



Jon Arney, Editor

**R.U.F.F. Times**  
The Official Newsletter of the  
Rochester UltraSport Fun Flyers  
EAA Chapter 95UL  
October 2010



Laura Arney, Copy Editor

Notice: EAA 95UL Newsletters are now posted at [R-U-F-F.org](http://R-U-F-F.org)

***October Member's Meeting***

**When:** Saturday, 30 October, 10:00 am.

**Where:** Spencerport Air Park club house.

**Program:** Dan Burrell on Taking a Flight Test

**After Meeting Lunch:** Hot dogs will be grilled outside the club house.

***October BOD Meeting Notes***

Dan Burrell, secretary

**Old Business:**

- Discussion took place regarding upcoming elections for next year's officers.
- The members' list was divided between those officers present. Each will call members to inquire if they have interest in joining the board of directors.
- BOD membership does not require that one hold an office.

**NEW Business:**

- Steve Ziggstein announced he is leaving the Rochester area to move to Nebraska for employment. We wish him the best!
- Chuck reported on the new pamphlet he is designing for the club.
- There will be a party to celebrate the achievement of 1000 flight hours by Jon Arney, Chris Black and John Macksamie. The party will take place Saturday November 6 at Jon Arney's home in Henrietta from 4-8PM. It is pot luck so please contact Jon to see what you can bring.
- Bob Lockmeyer has turned 80 years old. Please consider sending him a congratulations birthday card.

***Sport Pilot Training Available at Batavia Airport (GVQ)***

John Macksamie reports:

Bob Miller Flight Training (<http://www.bobmillerflighttraining.com/aircraft.html>) is now offering sport pilot training at Batavia airport. They use a 2009 light sport airplane called the Navigator 600LS. Slowly the FBO industry is gearing up for light sport!



## How About a Powered Parachute of Iron & Aluminum that Cruises 350 MPH!!

From Bill Sauers, Greece Town Historical Society

The Rochester D&C, 31 March, 1918

### **AIRPLANE INVENTOR MAKES BIG CLAIMS**

#### **Comstock Company Files Incorporation Papers.**

The Comstock Parachute Airplane Company filed incorporation papers here yesterday in the office of the county clerk and proposes to manufacture a new type of airplane which, if it substantiates the claim of its inventor Dr. Francis M. Comstock, of New York, will revolutionize the construction of airplanes in this country. Dr. Comstock has been a student of aeronautics for years and was a pupil of the famous Professor Langley, one of the pioneers.

The papers were filed by Attorney Charles F. Doehler. The company is capitalized at \$100,000 and will start business

with half of the capital stock paid in. The directors are: Dr. Comstock, Harry V. Walker, Phillip H. Farley and Eugene H. Hickey. It is said that the company will begin the manufacture of the new airplanes next month. Dr. Comstock has had conferences with representatives of the War Department and will have no trouble in disposing of the machines if they do what he says they will do.

The chief advantage claimed for the new plane over the old type is that the parachute principle will make it unnecessary to descend when the engine stops. The plane can remain in the air for some time with the engine stopped and may then descend to earth with safety instead of being forced to glide to earth.

The machines will be driven by two Liberty motors, and the inventor says they will be capable of making 350 miles an hour. They will be constructed of aluminum and sheet iron and, according to the inventor, will weigh 1,800 pounds each, which is less than the ordinary type of airplanes. Dr. Comstock believes he has solved the problem of a substitute for spruce in the construction of aeroplanes.

### ***Kwik Fill Gasoline Test***

Jon Arney

This month I tested the gasoline at the Spencerport Kwik Fill station. Last month it tested as zero alcohol content. This time it tested as 7% alcohol content. (The tests were done with a dielectric analysis cell I built.) It appears they filled the station tanks with E10 and still had some E0 left to dilute it. Also, Bernie reported that the Kwik Fill in the Dansville area also has switched to E10. I e-mailed the Kwik Fill home office and they replied to me that they are indeed in the process of switching over to E10 gasoline because that is the only thing they, in turn, are able to get. So, there is no more alcohol free gas in this area other than 100LL.

### ***Fly Safely with E10 Gasoline***

#### ***Part (II): Testing for Water in E10 Gasoline***

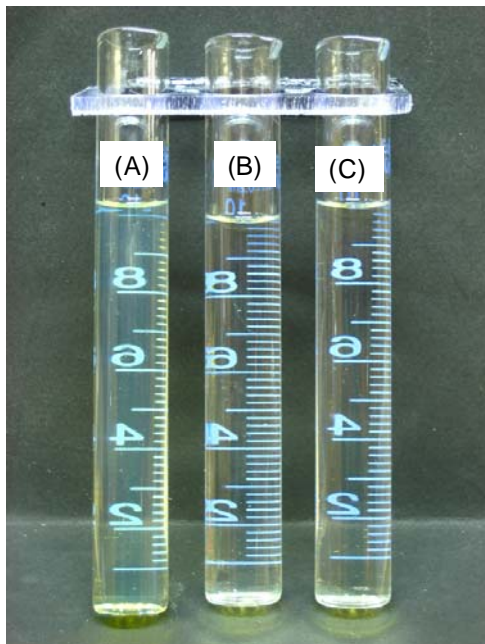
Jon Arney

Last month's newsletter discussed the use of E10 gasoline in aircraft, and it was pointed out that this can be done legally and safely for some ultralights and EXPERIMENTAL aircraft. All you have to do is; 1) make sure your engine and your fuel system are compatible with the ethanol in E10 gas, and 2) change the way you check for water in your gas during pre-flight. This month will discuss a simple procedure for testing for water in E10 gasoline.

The old method for checking for water was easy. We were all taught to take a sample at the sump and look at it. If you see water, you discard the sample and take another. You continue to sump and check until you no longer see water. However, if you are using E10 gasoline, this procedure is NOT appropriate. This is because E10 gasoline saturated with up to

0.4% water looks exactly like dry E10 gasoline. Gas with 0.4% water is about 5 oz of water in a 10 gal tank! You can fly with dry E10 gas, but you don't want to fly with water saturated E10 gas because of the chance of a phase separation during flight.

The good news is that there is a way to check E10 gasoline for water. You taking a sample at the sump, then you put 10 ml of the gas sample into a test tube. Then add one drop of water using an eye dropper or a small syringe (without needle!) and shake it up vigorously. (Note: The size of the drop makes a difference, so use the dropper or syringe.) You will observe one of three things, depending on the gas you have. These three things are illustrated in Figures 1 and 2.



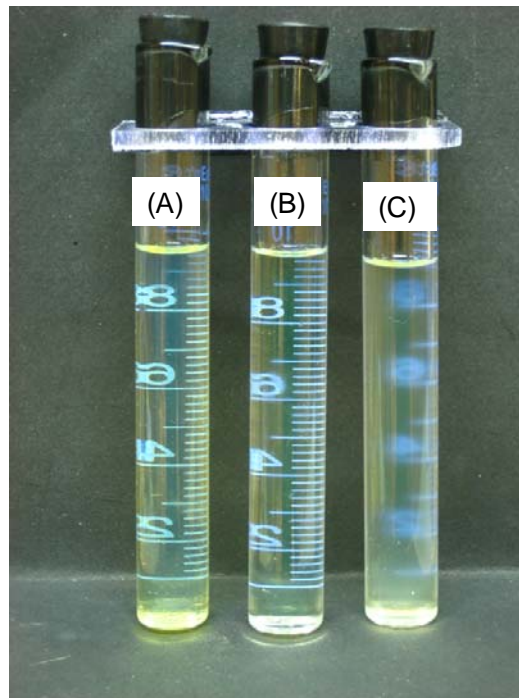
**Figure 1:** 10 ml samples of gasoline. Note the numbers on the test tubes are on the back side of the test tubes.

- (A) Ethanol free gasoline.
- (B) Dry E10 gasoline.
- (C) E10 gasoline that is half saturated with 0.2% water.

The three samples in Fig. 1 are (A) ethanol free gasoline; (B) Dry E10, and (C) E10 with 0.2% water, which makes it half saturated. **Note in Fig. 1 that all three samples look the same.** Samples (A) and (B) are okay for flying, but sample (C) is not. It is too close to being saturated with water. However, you can't detect this simply by a visual inspection the way you did in the old days of ethanol free gas. This is why you need to add one drop of water from an eye dropper or syringe to test the 10ml sample of gas.

The result of adding one drop of water to each sample of 10 ml gasoline, followed by vigorous shaking, is shown in Fig. 2. The drop of water in the ethanol free gas sample quickly coalesces and settles to the bottom. Although it is not easily seen in this photo of Sample (A), it is easy to see on a close visual inspection of the tube. Sample (B) shows no change since all the water is dissolved by the dry E10 gasoline. The sample remains clear. Sample (C), the wet E10, behaves in a very different way. It can not dissolve the entire drop of water. Moreover, the undissolved water actually induces some of the ethanol/water in the gasoline to come out of solution. The result is a cloudy sample, as indicated by the hazy appearance of the numbers on the back side of the test tube. A fully saturated E10 sample will cloud up even more. So, this

test shows safe gasoline as being clear, as shown in Sample (A) and (B), but unsafe wet E10, Sample (C), clouds up.



**Figure 2:** Samples (A), (B), and (C) from Fig. 1 with one drop water added. Note the cloudiness in sample (C).

Note that this is a pass/fail test. E10 gasoline with as little as 0.2% water (1/2 saturation) fails the test. Although 1/2 saturated E10 is probably not going to phase separate during flight, even at 10,000 feet, it is prudent to discard it anyway and fly only with dry E10. If the E10 gasoline sample passes this one drop test, then you can have high confidence that it is dry and safe.

Note also that the detection of **ANY water** in your aircraft gas tank filled with E10 gas, either observed visually when you sump it or by this one-drop test, means **you need to discard the entire tank of gas**. You can not add any kind of gas treatment to solve the water problem once the E10 gas has gotten wet. Also, you may consider testing the E10 gas at the point of purchase to be sure it is dry before you buy it. Generally there is at least 10 ml still in the hose when the pump shuts off, so you generally can test a sample before you swipe your card to buy it.

<b>Test Summary</b>	
1)	Sump the fuel as you always do, but place exactly 10 ml in a test tube.
2)	Add one drop of water and shake vigorously.
<b>If the result is:</b>	<b>Then do the following:</b>
the drop ends up at the bottom of the tube, and the gasoline is clear	Go flying. The gas has no ethanol.
the sample is clear and unchanged	Go flying. The E10 gas in the tank is dry.
the sample is cloudy	Drain the entire tank. The E10 gas has too much water in it and is unsafe for flying.

***A Letter from Timm Bogenhagen, EAA #379292***  
**Senior Aviation Specialist, (920)426-6831 [www.eaa.org](http://www.eaa.org)**

Dear EAA Ultralight Chapter:

I hope you and your chapter have had a great summer with chapter activities, and having fun with your ultralights and light planes. Chapters are such an awesome way to bring together like minded people who share a common passion for flight. Thank you for volunteering your time and talents to help make your chapter work for the benefit of all the EAA members in your chapter.

I wanted to send you this e-mail to remind you that EAA still maintains registration programs to support Part 103 flying. Participation in the programs are free to all EAA members and participation in these programs help to ensure our privileges under Part 103 continue. The registration programs are:

**Vehicle registration** - EAA's vehicle registration program provides a way to identify your ultralight vehicle to others. Once registered with EAA you will be assigned a registration number that begins with the letter "E" identifying it as registered with EAA. This will help to gain access to airports and shows you are complying with the self regulation concept which FAR Part 103 embraces. This program is a member benefit and free of charge to EAA members. To register your ultralight vehicle, go to

[https://secure.eaa.org/ultralights/vehicle\\_registration\\_form.html](https://secure.eaa.org/ultralights/vehicle_registration_form.html)

**Student registration** - Should be done at the start of any flight training. Student registration allows the use of ultralight flight time to meet sport pilot time requirements, in accordance with FAR 61.52. To register as a student, go to

[https://secure.eaa.org/ultralights/student\\_registration\\_form.html](https://secure.eaa.org/ultralights/student_registration_form.html)

**Pilot registration** - EAA maintains pilot registration program for your benefit. Although federal regulations that pertain to ultralights don't require you to register yourself or your vehicle. Also, the simple and less restrictive rules for ultralights were allowed by the FAA on the assumption that industry would self-regulate. When you participate in the registration program, you are helping us to fulfill this commitment to self-regulation. If we fail to self-regulate, the FAA will be forced to do it for us. This program is a member benefit and free of charge to EAA members. To register as an ultralight pilot go to

[https://secure.eaa.org/ultralights/pilot\\_registration\\_form.html](https://secure.eaa.org/ultralights/pilot_registration_form.html)

EAA maintains a web site dedicated to ultralights that has a lot of information, the site is [www.eaa.org/ultralights](http://www.eaa.org/ultralights)

*Have Fun and Fly Safe!* , Timm



• ***Trade Winds*** •

### **The "Engine Information System"**

If any of you aircraft builders are considering using the EIS system from Grand Rapids Technologies in your plane, contact me as I can get a better price since I am a dealer. This way you can save a few bucks. The EIS is a valuable instrument to have because it measures the battery voltage, engine rpm, exhaust gas temp., cylinder head temp., water temp, outside air temp., engine hours (Hobbs meter), flight time, and also has extra inputs that you can use to your liking. All of these measurements have upper and lower limits that you set and if any of these limits are exceeded, a warning light flashes and the screen indicates the problem area. This is probably the most valuable function of the unit. Basic units for most aircraft run about \$500. George Charnitski.

**Buccaneer for sale:** Located in Florida

Asking \$ 6000. Owner would consider all reasonable offers.

With covering, the BRS chute, on-board battery electrical system, 12 gal. fuel tank, and outer covering, it weighs in as 300 lbs. It is probable that it can be lightened to meet FAR Part 103. The owner reports that it flies well and has always been hangared.

He doesn't know what the "011CS" on the side means, but it is not a registered aircraft in the US. For additional information, contact William G Irwin, [wirwin7@tampabay.rr.com](mailto:wirwin7@tampabay.rr.com).

