

WIND IN THE WIRES



The Newsletter of Chapter 26, Experimental Aircraft Association ❖ Seattle, WA ❖ Volume XXIX No. 10 ❖ October 2021

President's Letter

Our little Cessna 150 has been slowly fading in power. The #2 cylinder exhaust valve was leaking so it got to the point that the mechanic thought we should be ready to work on it. After he did the last annual, he said fly 5-6 hours and we will see what is happening. . . It was tired! The last time I flew it, in July, I could barely make it over the trees on take off – solo. I knew it was time. The mechanic had to get a new Continental cylinder, so it finally got fixed yesterday. Today I flew one hour at about 2500 – 2550rpm to break it in. You don't realize that the power is going away. 100hp is not that much but when only three cylinders are working and you probably have 75hp it is not good. When examining the old cylinder, it had a small hole in the exhaust valve and the cylinder itself has a crack where the barrel screws on to the top. So it is not even rebuild able – junk only. The little Cessna is now up to its old self and 'ready for another mission', as the mechanic says. Those airplanes are just straight forward and honest in the way they fly. A good basic airplane.

(Continued on page 2)

**Terminal
Building at
Boeing Field
7259 King County
Airport Access Rd,
Seattle, WA 98108**

**This month:
IN PERSON AT BOEING
FIELD
Thursday @ 7:30**

Meeting Topic:

Cylinder problems and Flying adventures

FUTURE EVENTS

Thanksgiving?

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President's newsletter (Continued)

My youngest daughter and I flew around Mt. Rainier the day before the weather changed and put a fresh coat of snow on it. We wanted to get a look at the rocks and all that was exposed by the warm summer. It was amazing! I fly the Falco every nice evening because the nice evenings will be going away as fall and winter move in. I come home grinning and talking about what a nice ride that was.

I do not have a program planned. I would be happy just to talk about catching up on our flying. We had a good sharing last month with about 7 in person and several on the computer.

I look forward to meeting again at the Boeing Field Terminal and seeing what people have to say. I will bring the tired cylinder to look at and the Mt. pictures if anyone is interested to see. Anyone else have something to look at? Bring it to share.

~Dave Nason

ANATOMY OF A VALVE FAILURE

Burned exhaust valves have long been a leading cause of cylinder failures and power loss in piston aircraft engines. Modern borescopes allow us to look deep inside cylinders—and this guide will help you interpret what you see through the viewfinder.

OVERVIEW: Valves that fail to seat properly are subject to severe and uneven heating that can cause them to weaken and fail in predictable patterns.

* GREEN MEANS STOP

PROGRESSION OF FAILING VALVES

- 1** First indication: Circular color pattern is slightly uneven and nonsymmetrical.
- 2** Crescent-shape, discolored burn pattern developing at upper edge.
- 3** Burn pattern migrates inward.
- 4** **GREEN MEANS STOP.** The green area at the top shows this valve should be replaced immediately. (Note how the uneven burn patterns match the heat distribution chart.)
- 5** Green crescent progresses toward center with valve cracking and failure a serious danger.
- 6** Crack at 12 o'clock shows valve failure is imminent.

* BURNED PIZZAS ARE OK

COLORFUL BUT HEALTHY

Don't be alarmed by the bright color, or deposits around the edges. The symmetrical pattern shows this valve is just fine.

A symmetrical, circular pattern shows a healthy valve. Red and orange deposits are harmless.

Thick lead deposits from an overly rich mixture give this healthy valve the appearance of an overcooked pizza.

LEARN MORE:
www.airsafetyinstitute.org/valves
Special thanks to Adrian Eichhorn and Dr. Peter Wu.

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AOPAFoundation.org

Flight Training Bill Clears Legislative Hurdle

September 24, 2021 – A bipartisan amendment that would reverse the FAA’s recent policy on flight training has been accepted into the House version of the National Defense Authorization Act (NDAA). The amendment, which encompasses the Certainty for General Aviation Pilots Act of 2021, would negate the FAA’s recent policy that requires virtually all training in experimental, limited, and primary categories to be conducted under a letter of deviation authority (LODA) or an exemption.

The NDAA is defense funding bill with a high likelihood of passage, so it is an excellent vehicle for limited and targeted legislative language such as this flight training policy.

Representatives Sam Graves (R-Missouri) and Kai Kahele (D-Hawaii) introduced the successful amendment with support from AOPA, EAA, and other associations. Focus now shifts to the Senate, where a similar amendment will help ensure that the final legislation contains the GA flight training language.

In June, the FAA confirmed that a court ruling that confirmed their interpretation of FAR 91.315 meant that no training for compensation or hire could be done in limited, experimental, and primary category aircraft without a LODA or exemption. This broke with decades of precedent and even applies to an aircraft owner receiving instruction in their own aircraft. While the FAA quickly rolled out a streamlined LODA and exemption system to accommodate this new policy, it is unnecessary, contrary to safety, and has resulted in headaches and confusion for countless pilots and CFIs.

While FAA Administrator Steve Dickson announced the FAA’s intent to change the rule so that the policy would return to its previous state, the rulemaking process is a years-long ordeal. Legislation is by far the faster route to achieve this needed change.

Experimental, Limited, and Primary Category Aircraft Flight Training FAQs

EAA continues to push the FAA for a legitimate solution to the harm and confusion the agency has created with its recent interpretation involving compensated flight training in Experimental, Limited, and Primary Category aircraft. As [previously mentioned](#), the FAA did an unexpected and stunning about-face from decades of standard policy with the change, disregarding longstanding aviation safety practices.

The Letter of Deviation Authority (LODA) process created to allow flight training to continue in Experimental aircraft is no more than an interim quick-fix until a permanent rule change that returns the common-sense flight training policy for this aircraft category, and the safety standards that are present with it. In parallel with the LODA effort is an upcoming exemption process for Limited and Primary categories as well. EAA is urging the FAA to keep these interim steps as simple as possible to minimize the burden to the community.

EAA remains at odds with this recent rule interpretation. We will continue to use every option to remedy this FAA decision, including legislative, regulatory, and legal options, working on our own and in concert with other aviation organizations.

EAA Free Webinars and News

11/2/21 7 p.m. CST

Building a Canard Aircraft Homebuilders Webinar Series By: Mike Beasle

Mike Beasley, editor of Canard Aviation magazine introduces the awesome world of canard aircraft and will cover considerations for selecting, building, owning, and flying these unique and efficient composite aircraft. Discussions will highlight the benefits of canard aircraft and also provide sources of support for builders and owners.

11/10/21 7 p.m. CST

Where's My Oil Pressure? A Case of Maintenance- Induced Failure Qualifies for FAA WINGS and AMT credit. By: Prof. H. Paul Shuch

The most hazardous flight you're ever likely to make is the first one after your airplane comes out of the repair shop. This is a case study of an actual maintenance-induced failure (MIF), leading Prof. H. Paul Shuch to declare an emergency and make an unscheduled power-off landing. Learn how to prepare for and deal with the unexpected — MIF is no myth!

11/17/21 7 p.m. CST

Bravo Buster: Adventures In and Around the National Airspace System Qualifies for FAA WINGS credit. By: Laura Herrmann

"I have a phone number for you to call when you are on the ground, advise when ready to copy." Those are words no pilot wants to hear! Join Laura Herrmann as she describes her inadvertent foray into O'Hare Class B airspace and the events that followed. She'll also discuss her flight around the Washington, D.C., SFRA, including what kind of training is involved. Additionally, she'll be answering the questions: what's the Fluky gate, why is the Leesburg airport special, and how are P56 and R-6608A different? Join us for a tour around some challenging and difficult airspace!

11/3/21 7 p.m. CST

How Hot is Too Hot? Qualifies for FAA WINGS and AMT credit. By: Mike Busch

Keeping CHTs under good control is one of the most important contributors to piston aircraft engine longevity. But how hot is too hot? Is cooler always better? And if CHTs are too hot, how can you figure out why and what can you do to correct it? In this webinar, Mike Busch A&P/IA offers the operational guidelines and troubleshooting techniques you need to keep your CHTs well-behaved.

On the Wreckord by Ron Wanttaja

Firestar – Pennsylvania: The pilot had recently purchased the accident airplane, and had completed numerous taxi runs but found that the airplane was hard to taxi in a straight line. He decided to fly. During the initial climb, the airplane immediately started to drift to the left, and as the airplane continued to climb, the airplane continued to make a left turn. The pilot applied right rudder and aileron and increased the power from 1/2 to 3/4 full but that the airplane continued to the left.

He flew in the local area for about 20 minutes and could not resolve the left turning issue. He attempted to land at his private airstrip, flying two approaches, but the airplane continued turning to the left. During the landing flare on the third approach, the airplane continued to the left and impacted trees.

The pilot reported, "after replaying the accident in my mind, I decided that when I was doing my test taxiing, I might have been introvertly [sic] pressing the left trim button on the control stick. I might have done this several times which resulted in the crash." (7/30/2017)



On the Wreckord by Ron Wanttaja

Zenith CH-701 – Missouri: Although he had no night or instrument flight experience, the sport pilot departed in a non-instrument certificated light sport airplane at night with an overcast ceiling and thunderstorms in the area. Radar data showed that the airplane proceeded on course for about 9 minutes and then entered a right descending turn that continued to ground impact, which was consistent with the pilot attempting to return to the departure airport and not paying attention to his altitude. Examination of the accident site revealed that the airplane struck open level farm land in a right wing-low, nose-low attitude. Examination of the engine and airframe did not reveal any evidence of preimpact anomalies. The pilot had a history of chronic insomnia treated with temazepam, a sedating benzodiazepine, and was regularly prescribed hydrocodone, an opioid analgesic. Toxicology testing detected these drugs and their metabolites in the pilot's system. The pilot was likely impaired by effects from his use of temazepam, and the impairing effects of temazepam were likely enhanced by the pilot's use of hydrocodone. (7/27/2017)



On the Wreckord by Ron Wanttaja

Lancair Evolution – Arizona: The pilot departed on a cross-country flight in his recently purchased high-performance homebuilt. About 25 minutes after takeoff, the pilot informed an air traffic controller that he was experiencing electrical problems and requested to divert to the airport where his maintenance facility was located. The pilot further stated that his electrical system was not charging and that he expected he may lose radio communications due to the loss of electrical power. The pilot continued about 30 minutes to the diversion airport. About one minute after being cleared for landing, the airplane's transponder stopped sending altitude information, consistent with electrical power being too low to power the radio system. The pilot performed a low pass over the runway, presumably for the tower controller to confirm that the landing gear were extended; although the pilot was not in communication with the controller, the controller transmitted that the gear appeared to be down. The airplane continued on a close-in downwind leg and turned onto the base leg of the traffic pattern; witnesses saw it enter a steep left turn followed by a near-vertical descent consistent with an aerodynamic stall.

The accident airplane had experienced electrical problems several days before the accident; however, the pilot's handling of that situation suggested a lack of familiarity with the airplane and its emergency procedures. During that event, he allowed the airplane to become slow at low altitude while troubleshooting, and he attempted to activate the emergency landing gear extension system, but instead pulled the parking brake handle. Due to the postcrash fire, the origin of the electrical system failure could not be determined. (7/17/2017)

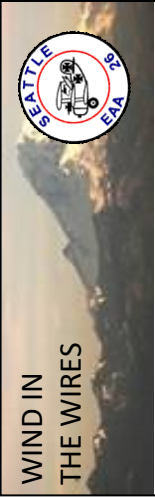




NEWSLETTER



Chapter 26
EXPERIMENTAL AIRCRAFT ASSOCIATION



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The Newsletter of EAA Chapter 26

