

# T-CRAFT AERO CLUB

## MONTHLY NEWSLETTER

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Photos courtesy Jim Hudson (left: 91X at Sulfur Creek), and Chuck Carlson (right: guess the landmark?)

### **General Information**

June came in quite unpredictably, with plenty of weather surprises to keep most T-Craft pilots grounded. July looks more promising as temperatures climb to normal highs towards the end of this month.

Density altitude calculations will be a vital component of ALL pre-flight preparations. Cool mornings in Idaho can quickly change into hot, humid mid-mornings. Read more in Jim Hudson's report below.

**Fuel re-imbursement for June 2009:** \$3.80/gal. The Board will be sending out e-mail notices concerning fuel cost increases/decreases, with corresponding rate changes. Watch for these notices.

**Current flying rates:** 152 @ \$52.00/hr wet, 172s @ \$73.00/hr wet, and 182s @ \$100.00/hr wet  
These rates will remain the same until T-Craft uses up the 8,500 gallons of fuel we have prepurchased (we burn 14,000 gal per year average)

Next **Board Meeting:** 14 July 2009, 7:00 p.m., T-Craft Hangar Offices.

Next **General Membership Meeting:** 29 September 2009, 7:00 p.m., EAA/CAP Hangar, Nampa, Idaho. NOTICE: the Board Members may call a Special General Membership Meeting to discuss operational issues. Please pay special attention to future T-Craft e-mail communications for further information.

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## From the Membership Director

## Density Altitude: Turns Bold Pilots into Old Pilots .... If You Survive!

It almost reached 100°F Wednesday (June 24<sup>th</sup>) in the treasure valley. Caldwell was reporting a Density Altitude of 5200'. McCall reached 77°F at 6 PM, resulting in a DA of 7150'. Summer has arrived and with it, the nemesis to us pilots – Density Altitude.

Here are some things to keep in mind as Density Altitude goes up:

- Power is Reduced
- Lift is Reduced
- Prop performance is reduced

Resulting in:

- Longer Take off Distance.
- Climb performance reduced
- Longer Landing distances
- Lighter loads.



A normally aspirated engine loses approximately 3.5% BHP per 1000' increase in DA from Sea Level. So yesterday if you were leaving McCall at 6 PM, the 230HP C182 would be putting out 75% available HP on take-off or 173HP. Our new powerful 160HP C172's would be at 120HP. That assumes that you are leaned for maximum performance.

### Takeoff Rules of Thumb:

- A 10% increase in gross weight results in 20% increase in takeoff distance.
- A 10 % decrease in power will increase takeoff distance by 20%
- At a given gross weight, each 1000' increase in DA will cause a 10 % increase in takeoff distance.
- **If you have not reached 70% of Vx IAS by 50% of the runway - ABORT**

### Landing Rules of Thumb:

- A 10% increase in IAS will cause a 20% increase in landing distance.
- Landing distance increases approximately 5 % per 1000' increase in DA above Sea Level.

Don't be fooled by what looks to be the "right" ground speed for rotating on takeoff and fairing on final. As DA goes up, true air speeds/ground speeds go up and can be deceiving and possibly result in a stall if you do not pay attention to IAS – Indicated Air Speed. You need to take off and land at the appropriate IAS.

**Vx and Vy change as DA goes up.** Some POH's indicate this in their performance tables, some do not. For every 1000' increase in altitude Vx increases 0.5 mph and Vy decreases 0.66 mph. Also remember respective Vx & Vy speeds decrease as weight decreases. Consult the respective POH for exact numbers when published.

The Vx and Vy numbers in the checklists are for Sea Level and Gross weight conditions. Performance will be affected if you do not use the appropriate Vx and Vy for the respective weight and DA conditions.

Don't forget tire inflation – every little bit helps. We have a compressor in the hanger and a tire gauge near the key lock box. (I've had to inflate tires on 3 birds in the last couple of weeks. They were all quite low.)

This is the time of the year to dig out the POH and review takeoff, rate of climb and landing performance numbers and the appropriate takeoff and landing speeds, especially at higher elevation strips. We're all getting old enough – let's not be bold also.

On a related topic – we will have a takeoff contest at the Garden Valley fly-in (July 18<sup>th</sup>). Participants will calculate the distance to clear 50' for the conditions at the time. We will then have an instrument to measure the actual takeoff performance. The one whose calculation is the closest to the actual performance will be the winner (of what to be determined).

Fly Safe and Have Fun,  
**Jim Hudson**

## Special Announcements

Bert Osborne solos June 2009.  
Congratulations from your  
friends at T-Craft!!!



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## Aircraft Maintenance

**WARNING:** Information below may or may not be accurate. Consult Schedule Master and clipboards on hangar wall for the most recent information concerning your aircraft.

**375:** Nothing to report.

**686:** Mineral oil changed out and aircraft released to Membership; tire changed; right flap is loose.

**64R:** Nothing to report.

**91X:** Nothing to report.

**0YD:** Crack found in oil sump.

**93S:** New battery.

**Got a squawk?** Write the tachometer time on the Squawk Sheet. Sign your name, and include a phone number where you can be contacted. Document the Hobbs time for all other recordings.

**Use good judgment adding oil to an engine.** Read "**Aircraft Oil Usage**" on the T-Craft Website for more information.

**From the Board** Some may have already read the AOPA article that was printed last November (2008), and most of you know the guy on the right in this photo. What you may not know is that these fellows set an official speed record in a T-Craft airplane.



Dennis Nau and his son Michael (pictured on the left) attempted a speed record between Blaine Municipal (4W6), and Vista Field (S98) in the state of Washington, in an effort to draw attention to plans to close both airports. According to the National Aeronautic Association, which certifies record attempts in the United States, the Naus made their flight in 1 hour, 54 minutes, averaging 132.58 miles per hour in a Cessna 172 (N13686, as you can see above). This record for "Speed Over a Recognized Course" represents the fastest speed of any piston engine landplane weighing between 1,102 and 2,205 pounds over the route.

The Board wishes to thank Dennis Nau and his son for this photo, and for their contributions and dedication to the advancement of general aviation in the United States. Awesome job guys!

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Ask any Board Member for a copy of any of the Minutes, or you can e-mail the Secretary ([jlvanho@msn.com](mailto:jlvanho@msn.com)), and have a copy sent right to your home.

Got something aviation **you want to sell**? Post it in the T-Craft Newsletter. Send your advertisement to the Secretary, [jlvanho@msn.com](mailto:jlvanho@msn.com).

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### **Upcoming Local and Regional Events**

**Salute To North American Aviation** (P51d Mustang displays), Warhawk Museum, 11-12 July 2009. (T-Craft invited to attend and Display)

**Garden Valley, Idaho Fly-In**, T-Craft Aero Club, 18 July 2009 (Campground and tie downs reserved for T-Craft).

**Bomber Days**, Warhawk Museum, 8-9 August 2009 (T-Craft invited to attend and Display).

**Thunder Over Nampa**, Nampa Airport, 11-12 Sept. 2009.

**T-Craft Plane Wash**, T-Craft Hangar, 16 September 2009, 4:00 p.m.

Share events in your Newsletter with Members by sending them to the Secretary at: [jlvanho@msn.com](mailto:jlvanho@msn.com)

## **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](http://www.t-craft.org).

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

Limited quantities of **T-Craft Gift Certificates** are still available. Contact the Board of Directors for more information.

**Properly sign out your aircraft**, including the correct designation; for example, Local, Cross Country, Maintenance, Replacement Aircraft Search, etc. If an aircraft moves, breathes, or sneezes, it **MUST** be correctly documented for maintenance and billing.

**Delete** the remainder of any unused flight time from **Schedule Master** 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 **Schedule Master**. To check or update your information, login to Schedule Master, click the "User" tab at the top, then click the link that says "Click here to edit your user info".