Duke

FLYERS ASSOCIATION NEWS

Number 96-3

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Last Duke Built P-596

1997 fly-in will be September 25, 26, 27 at Tullahoma, TN

AVAILABLE

Three original Duke commercials from 1960-1980, 30 minutes. VCR copies are $11.95 postpaid in US or Canada. Contact Jim Gorman.

Duke Association has on hand:

1 - Generator
2 - Oil coolers
1 - Starter
1 - Magneto
1 - Step retract cable 60-430240-3
1 - Pilot/Co-Pilot hydraulic seat control
4 - Brake carriers 60-8002-19
2 - Brake disc's 60-8002-17
1 - Exhaust Pipe (Lycoming Part #77429)
1 - 5 x 6.0 Nose wheel tire
1 - 19.5 x 6.75-8 Main gear tire
1 - 19.5 x 6.75-8 Main gear tubes
4 - Prop brush 3E1206-2

The arrangement we have with the Aircraft Systems, 5187 Falcon Road, Rockford, IL 61109 is they will ship an O/H generator, starter or magneto to you by UPS or Federal Express. You return (same day) your part to them. They will overhaul, charging you for work done, and the item then becomes association emergency part. Phone number 815/399-0225. For oil coolers contact Bill Passey at 602/969-2291 (office). For other items contact Jim Gorman at 419/755-1223 (office.)

CHUCKLE FOR TODAY

You all know about the Darwin Awards - It's an annual honor given to the person who did the gene pool the biggest service by killing themselves in the most extraordinarily stupid way. Last year's winner was the fellow who was killed by a Coke machine which toppled over on top of him as he was attempting to tip a free soda out of it. And this year's nominee is . . . The Arizona Highway Patrol came upon a pile of smoldering metal embedded into the side of a cliff rising above the road at the apex of a curve. The wreckage resembled the site of an airplane crash, but it was a car. The type of car was unidentifiable at the scene. The lab finally figured out what it was and what had happened. It seems that a guy had somehow gotten hold of a JATO unit (Jet Assisted Take Off - actually a solid fuel rocket) that is used to give heavy military transport planes an extra "push" for taking off from short airfields. He had driven his Chevy Impala out into the desert and found a long, straight stretch of road: Then he attached the JATO unit to his car, jumped in, got up some speed and fired off the JATO! The facts as best could be determined are that the operator of the 1967 Impala hit JATO ignition at a distance of approximately 3.0 miles from the crash site. This was established by the prominent scorched and melted asphalt at that location. The JATO, if operating properly, would have reached maximum thrust within five seconds, causing the Chevy to reach speeds well in excess of 350 mph and continuing at full power for an additional 20-25 seconds. The driver, soon to be pilot, most likely would have experienced G-forces usually reserved for dog-fighting F-14 jocks under full after-burners, basically causing him to become insignificant for the remainder of the event. However, the automobile remained on the

straight highway for about 2.5 miles (15-20 seconds) before the driver applied and completely melted the brakes, blowing the tires and leaving thick rubber marks on the road surface, then becoming airborne for an additional 1.4 miles and impacting the cliff face at a height of 125 feet leaving a blackened crater three feet deep in the rock.

WELCOME NEW MEMBERS

Duane Morrer Middletown, KY	P-67	Tom Carroll Rancho Murieta, CA	
Werner Scharmach Tacoma, WA	P-408	Mark Madura Anchorage, AK	P-321
Ken Callander Scotts Valley, CA	P-503	Dallas L. Smith, Jr. Midland, TX	P-464
Patrick Laux West Chester, OH	P-339	Phillip Mullins Hopkinsville, KY	
George Friedrich Searcy, AR	P-51		

Steve Michael has the original engine baffle material. 513/932-1133 days.

Why I'm glad I own a Duke:

> FAA has issued a Special Airworthiness Bulletin which calls for **disassembly** of the entire exhaust system every 100 hours on most 300 and 400 series of Cessna Turbo-charged twins.

AD 96-20-07 JANAERO (formerly Janitrol) Amendment 39-9773-B Series combustion heaters, Models B1500, B2030, B0340, B4050 installed in Models 60, A60. Aero Spec 614/387-1933 have the C+D airmotive pressure decay test equipment required to comply with this AD P.O.Box 693 Marion, OH 43301.

Doug Gulley reminds us member/owner Gary Seabert runs Island Aviation, Fernandina Beach, FL. 904/261-7890. Gary knows and loves Dukes and treats the Duke owner very favorably. Doug recommends Island Aviation the place to take your Duke for maintenance.

I wanted to let the Duke Flyers Association know about the problem I had with my AC & Heating system and an irregular prop sync.

Upon turning on the AC in the auto mode and setting it to the coolest indication that cold air would come out of the overhead vents and at the same time heat would come out of the lower level. The heater has a higher BTU rating and would overcome the AC output and it would become uncomfortably warm in the cabin. The only way I could use the AC was to turn it to the AC manual mode and then it would get too cold because the thermostat is inoperative in this mode. I took my Duke to United Beechcraft at Indianapolis and they put someone on it all day tracing down the wiring. Their answer was to replace the control switch on the panel. After spending $289.00 and 3-4 hours labor the problem was still the same. We then exchanged the sensor mounted on the side wall. This was obtained from another Duke. It worked perfectly! We ordered a new sensor from Beech and find that the cost was $1,400.00 just for that part!! However, upon installing the new part it still did not fix it. I had Raytheon Aircraft Services in Tampa, FL look at it and they finally resolved it. It was the temperature control board (located behind the power pedestal). Replacement resolved the problem and the HVAC now works just fine. The cost of the board was approx. $1,200.00 plus labor.

So far I have replaced everything in the HVAC except the wires. New heater can, ignitor, fuel pump, nozzle for the heater, compressor, dryer, control switch and now the temperature control board. It seems to me, in retrospect, that when you start having problems like I did-*do not become timid*-replace all the parts of the system at one time.

At our annual meeting in Denver I heard several people talking about problems with their prop-synch. This is how I resolved my prop sync problem:

After replacing the controller, overhauling the actuator and replacing the cable the prop-synch was still not working properly. All of the components continued to fail until I found the problem. It was the prop sync jack screw.

If the controller, actuator are working properly the first thing to check is the cable going from the actuator to the prop sync jack screw. Make sure that the end of the cable that screws into the actuator is square tipped. When working correctly the actuator is so powerful that it could round off the corners if something is not working.

If the cable end appears to be normal check to see if you can rotate the cable. You can do this by disconnecting the cable at the actuator and clamping a Vise-Grip to the square tip. You should be able to make 8-9 turns freely for full travel through the prop sync jack screw. If it does not turn freely then the problem is the prop sync jack screw. The prop sync jack screw needs to be cleaned and totally lubricated.

The procedure is as follows:

1) Soak with LPS 1 while trying to turn the cable.
2) Rotate cable counterclockwise to stop while applying LPS 1.
3) Remove and clean all old lubrication with MEK and scotch brite. (You may notice a lot of rust and grime).
4) After cleaning apply a liberal amount of Anti-seize compound to prop sync jack screw.
5) Rotate the cable clockwise 8-9 turns to stop. Repeat 2-3 times.
6) Now rotate cable to the full stop position-counting how many turns it takes to reach the stop.
7) Rotate 4-4 1/2 turns to center the prop sync jack screw.
8) Reconnect the cable to actuator.

Note: It is imperative to center the prop sync jack screw before reconnecting the cable to the actuator. If you do not do this the props will search and never put the props in synch. There is a stylus in the actuator that rotates to center when you turn off the prop-synch switch and it attempts to center the prop sync jack screw, too.

For more than 700 hours, since repair, the prop-sync has worked flawlessly. However, a word of caution - be sure and relubricate every 100 hours or it will bind up again. I have gone to 115-120 hours without lubrication and then the prop-sync starts to search, again. Clean and relubricate and the problem goes away. If anybody knows of a better lubricant I would appreciate knowing. We tried anti-seize because it sticks to everything it touches and holds up well.

I hope this is of some help. It makes it so pleasant when you are altitude and the prop synchophaser is sitting perfectly still and not spinning.

Larry Moskoff

WORTH READING AGAIN

Inexpensive repair of coal flap motor - Page 2 88-1

Insight graphic engine monitors - Page 1 89-2

Spool down time for turbos - Page 6 89-3

Removal Phillips screws - Page 3 90-3

Frozen controls due to ice in fuselage - Page 5 90-2