



EAA602 Log Book

Adirondack Chapter Newsletter
April 2006



From The Presidents Desk

by Tony Rizzio
VP



Since the prez is ill, he asked me to jot something down for the newsletter. So I don't get impeached, I'll tell you some rumors.

Word is Chris passed his test, must be Doug is a good teacher. In a few weeks you can take yours at FULCO.

I'm all excited about the spring flying season. The air will be filled with the sound of a new flock of Rotax engines.

Gregg purchased a gyrocopter and will be getting some lessons.

RickFrance will be bringing his new Koala to Edinburg for the test flight.

Fred Blowers is ready to fly his S4 Coyote. He has the engine on and running.

Josh has his Laziar ready and hopefully will be getting it to the airport soon.

Brian and Doug have been hard at work on Brian's Sky Ranger. It should be flying by the time you get this (maybe).

If Doug ever gets his engine back from Lockwood, he'll take his instructor flight test & get legal.

The Poker Run committee has been checking with all the airports involved, getting the ok's and planning the route.

Don't forget the welding class at the 195 factory on May 17th.

We're still looking for other places to hold our meetings, if anyone has an idea, please let us know.

Now if I stop babbling and get to work I might have my Koala in the air.



Editors Notes

Just got back from Sun'N'Fun last week. Great show. Got there on Monday afternoon. I flew down in my Cherokee to see my father in Stuart and thought it was a good excuse to go to Lakeland for Sun'N'Fun. I stopped at Sebring to drop off my Rotax engine at Lockwoods for rebuilding. They have some facility there! They have a rebuild shop that's capable of working on 8 or 9 engines at a time and 5 or 6 planes in the hanger. There were 7 CT aircraft there in various

stages of assembly or waiting to be picked up. I wasn't aware that they were a CT dealer (some plane).

Sun'N'Fun entry was interesting: not to bad as long as you read the NOTAM. The flight in was totally visual and you were expected to listen to the radio (don't talk unless requested to). After landing and about 10 miles of taxing (maybe 2 miles), I tied down and waited for my personal pick up service, Bill

Scheidigger, to help me carry to much stuff back. He came down with his camper and I stayed with him. The next day we found out that we could fly in the fly-by pattern at 9am Wednesday. So after a brief briefing, off we went. What a blast especially when the Lanceairs went blasting by at mach 2 (well maybe 200kt.).



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Up-Coming Events

- | | | |
|---------------|--------------------------|----------------|
| May 31-June 4 | 2nd Annual Can-Am Fly-In | Speculator, NY |
| June 21-24 | Sentimental Journey | Lock Haven, PA |
| July 8-9 | Geneseo Air Show | Geneseo, NY |
| July 24-30 | AirVenture | Oshkosh, WI |



Editor From Page 1

I don't know of any large air show that allows regular aircraft to do fly-by's during the show. As a matter of fact, it was so much fun we did it again on Thursday.

I blew out on Friday afternoon before they closed the airport for the daily air show. On to Akin, South Carolina to see my grandchildren for a couple of days.

If you ever wondered what would happen if you got a flat tire while landing, just ask me. After touch down at Akin I noticed that I had to apply a little more right rudder than usual (maybe a lot) to keep it rolling straight and below 50 mph the left side started to bounce up & down a bit (maybe a lot). I kept it moving to the cross runway so as not to block the 2 jets waiting to

take off behind me (it was Masters Golf Tournament time) and that was it.

A great FBO guy came out with a jack and we removed the wheel for repair right on the cross runway. Just what you need after a 3.5 hour flight.

Back in the air Sunday; 7.5 air hours and one fuel stop later the Great Sacandaga was a welcomed sight. Man it's always great to get home after a long trip. Put a total of 30 hours on the hobbs. When you do a long cross country like that you can really appreciate being very familiar with your OWN aircraft. 10 different airports in 5 different states down the east coast was GREAT fun. Well it's back to work time hope to see all of you at the next meeting. 

Doug

THE SPIN

Dad brought the Cub to Nellis field on skis in about 1971. He had traded a snowmobile and something like \$800 for it. It was winter and we had to shovel 5ft drifts out from in front of the hanger that winter to order to get it out to fly. Then we had to fly it off the snow patch next to the runway that was only half as long as the runway. Years later I had an instructor tell me that there were other landings that could be performed besides short field, but that's another story.

My brother and I painted a cork screw on the prop spinner with florescent orange paint so it looked like the German Messeresmitts in WWII.... cool eh?

I was seventeen and dad said I ought to be legal to learn to fly, so I got a 3rd class medical and took some lessons from a WWII pilot named Ouderkirk, and learned turns over a point, engine out procedures, off field approaches, wing overs, etc. and how to chase the ducks up off the Mohawk River when the instructor got bored with my flying. In my exuberance of youth, and one badly done wing over, I actually laid the Cub over on it's back, but it did a half turn and flew right out with a boot of opposite rudder. Clue?.... rudder? My little mind was working....

Soon after, that summer, Dad and I were flying and he was showing me power on stalls, you

know, where you lay on your back because the nose is so high, and walk the rudders to make the nose fall straight over so it doesn't want to spin? Then he mentions spin.....and says "here I'll show you" we did a lazy half turn and recovered. Dad knew what a spin was, but me being too young and ignorant to have any fear of it, I said "lemme try"..... and when the plane stalled, and I stalled it a lot, the right wing dropped and having worked it all out in my head, I kicked full right rudder. The left side glass then came right over and slapped me up side the head. As the cub rolled over on her back and the nose fell through, we did a turn and a half faster than you can take a breath! Right about then Dad let out a war hoop and pulled the grip completely off the front control stick! At about the same time as he was trying to get the grip back on the stick, the throttle knob slapped back at my left hand as the rudder went full opposite and the stick full forward. Earth that was filling the windshield in a twisting motion stopped and we pulled out of the dive.

So much for spin training, he never invited me to do it again, no wonder why. I guess it's actually a wonder, thinking back on it, that he didn't wring my neck once back on the ground, except I guess he knew that I had scared the crap out of myself. Sorry dad, for scaring you like that, but every time I think about it, I can't help but giggle. 

Blue Skies, Roland Hisert



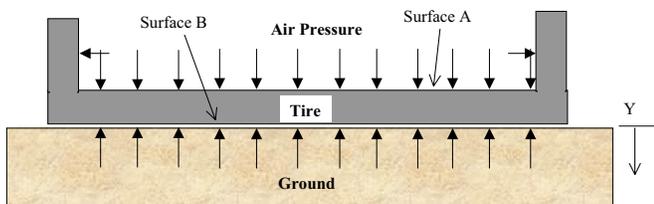
Effects of Tire Inflation on Aircraft Operation

Proper tire inflation is one often overlooked portion of a preflight inspection. Often times a tire pressure is not physically checked with an instrument because it “looks good” visually during a walk around inspection. The problem with this visual approach is that often the aircraft is not properly loaded (weight wise) as passengers are not aboard, and also the possibility of an over-pressurized tire (or tires) would not be readily recognized (even with some of our best calibrated eyeballs).

Tire pressure effects rolling resistance, the stress on an airfield, it’s ability to absorb and respond to bumps (o.k., hard landings) and also the speed at which the tire will hydroplane in wet conditions.

One thing to recognize is that (for a simplistic model) a tire is just a thin interface between the air within the tire and the ground upon which it contacts. The pressure in the tire, usually given as a force per unit area, such as pounds per square inch (PSI), is ultimately the “pressure” that the tire exerts on the surface it contacts (such as the ground). This pressure is often termed “stress”. Pressure and stress have the same units of measure, namely PSI.

To better illustrate this, the following sketch of a tire contacting the ground is provided:



On the upper surface of the tire skin (Surface A), we see that the stress it encounters is due to the air pressure above it. The lower surface of this skin (Surface B) is in direct contact with the ground. Newton’s 1st Law of Motion states that an object at rest will remain at rest, unless acted upon by an unbalanced force. Typically there is no motion between the ground surface and tire (in the vertical direction). For this to happen (with a shared contact area of the tire) the stress of the air must be exactly equal and opposite to the stress provided by the ground. In this case, the tire will deflect until the contact area with the ground provides sufficient force to offset the weight of the aircraft (note: Force = Pressure x Area). So... to keep the tire from sinking

into the ground (motion relative to the ground due to an unbalanced force), the ground must be able to provide opposing stress at least up to that provided by the air pressure in the tire. The key take-away here is that it ultimately the tire pressure, not the aircraft gross weight which determines if it will sink into the ground or not (provided the tires are large enough to provide sufficient contact area to properly support the aircraft weight). The stress capability of the ground is often called its “firmness” (stated in PSI), and can be readily tested using a device called a Penetrometer. Simple measurements can even be accomplished using a known force for a given area. For example, if you were just able to push a 2” diameter flat disk into the ground using a 200 pound force, you would know that the maximum allowable tire pressure at that specific location would be 64 PSI. Operations to and from soft airfields typically dictate lower tires pressures be used (to prevent runway damage and improve flotation of the tire). Each manufacturer will have its own guidance in this area. When using lowered tire pressures, other tire pressure related performance parameters must also be acknowledged.

Rolling resistance is one of these performance parameters affected by tire pressure. The lower the tire pressure is, the more it must deflect to support a given weight above it (i.e. automatically increase the contact surface area to offset the lower stress). Every time a tire sidewall is deflected and subsequently extended (as continuously happens when rolling) a certain amount of energy is lost/absorbed due to the normal damping tendencies of the tire. Ultimately the force used to compress the tire up front is more than the force returned back to the ground by the tire at the back, causing a negative torque (or increase in rolling resistance). As tire pressure decreases, rolling resistance increases. This may aid the aircraft in slowing down upon landing, but can have a detrimental effect on your take-off ground run if not anticipated. If both tires are not pressurized equally, the aircraft may veer towards the low pressure tire during ground operations due to the increased drag of that tire.

The speed at which a tire will hydroplane in wet conditions also function of tire pressure. The hydroplaning speed decreases as tire pressure is lowered. One often quoted formula in the aviation community for determining hydroplaning speed is:

$$V_{hydroplane} = 9 * \sqrt{PSI}$$

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Tires From Page 3

Therefore, a tire with a pressure of say 50 PSIG will be at risk for hydroplaning at approximately 64 knots (72 MPH). It should be noted that this is just a guideline value, as tire design and wear will have an effect on this number.

Lastly, as you all know, the tire is an integral part of the aircraft suspension. The air pressure within the tire effectively acts as a spring in the suspension system, helping to absorb loads and lessen impact on the airframe. Lowering the air pressure effectively decreases the stiffness of the suspension (ultimately decreasing the maximum amount of load that could be absorbed prior to the tire contacting the rim and causing damage). Pressure in the tire also serves to



increase the stiffness of the tire sidewall. Pressures below that recommended by the manufacturer may affect tracking and positive aircraft control on the ground, especially during cross wind operation.

Just a few things to consider during your next preflight inspection.

Runway Type

Air Pressure

Tire Condition



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