

Experimental Aircraft Association



TALESPINNERS

Chapter 174

Cincinnati, OH
Chartered since 1966
www.eaa174.org

Vol. 41, No. 1 << Next Mtg: Sun, January 21, 2:00 PM, Hawk Building >> January, 2007

President:	Gary Collins (513-722-7877)	Tech Counselors:	Howard Wells (513-683-1657)
V. President:	Doug Auxier (513-623-1423)		Gary Collins (513-722-7877)
Secretary:	Norm Beaudette (513-247-0347)	Flight Advisor:	Don Fairbanks (513-732-5852)
Treasurer:	Phil Cady (513-237-5163)	Newsletter Editor:	Dwayne Hensley (859-802-0310)

President's Notebook

The Holidays Are Behind Us

By Gary Collins

I for one I feel like I got further behind. But, except for a stomach virus which does not want to give up, I survived very well. I got a very interesting book for Christmas. It was published in Britain several years ago and sold well there. It tells the story of a teenage boy who signed up to fly fighters and age seventeen and one-half because it seemed an exciting thing to do and was swept into the "Battle of Britain" in 1940-41. When he arrived at his first assignment it was a Spitfire base and he was asked how much time he had in Spitfires. His reply was " I have never seen a Spitfire". His answer to the second question was "I am 18 years and 9 months old." He had 168 hours of flying time and 95 of that was solo. In spite of those answers he did fly the Spitfire very well for the duration of his service. The title is FIRST LIGHT by Geoffrey Wellum published by John Wiley & Sons in 2002. It is a good book.

My projects have been neglected for several weeks with Holidays and the stomach bug but just this morning Howard came over and we worked on the 170 engine. It appears that the oil control ring on the bottom of the piston of the cylinder that was using all the oil did not function properly. That let so much oil get through to the top of the piston that it got all carboned up and at 111 hours the top rings were not functioning properly. They were letting so much oil through that the bottom plug was fowled out on every start-up. The piston was cleaned - big job with all the burned on carbon. The cylinder was deglazed with scotch bright pads and brake cleaner, and then honed to get a pattern the new rings could wear into. New rings were installed on the piston and the whole assembly put back on the engine. It is not that easy but that is what we did. It is much easier to do with the engine on a stand and not on the airplane,

With all the intake system and exhaust system removed it seemed reasonable to look into the cylinder that was making valve noise. We were able to pull the cylinder out just far enough to remove the hydraulic lifter units without pulling the piston out of the cylinder. The hydraulic units seemed to be functioning OK. But on general principles two new hydraulic units were installed and the cylinder pushed back into place. I am not hopeful this did any good but it was worth a try. Everything needs to be torqued to the proper values and all the baffling and intake and exhaust installed. And then I need to drain the oil and put back non-detergent oil for the break-in of the cylinder with the new rings. Then a test flight if I still remember how to fly.

We finally got a seat sling and seat cushions for the Sparrow. The modification of the Cessna 170 windshield is progressing and will look much better than a flat wrap of lexan. But that job is taking much longer than expected. That is the homebuilders/ restorers continual lament — everything takes at least 4X the expected time.

The Chapter is in good financial shape and we look forward to another year of supporting Sport Aviation in all its various aspects.

NEW OFFICERS FOR 2007:

President – Gary Collins
Vice President – Doug Auxier
Treasurer – Phil Cady
Secretary – Norm Beaudette

RAFFLE WINNERS

Young Eagles Leather Jacket – Phil Cady
Toolbox Refrigerator – Pete Eide
T-6 Flight – Chuck Henkel
T-28 Flight – Kathie Doyle

The proceeds from the above raffle were \$1330.00. Thank you to all who sold and purchased tickets. A special thanks to all who organized and coordinated the event. An extra special thanks to all who contributed items for the raffle.



Phil Cady showing off his new leather jacket

Congratulations to Greg Baker, who earned his Sport Pilot license in November 2006 !

Discounts available with EAA US Bank Visa

Help EAA keep the fun in flying by applying for and using the official EAA Platinum VISA credit card, issued through EAA partner U.S. Bank. Choose from one of three designs: EAA's B-17 Aluminum Overcast; a Piper Cub; or the EAA logo. New cardholders also receive the opportunity for the low interest rate the first 12 months. The EAA VISA entitles cardholders to a discount with EAA flagship partner Aircraft Spruce & Specialty.

(Up to 10 percent; restrictions apply to avionics.) Additional partners will be added to the program in the future.

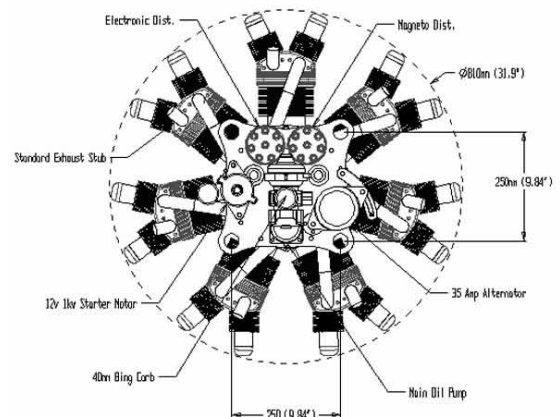
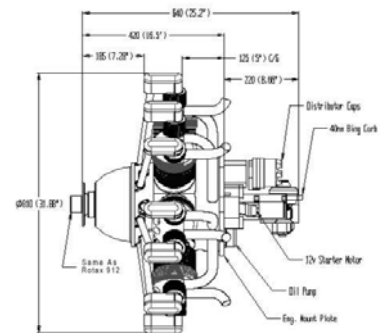
SAVE YOUR OUTDATED SECTIONALS

Kathie Doyle has requested that we save all our outdated sectionals for handouts at our Young Eagles Rally. Many Young Eagles have shown interest in the maps.

Drop them off at any meeting between now and May for handouts at the 2007 Young Eagles Rally June 9.

.2007 EAA Calendars \$10.00

We still have a few 2007 EAA calendars for sale. They will be available at the January meeting for as long as they last. We only have a few. First-come-first-served



A glance at the Rotec R2800

By Kevin Kinney

In the course of my WWW (world wide web wandering), I learned a bit about an Australian built rotary engine. Rotec has been manufacturing rotary engines since 2000. Note, this company is not the Rotec that manufactured ultra light aircraft a few years ago.

Rotec was founded by two brothers, Paul & Matthew Chernikeeff, who got into aviation as many of us did, by building models. However they took it a bit farther than most by ending up flying models on the mammoth scale.

The problem the brothers encountered is that there aren't many suitable engines for mammoth scale models. Luckily they had the skills to make their own. Matthew, the toolmaker with a background in CNC and Paul, a self taught machinist put their heads together to come up with an engine for their mammoth scale GeeBee.

In 1997 they built a 350cc proof of concept radial engine. After testing, they decided their model worked well enough to scale up. Three years later, they had a 7 cylinder direct-drive R2800 110hp prototype. (Since then they introduced the R3600, a 150hp engine.)

The Chernikeeff brothers teamed up Nestor Slepcev who designed a $\frac{3}{4}$ version of the Feiseler Storch, known for its' STOL characteristics and ability to perform flat turns. Initial testing determined the engine would benefit from a planetary reduction unit. In turn, this allowed the prop increase from 68 to 74 inches with a greater pitch.

This would be the final configuration for the R2800. And for those who know more about engines than I do, (nearly everyone?) here are some more words describing the engine. The R2800 is a naturally aspirated, pushrod overhead valve engine. It uses an altitude compensating Bing carburetor with a 35 amp alternator. The oil system is a fully scavenged with a remote oil tank.

Like the Jabiru collecting dust in my garage, the R2800 is nearly fully CNC'd with the only cast parts being the rocker cover & intake manifold. As I can attest, CNCing makes for a very pretty engine.

---Contact Kevin or the Newsletter Editor if there is a topic that you would like to have him research and publish in this newsletter---



Here's a spec box on the R2800 -
Cost - \$13,750 US for R2800 engine, \$1800 for dual exhaust collection ring, \$750 approx delivery from Australia

2800cc displacement, 110HP @ 3700 RPM geared. Total engine diameter is 31.9".

Dry Weight with Acc's (Starter Motor + Alternator + Carb) = 225 lbs

Gearing is via a PSRU at a ratio of 3:2
Engine rpm:Prop rpm.

Propeller / RPM Fixed 76" Diameter x 51"Pitch @ 2,400 RPM.

Electronic & magneto ignition using 2 auto spark plugs per cylinder.

Starter motor included with built-in solenoid.

35amp alternator with built in voltage regulator.

Bing 40mm constant compression altitude carburetor

Engine driven mechanical fuel pump

Dry sump lubrication via geared oil pressure and dual scavenge pumps.

Auto style spin on oil filter.

All cams and bearing surfaces are nitride hardened and precision ground to exact tolerances.

Fuel used can be 97 octane, 100LL aviation or high octane mogas

Fuel consumption: Avgas 100LL or high octane mogas: 5.8 gallons/hour @ 80% Power

Recommended TBO of 1000 hours.

<http://www.rotecradialengines.com>

SportAir Workshops

Jan. 19-21, 2007 West Palm Beach, FL
Topic: Repairman (LSA) Inspection-Airplane

Jan. 27-28, 2007 Oshkosh, WI (EAA HQ)
Topic: Composite Construction, Sheet Metal
Basics, Fabric Covering, Electrical Systems
and Avionics, Gas Welding and What's Involved
in Kitbuilding?

Feb. 17-18, 2007 Lakeland, FL
Topics: Composite Construction,
Sheet Metal Basics, Fabric Covering,
Electrical Systems and Avionics,
What's Involved in Kitbuilding?

For detailed information on SportAir Workshops,
including cost, course descriptions and how to
register, go to the web at:
<<http://www.sportair.org/schedule.html>>
or call 1-800-967-5746.



Next Chapter Meeting

Sunday, January 21, 2007, 2:00 PM

TWO SHORT VIDEOS
VISTANAV "THE WORLD OUTSIDE YOUR AIRPLANE"
and
FIREWALL INTEGRITY

Hawk Building, Clermont County Airport