



# CHAPTER 613

September 2004

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



Saranac Lake Airshow – August 22, 2004  
B24 (top) and B-17G (bottom)

## Upcoming Events

**Sept. 18:** Middlebury, Vermont. Pancake breakfast, Middlebury Airport (6B0). **9 a.m. to 11 a.m.** \$4 per person. Pancakes, eggs, sausage, orange juice and coffee. For more information call J&M Aviation (802) 388-2022.

**Sept. 18-19:** Sherbrooke, PQ. Sherbrooke Air Show.

**September 18-19:** Rhinebeck, NY. Cole Palen's Old Rhinebeck Aerodrome. Special Event (in addition to our regularly scheduled airshows: every Saturday "History of Flight"; every Sunday World War I) Artists' Weekend. For more details please see our website: [www.olderhinebeck.org](http://www.olderhinebeck.org).

**Sept. 25:** South Albany Airport (4B0), NY. 2nd annual fall "Flap-Jack Fly-In Breakfast". Antique, vintage, classic, warbird, experimental & all aircraft welcome. All you can eat flap-jacks, eggs, sausage, juice, coffee & tea \$5. Kids under 12 free. **8-12** (rain date Sun 9/26) Airport 518-767-9189 or Ted 518/281-5430.

**September 25 (Sat) 9:00 – 16:00**  
Young Eagles Rally – Shelburne Airport,  
Shelburne VT.

## Views and News By Bill Morelli

**Scheduled Events:** To locate additional scheduled events other than those listed above, check out the Atlantic Flyer on-line at [aflyer.com](http://aflyer.com) or in a hardcopy available at most airports.

**On the Cover:** Two of the photos taken by Joe Gardner at the Adirondack Regional Airport (SLK) Air show and Young Eagles Rally. Additional photos on page 9. Joe commented he couldn't believe the sweet sound of those Pratt and Whitney engines.

**Hobie Tomlinson** continues his series in the "Flight Advisor Corner" starting on page 5. This month it's **Special Attention Inspections**

**FSO Improvements** – For those of you that have not been to Franklin County Airport for a while, there have been some improvements made. The ramp has been extended to the south all the way to the beginning of runway 01. A taxiway was added (I believe it's taxiway "A") between this new ramp and runway 01. No longer a need to back taxi to runway 01.

**Weather Decoder** – On page 4 is a clip and save weather decoder that lists some of the descriptors used in weather reports and some alternate words to help remember the codes.





## YOUNG EAGLES

by  
Donald Taylor

We have four pilots reporting Young Eagle Flights for this newsletter.

Donald Taylor	-	22
Bill Yendrzkeski	-	2
John Elgert	-	6
Terry Griffin	-	10

We have flown 282 so far this year, 118 more to go for our goal of 400.

We have the following pilots reporting Young Eagle flights for 2004

John Butterfield	-	36
Bill Hanf	-	12
Mike Pecue	-	24
Donald Taylor	-	113
Bill Yendrzkeski	-	28
Steve Couzelis	-	8
Don Nowakowski	-	2
Bill Morelli	-	16
George Godin	-	6
John McNerney	-	10
Dick Jason	-	11
Terry Griffin	-	10
John Elgert	-	6

### Young Eagles Rally's

**September 25 (Sat)** 9:00 – 16:00  
Young Eagles Rally – Shelburne Airport  
(25VT), Shelburne,

### August 21-22(Sat-Sun Adirondack Regional Airport (SLK) Saranac Lake N.Y.

August 21-Sat was a bust, it rained all Sunday, but the 22<sup>nd</sup> was one beautiful day. We could not start out too early, because there was fog at Saranac Lake. We got there around 9:30 and the fog had moved out. It was nice and clear. It stayed like that all day. Nothing started until 10:00. We got all set up and by 11:00 we started to get Young Eagles. The airport was closed from 12:00- 2:00 for the air show. So we could not fly then. We had two young girls from Saranac Lake, to do the paper work and it was a good thing because after 2:00 we were busy. We were still flying Young Eagles after 6:00. Flew a total of 38.

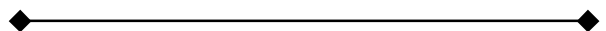
The pilots and Young Eagles flown were:

Terry Griffin	-	10
John Elgert	-	6
Donald Taylor	-	22

### Safety Tip

#### Avoid Temptation

Many pilots like the one who descended below minimums and crashed on the ice in a snowstorm on Lake Champlain. The aircraft was totaled and he was killed. If the approach plate says the MDA is 840 ft. that means you are not to descend below that until the airport or land is in sight. Yet, it is tempting, especially when you can see the ground directly below, to descend another so feet, then another so feet trying to get below the clouds. Too many pilots have flown their airplanes into the ground while doing exactly that. Poor judgment by the pilot in command, to be sure. There is so much more to pilot judgment than simply making safe decisions.



## Did You Know

### F-22 Raptor

The most advanced fighter aircraft in the world. The F-22 Raptor is now being tested at Edwards Air Force Base. The Raptor is a revolutionary leap in aircraft technology that unites advanced capability with reduced maintenance costs and support requirements. The F-22's combination of stealth, advanced avionics and maneuverability will give pilots a first look, first-shot, first kill capability against the aircraft of any potential enemy. The F-22 combines advanced supersonic flight with the ability to fly at slow speeds. During combat, pointing it's nose in any direction without loss of control. Integrating systems like radar and friend-or foe identification into one cohesive platform. The Raptor is designed to provide air superiority and



dominance to allow quick decisive victories with few U.S. and allied casualties. This impressive aircraft will replace the F-15 as America's front line air fighter.

## Weather Decoder

The following weather decoder is an excerpt from the Pilots Pocket Handbook by Art Parma and is copied with permission.

(Clip and Save)

QUICK WEATHER DECODER		
CODE	DEFINITION	REMEMBER
BC	Patches	Bits & Chunks
BL	Blowing	Blowing
BR	Mist ≥ 1/2 mile	Baby Rain
DR	Low Drifting	low Drifting
DU	Dust	Dust
DS	Dust Storm	Dust Storm
DZ	Drizzle	Drizzle
FC	Funnel Cloud	Funnel Cloud
FG	Fog ≤ 1/2 mile	Fog
FU	Smoke	Fumes
FZ	Freezing	Freezing
GR	Hail	Granite Rain
GS	Small Hail	Granite Small
HZ	Haze	Haze
IC	Ice Crystals	Ice Crystals
MI	Shallow	Minimal
PE	Pellets	Pellets
PO	Dust/sand Whirls	sand Pockets
PR	Partial	Partial
PV	Spray	spray
RA	Rain	Rain
SA	Sand	Sand
SG	Snow Grains	Snow Grains
SH	Showers	Showers
SN	Snow	Snow
SQ	Squall	Squall
SS	Sand Storm	Sand Storm
TS	Thunderstorm	Thunderstorm
UP	Unknown	Unknown Precipitation
VA	Volcanic Ash	Volcanic Ash
SKC	Clear	0
CLR	Clear	0
FEW	Few Clouds	1/8 - 2/8
SCT	Scattered	3/8 - 4/8
BKN	Broken	5/8 - 7/8
OVC	Overcast	8/8
VV	Vertical Visibility	8/8
CB	Cumulonimbus	Cumulonimbus
TCU	Towering Cumulus	Towering Cumulus



## Flight Advisor Corner



### Special Attention Inspections

This month we want to finish the series on “Aging Aircraft” with a discussion of **Special Attention Inspections**. We concluded last month’s article on [Aircraft Records Research](#) with a series of questions about the aircraft’s past use which will have affected it’s aging process. These were:

- Has the aircraft been hangared?
- Where has the aircraft been geographically?
- Has the aircraft been inactive for long periods?
- Has the aircraft had a special usage role?

**Aircraft that have spent much time outside** have the likelihood of increased corrosion. During the restoration of Shirley Chevalier’s 1959 Champion, N8599E, the entire bottom half of the fuselage needed to be replaced due to corrosion. Also seals, hoses, electrical wiring, windshields, interiors, and exposed moving parts will show accelerated aging.

**Aircraft that have been based in coastal areas**, especially the Gulf coast, for even a few years have major corrosion concerns, especially if they have been outside. During my flight school days, I remember canceling the purchase of a relatively new Cessna 152 from a Gulf coast operator when the prepurchase inspection revealed severe corrosion. Corrosion degradation is not limited to structure alone, but can cause problems with electrical systems as well. Deterioration of electrical components, hoses, seals and lubrication is faster when subjected to the temperature extremes of very hot or cold climates.

**Aircraft inactivity** has a more severe aging impact than regular use. The issues of material deterioration, lubrication breakdown and part wear due to lack of movement accelerates the aging process. Condensation moisture created by the daily thermal cycle of an inactive aircraft engine will accumulate in the oil and become acidic, creating

major corrosion and drastically aging the engine. Regular operation vaporizes this moisture, which is then expelled through the crankcase breather. Inactive aircraft also tend to suffer from poor maintenance.

Special usage roles dramatically accelerate the aging process. **Aircraft operated for significant amounts of time in a frequent or high gust load environment**, such as pipeline patrol or mountain flying, will have accelerated metal fatigue damage to the wings, empennage and associated structure. The video clip of the C130 firebomber wing separation accident vividly demonstrated this fact.

**Aircraft operated in aerobatic or high-g maneuvers** will also have accelerated fatigue, especially when modified with higher-powered engines. Again, a T34 wing separation fatality with a very experienced “Air Combat” operator drives home the point.

**Aircraft that have been consistently operated with heavy loads**, i.e. freighters, will incur additional fatigue damage. Consistently operating at (or unfortunately, sometimes over) maximum gross weight, plus multiple loading/unloading cycles takes its toll on the aging process.

**Aircraft with high “cycles”**, i.e. multiple short flight segments, will show accelerated wear. This is especially true when in a hard use role such as tow / jump planes or primary trainers. The severe thermal cycles of tow and jump planes cause accelerated engine wear. This is another group that can tend to suffer from inadequate maintenance.

Unfortunately, **metal fatigue damage is not “healing”, but cumulative**. Just because the special use role happened when the airplane was much newer does not mean that the unseen and undetected, accumulated fatigue damage is not still there. This will manifest itself in a propensity for metal cracking and expensive repairs in the aircraft’s later life. (Although wood and composite structures do not sustain fatigue damage the way metal does, repeated loads still have a long-term damaging effect.) Wood structures are susceptible to moisture, dry rot and the breakdown of older style glues. Parts with any significant corrosion or metal fatigue damage are not repaired, but must be replaced. This usually involves major disassembly of airframe components, such as wing/fuselage “demating” and extensive sheet metal replacement.

**Engines beyond their recommended overhaul times**, either in operating hours or especially in calendar time, can be expected to cost substantially more to repair/maintain/overhaul. Engines with a Mogas (automotive) operating history, especially when new or after cylinder replacement, can expect lower cylinder life and higher maintenance costs.

As an airplane ages, inspection methods and techniques must change from what was previously required. **Special Attention Inspections** are required because of high aircraft time, severe operation, inactivity, outside storage, modifications or poor maintenance. Some aircraft, especially helicopters, have “life limited” components, which require replacement after a set “time in service” period.

While the records research should give us a good idea of the type of problems to expect, the aircraft “Type clubs” are usually a gold mine of information regarding the best **Special Attention Inspection and maintenance techniques**. They will also have data on available field approvals for modifications and alterations. This is especially helpful when the aircraft needs to be modified to gain access for a special inspection. As more maintenance facilities tend to specialize in certain types of vintage aircraft, do not overlook the advantages of using a shop that is very familiar with your aircraft type. Again, Type clubs will usually have knowledge of the “specialty” shops. A Type club listing can be obtained from the EAA website address of: <http://vintageaircraft.org/type>.

The last piece of the puzzle is sitting down with your maintenance people and developing a **Special Attention Inspection baseline checklist**. This should include, but is not limited to, applicable items such as:

**General:** Reweigh the aircraft for accurate weight and balance data. Pay special attention for corrosion damage to magnesium parts such as control surfaces or castings.

**Avionics:** Remove antennas to check for corrosion of the mounting surface and electrical characteristics. Check coax cable and connectors. Make a resistance check of static wicks and bonding straps. Bench check the ELT for power output and frequency tolerances.

**Controls.** Check control surfaces for balance and rigging. Check inaccessible control surface areas and attach points for cracking and corrosion. Check all cable runs for proper tension, condition, chaffing, pulley condition and terminal end corrosion. Check control surface balance weights for corrosion and security of attachment.

**Electrical.** Check wires bundles for deterioration and chafing. Check circuit breakers and bus bars for proper wiring and capacity. Verify aircraft battery capacity and condition. Check battery box and adjacent areas for corrosion

**Empennage:** Check condition of stabilizer attachment structures and inaccessible areas for corrosion or cracking.

**Engine:** Have all engine gauges checked for accuracy. Check engine mounts for fatigue, cracking and the condition of the vibration isolators. Check the internal condition of the exhaust systems, as well as it's external clamps and hardware. Check engine baffling for condition and chafing. If so equipped, check for proper operation of the turbo-charger wastegate and for the accuracy of turbo-charger indicators.

**Fuel system:** Check the fuel tank installation for corrosion, leakage, plumbing, condition of rubber hoses and attachment. Check all fuel quantity gauges for accuracy.

**Fuselage:** Check seat tracks for wear, cracking, and positive seat “locking”. Check fuselage attach points of the wing, stabilizer and landing gear for corrosion or cracking. Completely remove all interior upholstery to check inaccessible areas for cracking or corrosion.

**Instruments:** Check condition of all plumbing (rubber hoses) and panel shock mounts. Check calibration of all instruments and stall warning system. Have biannual pitot/static and mode C transponder checks updated.

**Landing Gear:** Do Non-destructive testing (NDT) on attach bolts and wheel axles. Check wheel well area for cracking or corrosion.

**Modifications:** Review records for proper approval and weight and balance revision. Verify additional continued airworthiness inspection requirements are present and complied with.

**Propeller:** Check for authorized engine propeller combination, as well as propeller condition.

**Repairs:** Review records for proper approval of all repairs

**Systems:** Pressure test exhaust system for leaks in heater muff area. Certify or replace seat belts, cargo restraints and fire extinguishers. Check hydraulic system plumbing for leaks, chafing and gauge accuracy. Check oxygen systems for leaks, proper regulator operation, calibration of the dispensing system and hydrostatic check of the bottle. If applicable, check the cabin pressure control for accuracy. Check the pneumatic system for gage accuracy, condition of rubber hoses and calibration of de-ice system pressure and indicators. Check vacuum system for condition of rubber hoses, regulator accuracy and operation, as well as gauge accuracy.

**Wing:** Replace wing and strut attach bolts or inspect with NDT. Check front and rear strut for cracking or corrosion, especially at the attach points. Check all strut attach fittings. Check metal spars for cracking or corrosion. Check wooden spars for dry rot, cracking or delamination. Check rib nails for security and ribs for corrosion or cracking. Inspect compression struts, drag wires and attach points for cracking or corrosion. If the wing has not been recovered in many years, consider this as a means of allowing a detailed inspection of the wing structure. On Shirley Chevalier's 1959 Champion 7EC, the "razorback" fabric was still airworthy after 30 years: however, opening up the wings uncovered the following discrepancies. The beginning of dry rot at the strut attachment fittings, a 6 inch longitudinal crack in the right front spar outboard of the strut attach fitting, two broken ribs and wood deterioration in the fuel tank bays. Lastly, insure that moisture drain holes are clear and inspection covers fit securely.

Well, that concludes the "Aging Aircraft" series, next month we will consider "Aging Pilots" (I wish I didn't have quite so much experience on that one.) The thought for this month is, "**What you don't know can hurt you!**" So until next month, remember to **Think Right to Fli-Rite!**

## Farewell to Neal

By Marge Butterfield

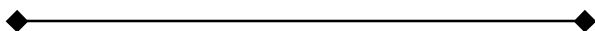
Neal Slocum, a beloved member of EAA Chapter 613, passed away on August 5, 2004. Neal had a true love of aviation which began when he worked at the town airport while earning his B.S. in industrial arts from Keene Teachers College. Likened to the "hobos" of his day who spent hours riding the rails, Neal was given the nickname "Skybo" due to hours spent at the airport and his passion for flying. Neal served in the U.S. Air Force from 1952 to 1956 as an avionics instructor and instrument technician.

Neal devoted much of his time over the years to our Chapter serving as Newsletter Editor and Vice President. Any job he performed was done well, as Neal paid great attention to details. While Neal was Vice President, he was also on the Scholarship Committee. I can still remember discussing that we needed some sort of stand to display the scholarship applications at the airports. At our next meeting, Neal came in with a prototype to see what we thought. Needless to say we were all impressed with the construction and detail Neal had put into the project.

Neal loved vintage aircraft and collected pictures of them, many of which he took himself as he was an avid photographer.

Neal was always willing to help out and worked at many of the Young Eagle Rallies. His penmanship was very neat and precise, so Neal was the one we would always ask to fill out the Young Eagle certificates.

Neal was a joy to be around and will be greatly missed. Farewell Neal, till we meet again.



# In memory of Neal



# Saranac Lake Photos

provided by Joe Gardner



Don Taylor warming up the Skylane at FSO



Don Taylor preparing for landing at SLK



Final approach runway 23 at SLK



Air National Guard C-130



George Coy tending to his YAK



Don Taylor does Young eagles paperwork as Terry Griffin waits for more kids to fly

## EAA CHAPTER 613

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FLY SAFE

September 2004

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