

Experimental Aircraft Association



TALESPINNERS

Chapter 174

Cincinnati, OH
Chartered since 1966
www.eaa174.org

Vol. 42, No. 6

<< Next Mtg: Sun, July 20, 2:00 PM, Hawk Building >>

June, 2008

President:	Doug Auxier (513-623-1423)	Tech Counselors:	Howard Wells (513-683-1657)
V. President:	Greg Baker (513-885-1844)		Gary Collins (513-722-7877)
Secretary:	Tom Jenkins (513-404-5201)	Flight Advisor:	Don Fairbanks (513-732-5852)
Treasurer:	Phil Cady (513-237-5163)	Newsletter Editor:	Norm Beaudette (513-247-0347)

President's Notebook

BAHAMAS FLYING

By Doug Auxier

When I started flying again in the early nineties, I bought a Cherokee Six. After flying it for about a year and a half on various trips, including Las Vegas, I had accrued approximately 250 hours. I was reading a magazine that had an ad in it about flying the Out-Islands of the Bahamas. I am always looking for interesting places to fly, so I requested an information package from the tourism office. Jan and I decided to fly to North Eleuthra and visit Harbour Island. We stayed at the Coral Sands Hotel.

Harbour Island is 3 miles long and about 3/4 of a mile wide at its widest point. There are about 1,500 people who live there year-round. The largest hotel has 33 rooms. There are no casinos, golf courses, or fast food restaurants. They do have great diving, fishing and a beautiful pink coral beach for relaxing. If there is a hundred people on the beach, it is crowded. The island has an eclectic group of restaurants from Bahamian home based to nice upscale places. We must have liked it ... we have been back 16 times, 15 times in our own plane and once commercially (not my favorite).

There are a number of airports in the Bahamas (50 plus) and we have visited Marsh Harbour, North Eleuthra, Long Island (Stella Maris), Cat Island, Acklins and Exuma. We have enjoyed them all. The weather is generally very good for flying and I don't think you will ever find a prettier sight from the air.

The Islands are not crowded (I have not been to Nassau or Freeport) and the people are VERY friendly - no begging or anything like that. The lingering British influence gives the Bahamians a lot of class.

Runways are generally very good since most were built during WWII. There are a few rules, no night VFR, etc., but nothing too unreasonable. There is a lot of information on flying in this part of the world. I have some old VHS tapes if anyone wants to use them and check out flytheoutislands.com, along with a book from Sporty's called Bahamas & Caribbean Pilot's Guide, which although expensive, I believe is almost required to have. This book has pictures of airports, customs info, places to stay and includes the rest of the Caribbean.

So get in your plane and go find yourself an island! To quote the Beach Boys, get there quick and then take it slow.

Lastly, we have a busy June, next week (June 14) Young Eagles and the next weekend (June 19-22) the Tri-Motor will be here. We can use your help.

Oh yeah, NO MEETING THIS MONTH!

See ya out there!

Doug

THE LIGHT SPORT AIRCRAFT DILEMMA

The purpose of the Sport Pilot/Light Sport Aircraft rules is to make flying more affordable and thereby arrest the precipitous downhill slide in the U. S. pilot population. Apparently, a lot of people do want to become Sport Pilots, but the stumbling block is a lack of AFFORDABLE Light Sport Aircraft.



The new \$100,000 plus LSAs obviously do not fit that definition, so what we have left are LSA eligible homebuilts and the relatively few 65 and 75 horsepower lightplanes from the late 1940s that are still around today. Homebuilders are a hardy, resourceful breed and will take care of themselves, but what about those who can spring for no more than \$20,000 to \$30,000 and are finding that the 65 and 75 h.p. airplanes are going fast? Read on.

Although I think the Sport Pilot/Light Sport Aircraft rules rank right up there with the Amateur-Built rules as the best things the FAA has ever done, I often wonder why gross weight was selected as one of the parameters that define a Light Sport Aircraft (LSA). It certainly has resulted in a lot of illogical exclusions of existing certified aircraft . . . exclusions that are keeping the Sport Pilot community smaller than it could be.

Just so we are all on the same page, a LSA has to fit within the following limitations:

- A maximum gross weight of 1,320 pounds (1,430 for seaplanes)
- A max stall speed of 51 mph (45 knots)
- A max speed in level flight, with max continuous power, of 138 mph (120 knots)
- Two place (pilot and passenger)
- Fixed landing gear (repositionable for seaplanes)
- A single reciprocating engine
- Fixed or ground adjustable propeller
- Unpressurized cabin

The primary function of the FAA is to do the best it can to ensure aviation safety - and the LSA limitations are intended to keep Sport Pilots in safe, easy-to-fly machines, especially new student pilots who do not have to undergo as many training hours to earn a Sport Pilot certificate as one does for a Private certificate.

Let's consider, then, the LSA limitations that most directly bear on safety. Certainly, the most significant limitation is the max stall speed. The lower the stall speed, the slower the aircraft can be landed. In case of a forced landing, one's chances of avoiding serious injury are better the slower the aircraft is moving when it lands in rough terrain or even in trees.

I really don't see the need for a max speed limitation. The safest part of any flight is when an aircraft is cruising along straight and level. What difference does it make how fast a structurally adequate aircraft is as long as it lands at a low, safe speed? Limiting top speed just penalizes the designer who is clever enough to come up with an aircraft with a low stall speed and a high top speed. This is particularly true

in homebuilts, which are generally smaller and lighter than production aircraft.

Then there is gross weight. Why 1,320 pounds . . . or any specific number, for that matter? Aside from weight and balance considerations, gross weight figures into the real world safety equation mainly as it relates to wing loading (gross weight divided by wing area equals wing loading - in pounds per square foot). From a piloting standpoint, it is wing loading that largely determines whether an airplane floats like a butterfly or has a sink rate like a lead balloon. Presumably the FAA wants LSAs to have light wing loadings

. . . so it would seem that aviation would have been better served if wing loading had been used rather than gross weight as a limiting factor for LSAs.

Take an Aeronca 11AC Chief and an 11CC Super Chief, for example. The LSA eligible 65 h.p. 11AC has a gross weight of 1,300 pounds, a wing area of 175 square feet, a wing loading of 7.4 pounds per square foot and a stall/landing speed of 40 mph. The non-eligible 85 h.p. 11CC has a gross weight of 1,350 pounds, the same 175 square feet of wing area, a 7.7 pound wing loading and a stall/landing speed of 43 mph. The 11AC and the 11CC are the same airplane except for the engines and there's hardly a gnat's whisker between the two as far as handling and performance are concerned. Yet, again, the 11AC qualifies as an LSA and the 11CC does not. The 11CC has a gross weight that is only 30 pounds over the 1,320 pound limit. Does that really make any difference? Is the 11AC significantly safer than the 11CC because its wing loading is three tenths of a pound lower and its stall/landing speed is three miles per hour slower?

Now, let's jump over to an example of the new, mostly European Light Sport Aircraft, many of which are currently priced at around a hundred thousand dollars, give or take a few grand. All the articles I've read lately claim that the Rotax 912S powered Flight Design CT is today's top selling LSA. According to a recent Kitplanes directory, the CTSW model has a gross weight of 1,320 pounds and a max speed of 138 mph - both the exact LSA limitations (those German designers are GOOD!). The wing area is 107 square feet and the wing loading is 12.3 pounds per square foot. The stall/landing speed is 45 mph. The aircraft, of course, also complies with the rest of the LSA requirements.

A 12.3 pound per square foot wing loading, eh? Let's compare that with some of the U. S. certified



Young Eagles Rally !

Saturday morning, June 14th, 2008

**at Clermont County Airport (I69)
Batavia, Ohio**

Pilots and Ground Crew Needed!!!

Sign up on our website at www.eaa174.org

Or call Phil Cady at 513-237-5163

**or Norm Beaudette at 513-247-0347
(except Friday before the rally)**

lightplanes that meet all the LSA criteria, except for the fact that they have gross weights over 1,320 pounds.

AERONCA 7EC
Wing area - 170.2 sq. ft.
Gross wt. - 1,450 lbs.
Wing loading - 8.52 lbs/sq/ft
Stall/land spd. - 45 mph
Cont. C-90-12F

CESSNA 120/140
Wing area - 159.3 sq. ft.
Gross wt. - 1,450 lbs.
Wing loading - 9.1 lbs/sq/ft
Stall/land spd. - 42/40 mph
Cont. C-85-12

CESSNA 150 to 150M
(Typical numbers)
Wing area - 159 sq. ft.
Gross wt. - 1,600 lbs.
Wing loading - 10.3 lbs/sq/ft
Stall/land spd. - 48 mph
Cont. O-200-A

ERCOUPE 415H

Wing area - 142 sq. ft.
Gross wt. - 1,360 lbs.
Wing loading - 9.5 lbs/sq/ft
Stall/land spd. - 45 mph
Cont. C-75-12

ERCOUPE 415E/G

Wing area - 142.6 sq. ft.
Gross wt. - 1,400 lbs.
Wing loading - 9.8 lbs/sq/ft
Stall/land spd. - 48 mph
Cont. C-85-12

FUNK B (All models)

Wing area - 169 sq. ft.
Gross wt. - 1,350 lbs.
Wing loading - 7.98 lbs/sq/ft
Stall/land spd. - 40 mph
63 to 85 h.p.

PIPER J-4E

Wing area - 183 sq. ft.
Gross wt. - 1,400 lbs.
Wing loading - 7.65 lbs/sq/ft
Stall/land spd. - 40 mph
Cont. A-75-9

LUSCOMBE 8E/F

Wing area - 140 sq. ft.
Gross wt. - 1,400 lbs.
Wing loading - 10 lbs/sq/ft
Stall/land spd. - 48/40 mph
Cont. C-85/C-90

All these aircraft (and there are others) fit well within the LSA limitations, except for those darn gross weights. Note, however, that all of them have wing loadings lower than the LSA approved Flight Design CTSW. Most of them were designed before or just after World War II when typical general aviation airports were short and unpaved. They needed a low stall/landing speed to safely operate out of such airports and the cheapest way to accomplish that was to put large wings on them.

They also needed to have a decent rate of climb on low horsepower, so ditto the large wings. Most started out with 50 to 65 h.p., then later had 75 and 85 h.p. engines installed in the same lightweight airframes. That allowed the gross weights to be increased - unfortunately for us today - to over 1,320 pounds. Again, however, the wing loadings and stall/landing speeds increased only slightly - those

large wings again. Would anyone claim that an LSA eligible Luscombe 8A is significantly safer than a non-eligible 8E . . . or that an LSA eligible Ercoupe 415C is significantly safer than a non-eligible 415G?

Does anyone think a Rotax powered Flight Design CT is significantly safer than a Continental powered Cessna 150?

In my opinion, all the 1,320 pound gross weight limitation is doing is depriving folks of average means of the opportunity to operate nearly 20,000 additional existing U. S. certificated lightplanes as LSAs. According to the FAA web site, there are 13,845 Cessna 150s alone, plus 3,826 Cessna 120s and 140s. The Aeroncas, Ercoupes, Luscombes, etc., make up the rest. When they are advertised for sale in Trade-A-Plane, most are currently priced in the \$20,000 range. All could be affordable LSAs if wing loading were substituted for gross weight . . . and if a limit at least as high as the Flight Design CT's were allowed.

Or, more simply, if gross weight was just arbitrarily dropped as an LSA limitation . . . much as, apparently, 1,320 pounds was arbitrarily chosen as a limitation.

A probably unintended (at least I hope so) consequence of the 1,320 gross weight limitation is that almost all the U. S. certified two-place lightplanes that do qualify as LSAs have no electrical systems - which means no starters or transponders. Not good for owners based at airports that frown on hand propping . . . and not good for those who want to show up on big airplane's collision avoidance equipment. It would be nice if those folks had the choice of, say, an Aeronca 7EC instead of a non-electrical 7AC.

In short, nothing but good would come from the simple substitution of wing loading for gross weight - at the CT's 12.3 pounds per square foot.

But, wait! The LSA approved Sportsplanes Skylark has a 13 pound per square foot wing loading. That's more than the 12.6 pound wing loading of a 145 h.p., four-place Cessna 170. Geez!

Jack Cox

Spring 2007 issue of Sportsman Pilot.
Reprinted by permission.

HISTORIC FORD TRI-MOTOR FLIGHTS



THURSDAY, JUNE 19 THROUGH SUNDAY, JUNE 22, 2008
9:00 AM to 5:00 PM
HISTORIC MAIN TERMINAL - LUNKEN AIRPORT
CINCINNATI, OHIO

This event is sponsored by EAA Chapter 174, and is a great opportunity for the chapter to exhibit its appreciation for classic aircraft like the Tri-Motor.

We still need volunteers for this event!
<<< Breakfast and lunch are included for volunteers! >>>

**Please contact Kathy Doyle at 513-503-7078
or Greg Baker at 513-885-1844**

Upcoming Events of Interest to Chapter Members (cont. from last page)

Please check our web site at www.eaa174.org for more events and updates

June 20-21, Fri-Sat. Ohio Aerobatic Open. Sanctioned International Aerobatic Club event for the Mid-America Regional Series. Competitors participate in two days of flying various aerobatic figures before a panel of judges. The contestants range from novice to airshow quality pilots. Local vendors provide on-site lunch for reasonable prices and the event itself is FREE to the viewing public. Union County Airport (KMRT), Marysville, OH, 8:00 am to 8:00 pm.

July 11-13, Fri-Sun. Annual Taylorcraft-Aeronca Fly-In. All grassroots aircraft welcome. Breakfast on Saturday and Sunday by EAA Chapter 82. See Chapter Fly-out for July 12 below.
July 12, Sat. Chapter Fly-out. Barber Field (2D1), Alliance, OH. Taylorcraft/Aeronca Fly-In. Meet near Hawk Building, Clermont County Airport, at around 10:00 am.
July 20, Sun. Chapter Meeting. Hawk Building, Clermont County Airport, 2:00 pm.

Upcoming Events of Interest to Chapter Members

Please check our web site at www.eaa174.org for more events and updates

June 7, Sat. Chapter Fly-out. Strawberry Festival and Vintage Aircraft Association. WACO Field (W1F), Troy, OH. Meet near Hawk Building, Clermont County Airport, at around 10:00 am.

June 12-15, Thu-Sun. 14th National Aeronca Association Convention. See more Aeroncas in one place than you'll see anywhere in the world. Tours, forums and lots of fellowship, fun and flying will make this a weekend event you won't want to miss. Hook Field Municipal Airport (MWO), Middletown, OH.

June 14, Sat. Young Eagles Rally. Hawk Building, Clermont County Airport, 8:30 am.

June 15, Sun. 7th Annual Father's Day Fly In. Wide variety of GA aircraft. Brunch starts at 8:00 am. Music entertainment and airplane rides available. Mettel Field Airport (KCEV), Connersville, IN.

June 19-22, Thu-Sun. Ford Tri-Motor Rides at Lunken - Sponsored by Chapter 174. Rides will be scheduled throughout all 4 days. Volunteers are needed! Main Terminal Building, Lunken Municipal Airport (KLUK), Cincinnati, OH.

Continued on previous page...



Next Chapter Event

Young Eagles Rally!

Pilots and Ground Crew Volunteers Needed!

HAWK BUILDING

Clermont County Airport

Saturday, June, 14 2008, 8:00 AM

NOTE: No regular meeting in June
