



CHAPTER

613

July 2005

(Chapter 613 web site)

www.eaa-chapter613.org

News and Views: Tom Edwards

The Ultralight Fly-In has come and gone. Unfortunately we had a tragedy to tarnish a great weekend. It seems that the papers were full of aviations accidents for this weekend.

Don Taylor will fill us all in on the Young Eagle activities and I have my son's wedding next weekend so this newsletter will be a little short!

For all of you going out to Oshkosh, have a great time, fly safe and have a look around for me.

Flight Advisor Corner: Hobie Tomlinson Tailwheel Transition Part II

July 2005

This month we are going to continue our series on tailwheel transition. Last article we talked about some of the history and characteristics of tailwheel aircraft, now we want to resume by discussing the actual transition training.

The first item in transition training is a thorough familiarization preflight of our aircraft with the emphasis on its exact configuration. Tailwheel aircraft come with many different "variations on the theme" as we discussed last article, so we want to pay particular attention to which one we are working with!

First is the type of tailwheel assembly. Do we have a steerable or a free casting tailwheel? Does it have a "full swivel" function? Does the aircraft have a "tailwheel lock" What type of tire does the tailwheel have, the older, small "hard rubber" type, or the newer, larger "air type". How about the leaf spring and steering springs? The old style springs were "softer" and absorbed the bumps better, but the tail sat low to the ground, giving a high angle of attack to the wing and more fuselage blanking of the rudder. Newer tailwheel springs are stiffer, allowing the tail to sit

higher and providing a slightly lower angle of attack for the wing. Carefully inspect the fuselage area where the tailwheel spring attaches. Sometimes the newer springs prove to be “too stiff” and fatigue cracking to the aft fuselage structure occurs, especially if subjected to a lot of rough field operations. Observe the steering springs for condition and proper tension on both sides. Lastly, check the tailwheel tire for proper inflation, sidewall condition and tread wear.

Second is the type of brake assembly. Do we have heel or toe brakes? Are the brakes powered mechanically or hydraulically and what type of brake assemblies are used, shoe or disk? This will give us an idea of the brake effectiveness to expect. Mechanical shoe type brakes will be the least effective, while the hydraulic disk type brakes will be the most effective. Also hydraulic shoe type brakes can have a tendency to “grab” if the pads become contaminated. (A major problem with old style brakes on Stearmans.) When dealing with older foreign aircraft, some quite unconventional (to us) systems may be encountered.

Lastly is the type of main gear assembly. Does the aircraft have a crosswind gear installed (C195, Helio Courier) and if so, does it have a “lockout” function which will prevent its activating when not intended. Does the aircraft have “wheel extensions” installed, or are they available for this type? (C140s are light in the tail and easy to “nose over. Most have had wheel extensions installed, moving the main wheels forward and correcting the problem.) Does the aircraft have a “walking gear” (older Beech 18’s)? This type gear has a compression spring in the drag brace, allowing limited fore and aft movement of the wheel. The term “walking” refers to the apparent stepping motion observed when the springs compress at different times during the run-up. This ability of “fore/aft” wheel movement is also present in Cessna aircraft with vanadium tube gear. When converted to tailwheel configuration, this particular trait increases control difficulties on landing (a trait known as “squirrely”) and is not viewed by me as desirable. Finally, what types of shock absorbers are installed? The progression has been from bungee cords (giant rubber bands) on J3 Cub’s, to Oleo struts on Aeronca’s and finally spring steel gear on Cessna’s. The oleo strut configuration provides for the easiest landings, because when compressed by a landing load it does not immediately want to “snap back” to its uncompressed state.

Before leaving this topic, I must say that the individual type clubs are a wealth of information on their particular aircraft and are well worth contacting before flying or purchasing a given type aircraft. They can all be accessed through the EAA’s website.

The next step in our transition process is spending a few minutes just sitting in the seat. Seat height and adjustment are very important in any aircraft, but even more so in tailwheel types. Can you easily move each rudder pedal full travel and work the brake pedals from all rudder positions? How do the brake pedals feel when actuated, solid or spongy? If spongy, maintenance is probably required prior to flight. What is the view “over the nose”? Older “round engine” types (such as the Cessna 195) have very limited forward visibility and must be operated by looking off to the side of the nose. Also note the nose position relative to the horizon, as this will be the correct landing attitude for normal “3 point” landings. A “3 point” landing is a term used in tailwheel aircraft to describe a landing in which the main gear and tailwheel contact the ground simultaneously. This is the normal landing method in light wind conditions.

Once we have completed the familiarization process, we are ready to go Fly. If we are flying an older aircraft without an electrical system, “hand propping” will be required. This is another “lost art” and probably deserves its own article. Suffice to say that propellers are lethal, so do not attempt this without proper instruction from someone with “hands on” experience! It can be done safely, but complacency here is a proven killer.

Taxiing is going to be quite different in a tailwheel aircraft. Immediately test the brakes at start of taxi by retarding the throttle and smoothly applying pressure to both brakes. Both brakes should feel “solid” with good braking capability and no “grabbing”. If the brakes do not test satisfactorily, shut down and obtain corrective maintenance!

It is important that we always use the brakes smoothly in a tailwheel aircraft, because more than one aircraft has been tipped up on its nose by a sudden brake application while it was rolling forward. This is especially critical if the airplane starts to roll forward during a high power run-up!

The aircraft is taxied at minimum power without “dragging the brakes” (continuous brake application with excessive power to prevent a speed increase). The aircraft should be taxied with the heels of the feet on the cockpit floor and the balls of the feet on the bottom of the rudder pedals. The feet are slid to the brake pedals whenever braking is needed. The aircraft will taxi easier if it is kept in motion at a safe, constant taxi speed.

To turn the airplane while taxiing, rudder is first applied in the direction of the turn, with whatever power and brake is required to turn the aircraft while controlling taxi speed. Once the aircraft is turning it will want to continue turning and it is necessary to anticipate the stopping point and lead it with opposite rudder and brake. If the aircraft is one in which restricted forward visibility prevents seeing obstacles directly in front of the aircraft, taxiing is done with a series of zigzag (or S) turns so that the area directly in front of the aircraft can be continuously monitored by looking off to the side of the nose.

The control positions during taxi are the same as used for tricycle gear aircraft, but are much more important in tailwheel aircraft. The old gouge is “**Climb into the wind, Dive away from the wind.**” That is, when taxiing into a quartering headwind, the yoke (or stick) should be turned (pushed) to the upwind side and positioned full aft. This will prevent the wind from lifting the upwind wing or raising the tail. (The elevator can be neutral here in a tricycle gear, but not a tailwheel.) When taxiing with a quartering tailwind, the yoke (stick) is turned (pushed) to the downwind side and positioned full forward. This is because the wind is flowing over the aircraft backward (as it does in an aerobatic “tail slide”) and reversing the control inputs. Thus down aileron keeps the wind from lifting the upwind wing and down elevator keeps it from lifting the tail. This is also important in tricycle gear aircraft as they can nose over “kitty-corner” in strong tailwinds. It is very important to taxi slowly in strong winds (especially when taxiing downwind), as extra taxi energy just compounds the control problems! Because of the strong tendency of a tailwheel aircraft to weathervane, taxiing directly crosswind (or downwind) is difficult and will usually require large rudder inputs and some brake usage to maintain directional control.

Run-up of a tailwheel aircraft is always done after turning the aircraft directly into the wind. This minimizes the tendency of a crosswind to lift a wing while operating at a high power setting. It is also very important that the elevators be held in the full up position and the aircraft prevented from creeping forward by continuous, firm brake application. As a general rule, do not trust light aircraft parking brakes and never trust them on tailwheel aircraft! **Letting the aircraft creep forward at a high power setting, then suddenly applying the brakes (especially if not facing into the wind or holding full up elevator) is a real easy way to “stand it on its nose”!**

Takeoff in a tailwheel aircraft is started by carefully aligning the aircraft with the runway. The aircraft should be allowed to roll forward enough to “center” the tailwheel and if a locking mechanism is provided, the tailwheel should be locked. Brakes are then



released and the throttle smoothly advanced to full power as both feet are slid off the brake pedals. Directional control during takeoff will be affected by changing rudder effectiveness (with increasing power & airspeed), torque, “p” factor, gyroscopic precession from the propeller (as the tail is raised), adverse aileron yaw (in crosswinds) and wind effects.

The takeoff roll is started with some up elevator to improve tailwheel steering effectiveness. As soon as increasing airspeed has given adequate rudder authority, the elevator position is changed to slightly forward and the tail allowed to raise to the liftoff attitude. This attitude is then maintained with elevator until the aircraft flies off the runway. It is very important in tailwheel aircraft to make a gradual advancement of power and to lift the tail smoothly. Doing either abruptly will dramatically increase control difficulties. (The first due to torque and the latter due to gyroscopic precession.) If the aircraft has been correctly trimmed for takeoff, the elevator will be mostly neutral during the latter portion of the takeoff roll and the aircraft will “fly itself off” the runway. Directional control should be maintained by applying whatever rudder pressure is needed to keep the airplane tracking straight. This is best done by picking an object at the far end of the runway and keeping it in a constant position relative to a place in the windshield or on the nose of the aircraft. Do not “walk” or “jab” the rudder pedals, but maintain a constant pressure on the correct pedal to keep the aircraft tracking straight. As control effectiveness increases with increasing airspeed, less and less control deflection (or control pressure) will be required to achieve the same result.

Once airborne, there is no significant difference between a tailwheel and a tricycle gear aircraft. A tailwheel aircraft will be faster and have a greater useful load than a tricycle gear aircraft of the same type. Tailwheel aircraft have more powerful rudders than tricycle gear aircraft and do not have the “rudder-aileron” interconnect springs that have become so popular on tricycle gear aircraft. That plus the fact that the older type tailwheel aircraft had significant adverse aileron yaw characteristics means that initially flying coordinated turns may take some practice. Other than that, all is the same.

Next month we will look at the different types of takeoffs and delve into *landings, where the real fun begins*. The thought for this month is: **Fools rush in, where angles fear to tread!** So until next month, be sure to **Think Right to FliRite!**

Young Eagles: Donald Taylor

Chapter 613 did fairly good in Haverhill, NH considering there were 19 planes and pilots. We flew a total of 24 Young Eagles. The pilots and number of Young Eagles they flew follows:

Ronald York	2	John NcNerney	5
Chuck Robitelle	2	John Butterfield	3
Don Taylor	12		

The Young Eagles and pancake breakfast at FSO went off OK. We did not get the help we wanted, but the help we did get buckled down and got it done!

Friday afternoon I set up the tables with the help of Heather from Border Air. We were all set to go at 8:00 Saturday. The cooks were Don Nowakowski, Joe Garden, and myself. At 10:00 we started flying Young Eagles leaving Charles Mackin to the tables and get things ready for the pancake breakfast Sunday morning.

The Young Eagle flights started slowly, the day was really hot but nice up in the air. Bill Yendrazeski did the paperwork as things picked up. After 3:00 pm with no more kids, the others left. I was still there checking on things when a large crowd of kids showed up. I did not get done until 6:00 pm. There were 31 Young Eagles flown Saturday with none on Sunday.

The pilots and Young Eagles Flown:

Steve Couzelis	5
Don Nowakowski	3
Chuck Robitaille	4
Donald Taylor	19



Don Nowakowski and I were there early Sunday morning to serve breakfast. Later we cleaned up and put everything in the trailer. We have a lot of food left for our next pancake breakfast. I sold the eggs, milk, and orange juice. Overall we did very well making \$217.79 for the chapter.

Young Eagles To Date

Young Eagle Flights have started to pick up! We have flown 156 Young Eagles so far, which leaves 144 more to go for our total of 300.

George Godin	2	Donald Taylor
57		
George Coy	1	John
Butterfield	14	
Don Nowakowski	8	Mike Pecue
13		
William Hanf	8	Chuck
Robitaille	10	
Ronald York	9	Steve Couzelis
17		
John McNerney	17	

We could be flying some kids at Plattsburg AFB. I will also be working at Springfield Young Eagles. If

Interested, please let me know.

Did you Know: by Donald Taylor Poison Ivy

If you have been exposed to poison ivy, wash up immediately with soap and cool water. Change all clothes. There are special soaps and cleansers that help remove and minimize the spread of the oil. There are also many ointments to help dry up and relieve the itching and discomfort associated with poison ivy. Learn to identify this plant, and if at all possible, avoid contact!

Safety Tip: Haze

Haze is bad,

But not that bad.

It is what lurks in it that is!

Calendar of Events

Saturday July, 23 Fly-in BBQ rained July 24 Claremont Airport, (CNH) Clairmont NH Sponsored by EAA Chapter #740 "The Twin State Flyers" in conjunction with Ascutney aviation. Contact www.ascutneyaviation.com or www.eaachapter740.org

July 25-31 2005 AirVenture, Need I say More? AKA **OSHKOSH**

TBA Hartness State Airport (VFS) **Young Eagles Rally**, Springfield, Vermont

Aug 20 & 21 Adirondack Regional Airport, (SLK) **Young Eagles Rally**, Saranac Lake, New York

Check out www.flyins.com for all the places you would care to fly!

As everyone knows we are organizing a hangar committee. I thought I would share a

letter we received from the FAA regarding a few questions I asked Portland FSDO regarding the above mentioned hangar. If anyone can figure out the response, Let me know!

Mr. Tom Edwards
Newsletter Editor
EAA Chapter 613

Mr. Edwards,

As a representative of the administrator, or sometimes when authorized, to act as the administrator, a comprehensive investigation must be conducted by a team or teams of one person or several persons from this or several other agencies to ensure that you or several other pilots or person or persons have tried or attempted to try to comprehend or understand any or all, in whole or in part of one or more that one of the many Federal Aviation Regulations. It is my duty as a representative of the administrator, or sometimes when authorized, to act as the administrator, to ensure that any one pilot or pilots or one person or persons that have or have appeared to have read any one, or more than one of the Federal Aviation Regulations and understood any one or more than one of the Federal Aviation Regulations, to initiate appropriate action, which may include but not limited to an immediate rewrite of the specific or multiple Federal Aviation Regulations, or require you, pilots or person or persons to attend remedial instruction, which may include classroom instruction, of the Federal Aviation Regulations until you, the pilots or person or persons have any understanding of how to function so that this agency or other agencies will never receive such a letter or letters from anyone.

At this time , appropriations are being requested to conduct a full investigation in this matter and you will be notified by this representative of the administrator, or sometimes when authorized, to act as the administrator. Ensure that you, the pilots, or person or persons are available for an interview.

We are here to help you,

Dan

a representative of the administrator, or sometimes when authorized, to act as the administrator

New Federal Regulation you need to heed 91. 91.27 states:

a) NO PILOT OR PILOTS OR PERSON OR PERSONS ACTING ON THE DIRECTION OR SUGGESTION OR SUPERVISION OF THE PILOT OR PILOTS, MAY TRY, OR ATTEMPT TO TRY TO COMPREHEND OR UNDERSTAND ANY OR ALL, IN WHOLE OR IN PART OF THE HEREIN MENTIONED FEDERAL AVIATION REGULATION, EXCEPT AS AUTHORIZED BY THE ADMINISTRATOR, OR AN AGENT APPOINTED BY OR INSPECTED BY THE ADMINISTRATOR.

b) IF THE PILOT, OR GROUP OF ASSOCIATED PILOTS BECOME AWARE OF, OR REALIZES, OR DETECTS, OR DISCOVERS, OR FINDS THAT HE OR SHE OR THEY ARE, OR HAVE

BEEN,
BEGINNING TO UNDERSTAND THE FEDERAL AVIATION REGULATION, HE / SHE /
THEY
MUST IMMEDIATELY, WITHIN THREE (3) DAYS NOTIFY, IN WRITING TO THE
ADMINISTRATOR.

c) UPON RECEIPT OF THE ABOVE MENTIONED NOTICE OF IMPENDING
COMPREHENSION,
THE ADMINISTRATOR WILL IMMEDIATELY REWRITE THE REGULATION IN SUCH A
MANNER
AS TO ELIMINATE ANY FURTHER COMPREHENSION HAZARDS.

d) THE ADMINISTRATOR MAY, AT HER DISCRETION, REQUIRE THE OFFENDING
PILOT OR
PILOTS OR PERSON OR PERSONS TO ATTEND REMEDIAL INSTRUCTIONS IN THE
FEDERAL
AVIATION REGULATIONS, UNTIL SUCH TIME AS THE PILOT OR PILOTS OR PERSON
OR
PERSONS ARE TOO CONFUSED TO BE CAPABLE OF UNDERSTANDING ANYTHING.



Ladies and gentlemen! This is your Captain speaking Please look out the right cabin window at Elvis sitting on the wing. Do not look out the left window for any reason what so ever!

Flight attendant announcements

1. On a Southwest flight (SW has no assigned seating, you just sit where you want) passengers were apparently having a hard time choosing, when a flight attendant announced, "People, people we're not picking out furniture here, find a seat and get in it!"
2. On a Continental Flight with a very "senior" flight attendant crew, the pilot said, "Ladies and gentlemen, we've reached cruising altitude and will be turning down the cabin lights. This is for your comfort and to enhance the appearance of your flight attendants."
3. On landing, the stewardess said, "Please be sure to take all of your belongings. If you're going to leave anything, please make sure it's something we'd like to have."
4. There may be 50 ways to leave your lover, but there are only 4 ways out of this airplane"
5. "Thank you for flying Delta Business Express. We hope you enjoyed giving us the business as much as we enjoyed taking you for a ride."
6. As the plane landed and was coming to a stop at Ronald Reagan, a lone voice came over the loudspeaker: "Whoa, big fella. WHOA!"
7. After a particularly rough landing during thunderstorms in Memphis, a flight attendant on a Northwest flight announced, "Please take care when opening the overhead

compartments because, after a landing like that, sure as hell everything has shifted."

8. From a Southwest Airlines employee: "Welcome aboard Southwest Flight 245 to Tampa. To operate your seat belt, insert the metal tab into the buckle, and pull tight. It works just like every other seat belt; and, if you don't know how to operate one, you probably shouldn't be out in public unsupervised"

9. "In the event of a sudden loss of cabin pressure, masks will descend from the ceiling. Stop screaming, grab the mask, and pull it over your face. If you have a small child traveling with you, secure your mask before assisting with theirs. If you are traveling with more than one small child, pick your favorite."

10. Weather at our destination is 50 degrees with some broken clouds, but we'll try to have them fixed before we arrive. Thank you, and remember, nobody loves you, or your money, more than Southwest Airlines."

11. "Your seat cushions can be used for flotation; and, in the event of an emergency water landing, please paddle to shore and take them with our compliments."

12. "As you exit the plane, make sure to gather all of your belongings. Anything left behind will be distributed evenly among the flight attendants. Please do not leave children or spouses."

13. And from the pilot during his welcome message: "Delta Airlines is pleased to have some of the best flight attendants in the industry. Unfortunately, none of them are on this flight!"

14. Heard on Southwest Airlines just after a very hard landing in Salt Lake City: The flight attendant came on the intercom and said, "That was quite a bump, and I know what y'all are thinking. I'm here to tell you it wasn't the airline's fault, it wasn't the pilot's fault, it wasn't the flight attendant's fault, it was the asphalt."

15. Overheard on an American Airlines flight into Amarillo, Texas, on a particularly windy and bumpy day: During the final approach, the Captain was really having to fight it. After an extremely hard landing, the Flight Attendant said, "Ladies and Gentlemen, welcome to Amarillo. Please remain in your seats with your seat belts fastened while the Captain taxis what's left of our airplane to the gate!"

16. Another flight attendant's comment on a less than perfect landing: "We ask you to please remain seated as Captain Kangaroo bounces us to the terminal."

17. An airline pilot wrote that on this particular flight he had hammered his ship into the runway really hard. The airline had a policy which required the first officer to stand at the door while the passengers exited, smile, and give them a "Thanks for flying our airline." He said that, in light of his bad landing, he had a hard time looking the passengers in the eye, thinking that someone would have a smart comment. Finally everyone had gotten off except for a little old lady walking with a cane. She said, "Sir do you mind if I ask you a question?" "Why, no, Ma'am," said the pilot. "What is it?" The little old lady said, "Did we land, or were we shot down?"

18. After a real crusher of a landing in Phoenix, the attendant came on with, "Ladies and Gentlemen, please remain in your seats until Capt. Crash and the Crew have brought the aircraft to a screeching halt against the gate. And, once the tire smoke has cleared and the warning bells are silenced, we'll open the door and you can pick your way through the wreckage to the terminal."

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**FIRST CLASS
MAIL**



July 2005

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