



# CHAPTER 613 August 2009

(Chapter 613 web site)  
[www.eaa-chapter613.org](http://www.eaa-chapter613.org)

## News and Views: Bruce Richardson

## The Dog Days of Summer

Well, it's officially August, so I guess that means summer is well under way. Before anyone laments the soggy weather to date, or complains about the heat, I would like to remind everyone that Fall is just around the corner, what with the Autumnal Equinox coming up in September... so enjoy things while you can!



Although the phrase "Dog Days" refers to the hottest, most sultry days of summer, my Merriam-Webster dictionary also includes "a period of stagnation or inactivity" in its definition. I don't know about anyone else, but it sure seems that way for me sometimes during summer, and not all of it attributable to the weather. But things will soon be picking up, with the resumption of monthly Chapter meetings, so we can all look forward to that - see below for more information on some upcoming Chapter events.

## *SHELBURNE AIRPORT DAY*

*By Marge Butterfield*

The groundwork is being laid once again for the Fly-In/Young Eagles Rally on Saturday, September 19<sup>th</sup> at the Shelburne Airport. (Rain date on Sunday, the 20<sup>th</sup>) We couldn't do this without the help of the volunteers who have helped in the planning part so far and for those who we hope will be there to help out on the 19th. So if there are any members out there who are free that day and haven't already committed their time, we definitely would appreciate your help!

## From the President: Tom Edwards

I imagine most of you have ventured to Oshkosh as it has been very quiet around here. Cliff Coy and I hosted the kids from Fairfield Library summer camp and showed them a great time. While Cliff talked aviation I flew 10 Young Eagles. All had a great time and a few got excited about aviation.

Bob Desmarais and I are in the early stages discussing a hangar dance this fall as a fundraiser. This would be opened to the community and should be fun for all. If anyone is willing to jump on board to help plan this give us a call.

We have a few important dates coming up. Marge is working on Shelburne Days, we'll have our usual fall potluck and on October 3rd and 4th we are helping out with the Boy Scout Emergency Preparedness Camporee. We plan on flying Young Eagles that weekend with the kids locating MIA campers through various methods of signaling. We will also need the use of a few hangars at FSO for dry meeting places.

George Coy continually improves and is getting around a little with a walker.

Hope everyone got in some flying between the raindrops!

The August newsletter continues our series on “*The Care and Feeding of Aviation Piston Engines*” with **Part VII, Fuel Injected Engines**. This month we will look at the nemesis of fuel injected engines - the “Hot Start”. Years ago the term “Hot Start” originated with gas turbine engines, both straight jets and turboprops. The term “Hot Start” when applied to a gas turbine engine means that the engine is over-tempering (becoming excessively hot) during the start sequence. However, with the advent of small fuel injected aviation piston engines, the term became adopted to describe a different condition.

**Hot Start**, when referring to a general aviation air cooled piston engine, refers to starting (or attempting to start) a fuel injected engine when it has been shut down for approximately ten to thirty minutes. *This problem is especially acute during the hot summer weather when the aircraft is parked outside in the sun.*

**Fuel Injection** is really a misnomer which the engine manufacturers use to describe these engines. They are not truly “Fuel Injected” the way a big radial engine like the Wright R3350 (or a diesel engine) is fuel injected. In a true “Fuel Injected” engine, fuel is only “injected” (directly into each engine cylinder) just prior to that cylinder’s power stroke and not continuously. A high pressure fuel pump is used to deliver this fuel “charge” under a pressure sufficient to provide proper atomization of the fuel for combustion. Instead, current horizontally opposed “Fuel Injection” engines use a Pressure Carburetor to measure the amount of fuel required by the engine. This information is then supplied to a “Fuel Metering Unit” by the pressure carburetor. The fuel metering unit apportions the fuel it is receiving (from a lower pressure engine-driven fuel injection pump) between the engine cylinders and a return line to the fuel tank. Fuel being sent to the engine cylinders is routed to a distribution “spider” (valve). The function of this distribution spider is to re-route fuel through each cylinder’s individual fuel line to that cylinder. The individual fuel lines then continuously spray fuel into each cylinder’s intake port, not into the cylinder itself. Hence, the proper name for these fuel injection systems is a “*Continuous-Flow Fuel Injection System*.”

**Modern Engine Pressure Cowlings** are usually designed with very little space inside the cowling and have no unnecessary openings. This is done to reduce airframe “cooling drag” which is a large part (up to a third) of an air cooled, piston engine aircraft’s parasite drag. Because of the tight “cowling” of modern piston engines, cooling is dependent on a continuous high pressure area being maintained inside the top of the cowling. This high pressure area results from the ram pressure rise created when high velocity air in the propeller slipstream is trapped inside the top of the cowling by the engine baffle system. This air is allowed to escape to the low pressure area in the bottom of the cowling which is created by the venturi effect of cowl flaps or a fixed cowl “cooling air exit.” The high pressure air escapes by flowing through the cylinder cooling fins before exiting in order to reach the lower cowling low pressure area. *Thus it is extremely important to insure that the engine baffle system is maintained in top condition.*

**The Fuel Distribution Spider** and its attached individual cylinder fuel lines are mounted on top of the engine case, which now causes a secondary problem. Once the engine is shut down at flight termination, airflow into the pressure cowling stops. The still hot engine cylinders cause a rapid rise of the air temperature inside the cowling as they dissipate their residual heat. For an airplane parked outside under the summer sun, it will take two to three hours for this trapped heat to appreciably dissipate. This hot air trapped inside the cowling quickly heats the fuel lines and fuel metering components located inside the cowling. Within ten to fifteen minutes, residual fuel located within the fuel lines mounted on top of the engine case inside the engine cowling begins to expand and vaporize. *Very quickly this residual heat will have vaporized most of the fuel in the fuel lines and fuel line components inside of the cowling.*

**Vaporizing Fuel** in these fuel lines creates a pressure which begins pushing the remaining liquid fuel back toward the fuel tank from which it came - provided the fuel selector valve was left on after engine shutdown. This would be the normal situation. In the event that the aircraft is parked on unlevel ground, the fuel selector valve should be left selected to a single tank position (left or right) rather than the “Both” position, when available. This is also true of floatplanes (or amphibious aircraft) left in the water. *This course of action will prevent fuel transferring from the high side tank to the low side tank (through the fuel selector valve) and possibility venting and/or siphoning overboard.*

In the abnormal situation where the fuel selector was turned “off” after engine shutdown, the expanding fuel vapors will force the liquid fuel and vapor through the fuel metering equipment and into the engine’s induction manifold where it will eventually escape into the atmosphere. *Thus it is normally preferable to leave the fuel selector on and contain the fuel and fuel vapors within the aircraft’s fuel tank system.*

**Two Fuel Pumps** are provided for all engines equipped with a continuous-flow fuel injection system. The first is an “engine-driven” fuel injector fuel pump. The second is the “auxiliary” or “booster” fuel pump. The engine-driven fuel injector pump can only supply fuel while the engine is running or being cranked by the starter. The auxiliary or booster fuel pump is an electric pump which can be operated any time the aircraft electrical system is powered (master switch on) which is irrespective of whether or not the engine is running.

**The Engine-Driven Fuel Injector Pump** serves a very different purpose than the engine fuel pump on a carburetor equipped engine. The only purpose for a fuel pump on a carburetor equipped engine is to move fuel from fuel tanks which will not “gravity feed” (i.e. low wing or fuselage tanks) to the engine. The engine-driven fuel injector pump on continuous-flow fuel injected engines serves a dual function. *It provides both fuel to the engine and some initial fuel metering through its internal fuel metering equipment.*

**All Engine-Driven Fuel Injector Pumps** must be able to provide more fuel than the engine and fuel metering equipment can use at full takeoff power. Continuous-flow fuel injection pumps are vane type pumps which operate at higher pressures and fuel delivery rates than a carburetor equipped engine fuel pump. Because of this, they are equipped with a fuel return line system which returns extra fuel back to the aircraft fuel tank system. (In some installations the fuel is returned to a small hopper tank located somewhere along the main fuel line instead of returning to the aircraft fuel tank system.) *Carburetor equipped engines use an automotive type diaphragm fuel pump which simply recalculates the extra fuel within its chambers.*

**Engine-driven fuel injector pumps** are all equipped with a bypass valve. This bypass valve allows fuel from the auxiliary fuel pump to bypass the vane portion of the engine-driven fuel injector pump (when it is inoperative), yet this fuel is still able to utilize the internal fuel metering section of the engine-driven fuel injector pump. When the engine-driven fuel injector pump is operating normally, it draws fuel from the aircraft fuel tank system, provides some initial fuel metering through the imbedded fuel metering section of the pump, and then delivers this partially metered fuel (under pressure) to the fuel metering unit.

**The Fuel Metering Unit** contains the fuel metering valve, which is mechanically linked to the throttle control. Some engines have the mixture control also contained within the fuel metering unit, while other engines have the mixture control built into the engine-driven fuel injector pump. *In both designs, fuel will pass through the mixture control valve prior to reaching the fuel control metering valve.*

**When the pilot moves the engine throttle**, the fuel metering control will move in a direct and related proportion. These fuel metering units are also equipped with a fuel return line for returning excess fuel which is not delivered to the cylinders for combustion. *The fuel metering unit “fuel-return line” connects to the “main fuel-return line” on the engine-driven fuel injector pump.*

**The Auxiliary Fuel Pump** serves several functions, which include priming the engine for starting, fuel vapor suppression, and providing a backup pump in case of the failure of the engine-driven fuel injector pump. When the auxiliary fuel pump is turned on, it draws fuel from the aircraft tank system and delivers it under pressure to the engine-driven fuel injector pump. If the engine is not running (or the engine-driven fuel injector pump has failed) fuel from the auxiliary fuel pump passes through the engine-driven fuel pump bypass valve into the fuel metering section of the engine-driven pump. *This partially metered fuel (supplied from either pump) will then flow to the fuel metering control unit.*

**When the Mixture Control** is out of the “Idle Cut-Off” position, fuel leaving the fuel metering control unit will continue through the fuel distribution spider (valve) and individual cylinder fuel lines and nozzles. *When the mixture control is placed into the “Idle Cut-Off” position, then fuel arriving at the fuel metering control unit will be re-routed into the fuel return line. This is the key to solving the “Hot Start” issue.*

**Normal Start Procedure** for a warm engine is as follows:

- Mixture - Full Rich
- Propeller – Full Increase (High RPM)
- Throttle – “Cracked” (Slightly Open)
- Mags – On
- Starter – Engage

When the engine begins cranking, the small amount of liquid fuel usually retained in the fuel injection lines and nozzles will then be injected into the cylinder intake valve ports. This fuel will allow combustion to occur, thus the starting of the engine.

**False Starts** occur when the engine starts normally, then abruptly quits. This occurs because the fuel lines inside the cowling are now filled with fuel vapor rather than liquid fuel. The engine driven fuel pump is not capable of removing this vaporized fuel in sufficient quantity to support continued combustion. Therefore the engine's inability to continue running after the initial start is due to fuel starvation. *This "false start" will be followed by much difficulty in re-starting the engine which will only confirm that a "hot start situation exists.*

**The Hot Start Procedure** involves the following two parts:

- **Fuel Purging**
- **Starting**

**The Fuel Purging Procedure** is as follows:

- Mixture – "Idle Cut-Off"
- Throttle – Full Open
- Aux. Fuel Pump – High for 20 Seconds

The auxiliary fuel pump takes liquid fuel from the aircraft fuel tank system and pumps it through the heat-soaked fuel lines under the cowling. Because the mixture control is in the idle cut-off position, this fuel is prevented from reaching the engine cylinders. It is instead re-routed through the fuel return lines where it returns to the fuel or header tank from which it came. This continuous circulation of liquid fuel through the fuel lines forward of the firewall will purge these fuel lines of all fuel vapors in addition to lowering the temperature of these fuel lines. In about twenty seconds these fuel lines will have cooled sufficiently to retain fuel in a liquid state when the auxiliary fuel pump is turned off.

**Starting Procedure** can commence after 20 seconds of fuel purging and is as follows:

- Aux. Fuel Pump – Off
- Mixture – Full Rich
- Propeller – Full Increase
- Throttle – Cracked
- Mags – On
- Starter – Engage

No priming is necessary because a small amount of fuel will have made it past the closed mixture control into the fuel injector nozzles during the fuel purging procedure. *This fuel is sufficient to provide for a normal warm start procedure without difficulty every time.*

**Three Things to Always Remember** for fuel vapor purging are as follows:

- **Mixture Control must be full lean** to prevent engine flooding and to force the circulating fuel to flow back through the fuel return line system.
- **Throttle Control must be full open** because some single engine fuel injected aircraft engines incorporate lockouts in their throttle linkage to prevent the auxiliary fuel pump from operating in the high mode when the throttle is retarded.
- **The Auxiliary Fuel Pump must run in high mode for approximately 20 seconds** to provide sufficient time to adequately cool the fuel lines and components inside the cowling.

**In Summary**, the following are the three reasons for "Hot Start" difficulties:

- **Heat Soaking** of fuel lines under the cowling after shutdown during hot weather causes the vaporization of fuel in these lines.
- **False Starts** occur because the engine driven fuel pump is incapable of purging these fuel line vapors, therefore leading to engine fuel starvation immediately after the initial engine start.
- **Fuel Purging** resolves this issue and allows the normal warm start procedure to succeed.

That concludes the “Hot Start” issue and wraps us up for this month. Next month we will take a look at the functions of some of our **Engine Instruments**. The thought for this month is **“A desk is a dangerous place from which to view the world” ~ John Le Carre’ ~ English Author.** So until next month, be sure to **Think Right to FliRite!**

**The Early Years ~ Your Scribe with a Northern Airways Beech D18S**



**Did You Know? By Don Taylor** **Airbus A380 at AirVenture in Oshkosh**

The Airbus A380 will perform aerial displays on Tuesday July 28th, when it arrives, and again on Friday, July 31st, when it departs. Sorry, but when you read this, it will be done and gone.



Photos courtesy Airbus SAS (left) and Chris Skott  
**Airbus A380 illustration (left) and Boeing 747-400**

	Airbus 380	Boeing 747-400
<b>Measurements</b>		
<b>Wingspan</b>	79.8 m (261 ft 10 in)	64.4 m (211 ft 5 in)
<b>Length</b>	73.0 m (239 ft 6 in)	70.7 m (231 ft 10 in)
<b>Height</b>	24.1 m (79 ft)	19.4 m (63 ft 8 in)
<b>Weight: Empty</b>	610,700 lbs (277,000 kg)	393,263 lbs (178,756 kg)
<b>Weight: Max Takeoff</b>	1,234,600 lbs (560,000 kg)	875,000 lbs (397,000 kg)
<b>Capacity/Layout</b>		
<b>Crew</b>	2	2
<b>Passengers (three-class arrangement)</b>	555	416
<b>Seating configuration</b>	Two decks, two aisles per deck	Two decks, two aisles main deck
<b>Miscellaneous</b>		

## Safety Tip By Don Taylor

Boating and playing in the water can be a lot of fun, but it can be very dangerous, so wear life jackets, and some sports on water require a helmet.

### Canoeing/Kayaking Safety



Canoes are a popular open water craft that are used on all kinds of water. Kayaks are usually decked except for an opening for the paddler(s). Both canoes and kayaks have less stability than other small craft. The key to safety for canoeing or kayaking is to have proper training in their use, safety and rescue. Important safety steps include:

- Wearing approved life jackets. Most small craft boating related fatalities could have been prevented if life jackets had been worn.
- Knowing weather conditions and taking appropriate precautions - storms, lightning, high winds and sudden temperature changes can cause disasters.
- Get information on waters where you will be canoeing or kayaking and take appropriate precautions - dam controlled water levels of lakes and rivers, tides, currents, recent rain, spring

thawing, low head dams and other hazards need to be known in advance.

- Avoid drinking alcohol when boating—approximately 1/3 of boating related drownings involved alcohol.

- Have emergency supplies or safety equipment—water proof first aid kit, signaling device, extra paddle, helmets (note: take first aid, CPR, and AED (Automated External Defibrillation) training.

- Knowing and abiding by the rules of the road—collisions with other boats or objects are often due to ignorance of the boating rules of the road.

- Wear appropriate clothing—choose clothing based on conditions and in colder conditions choose clothing that preserves body heat even when wet.

- Know the capacity of your craft—overloading your craft increases possibility of falling overboard, capsizing or swamping.

- Know and meet legal requirements for where you are canoeing or kayaking—check with state and local boating authorities.

- Stay with your craft if you unintentionally fall out of your canoe or kayak—they float.

- Submit float plans—this is especially important if traveling in a wilderness area.

- Have an emergency action plan—in case something does happen know what you are going to do and how to obtain emergency assistance.

And, of course, it helps to know or learn how to swim. If you can't, take lessons.



Getting in and out of a canoe: Keep the center of gravity low and move slowly. -14-

**Young Eagles: Donald Taylor**

The Young Eagle flights are the same as last month. Nine pilots flew 94 Young Eagles:

George Coy -	1	Donald Taylor -	18
Richard Swanson -	7	Robert Desmarais -	3
Thomas Edwards -	25	Charles Robitaille -	9
John Butterfield -	12	Don Nowakowski -	8
Steve Couzelis -	11		



September 19th - Shelburne Day, Shelburne Airport (VT8)  
9am - 4pm (Rain Date: 20 Sept)

I received two letters from the EAA Air Academy (see below). The first thanks the chapter for supporting the program, and the second was from John Marshall.



July 6, 2009

Donald Taylor  
11 Ferris St  
Swanton, VT 05488

Dear EAA Chapter 613,

On behalf of the EAA Air Academy we would like to say thank you for helping young people attend the EAA Air Academy 2009 camps. Your involvement in the Young Eagles program has been a blessing to many young people. The students have been able to attend the camps because of the generosity of your chapter.

Enclosed are thank you notes from participants your chapter has assisted financially. If you have any questions about the EAA Air Academy camps, please contact us at 920-426-6817.

Sincerely,  
Experimental Aircraft Association, Inc.

Bob Campbell  
Manager of Museum Operations & Resident Education

Scott Cameron  
EAA Air Academy Camp Director



Dear EAA Chapter 613,

**I am writing to thank you very much for the scholarship that was granted to me that made it possible for me to go to the EAA Air Academy Camp. It has been such an amazing experience for me and has expanded my knowledge and passion for aviation. I would also like to thank you very much Mr. Steve Hard for supplying the funding for my plane ticket.**

**Some of the experiences that I have enjoyed this week at camp are dogfighting with friends on the simulators, a beyond – the – barriers tour of the Air Venture museum, building wooden wing ribs and a composite airfoil in the workshop, a flight with me at the controls in a LSA, climbing on the challenge course, and a helicopter ride.**

Again, Thank you.

*John Marshall*

**SAFETY HEADS-UP!** Courtesy of Hobie Tomlinson

VT JUL 26 2009 8:08AM JEL Burlington Airport 802-663-7947

No. 8857 P. 2

**Mark Sciarrotta, Senior Chief Counsel**  
 Vermont Electric Power Company, Inc. [www.velco.com](http://www.velco.com)  
 388 Pinnacle Ridge Road Rutland, VT 05701  
 P. 802.770.6339 C. 802.282.3812 Fax (802) 770-6448

July 27, 2009

Burlington International Airport  
 Attention: Airport Administrator  
 1200 Airport Drive  
 South Burlington, VT 05403

Re: **Removal of Marker Balls at Waterbury Reservoir**  
 VELCO Lamoille County Project

Dear Sir or Madam:

As part of the Lamoille County Project ("Project"), the Vermont Electric Power Company, Inc. ("VELCO") is currently upgrading the electric power lines that cross the Waterbury Reservoir, in Washington County. This letter is a notification that during the week of July 20, 2009, VELCO removed marker balls from the power line that crosses the reservoir.

The single 34.5kV power line that spanned the reservoir had attached marker balls to warn watercraft of the line's presence. As part of the Project, VELCO is currently installing a new 115 kV transmission line that will replace the existing 34.5kV line, previously equipped with marker balls. The new 115kV line will run parallel to a new (relocated) 34.5 kV line. The new lines will be situated higher (at a maximum height of 720' above sea level) than the existing 34.5 kV line height, such that marker balls are no longer necessary to warn watercraft operators.

VELCO will be installing the new power lines without marker balls. According to the Vermont Agency of Transportation, the Waterbury Reservoir is not located within a major aviation intersection. VELCO has identified no Federal Aviation Administration, U.S. Coast Guard, or the Army Corps of Engineers requirements for marker balls at this location. For reasons related to aesthetics, the Vermont Public Service Board ordered VELCO to install both the 34.5 kV and 115 kV lines without marker balls. Since the removal of the marker balls represents a change that airports and aircraft operators may want to be aware of, VELCO is providing this notification to local airports as a courtesy. Please distribute and post this notification at your airport.

Should you have any questions regarding the removal of marker balls from the power lines that cross the Waterbury Reservoir, please do not hesitate to contact me at (802) 282 - 3812.

Very truly yours,

*S. Mark Sciarrotta /ba*

S. Mark Sciarrotta, Senior Counsel

SMS/lms

VELCO VERMONT'S TRANSMISSION RELIABILITY RESOURCE

MOVING POWER, MOVING FORWARD



## UPCOMING EVENTS

**Lake Champlain Float Plane FLY-IN**

AUGUST 8 &amp; 9, 2009



Lake Champlain, Vermont  
 Alburgh Dunes State Park  
 South Alburgh, Vermont 05440

## SUMMARY OF EVENTS:

Featuring a FAA Team Interactive Safety Work Shop: "Float Plane Flying, followed by a "grass roots aviation" Cook-Out on Saturday afternoon/night. On Sunday, a Fly-In Breakfast to nearby North Hero's City Bay, followed by an approved Aerobatic Airshow, then Water Bombing and Accuracy Landing Contests; Float Plane Rides available to the public all day Sunday. (For complete details, see <http://www.scootair.org/Flyin.htm>)

**International RV Reunion  
 and Builder's Forum**

September 12-13, 2009

Hosted by EAA Chapter 486  
 Oswego Co. Airport (FZY)  
 Fulton, NY

Mike Seager from Van's Aircraft is scheduled to attend with an RV-7, available for transition training!  
 Chip Lock is attending with his RV-12 and will be hopping rides!

- All day seminars, demonstrations and exhibits.
- Hands on workshops on welding, riveting, fabric covering.
- Kit Aircraft demonstrations.
- Vendor displays
- Flea/Fly Market

Camping Available  
 Registration Fee \$30.00  
 For more info go to [www.eaachapter486.com](http://www.eaachapter486.com) or call (315) 675-9876

## **\*\* Butterfields – Music on the Green \*\* --- Rescheduled**

John and Marge Butterfield and drummer, Steve Fox will be performing music at Maple Tree Place (on the green across from the Majestic Movie Theatre) at Taft Corners in Williston on Thursday, August 27<sup>th</sup> from 6:00 – 8:00. Come and enjoy the music! (If it is raining like the last time they were scheduled, the event will be cancelled)

### **Calendar of Events**

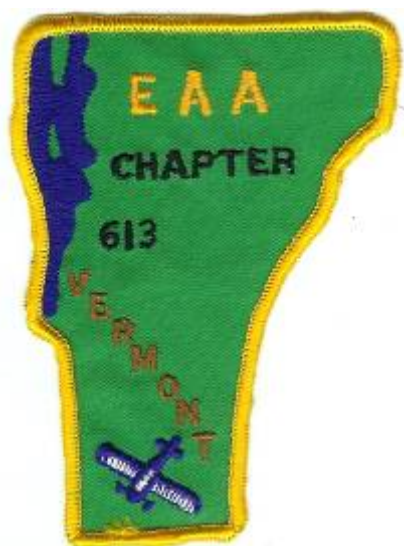
August 8-9 Lake Champlain Float Plane Fly-In, Alburgh Dunes State Park, So. Alburgh, VT  
 September 12-13 EAA Chapter 486 International RV Reunion, Oswego Co. Airport (FZY), Fulton, NY  
 September 19 Shelburne Airport Day @ Shelburne Airport (VT8), Shelburne, VT 9am - 4pm (Rain date: 20 September)  
 October 3-4 Boy Scout Emergency Preparedness Camporee @ Franklin County Airport (FSO), Highgate, VT  
 TBD October Chapter 613 Potluck

### **OFFICERS/COMMITTEE MEMBERS**

<b>President</b>	<b>Phone</b>	<b>Address</b>	<b>e-mail</b>
Tom Edwards	355-1656	250 Eagle Mountain Rd Milton VT 05468	k1kbl@msn.com
<b>Vice President</b>			
Bob Desmarais	872-8449	399 Old Stage Rd, Essex Junction VT 05452	rjdesmar@us.ibm.com
<b>Treasurer</b>			
Bryan Bourgeois	899-1333	23 Butler Rd, Underhill VT 05489	bbourg@lightshiptech.com
<b>Secretary</b>			
Vacant			
<b>Newsletter Editor</b>			
Bruce Richardson	229-2460	975 Crosstown Rd, Berlin VT 05602	bbrichardson@yahoo.com
<b>Scholarship Committee</b>			
Frank Gibney	879-7419	1147 Sunset View Rd. Colchester VT 05446	gibneyf@aol.com
<b>Young Eagles Coordinator</b>			
Don Taylor	868-3809	11 Ferris St., Swanton VT 05488	
<b>Technical Counselor</b>			
George Coy	868-2698	116 St. Albans Rd, Swanton VT 05488	george@gesoco.com
<b>Assistant Tech Counselor</b>			
John Butterfield	878-6337	721 North Williston Rd, Williston VT 05495	airbear9fj@verizon.net
<b>Chapter Web Site</b>			
Dick Bayer	796-4432	20B South Main St., Alburg VT 05440	webmaster@grnmtsolutions.com

EAA CHAPTER 613  
Bruce Richardson  
975 Crosstown Rd  
Berlin, VT 05602

**FIRST CLASS MAIL**



August 2009