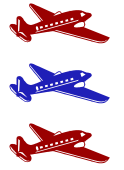


Dayton Pilots Club



October 2004

www.daytonpilotsclub.org

Next Meeting Wednesday, October 20, 2004

Dayton Wright Brothers Airport at 7:00 PM

Chester Harris, Editor

DPC's Finances and New Rates

By Chester Harris

Using a complete year of financial data in the new accounting system, the DPC trustees have adjusted rates to better match actual costs. At the same time we plan to consolidate existing loans and lock in current low interest rates with a bank loan, slowly reduce debt, fund fleet improvements, and minimize taxes. A tall but do-able order.

Operating Costs

The new discipline in club accounting makes it possible to clearly separate the effects of selling (and buying) airplanes from the costs of owning them and from the costs of operating them. The trustees' goal is to cover the costs of owning the fleet with the monthly membership fees and the costs of operating an airplane with its hourly flying rate. As the call to action in the sidebar points out, we charged 12% less for monthly dues and flying last year than it cost the club. In order to match the fixed costs of owning the fleet, monthly rates should have been approximately \$10 per month higher. To match the hourly operating costs, the average hourly rate should have been approximately \$8.35 per hour higher. Approximately \$5.60 of this hourly rate shortfall comes from the increase in fuel prices since the club last

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CALL TO ACTION

Operating Cost

Under recovered last Year by 12%.
Fuel Prices up >\$5.60 per hour since last increase
\$9,400 "missed" in fuel increase last year

Loans

Line of Credit Used -\$40,000 of \$50,000
Member Loan Total -\$153,000

Fleet

Taxes due next Feb of \$31,000 if \$125,000 not reinvested
Need Fleet Improvement for appearance and reliability

Inactive Members

\$29,500 return of share value due in Nov 2005

Safety Corner—Vacuum Pump Failure

By Tim Smith

I'm at the run-up area, reviewing my check list, I'm looking at the vacuum gauge, thinking about the vacuum pump. This is a critical component of the airplane. After all it drives the attitude and heading indicators. I read about it, heard about it in ground school, saw questions on the test about it, but what do I really know? So, I decided to check it out. Here is some of what I found. The article below is adapted in part from an article by Alton K. Marsh in AOPA Pilot in June, 1999.



Worried about a vacuum pump failure? Probably not, especially if you're an airline, military, or business aircraft pilot and fly planes that typically have redundant backup systems. Most general aviation pilots have never had a vacuum pump failure. But call the repair shop at your airport and you'll find that vacuum pumps fail more often than most pilots realize. While most GA airplanes have an electrically driven turn coordinator and vacuum-driven attitude and heading indicators in order to avoid dependency on a single system, a vacuum pump failure is still challenging.

Do vacuum pump failures cause accidents? The AOPA Air Safety Foundation found 40 accidents from 1983 through 1997 involving vacuum pumps. Thirteen listed a broken vacuum pump as the cause of the accident, while most listed the failed pump as one factor contributing to the accident.

Were the accidents serious? Four of the 40 accidents caused no injuries, three resulted in minor injuries, and one led to serious injuries—but 32 of the accidents re-

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sulted in fatalities.

Even VFR pilots need to consider the loss of a vacuum pump as a potentially serious emergency, depending on flight conditions. The National Transportation Safety Board reports that on September 20, 1997, a Mooney pilot noticed low vacuum-pressure readings followed by slow failure of the attitude and heading indicators. The wing leveler system failed as well, since it, too, was a pneumatic (air-driven) system. The pilot elected to continue into deteriorating weather that became so bad he was forced below VOR reception altitudes and ended up landing in an open field. There were no injuries, although the aircraft was damaged.

Why Vacuum Pumps Fail

Modern dry vacuum pumps often fail prematurely—always catastrophically and without warning—usually at the worst possible time.



Most small aircraft depend on air-driven gyro instruments powered by vacuum produced by an engine-driven air pump. The vacuum system is a simple one, and it should be reliable and trouble-free. Too often, though, it isn't. Air enters the system through a central vacuum filter, ensuring that the gyros breathe only clean air and are protected from dirt and other contaminants. The air passes through the gyro instruments (where it spins the gyros), then through a vacuum regulator, and finally to the suction inlet of an engine-driven vacuum pump. The pressure outlet of the pump usually discharges its air into the engine compartment.

Almost every case of premature dry vacuum pump failure can be traced to one of three causes: contamination, overstress, or faulty installation.

A dry pump can be destroyed by carbon contamination. A dry pump normally fails suddenly when a graphite vane or hub fractures, generating a cloud of carbon fragments. If the system is not meticulously cleaned of carbon before a replacement pump is installed, the new pump may ingest these fragments. This may result in failure of the new pump in just minutes or hours.

Dry air pumps are also extremely vulnerable to contamination by liquids. The graphite vanes are designed to operate absolutely dry, and the introduction of any liquid can quickly destroy a pump. Oil can enter the vacuum pump in several ways. One frequently-seen culprit is a leaky pad seal gasket between the pump flange and the engine accessory case. Any engine compartment oil leak that allows oil to get on the pump may find its way inside through the drive coupling. Alternatively, oil that gets on the vacuum regulator will quickly oil-soak the foam garter filter and start being sucked inside the pump itself. If even a tiny bit of oil gets inside a dry pump, it's history.

Now when I look over at the vacuum gauge during run-up, I have a clearer picture of what is behind it.

Around the Hangars

Congratulations!

On September 30, Suzanne Harris successfully completed her instrument exam with FAA examiner Dave Stahl. Congratulations to both Suzanne and her instructor, Norm Hignite.



Plane Wash

Clem has reserved the planes for the fall plane wash on October 23rd. Come out for lots of food and conversation ...and to give our planes and hangars their semiannual cleaning.

Safety Meeting Reminder

A Safety Meeting is scheduled for our November AOPA's Safety in a box on "Managing Flight".

President:	Greg Halderman	(937) 859-3642
Secretary:	Kevin Chandler	(937) 885-1395
Treasurer:	Mike Nolan	(937) 866-8280
Membership:	Jerry Falta	(937) 439-4864
Maintenance Officer:	Bill Mervar	(937) 258-1210
Safety Officer:	Tim Smith	(513) 897-7729
Member Loans:	Tom Weber	(937) 748-9084
Newsletter Editor:	Chester Harris	(937) 657-3621 chester.harris@attglobal.net

Newsletter articles Due by October 31

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adjusted the hourly rate.

Equity=Assets-Liabilities

Although Club equity in the fleet has varied over the years, your trustees are working to maintain or slowly grow the Club's ownership in the fleet. This means decreasing debt and investing in fleet improvements. Currently we value the fleet at approximately \$413,000. Our current debt is approximately \$225,000 or 55% of the fleet value. We expect the percentage to increase to 65% with fleet improvement and the retirement of some inactive members over the next year and then to decrease over the next several years as we fund additional incremental improvements through operations and pay down our debt.

Rates

The new monthly rates are set to fully recover the forecast ownership costs plus reduce

debt by approximately \$7,000 the first year plus contribute approximately \$3,000 per year to fleet improvements. The hourly rates are set to fully recover the forecast hourly operating costs plus contribute approximately \$6,000 per year to fleet improvement. The new monthly rates are \$79 per month. The new flying hour rates are in the blue sidebar. They are based on current rates for fuel. As fuel prices change, the flying rates will be adjusted accordingly and shown in ScheduleMaster.

Comparison

Dayton Pilot's Club continues to be a great flying value. The sidebar to the right compares the new rates with local and regional alternatives showing DPC to be the low cost way to fly even before you add tax to the alternatives. In addition, the selection of planes and the liberal daily minimum hours policy for trips allow DPC to fill needs not met by any other approach in the region. With rates that provide a stable financial base, DPC will keep serving its members for many more years.

Aircraft	Old Rate (\$)	New Rate (\$)	Yrly Time (%)
172	59	71	11%
Archer	67	81	70%
Mooney	95	108	19%

F L I G H T O P S	Aircraft	July Billable Hours & 888 Time			YtD Billable + 888 Time	
		2004	2003	Monthly 888 Time	2004	2003
	4201U	21.26	21.09	0.00	225.33	170.97
	4506W	33.92	36.39	0.12	234.72	284.19
	62RP	26.21	25.19	0.48	187.99	205.32
	738NG	33.60	18.60	0.00	188.70	197.00
	8078X	29.20	42.40	1.70	222.60	321.40
	8268B	23.40	31.20	1.60	241.90	312.10
	Totals	167.59	174.87	3.90	1301.24	1490.98

Do You Know?

Private

It is getting dark earlier and a lot of us are doing night landings. While I was out at the hangers the other night, two pilots were in the pattern getting current. Both the Cessna and the Archer had their rotating beacons on. The Cessna had its wingtip strobes on but not the red and green position lights. The Archer had red and green position lights, but no strobes. The Cessna was using its landing light but the one on the Archer apparently didn't work. Was either aircraft operating legally?

Instrument:

As you take off for your return trip to MGY from St. Louis in 62RP, right before you hit "OK?" on the GPS, you notice that the latest GPS update had not been applied and the database is officially out of date. Can you legally use the 430 for (1) en-route navigation, (2) to fly the loc 20 at MGY (3) to fly the loc 23 at MWO?

Aircraft	ASI	GW	T&G Flying Cleveland	
			Member	Renter
172	\$88/h	\$80/h	\$ 83/h	\$108/h
Archer	--	--	\$ 92/h	\$118/h
Mooney	--	--	\$128/h	\$164/h
Renter's Insurance or Monthly Dues	\$80/m	\$80/m	\$55-75/m (+1K--1.5K one time)	\$80/m

Minutes of September 15 DPC Meeting

By Kevin Chandler

President Greg Halderman called the meeting to order at 7:07pm.

Greg announced that the normal procedure of business would be altered so that a presentation about the club finances could be shown to all of the members. The normal business meeting would be held after the presentation.

State of DPC Finances/Rates

Greg presented information about the costs and revenue associated with the last 12 calendar months. Highlights included losing \$11K where our fixed costs were not covered by member dues. Losing an average of \$10/hour where our variable costs were not covered by flight revenue. Greg also noted future expenditures and problems with our member loan program.

To resolve this problem, monthly dues are being raised to \$79/hour. Flight charges are being set to: Cessna=\$71/hour; Archer=\$81/hour and Mooney=\$108/hour. The new rate will go into effect on October 1st 2004. Additional funding has been included in the rate increases to provide approximately \$10K/year for upgrades to the fleet.

Greg also stated that funds to dissolve the member loan program, improve the fleet in order to avoid taxes and to pay off all inactive members would be obtained through a bank loan. The plan is to treat our current debt the same as a 20 year mortgage on a house.

The complete presentation can be found on the member's only section of the website.

Trustee Reports

Mike Nolan – Treasurer

Mike presented the numbers for August 2004. Various questions were made by the membership.

Bill Mervar – Maintenance

06W – Completed annual. The autopilot porpoising has been fixed.

62RP – Installed a new tach.

78X – Installed a new directional gyro and fixed a

Nav radio.

8NG – Com radio problem fixed.

68B – Com radio problem fixed.

01U – Fuel pressure gauge has been replaced.

New EGT probe installed. The plug fouling problem seem to be resolved.

Tom Weber – Member Loans

As of September 1st, 2004 we have 12 loans valued at \$158,560. \$27K will come due in October. Multiple notes totaling \$40K are due in November. It is expected that \$30K will be renewed.

Greg noted that the member loan program will be dissolved. Notes will be given the accrued interest.

Tim Smith – Safety Officer

November safety meeting was advertised. Maneuvering Flight AOPA-Seminar in a box will be presented at that time.

Larry Scherr – Poker Run

Larry is soliciting help for the poker run.

The meeting was adjourned at 8:27pm.

Did You Know the Answers?

Private

The Archer was legal and the Cessna was not. The simplified rules for lighting are:

- ◆ Don't operate anytime without anti-collision lights. Anti-collision lights are a rotating beacon and/or (wing-tip) strobes. The only direction an airplane can move without anti-collision lights is toward the shop for repair.
- ◆ Don't operate at night without the little red (passenger-side) and green (pilot-side) position lights. They are the only way other planes can tell which way you are going.
- ◆ The landing light is optional (but very desirable).
- ◆ It is a good idea to turn on all your lights when you get close to an airport, day or night.

Instrument:

Find Para. 1-1-20 in your 2004 AIM. Then find Table 1-1-8 and read the footnotes.

- 1) You can use an expired database for enroute navigation. You just have to verify the points if the database is expired.
- 2) You need a DME for the loc 20 @ MGY. Without a current database you cannot legally fly this approach!
- 3) Since the loc 23 @ MWO uses ONIDA and a timer rather than a DME you don't need current GPS data for this approach.