Duke

FLYERS ASSOCIATION NEWS

Number 95-2 September 1995

If you have not made reservations for our fly-in at Spirit of St. Louis Airport, October 5-7, time is running out. We must advise catering number of those attending. Call Susan Young at Bock Pharmacal now. Phone 314/579-0770, Fax 314/878-8375. ***YOU MUST FILL OUT RESERVATION FORMS FOR FLY-IN AND HOTEL*** - not just the card which said you would be in attendance.

President	Vice President	Secretary-Treasurer
Bill Passey	Max Cohen	Marge Gorman
P-594	P-412	P-596

We now have received complaints on three engine overhaulers. One was detailed in the last newsletter, two more this month. Problems vary but it appears the engine people have not learned the basic rule of business. "If we don't take care of the customer, someone else will."

While on the subject of engines, some owners (many new) have experienced spoiling of cam shaft lifters. In discussion with Lycoming on the subject, they listed five causes.

(1) Long periods of inactivity
(2) Infrequent oil changes
(3) Not using Lycoming additive LW-16701
(4) High RPM during start
(Never above 500 RPM until full oil pressure)
(5) Salt air environment

Can be a combination of all above.

Installation of Oilamatic Inc. pre-oiler would solve items (1) (4) (5). If interested contact George McGrills at 1-800-343-7623.

Al and Debbie Uhalt have taken the time and effort to compile an index of all newsletters by subject which we have enclosed. They also extended an invitation to hold the 1996 fly-in at Colorado Springs. Thanks for a job well done!

At Oshkosh I had the chance to discuss fuel cells with Kurt and Carl Hartwig of Aircraft Fuel Cell Repair, Eagle River, WI 54521. The worst news was majority of fuel cells found in Dukes are the original Goodyear cells. Any Goodyear cell built before 1979 is either unrepairable or it will be very soon. For that reason most of the fuel cells are replacements. They stock both overhauled and new. 1-800-4437-8732. *Carl's "Outs" and "Ins" of Fuel Cells* is interesting.

Another Duke accident at Olney, IL. Crashed on the approach to Runway 11. Conditions 100', overcast, 1/2 mile visibility. Minimums are 900 and one. So far as we can determine, none of Duke accidents this year involved icing. More on this in next newsletter.

Last newsletter we asked for your recommendations on maintenance and radio shops. So far only two people replied. Please take time to let us know. It may help you on a cross country. Send to Jim Gorman, P.O. Box 2599, Mansfield, OH 44906.

WELCOME NEW MEMBERS

JOHN E. RICE P-491
34451 W. BURNVILLE PKWY
BURNSVILLE, MN 55337

RICK COULTER P-513
2750 PINERIDGE DR.
LA CRESCENTA, CA 91214

CHRIS WIGHT P-370
3509 BAY SHORE RD.
FT. COLLINS, CO 80524

CHARLES BLACK P-543
7234 SHORELINE DR., APT.153
SAN DIEGO, CA 92122

JEFFREY J. LASKOWSKI P-45
7258 N SR 39
LIZTON, IN 46149

DAVID SCHLOSSER P-74
21609 N. 14TH AVE.
PHOENIX, AZ 85027

JEAN-PIERRE PAQUETTE P-261
368 FRONT ST.
L'ORIGNAL ONT CANADA KOB1KO

JEFFREY M. DRAZAN P-467
3000 SAND HILL RD., BLDG.4
MENLO PARK, CA 94025

TED DOLL P-586
3585 LOCKSLEY DR.
PASADENA, CA 91107

KENNETH SWENSON P-241
P.O. BOX 45701
BATON ROUGE, LA 70895

DEAN P. LYONS P-582
2500 CHARETTE LANE
BURLINGTON, IA 52601

MARK RIDIG P-416
P.O. BOX 197
MAUSTON, WI 53948

FRANK P. MORGAN P-589
501 S. WOODCREEK RD.
BOLINGBROOK, IL 60440

ROBERT WOOLF P-395
225 SPIT ROAD MOSMAN
SYDNEY, NSW 2088 AUSTRALIA

HOWARD G. CHILTON, JR.
3306 WILEY POST RD. #106
CARROLLTON, TX 75006

JAMES D. BRUNNER
10523 W. HAMPTON AVE.
MILWAUKEE, WI 53225

JOHN COTTA
5573 W. WOODBRIDGE RD.
LODI, CA 95242

ROBERT F. MANN P-584
2970 WALDWIC LANE
OSHKOSH, WI 54904

CHARLES D. GULLEY, JR.
P.O. BOX 1740
OCEAN SPRINGS, MS 39566

STEPHEN FABER
120 RAYNOR AVE.
RONKONKOMA, NY 11779

CHUCK GUSCHEWSKY P-522
961 WYO HWY 789
LANDER, WY 82520

HAROLD J. HITCHCOCK
12361 OAK PARK BLVD. #112
BLAINE, MN 55434

WELCOME NEW MEMBERS CONT.

GAIL P. LYNCH
27 URBINO
IRVINE, CA 92720

MICHAEL F. FASCIANO P-359
2533 INDIAN RIDGE DR.
GLENVIEW, IL 60025

WE HAVE NOW ISSUED 494 MEMBERSHIP CARDS.

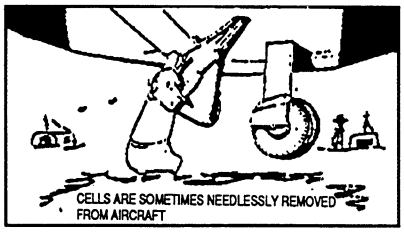
Item of interest: At last count, there were 73 Dukes outside of U.S. and Canada.

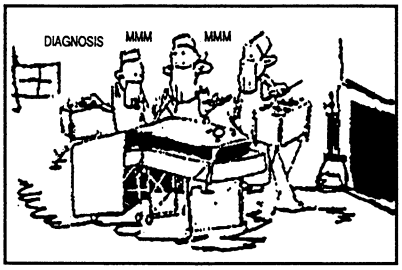
I have TIO 541 engine for sale. Engine is ready to assemble. Has yellow tags on case and crankshaft and cylinders. New pistons, rings, valves, cam, etc. Used starter - turbo. Will be 0 SMOH when assembled. $20,000.00 outright. Gene Underland, Box 1292, Wilmar, MN 56201 612/235-8748.

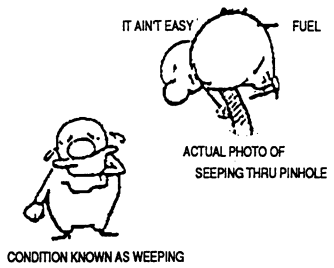
DUKE FLYERS ASSOCIATION NEWS INDEX
Issues 88-1 thru 95-1

CARL'S "OUTS" and "INS" of FUEL CELLS

DIOGNOSIS







Diagnose the problem before removing any fuel cells. Check gaskets, connections, cracked tubing etc. Inspect the cavity for fuel staining. It may be coming from the next cell over. Have a very good idea where the leak is before starting the removal process. Always consult the airframe manual for exact procedures. These are only helps to reduce damage and ease a sometimes difficult and usually disliked job.

REMOVAL

Make sure both the wing and fuel cell are thoroughly warm. The fuel cell is always more manageable when it is warm. Usually leaving the aircraft in the sun for an hour or so, depending on your climate, will be sufficient to make your job easier.

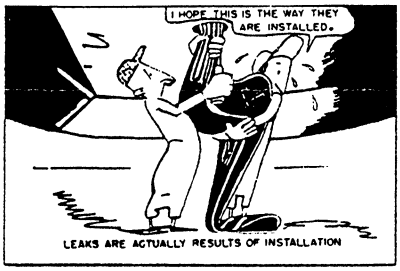
Remove the screws at the filler neck adapter. These screws attach the adapter to the wing and the fuel cell. Check the gaskets. This wing opening usually is where the cell is removed from the wing although there are sometimes other access plates. Regardless of which access hole is used, tape the edges of the opening to avoid abrasions and cuts.

Remove wing root fairings if needed and inspection plates to disconnect fuel and vent lines. Loosen the clamps and allow the nipples to relax. Then making sure the nipples are warm enough, carefully work fuel strainers, quick drains, and lines loose and out.

Reach in on the outer surfaces of the cell and unsnap bayonet clips, snaps, buttons or lacing cord which hold tank in place. Carefully fold and roll cell into a tube shape to remove it through the opening. Remember warmth is your friend and don't force anything.

Once removed; wipe out any fuel residue, remove clips, crossvent tube, quickdrain and clamps. Retain them for installation. Leave the bolt rings attached to the cell. **Do not oil cell**. Oiling is for long term storage after repair. It would be like waxing before a paint job. Fold loosely and box in a sturdy carton.

INSTALLATION



Prepare the cavity by inspecting it for metal filings, bolts, tools or rags. Clean it thoroughly. Retape rivet heads with a fuel resistant tape if old tape has come loose. Tape any sharp edges that might damage the cell on installation. Attach quickdrain to cell if necessary. Transmitter gaskets might also be put in place. **Do not use gasket cements or pastes**. The holes will elongate and cause the gasket to slip under pressure.

Double fold and roll the fuel cell into a tube as before and install through the taped access hole. Once inside the cavity unfold and fit all corners and remove wrinkles. Fasten snaps, bayonet clips, buttons and or lacing cord which support the fuel cell in the cavity. Make all connections. When clamping do not overtorque. Allow nipple to relax, at least 1 hour, before retorquing. In temperatures under 75 degrees Fahrenheit, allow more time. Overtorquing can result in nipple damage and leaks. See manuals for specified torque of clamps used, generally 20 in lbs.

Check venting system for restrictions. They cause a vacuum which pulls the cell loose in the cavity and this results in structural fatigue and leaks in the fuel cell. Check fit and all connections. If one clip doesn't snap in place it won't adversely affect the functioning of the fuel cell.

STORAGE

Fuel cells should be stored in their original container at room temperature in normal humidity. If it is removed from the container, it should be replaced in as nearly the same folding as possible. Fuel cells can be stored a year or more before they have to be lightly reoiled with a lightweight mineral oil.

FOR THE LONGEST SERVICE OF FUEL CELLS, IT IS A GOOD POLICY TO KEEP YOUR TANKS TOPPED OFF.