

EAA Chapter 648

Longmont, Colorado 80503

Our next meeting on August 8th, 2016, at 7pm, will be held at our usual location, the Colorado Classic Aircraft Building of Carol & Bob Leyner, located on the north side of the Longmont Airport.

August

2016

www.648.eaachapter.org

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Editor

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July Meeting Photos:



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A Message from the President

By now I'm sure most have heard the "Pilot's Bill of Rights 2" was signed into law. Conditions and procedures for obtaining and holding a 3rd Class Medical Certificate have been significantly changed in a positive way. It's not quite the same as a Sport Pilot set of conditions but it does eliminate the major costs and requirements for the individual who just wants to enjoy safe flying. Rather than try to go into details here, it's worth hearing from those who attended the AirVenture event and heard first hand from FAA, EAA and AOPA personnel who had something to say. If you attended AirVenture, be sure to come to the meeting and give a brief summary of your experience.

Dick Socash

President, EAA Chapter 648

NEWSLETTER QUIZ

Each month, we will ask a "question" in the newsletter. Answers are given at the meeting referenced in the newsletter. At the end of the year, there will be a prize to the person who has the most correct answers. Some will be easy and some difficult.

July Question: What is meant by the term "Aircraft-Grade Aluminum?"

July Answer Most aluminum used in industry is not pure aluminum, but various alloys. A common Aluminum alloy is 6061-T6. The four digit number refers to a wrought aluminum alloy whereas a 3 digit number (such as the common A356) is a cast aluminum alloy. 6000 series aluminum is particularly suitable for heat treatment due to the inclusion of both magnesium and silicon. 2000, 6000 and 7000 series can be heat-treated.

The main reason why 6061 is found everywhere is because it is fairly cheap and it is weldable. "Aircraft grade aluminum" refers to many different alloys including, but definitely not limited to 2024, 6061, and 7075. The material used in airframes depends on the aircraft, and aluminum's use for this purpose is declining because of the advent of strong, light composites. Pure aluminum isn't used in very large quantities in most applications. Pure aluminum is primarily used when strength is not important, but electrical and/or thermal conductivity is. Examples of applications of pure aluminum are in heatsinks and electrical connections within integrated circuits.

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Not all 6061, 7075, etc. is made equal. The biggest differences are in fatigue and fracture toughness behavior based on processing differences. For real aircraft grade material, there are numerous requirements in place to ensure proper processing, heat treatment, etc.

August Question: A piston is positioned top dead center and the cylinder is pressurized. A moving air sound is heard at the breather pipe exit point. What does this indicate?"

August Program

Unmanned Air Systems (UASs) History and Future Challenges

We are in the midst of an explosion in the development and use of Unmanned Air Systems (UASs) or drones for military and commercial purposes. Rick Brennan will discuss the history and use of drones in combat and the engineering, tactical, and political challenges drones represent in today's complex world. For those of you who are not acquainted with Rick, he's one of our new members this year and an ex-Navy carrier pilot with over 1000 carrier landings. This promises to be an excellent program of interest to pilots, model airplane enthusiasts and ordinary citizens. Mark your calendar and BRING A GUEST!

Upcoming Event

September is Chapter 648's annual picnic. A date has not been firmed up but it will be on a Saturday close to our usual meeting date, probably the 10th or 17th. Plan on attending and bringing a guest. The picnic has been held, for many years, at the (now former) property of Earl and Barbara Bolton in the town of Eldora. The setting is quiet and beautiful and for those who have not been to a picnic here in the past it's a great time and place to enjoy a special chapter event, while mingling with and getting to know fellow Chapter members.

July Program: Bill Hug showed a video on a couple of "First Flights." He featured his RV and another beautiful double winger constructed from plans. Also got to hear some good stories on first flight experiences and general discussion on what's involved. Looking forward to a member's first flight report any time now.

Other Items of Interest

AIRPLANE PICTURE(S) OF THE MONTH #25

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Another picture from Bill and Mary Mitchell's collection. Had to put this one in as it took me back to 1960 when I got my license at Livermore, California in a Luscombe 8A. No electrical system, no radios, just "needle, ball, and airspeed." A joy to fly.



ANYONE WHO HAS A PLANE AND HAS NOT SUBMITTED A WRITE-UP AND PICTURE(S), PLEASE DO SO. THESE ITEMS FORM AN INTERESTING ADDITION TO OUR NEWSLETTER.

Member Activities

A note to the chapter that Russ Oberg, one of our members, has successfully flown his Murphy Rebel from the Longmont airport. I have inspected Russ' plane a couple of times and have found excellent workmanship and attention to detail. Russ has indicated that he will be sharing data on his building experience and some photos once he has caught his breath and has the airplane flying the way he would like it to. Congratulations, Russ, on a job well done.

Doug Sykes

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To members, friends and aspiring authors. Get published! Send in Your Newsletter Items: **DON'T FORGET!!!** We need to get submissions from the members to include in future newsletters. I'm starting to run out of ideas and lies!! Let's hear from you!! Need "Plane of the Month", trip reports, technical tips, hangar tales, "beautiful planes", and aviation slanted "fish stories." NOTE: To all who have sent in articles. **THANK YOU!!**

Chapter Officers:

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