



FLYERS ASSOCIATION NEWS

Number 07-3

November 2007



CHINO AIRPORT FLY-IN: AL UHALT AND LLOYD & LAURA COPENBARGER

2008 FLY-IN: DAYTON, OHIO

Sept 4, 5, 6 and 7

PRESIDENT
Earle Olson
P-352

VICE PRESIDENT
Ralph Cohen
P-412

NEWSLETTER
Jim Gorman
P-596





SPARE PARTS FOR YOUR DUKE





(2) Generators
(2) Starters
(2) Flap Motors

(1) Tach Generator
(2) Magnetos
(2) Landing Gear Motors





Above are located at Aircraft Systems, 5187 Falcon Road, Rockford, IL 61109. They will ship item to you by UPS or Federal Express. You return your part (same day) to them. They will overhaul, charging your credit card for work done, and then item becomes Association emergency part. Phone 815-399-0225.



Cowl Flap Actuator
Electric Boost Pump
Exhaust Transition Pipe
Lycoming Exhaust Pipe #77429
Prop Brush 3E1206-2
Recognition Bulbs DN25-5

A/C Door Actuator
Overhauled Turbo
Oil Cooler (new)
Engine Cylinder Assembly
Prop Spinner (Less Back Plate)



Above - contact Earle Olson @ P. O. Box 1043, Medina, OH 44258
Phone 330-723-3210 (O) 330-723-9977 (FAX)

Windshields - Contact Gary Bongard @ 952-944-2628

Air Conditioner and Generator Belts

AC belt is Gates XL9380

Generator belt is Gates XL 7440 (Always replace in pairs. Do not mix old and new.)



WELCOME NEW MEMBERS



Anthony Dohrmann P-321 N139
Las Cruces, NM

Melvyn Earle P-322 N322RJ
Suffolk, England

Frederic Lee
Edinberg, NY

Kenneth Brown P-197 N111XL
Clearwater, FL

R. L. Nicolson P-511 N2AS
Reno, NV

AB Fuoss
Elkridge, MD

William Mayher P-586 N586HP
Albany, GA

Scott White P-457 N999AB
Castlewood, VA

Dale Cox
Hawley, MN

Jim Fessler P-302
Live Oak, FL

Patrick Nickles P-35 N7110D
Alpharetta, GA

Jeff Newsome
Blackwell, OK



Comments from our President:

18TH FLY-IN AT THE CHINO AIRPORT

We had sunny and cool weather for our Chino Airport Fly-In but the warmth of our hosts and staff made this a very enjoyable event. We got the red carpet treatment and a beverage and cookies from pretty girls and handsome line guys.

Thank you to Lloyd, Laura, Mark, Debbie, Al, Debbie and all the staff at Encore Jet Center for a wonderful time.

There were 19 Dukes and Marc Franklin in his C-90 King Air. We had 52 people in attendance.

Our first Fly-In was hosted by our founders Marge and Jim Gorman in Mansfield, Ohio in 1989. We had our 2001 in San Diego cancelled by the terrorists attack. Start planning now for our 19th Fly-In which will be September 4, 5, 6 and 7, 2008 in Dayton Ohio. This is the birthplace of aviation and we have some exciting plans which will be laid out for you in upcoming newsletters.

Our Chino Fly-In was kicked off with a cool but enjoyable cruise on Newport Beach Harbor and we were treated to music by Mike O'Brien, along with dinner on board our party boat. An accident on the freeway caused our van drivers and navigators to become creative to see who would arrive back at the Hilton first. It was a late night but no one complained. Saturday our ladies were treated to shopping on Rodeo Drive, while the guys and Monica Desroche gathered for our Business Meeting and Technical Sessions. We are delighted to see Monica's smiling face with us again and glad her cancer is in remission.

We asked if Dane's compendium of Helpful Hints should be reprinted. The group unanimously said "Yes!", even without updating it. Dane said 100 copies will cost around \$8.00 each and he has approximately \$2.00 each in postage when he sends them out. The group voted to give Dane \$1,000 to do it.

Earle announced:

1. The new procedure for exchanging generators with Aircraft Systems, Inc. in Rockford, IL, DFA will no longer be billed for repairs. The member getting the work done will be billed directly. All present agreed. ASI will ask for a credit card upfront.
2. Please fill out the questionnaire so we know about future parts and Fly-Ins.
3. Beechcraft apologized for not making the meeting because of bad weather, but said they are going to support the Duke and asked us what parts we have had trouble getting. Drew McEwen of Beechcraft donated 4 Beechcraft leather jackets that were given away at the banquet.

TECHNICAL SESSIONS

- We welcomed George McGrillis, owner of Oilmatic, back. He has recovered from his near death illness and is now shipping pre-oilers.
- Darwin Conrad, Rocket Engineering, said they have delivered 8 turbo conversions and said he believes they'll do 100 over the next few years. Darwin told the group he does not knock the Duke's performance to sell turbo

conversions and was sorry about the “Bimbo” article. He told us of a few minor glitches they’ve run into and how they were resolved.

- Gary Bongard showed how they make bonded magnesium surfaces and how the process has evolved with newer bonding materials. They can repair and rebuild your tail surfaces. Gary says, “Catch corrosion early and avoid the big bucks”.
- Jerry Burnham says carbide faced lifters are STC’d and he is PMA’d, ready to ship. He also has new and improved push rod seals that should eliminate leaks.
- Dale & Tony Cox, Elite Air Control, showed what they have done with P58 Barons and told how they now have a contract to do their first Duke. We wish them well and will provide whatever information we can to help make their Duke do-over a success.
- Bob Hoffman reviewed our fuel systems with us and pointed out how our pressure relief valves are supposed to work and how to check them. He told how to do crosschecks and pointed out that there is no fuel load unbalance problem with Dukes. He cautioned that if anyone still has the chains for fuel caps, they should get plastic lanyards to replace them.
- Bob Desroche in his usual entertaining manner told us that if your Duke is not making book numbers (on speed), you can be sure it is not rigged correctly. At one of our earlier Fly-Ins he checked the flight line and left instructions on what he found. Let’s hope we can get him to do this at our Dayton Fly-In. Bob had his usual test pilot stories to tell and kept us on the edge of our chairs when he told of doing the “Flutter Test Program” for the King-Air. I believe he said in the power dive he was coming down at 24,000 feet per minute and the only one to beat that record is dead. We thanked Bob for all the improvements he has made to our Dukes.
- Nick Dean (BLR) said they have sold 350 sets of VG’s for the Duke and that he has pictures of every Duke that has been to a Fly-In since he has been attending.
- Mark Seader explained that Fire Wall Forward is now under new ownership and will be operating as a division of Duke Source. He said they have STC’s and PMA’s for most of the bonded magnesium surfaces and will sell them to any shop that wants to install them. He said they are working with a new source for windshields. They are talking with the Gami Nozzle people about how they might improve our fuel economy. Mark said they are pleased with the performance of the “Center Lube Cams”.
- The round table maintenance session fielded questions on oil consumption, window delamination, heater overheat, oxygen mask fittings, belly water drains, and fuel selector valve seals. It is not our intention to recap all this information, as much of it has been covered on the web and in our Newsletter.
- Earle read a letter from Bill Passey explaining that the Insurance Market for our Duke’s is stable and anyone under 65 should be able to get \$5,000,000.00 of coverage without much of a problem. If you’re over 65, stay with whoever you have and settle for the fact you probably can no longer get more than \$1,000,000.00 coverage.

Our closed session went well and all attending asked that we repeat it. We had our closing banquet at the Planes of Fame museum where Jeff Usem showed us pictures from his European Trip. He flew his Turbine Conversion Duke across the Atlantic before returning home. He is planning to join a group that will fly around the world. Thank you, Jeff, for a delightful tour.

Sunday morning Lloyd and Laura Copenbarger were at Encore Jet Center to say good-bye and wish us well on our journey.

Thanks again to the Copenbargers, Seaders, Uhalts, and the staff at Encore Jet Center for a wonderful time.

Earle





DUKE ENGINES

The 541 engine has been used in four airplanes, Beech 56TC, Beech Duke, Mooney Mustang and a geared version in Piper PA31P. My guess is Lycoming produced in excess of 2500 541 engines.

Known for years as a “Bulletproof” engine, all changed sometime in the 90’s when lifter spalling started occurring, which if operated long enough affected the cam. Reason for this is rumored (but a rumor with great substance) was the transfer by lifter manufacturer Eaton of production to Europe, where manufacturing expertise was lost. Regardless of the reason, failures did occur. The problem was not helped by an article in “Light Plane Maintenance” which recommended starting the engine at 1500 RPM and operating it for ten minutes at this speed. Probably best way to ruin an engine.

Many early Dukes were corporate owned and flown regularly. AMP Corporation owned 8 Duke’s and used take off power (41” – 2900) till reaching altitude. They had very few problems with the 541 engine. Amp operated their Dukes in excess of 500 hours annually. Bob Hoffman reports at least three of his clients are operating their Dukes with over 1500 hours SMOH. Today the average Duke flies 130 hours a year leaving 8600 hours for oil to drain off oil filter and lifters resulting in high abrasion on lifter surface when starting. Can you imagine what happens when one starts the engine at 1500 rpm? Owners with pre-oilers find if airplane is idle for a week or more it takes a minute and a half for the pre-oiler to build up to 50 lbs.

Our organization is very fortunate Jerry Burnham and Gary Bongard took the bull by the horns and developed an improved lifter, which was granted an FAA STC. By all reports, the lifter problem has been solved but still pre-oiling is recommended.

In spite of lifter problems, owners have achieved TBO or greater by following Paul McBride’s care and feeding of the 541 engine. He was Piston Engine Service Manager at Lycoming for many years.

1. Install pre-oilers
2. Maximum RPM at start (550 – 600)
3. 800 RPM till upward movement of cylinder head and oil temp
4. Slow and steady movement throttles and RPM
5. If using Shell products, stick to straight weight 100 or 80 Plus which has the Lycoming additive
6. Inspect lifters every 100 hours by dropping pan or better yet install Burnham/Bongard lifters
7. Idle at 1000 RPM four minutes before shut down
8. Preheat at temps below 50°F, but do not use pre-heaters on a continuous basis

Some Comments by the Experts:

Twin & Turbine October 2007 Ken Ibold
“The most notorious power plant shortcomings – notably the Beech Duke”

AOPA Pilot August 2007 Peter A. Bedell
“Duke is a Bimbo” “Greatest weakness is its performance”

Twin and Turbine September 2005 Leroy Cook
“1600 hour TBO was an elusive target”

Pilot Journal July 2005 Bill Cox
“Dukes rarely got past 1000 hours before needing significant top or even major overhaul”

Mr. Cox is the same person who claims Jackie Cochran won the 1937 Bendix in a Beechcraft Staggerwing instead of the true winner, Louise Thaden (Pilot Journal, July 2006).

World Beechcraft September 2005 Alan Dewitt
“541 engine so unreliable that the planes spend more time on the ground than in the air”

All of this got started with the advent of articles on the turbine Duke – enough said.

It is time we corrected this misinformation and letters from DFA members to these authors is a good starting point (see list below).

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Chino Fly-In



