

T-CRAFT AERO CLUB

MONTHLY NEWSLETTER

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Even though the cost of aviation fuel has rocketed skyward, our treasurer has used timing opportunities to purchase a load of fuel that will help us to continue to fly affordably; refer to the updated fuel reimbursement and flying rate schedules later in this newsletter. Meanwhile, the new tools employed by your board members are helping fine tune costing for all the functions of our club; look for committee reports in later newsletter issues and upcoming board and general membership meetings. The board will continue providing members more reasons why T-Craft is a logical alternative to private ownership, as well as point out differences between our organization and other club options; a great article from our president can be found in the "From the Board" section.



1891X resting at Mackay Bar Resort. [photo courtesy Jim Hudson]

From the Membership Director

Performance When You Need It

The aircraft performance training class and homework this past month was fun and informative. We shared some great discussions. Here is a short review of the homework assignment, which will touch on a few topics of discussion and provide some food for piloting thought.

The assignment was: You are in at Smiley Creek (U87) in N13686 sitting at 2200 pounds gross weight, with 2 passengers, each weighing 200 pounds. It is 11:00a.m., the temperature is 70 degrees Fahrenheit, and the pressure altitude is 29.72. The recommended runway (runway 32) has a 5 knot wind (a tailwind at takeoff). The Smiley Creek elevation is 7160 feet, and the turf airstrip is 4900 feet by 150 feet wide.

The example above was based on the conditions similar to Ben Brandt's observation earlier this month when he saw a C172 barely clear the fence at the end of the runway during an afternoon takeoff from Smiley Creek.

The class was asked to determine whether or not they would take off by computing the following parameters: Pressure Altitude, Density Altitude, Take-off Ground Run, Take Off Distance to clear a 50 foot high obstacle, Rate of Climb, and Vx and Vy in these conditions.

Here are the findings:

PA = 7360' DA = 9700', Vx = 73 MPH, Vy = 80 MPH

Interpolated at 2200 lbs.	Take Off Run Feet	Total to Clear 50' Feet	Rate of Climb Feet/Min
N13686 POH (std 150HP) C172M	2371	5066	280
C172 N POH (160HP) comparison	2340	4349	295
KOCH Method	3166	5256	250
Sporty's Takeoff Computer	2800	4850	225

As you can see, each method computed produced a different result. Also, almost everyone came up with a slightly different answer, even using the same method. We all used slightly different assumptions and round off errors.

The process raised some serious questions: "What numbers should I use? Do I believe them? Should I take off? (now that it took me an hour to go through the calculations and the temperature has risen to 75 degrees and the wind is picking up)?"

As we discussed in the class, the decision to take off should be based on judgment and experience. In this example, it probably would be best to WAIT for cooler temperatures and especially for the wind to die down, eliminating a tail wind from our computations. The tailwind plays a huge factor, increasing take-off by 25%. Each 2 knots of tailwind increases take off distances 10% (up to 10 knots). Why take off in a tailwind on the preferred runway? At this strip, and many others, taking off the wrong way (uphill, or up river) would put you in a situation where you may not be able to out climb the terrain, leaving you staring at terra firma in your wind screen. Taking off under the conditions given in the example leaves little room for error (as Ben observed).

The point of this exercise is that one should know in advance what conditions are typical and what to expect at every strip you plan to visit. You should know your capabilities in each aircraft and know how you can perform relative to the performance tables. Better yet, determine the worse-case scenario you might expect at each specific strip beforehand, and plan accordingly. If you are concerned to the extent that you have to dig out the POH, it's probably not the time to take a chance.



Reggie Sellers lining up on the "down river" at Smiley Creek. [photo courtesy Reggie Sellers]

Whether going into the backcountry or departing McCall or Nampa on a hot day, one should know in advance their capabilities in a given aircraft when performance is critical. Experience and practice is the best way to know.

I have found that the Sporty's takeoff performance computer is very easy and quick to use. It takes into consideration: altitude, temperature, runway surface, headwind, tailwind, runway slope, and percent of gross weight. It also determines rate of climb. It is a little on the conservative side, and fairly accurate for any given conditions. At \$22.95 it's a bargain. Find it at: <http://sportys.com/PilotShop/product/9305>.

How do you get experience? Practice! Practice! Practice! You can determine the performance numbers under a given set of conditions, then go out and see the results. You can go into Boise, Homedale, and maybe Caldwell with 1,000' markers along the runway. At Nampa, scale the distances off a runway diagram, or use a Google earth photo to determine distances. Take a friend along to note the distance it takes to lift off and to clear 50' on the altimeter.

For more fun, takeoff and land in a mild tailwind. Always make sure there is no traffic around and, clearly announce your intentions. Rate of Climb is easy – just determine DA at a given MSL altitude. At 7,500' MSL (72 degrees) would be 10,000' DA on a typical 90 degree day in Nampa. Go see what rate of climb you get at 10,000 DA and see how it compares to the performance tables for your weight at the time. Also see how Vx and Vy compare, and does the calculated Vy really give you best rate of climb at this altitude. The weight and balance excel program on the club computers (and on our T-Craft web page) have tables at the bottom that calculate Vx, Vy Va and other V speeds at different DA and weight conditions.

If you ever get in the situation where you may need to know these numbers, you better know them, or else you could be in for a big, bad surprise.

Other factors to consider when you need peak performance:

- 1) Lean Properly
- 2) Correct Flap setting
- 3) Trim set for take off
- 4) C182 – Max Prop RPM
- 5) Tire Pressure Max – per POH
- 6) Emergency Brake OFF and Feet OFF the Brakes (trust me, both have happened)
- 7) Rotate Vr to maximize ground effect.
- 8) Climb at correct Vx or Vy for weight and DA (not checklist numbers which are sea level gross weight)
- 9) Maximize every inch of runway.
- 10) Stay in the worn part of grass strips.

Let me know if you have any questions or comments.

Fly Smart, Fly Safe and Have Fun,
Jim Hudson

Membership: We have 72 members.

New Member: Please welcome **Mark Turner** to our club. Mark earned his wings several

years ago while in college, and now finds the time in his life situation to again pursue his dream of flying.

Membership Drive: There have been several members who have referred friends and associates to our club. Great job, keep up the good work. Some are interested in getting their ticket, and some are currently pilots and hope to join the club soon.

There will be an article in the next issue of Rudder Flutter about our fantastic club. Be sure to grab some brochures off the counter and pass out to friends and associates who are interested in learning to fly, or joining our club. We need to get our numbers up.

Attendance: Most members have been attending some club function as required, but there are a growing number of members who are WAY past 90 days. The board meets every 2nd Tuesday, and there is usually a training event each month. I have been lenient over the summer, but I will have to suspend folks as our policy states after the training event in August. If you have some unusual circumstance in which you can't make a function, please let me know and we will address it at the board meeting.

Training/Events:

August – Topic and Date TBD. Let me know if you would like to present something or have any ideas.

NEW MEMBER NOTICE

T-Craft Board approved members must be formally accepted into the Club by member vote during a General Membership Meeting. The next General Membership Meeting is scheduled for 27 September 2011, 7:00p.m., in the EAA/CAP Building, Nampa airport.

**Aircraft
Maintenance**

Contact Jim Eyre [cell:(208)794-0667] with squawks, and use the notification feature found on-line in [Schedule Master](#) to alert pilots intending to use impacted aircraft. Write the tachometer time on the Squawk Sheet clipboard found on the hangar wall. Sign your name, and include a phone number where you can be contacted. Document Hobbs time for all other recordings. Report leaks immediately.

FROM THE BOARD

Most if not all of us are aware that fuel prices have risen substantially since our last fuel purchase. Thankfully it is not as large of an increase as it could have been. Dennis Wheeler did an excellent job of monitoring and timing the markets, within the limits we are allowed by the Av Center, and has secured our fuel for a \$0.86 increase. This means the new batch of fuel will cost \$4.89 /gallon. The new aircraft hourly rates associated with the increase in fuel cost will be proposed in the August Board meeting and are

provided below to assist you in your future aviation budget planning.

C182 91X and 0YD \$ 121
C182 93S \$ 124
C172 64R \$ 84
C172 686 \$ 86
C152 375 \$ 58

The board expects the rates to be in effect for the August billing period. Off field fuel purchases will be reimbursed at the rate of \$4.89/gallon coinciding with the hourly rate increase.

Safe and Happy flying

Thank you

Ben Brandt
President
T-Craft Aero Club

NEW!! **Flying rates** effective 26 July 2011 [all hours recorded per hour "wet"]:

375	-	\$58.00
64R	-	\$84.00
686	-	\$86.00
91X and 0YD	-	\$121.00
93S	-	\$124.00

Fuel re-imbursement for July 2011: **\$4.03gal**

Fuel re-imbursement for August 2011: **\$4.89gal**

(Review your receipts and confirm \$.25/gallon is recorded. Report any discrepancies **ASAP** to Dennis Wheeler.)

***** Members wishing to maintain currency may attend the following meetings:*****

Next Board Meeting: 9 August 2011, 7:00p.m., T-Craft Hangar training room.

Next General Membership Meeting: 27 September 2011, 7:00 p.m., EAA/CAP Hangar, Nampa, Id

Aircraft Ownership: Can I Afford It?

By Ben Brandt, President, T-Craft AeroClub Inc.

The excitement of learning to fly can quickly be tempered by the soaring costs of aircraft ownership. In today's market there are numerous aircraft available for extremely reasonable initial investments. But, what does it cost to own an aircraft?

For me the lure of aircraft ownership is constantly beckoning. So much so that I created a spreadsheet that can be used to calculate the cost, based on the aircraft, number of partners, and other variables, then I can compare those costs to the cost of flying T-Craft aircraft – all in a matter of seconds.

Since I consider the aircraft to be an investment, I don't consider the upfront cost of the aircraft in my calculations. After running the numbers on aircraft ranging in price from \$15,000 to \$175,000, I have come to a conclusion: if I was given an airplane, it would cost me more to own it than to fly 3 to 4 hours in T-Craft aircraft.

So, what does it cost to own an aircraft? Obviously costs vary, but assuming typical insurance, an indoor hangar, and annual maintenance, you would spend approximately \$300.00 per month, just to cover these fixed costs. Remember: that's just to own the airplane. It hasn't been flown yet.

The next problem I run into is finding one aircraft that meets all of my flying needs (I say "needs" because I have spent long hours making my case with my wife that flying is actually a "need"). My conclusion: one aircraft that does it all is hard to find. What do I need for a particular flight? Payload, passenger room, back country work, or fuel efficiency? Here T-Craft has advantages as well, giving me access to 6 airplanes, and making it easier to find a plane that works for type of flying I have planned.

Another great advantage of a T-Craft membership is the savings at the pump. Our current prices for 100LL compare very favorably with the on-field price at Nampa, and almost every fuel supplier in our region. The higher maintenance costs associated with multiple pilots using a particular airplane are offset by the costs savings at the fuel pump. At a difference of \$1.50 an hour, burning 10 to 12 gallons per hour in a C-182 and the dollars start adding up quickly.

Cost, of course, is not the only advantage of T-Craft membership. Currently we have an experienced, professional maintenance director actively managing the maintenance of our aircraft. This helps ensure we receive the appropriate maintenance at a reasonable rate. Many aircraft owners pay a third party to manage the maintenance of their aircraft. At T-Craft, it is a benefit of membership.

Aircraft clubs aren't for everyone. If you have the financial strength and the desire to own your own aircraft, you have the distinct advantage of flying anywhere at any time without the need to plan your reservation to ensure an airplane is available. Of course, if you only have one plane, it may be down for maintenance!

If you are finding that aircraft ownership is out of reach, now is a great time to be a member of T-Craft. Perhaps you might be able to share these advantages with your friends who are presently struggling to keep flying their own aircraft?

Thanks, and safe flying!

--Ben

Upcoming Local and Regional Events

(See Jim Hudson's note above.)

If you have read or know of events to come, please send the Secretary (jivanho@msn.com) a quick e-mail.

Websites of Interest

www.t-craft.org, the official website for T-Craft Aero Club Inc.
<http://www.nampaairport.org/airport/Category/news>, Nampa, Id. Airport news
www.cubgearstore.com, Survival, and back country gear
www.shortfield.com
www.backcountrypilot.org
<http://www.flyidaho.org>, Idaho Aviation Association,
<http://www.itd.idaho.gov/aero/>, Idaho Aviation Association Calendar of events
<http://www.aviation.state.or.us/>, Oregon State
http://www.aopa.org/asf/online_courses/, **AOPA Flight Safety** on-line courses
<http://www.aopa.org/letsgoflying/>, AOPA's "Let's Go Flying!"
<http://www.aopa.org/index.html>
http://www.aopa.org/asf/online_courses/
<http://www.aopa.org/asf/publications/advisors.html>
http://tfr.faa.gov/tfr_map_ims/html/index.html, FAA
http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/airplane_handbook/
<http://www.faa.gov/go/runwaysafety>, Runway safety
<http://faasafety.gov/>
https://faasafety.gov/gslac/ALC/course_catalog.aspx
<http://airspace.nifc.gov/mapping/nifc/index.cfm>, TFRs on WACs or Sectionals
<http://www.navmonster.com/>, TFRs along your route
http://activefiremaps.fs.fed.us/lg_fire2.php, Large fires, some including TFRs
<http://www.weather.gov/aq/sectors/pacnorthwest.php>
<http://www.wrh.noaa.gov/boi/>, National Weather Service – Boise Office
<http://www.firedetect.noaa.gov/viewer.htm>, Fire Reporting
<http://aviationweather.gov/adds/metars/>
http://aviationweather.gov/adds/icing/icing_nav.php?icg_type=CIPSEV50&height=max&fcst_hr=0
<http://www.wrh.noaa.gov/satellite/?wfo=boi>
<http://www.ghcc.msfc.nasa.gov/GOES/goeswestpacus.html>
<http://www.wrh.noaa.gov/zoa/cwa.php>
http://www.undaerospace.com/cbt_files/virtualengine/Magneto/virtual%20Engine.swf, Magneto Fun!
http://www.faa.gov/news/safety_briefing/, FAA Safety Briefings

SAFETY NOTICE: It is recommended that no persons occupy aircraft during refueling.

Reminders

Answers concerning our Club, Policies, or even locating a **New Member Application Form** for your friend or family member can be found on the T-Craft website: www.t-craft.org.

T-Craft Business Cards and Pamphlets are available. Share them with friends and acquaintances in the community who may be looking for piloting opportunities.

Delete the remainder of any unused flight time from ScheduleMaster immediately after landing. Somebody may be able to use that time.

T-Craft Members are responsible for keeping their **contact information** (phone numbers, email addresses, postal address) updated in [ScheduleMaster](#). To check or update your information, login to ScheduleMaster, click the "User" tab at the top, then click the link that says "Click here to edit your user info".

Got something aviation **you want to sell**? Post it in the T-Craft Newsletter. Send your advertisement to the Secretary at: jlvanho@msn.com.

Thanks to all who have sent us stories and photos for our news letters. Be sure to send us yours.

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