Duke

FLYERS ASSOCIATION
P. O. Box 2599 • Mansfield, Ohio 44906
Telephone (419) 529-3822

Number 90-2 June, 1990

P540 owned by J. T. McCafferty
Tocwoomba, Queensland, Australia

One of the main reasons our organization was formed is best illustrated by the enclosed letter from Paul Loyd, P-439.

We cannot stress strongly enough to check your airplane for the same condition and add it to the 100 hour list.

Thanks to Paul, a very serious problem for someone else, may have been averted.

FLYERS ASSOCIATION NEWS

1990 DUKE OWNERS
FLY-IN
FALCON FIELD
MESA, ARIZONA

Bill Passey, our Vice President, will host the 1990 Fly-in.

October 3 - Early arrivals - Dinner on your own
October 4 - BBQ/picnic at the airport, 6:00 p.m.
We will be guests of Champlin Fighter Museum Art Auction at their museum on Falcon Field
October 5 - 8:00 a.m. - 1:00 p.m. - Duke Maintenance Seminar
6:00 p.m. - Banquet at Hilton
October 6 - Departure

We are looking for a large turnout from the west coast. Last year we had over 20 and hope this October for 50 Dukes. What a great photo opportunity and learning experience for those in attendance. All that came last year agreed it was time well spent. We look forward to seeing all of you this October.

Enclosed is a hotel reservation form which should be sent directly to the hotel. Note the cutoff date is **September 5, 1990.** Send hotel reservation to Hilton, along with payment for one nights room. Note $60 price is for either single or double.

Bill passey would appreciate your returning the form below just as soon as possible. Remember it takes a lot of work and effort to host a fly-in.

FLYERS ASSOCIATION NEWS

AIR CONDITIONING

The Duke is equipped with a freon type evaporative cooling system similar to most automotive type air conditioning systems. The compressor is mounted to the right engine and is belt driven via a magnetic clutch. Also in the right nacelle is the condenser, the receiver dryer, and the condenser blower. Air flow over the condenser is regulated by a fully automatic scoop, mounted on top of the right nacelle.

The air conditioner may be operated in either the "manual" or the "auto" mode. In the manual mode, the compressor operates continuously, regulated only by the evaporator temperature switch. In the auto mode, the compressor is cycled to maintain the desired cabin temperature. It should be noted here that the heat and air conditioning systems are totally independent, and should never operate simultaneously.

If you do not get cool air from the overhead vents when you select a cooling mode, there are a couple of things you can check, before heading for the shop. First, is the compressor operating? With the right engine operating, and manual cool selected, is the compressor clutch engaging? If it is, the system is probably short of refrigerant, indicating a probable leak. If it is not, then check the fuse located in the outboard access panel of the right nacelle. If the system pressures have varied from normal, either excessively high or excessively low, a safety will short this fuse through a resistor to ground, thereby disabling the clutch and the system.

If the system operates on manual, but not on auto, you probably have an electrical problem with the temperature control circuit. The maintenance manual gives detailed steps for troubleshooting an inoperative temperature control circuit. By methodically checking the various components you can quickly isolate and repair a defective system.

The air conditioning system has undergone several minor changes over the years, so be sure to check the status of service bulletins relative to the system installed on your airplane. The earlier Dukes incorporated a hot gas bypass valve, later removed. Another bulletin required installation of a guard over the pulley. You will find that when the air conditioning system is operating properly, it will maintain a comfortable cabin over a wide range of outside air temperatures.

Ralph Cohen

Ritt Berry has an STC for installation of safeflight's angle of attack indicator in the Duke. He will offer any member a license to install for $250.00. Ritt estimates total cost would be about $2800.00. Contact him at 213/277-6868 or 2312 Strand Manhattan Beach, CA 90266.

Telephones:
Office , 669-3324
Residence 665-4143

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25 May 1990

Mr. Jim Gorman
Duke Flyers Association
P.O. BOX 2599
Mansfield, OH 44906

Re: P-439 Control cables freeze-up

Dear Mr. Gorman:

A recent experience we had might be of interest to other Duke operators: Enroute from our home base in Pampa, TX to Ft. Myers, FL, we made a planned fuel stop in Jackson, MS. During the descent into JAN, and subsequent departure, we flew through light to moderate rain for a total of approximately 30 minutes, with OAT's well above freezing. The cruise portion of the flight from JAN to FMY was at FL230, in smooth air, with the auto-pilot engaged, for about 2 1/2 hours.

As we began our descent into FMY, we discovered that the elevator, rudder, and elevator trim tab controls were frozen solidly. They became functional again only after some 15-20 minutes of flight below the freezing level, and were still slightly restricted during landing.

Subsequent investigation revealed that an accumulation of an estimated 3 to 5 gallons of water had collected inside the bottom of the fuselage just aft of the aft pressure bulkhead. The drain tube which is supposed to keep this from happening was stopped up tightly by carpet lint. The water appeared to have been about 6 inches deep and, at this point, the control cables for the tail section are only about 1 1/2 to 2 inches above the bottom skin. The water had frozen and the cables were encased in the ice.

Our particular situation was resolved with no "bent aluminum", but if the situation had been compounded by an engine failure, or had surface temperatures been below freezing....who knows?

I checked the Beech Duke Annual Inspection form and could find no specific requirement for inspection of this drain tube, so it looks like it is up to the pilots to insure that it remains clear. Beech has suggested blowing into the tube during pre-flight inspection. (That's going to raise your passengers' eyebrows!) Anyone else ever had this problem?

Thanks for starting what I consider to be a very worth-while organization.

Paul D. Loyd

Paul D. Loyd
Chief Pilot

WELCOME NEW MEMBERS

#193 David R. Black
Box 335
Munroe Falls, OH 44262
216/688-2741 (office)

#194 Robert F. Geary N 111 VV P-484
Viking Yacht Co.
Route 9
New Gretna, NJ 08224
609/399-0453 (office)

#195 Bob Foster
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Van Nuys, CA 91406

#196 Al DiTommaso
Flexovit USA Inc.
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Angola, NY 14006

#197 Sheldon Holson N 1234A P-535
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203/847-8832 (home)

#198 Vincent J. Mascia N777SG P-538
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1121 Morning View Dr., Apt. 305
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#200 Earl G. Fiscalini N57HD P-279
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408/679-2744 (home)

#201 Gene M. Gaertner N721TR P-571
501 S. Grace
Addison, IL 60101
708/543-4040 (office)

#202 Leon Brinkley N6BS P-219
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Paragould, AR 72450
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314/438-6120 (home)

#203 Ken Crandall N822D P-8
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209/733-8111 (office)

#204 Paul Abramowitz N777PC P-220
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213/465-1451 (office)
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#205 J. T. McCafferty VH-DUU P-540
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Box 643
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076-381199 (office)
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#206 Ed West N157JT P-589
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