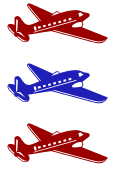




Dayton Pilots Club



July 2005

www.daytonpilotsclub.org

Next Meeting Wednesday, August 17

Dayton Wright Brothers Airport at 7:00 PM

B.D. Luckenbill, Editor

From the Editor

By Brad Luckenbill

Hot, very hot, hangers are hot, planes are hot, pilots and passengers are hot. When things get too hot, they break, when people get too hot they get distracted or in a hurry. I don't know if there have been any pilot errors due to the heat, but I wonder if the rash of mechanical problems with the club aircraft might not be heat related. I do not know of any solution to keeping the pilots and passengers cool, but we can help the engines by making sure the right amount of oil is present, keep idle time on the tarmac to a safe minimum, and keep an eye on the engine gauges during climb out.

The importance of a thorough preflight has been instilled in all of us throughout our training. Using shared aircraft presents a special challenge to the preflight process. Any problems noted on inspection or during flight needs to be carefully documented on the tachometer sheets. This includes any routine maintenance items such as the addition of oil. If a quart of oil is added frequently, that may be indicative of a problem. Such was the case with the Mooney which developed an oil leak that was discovered by good fortune but not during a preflight and could have lead to some real stress in-flight. The amount of oil on the underside of the aircraft was substantial, but not to someone who rarely flies the plane and would not be familiar with how much filth is usually there. Had the oil consumption been noted in the tachometer sheets combined with a thorough preflight, we would like to believe the problem would have been recognized by a member of the club than found during maintenance for an unrelated issue.

Another summertime issue besides the heat is the bugs. I am referring to the numerous flying insects that seem to filled with super glue. It was proposed and endorsed by the trustees to do some post flight cleaning of the leading edges and other areas of the craft where the bugs like to adhere. Each hanger should be equipped with towels and a

cleaning solution specific for that purpose. The reason for this bit of post flight aggravation is to save the club some money in plane washing expenses and keep the planes presentable. The bugs are much easier to remove before the glue dries than during the occasional bath. Besides, the fewer the bugs the faster the plane.

Each plane has been provided with a GATS jar to collect fuel samples for inspection. The idea behind the jar is separate water and sediment from the fuel and then return the fuel to the tanks. In order for the filter to work, it must be pre-wetted with fuel. This tends to happen automatically during the sampling process, but if not, make sure you swirl some fuel against the filter before you pour it back in. There really is no reason to unscrew the white lid. The rubber "O" ring is a pain to keep in place if you do. I would surmise that if in the process of collecting the sample and you find a substantial amount of either sediment or water, you may opt to dispose of the fuel and refer the plane for further inspection or maintenance.



After a careful review of the flying needs of the club, the trustees decided to get one of these.
(Picture courtesy of S. Harris from Oshkosh 2005)

Around the Hangar

- The 182 seems to be job security for ASI's mechanics. It will be going for annual this month. The good news is that for the most part they will be inspecting their own work so it should go smoothly.
- The Mooney is jealous over all of the attention the 182 is getting. It just came out of annual but will be back to maintenance for a few odds and ends, (like a vacuum pump and VOR repair).
- The 172 is getting some attention but the Archers seem to be the stellar performers this past month.
- Reporting problems with the aircraft should include tach sheets and either phone calls or emails to the crew chiefs. This will allow the planes to be taken in for maintenance as quickly as possible and members to reschedule a different plane if needed.

Pilot Safety

Brad Luckenbill

Recently, there has been another accident involving an airliner attempting to land during convective weather, thankfully, there were no fatalities. Several years ago, a similar accident occurred with fatalities under very similar circumstances. In the case of the latter, the NTSB made it's usual finding of pilot error with other factors which included ATC and weather. In both cases, the airplane skidded off the end of the runway following loss of control and poor braking action. The most recent event will likely be investigated for quite some time but I suspect the weather and the pilot's performance will be incriminated.

Flying small planes in convective weather is much more hazardous than what the airlines experience for many reasons. Chances are that very few GA pilots would attempt to fly much less land in similar conditions. But the circumstances that created a problem for the airline pilots can provide GA pilots a warning about things that can go wrong during the landing phase of flight. A review of accident statistics involving GA aircraft suggest that a high proportion of accidents occur during landing and involve loss of control during rollout.

It is my speculation that the start of the problem for the two airliners began when it became apparent that the approach was using up too much runway and the pilots elected to force the plane

down to the runway surface in order to begin braking and reestablish directional control. In each case the planes landed "hard" which would suggest the pilots touched down at a higher than normal speed or could not control the rate of descent. I suspect that the planes "floated" farther down the runway than expected by the pilots. With the end of the runway approaching, it would not be unreasonable to assume that the pilots would force the planes down in order to reverse thrust and begin braking. Unfortunately, the planes began to skid and control was lost.

There are a few things that can benefit GA pilots from reviewing the potential problems that may have occurred to the two airliners. The most obvious is what to do when you are running out of runway. But first, let's look at reasons why a seemingly normal approach burns up more runway than what one would anticipate.

Ground effect is reached at about the length of the wing span from the ground. This effect will cause a plane to float down the runway. If you add a tailwind, even a slight tailwind, the float distance increases dramatically. (The groundspeed of the aircraft is higher even though the airspeed indicator may be slower than normal). Hot asphalt can create a thermal lift to the plane as well.

Pilots are often tempted to "get the plane down" after the expected amount of runway disappears beneath the plane resulting in "hard" landings. In addition, pilots resist "going around" due to ego, fear of a worsening wind or weather or inability to recognize a dangerous situation and making a decision.

Pilots should consider that any landing could result in a "go around" and be prepared to take action. Defining the amount of runway that you are willing to leave behind you before you start the approach will provide a simple criteria to base your decision on. If you find the plane "floating" beyond the norm, that should be your first warning. Forcing the plane to the runway can potentially cause more harm. Bent ego's are easier to fix.

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Newsletter articles Due by July 31, 2005

Test Your Knowledge:

Which is true regarding actual air temperature and dewpoint temperature spread? The temperature spread:

- A. Decreases as the relative humidity decreases.
- B. Decreases as the relative humidity increases.
- C. Increases as the relative humidity increases.

From which measurement of the atmosphere can stability be determined?

- A. Atmospheric pressure.
- B. The ambient lapse rate.
- C. The dry adiabatic lapse rate.

Which type of clouds would indicate convective turbulence?

- A. Cirrus clouds.
- B. Nimbostratus clouds.
- C. Towering cumulus clouds.

Of the following, which is accurate regarding turbulence associated with thunderstorms?

- A. Outside the cloud, shear turbulence can be encountered 50 miles laterally from a severe storm.
- B. Shear turbulence is encountered only inside cumulonimbus clouds or within a 5 mile radius of them.
- C. Outside the cloud, shear turbulence can be encountered 20 miles laterally from a severe storm.

Which statement is true regarding squall lines?

- A. They are always associated with cold fronts
- B. They are slow in forming, but rapid in movement.
- C. They are non frontal and often contain severe steady-state thunderstorms.

Which is true regarding the use of airborne weather avoidance radar for the recognition of certain weather conditions?

- A. The radarscope provides no assurance of avoiding instrument weather conditions.
- B. The avoidance of hail is assured when flying between and just clear of the most intense echoes.
- C. The clear area between intense echoes indicates that visual sighting of storms can be maintained when flying between the echoes.

Answers: B, B, C, C, C, A

Did You Know?

After working with the Garmin 430 and then transitioning down to the Garmin 300 XL you will be amazed at the improvements Garmin made in the 400 series. There are a few quirks with the 300XL that you should be familiar with before using it to fly an IFR approach.

There are 3 buttons below the unit which provide specific functions in the 300XL. These same functions are built into the 430. The buttons are labeled NAV GPS; GPS APR; GPS SEQ.

- The NAV GPS is used to connect the autopilot to either the GPS unit or the NAV 1 unit.
- The GPS APR is used to activate or deactivate an approach.
- The GPS SEQ is used to “hold” navigation based on the current waypoint, (works like a VOR), or allow sequencing to the next waypoint. This button will also change the sensitivity of the needle deflection. In “hold” mode, the sensitivity is reduced. The “hold” setting must be engaged when flying vectors, procedure turns, or a missed approach. (More on the missed approach later).

One of the biggest downsides to the 300XL is recovering from a mistake in selecting the proper set up for an approach. Delayed use of the “hold” feature or a failure of setting the heading on the “VOR” head prior to releasing the “hold” can really mess up the approach. A few rules need to be followed when using the GPS SEQ button:

- You must set the unit to “Hold” anytime you deviated from the published approach, (Vectors, Procedure Turn).
- Anytime you release the “Hold”, the unit will fly the present setting on the HSI/VOR head. Always dial in your desired course before switching from “Hold” to “Auto”. You must allow 2 seconds to pass after you dial in the course before switching to “Auto” or the unit will not pick up the correct course information.

If the FAF is not shown as the active waypoint, the approach will not be “armed” and the unit will not provide navigation based on the published approach. If you cross the FAF without selecting “Hold” during vectors or setting up for a procedure turn, the unit will assume you are going to land and sequence you to the airport regardless of your intended route of flight.

To activate a missed approach, you must press the GPR APR button after and only after you cross the MAP point. Then select direct to and enter to begin navigation to the MAP waypoint.

Minutes of April DPC Meeting

By Chester Harris

Minutes of the DPC Membership meeting July 20, 2005:

Greg Halderman called the meeting to order at 7:03.

Chester Harris read the minutes of the July 13, 2005 trustees' meeting. During the review of the minutes several items were discussed.

- Mooney 4201U is now advertised for sale. It has been registered with AOPA for three weeks and in Trade-A-Plane for two days. Greg has also registered it on a couple of web sites. Two potential customers have called.
- Front seat covers have been ordered from Sportys for the three Archers.
- A spray bottle of wax/cleaner will be put in each hanger. Members are encouraged to treat the wing edges after flying to remove bugs before they harden.
- There is a requirement at some airports not to dump gas on the tarmac from the fuel test. New fuel testers (GATS jars) that allow the drained fuel to be returned to the fuel tanks have been purchased for all aircraft.
- Increased fuel prices this month will raise flying rates \$1 to \$2 per hour for August.

Greg reported that N4506W is back online with the new weather capability. Total cost was approximately 21K for all the new avionics.

The total price for the N759HS and its new engine was discussed. The approximate total was \$105K for the aircraft and \$26K for the engine. Three or four trips were taken to inspect potential purchases.

Rich Stepler has asked to give a talk to DPC on the program to provide free transportation to WWII veterans to the new memorial in Washington.

Trustee Reports:

Web Site: Tom Weber. Last month website had approximately 65 hits per week. The July newsletter is on the website. All checkout sheets are currently on the web. Tom will add links to the Garmin site for the new 430 features installed on 4506W.

Newsletter: Brad Luckenbill. Newsletter is out and everyone should have it by now. Last months survey

drew responses from 35% of the membership. C-182 was first preference. C-172 was also well rated. Current fee structure was rated as OK Brad's summary of the three key factors was appearance, performance, avionics in that order.

Membership: Kevin Chandler. There are currently 75 members in DPC, down two from the previous month.

Safety: Tim Smith. We will have a safety seminar at the November membership meeting. It will probably be on in-flight weather.

Poker Run: Larry Scherr. The DPC third annual poker run will be on Saturday, August 27. Contact him if you can help with the event. Larry has also updated all IFR GPS databases. The Mooney VFR GPS was updated using the recently out-of-date data from N759HS.

Maintenance Report:

Bill Mervar reiterated that 4506W has new avionics 8078X had both mags overhauled as well as the left fuel sender at annual.

4201U still has a problem with an intermittent stall warning horn.

759HS had the carburetor heat cable replaced. The carburetor ice detector will be removed at annual.

Meeting adjourned at 7:30 PM

F L I G H T O P S	Aircraft	July Billable Hours & 888 Time			YTD Billable + 888 Time	
		2005	2004	Monthly 888 Time	2005	2004
	4201U	24.38	0.00	0.61	126.17	182.41
	4506W	33.29	30.00	0.00	149.86	156.80
	62RP	16.60	27.22	0.00	101.60	142.21
	738NG	12.40	27.10	0.00	110.20	128.50
	759HS	37.30	0.00	0.00	117.60	***
	8078X	12.90	35.20	1.10	125.20	161.60
	Totals	136.87	119.52	1.71	730.63	771.52

***Note: The above hours for 2004 exclude N8268B which was replaced by N759HS. The total time for July of 2004 including 68B is: 143.80 hrs with a total year to date of: 949.22 hrs.