



Chapter 279 Newsletter



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Information must be in the hands of the Newsletter Editor by the first of the month for that month's issue.

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October 2010

Volume 2010, Issue 10

www.eaa279.org

Chapter Monthly Meeting: Second Friday of the month at 7:30 PM
Breakfast Fly-in: Third Sunday April through October

Greetings Members

Here we are again getting ready to bring to an end our Fly-in Breakfast season with our soon to be last one this October. I feel that progress for us continues to be made on many fronts. Here is just one small example, while serving breakfasts at the September fly-in along with a new member, John Rodick , I noted at least ten new visitors who came directly up to the serving window. I first told the how very glad we were to see them as first time visitors and then sent them to the ticket sales table to see John. This tells me word is continuing to get out. I feel we are becoming a solid presence on the field and recognized as such. Hopefully our chapter will continue to act in a responsible manner in return. In line with this we must continue with our safety patrols at our fly-ins as well as seek out ways to improve the looks and appearance of our facilities and the airport as a whole. Continued praise is given to our club house and field clean-up crews for the excellent post fly-in job they do as well as those members who do follow-up clean up during the week. It takes a "Village" or club as you prefer.

In Memoriam

Sadly we recognize the loss on September 2nd of a Lifetime club member and strong club supporter, William ' Bill ' Draper, Mike's loving father. He used to enjoy being present to assist Mike whenever he came to work on his RV but most of the time he just enjoyed being with us all . We will all miss his jovial smile and camaraderie. Condolences to Mike and his family.

We also recognize the recent loss of another long time member from the past, Newton W. Borden. Newt was well known among the long time club members for his aircraft craftsmanship and amateur inventor status (he invented the first hand-held metal detector). Club members who well remember him also say he was " The Best Friend A Doberman Could Ever Have". Our sincere condolences to his family.



Chapter 279 Newsletter



Table of Contents

President's Message	Page 1
Bill Draper	Page 1
Bruce Shulman	Page 2
September Minutes	Page 2
Calendar	Page 3
Tech Corner	Page 3
Fly-In Pictures	Page 5



A Few Words About Bruce Shulman

By now most of us have heard about fellow club member Bruce and his unfortunate helicopter accident. As of this writing, the spirit and words continue to be positive from the family's website as he strives to make progress while hospitalized at Brigham and Women's Hospital in Boston. Bruce has a ways to go and he is still at serious risk but every day that things go his way he gets a little bit better. His family attributes his progress as being made possible first by Bruce's strong desire to get well and through the countless well wishers he has praying for him and thinking positive thoughts. We join with them in wishing Bruce 100% continued success in overcoming his injuries and returning to his family ASAP.

Carl Patturelli, President

September Meeting Minutes

Our meeting for September was brought to order by Carl Patturelli at 7:30 PM with 11 members present. We observed a moment of silence for two of our lifetime members who passed away recently; George Fortin and Bill Draper. Our most sincere condolences go to both families and their relatives. The secretary's report was accepted as written in the newsletter with a second from Joe Fava. Gerry Scampoli gave the treasurer's report which was accepted by the members with a motion from Bob Hittel and a second by Jim Lane.

Old Business; Research into the fire extinguisher situation discovered that it would cost \$900 dollars to



Chapter 279 Newsletter



replace and upgrade what we have. There was no further discussion and the issue was tabled. There was no New Business discussed tonight.

You may have noticed that Brian Baragwanath was not here tonight because after 3 years of work on his Ercoupe he finally finished all necessary repairs. He flew to an Ercoupe fly-in in Illinois and afterwards he will continue on to an airport in Arizona called Snowflake which is 7 miles from a 40 acre parcel of land that he has purchased. He will leave his plane there and fly back commercially and pack up everything and drive to his new home. He will certainly be missed around Cranland.

Three of our members have been hospitalized recently; Bob Wilkie underwent a vein transfer to save his leg and is now at Weymouth Health Care in Rm 141, Newt Borden is in Alliance Nursing Home on Pond St. in Braintree, and Dick Murphy spent a few days in South Shore Hospital but is home now. Best wishes for speedy recovery. Ed. Note: Newt passed away after the meeting, see the notice in the President's Report.

The meeting was adjourned at 8:45 PM
Tom Hassie, Secretary

Calendar

Friday Oct 8 7:30 PM	Cranland Airport (28M)	EAA Chapter 279 Monthly Meeting
Sunday Oct 17 8:00 AM	Cranland Airport (28M)	EAA Chapter 279 Fly-in Breakfast
Friday Nov 12 7:30 PM	Cranland Airport (28M)	EAA Chapter 279 Monthly Meeting

Breakfasts will start up again in the Spring. We look forward to seeing you then

www.eaa279.org/279breakfast/breakfast.htm

Tech Corner

This month is a continuation of last month's article on "Fuel Systems and Components". Auxiliary Pumps are electrically driven and supply fuel under pressure to the inlet side of the engine driven fuel pump. This is an essential part of the fuel system especially at high altitudes, to keep the pressure on the suction side of the driven pump from becoming low enough to permit the fuel to boil. This booster pump is also used to transfer fuel from one tank to another, to supply fuel under pressure for priming



Chapter 279

Newsletter



while starting an engine, and as an emergency unit, to supply fuel to the carburetor in case the engine driven pump fails. As a precautionary measure the booster pump is always turned on during takeoffs and landings to maintain a positive supply of fuel.

The booster pump is mounted at the tank outlet within a detachable sump or is submerged in fuel at the bottom of the tank. Seals between the impeller and the power section of the pump prevent leakage of fuel or fumes into the motor. If any fuel or fumes should leak past the seal, it is vented overboard. As an added precaution in nonsubmerged-type pumps, air is allowed to circulate around the motor to remove dangerous fuel vapor.

As fuel enters the pump from the tank, a high speed impeller throws the fuel outward in all directions at high velocity. The high rotational speed swirls the fuel and produces a centrifuge action that separates air and vapor from the fuel before it enters the fuel line to the carburetor. This results in a practically vapor free fuel delivery to the carburetor and permits separated vapors to rise through the fuel tank and escape through vents. Since a centrifugal pump is a non positive displacement pump there is no need for a relief valve.

The engine driven pump will supply positive fuel pressure to the carburetor at all times and is usually mounted in the accessory section of the engine. Since the engine driven pump normally discharges more fuel than the engine requires, there must be a way of relieving excessive pressure at the fuel inlet to the carburetor. This is accomplished with the use of a spring loaded relief valve which is adjusted to the required pressure for the particular pressure. This fuel is then routed back to the inlet side of the fuel pump. Should the fuel pump become inoperative there is a bypass valve that allows fuel to flow around the pump rotor. Then the booster pump can deliver fuel to the carburetor.

There are various selector valves which provide a means for shutting off fuel flow for the tank and engine, or for cross-feed and fuel transfer. There are many different system designs according to the requirements of a particular aircraft.

Fuel quantity gauges fall into four categories; 1 Sight glass 2 Mechanical 3 Electrical 4 Electronic Sight and mechanical gauges are used on aircraft where the tanks are located close to the cockpit, whereas electrical and electronic are used on larger aircraft where the tanks are located away from the cockpit. The sight glass is the simplest of all. It is a glass or plastic tube placed on the same level as the tank and operates on the principal that a liquid seeks its own level. The mechanical type is usually mounted in the tank and is known as a direct reading gauge. It has an indicator connected to a float resting on the surface of the fuel and as the level changes it will mechanically operate the indicator. The electrical gauge consists of an indicator mounted in the cockpit and a float transmitter installed in the tank. As the fuel level changes the transmitter sends an electric signal to the indicator showing the fuel level. The electronic type (capacitance) fuel quantity gauge differs from the others in that it has no moving parts. the dielectric qualities of fuel and air furnish the measurement of fuel quantity.



Chapter 279 Newsletter



Essentially the tank transmitter is a simple electric condenser.

The fuel pressure gauge measures the pressure of the fuel entering the carburetor, most commonly found in the low wing Pipers. This article is meant to give a basic overview and has not covered all aspects of fuel systems.

Tom Hassie, Technical Counselor

September Breakfast Fly-In

Winston Bolton, a loyal breakfast guest, and one of his balsa stick and tissue airplanes he makes at home from plans found in original 1930's magazines on file a local libraries.





Chapter 279 Newsletter



Jake Hatch, and two excellent finished wooden biplanes he put together and painted from our EAA279 biplane kit inventory.

