



CHAPTER 613

April 2006

(Chapter 613 web site)

www.eaa-chapter613.org

News and Views: Tom Edwards

Please note that the pancake breakfast has been moved to April 23 at FSO 9-11

It was a sad time for the family and friends of our VP Moe Boisvert who died of a heart attack last week. A shock to most of us as Moe had been so active up to his final journey to go west. We will all miss you Moe!

03/30/2006 MAURICE N. "MOE" BOISVERT SOUTH BURLINGTON — Maurice N. "Moe" Boisvert, 61, of South Burlington died suddenly of a heart attack while walking with a friend at Camp Johnson on March 28, 2006. He was born in Burlington on March 6, 1945, son of Jean M. and Armande M. (Beaudin) Boisvert. Moe grew up on Shelburne Farms. He graduated from Rice High School in 1963, attended Johnson State College and then studied in Endicott, N.Y. to become a tool and die maker. He worked at I.B.M., retiring after 30 years. He was an accomplished machinist who could make anything out of metal. Maurice joined the Vermont National Guard on Aug. 27, 1965, and soldiered continually until March 31, 2005, when, at age 60, he retired after 40 years of distinguished service. He graduated from the U.S. Army Initial Entry Rotary Wing Course at Fort Rucker, Ala. as a Warrant Officer Aviator in 1974. During his thirty Year Army Aviation career with the Guard, he amassed 2200 accident free military flight hours, was designated a Master Army Aviator, and served both as a helicopter Instructor Pilot, and Aviation Safety Officer for his unit. In 2000, he was selected from among many of his peers to become the first Warrant Officer to ever be designated as State Aviation Safety Officer in Vermont, and was promoted to the rank of CW5. Until his recent retirement, he led the Aviation Safety Program from that position of responsibility greatly contributing to prevention of all accidents and working to preserve an accident-free safety record. After retirement, Moe joined the Vermont State Guard and voluntarily provided many many hours of service to the broader National Guard Community. Moe loved flying. He held a private pilot's license and owned and operated numerous airplanes over the years. He was also a motorcycle enthusiast. He was a life member of the National Rifle Association. Moe was a real outdoorsman, who loved kayaking and sailing on Lake Champlain. He always watched and looked after the wild animals and birds on his property. Moe was also a physical fitness buff. He also spent much time and energy

supporting the cause of the Republican Party. He is survived by three brothers, Charles and his wife, Gladys of Essex Junction, Robert and his wife, Patsy of Poughkeepsie, N.Y., and Paul Boisvert and his significant other, Ellen McShane of Shelburne; two sisters, Jane Boisvert and her husband, Dana Twitchell of South Burlington, and Colette Boisvert of Port Orange, Fla.; his nieces and nephews, Celine Griggs and her husband, Sean, Charles D. Boisvert and his wife, Angela, John A. Boisvert and his wife, Christina, Sean Boisvert, and Marie Boisvert and her fiancé, Thomas Jessup; many great-nieces and great-nephews; five aunts, Rose Hurteau, Renee Caggiano, Andree Hayes, Aline Elliott and her husband, William, and Suzanne Moorby and her husband, George; numerous cousins; and many many good friends. A Mass of Christian Burial will be celebrated at 10 a.m. Friday in St. Catherine Church, Shelburne, with interment to follow in New Mount Calvary Cemetery, Plattsburgh Ave., Burlington. Visiting hours will be from 2 to 4 and 7 to 9 p.m. today in the Boucher and Pritchard Funeral Home, 85 N. Winooski Ave., Burlington. In lieu of flowers, contributions in Moe's memory may be made to the Vermont Military Family Assistance Fund, Inc., P.O. Box 26, Essex Junction, Vt. 05453. Arrangements are by Boucher and Pritchard Funeral Directors.

Fellow EAAers, From Tony Speranza

By now everyone has heard that our friend and Chapter 613 Vice President, Maurice Boisvert has "gone west". I've know Moe for many years, more closely for the last few. Moe was generous person with deep convictions who was always willing to lend a helping hand to a friend. He served his country for over 40 years in the Vermont National Guard where he distinguished himself as an outstanding helicopter instructor pilot. Even after his guard retirement, he continued to volunteer, make donations and help families of servicemen and women overseas. Moe had been very active recently with the EAA helping the Hanger project move forward. From his old IBM days, Moe was an expert tool & die maker. He frequently helped me with "metal tasks", most recently bucking rivets on the inside of my RV6 fuselage. Moe & I flew often in his overpowered Champ. We all are going to miss him and his unique form of political humor!

MARCH MINUTES BY TOM EDWARDS

The March meeting was called to order by President Tony Speranza at 10:20 following the pancake breakfast at a new location for the month at Atlantic Aviation in Burlington. First order of business was to thank the cooks, George Coy and Don Taylor for an outstanding job. They cooked under unusual circumstances with electric skillets and shlepping water to perform their culinary tasks. They rose to the occasion and fed almost 30 a recent record!

Additional thanks were to Tom Edwards for the publication of the newsletter and to Atlantic Aviation to the use of their wonderful hangar.

The minutes and Treasurers reports were accepted as published in the March newsletter.

Tom Edwards reported on the Treasurer's Report due to Steve's absence. As of March 19, 2006, The General Fund was \$9603.79, the Roberti Scholarship Fund \$1085.28 and the Mary J. McGrath Fund had a market value of \$39723.61 as of January 1, 2006.

It was noted that the Mary J. McGrath memorial fund has been invested wisely and has grown from an initial investment of \$25, 000 and has risen to over \$39,000!

Moe Boisvert reported that the water tests were taken for the hangar site and are all completed except the mineral content. When these are all finished, Tyler Hart will start the engineering work 6-8 weeks later, Probably sometime in the month of May. Lucier sawmill will help us with building our hangar. Don Taylor is working on a bill of materials for our project. There was a discussion about the spacing of trusses and strength of them. We decided to let Don talk to the supplier of the trusses to help us determine the best design. We discussed the merger of the hangar and shed roof for spacing and sizing to keep an 8 foot ceiling in the classroom and kitchen area. We discussed the need for a 4" slab reinforced with fiberglass and re-bar with poured footings. We estimated \$10,000 for the floor needing 48 yards of concrete. John Centrozne offered help with the sitework. Don Taylor said we should offer a plaque in the education center to commemorate the donations for the hangar. The hangar committee agreed to meet after the pancake breakfast for further work.

There was some discussion about the growth of hangars projected for FSO. George Coy reported that 6 or more are scheduled for building this summer. All of the hangars are individual efforts with no co-ordination. If they would work together, they could probably save some money and manpower. We also discussed the DuFresne-Henry report outlining the future of FSO. George insisted that they retain the grass and ultralight landing strips. They are on the plan thanks to George and others in attendance at the open meeting. It was noted by Frank Gibney that FSO is one of a very few airports that work in harmony with all types of flyers. Frank will talk with Rich Turner to see about FSO and the EAA sponsoring an EAA fly-in.

George brought up that there a few hangars for sale right now at FSO and then noted that Leonard DuBois is also very ill and is not expected to last too much longer. Leonard was instrumental in building many hangars at FSO. Our prayers got out to Leonard and his family. Bruce Uvanni questioned whether we should look into purchasing one of the hangars for sale. The concerns for the available fund and the lack of a project for us to work on cooled the thought but it wouldn't hurt us to look and see what is available.

Across the pond, it was noted that SUNY Plattsburgh is offering A&P classes for training at the Plattsburgh Air Force Base and the Clinton County airport is moving to the base and closing its present location.

Frank Gibney brought us up to date on the Scholarship Fund. Don Taylor brought in the application for Cory Paya a child with aviation vision for the EAA Camp. He is a little older and needs to go to the more expensive Advanced Air Academy Camp. We have \$250 or so in chits to reduce the costs so we approved the costs of sending Cory to camp and we will see if we can arrange for air transportation through a ride from a member going out their or help to pay the for the tickets. There was no recent activity for the McGrath or Roberti Scholarships. Tom Edwards and Tony Speranza offered to help Frank with the committee.

Don Taylor reported that there we no Young Eagles Flights yet this year reported to him. He stated that he keeps a list of all he has flown. Bill Yendreski noted he got a letter from a kid he flew many years ago who started a career in the Air Force. Don noted that all pilots that fly 10 or more a year get their names in the Eaa *Sport Aviation* Magazine. Vermont had 10 names listed in the March issue. Don noted that Young Eagles Flights are starting and to look in the schedule in this newsletter for coming events!

The 50-50 drawing was held with Marge's string being broken. Steve Soule was the winner of \$33.50! way to go Steve!

Flight Advisor Corner: Hobie Tomlinson Flying with Skis – Part II

This month we wrap up **Flying with Skis**. It was a very mild winter in Vermont and a lot of people didn't even mount their skis this year. As I am writing this, it is 70 degrees outside and the Maple Syrup folks are washing their equipment, so just file this away for next season.

We ended last month's article with **Starting**, so we will pick it up with **Taxiing**. We will cover **Takeoffs, Off Airport Landing Sites, Landings, Parking and Emergency Operations**.

Taxiing a skiplane is more like taxiing a floatplane than its land counterpart and presents some "interesting" challenges. Always leave plenty of "maneuvering room" to turn when on skis, as there are no brakes and the ski has the ability to slide sideways on hard packed snow or ice.

On hard packed snow or ice, tailwheel (or tailwheel ski) steering will have little effect, leaving the rudder to provide most of the directional control. Sometimes adding a little power with forward stick to lighten the tail will aid the turn. Just be very careful not to put it on its nose! As with floatplanes, getting it to turn downwind for the "taxi back" is toughest.

Crosswind operations are different in that the skiplane will weathervane into the wind, just as a floatplane. To taxi crosswind, the skiplane must be allowed to crab into the wind and will taxi in a sideways drift. Just as in floatplanes, a short blast of power may be needed to initiate a turn to downwind. The skiplane will drift sideways during the turn, so preplan your taxi track to remain clear of obstructions and provide ample room for maneuvering. On glare ice with crosswinds, a ground helper may be required to help line up the skiplane for takeoff.

Generally, taxi speeds should be kept low on ice or crusted snow, while powder snow will require enough power to maintain forward motion and keep the skis on top of the snow. For long distances a skiplane may be "step taxied" just like a floatplane. Skiplanes may become stuck if allowed to sink into powder snow, or if stopped on wet, sticky snow. If this happens, work the rudder and elevators while adding power to aid in freeing the skis. Once moving be sure to maintain forward motion to prevent resticking the skis. If the snow is sticky, it may be necessary to place some branches under the skis while starting the engine, so they won't restick before the aircraft can be taxied.

Some airports which have considerable skiplane operations will mark the taxi routes with red dye as a safety aid.

Takeoff distances are greater on skis than when on wheels. On surfaces other than hard packed snow or ice, allow for three times the wheel takeoff distance. The general takeoff performance rule of 70% of takeoff speed by ½ the distance available still applies to skiplanes. For the typical light aircraft, this means we should see 45 to 50 IAS by the ½ way point of the runway. If not, aborting the takeoff and stopping would be well advised. We also need to remember skiplanes do not have any brakes!

Plan a takeoff path that allows adequate distance and an obstruction free departure. Takeoff upwind or downhill whenever possible. If upwind is not downhill, weigh the wind velocity vs. the slope to make a determination, usually downhill is better. Remember you will need a wide arc to turn onto the takeoff path.

When the condition of the takeoff path is unknown, taxi (or walk) the full length to check for hidden obstructions and help pack the snow. Be sure to remove any frost or crusted snow from the ski bottoms before takeoff, as this can dramatically increase ski drag and takeoff distance! As snow can hide many unforeseen hazards, **always plan for the unexpected!**

Configure for and use a soft field takeoff technique. The lack of contrast and surface detail as well as glare off the snow or ice can hide possible hazards. Snow drifts or sticky spots may cause sudden deceleration, causing the tail to come up or even a possible noseover!

Make sure the skiplane is properly configured and "ready to go" during the taxi back, so that stopping is not required, as the skis may settle into the snow and limit acceleration during takeoff. During crosswind takeoffs the aircraft must be crabbed into the wind with the skis sliding sideways to maintain the desired track.

Off Airport Landing Sites include **Glaciers, Lakes and Rivers, and Tundra.**

- Glaciers are very deceptive and contain many hidden hazards. Some of these are slope angle, condition of the snow, avalanches, ice falls, and visual illusions. Fortunately there aren't any in the Northeast, so if you are flying to an area where there are glaciers, be sure to train with an experienced glacier pilot before attempting this alone!
- Tundra also contains many hazards such as hidden ridges, obstacles and holes. This also does not exist in the Northeast. If flying to an area where it exists, do not land on tundra unless the area is well known!
- Frozen Lakes and Rivers are everywhere in the Northeast and provide one of the primary off-airport landing sites. Some of the hazards associated with these sites are snow ridges, pressure ridges, beaver dams and houses, debris frozen in the ice and hidden by the snow, overflow, spider holes, thin ice, and clear ice.
 - Snow Ridges are caused when the wind breaks the snow into small particles which quickly bond to form solid ridges. These can easily destroy the gear on a skiplane and should be avoided by landing parallel to them even if crosswind.
 - Pressure Ridges are caused when the wind or ice expansion causes the ice sheet to buckle upward. Just as in snow ridges, these can destroy the gear on a skiplane and must be avoided.
 - Beaver Dams, Houses and Debris Frozen in the ice can be covered with snow and be invisible, especially in flat light. Over fly the landing path from 100 to 200 feet and carefully inspect the surface before landing. If an area of ice is available without snow cover that is easier to evaluate for hazards.
 - Overflow is liquid water on top of the ice which is cooled below its freezing point. The moment the skis touch this supercooled water it freezes solid, causing very rapid deceleration! Overflow can exist with or without snow cover.
 - Spider Holes are ports formed by air escaping from under the ice. These are weak areas of thin ice and should be avoided!
 - Thin Ice will support snow cover, but not a skiplane, and is not always obvious. It will usually exist near the shore where rivers or discharge lines empty into the lake. Do not land if there is any question about ice thickness!
 - Clear Ice is very slick and will not allow direction control once the aerodynamic controls become ineffective. This becomes critical in crosswind operations!

Landing a skiplane is relatively easy compared to wheels, but the site must be chosen carefully.

Always make a low pass over the landing site to determine landing direction and to evaluate whether a safe landing can be made. Then perform a trial landing to determine the best approach path, quality of the surface and the subsequent departure path.

The trial landing is made from a stable approach with a soft field configuration and technique. Perform a gentle touch down (controlled by power), then high speed taxi for 600 to 800 feet and initiate a go-around. This is very helpful in evaluating depth and consistency of the snow, surface conditions and hazards. Initiate an immediate go-around if the landing does not appear normal or hazards appear. Do not land if the ski tracks turn black, as this indicates the presence of "overflow" water under the snow!

On level surfaces the landing should be made into the wind. If a slope is present, land uphill. Fly the airplane all the way to the surface with power to avoid a hard landing, and be sure to stop the airplane crosswise to the slope to prevent it from sliding backwards down the slope.

When landing on ice without snow cover, be prepared to use a burst of power to maintain directional control while slowing, as the tailwheel provides little friction. Wheel skis work better with the wheels extended in this instance. Because of the almost complete absence of friction, be prepared for much longer landing distances!

Under bright sun conditions, glare can impair depth perception, so always use soft field technique when landing off-airport. After touchdown on soft snow, add power to keep the skiplane moving to the parking area. Just before stopping slow the taxi speed down and allow the skis to cool. Friction and pressure warm the skis and, if not allowed to cool before stopping, they will freeze to the surface when they cool.

When **Parking**, remember skiplanes do not have any brakes and will slide on inclines or sloping surfaces. Always park perpendicular to the incline and block or chock the skis to prevent movement. Remember to place the fuel selector to the uphill tank from the both position! This will prevent fuel migrating from the high to the low side and siphoning overboard.

When parking for any length of time, support the skis above the snow to prevent freezing. This is especially important in warmer temperatures, as the pressure of the ski on the snow or warm skis will cause melting and refreezing. This will freeze the ski to the surface and may be very difficult to free. Use tree boughs, wood slats or burlap bags to keep the ski off the surface.

Emergency Operations consist of Survival Gear, Ski Malfunctions and Night Landings

- **Survival gear** should always be carried for remote area operations. Alaska, Canada and Sweden provide internet lists of required survival kit contents for northern areas.
- **Ski Malfunctions** can occur if skis are not rigged properly or recommended airspeeds are exceeded.
 - **Ski Tuck** occurs when the spring or bungee tension is insufficient to hold the ski tip up, especially at higher airspeeds. This causes the aircraft nose to pitch down and yaw. The immediate fix is to slow down and reduce the air loads on the ski. Usually this will cause the ski to reposition when the air load on the ski becomes less than the spring or bungee tension. Have maintenance readjust the spring or bungee tension.
 - **A Broken Ski Cable or Hydraulic Line** will also allow the ski tip to tuck down. This creates an asymmetrical drag situation, but it is controllable. Slow the skiplane down to slow flight. If anything is available that will reach the back of the ski, attempt to align it with the airflow. If the skis are retractable, place them in the up position and land on pavement. **If efforts to get the ski to reposition fail, aircraft damage is inevitable.** Land the aircraft where help is available and in such a way as to minimize danger to the occupants. As the ski tip will dig in upon landing, **it is best to land on pavement and attempt to break the hanging ski.** A broken hydraulic line on retractable skis may leave one retracted and one down. This is controllable with proper rudder and braking technique.
 - **Night Landings** are an emergency in unfamiliar locations. Unlatch the doors prior to landing to prevent jamming in case of airframe damage. Make appropriate distress calls and activate the ELT. Frozen lakes or rivers are an excellent choice if the ice is sufficiently thick. If in doubt, make an off-ice landing, as **hypothermia is rapid and fatal!** If landing for other than power failure (weather, ice, etc.) over fly the landing area and drop glow sticks at 2 second intervals. This will aid in depth perception and landing run alignment. Make a soft field touchdown with power at the slowest possible speed.

Well, that wraps up skiplane flying. Try it, you'll like it! Next month we will start a different topic. The thought for this month is: **The person who elects to teach himself usually has a fool for a student!** So until next month, remember to **Think Right to Fli-Rite!**



Hugh Schoelzel's J5 on Takeoff (Connecticut – 2006)

FLIGHT OF AN AVID By Bruce Uvanni

I just recently bought an Avid Magnum. It was located just outside of Appleton WI. The owners (Dan & Tweet Hurst) and I had agreed on a price and I was going to go out there to inspect the airplane and finalize the deal. My plan was to fly out commercially to Green Bay on a Friday, then check the plane over on Saturday and either fly commercially back to BTW on Sunday, or fly the Avid back. The weekend I choose was February 17th to 19th. If you remember, those were some of the coldest days of the year.

Well, as it turns out my flight was cancelled on Friday so instead I left on Saturday. The plane was as advertised and I bought it. I checked the weather that night and it looked like I could fly this new bird back the next day. We got up early Sunday, went to the airport to pack up and preflight the plane. We fueled up and off I went. The outside temperature was 2 degrees F.

The trip back wasn't too bad. After I left Brennand (79C) I climbed to 9,500 feet to cross Lake Michigan. I had a pretty good tail wind, I think my ground speed was in excess of 160 mph. That's not bad, I figured I was "feet wet" for only twenty minute, and at that altitude and ground speed, I was only exposed for five to seven minutes. As I approached MI, the clouds were getting thicker but I could still see the ground at least half the time. On my way to Port Huron I was listening to ATIS and AWOS' along the way. The cloud cover was thickening a bit as I went but the ceilings were still plenty high and I could still see the ground, but through a thin haze. The bad news from the reports were that all the runways were closed due to ice. An Ice storm had moved through the night before. I was getting a little nervous so I decided to land. I found a small uncontrolled air field and set her down (Mt. Pleasant, MOP). In hind sight, this was probably a mistake, because I wasted at least 45 minutes and had to make my first real landing on an ice covered runway with no breaking action. You see, the two touch and goes at your airfield weren't too pretty. After thinking about it, I think there were some real nasty rotors coming off the hangers that made the landings there quite tricky. As it turned out, the landing was perfect, a little fast because of the gusty winds but it felt nice and in control the whole time. While on the ground I called in for the weather, and added some fuel (boy was it cold). Port Huron never saw the ice storm, they were reporting clear skies and dry runways, so you see, I add more risks by diverting and also costing me valuable time.

From Mt. Pleasant to Port Huron there were some scattered snow showers that I needed to go around. I found PHN and come in and landed. This one was a little easier with the dry runways. After I fueled up, I could not believe what time it was. The clock showed 2 pm. Man that was late and I figured I had a 3 1/2 hour trip over to Massena NY, which would be right at sun set. Well I called flight service, got the weather and filed a VFR flight plan, then the briefer told me that I would need to get a hold of a controller before crossing the border to get a transponder squawk, and that I would have to contact someone on the other end to do the same to cross back over into the US. Well he knew who to contact on his end but had no clue who to contact on the other end. Luckily I've flown in that area and knew to contact Boston Center on 135.25.

Well, trying to get a hold of the Canadian controller and then understanding him was a trick. For some reason he sent me to Toronto, who sent me back to him, who sent me back to Toronto who finally gave me a squawk and sent me back to the original guy. I was having a tough time hearing them, and to make it worse I had to of been handed over to at least six to seven different controllers as I made my way around Toronto. At this point I was flying low (about 2000 to 2500 ft) and it was hazy with light snow showers. So, visibility was around 5 miles, sometimes less. Finally I'm leaving Toronto's airspace and they drop me from radar coverage so I no longer had to talk to them, which was alright with me. Plus the ceiling was lifting and the sun was coming out, so I climbed to 5,500 ft and started listening for Boston center. It wasn't too long after that I started to pick them up. So as soon as I got close to NY state I called them up, got a transponder code and flew into US airspace.

The bad news was, Massena was reporting the same icy runway conditions. I think I had plenty of fuel to get further east but with the sun setting and the clouds lowering I decided to land. Luckily the wind, which was blowing 20 knots gusting to 27 knots was right down the runway. The landing was uneventful but the taxiing was slow and slippery. I made it to the other end of the airfield where the fuel tanks were and parked her. The wind was howling and there was no one around. With all the ice, there was no place to tie down. I found an open hanger and put her in it. Than I called my girlfriend (the lovely Carolyn) to tell her I was ok. She was thinking of coming to pick me up and was calling a friend for some help. While waiting to hear back from Carolyn, I called the folks I had bought the plane from to let them know I was safe and where I was. While on the phone with them I had an incoming call so I ended the call. I missed the call, I though it was Carolyn but I was wrong, I found out later who it was.

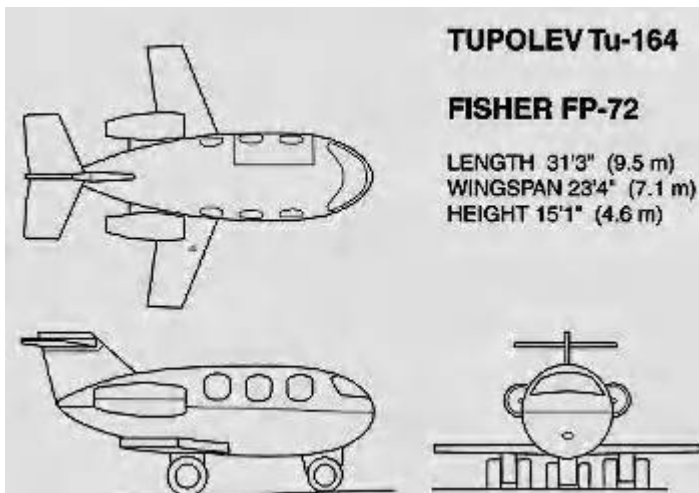
Well Carolyn finally called back and the plan was she would make the 2 1/2 hour drive and pick me up. I wrote a note and left it on the plane, just in case the owner of the hanger was as nuts as I was and did fly in that night. After the plane was tucked away in the hanger I stated the long walk to the other side of the field where the terminal was. On way there I

remembered I didn't close my flight plan so I called them up. It appears that they were the call that I missed. They were happy to hear from me and promptly closed my flight plan. Well I made it to the terminal but there was no way in from the airfield side and no way out of the fence either, so I broke the law and squeezed thru the gate. Now I figured I'd be waiting outside, No one was around and there was no way into the building from the airfield side, but I got lucky, the terminal was wide open, warm and empty.

So I washed up a bit and got comfortable for the wait, I started to nod off when my phone rang. Guess who it was? It was the owner of the hanger: yes, he just flew in and wanted me to move my plane out. He was actually very friendly, he said he'd done the same thing. He knew a number I could call to get permission to put the plane in a big open hanger. I called the guy and I had a new home for the plane that night. The guy came and got me at the terminal and we helped each other with our planes. It wasn't long after that, that my ride showed up, Carolyn was happy to see me and I was glad to see her.

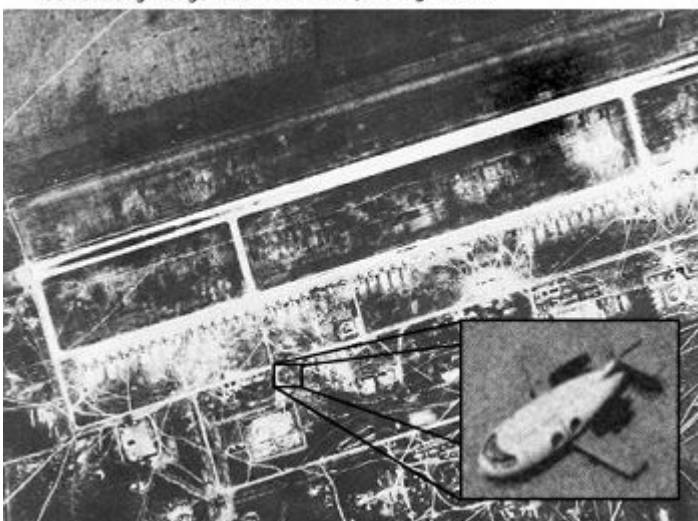
The next day was a holiday, for some folks, so I found a few guys that wanted to go for a ride (Jim & Norm). They drove me over to the Massena airport. I picked the plane up and was home in less than an hour. My buddies only lost \$20 at the casino (Bob P's money) and had a great day. So, my trip ended on a high note.

looF lirrA from the bowels of the internet!



Basic layout of the Fisher-Price aircraft. (*Interavia*)

Soviet Long-Range Aviation Airfield, 20 August 1966



American military satellites first detected construction of the prototype at Saratov in 1966.

HISTORY OF THE FISHER-PRICE AIRPLANE (Tupolev Tu-164)

Almost forgotten, the Fisher-Price Airplane is a relic from the 1970s, a rare example of a Soviet design that was adopted by Western airlines. It is the predecessor of regional jets, which are beginning to form the backbone of major U.S. airlines.



The Soviet requirement

In 1951, Stalin had reiterated his call for "one of the toughest engineering problems facing our nation" -- a plane that could carry a dad, a mom, their family, and the dog to a playground in Irkutsk. Tupolev had the courage to tell him that it couldn't be done. The task was simply "impossible to fulfill" owing to the "limits of contemporary knowledge".

In his memoirs, Khrushchev emphasized that



Alexei and Andrei Tupolev, 1969.



First flight, 1970, Saratov.



The Tupolev Tu-164 began Aeroflot service in 1971.

Tupolev was telling this to a man who had already jailed him for years on a manufactured pretext. But he understood his responsibility. He knew such a plane was impossible, and he told Stalin so. Tupolev was placed under house arrest until Stalin's death in 1953.

It wasn't until 1962 when jet engine technology and engineering had made the necessary advances. However, Andrei Tupolev's approach to his aircraft was more pragmatic than some of his early designs would suggest. He emphasized the need for plastics, which would yield tremendous weight savings. Tupolev turned to leading engineers at the Soviet Academy of Sciences. Together they developed an isotactic polypropylene compound, which was adopted for the new project. Construction of the new plane, dubbed Tu-164, began in 1968, and the first flight of the prototype was on May 7, 1970.

Khrushchev enjoyed the status of Tu-164 *Kurator*, formalizing his commitment to bring together the Soviet economy to bear on this high-profile project. Unfortunately, Khrushchev died in September 1971 and the project survived him by only six months. Ironically, Brezhnev's faith in technical progress led to the demise of the Tu-164 program, as resources had to be funnelled to the emerging MiG-23 fighter program. Only two aircraft were built, all in service with Aeroflot.

The Fisher-Price years

In 1973, Tupolev licensed the design to Fisher-Price, a toy manufacturer in East Aurora, New York. Fisher-Price intended to shelve the design as an investment. However the company was approached by Pan Am, who was seeking a plane to handle its long, thin routes.

Fisher-Price had just completed its Cinderella movie camera and a successful record player. Suddenly it found that it needed a line of bank credit totaling \$350 million to finance hangar space and tooling. Unfortunately it lacked the assets to pledge as collateral, and its financiers demanded security. Fisher-Price made inquiries about a federal loan guarantee: a pledge that the Treasury would reimburse the banks if Fisher-Price should fold. On September 12, 1974, Fisher-Price met with President Ford. The Administration announced it would send the necessary legislation to Congress.

Congressman Wright Patman, chairman of the



Pacific Southwest Airlines began using the Fisher-Price design in 1978 for its San Francisco - Los Angeles route.



Fisher-Price FP-72 at Denver, 2001.

House Banking Committee, had blocked federal support for the bankrupt Penn Central Railroad just a few years earlier, and was highly skeptical of the new measure. However Congress had killed the SST project in 1971. With an ongoing recession and the threat of additional lost jobs, Congress could not lightly affront the labor unions a second time. Fisher-Price got its financing.

Fisher-Price began construction in 1975, naming the model FP-72. The first customer was Braniff Airways. It was a business airline par excellence, offering frequent service in medium-size 727s. Adding the Fisher-Price aircraft meant businesspeople could easily get the connections they wanted. Braniff's chairman and CEO, Harding Lawrence, insisted that the Fisher-Price plane would bring easy connections to Sesame Street, and connect Dallas to all of Texas' barnyards and barbecues. Braniff put in an order for 26 aircraft with 38 on reserve.

The first flight of the licensed prototype was in 1976. The aircraft entered service in 1977 with Braniff, followed by Pacific Southwest Airlines, Frontier Airlines, and Aeromexico.

Basic dimensions

Length	31 ft 3 in
Wing span	23 ft 4 in
Height	15 ft 1 in
Weight	13,560 lb
Passengers	4 to 5
Range	3,560 mi
Speed	475 mph
	2x Ivchenko AI-25 turbofans (3790 lb)
Engines	2x General Electric CJ-610-4 turbojets (2850 lb)

Reader comments

From: Kuzmin Yuri

<_____@rambler.ru>

Date: April 1, 2006 19:37:46 +0300

Hi, Tim!

Thank you a lot for your fine essay about Tu-164. A lot of fun.

Please, change "Moscow's Academy of Sciences@ on "Soviet Academy of Sciences" (there was never separate Moscow academy in USSR).

With best regards, Yuri Kuzmin, Moscow.

LAZY RUDDER SYNDROME By George Coy

From time to time there is talk among those in the flight training arena about the merits of reinstating the requirement for spin training at all levels of pilot training and certification, as it existed several decades ago. The issue asks a simple question "Would spin training for private and commercial pilot applicants have any tangible benefit in terms of improving overall safety"?

Earning my private pilot certificate in 1947, commercial pilot certificate in 1948, and as a young flight instructor in the early 1950s, I have experienced my share of spins. Has this experience in itself made me more capable or safer pilot? Probably not? Accidental spins usually occur at low altitudes when doing such things as making the turn from base to final or buzzing someone's house. Under these or similar conditions a recovery is highly unlikely, even if one had previously undergone spin training. Pilots who have had spin training know how to recover from them, but at low altitudes they don't have the room needed to apply what they've learned. Prevention is the key to avoiding these situations. Almost without exception, improper use of the rudder is the primary contributor to an accident spin. What can be done to decrease the chance of an accident spin? Perhaps returning to the "basics" would be appropriate. This falls directly in the lap of the flight instructor. Before the flight instructor can be an effective teacher to address this issue, he must fully understand the role the rudder plays in the scenario.

During the 48 years this writer has served as a designated pilot examiner(DPE), it has become apparent that many (if not most) contemporary pilots suffer, at least to some extent, from what I call "Lazy Rudder Syndrome." In other words, they simply don't use appropriate rudder response when required. Rather, they attempt to "drive" the airplane with inputs from the yoke with little, if any, rudder input. Why is this? In my view the root cause lies primarily with the tricycle landing gear and yoke control. Many years ago training type airplanes had what was then called a "conventional" landing gear. In other words, the airplane had a tailwheel. Initially, just learning to taxi one of these "tail draggers" was a challenge in itself. With time the student soon got the hang of it and the required rudder inputs to make the airplane go where he or she wanted it to go. This resulted in a conditioning of the student's reflexes. This conditioning became so well ingrained that at the first hint of any directional deviation, on the ground or in the air, immediate and appropriate rudder response was initiated without conscious effort. This development simply doesn't happen to the same degree when learning to fly in a tricycle geared airplane.

The inherent tendency for contemporary pilots to suffer from lazy rudder syndrome is reflected in the CFR 61.31(i)(1), which reads part: "No person may act as pilot in command of a tailwheel airplane unless that person has received and logged flight training from an authorized instructor who found the person proficient in the operation of a tail wheel airplane." Although this requirement is grandfathered for a person who has logged pilot in command time in a tail wheel airplane before April 15, 1991, the inference is clear for all pilots. It has been reported by some flight instructors in both tail wheel and tricycle geared airplanes that, even though the

rudder response was adequate when operating a tail wheel airplane, any conditioning derived thereof was soon forgotten when flying the more traditional and forgiving tricycle landing gear airplanes. In cases it would appear the conditioning process had not been sufficiently developed to come into play, regardless of the type of airplane being flown. In addition to a tail wheel, airplane used for flight training during earlier years had a "stick," as opposed to a yoke or "wheel." When driving an automobile, one subconsciously turns the wheel in the opposite direction when the vehicle starts to drift to one side of the road or the other. This also is conditioned reflex. Unfortunately, this conditioning carries over to airplanes equipped with a yoke control. A stick, unlike a yoke, provided little similarity to an automobile's steering wheel and a pilot trained in a stick airplane was less likely to attempt to "drive" the airplane.

Aircraft designs of the 1930s, 1940s, and early 1950s were generally not as aerodynamically "forgiving" as current designs, and using the ailerons during a stall recovery was a no no. With these aircraft, attempting to pick up a wing or maintain directional control during a stall recovery with ailerons was cause for failure of a flight test. The flight training manuals and Flight Test Guides of that time emphasized; "Only the rudder is to be used to maintain directional control during stall recoveries." Quoting from the Civil Aeronautics Administration Bulletin No. 32, June 1943, "Fundamentals of Elementary Flight Maneuvers" (Yes, I still have those old manuals), it was emphasized: "The wings are to be held level without the use of ailerons." These mandates should be recognized and given heed by contemporary pilots restoring and flying these grand old vintage birds. Why did this bulletin and other training manuals stress using the rudder to keep the wings level? To spin, an airplane must first be in a stalled configuration and, while in that configuration, "allowed" to rotate. If the airplane is prevented from rotating it cannot spin. It is the rudder that is the key to preventing rotation.

Aircraft that initially come onto the market following World War II were primarily designs that existed before the conflict. Eventually some of these aircraft, along with entirely new aircraft designs, were given various aerodynamic enhancements that came into play when approaching and during a stall. Of particular note were differential aileron travel and wing washout. As any CFI knows, differential aileron travel provides that the down aileron deflects into the slipstream to a lesser degree than the up aileron, thereby, minimizing adverse yaw. Adverse yaw can have a villainous impact on various aspects of controlled flight. Differential aileron travel is not restricted to only training aircraft. For example, the Citation II provides for differential aileron travel by the up aileron extending 19 degrees, while the down aileron extends only 15 degrees. This may not seem like much, but it results in a decrease in adverse yaw that has a direct impact on required rudder response. Frise type ailerons can also address adverse yaw. Although perhaps not common on typical training type airplanes, the Frise type aileron provides for the structure's leading edge to project into the airflow, thereby, increasing drag. Unlike a conventional aileron design, the increased drag contributes to a decrease in adverse yaw. In addition, the "slot" afforded by this design makes the aileron more effective at high angles of attack by disciplining the airflow over the structure's surface. However, despite this feature some rudder is still needed whenever ailerons are applied. Wing washout provides for a decreased angle of incidence from wing root to wingtip. Thus, at the onset of a stall, the stall occurs at the wing root and progressively moves outwardly toward the wingtip. This results in increased aileron effectiveness during slow flight and, to some degree, during stall. With embellishments of this nature applied to a wing's platform it has now become acceptable practice, according to the FAA's current Flight Training Handbook, to use aileron inputs during a stall recovery. However, it gives this caution: It is important that the rudder be used properly during both the entry and recovery from a stall to counteract any tendency of the airplane to slip or yaw, the latter being a prelude to a spin. Talking about the proper use of ailerons and rudder means little if pilots do not acknowledge their interaction in flight.

Having conducted pilot certification flight tests for over four decades as a DPE, it has become abundantly clear that many contemporary pilots don't fully comply with the FAA's intent in the use of ailerons during a stall recovery. In many cases, the rudder pedals appear to serve only as foot rests. Or simply put, the pilot suffers from lazy rudder syndrome. How can flight instructors address lazy rudder syndrome when training pilots, including those who may have learned to fly a tail dragger but have since fallen victim to lazy rudder syndrome? Recognizing that the condition exists is a good place to begin. Lest it be thought this applies only to

the student or private pilots, rest assured it applies to all levels of pilot certification and experience, including the flight instructor.

What then can be done to address lazy rudder syndrome? There are several excellent training exercises that can contribute to strengthen one's basic stick and rudder skills. When taxiing the aircraft, keep one's hands off the yoke, unless wind and surface conditions suggest otherwise. This reinforces the pilot's subconscious that the rudder is the major contributor to the airplane's "direction" (yaw), not the yoke. It is not uncommon to see an applicant for a pilot certificate turn the yoke in the desired direction when taxiing the airplane. Almost assuredly, this tendency will be demonstrated in flight as well. From time to time the instructor should have their students completely remove their hand(s) from the yoke during a climb, as well as in straight and level flight, using only soft applications of the rudder to maintain directional control. If a wing drops slightly, as it will likely do at some point, smoothly applying opposite rudder pressure in a timely manner (human yaw damper) will return the wings to level flight. It can be expected the student will initially display difficulty when in flight to completely remove his/her hands from the yoke. This is not unusual and is a subtle reminder of the presence of lazy rudder syndrome.

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Safety Tip by Don Taylor

Airworthiness Directives (AD)

A primary function of the FAA is to require corrections of unsafe conditions found on aircraft, engines, propeller, rotor, or appliance when such conditions exist or are likely to exist or develop in other products of the same design. The unsafe conditions can exist because of a design defect, maintenance or others causes. 14 CFR part 39 Airworthiness Directives (AD's), defines the authority and responsibility of the FAA administrator for requiring the corrective action. The AD's are used to notify aircraft owners and other interested persons to unsafe conditions and to specify the conditions and to specify the conditions under which the product may be continued to be operated.

AD's are divided into two categories:

1. Those of an emergency nature requiring immediate compliance before further flight.
2. Those of a less urgent nature requiring compliance within a relatively longer period of time.

Another Short Story By Don Taylor

My wife Anita, fell and broke her hip. She was in Fletcher Allen Hospital for 3 weeks and was transferred to Birchwood Terrace Healthcare in Burlington. She was put in a double room with Ruth Getty. Leland, Ruth's husband and I would visit every day and we would talk about different things. I told him I had an airplane and I flew Young Eagles. Later that afternoon, when I was gone their son Richard and his two sons

from Rutland came in for a visit. Lee introduced them to Anita and said that she and her husband were from Swanton. The boys said they knew me and had flown with me in the Young Eagles Program. I looked them up and found that Eric, age 14 and Matthew Getty, age 12 were both flown in my 7EC in Rutland June 11, 1994. As Shirley Chevalier and I found out it is a small world!

Young Eagles: Donald Taylor

We have no pilots reporting Young Eagle Flights for this year. We have received our Young Eagle Chits to send someone to the EAA Academy. We have a total of 229!

The pilots and Chits received are:

Charles Robataille	15	Donald Taylor	115	Michael Pecue	17
John McNerney	17	Ed LaFramboise	17	George Godin	11
John Butterfield	18	Steve Couzelis	19		

Steve Russ, executive Director of the Young Eagles Program and I would like to thank all the pilots that flew 10 or more for 2005!



Calendar of Events

April 23, 2006	Pancake Breakfast, Franklin County Airport (FSO) 9-11. Meeting to follow
April 22, 2006	New England Aviation Expo, KASH, 8-5:00
June 3, 2006	Airport Awareness Day & YEs Flight Dean Memorial, N. Haverhill, Marge @ 878-6337
June 10, 2006	International Young Eagles Day, (FSO) Details to follow
August 12, 2006	EAA 740, Young Eagles, Lebanon, NH Call Marge @ 878-6337

Favorite Links

www.vermontairports.com www.greenmountainflyers.org
www.aflyer.com www.eaa.org

From the Editor, Tom Edwards

It has been a bad month for all of us that knew and loved Moe for his humor and smile that he had for everyone. He was always willing to help anyone that needed a hand. My son Nathan was very close to Moe for all the help Moe gave when my son was working on Jim Douglas's Campaign and now on Martha Rainville's. Moe was always there.

After Moe's funeral a bunch of us EAAers got together to reminisce all the great times we had with Moe and the help he gave or the dirty jokes he could tell, of even the politician he would beat upon. I missed the wake but I understand it was a great gathering of flyers, all with a story to tell about Moe.

The end result of all the stories I heard and from other conversations passed along is that we need to spend more time together as life is too short and family and friends are more important than anything else. My questions to the membership, not just from me but from everyone else I talked to was why don't we get serious about having gatherings this summer? There is no reason why we can't have a pancake breakfast in the summer, a barbeque someplace or more flyouts. Frank Gibney and Tony Speranza both said they wouldn't mind a gathering at their places this summer. More of us could attend a Young Eagles Rally. I understand George and Chuck are heading to Alaska this summer to accomplish a life-long dream.

We all have dreams if we don't we'll never obtain our goals. We need them both. Let's slow down and smell the coffee, spend a little time with family and friend and spend a little time on a better quality of life before it is too late. Life is not a dress rehearsal.

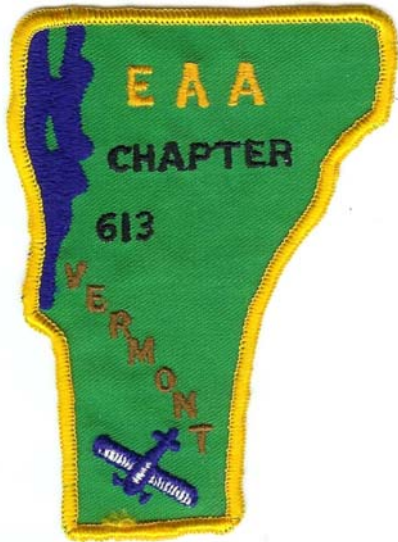
I know this newsletter is a little long this month but I couldn't edit anything out as it is all too important to pass along. I look forward to seeing you at the next pancake breakfast.



CHAPTER 613

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FIRST CLASS MAIL



April 2006

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