



# Illinois Valley Beacon

January 2009

Chapter 563 Chartered in 1976

Volume 16 Issue 1

The **First Breakfast** will be held on the **First Saturday, January 3rd**, in the EAA Hangar from 8:00 to 10:00.

The **Regular Meeting** will be held on the **Second Thursday, January 8th**, in the EAA Hangar from 8:00 to 10:00.

The **Second Breakfast** will be held on the **Third Saturday, January 17th**, in the EAA Hangar from 8:00 to 10:00

The **Directors Meeting** will be held on the **Third Thursday, January 15th**, in the EAA Hangar starting at 7:00. All members are welcome to attend.

## Hope You Had a Happy Holiday

The 2008 year ended with the 2nd Annual Holiday Dinner at the Sky Harbor restaurant. Everyone appeared to have a good time and enjoy the evening. Chapter President, Al Phipps, gave out the Service Awards listed below:

Those listed below were presented **2008 Chapter Service Awards** by The EAA at the annual Christmas dinner. The dinner was at Sky Harbor restaurant on December 5, 2008. There were forty six members and guests attending.

<u>Position</u>	<u>First Name</u>	<u>Last Name</u>
Flight Advisor	Samuel	Sisk
Flight Advisor	James	Hannemann
Newsletter Ed.	Maurice	Caudill
Secretary	William	Engel
Tech. Counselor	Allan	Lurie
Tech. Counselor	Samuel	Sisk
Treasurer	Jerry	Pilon
Vice Pres.	Barry	Logan
President	Albert	Phipps
Web Editor	Maurice	Caudill

## OPPORTUNITIES!!!

Do you have a Canon printer? I have a multipak of color ink tanks bought by mistake. The box contains one each of 3e magenta, cyan and yellow. If you can use them they are yours for the asking.

Like old flying magazines? I have many years of back issues for **Sport Aviation**, **Sport Aerobatics**, and **AOPA Pilot**. They are boxed and in order. Yours for the asking.  
Bill Engel, 691-6466

## Tax Deductible

Chapter 563 expenses are not entirely covered by dues. In order to keep annual dues at a reasonable level, we rely on other sources of income to break even. Breakfasts and donations play a big part in keeping us in the black. We are happy to acknowledge donations of any amount on our "Honor Roll", which you can see posted on our hangar bulletin board. Can we add your name to the list?

## Field Test for Determining Presence and Amount of Alcohol

EXPERIMENTAL AIRCRAFT ASSOCIATION, INC. (EAA) appreciates the permission of Conoco, Inc. to base this field test procedure on one developed by the company.

### Scope

This method determines the amount, if any, of alcohol present in gasoline. This test is designed specifically for field-testing where time and simplicity are important factors.

### Summary of Method

A sample of gasoline is shaken at room temperature with an amount of added water. The volume increase of water is proportional to the amount of alcohol initially in the fuel sample. Nine (9) parts of the gasoline sample are combined with one (1) part water.

### Apparatus Required for Either of the Methods Below

Graduated Cylinder Method - One (1) each one thousand milliliter (1000 ml) clear Pyrex or shatter-resistant glass graduated cylinder OR transparent chemical-resistant plastic (such as TPX) graduated cylinder. (These can be purchased from laboratory or chemical equipment suppliers.)

Measuring Cup Method - One (1) each 2-quart clear Pyrex, glass, or chemical resistant plastic container. One (1) each 4-fluid-ounce measuring up (1/2 cup). One (1) each 32-fluid-ounce measuring cup (1 quart).

### Preparation

Clean Containers.

On the 2-quart container, mark the level of exactly four (4) fluid ounces (1/2 cup) permanently on the side (a piece of masking tape can be used).

### Procedure

Graduated Cylinder Method - To 9 parts of gasoline (900 ml), add 100 ml of water for a total of 1000 ml in the graduated cylinder. Shake thoroughly, let stand for 10 minutes or until gasoline is again bright and clear. Record the apparent level of the line between the gasoline and water. This "Final Volume" is used in the calculation below.

Measuring Cup Method - To nine (9) parts of the gasoline sample (36 ounces or 1 quart plus 1/2 cup), add 4 fluid ounces (1/2 cup) of water for a total of 40 fluid ounces in the 2-quart container. Shake thoroughly, let stand for 10 minutes or until gasoline is again bright and clear. Record the apparent level of the line between the gasoline and water.

The Measuring Cup Method is intended to indicate the presence of alcohol and is not practical to evaluate the amount of alcohol. If the final line between gasoline and water is measurably higher than the 1/2 cup mark, the presence of alcohol is indicated. NOTE: Erroneous results are probable if sample and water are not thoroughly shaken and mixed.

### Calculation

Graduated Cylinder Method - Note the final volume and calculate the percentage of alcohol in the sample using the following calculation:

$$\text{Percentage of Alcohol in Gasoline} = (\text{Volume} - 100)$$

divided by 900) X 100.

Where: V = "Final Volume" of water as determined in procedure above (read at separation line between water and gasoline).

### Precision

Within +/- 1% alcohol if you measured and recorded accurately.

### Action to be Taken

In the opinion of EAA, and in the interest of most conservative operations, the following observations are offered:

If alcohol content is less than 1%, fuel will probably have no effect on aircraft.

If fuel contains up to 5% alcohol, caution must be exercised. Do not permit it to remain in tanks or fuel system for more than 24 hours, then drain and refill with alcohol-free fuel, ensuring that no alcohol concentration remains in fuel lines or sump. Vapor lock may be a problem. DO NOT FLY.

If alcohol content is more than 5%, DO NOT FLY. Drain the fuel system, flush all parts, replace with clean alcohol-free fuel and run up engine long enough to exchange fuel in carburetor bowl.

### Known Problems

Alcohol attacks some seal materials and varnishes on cork floats of fuel level indicators. This could cause leakage of seals and release particles of varnish from floats, causing blocked screens in fuel lines or blocked carburetor jets. Excessive entrained water carried by alcohol could lead to fuel line blockage or blockage at screens or valves when operating at low ambient temperatures at ground level or at high altitude. Fuel volatility is also increased with the addition of alcohol in a manner that is not detected by the Reid Vapor Pressure test, which is used to determine if a fuel meets the automotive specification. For example, a gasoline with alcohol will meet the Reid Vapor Pressure limit of 13.5 psi but it will behave as though it has a volatility of roughly 20 psi. Gasoline's with alcohol will also phase separate. Phase separation occurs as the gasoline/alcohol blend cools, such as when a plane climbs to a higher altitude. When water that is absorbed in the fuel by alcohol comes out of solution, it takes most of the alcohol with it. The quantity that comes out of solution cannot be handled by the sediment bowl and tank sumps. Furthermore, if the alcohol is used to raise the octane of the base gasoline, the gasoline that remains will not have sufficient octane to prevent detonation. A good reference for this phase separation problem is: Paul Corp., Laboratory Investigations into the Effects of Adding Alcohol to Turbine Fuel, DOT/FAA/CT-TN88/25 July 1988, FAA Technical Center, Atlantic City International Airport, NJ 08405.

### Precautionary

Gasoline is volatile, extremely flammable and harmful, or fatal if swallowed. Avoid prolonged or repeated breathing of vapor or contact with skin or eyes. If swallowed, do not induce vomiting, get medical care immediately.

# 2008

## Was a very good year for Chapter 563

### January

Speaker: AOPA Safety Film  
Evening Holiday Dinner a success  
200 Young Eagles in 2007  
Cessna chooses China for the 162  
Dues raised to \$25, \$30 for families

### February

Speaker: M. Caudill on fiberglass parts  
Cecilia Ernst soloed  
Chapter coffee cups arrived

### March

Speaker: Chris Tate, Aircraft Insurance  
Projects in hangar: Phil Jones Zenith  
601, BD-5. and an English Wheel  
donated by Barry Logan, and Marty  
Martin's wheel pant repair  
Mt. Hawley survey results meeting

### April

Speaker: Melissa Johnson, Op. Spec. at  
the Greater Peoria Airport  
Safety door in rear of hangar installed  
"In over my head." by Phil Jones (#1)

### May

Speaker: Dave McCurdy, PIA ATC Mgr.  
Performance challenge  
Chapter 563 Family Cookout  
"In over my head." by Phil Jones (#2)

### June

Speaker: Ron Vice, powered parachutes  
Flew Young Eagles  
"In over my head." by Phil Jones (#3)

### July

Speaker: Ty Plowman, Mt. Hawley heli-  
copter school  
"In over my head." by Phil Jones (#4)  
Mt. Hawley open house, EAA cooked

### August

Speaker: No meeting. Second  
annual Chapter cookout

### September

Speaker: Dr. Phil Jones on "The Air  
Wars"  
Third annual Chapter cookout

### October

Nominations for officers and directors  
Hangar flying  
B-17  
Young Eagles (Boy Scout Troop)

### November

Speaker: Larry Byerly, history of B.A.  
Election of officers  
Jeff Wales, Mt. Hawley future

### December

Annual Holiday Dinner at Sky Harbor

## The State of the Chapter

From where I sit (your newsletter editor) the  
Chapter is looking better than ever.

*This opinion is not official, for I am not an  
officer, just an observer and reporter of the offi-  
cial and unofficial goings on around the airport.*

As you can surmise from the 2008 year, the  
Chapter had many interesting events, speakers, and  
influenced several groups of Young Eagles.

The Chapter treasury is in good shape and  
the hangar is being utilized by the tenants and the  
Chapter. Two breakfasts a month and coffee every  
Thursday keeps the place humming.

We are currently in a phase of deficit spend-  
ing due to high utility bills and lower breakfast in-  
come, but that is being addressed by your executive  
committee. Just like taxes, income needs to con-  
tinue to increase.

Thanks to the officers and directors, past  
and present, the ground work has been laid for the  
continuing growth of Chapter 563 and the enjoy-  
ment of aviation by being involved in EAA.

# January 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3 First Breakfast
4	5	6	7	8 Regular Meeting	9	10
11	12	13	14	15 Directors Meeting	16	17 Second Breakfast
18	19	20	21	22	23	24
<div style="border: 2px solid red; padding: 5px;"> <p>Unless otherwise notified, the Regular Chapter 563 meetings will be held at the Chapter Hangar at 7:00pm on the second Thursday of each month.</p> <p>All Chapter 563 breakfasts will be held at the Chapter Hangar from 8:00 am to 10:00 am on the first and third Saturday mornings.</p> <p>Unless otherwise notified, the Chapter 563 Directors meetings will be held at the Chapter Hangar on the third Thursday of each month at 7:00pm.</p> </div>					30	31

## 2008 Chapter 563 Officers

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 Vice President: Robert Young, 4569 Thornhill Dr., Peoria, IL 61615, Ph. 453-5602 rwyoung77@hotmail.com  
 Treasurer: Jerry Pilon, 110 WindRidge Dr., Washington, IL 61571, Ph. 745-1139 plongt@hotmail.com  
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