

# T-Craft Aero Club

February 2013



Featured Photo  
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your photo

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## MAINTENANCE DIRECTOR'S MESSAGE

by Jim Eyre

### Break-in and Beyond

#### Learning how to treat your pricey new power plant

With the new engine in N67375 perhaps the following will help you better understand why we do what we do for engine break in.

We all enjoy piloting (at least I hope so). But exercising our pilot's privileges carries the obligation to do so as safely as possible –and that means as knowledgeably as possible. At times, however, it seems impossible to keep up with all the know-how essential to flight as the list of subjects in which we are supposed to be experts is plenty long including having to worry about the engine.

Our automobiles pretty much look after themselves. But by the end of the first century of powered flight, we piston pilots still have to ride herd on our horsepower just about as watchfully, carefully and manually as did Wilbur and Orville in 1903. This applies especially to a phase of operation that few highway drivers encounter anymore; breaking in an overhauled engine.

During initial flight training, we all learned the bare basics of how to operate and treat the generic air-cooled engine: don't over-rev it, don't over lean it, and don't shock

### Club Meetings

#### ◆ General Membership Meeting

February 26, 2013 7:00 PM

@ the EAA/CAP Facility

#### ◆ Safety Meeting – Spring Weather

Tentative March 6, 2013 7:00 PM

@ the T-Craft Hangar

#### ◆ Board Meeting

March 12, 2013 7:00 PM

@ the T-Craft Hangar

### ...Continued

cool it, etc. But for many of us, some degree of mystery still lurks under that cowl, and nothing makes us more uneasily aware of our ignorance than knowing there's a freshly (\$19,000) rebuilt engine reciprocating along in there. In this case, ignorance very definitely is not bliss.

Fact is, you can mess up the engine in minutes. For instance, did you know it's a bad idea, for reasons other than shock cooling, to pull the power back at altitude and let the prop windmill all the way down to your destination? Teledyne Continental Motors say "Never let the airplane drive the engine." When reducing speed or altitude, cut power only to the point the engine feels as if it's simply loafing, not dragging.

Why? Because reduced power robs the piston rings of the internal cylinder pressure that normally helps push them against the barrel walls. Without this pressure, crankcase oil leaks past the rings to the hot end of the jug, where it bakes into a "glaze" that degrades compression-sealing, even when full power is restored. This coating is so slick and hard it can only be removed by honing – which requires a top overhaul. (What a sharp pain that would be since we just did a \$19,000 major overhaul not including R&R).

This admonition applies to all engines, but it emphasizes the special care we need to take while flying the first hours after overhaul. The best quality overhaul can be ruined with a careless or clueless break in. It is important that we understand how important it is keeping cylinder pressures up.

According to Textron Lycoming a new or rebuilt engine should be run hard throughout its break in period.

Any power setting of less than 65% simply does not produce adequate internal pressure to force the new rings against the bores tightly enough to seat everything properly.

Full power for takeoff and climb during the break in period is not harmful, although engine temperatures should be monitored closely to ensure that overheating does not occur. Cruise power setting above 65 percent of rated power is used to achieve a good engine break in. Rich mixtures are important as the valves and valve seats benefit from the lead bath they get from lots of 100LL during break in.

How long does this critical break in period last? 50 hours or so, says Lycoming, adding that closely monitoring oil consumption will show when the rings are nicely seated. The more the engine runs, the happier it is. N67375 will be released to general membership with continued break-in instructions when we feel comfortable doing so.

Lycoming Service Instruction No. 1009AJ states that an engine should be run frequently and consistently to remove moisture & acids that build up in the oil which are purged by heat. It also involves gaskets, seals & hoses. This our club does (as long as the weather cooperates). Lycoming also states that in doing so hours can be added to usual TBO.

Lycoming Service Instruction #1094D recommends that after proper break-in to holding continuous cruise power to 65% or less for maximum engine life.

Thanks for taking your time to read this. With your understanding & cooperation I hope to continue providing you with strong, reliable engines & aircraft for safe fun flying.



March 4-10, 2013

## The Institute for Women of Aviation Worldwide

<http://www.womenofaviationweek.org>

The 3rd annual Women of Aviation Worldwide Week, March 4-10, 2013.

Ponderosa Flying club in Boise will be supporting this event in what has been dubbed "Fly-it-Forward" on Saturday March 9th. This year they will be offering 75 free flights to girls and women. For more details and sign up forms, visit

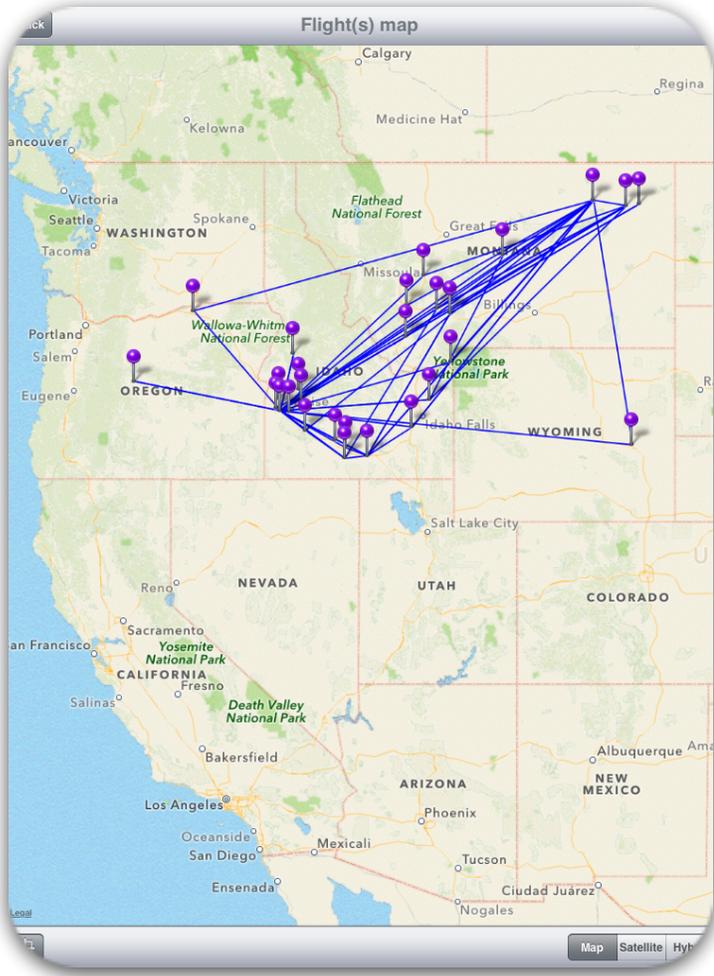
<http://www.womenofaviationweek.org/rsvpmaker/id-boise/>



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<https://www.facebook.com/groups/164768522373/>





Jump to Page Date

Page 22 of 23  
158 records

Totals Brought Forward		265.40	18116.93	265.40	0.00	0.00	99.50	218.00	183.30	56.00				
Date	Aircraft	Registration	From	Via	To	Duration of Flight	Flight Distance (nm)	Category / Class / etc.			PIC	Cross Country	Dual	
21 Jul 2012	Skyhawk	N13686	MAN	MAN	MAN	1.10					1.10			
13 Aug 2012	Skyhawk	N13686	MAN	BYI	BYI	1.50	135.76	1.50				1.50	1.50	
13 Aug 2012	Skyhawk	N13686	BYI	BZN	BZN	3.10	224.41	3.10				3.10	3.10	
14 Aug 2012	Skyhawk	N13686	BZN	PO1	PO1	3.00	283.06	3.00				3.00	3.00	
14 Aug 2012	Skyhawk	N13686	PO1	BZN	BZN	3.60	283.06	3.60				3.60	3.60	
15 Aug 2012	Skyhawk	N13686	BZN	BYI	BYI	2.80	224.41	2.80				2.80	2.80	
15 Aug 2012	Skyhawk	N13686	BYI	MAN	MAN	1.70	135.76	1.70				1.70	1.70	
Totals This Page						16.80	1286.47	16.80	0.00	0.00	0.00	16.80	15.70	0.00
Grand Totals Including This Page						282.20	19403.40	282.20	0.00	0.00	99.50	234.80	199.00	56.00

Agency and Printouts General

Single-Engine Land Airplane

- 61.57(a) Carrying Passengers >
- 61.57(a) Carrying Passengers in a Tailwheel Airplane >
- 61.57(b) Carrying Passengers at Night >
- 61.57(c) Acting as PIC under IFR >

**Safelog App syncs with your Computer and allows you to log flights on your Ipad or Iphone. Also Maps Flights and Tracks Currencies.**

Mark your calendar for July 19th and 20th for the Annual Garden Valley Fly-in and Breakfast where fun times are had by all!



Anyone can do the job when things are going right. In this business we play for keeps

- Ernest K. Gann

# EMERGENCY PROCEDURES - THINK THIS STUFF THROUGH

Safety - Membership Director

You may have seen a recent YouTube video making the rounds of a Cessna 175 with a in-flight emergency and subsequent landing on a snow covered field. Luckily there were no fatalities or serious injuries. If you have not seen it, it's at: [http://www.youtube.com/watch?v=JDQVN\\_G1bM4](http://www.youtube.com/watch?v=JDQVN_G1bM4)

I'm not going to arm-chair quarterback or 2nd guess too much in this article. However, one big question was why there were 5 people (a 7 month old baby) in a 4 passenger plane. There were several omissions in following a typical emergency landing checklist that we're taught to use in a situation like this. You can spot many of these for yourself.

This accident begs the question; was the pilot prepared for something like this? One ATP pilot made the following comment on YouTube: "You have to think this stuff through before you find yourself in an emergency situation".

A good place to start to "think this stuff through" is with the POH. Section 3 Emergency Procedures in our POH's (except 91X) covers many types of Emergency situations in good detail. For 91X, I suggest adapting the procedures in 93S's POH.

As you prepare for you next flight, review this section of the POH, and re-familiarize yourself with the various types of emergencies one can expect. A good pre-flight also involves mental preparation and running some what-if scenario's through your mind.

If something unexpected happens, have a good idea of what actions you will take.

Some related newsletters you may want to review on similar topics:

- December 2009 – "Engine Failure on Take-Off" – Specific advice for Nampa airport.
- May 2011 System and Equipment Failures
- July 2010 – "Dead Stick landings". Tips on practicing simulated emergency landings without power.
- February 2012 - "Complacency"
- March 2012 - "The Impossible Turn"
- November 2012 – Carb Icing.

## Membership

Our Membership count is down 3 to 68 Members

- ♦ Sponsor a new member and receive 1 hour of flight credit (C152)

**Fly Smart, Fly Safe, Have Fun,  
and - Don't do anything Stupid!**

## Membership

We've lost 3 members this past month: Rob Anderson, Steve Fickes, and Mitch Wolf. Our membership is currently at 68 members.

## Club Meetings

**February 26th** - General Membership Meeting 7:00 PM in the EAA/CAP facility

**March 6th** (Tentative date) Spring Weather Class – Bill McGlynn, T-Craft hanger

If you have not do so, please take the on-line survey for this class <http://www.surveymonkey.com/s/MVPR6G8> . **It is Quick and easy by the way!**

**March 12th** - Board Meeting 7:00 PM at the T-craft hanger.

**March 26th** - General Membership Meeting 7:00 PM in the EAA/CAP facility

## Squawks/Status

\*\*Always check current squawks on Schedule Master and hangar wall\*\*

### New Lower Rates!!!

N67375 - \$57 per hour

From Feb 4 to March 29, 2013

Plane Grounded for New Engine Install

N13686 - \$81 per hour  
Ready To Fly

N4464R - \$79 per hour  
Ready To Fly

N1891X - \$117 per hour

Lifters the cause of the Metal particles in oil filter. Repairs have been made & back on line.

N7593S - \$121 per hour

Aircraft currently certified for VFR flight Only  
HSI Squawked as not working.

### ALL BIRDS

Floor Heaters are to be used continuously this winter. Please reinstall after your flight and verify operation along with putting the blanket over the Cowling. If OAT is below 30 F you could plug in oil pan heater while doing preflight.

**HOWEVER - DO NOT LEAVE OIL PAN HEATER PLUGGED INTO AIRCRAFT AFTER YOUR FLIGHT**



Who is looking forward to this year's annual Garden Valley Fly-in? Mark your Calendar for July 19th and 20th. Breakfast will be served.

Fuel Reimbursement  
\$4.87

### News Letter Contributions

Please send photos and your Flying Stories to

[dbs477@gmail.com](mailto:dbs477@gmail.com)

for inclusion on future issues.

Thanks