



## CHAPTER 613

July/August 2006

(Chapter 613 web site)

[www.eaa-chapter613.org](http://www.eaa-chapter613.org)

### News and Views: Tom Edwards

Life hasn't been much better this summer with all the classes and non-flying. As some of you may have noticed this issue is for both July and August as I'm falling behind and I still need to write a fund raising brochure for the hangar. I'll pass it on to anyone interested or I'll work on it during my month off.

I was able to shoot a few T&Gs for proficiency and at least bumped in to Don Taylor for a few minutes. My wife Dawn and I were able to take a day off on our boat and anchored in the North Hero's City Harbor for a little R&R. (She is taking classes too!) Our swim was interrupted by a J-3 on floats picking up a passenger from the docks and a pretty looking champ flying over watching the whole thing. Do I curse you Doug Smith? Next time pick me up!

The cut off date for future newsletters needs to be the 3<sup>rd</sup> of the month. Anything I receive after that might be put off for a month. Additionally, I'm thinking of downgrading my C172M to a Champ, or the like, so if anyone is interested, give me a call!

### Flight Advisor Corner: Hobie Tomlinson

July 2006

Flying with Floats – Part II

Preflights & Briefings)

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Flying with Floats – Part II (Preflight & Briefings)

Last month we started a new series on “**Flying with Floats**,” covering seaplane characteristics. This month we will continue with the **preflight** and **briefings** for seaplanes.

**Preflight** of a seaplane involves all of the familiar items we are used to performing during a landplane preflight, but it includes significant issues not present with landplanes.

**Weather evaluation** for seaplanes must include **wind** and **water conditions**. The difficulty of operating a seaplane on water increases exponentially with increases in wind, wave, or current conditions. Ideal wind conditions for seaplane training (or pilots with a low seaplane experience level) are between 1 and 6 knots. Calm winds produce “glassy water,” which causes several hazardous conditions that we will expound upon later in the series. Higher wind levels rapidly increase the water handling difficulties beyond the skill level of “casual” seaplane pilots and should be left to high time experts. The upper wind level most of us should be attempting is 10 knots and even then “sheltered water” should be sought during takeoff and landing. The “flag,” which indicates this upper level has been reached, is the appearance of scattered whitecaps on the waves. The extreme limit should be 16 knots (numerous whitecaps) with anything above that

considered only in emergency situations. If caught in high winds with no sheltered water available, landing on the grass at a land airport may be a far safer alternative to a very hazardous water operation!

**Preflight of a seaplane “out of the water”** presents different challenges than the preflight of one “in the water.” The principle challenge when “out of the water” is the height of the seaplane. A stepladder will be needed to inspect the tail surfaces and outer wing panels. If the seaplane is on amphibious floats, the height issue is even worse. A typical Cessna 185 or 206 on amphibious floats has the top of the floats just below chest height, while the bottom of the cabin door is not reachable from the ground. When a “straight floated” seaplane is out of the water, do not walk on the floats aft of the step, as this may cause the seaplane to tip back on the aft portion of the floats and damage them.

The advantage of an “out of the water” preflight is that the bottoms of the floats are easy to inspect, the seaplane is not being “rocked” by the waves, and access to all parts of the airframe is available.

**Preflight of a seaplane “in the water”** is the usual circumstance and the one we will discuss. The challenges here are that the seaplane may need to be repositioned during the preflight to allow access to all parts of the airframe. The bottoms of the floats are not able to be inspected and waves may be causing motion of the seaplane during preflight.

**When approaching the seaplane**, make a mental note of how it sits in the water, as this can provide vital clues to its gross weight, center of gravity, and the presence of **water in the floats**. If the seaplane is riding too low in the water, the wings are not level, or the fuselage is not level, suspect a flooded float compartment or a very improperly loaded aircraft. Water weighs slightly more than 8 pounds per gallon, so even small amounts of water in the floats can seriously affect empty weight and center of gravity!

**Starting with the cockpit**, verify that the throttle is closed, the mixture control in the “idle cut-off” position, the master switch “Off,” and the magneto switches “Off.” Verify the position of the fuel selector valve; as seaplanes are typically secured with the fuel selector valve either in the “off” position or on a single tank. This is done to prevent fuel migrating between tanks when the seaplane is not in use, possibly capsizing the seaplane. If the seaplane is one you will have to “prop” to start, it is suggested you do so with the fuel selector off. This will limit the distance you will have to swim, should you slip off the float in the process. Next, lower the water rudder, checking for any stiffness or binding in the cables. Check for the presence and condition of necessary marine safety equipment such as inflatable life vests, mooring lines, anchors, and paddles. Last, obtain the bilge pump and fuel sample cup.

**Walk forward on the float** and check the forward fuselage, wing, and propeller. Water spray abrasion (similar to gravel abrasion) to the propeller must be inspected and corrected by a mechanic prior to flight, except for minute amounts. Visually check oil and fuel levels and sample the fuel for proper grade and contaminants, the most likely of which will be water. Fuel samples should be taken in a container which allows the fuel to be returned to the tank after passing inspection, thus avoiding serious EPA issues. All hinges should be kept lubricated to keep water out and help prevent corrosion. Any paint blistering is a red flag pointing to underlying metal corrosion. Pay special attention to float attachment fittings for security and damage. Wrinkling of the fuselage skin in the area of fittings is sign of overstress and internal damage.

**Inspect the floats** carefully for signs of stress (such as distortion or buckling of the skin, dents, and loose rivets) and corrosion. Chines should have smooth curves with no bends or kinks along the flange. Check the bracing wires for uniform tension and the spreader bars for loose fittings, broken welds, or any sign of movement. As floats have no shock absorbers, water forces can create very high loads and lead to cumulative damage. On fiberglass floats, check carefully for surface cracks, abrasion, or signs of delamination.

**The Bilge Pump** is now used to remove any accumulated water from each of the watertight compartments. High dynamic water pressure during takeoff and landings cause tiny gaps to open between the float components allowing small amounts of water to enter. Also, all floats have some natural hull leakage and acquire water while sitting at rest in the water. Last, some water will enter through the bilge pump openings during normal operations. Pumping more than a quart or so of water from any float compartment may indicate damage to the float. This causes excess leakage and should be investigated by a qualified aircraft mechanic experienced with floats. Failing to pump any water from a compartment may indicate that the bilge tube is damaged and should be investigated to insure the compartment is not hiding a

significant amount of water which the bilge pump cannot “suction out.” Be sure to securely replace all the bilge pump opening plugs.

**Check the sterns of the floats** for damage to the aft bulkhead caused by contact with the water rudder or hinge hardware. This area is susceptible to damage if the water rudders are forced beyond their normal range of travel by contact with a dock or other obstruction. Check the water rudders for damage, inspect the water rudder retraction assembly, water rudder cables (especially where they go over pulleys), and steering mechanism. Carefully remove all water weeds and debris lodged in the water rudder assembly. This is very important in light of the attempts to stop the spread of milfoil to uncontaminated waters.

**Untie the seaplane,** push it away from the dock, and rotate it 90 degrees, being careful not to allow the water rudders to contact the dock. Inspect the empennage area (including security of the ventral fin) while it is over the dock, and then continue rotating the seaplane until the opposite float is against the dock. Retie the seaplane to the dock and repeat the previous items on the opposite float. Last, reposition the seaplane so the door is facing the dock and it is in position to be launched.

**Very early or very late in the season,** ice becomes a concern. Because water expands when it freezes, even a small amount of water freezing inside a float compartment can open seams and cause severe leakage problems. Large amounts could burst a seam. Also, airframe icing due to freezing spray during water operations becomes an issue. Floats stored outside in cold weather should either be turned upside down for drainage or covered to protect them from water exposure. When first refloating the seaplane in the spring, floats seams should be carefully inspected and then the seaplane carefully monitored until the leakage rate is confirmed.

**Passenger briefings** are doubly important in seaplanes and should be performed while the seaplane is still secured to the dock. In addition to all the items required to be covered in a landplane briefing, a seaplane briefing should contain the following items:

- Passengers should not attempt to help in launching or docking a seaplane unless requested to do so by the pilot. Control surfaces can amputate fingers and propellers kill!
- How to unfasten the seat belt & shoulder harness without looking at the mechanism
- How to stow the loose end of the seatbelt so it does not hinder unfastening the seatbelt
- How to recognize seatbelt rollover by feel & right the buckle so it may be released
- The location and operation of each normal and emergency exit by demonstration
- How to move seats forward and aft to enhance egress
- How to kick out windows for egress when needed because of fuselage distortion
- The type and location of personal flotation devices (PFDs)
- A demonstration of how to don and simulated inflation (it is recommended that PFDs be worn during water operations)
- The importance of not inflating the PFD until after the aircraft has been exited
- That exits may not open until the water pressure is equalized by the cabin flooding
- Establish situational awareness for each passenger by having them reach from their right knee toward the nearest exit handle while seated and with their eyes closed. Emphasize that it is vitally important to grasp a known part of the airframe before releasing their seat belt in a capsized seaplane. While they are still strapped in, everything will still be in its proper place relative to them, even though the aircraft is inverted. Then release the belt and move “hand over hand” to the exit, never letting go of the airframe. To do otherwise in a capsized seaplane, will result in total loss of orientation and may prevent successful egress. Exit handle movements should be briefed relative to the seated passenger, and not as up or down – so they are the same even if inverted. Drowning is by far the major cause of death in seaplane accidents with survivable impact forces.
- **Capsizing** (because of accidental water contact with a wingtip, a float while drifting or in an improper touchdown attitude, or a gear down water landing) **is one of the most common seaplane accidents.** This will involve the shock and noise of sudden deceleration, then being silently inverted in cold water!
- **Don’t panic, think then act!**
- You may be incapacitated in an accident and unable to render assistance.
- The danger of Hypothermia in cold water including the “Heat Escape Lessening Position” of flotation. (Arms held tightly to sides, forearms crossed over the chest, legs drawn up and ankles crossed). This may double time of



consciousness in cold water. (30 minutes in 40 degree water, 1 hour for 50 degree water and 2 hours in 60 degree water.)

- The location and use of onboard survival gear.

**“Dunker Training”** is highly recommended and very educational for people who have routine exposure to seaplanes. The President of the Canadian Seaplane Pilots Association and his family recently drowned in an otherwise survivable seaplane capsizing accident caused by attempted operation in very rough water.

This brings us to our stopping point for this month. Next month we will pick up with **Launching and Taxiing**.

The thought for this month is **Wisdom excelleth folly, as far a light excelleth darkness!** So until next month, remember to **Think right to FliRite!**

## Awaiting the Season!



## Young Eagles: Donald Taylor

Mike Pecue had a very good Young Eagles Fly-in at Montpelier. There were only 3 pilots but they flew a total of 91 kids! See the article and pictures from Marge and John Butterfield.

Mike Pecue	31
Bill Yendrzkeski	30
Ron York	30

Young Eagles Flown so far this year

Bill Yendrezski	39
Mike Pecue	31
Ron York	30
Donald Taylor	16
Bob Sterling	8
George Coy	11
Don Nowakowski	1
Steve Couzelis	5

The total for this year is 141, just 159 more for this year's goal of 300!

International Young Eagles Day was rained out at Franklin County (FSO) last month. We will reschedule it later this year.

The next Young Eagles Rally is at Hartness State (VSF) in Springfield, VT August 2 with a rain date on the 3<sup>rd</sup> or 4<sup>th</sup>. We should have about 30 kids. Please call me if you plan on going. 868-3809



## YOUNG EAGLE RALLY – MONTPELIER

By Marge Butterfield

The third annual Young Eagle Rally on Thursday, June 8<sup>th</sup> at the Edward F. Knapp Airport in Montpelier was a huge success. Mike Pecue arranged to have the 8<sup>th</sup> grade class at the Barre Town Middle and Elementary School participate in the Young Eagles Program. Their Young Eagle flight was at the end of a six week class on the physics and history of flight. Mike held two lessons during the week prior to June 8<sup>th</sup> to familiarize the students with the Young Eagles program, go over flight procedures and to answer any questions the students had.

We had three pilots who were able to give the Young Eagle flights. Many thanks to Mike Pecue, Bill Yendrzkeski and Ron York. Pat Forbes and Vivian Layton were there to help Marge Butterfield with the paperwork, which Marge greatly appreciated. A total of 91 Young Eagle rides were given in a span of about 5 hours. I think our pilots broke a record for the number of rides they each gave. Mike gave 31 and Ron and Bill each gave 30. They were real troopers and never seemed to get tired, even after 10 flights each. The kids had a great time and it was such a joy to see their expressions and hear what they had to say about their flight. A rewarding day it was for all.



**Calendar of Events**

August 2, 2006      Young Eagles, Springfield, VT    Rain date August 3  
August 12, 2006    EAA 740, Young Eagles, Lebanon, NH Call Marge @ 878-6337

**RUTLAND EAA CHAPTER 968 EVENTS**

Date TBD: Hike to the Camel's Hump B-24 crash site with aviation historian and crash-site sleuth Brian Lindner. Fascinating and strenuous(!) trip and I've heard of some interest in doing it again. If enough people would like to go I thought that late September or into early October might be a good time and I would ask Brian if he would like to take us. Please let me know of your enthusiasm.

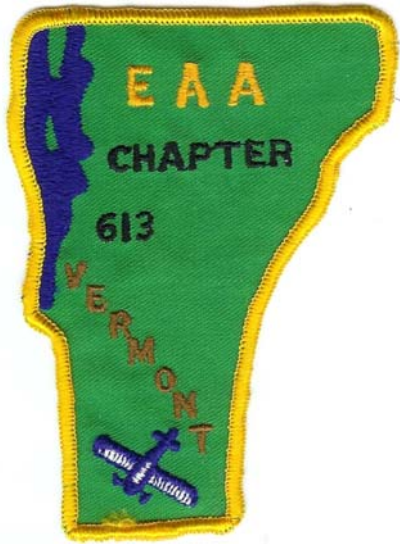
**Favorite Links**

[www.vermontairports.com](http://www.vermontairports.com)    [www.greenmountainflyers.org](http://www.greenmountainflyers.org)  
[www.aflyer.com](http://www.aflyer.com)      [www.eaa.org](http://www.eaa.org)



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## FIRST CLASS MAIL



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