The Leader In Recreational Aviation

Chapter 736 Newsletter for May 2019

Next Meeting

We're starting meetings again this month

Our next meeting will be held at Curtis Air at the Pittsfield Municipal Airport on **Tuesday, May 21st beginning at 6:00 pm**.

An Interesting Submission - check out the web site

From: Charles Huson <charles.huson@collectyv.com>
Sent: Tuesday, May 7, 2019 9:40 PM
To: psi@fairpoint.net
Subject: Re : EAA Private pilot ground theory

Hi Michael,
My name is Charles, I am working on a Private pilot ground project and wanted to reach out. I found an EAA ground syllabus posted online and used it as the base index of my curated ground project.

Since the initial help came indirectly from the EAA, I thought the Pittsfield chapter might be interested in seeing what I had made, possibly sharing it with the pilots and assisting with recommendations on how I can make it better.

This project is not about making money, just like the EAA, it's my way of giving back to the community. It is completely free and open, and is a constant work in progress. The plan is to make it not only as good as a paid course, but better. It is my belief that aviation knowledge should be shared and not bought.

You can see the project at https://collectyv.com/Course/6aaaaaaab

BASICMED TURNS TWO

It's hard to believe, but the successful effort to reform the third class medical process, today known as BasicMed, turns two years old on May 1. And while nearly 50,000 pilots have already taken advantage of the new medical process, many still have questions.

For those who need a refresher, BasicMed was enacted into law on May 1, 2017, after several decades of no movement at the FAA. When AOPA President Mark Baker came on board, he directed our government affairs team to work with Congress and the FAA to finally fix the costly and bureaucratic system that had developed over the years and BasicMed was born.

When using BasicMed, pilots can fly single- or twin-engine aircraft capable of flying up to 250 knots and 18,000 feet msl, with a maximum take-off weight of up to 6,000 pounds, and up to six seats.

For the nearly 50,000 airmen flying under BasicMed, its significance can't be overstated. Many of those pilots had to endure the time-consuming, costly, and sometimes unnecessary medical testing and process of obtaining multiple special issuances. Discouraged, many gave up on flying. However, thanks to BasicMed provisions, thousands of pilots are once again airborne.

Under 14 CFR Part 68, the regulations that govern BasicMed, a pilot in command must receive a comprehensive medical examination by a state-licensed physician every 48 months (calculated to the exact day); plus he or she must complete an online medical education course every 24 calendar months (calculated to the last day of the month). At this two-year anniversary, BasicMed pilots just need to refresh their aeronautical knowledge through the ***Medical Self-Assessment Course***.

For those pilots already flying under BasicMed, your two-year online medical education course requirement could be fast approaching, and you will need to take the course again. Those pilots will need to enter the same doctor's exam data from the first physical they received, including the name, the state medical license number of the doctor who performed the BasicMed exam, the date of the exam from two years ago, and the doctor's contact information.

After completing the online medical education course, get out and fly! AOPA submits the basic information that you provided at the end of the course to the FAA on your behalf. Just remember to keep track of your physical exam date when you'll be due for another doctor's visit in two more years.

Here is a link to some frequently asked questions about BasicMed, and for pilots who still have questions or are unfamiliar with BasicMed, AOPA has a number of resources on its **Fit to Fly** page. Pilots can also obtain answers to general BasicMed questions by contacting the Pilot Information Center for assistance **via email** or by phone (888-462-3976).

SOCIETY POSTS PRIZES TO SAVE BONANZA FLEET

REWARDS OFFERED FOR CORROSION SOLUTIONS

Beechcraft engineers used magnesium to skin the ruddervators of V-tail Bonanzas dating back to 1947, and magnesium has since become very hard to come by. Engineering an alternative that works as well could earn an engineer, or team of engineers, a share of $200,000 as a reward for saving the fleet from being forever grounded by corrosion.

The **American Bonanza Society Air Safety Foundation** put the word out April 30 that **two separate prizes are available**: up to $20,000 each awarded to as many as five individuals or teams who engineer a ruddervator skinned with something other than magnesium. Solutions must be shared as open source technology and survive peer review. Successful engineering solutions can then be used by the creator, or someone else, to claim a $100,000 prize offered for being the first to secure a supplemental type certificate for a reskinned or replaced ruddervator available to all Beech Model 35 Bonanzas covered by existing type certificates A-777 and 3A15.

It might sound simple, but it's not, or it would have been done long since. ABS Air Safety Foundation Executive Director Tom Turner told AOPA that the dwindling supply of magnesium has been well known and worsening for a long time, and the hope is to find a different material to cover the flight control surfaces on each side of the V35 Bonanzas. A straight tail can be reskinned in aluminum, but some unique characteristics of the ruddervators installed on all V35 models preclude that.

For one, being as far aft of the center of gravity as it gets, the ruddervator control surfaces must be as lightweight as possible. Magnesium also confers unique properties that protect against control surface flutter, Turner added. So far, nobody has figured out a substitute that can do all that magnesium can do without corroding as magnesium does—very quickly, if any part of the metal is exposed. Paint chips are anathema to V-tail Bonanza owners, and corrosion threatens the long-term airworthiness of the entire fleet.

Turner said Textron Aviation, which owns Beechcraft and all of its type certificates, is attempting to source the high-grade magnesium in large enough quantity to meet the need, and may also be attempting to reengineer the ruddervators.

"It's difficult to get different types of materials to achieve the same control flutter protection," Turner said.

The Wichita, Kansas-based organization is funding the prizes with a bequest from Manuel Maciel, and "we think this is one of the best possible uses of this money," Turner said.

While the deadline for a completed STC to be eligible for the $100,000 prize is Dec. 31, 2025, Turner and the owners of V-tail Bonanzas hope an answer might come sooner. Turner said that they set the deadline farther out than anyone really wants to wait because the work will take time, and the society did not want to "limit potential contenders."

The deadline for submitting a materials-tested solution that is eligible for FAA evaluation and an STC application is June 1, 2023. Universities and private firms with metallurgical expertise and access to materials testing equipment are in the best position to come through, along with aircraft manufacturers. While the rules don't preclude the use of magnesium entirely, the $100,000 prize winner will have to have produced five retrofit kits or finished control surface units at a price no more than 20 percent greater than what is currently available.

Drone Training Curriculum Coming to High Schools

A drone training company based in New York recently completed a successful pilot of its training curriculum. SkyOp tested its SkyOp drone training curriculum in a community college located in the

same state. According to the company, the program was so successful, the U.S. Department of Labor's Job Corps is making plans to adopt it for training in high schools, college credit programs, workforce development and continuing education.

The curriculum teaches students to fly drones and prepares them to take the FAA Part 107 pilot exam. The training program also uses hands-on work with data collection and analysis tools used in the drone industry. The company produces courses for industry, government and education, both at the K-12 and college levels.

Through a proprietary learning management system, SkyOp intended to deliver content continually updated to adhere to the latest regulations. The six core components of the curriculum cover 300 hours of instruction and coursework including:

- An introduction to drones, which gives students an overview of drones, how they function and fly with and without GPS, and how they're currently being used for commercial and public safety applications;
- Part 107 test preparation, to help students learn safety and operational requirements for passing the Federal Aviation Agency's remote pilot test and become licensed drone pilots;
- Hands-on drone flight training on an industry-grade drone;
- Drone photo and video production, which will allow students to use their flight skills to capture aerial imagery (both photos and video) and learn how to work with the results in popular digital editing software to create video productions;
- Introduction to autonomous drone apps with hands-on flight training, covering programming of "autonomous missions" to help students become proficient in running these protocols, which are behind many commercial drone deployments; and
- Introduction to Pix4D, an advanced photogrammetry application that turns data into visual representations, including orthomosaic mapping, 3D modeling, point clouds, Normalized Difference Vegetation Index (NDVI) and geographic information systems.

The company said it has also created a 90-hour subset of lessons that can be integrated into other courses, covering the introductory content and the remote pilot license preparation.

The curriculum was tested at New York's Hudson Valley Community College, under a program put together by the U.S. Job Corps in Oneonta, NY. The college has been offering drone-related training for several years. The latest offering drew applicants from around the country. Based on the results of that effort, the Job Corps intends to expand the program, SkyOp reported. The Oneonta center, which educates young people between 16 and 24 in career and technical education topics, delivers multiple 18-month training programs in automotive and machine repair, construction, healthcare. Students live on campus while taking courses.

"SkyOp has allowed us to take our drone pilot training to the next flight level," said Academy Director, Chris Kuhn, in a statement. "When it comes to getting jobs, learning to fly a drone is just the beginning. The SkyOp program goes way beyond preparing students for the FAA Part 107 Remote Pilot exam, to include various flight applications, data collection practices and understanding the useful work drones can deliver."