



The Bend High Desert Flyer of Chapter 1345

WEBSITE: <http://www.eaa1345.org/>

KBDN AWOS 134.425

JULY 2011, VOL10, #7

PREZ SEZ:

Tail Wheel Fun!

Are you looking for some fun or a new challenge? Do you want to improve your rudder control and overall flying skill? If you answered yes, then consider getting your tail wheel endorsement. It's a blast and the learning process will definitely get you back to good old stick and rudder flying!

When I started flying, I learned in a Piper Cherokee and flew similar airplanes for the next 18 years. While many modern airplanes have nose wheel configurations, I knew I eventually wanted to learn to fly a tail wheel to open up the possibilities for owning an RV or one of the many tail wheel aerobatics airplanes. While I loved the idea of flying a tail dragger, there simply weren't many rental options at the time to learn in. Fortunately, in 2005 a friend from the flying club in Santa Cruz decided to take on a partner in his Citabria. It didn't take long to make up my mind and I decided to go for it.



As luck would have it, my instructor, Wanda Collins, was also a Citabria owner and former aerobatic competition pilot. She agreed to teach me and we started immediately in her airplane.

She stated up front that regardless how quickly you picked things up, she would not sign anyone off in under 10 hours and she planned to put me through the ringer. That was just fine with me, given my concern about ground looping my new airplane.

Well, she was right, she did put me through the ringer. My first flight was 1.5 hours and we did 20 takeoffs and landings. The third flight was 1.8 hours with 25 landings. We started with 3 point landings and then progressed to wheel landings. On days when the marine layer would sock the field in only a couple hundred feet off the ground, we'd go out and do multiple takeoffs and landings and only get 50 feet of altitude before setting up for another landing on the same runway, or angle to a crossing runway. It was exciting flying.

To improve handling on or close to the runway, she'd have me fly down the runway, first in a slip to one side with one wheel on the ground, then switch over the other side. Its amazing how much control you have with the airplane. Her instruction really opened my eyes. Certainly not good for tire life, but great for learning to control the airplane.

For wheel landings, she'd have me practice over and over again, bringing the wheels within a few inches level, then placing one wheel down first and then moving the stick forward to keep the plane on the ground and not bounce. With the sprung steel landing gear, it worked wonders.

Since the plane didn't have flaps, I got to practice a lot of slips to each side. For anyone who has flown a Citabria, you know flaps are not needed and a full slip can bring you down like you're on an elevator.

Once all the other basic maneuvers were well developed, then we really focused on cross wind landings in higher winds. I recall one day, the cross wind was really strong and seemed perpendicular to the runway.

Tail Wheel Fun! ---continued

All went well, but I was certainly glad she was there in case things got wild.

I'm certainly glad she made things as tough as she did, for there were certainly times in the next few years where I had similarly strong winds and the practice came in handy.



In total, it took 10 calendar days, 11.3 hours of flight time and 123 landings to get my endorsement. I really loved it and would do it again in a heart beat. Not only was it fun, but it really opened up new and exciting flying experiences in the years to follow. I know there are many of you who already fly tail wheel airplanes. I hope your experience has been as fun. For those of you who have not flown a tail wheel, if and when you get the chance, go for it!

Sean Harbison, President

Next meeting:

This month, on July 13th, we'll be starting off at the Ellsberg Hangar for the pizza and drinks and then walking down to "Windward Performance" to see their operation and get the behind the scene tour and maybe get a chance to spy into their "skunk works"! Plan on being at our hangar **early**, as we'll head down to Windward around 6:15!

I'll post a sign on the door for any late arrivals.

Thomas Phy, Vice-president

Treasurer's Report

Financial for period 1/1/11 through 6/30/11

Total Income:	\$500.00
Total Expense:	\$401.49
Net Income (Loss)	\$98.51
Cash Balance:	\$2167.91
Accounts Receivable:	\$260.00 (2011 dues)

Dues for 2011 are now well past due!

Members who are still delinquent by July 31st will be dropped from the newsletter distribution – Ed

Jack Watson, Treasurer

June meeting minutes

Minutes are not available from the Chapter meeting, which was held at the Ellsberg Hangar at the Bend Airport on Wednesday, June 8th, 2011.

If you were not there you missed a great evening!

Doors were open at 5:45 and the meeting started at 6:30. We also had a great "Chili Night" instead of having the usual pizza, with members bringing their favorite recipes plus cornbread!

Our Prez., Sean, brought us up to date on his latest adventure in the aviation world, complete with movies and the gear he uses ...!



Wings and Wheels Reunion

Replacing Bend Airport Day, run by the Red Hangar Group, had a very poor turn-out, based on the 2 hours I was there around noon ... maybe the predicted chance of rain had a ‘damping effect’.



That’s right ... one classic ‘plane, 2 cars and 4 motor bikes, however the Civil Air Patrol was out in force and one lone (Bend-based) Helio Courier, with stabilator and wingtip damage from a tiedown separation



The “AirMule”

This is the brainchild of Urban Aeronautics, an Israeli company.



There have been efforts since the 1950s to develop a vehicle like this, mainly for civilian purposes, to overcome traffic congestion and fuel waste. The developers of flying vehicles drew inspiration from the helicopter, but they ran into one central problem: the rotor, which severely restricts where a chopper can go, especially in urban areas. The rotor is the primary factor in helicopter accidents: a slight impact can cause a crash, and in general it is dangerous for helicopters to cross high power lines.

The Israeli Defense Force (IDF) is supporting the AirMule as it can fly in gullies and does not expose itself to fire, which is an advantage compared to the helicopter and its big external rotor, which has to fly much higher in a hilly region. Another advantage the AirMule has over a helicopter is that a helicopter cannot land on an incline greater than 5-10 degrees, mainly because the rotor could hit the hillside.

FAA Clean Program May Revive Open Rotor Engines

The FAA awarded five contracts worth a total of \$125 million over five years to engine manufacturers and Boeing to “develop and demonstrate technologies that will reduce commercial jet fuel consumption, emissions and noise.” The research is intended to accelerate introduction of green technology in the FAA’s Next Generation air traffic modernization program as part of the agency’s continuous lower energy, emissions and noise (Cleen) program. Participants include Boeing, General Electric, Honeywell, Pratt & Whitney and Rolls-Royce North America, all of which will match the FAA’s investment in the cost-sharing program. The companies will study alternative fuels, lighter turbine engine components, noise-reducing engine nozzles, wing trailing edge technology, optimized flight trajectories and open-rotor and geared turbofans.

Goals of the Cleen program include:

- Fuel burn reduction by 33 percent relative to current subsonic aircraft technology.
- Engine technology that reduces landing and takeoff cycle nitrogen oxide emissions by 60 percent, without increasing other gaseous or particle emissions, over the 2004 International Civil Aviation Organization standard.
- Certifiable aircraft technology that reduces noise levels by 32 dB cumulative, relative to the current Stage 4 noise standard.

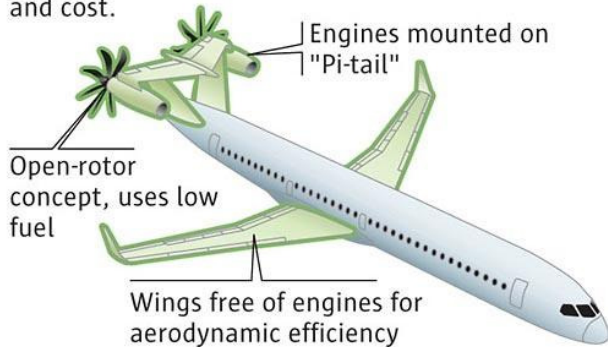
Open Rotor Engines ---continued

- Sustainable alternative aviation jet fuels and safety and transition strategies that enable “drop in” replacement for petroleum-derived aviation fuels with no significant modifications to aircraft and engines required and that perform more efficiently and cleaner than fossil-based fuels.

Cleen technology might be implemented as early as 2015, according to FAA Administrator Randy Babbitt. “Cleen is poised to get advances into service as quickly as possible,” he said. Cleen participants will meet semi-annually and a modeling tool developed by the Georgia Institute of Technology will be used to assess Cleen progress.

"FOZZIE": LOW FUEL USE

Low cruise speed of 500 mph reduces fuel use and cost.



Source: Boeing documents

Reporting by DOMINIC GATES

Graphic by MARK NOWLIN / THE SEATTLE TIMES

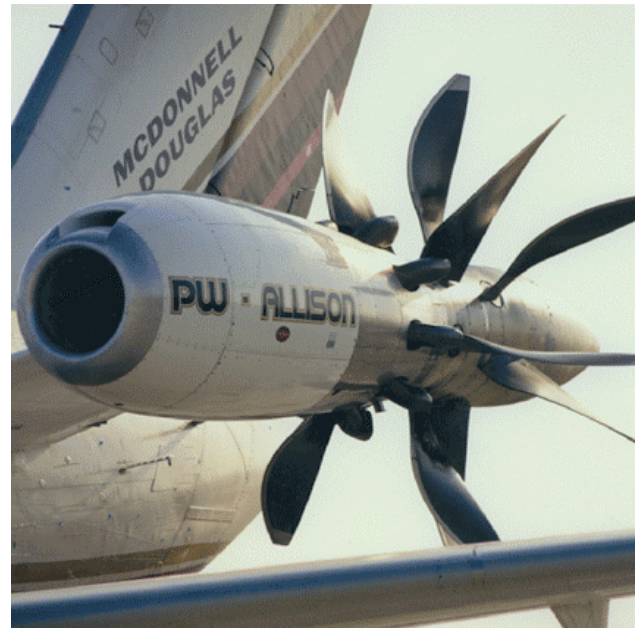
Flight tests of adaptive wing trailing edges and ceramic matrix composite acoustic engine nozzles will be flight tested on a Boeing 737 NG in 2012 and a twin-aisle airplane in 2013.

Adaptive trailing edges are controllable devices on the aft portion of the wing, according to Boeing, which “can help tailor the wing configuration to reduce fuel burn at takeoff, climb and cruise, and to reduce community noise at takeoff and landing.” Ceramic matrix composites can withstand hotter-running engines and thus “offer the potential of better thermal and structural performance, while helping to reduce weight and acoustic footprint.”

The Taps II combustor in General Electric’s new new eCore engine core will deliver up to 16 percent better fuel efficiency, according to GE, and eCore will be used in CFM International’s new Leap-X engine and for new GE regional and business jet engines.

GE will also conduct technology demonstrations of FMS trajectory algorithms to improve fuel, emissions and noise performance and develop capability for an FMS to share information with the FAA’s en route modernization system “to enable the four-dimensional trajectory-based FMS to fly more optimum trajectories.” Cleen funds will help pay for research into blade aero-acoustic and pitch change mechanism research on GE’s open rotor (unducted fan) engine. The design reduces fuel consumption by 26 percent and addresses noise challenges, according to GE, which conducted wind tunnel testing last year on counter-rotating fan systems. The Leap-X engine is a candidate for open rotor technology.

Honeywell is working with Gulfstream Aerospace and the Massachusetts Institute of Technology on further development of its UOP green jet fuel, using the Honeywell Tech7000 engine technology demonstrator. Honeywell UOP’s jet fuel can be made from sources such as algae and camelina (flax), and the fuel meets current specifications while significantly lowering emissions, according to Honeywell.



Pratt & Whitney is continuing development of advanced technologies for its PurePower geared turbofan engine family. By 2020, the company expects to achieve fuel burn savings of 25 to 35 percent. Compared to current engines, the PurePower family offers a 50-percent reduction in noise, according to Pratt & Whitney.

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