercom. The Garmin is wired to the radio using the Garmin Data Protocol; this means the radio picks up the frequencies for nearby airports and puts them in a special GPS standby that can be called up directly on the radio - no more hunting through the Canada Flight Supplement for frequencies. It's also wired to the intercom so that airspace and terrain alerts are heard audibly in the headsets. Pretty neat. Some sort of EFIS is planned in a year or two.

The cockpit is 43 inches wide; two inches more than my Cessna (a noticable difference) and features a generous baggage compartment capable of holding 60 pounds of whatever you want to stuff back there. And since it's a side by side design, the baggage sits closer to the centre of gravity, making the loading of the airplane much more convenient.

The upholstery in Rob's aircraft

is economical, effective and attractive. Fabric covers the cabin walls, and the floor is carpeted. The overall workmanship on the airplane is quite good, and the natural metal highlights this; there's no paint to hide flaws.

Van's website reports that fuel capacity 38 US gallons, yielding a range of 775 miles at 75 percent power at 8,000 feet ASL. An economy cruise can stretch that to 950 miles. That give some serious utility.

Approach is normally at 70 knots (80 mph), and wheel landings are the normal landing; Rob says that three-pointers tend to land tail first.

The flaps and trim are manual. Works for me - less to break, and less to weigh things down.

All in all, a solid, well constructed aircraft.

Rob's working on an RV-7, by the by. Plan "A" has always been to build that; the -6 was supposed to be something to keep him occupied during the build.

I dunno. He seems pretty happy with this one. And who could blame him?

In songwriting, a composer's dream is to write something that goes beyond being a hit; the holy grail is to write what's called a "standard": something that is so well known, so *everywhere* that it becomes cultural icon. In the world of amateur-built aircraft, Van's designs continue to impress for good reason. They are more than just a good airplane; they have indeed become a *standard.*

AVOID HST FOR **LIFE**?

...Well, at least for RAA Life memberships. On May 1 the HST kicks in and must be applied to membership dues. There are two ways to avoid this:

1. RAA is offering a discount deal to the first 100 who buy a life membership. The usual price is $625 plus GST, and the first 100 who apply may buy a life membership for $500 including tax. The best way to do this is to phone Marina on Tuesday, Wednesday, or Thursday at 1-800-387-1028 and pay by credit card. Alternatively you may phone to reserve your membership and then mail a cheque.

2. All regular memberships that are renewed before May 1 will be at the current $53.50 rate. Renew yours before May 1st and avoid the HST.

REC FLYER SUBMISSIONS
George Gregory and Gary Wolf are now prepping the next issue of the Rec Flyer. Please send Chapter News and New in Canadian Skies items to gregdesign@telus.net. Please send tech articles and classifieds to garywolf@rogers,com .

Does your chapter listing need changes? Please send new text to gregdesign@telus.net

In the spring of 2008 I was made aware of an AD regarding my ECI cylinders.

THERE ARE TWO GROUPS of cylinders involved, and include the popular 360 and 540 style Lycoming engines. These cylinders are P/N AEL65102 manufactured between 2002 and 2005. There was a manufacturing flaw that existed between the cylinder and the head. This had caused the head to break from the cylinder in a few cases particularly with the later batch. The main problem cylinders, Group B, were the last of the run and the AD specifies a maximum service life of 350 hours. After which they are to be removed and replaced. Originally ECI was replacing these cylinders with new cylinders. The owner was left freight and mechanics costs for the replacement.

The other group of cylinders is the "A" group and the AD specified a visual inspection for cracks and a compression check. If all was well then the airplane was fit for service but this inspection had to be done every 100 hours and the cylinders had a maximum life of 2000 hours at which time they were to be scrapped.

Fortunately, I thought, my cylinders fell in the A group and passed the test with no problem. As I normally fly about 100 hours a year the AD was of no great concern to me.

Early this year an updated AD has appeared that has expanded the number of affected B group cylinders and increased the mandatory inspection time to every 50 hours for my A group cylinders. Now I am concerned as I felt that the value of my airplane has been decreased due to this AD.

I now have about 400 hours on this engine and right from the start it seemed to use more oil then I was used to. Also there was more blow-by from the crankcase vent than I had seen with my other planes. It ran fine but I somehow felt it just did not have the "snap" on application of full power that I was used to in other rockets.

With the new AD, and my unease regarding oil consumption I spoke with ECI and asked that my cylinders be reworked. They came out with a program for the "A" group cylinders in late January. I was issued an "AMOC", alternate means of compliance, for the AD. ECI will rework my cylinders, inspect and repair if necessary, provide new serial numbers that are not affected by the AD. They will cover all those costs and pay freight one way. I pay the other direction freight and my mechanics costs. Personally I felt this was a good deal; I end up with essentially a complete top overhaul and get a chance to take a look in the engine. The AD goes away and life will be good again.

When we removed the cylinders it was clear that my pistons had more wear on the skirts than you would normally see in an engine with this number of hours. John Goris, Purple Hill Aviation, my mechanic looked at the rings and noted evidence of burnt oil aft of the compression rings. This was no surprise to me as I had always felt it used more oil then normal.

My high compression pistons had come from Lycon, in California, and I returned the pistons to them for inspection. Their conclusion was that the ECI rings had not seated properly. Apparently there is another totally unrelated SB service bulletin from ECI that relates to this issue. It speaks of increased oil consumption, blow by, discoloured oil, all things I had noted about this engine. The repair was to replace the rings and hone the cylinders. The ECI rings have an imbedded plasma coating that rarely flakes off the surface of the rings. Lycon felt that this could have contributed to the increased wear on my piston skirts. Our RAA president, Gary Wolf, had noted similar wear in motorcycle engines that had unusual blow by. His theory, and I concur, is that the blow by burns off the lubricating oil on the piston skirts, thus the abnormal wear. It should be noted that the cylinders were not affected by this increased piston wear.

ECI has been swamped with cylinder returns and with the increased volume and the need to set up a repair protocol my promised three week turn around time is now approaching 10 weeks. The cylinders have gone through the shop, passed the tests and are in the assembly phase. I expect to lose about one month of flying as my runway is not serviceable in the winter months and I am ok with that.

As always there is lots of chatter on the internet, regarding different treatments for different customers. This is a huge issue for ECI and I feel they are doing the best they can under the circumstances. If you are in either of those groups, call them and see what you should do. Try to plan around the event when your aircraft may be down for a few months. RAA

14TH ANNUAL

RAA

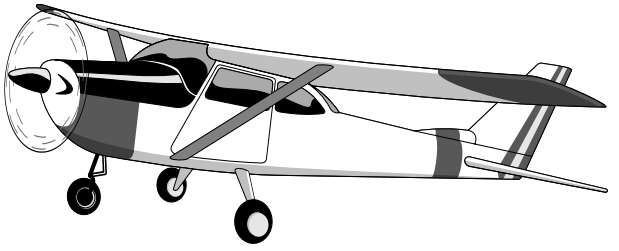
NORTHERN REGION

FLY IN

JULY 10, 11, 2010

Collingwood Regional Airport

(FREQUENCY 122.85)



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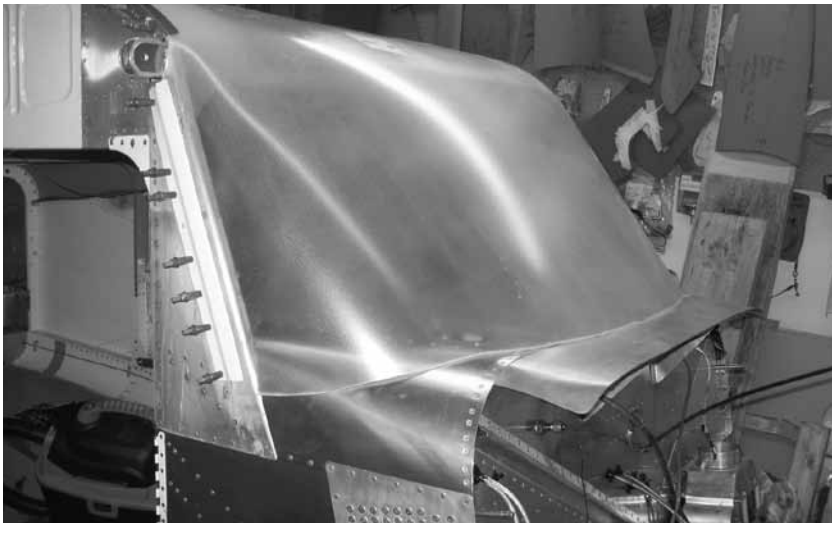


I've done a lot of windshields over the past seventeen years while building, or rebuilding, on average 1.5 airplanes per year and at the same time maintaining a fair sized fleet of Murphy and Zenair products for customers. All but the very first one of those windshield installs has been done with ease, and with absolutely no fear of breaking the acrylic.

Windshield manufactures like LP Aero still state on their installation paperwork to cut the acrylic with a band saw. I think they suggest this because they are in the market of selling windshields! I did my first windshield that way…. terrified the entire time that the saw was going to bind, jump or catch and of course it did on the last cut. Since that (at the time $300, now $720) mistake, I have been using a small cut off wheel in a Dremel tool.

Always leave the protective coating on the windshield until it's time for the last placement. Mark the windshield where you want to cut it with a sharpy marker. I have the luxury of many old broken windshields to use as templates to check the fit on the airplane I'm working on, and paper patterns of same to clamp in place on the new windshield for a one time marking and cutting in less than an hour. You may have to place the windshield on the fuselage many times and mark for small trims at a time to get a nice fit, but regardless of how many times you have to cut you can keep the task at hand easy (with a pleasant outcome) if you use the cut off wheel, versus the band saw. I have never had an acrylic windshield crack or break on me

using this cutting method.

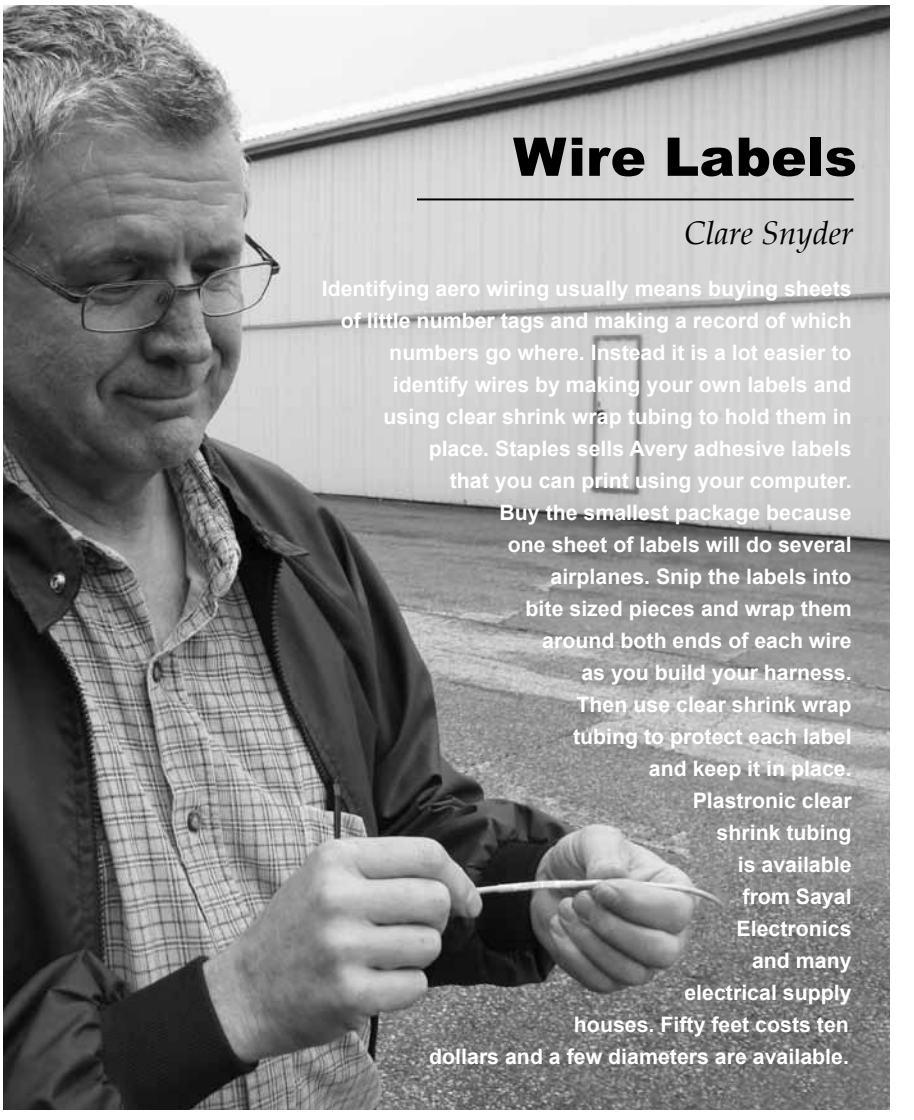
Before you dig right in to the trim lines try cutting on the outside edge in the scrap area first, to get a feel for how much hand control you need. Determine if you are better going to the right or the left before you get into the real trimming. One direction will have the wheel pulling down to the surface, the other trying to pop out. Both can work, just depends on the operator and hand/arm strength and dexterity.

I run the Dremel at full speed and it moves along very nicely, negating hot spots from staying in one place for too long. It cuts very easily and the added benefit of the cut wheel is the trailing edge polishes the cut as you go along. As you get about a foot into the cut take a spring clamp and position it to hold the piece that is being cut off to the main windshield. This will keep it from "loading" the cut area that may cause the blade to bind or put the weight of the flapping cut off piece on the area to be cut. Once you have your windshield fitting nicely, take some fine sandpaper and go around all the edges to smooth out the odd spot you may have gouged a little with the cut wheel.

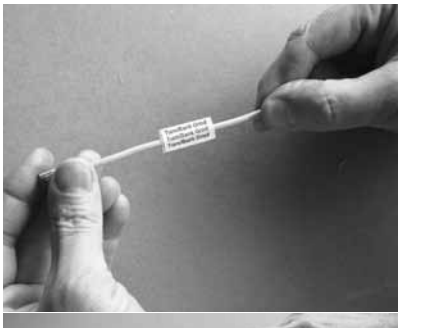
At this point your windshield is covered in acrylic dust! You can wipe it all you want and the static just brings it right back. I fought this for years, heck 17 of them! Last week I finally woke up when the "light bulb" glowed for a bit. I ran into the house and grabbed my old stereo LP Static Eliminator gun. A few shots with that and the windshield wiped clean! Now don't anyone tell me that they don't know what an LP is….

Wire Labels

Clare Snyder



Identifying aero wiring usually means buying sheets of little number tags and making a record of which numbers go where. Instead it is a lot easier to identify wires by making your own labels and using clear shrink wrap tubing to hold them in place. Staples sells Avery adhesive labels that you can print using your computer. Buy the smallest package because one sheet of labels will do several airplanes. Snip the labels into bite sized pieces and wrap them around both ends of each wire as you build your harness. Then use clear shrink wrap tubing to protect each label and keep it in place. Plastronic clear shrink tubing is available from Sayal Electronics and many electrical supply houses. Fifty feet costs ten dollars and a few diameters are available.



Chapters / continued from page 20

held at the home, and workshop of Eric Bartlett, located at 10 Stanhope Crescent, in London.

The meeting was called to order by President Angus McKenzie at 7:30PM with thirty one persons in attendance. Considering the size of the attending group, and the myriad component parts of the Bearhawk project, we filled Eric's garage/workshop area to standing room only for later arrivals.

Angus announced that the Reece's Corners airfield has been taken over by new owners, and extensive renovation is planned for the facility, including the restaurant, the hangars, and the field itself. Probably a fly-in will be held in appreciation for the years of previous efforts by Ormy and Eadie, details to follow at future meetings.

Gus Cameron reported currently renewed memberships at forty three with about twenty previous memberships still to be heard from. Angus then commenced a slide presentation from his involvement with the Jebel Lado Project. This group raises money and is attempting to get the farming and food production restarted in the Southern Sudan region of Africa. The Sudan region is well over twice the size of Ontario, but the thirty seven million people have been involved in a religion based civil war for the last twenty five years, putting Muslims in the North against Christians in the South. The South want to separate from the North and in the process the farming infrastructure has been pretty much obliterated, leaving the population dependent on the United Nations organization for food supplies. The Jebel Lado project is attempting to import farming equipment, and teach the local population how to operate and maintain this equipment to reestablish food production on some of the vast amount of arable land available. To this end, Angus and associates were to rebuild a John Deere combine, previously dismantled and packed into a shipping container along with a tractor and other replacement parts for a trip from the USA. Currently 400 acres are being planted in Sorghum, (perhaps later Corn as well) with the department of Agriculture allowing 19600 acres still available to the project. The added challenges of 30 to 40 degrees celcius heat continuously, and almost daily rain, deadly poisonous snakes on site, and the occasional raid by armed invaders mean that Angus and the Jebel Lado Project staff still have some things to work on.

Although taking pictures is generally forbidden and consequently dangerous, Angus presented us with a fascinating glimpse into a vast project of which most of the world is unaware. Then, using the workbench for a stage, Eric reviewed the building efforts to date on his Bearhawk project. Eric noted that his career started with repair and maintenance of heavy Diesel machinery. He went college for further training as a Technologist. From there he found work in the design of very large air moving ventilation fans such as those supplying air to underground mining operations. When he moved from New Liskeard to southern Ontario he became involved in designing small air moving fans such as those used in heating and air conditioning of automotive applications. He has a passion for aerodynamics, and is currently the named inventor on many patents. So maybe, stated Eric, just maybe I will be able to make a high-wing aircraft which will go fast! Eric currently files Cessna aircraft on occasion. The Bearhawk is being built entirely from plans, with each component as defined on the twenty nine drawing sheets, being laid out, cut by hand, formed and drilled and assembled.

Although the budget was a consideration, Eric noted that he wanted to BUILD a plane, not just assemble the pre formed parts. The Bearhawk, having a constant chord, all metal wing, and a rag-and-tube fuselage will provide a challenge for Eric, in all aspects of light aircraft building. The wing, ailerons and flaps are well along the way, and Eric notes that he is near the half-way point in construction. His workmanship and attention to detail is impeccable. As well, he has developed many innovative techniques for part building along the way, such as vacuum forming of wing panels, yes using a vacuum cleaner and plastic sheets, which he offered to share with those interested and in need of the process.

Tea, Coffee, and treats were available in the kitchen to top off an excellent technical presentation. RAA

President's Message / cont'd from page 2

BIRD NEST SEASON

Before each spring flight it is wise to drop the engine cowling to check for bird nests. It is unbelievable how quickly a determined bird can build a nest. Just because you checked the cowling yesterday does not mean that it will be free of bird nests today. In one occurrence a flying school Katana was seen taxiing with smoke coming out of the cowl when a nest had been built overnight on the exhaust system. And recently a Comanche was written off when a bird nest was sucked into the alternate air on takeoff. Both planes had been receiving excellent maintenance but birds are very determined. RAA

Weight And Balance For Amateur-Built Aircraft

Terry Elgood

TRANSPORT CANADA *rightly places great emphasis on the proper balancing of an aircraft. It is not enough that an aircraft is within its maximum allowable weight; one that is simply out of balance can, and usually does, display dangerous flight characteristics that can quickly move beyond a pilot's ability to cope. The time to get it right is* before *you leave the ground. There are many things we can overlook; here, Terry Elgood gives us a step by step procedure that you can remove from the magazine and use to ensure a logical, complete weight and balance is performed before you strap on your new ride.*

Instructions to fill out the Weight and Balance form:

Preparing the aircraft:
1/ Drain the fuel, (leave the residual fuel in), fill the engine oil tank.
2/ Check that all required equipment is in its correct location; ELT, first aid kit etc.
3/ Remove any unnecessary articles, the aircraft should be clean and dry.

Weighing the aircraft:
1/ The aircraft should be in a building, out of the wind.
2/ Place the aircraft on the scales, it should be levelled side to side and lengthwise using the designers reference points. Record the scale readings.
3/ Drop a plumb bob from the datum, mark the floor. Record the distance from the datum to the main wheels and the distance from the datum to the nose or tail wheel.
4/ Record the distance from the datum to; the engine oil tank, each seat, baggage area, fuel tanks and ballast location.
5/ Remove the aircraft from the scales, weigh and record each tare (wheel blocks, 2x4 to lift the tail, anything that was weighed with the aircraft that is not part of the aircraft).

Filling out the form:

Page 1
1/ Levelling reference used, enter the longitudinal structural reference you used.
2/Enter the three scale readings, enter and subtract the tare from each scale reading resulting in three calculated net weights.
3/ Enter the arms (distance in inches from datum to wheels). Multiply the net weight by the arm to calculate the moment, enter it on the form.
4/ Add all three net weights to get the total weight, enter it on the form.
5/ Add all three moments to get the total moment, enter it on the form.
6/ The total moment divided by the total empty weight equals the empty center of gravity in inches from the datum, enter it on the form.
7/ Additional weights and arm; fill this out so that including the empty weight it adds up to the gross weight. Note; the oil is already included in the empty weight.

Page 2
Appendix 1, Equipment list shows what is installed in the aircraft so that if you change anything on this list you can update your empty weight by calculation.

Page 3
1/ There are many different configurations of aircraft, it may have the fuel, seats or baggage ahead or behind the center of gravity. Loading conditions 1 and 2 should be calculated keeping in mind the location of these variables so that the calculation results in the most forward (1) or the most rearward (2) while keeping within the loading envelope. In forward example (1), the load is heavy ahead of CG, behind load is light. In rearward example (2), the load is light ahead of CG, behind load is heavy.
2/ Loading condition 3 shows the aircraft loaded to its gross weight. Be sure to use the same gross weight as on the Application for C of A. Check that the center of gravity stays within limits when the fuel is removed, this is for your information only
Notes:
1/ Check the three scales for accuracy before weighing.
2/ Read and understand the Weight and Balance section of AC 43.13
3/ Do not use a datum that could be changed later such as the spinner tip or wheels.
4/ Keep a copy of the Weight and Balance report in your journey log book.
T. E. form 29 January 2007

Weight and Balance report for C-_____

Aircraft Manufacturer (builder)_____

Aircraft Owner_____

Owner address_____

Aircraft model _____serial number_____

Date _____and place _____of weighing

Levelling reference used_____ Datum_____

Weighing results:

Weighing point	Scale reading lb.	Tare	Net weight lb.	Arm (inches)	Moment
Right					
Left					
Nose or Tail					
		Total weight		Total moment	

Total moment _____ divided by the Total weight of the aircraft _____
equals the empty Centre of Gravity of the aircraft _____in inches to the datum.

_____

Loaded centre of gravity operating range; forward _____rearward_____

Operational additional weights and arm:

Seats – Front left _____lb., arm_____
Front right _____lb., arm_____
Rear left _____lb., arm _____
Rear right _____lb., arm _____
Fuel, location 1 _____ lb., arm_____
Fuel, location 2 _____lb., arm_____
Baggage, location 1 _____lb., arm _____
Baggage, location 2 _____lb., arm _____
Oil capacity (note) _____lb., arm_____(included in empty weight)
Total additional weights _____ lb. (do not include the oil weight in this total)
Plus empty weight_____ lb. equals aircraft gross weight _____ lb.

Equipment items included in the empty weight: see equipment list, appendix 1, page 2

I certify that this data has been prepared in accordance with AC43.13 1A and to the best of my knowledge represents the true empty weight and centre of gravity of this aircraft.

Date_____ Signature _____

T.E. form, 29 January 2007 **Page 1 of 3**

Weight and Balance report for C_____

Appendix 1, Equipment items included in the empty weight

Item	Weight	Arm	Moment
Miscellaneous			
First aid kit			
Fire extinguisher			
Radio			
ELT			
Communication			
Transponder			
Encoder			
GPS			
Instruments			
Compass			
ASI			
Altimeter			
Turn			
ROC			
Horizon			
DG			
Clock			
G meter			
Tachometer			
Oil pressure			
Oil temperature			
CHT			
EGT			
Voltmeter			
Ammeter			
Fuel gauge			
Fuel pressure			

Date_____ Signature _____

T.E. form, 29 January 2007 **Page 2 of 3**

Weight and Balance report for C-_____

Examples of aircraft loading, while keeping within the loading envelope.

Loaded centre of gravity (C.G.) limits; forward_____rearward_____

1/ loading condition that results in most forward centre of gravity

Item	Weight, pounds	Arm, inches	Moment
Aircraft empty			
Pilot			
Passenger, front right			
Passenger, rear left			
Passenger, rear right			
Fuel, location 1			
Fuel, location 2			
Baggage, location 1			
Baggage, location 2			
Total weight		Total moment	

Total moment _____divided by Total weight _____= C.G. _____

2/ loading condition that results in most rearward centre of gravity

Item	Weight, pounds	Arm, inches	Moment
Aircraft empty			
Pilot			
Passenger, front right			
Passenger, rear left			
Passenger, rear right			
Fuel, location 1			
Fuel, location 2			
Baggage, location 1			
Baggage, location 2			
Total weight		Total moment	

Total moment _____divided by Total weight _____= C.G._____

3/ loading condition that results in the gross weight

Item	Weight, pounds	Arm, inches	Moment
Aircraft empty			
Pilot			
Passenger, front right			
Passenger, rear left			
Passenger, rear right			
Fuel, location 1			
Fuel, location 2			
Baggage, location 1			
Baggage, location 2			
Total weight		Total moment	

Total moment _____divided by Total weight _____= C.G. _____

Date_____ Signature _____

T.E. form, 29 January 2007 **Page 3 of 3**

Coming Events

CANADIAN AVIATION EXPO
May 1-2 is the date for the 2010 Canadian Aviation Expo. RAA Toronto Region Chapter will be handling the display this year under the guidance of president Brian Heinmiller. If your chapter would like to take part in this or if you would like to volunteer to staff the display, please contact Brian at b.j.heinmiller@sympatico.ca

May 1, St. Thomas, ON: Air Rally and Landing Contest. Start at either Chatham CNZ3 or Brantford CYFD. Briefing 10:00 a.m. terminus Chatham CYQS. Great prizes. All pilots welcome to join the fun. Raindate May 2. Hosted by the 99s. Info: Anna Stromenberg, astromen@uwaterloo.ca, 519-807-0547 or Janet Chesterfield, jchester@wincom.net, 519-326-6875 or click on www.wxcel.on.ca/mapleleaf.

May 1-2, Mount Hope, ON: The Canadian Aviation Expo is Canada's largest aviation trade show and Canada's largest fly-in, earning it the title of "Canada's Premier Aviation Event". Held again this year at the Canadian Warplane Heritage Museum located at the Hamilton International Airport. Visit www.canadianaviationexpo.com for more information.

Saturday May 22 8 AM to Noon. RAA Flamborough Breakfast Fly-In. All welcome.

Friday June 11 5 PM to Dusk. Family & Friends Bar B-Q, Flamborough chapter. All welcome.

If flying in, field elevation is 840 ft. 43 22.25N 79 55.95W circuit height 1,000' AGL and all circuits MUST be to the East of the field. If driving, take Hwy 6 North from Hamilton to Concession Six East. Turn right at the restaurant on the NE corner. Go to Flamborough Centre and Centre Road. Continue East 1/2 mile to railway tracks. Cross tracks and after 50 yards take the first laneway to the left (Flamborough Springs). Follow lane N through woods to the hangars. There are no signs.

Service d'inspection Représentant du Ministre-Aviation de Loisir (RM-AL)
Le RM-AL va tenir une session d'information aux Les Ailes Québecoises, Aéroport Jean Lesage, Québec, samedi le15 mai, 2010 de 13:00 à 16 :00 hres.
Toutes les personnes concernées par l'Aviation de Loisir sont invitées.
Si vous désirez des informations additionnelles, contactez moi à pierre-fournier@videotron.ca ou au (514) 645-4355

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To submit or delete a classified ad, please send to classified@raa.ca and place "RAA ad" in the subject line.

The Recreational Flyer is pleased to offer you colour advertising within the magazine. Previously limited to the back cover, we have added 4 new colour pages which will be available with limited space for your advertising needs. Our rates for both black and white and colour ads remain very competitive and you reach a captive and qualified audience.

Ads can be emailed to : ***classified@raa.ca***

Deadline for submissions is the first of the month preceding date of issue.
Artwork: Rates apply to camera ready artwork. Digital files are preferred and should be sent as email and in .txt format, PDF, JPEG, MS WORD, Photoshop or other common file types. Advertising is payable prior to printing of magazine unless other arrangements have been made. Payment is in Canadian funds. 10% Discount applies to one year (6 issues) insertion paid in advance. Commercial Classified ad rates 1/8 page minimum.

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The Recreational Flyer Publisher reserves the right to refuse any or all advertising for any reason stated or unstated.
The Recreational Aircraft Association Canada does not assume responsibility for advertisements, but does exercise care to restrict advertising to responsible, reliable individuals.
Please note: Ads running more than 3 issues must be renewed to guarantee continued display in the magazine.

Recreational Aircraft Association Canada

President: Gary Wolf
Treasurer: Wayne Hadath

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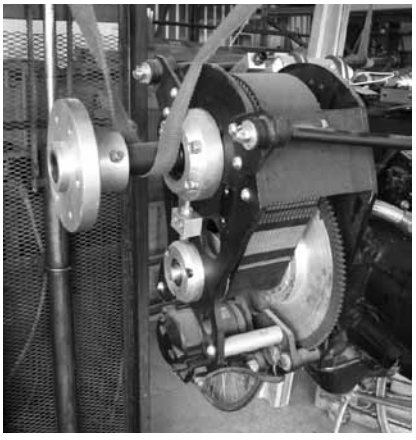
The Recreational Flyer is devoted to the aerospace sciences. The intention of the magazine is to promote education and safety through its members to the general public. Material in the Flyer is contributed by aerospace engineers, designers, builders and restorers of aviation devices and vehicles, used in an amateur capacity, as well as by other interested persons, publications and organizations. Contributions to the Recreational Flyer are voluntary and without remuneration. Opinions expressed in articles and letters do not necessarily reflect those of the Recreational Aircraft Association Canada. Accuracy of the material presented is solely the responsibility of the author or contributor. The Recreational Aircraft Association Canada does not guarantee or endorse any product offered through articles or advertising. The Flyer and its publisher welcomes constructive criticism and reports of inferior merchandise or services offered through advertising in the publication.

For Sale



Brand new Crossflow redrive for Subaru EA 81 with flywheel and starter. RAA is handling the sale of this redrive for the estate of the late Mike Davy. $1200. This is a complete bolt-on unit. Please contact garywolf@rogers.com or call 519-648-3030 Jun09

Zenith CH-250 Project For Sale. Tricycle configuration First inspection done. Ready for rigging. Have 3 in 1 engine gauge, VSI, ALT, Compass, Tack, and air speed gauges. Have a dinafolcal engine mount for 0320 engine, prop, some pneumatic tools. Plus lots of old news letters for the project and pictures of different configurations. $10,000.00 Ph. 604-859-6884, John.

SIDEWINDER: All metal; seats two. Equipped with Lycoming 0-290D (110 hrs STOH), engine log, 3-blade ground adjustable Wrap Drive Prop. Bendix/King KY 97A radio, Icom portable standby radio; intercom, transponder/c. Full cockpit and panel lighting, strobes, L/L, and nav lights. Ready for MDRA final pre-flight inspection. All drawings and building manuals are included. Selling for material

cost only ($20,000 cdn.) Call Norm at 519-745-7971 or email at ldservice@rogers.com. Apr09

Project Assistance 15 years of aircraft sheet-metal/fabric/ composite construction/ mechanical. can help your project. Have helped on RV projects.and other home-build aircraft. 1-519-777-7084 ask for Robert April09

FOR SALE: Bushcaddy R120 kit for sale. Tail section completed, cabin 85% completed. Rexton NB. Asking $24,500.00 For more information & pictures, please call 506-523-9614 or 506-523-9056 e-mail ahudson@nbnet.nb.ca

1969 c-172,2800 TTAF,590 SMOH,original paint,Mk12D with glideslope,Mk12,loran March annual, Transponder with encoder.$60M Ted Strange 1-250-762-4924 ted.strange@gmail.com Aug09

FOR SALE: 1969 Stitts Playboy.135hp. Lycoming. Fuselage & tail surfaces covered with ceconite in 2006. Gross 1450 lbs. Net weight 945 lbs. $12,500. Call 1-519-294-6118. E-mail mtlarkin@sympatico.ca. Jun09

McCauley prop from a 150 hp 172, CTM 7553. Removed July 06 for inspection/overhaul. Asking $700 flyadler@golden.net 519-648-3886 Aug09

Falconar "F11A" project, Fuselage complete, wing 90% complete, empenage complete, 1st inspection done, EA 81 Subaru with re-drive included. $3000. (905) 649-1376Aug09

Four Subaru EA81s and one EA82. one partly converted. Will not be undersold. FOB my shop. Bill Weir 519-461-0593 Jun09

FOR SALE: ZENITH CH-300 on floats. First flight, Sept 1983, total hours 575 (300 on floats since July 1993). Engine O-320-C2A zero timed in 1999 now with 170 hours. panel, no radio. Prop McAuly 1A175/GM8241 new in 1993, Floats Zenair 1850. Location Lake Muskoka. $30,0000 George 705 445 7054 CollingwoodAug09

FOR SALE: Lycoming engine-Model IO-360-B1B--Last annual 5-8-73 at 646.0 hrs since top O/H--in storage since removal from Beechcraft--C/W Hartzel C/S prop. Dynafocal mount , Exhaust,--Logbook--Located in Edmonton,Ab. $8500 OBO forestind@mmipro.com Cell 780-499-1724 Res: 780-460-7420 Jun09

(1) 1967 C-172, 3155 TT, Cont. 0-300, 1005 SMOH, new windshield, new battery in 2007, new paint in 2005, a working DME, two 720 com. radios, a ELT, current annual until Nov.09. $41,000. (2) 40' X 30' Calhoun structure hangar at Earlton,CYXR, 5' high steel walls, 10' high doors, fabrene roof, put up in Nov. 2004, will hold a C-172. $12,000. Phone 705-544-8743 or whiteheadbj@msn.com Aug09

For Sale: Avid Flyer Mark IV STOL wing. 800 TT, folding wings, 1150 lb gross, 540 lb useful load. Engine liquid cooled 582C 50 SOH. Registered as homebuilt, restored 2005. 720 channel Com, ELT, new 3 blade GSC prop, new wheels, tires and brakes. Cruises at 90 mph, stalls 32, low cost and lotsa fun flying. Skis and some parts included. Asking $16K. Email planes1057@hotmail.com. Phone Tom 780-632-9396 days, Lowell 780-632-2931 evenings. Oct09

For sale/trade: 0290D2, good but scored crank journal, no accessories, dismantled $2000.00. Also, Revmaster mount and electrics $500.00. Bendix dual mag $500.00. Call 519-692-5309 for details. macmaz@mnsi.net Oct09

For Sale: Avid Speedwings new and uncovered, at the ladder stage,with factory made flaperons. $500. Avid stabilizer $100. Avid stab lower braces $75. One jury strut assy $30. As a batch - $575. garywolf@rogers.com 519-648-3030 Oct09

For Sale: McCauley propeller 1A101DCM6948 modified to a GCM6948 that takes a prop extension. Prop is in good condition and removed from Cessna 150 for age. Last major overhaul by Western Propeller Jan 1991 and has about 1090hrs since then. Because of the modification for a prop extension, prop cannot be recertified. Good for your homebuilt powered by a Continental O-200. Price $700 Cdn. Call Don Bentley 250-764-0880 Oct09

For Sale: Ballistic Recovery System Model BRS-5-1200-VLS complete with harness,rocket,installation guide and owners manual. New $3400.00 US. Never used--needs repack only. Price $500.oo Call 613-543-0594. Oct09

For Sale: I have an Rv 6A, nose wheel and main gear legs, fairings, gear attachments,motor mount etc would like to sell or trade for complete tail wheel components, if you know of anyone interested please have them contact me at rosymury@aol.com. Oct09

Murphy Super Rebel Kit SR2500 (Moose) Complete airframe kit. Tricycle landing gear. In factory crate. $15,000.00 Larry 905 460-0880, work 905 677-8300 or email lawrence.strilchuk@sympatico.ca Oct09

Zenair Zodiac 601HDS Tricycle gear, registered 1993, Rotax 912 UL, ARPLAST flight adjustable prop.. 756 hrs TT. ICOM A-4, 2 headsets, GARMIN 95 GPS, Vacuum AH. Stainless exhaust, new upper paint 3 years ago. Canopy cover. Cruise 120 mph. Asking $28,000 CDN. At Oshawa. Dave, 416-282-5252 Oct09

Cessna 150H, 3980 TTAF, 1820 SMOH, KX145 NavCom, Icom 200 Com, Narco Mode C, paint 8/10, interior 7/10, 4 new cyls/321hrs $19500 gbemus@rogers.com Dec09

For sale, new RV9A parts; Lycoming conical engine mount, 3 L/G legs with mounting

brackets, nose wheel, fairings. All the parts I didn't use when I converted to tailwheel. Approximate cost to buy $3000. Contact Terry Elgood for list at TMB_Elgood@shaw.ca or 250-503-5188 Feb 10

1995 Zenair 701 on floats, 300 hours TTAE, Rotax 80 hp with new Warp Drive propeller. Always hangared, overall, 7/10. Minor dings and scratches. Many extras, $35,000. Anderson Kingfisher project: Sponsoons, wing ribs, fuselage and tail completed and on its gear. Brakes, controls, fuel system installed. includes Lycoming 0-235 and McCauley prop with logs. May extras, $22,000. $50K takes both. Guy at (902) 682-2888 (Nova Scotia). Feb10

Early model Zodiac HDS Speed Wing spars, ribs & plans. $400 or best offer. F.O.B. Don Benton 1-519-442-2962 dorothybenton@hotmail.com Apr10

1995 Buzzard Special taildragger. Rotax 912 80 hp. Very smooth and quiet. Always hangared . 3 Blade Warp Drive prop. 80mph cruise @ 75% power . Take off in 200ft. Heavy duty wide landing gear. Differential hydraulic brakes . Extra wide cabin . Large baggage area . Built in intercom and radio antenna . Landing light . 20gal. fuel capacity . In cab trim . Very stable in rough air . Constructing Zenair 750...need to sell. $27,500 Call Mac 519-831-0967 or macpat@bellnet.ca Apr10

One set of aluminum floats for sale. Were built for a Super Koala ultralight. Gross weight of Koala is 830 lbs.Approx. 12 feet in length. The floats are very light in weight. Similar to a Murphy float design. Pump out ports in each compartment. Rudder on right float. Asking $2500.00 OBO. Contact, Richard at 250-374-6136 e-mail: richard_suttie@telus.net Apr10

Ficher Flying products Super Koala: Plans built airplane, needs finishing!!
I purchased this airplane with no motor or mount. I acquired a mount from California off of another SuperK. Mount is installed along with a 532 Rotax. Engine is single points, dual carbs. The engine has 19 hours on it and has been pickled. Very good quality woodwork and fabric work on plane. Need to finish engine install, rad, controls etc. Wings in good shape as well. 2 wooden props included. (One piece props.) One brand new, one slightly used. Comes with some gauges, tailwheel assembly and other misc. parts. I do not have time to finish.
Asking $5000.00 OBO Phone Richard Suttie 250-374-6136 E-mail richard_suttie@telus.net Apr10

Beaver RX 550 serial number BRX0090. 503 Rotax with electric start. Single ignition, dual carbs. Full dash, Altimeter, Vertical speed, Tach, dual EGTs, single CHT, Compass, Hour meter, Capacitive fuel probe and gauge, Airspeed, Slip indicator. Hydraulic disc brakes, individual heel operated. Airframe was totally rebuilt by an AME 4 or 5 years ago. All flying surfaces covered with aircraft fabric. Wings totally rebuilt with turnbuckles in every bay of the wing. Covered with fabric. Has flaps on the wings. Engine has low hours as crosshatch still on cylinders. Checked and regasketed as actual hours not known. 10.9 hours since check on engine. Larger 600 x 6 tires.One of the nicest Beavers around!! Asking $11,500.00 OBO. Located in Kamloops, B.C. Richard 250-374-6136 richard_suttie@telus.net Apr10

Wanted

Wanted- Great Plains only VW dual spark plug heads, Aerovee 29mm Injector Carb or similar Revflo in good condition, or even Ellison ESF 2, low time Slick 4316 mag, Great Plains only complete Force One Prop Hub. John Donaldson, 519-426-8583, jdonaldson@kwic.com near Simcoe ON. Dec09

Wanted: Geshwender redrive for my Spitfire project. 519-692-5309 macmaz@mnsi.net Oct09

Ads run for a maximum three issues depending on space available and then must be renewed for continued display. Please direct all classified inquiries and ad cancellations to: classified@raa.ca and place "RAA ad" in the subject line.

Published in Part II of Canada Gazette

We finally made it!

The Canadian Aviation Regulations have been amended to formally introduce the new Aviation Document Booklet. In addition to the administrative issues associated with the booklet, the new CAR 401.12(5) causes old format documents to expire in either of June or December of this year, depending on the type of licence or permit. These dates are the same ones that we've been marching toward lately, but those dates now have the force of law.
You can find details of the changed regulations on the Canada Gazette website at:

http://www.gazette.gc.ca/rp-pr/p2/2010/2010-02-17/html/sor-dors26-eng.html
or
http://www.gazette.gc.ca/rp-pr/p2/2010/2010-02-17/html/sor-dors26-fra.html

As a result of this publication, we can now modify any information provided to licence holders concerning the need to obtain booklets. We can replace our "you *really should* get a booklet soon" with statements like "you *absolutely need* to get a booklet soon"! Please modify any letters or other communications materials you might be using accordingly. We'll look after changes to the national website.

Classifieds On The Internet:

http://www.ocis.net/tvsac/buyandsell.html -more ads from our Kamloops chapter
http://www.lyncrest.org/sfcclassifieds.html -more ads from our Winnipeg chapter

RAA Chapters and Meetings Across Canada

The following is a list of active RAA Chapters. New members and other interested people are encouraged to contact chapter presidents to confirm meetings as places and times may vary.

ATLANTIC REGION

HAVELOCK NB: Weekly Sunday morning get together year round, all aviation enthusiasts welcome. Havelock Flying Club - 25 mi west of Moncton. Contact Sterling Goddard 506-856-2211 sterling_goddard@hotmail.com

QUEBEC REGION

COTE NORD (BAIE COMEAU): Meeting times to be advised. Contact Pres.Gabriel Chouinard, 418-296-6180.

LES AILES FERMONTOISES (FERMONT): First Sunday 7:30 pm at 24 Iberville, Fermont. Contact Pres. Serge Mihelic, 418-287-3340.

MONTREAL (LONGUEUIL): Chapter 415, Meeting in French second Wednesday at 8 pm, at CEGEP Edouard Montpetit 5555 Place de la Savane, St. Hubert, PQ. Contact president Normand Rioux at NRIOUX@lapresse.ca

OUATOUAIS/GATINEAU: Every Saturday 9:00 am to noon at the restaurant l9Aileron in the airport terminal. Contact Ms N.C. Kroft, Gatineau Airport, 819-669-0164.

ASSOC DES CONSTRUCTUERS D'AVIONS EXPERIMENTAUX DE QUEBEC (QUEBEC): Third Monday 7:30 pm at Les Ailes Quebecoises, Quebec City Airport. Contact Pres. Ray Fiset, 418-871-3781. rayfiset@qc.aira.com

ASSOC AEROSPORTIVE DE RIMOUSKI: First Saturday at 9:00 am, La Cage aux Sports, Rimouski. Contact Pres. Bruno Albert, 418-735-5324.

ASSOC DES PILOTES ET CONSTRUCTEURS DU SAGUENAY-LAC ST JEAN: Third Wednesday 7:00 pm at Exact Air, St Honore Airport, CYRC. Contact Marc Tremblay, 418-548-3660

SHERBROOKE LES FAUCHEURS de MARGUERITES. Contact Real Paquette 819-878-3998 lesfaucheurs@hotmail.com

ONTARIO

BARRIE/ORILLIA CHAPTER Fourth Monday 7:30 PM Lake Simcoe Regional Airport Contact Secretary Dave Evans 705 728 8742

E-mail david.evans2@sympatico.caCOBDEN: Third Thursday 8:30 pm at Club House, Cobden Airport. Contact Pres. Clare Strutt, 819-647-5651.

COLLINGWOOD AND DISTRICT; The Collingwood and District RAA, Chapter 4904, meets every first Thursday of every. month, at 7:30 PM except July and August, at the Collingwood Airport or at off-site locations as projects dictate. The January meeting is a club banquet held at a local establishment. For more information contact Pres. Keith Weston at 705-444-1422 or e-mail at ckweston2@sympatico.ca

EXETER: Second Monday 7:30 pm at Summers-Sexsmith Airfield, Winters-Exeter Legion. Contact Pres. Ron Helm, ron.helm@sympatico.ca 519 235-2644

FLAMBOROUGH: Second Thursday 8:00 pm at Flamborough Airpark. Contact Pres. Karl Wettlaufer 905 876-2551 or lazykfarm@sympatico.ca

KENT FLYING MACHINES: First Tuesday 7:30 pm at various locations. Contact President , Jim Easter 519-676-4019 jim.easter@teksavvy.com.

KITCHENER-WATERLOO: Meets the third Monday of each month in the upstairs meeting room of the cadet building at CYKF, except during the summer months when we have fly-ins instead. Please contact Clare Snyder clare@snyder.on.ca

LONDON/ST. THOMAS: First Tuesday 7:30 p.m. At the Air Force Association building at the London Airport. Contact President Angus McKenzie at 519-652-2734 or angus.mckenzie@sympatico.ca

MIDLAND-HURONIA: First Tuesday 7:30 pm Huronia Airport. Contact Tom Massey 705-526-5304, fax 526-5310

NIAGARA REGION: Second Monday 7:30 pm at Niagara District Airport, CARES Building. Contact Pres. Elizabeth Murphy at murphage@cogeco.ca, www.raa-niagara.ca

OSHAWA DISTRICT: Last Monday at 7:30 PM at the Oshawa Airport, South side, 420 Wing RCAF Assoc.

Contact President: Jim Morrison ,905 434 5638 jamesmorrison190@msn.com

OWEN SOUND Contact President Roger Foster 519-923-5183 rpfoster@bmts.com

OTTAWA/RIDEAU: Kars, Ont. 1st Tuesday. Contact: Secretary, Bill Reed 613-831-8762 bill@ncf.ca

SAUGEEN: Third Saturday for breakfast at Hanover Airport.

YQG AMATEUR AVIATION GROUP (WINDSOR): Forth Monday, 7:30 pm Windsor Flying Club, Airport Road, Contact: Kris Browne e_kris_browne@hotmail.com

SCARBOROUGH/MARKHAM: Third Thursday 7:30 pm Buttonville Airport, Buttonville Flying Clubhouse. Contact Bob Stobie 416-497-2808 bstobie@pathcom.com

TORONTO: First Monday 8 pm at Ch 41 Hangar on north end of Brampton Airport Contact: President, Earl Trimble 905-787-8524 northerntailwind@aol.com

TORONTO ROTORCRAFT CLUB: Meets 3rd. Friday except July, August, December and holiday weekends at 7:30 pm Etobicoke Civic Centre, 399 The West Mall (at Burnhamthorpe), Toronto. Contact Jerry Forest, Pres. 416 244-4122 or gyro_jerry@hotmail.com.

WIARTON: Bruce Peninsula Chapter #51 breakfast meetings start at 8:30am on the second Saturday of each month in the Gallery of Early CanadianFlight/Roof Top Cafe at Wiarton-Keppel Airport. As there are sometime changes, contact Brian Reis at 519-534-4090 or earlycanflight@symptico.ca

MANITOBA

BRANDON: Brandon Chapter RAA meets on the second Monday of each month at the

Commonwealth Air Training Plan Museum at 7:30 PM except in the months of July and August. Contact Pres. John Robinson 204-728-1240.

WINNIPEG: Winnipeg Area Chapter: Third Thursday, 7:30 pm RAA Hangar, Lyncrest Airport or other location as arranged. Contact President Ben Toenders at 204-895-8779 or email raa@mts.net. No meetings June, July & Aug. RAA Winnipeg info also available at Springfield Flying Center website at http://www.lyncrest.org/sfcraac.html.

SASKATCHEWAN

Chapter 4901 North Saskatchewan. Meetings: Second Tuesday of the month 7:30pm Prairie Partners Aero Club Martensville, Sk. info at www.raa4901.com. Brian Caithcart is the chapter president. Contact email: president@raa4901.com.

ALBERTA

CALGARY chapter meets every 4th Monday each month with exception of holiday Mondays and July & August. Meetings from 19:00-22:00 are held at the Southern Alberta Institute of Technologies (SAIT) Training Hangar at the Calgary Airport. Join us for builder discussions, site visits, tech. tips, fly out weekends and more. Contact president President Gene Lukan at 403 932-4238

EDMONTON HOMEBUILT AIRCRAFT ASSOC: First Tuesday 7:30 pm EAHS boardroom. Contact President Bill Boyes 780-485-7088

GRANDE PRAIRIE: Third Tuesday, Chandelle Aviation Hangar, contact Jordie Carlson at 780-538-3800 work. or 780-538-3979 evenings. Email: jcarlson@telusplanet.net

MEDICINE HAT: Last Thursday of the month, 7:00PM, RAAC clubrooms, airport. Contact Boyne Lewis at (403) 527-9571or E mail balewis@shaw.ca

BRITISH COLUMBIA

ABBOTSFORD: Third Wednesday 7:30 pm Abbotsford Flying Club, Abbotsford Airport. Contact President, John Vlake 604-820-9088 email javlakeca@yahoo.ca

DUNCAN: Second Tuesday 7 pm members homes (rotating basis). Contact Pres. Howard Rolston, 250-246-3756.

OKANAGAN VALLEY: First Thursday of every month except July and August (no meetings) at the Kelowna Yacht Club. Dinner at 6:00pm, meeting at 7:30pm Contact President, Cameron Bottrill 250-558-5551 moneypit@junction.net

QUESNEL: First Monday/Month 7:00 p.m. at Old Terminal Building, CYQZ Airport. Contact President Jerry Van Halderen 250-249-5151 email: jjwvanhalderen@shaw.ca

SUNCOAST RAA CHAPTER 580: Second Sunday 13:30 pm Sechelt Airport Clubhouse, sometimes members homes. Contact Pres. Gene Hogan, 604-886-7645

CHAPTER 85 RAA (DELTA): First Tuesday 7:30pm, Delta Heritage Airpark RAA Clubhouse. 4103-104th Street, Delta. Contact President President: Tim Nicholas vibraanalysis@shaw.biz.ca. Website http://raa85.b4.ca.

VANCOUVER ISLAND AVIATION SOCIETY (VICTORIA): Third Monday 7:30 pm Victoria Flying Club Lounge. Contact Pres. Roger Damico, 250-744-7472.

THOMPSON VALLEY SPORT AIRCRAFT CLUB: Second Thursday of the month 7:30 pm Knutsford Club, contact President - Dick Suttie Phone 250-374-6136 e-mail - richard_suttie@telus.net

ALASKA HIGHWAY: meetings held every third Thursday of every month (except July & August) at the Taylor Fire Hall at 7:30 p.m. For more information call Richard at 782-2421 or Heath at 785-4758.

Chapter executives please advise of changes as they occur. For further information regarding chapter activities contact RAA Canada, 13691 McLaughlin Rd, R R 1, Caledon, ON L7C 2B2 Telephone: 905-838-1357 Fax: 905-838-1359 or call toll free: 1-800-387-1028 email: raa@zing-net.ca www.raa.ca

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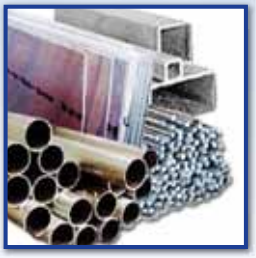
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