




The Flightline

EAA Chapter 958 San Marcos, TX
Where every day is a good flying day!
December 2014 Issue

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December Chapter Meeting
at Clear Springs Restaurant

The December meeting will be held 12/6/14 at 7:00 pm. at Clear Springs Restaurant in New Braunfels. Please bring your wives/significant other/friend to help celebrate with the Chapter.

Prez Sez

Happy Holidays to 958

I write this prez sez just before Thanksgiving, It will go into the newsletter on or about the first of December. Thanksgiving will have come and gone, hoping you all had a good day filled with family and friends. The chapter Christmas party is scheduled for the Sixth of December, at Clear Springs Restaurant, 1692 state highway 46 south New Braunfels, Texas. We will get things started around seven P.M.. There will be a white elephant gift exchange so bring that Christmas sweater from last year. Please come on out and enjoy some fine food, spirits, and the company of fellow chapter members. From myself to you and yours all the best for a great holiday season and a great new year.

The chapter meetings will resume at our regular times starting in January. On the third Saturday of each month at 1000 hours. The January meeting will be chapter business elections for officers will be held and other items covered. We Will resume the pancake breakfast that morning also, starting around 0900. Over the coming year the focus of the chapter will be to present as much material as possible on how to choose a project, how to get started, maintenance and upkeep of aircraft, and flight safety. We hope over the coming year to include activities which will allow more hands on involvement of both members their family, friends, and prospective chapter members. Looks to be a great year. Looking forward to seeing all of you at the Christmas party.

Phill Steele

From the Editor

As the year draws to an end it provides an opportunity to reflect on where the chapter is and what can be done to help it grow and interact with the community to promote aviation for both young and old. We've seen some changes with the Chapter in that it has moved its regular meeting venue from New Braunfels airport to a very GA friendly FBO at San Marcos airport. Pancake breakfasts have been reinstated prior to most of the regular meetings and the chapter had an opportunity to provide volunteers at the April AOPA regional fly-in.

Chapter 958 is in position now to make 2015 a banner year. With the proximity to the CAF, the CAP, RedBird Flight training, and other aviation resources close at hand. We want to identify ways we can involve family members in a way that is meaningful to them; we would like to identify resources in the local communities that will provide support for the aviation community; we would like to expand membership - reaching out to the younger adult community through events such as the MAKER show in May and involvement in the local college community; we would like to add a Young Eagles co-chair for San Marcos and expand the young eagles programs to two in New Braunfels and two in San Marcos during the year; and of course, we want to provide meaningful monthly programs for our members.

All this can happen with an enthusiastic approach to EAA aviation and participation from our members. With chapter elections coming up, please consider stepping up to help the organization. If not for an officer position, volunteer for a slot that will help with other activities. We would like someone, 1. to coordinate monthly programs, 2. be a co-chair for San Marcos Young Eagles, 3. perhaps a liaison to interface with communities and recruit for the club. and there are other I'm sure I haven't thought of.

And let's not forget to recognize those who have heeded the call. We need to thank folks behind the scenes like Jack Fairchild for the coffee and doughnuts he provided for a long time; Stan Timmerman who got our new web site up and running; Steve Dixson who stepped in the position of Technical Councillor; Mike Short who has been chairing the Young Eagles program for several years and the pilots who have volunteered their time and resources to take the Young Eagles kids aloft; Guy Bowen who got us going with pancake breakfast again; and Richard Weber who did the newsletter for so long. I'm sure I left someone out but suffice it to say, we all need to participate, and we all need to recognize and thank those who have stepped up to the plate.

Enough now. I hope everyone had a simply fantastic Thanksgiving, and hope to see you at the Christmas Dinner at Clear Springs Restaurant on the 6th.

Happy Hollidays

Russ

Young Eagles

Several of our Chapter Members had an outstanding opportunity to share their love of aviation with the next generation of potential pilots and aviation enthusiast . We hosted Young Eagles flights from KBAZ on November 8, 2014. Ground crew and pilots on hand were Steve Sewell, Eric Marsh, Russell Ross, Ron Vanbeek and myself. We officially flew eight Young Eagles the majority of which were young folks from Big Brothers and Big Sisters. The Big Brothers and Big Sister goals are to help children “realize their potential and build their future.” I believe EAA’s Young Eagles program matches well with their goals.

Mike Short



Steve getting another group ready



Young Eagles straping into Steve's 172



Mike and one of the Young Eagles from Big Brothers/Big Sisters



Eric Marsh and a Young Eagle from the Boy Scouts

Editors note: Special thanks should be given to Mike Short who has been Young Eagles coordinator for over 6 years and Steve Sewell who has not missed a young eagles flight in at least as many years. We need to thank these dedicated members for their service to the program. And Eric Marsh made his debut as a 1st time Young Eagles pilot. Great job Eric.

Elm Creek Fly-In

The Elm Creek Fly-In was held November 1st and the weatherman really cooperated by giving the event absolutely georgeous weather. There was a great shwing of aircraft, and the organizers provided a good dose of Southern hospitality and great food.



Safety Corner

(tire safety continued from October Newsletter)

Retractable



You can see that the room for error in some retractables is very tight. While sizes are reasonably consistent between brands, a retract check is a good idea. Also, a new tire will grow several percent over the first 12 hours of inflation, so it should be rechecked and inflated as required.

Retractable aircraft represent a special case for conservatism. If you are switching tire brands or even tire types from what is currently installed, a gear retraction test is a good idea to be sure that the tire will not interfere in any way with the gear wells or the retraction mechanism.

Some aircraft have quite limited space around the tires and the retraction mechanisms. And remember the tire will grow a bit in service, so if it's a close call when brand-new, chances are you may have a problem later on.

I also recommend against retreads on a retractable. While it's true airlines use retreads, it's a different ballgame there. The airline tires are serial-number tracked, so the carcass history is known from manufacture to retirement.

When to Change the Tube

When changing tires, it may be hard to dump a tube that appears serviceable, , but it's best to use a new tube with a new tire, because the old tube may have grown as much as 25 percent in service. Thus, reusing the tube may be difficult or you may end up with a fold or binding spot in the tire that will fail prematurely. There is no reason why a tube cannot be patched with an in-service tire, providing the tire passes a safety inspection, e.g., no sidewall punctures allowed.

When to Replace a Tire

The tire on the next page had to be re-tired after just one landing when the student landed with the brakes on. Tires should be examined and possibly replaced when they have certain types of cuts, sidewall damage, bulges, fabric fraying, groove cracking or flat spots. The specific criteria for each type of damage is listed below.

(Tire Safety cont.)



New tire ready to be re-tired

Tread Cuts: Inspect tread for cuts and other foreign object damage and mark with crayon or chalk. Follow specific cut-removal criteria from aircraft maintenance manuals, operation manuals or tire-cut limits on the tire sidewall when available. When specific cut-removal criteria are not available, use the following Goodyear removal criteria: any cut into the casing plies on bias tires, any cut into the belt package on radial tires, any cut which extends across one or more rubber tread ribs to the fabric, or rib undercutting at the base of any cut. Warning: Do not probe cracks, cuts or embedded foreign objects while tire is inflated.

Sidewall Damage: Remove tire from service if weatherchecking, cracking, cuts or snags extend down to the casing ply in the sidewall and bead areas. Cuts and cracks deeper than one ply require the tire to be scrapped.

Bulges: Bulges in any part of tire tread, sidewall or bead area indicate a separation or damaged tire. Mark with crayon and remove from service immediately.

Fabric Fraying/Groove Cracking: Tires should be removed from service if groove cracking exposes fabric or if cracking undercuts tread ribs.

Flat Spots: Generally speaking, tires need not be removed because of flat spots due to touchdown and braking or hydroplaning skids unless fabric is exposed. If objectionable unbalance results, however, rebalance the assembly or remove the tire from service.

To help with removing old tires, [Aircraft Spruce & Specialty](#) sells a bead breaker that is much easier than stomping on the old tires.

Aircraft Spruce also has a wealth of jacks and jacking aids to help cradle the main gear legs in many Cessnas and provide a non-slip, safe jacking point.

Problems with New Tires

While quality control of tires continues to be high, it is not infallible. New tires should be balanced and the proper weights applied. Ninety-nine percent of the time that is all there is to it. However, on occasion, a tire may be out-of-round as a problem with the construction process and slip through the QC screen.

It doesn't take a lot to cause a balance problem. It will not generally be obvious to the naked eye without some form of a reference to continuous diameter checks. So if the tire seems to not want to be balanced, don't dismiss the possibility that the "new" tire needs to have some rubber shaved off to make it round.

Retreads



Here is an example of a pure alignment problem with the aircraft. Such wear issues are sometimes difficult to avoid, so one strategy is to reverse the tires before wear on one side becomes too significant. This will effectively double the life of the tire, notwithstanding other disqualifying issues.

Let's look at retread tires. Are they right for you? Generally they are less expensive than new tires of similar quality construction. Goodyear for one has an extensive rejuvenation and testing procedure. As said earlier, some flight schools use them where they get a lot of use over a short time in trainer-type aircraft. That said, the price differential over new is not so significant that I would use them on my plane. Unlike the airlines, you do not know the history of the retread you buy.

Top Tire Recommendations

For a retractable, I recommend a top-level tire such as a Goodyear FC II or III, or whatever is recommended by the POH. With higher takeoff and landing speeds as well as more likelihood of foul weather use, the best tires are the only choice in my opinion. The Goodyear FC III has the greatest cross-section of tread in the 600x6 compared to other popular brands.

Compared to the FC II, the FC III also has Kevlar belts, improved tread design for wet performance, deeper tread, additional resistance to sunlight, and an improved tread compound. These factors add up to about 20 percent more potential landings than the FC II.

For most use, however, the question is not the number of landings but how long it stands up to time. If you fly infrequently in, say, a Skyhawk, you may want to save some money with a more economical choice. Here offerings from Specialty Tire Co. (formerly McCreary Tire) may meet your budget. In increasing costs are the Air Trac, Air Hawk and Super Hawk. Mechanics I deal with recommend the middle-line tires as the most cost-effective.

General Mounting Guidelines

Be sure to keep the paper sticker on a new tire. It has a set of basic mounting instructions for that tire.

Use a clip-on chuck, an extension hose, and a safety cage for inflation. Use a direct reading or dial-type pressure gauge with 5 psi or finer increments that is calibrated on a regular basis. When inflating a tire/wheel assembly, regulate the supply line to a pressure no more than 50 percent higher than the tire service pressure. Do not inflate a tire above rated pressure to seat beads. Make certain that every valve has a cap to retain inflation and prevent dirt, oil and moisture from damaging the core.



Tube Type Mounting

1. Use the correct tire and tube for the wheel assembly.
2. Clean inside of tire, then lubricate lightly with tire talc, not baby powder. [Aircraft Spruce](#) sells the proper talc.)
3. Inflate tube to slightly round, and insert in tire.
4. Align yellow stripe on tube with red balance dot on tire; align red dot with valve if no stripe on tube.
5. When mounting tire and tube on wheel, be sure that wheel bolts are torqued to wheel-manufacturer's instructions before inflating.
6. Inflate tire in a safety cage to rated pressure.
7. Deflate assembly to equalize stretch.
8. Reinflate to rated pressure.
9. After 12-hour stretch period, re-inflate to rated inflation pressure.

Tire Balancing and Landing-Gear Vibration



When jacking, be sure to do it properly. While a wing jack is not necessarily required, be sure any method that you use is safe and solid in case the wind blows while the wheel is off the plane. Check your pilot manual for proper jacking methods for your particular aircraft. A couple of 4x4s stacked under the bare axle is a good safety practice.

It is important that aircraft wheels and tires be as well-balanced as possible. Vibration, shimmy, or out-of-balance is a major complaint. However, in most cases, tire balance is not the cause. Other factors affecting balance and vibration are:

- Flat-spotted tire due to wear and braking
- Out-of-balance wheel halves
- Installation of wheel assembly before full tire growth
- Improperly torqued axle nut
- Improperly installed tube
- Use of non-aircraft tubes

- Bent wheel
- Worn or loose gear components
- Incorrect balancing at wheel assembly

In addition, pressure differences in dual-mounted tires and incorrectly matched diameters of tires mounted on the same axle may cause vibrations or shimmy. With some split wheels, the light spot of the wheel halves is indicated with an “L” stamped on the flange. In assembling these wheels, position the “L’s” 180 degrees apart. If additional static balancing is required after tire mounting, many wheels have provisions for attaching accessory balance weights around the circumference of the flange.

Where to Find

[Aircraft Spruce & Specialty](#) has a convenient chart for all popular aircraft by aircraft model, including tire sizes and ply ratings. They also have a good brand selection.

More information can also be found from the Goodyear [Web site](#).

