

# Tower Talk

2015 Newsletter Award Winner

John Livingston

August 2016

## Upcoming Events:

### August Chapter Events

- **2 - Tuesday, 7:00**  
Board Meeting, Airport  
Conference Room
- **6 - Saturday, 8:30**  
Breakfast, Cedar Falls Family  
Restaurant
- **16 - Tuesday, 7:00**  
Chapter Meeting, Airport  
Conference Room

### August Events:

- **28 - Sunday, 7:30 - 11:00**  
Wings Fly-In/Drive-In  
Omelet Breakfast  
Greenfield (GFZ)

### Iowa DOT Calendar:

[www.iowadot.gov/aviation](http://www.iowadot.gov/aviation)

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## Runway Zero

by Warren Brecheisen,  
Chapter 227 President



There is great news regarding medical reform. President Obama signed the FAA funding extension into law which includes third class medical reform. In the future, most pilots who have held a valid medical certificate since July 2006 will be able to fly without needing another FAA third class medical exam. Pilots will be required to visit their personal physician at least once every four years during which an FAA developed issues list will be discussed and signed by both parties. Pilots will also be required to take an online aeromedical factors course every two years to remain medically qualified to fly.

The legislation as signed considerably expands the operating limitations under which the third class medical will no longer be required. For example, it includes day and night VFR and IFR operations. The FAA will now start working on the rulemaking process and has up to one year

to implement the new legislation. In the meantime, pilots will still be required to keep up their Class III medical certificate. There is considerably more information on EAA website.

I flew down to Davenport to attend a Chapter 75 potluck on July 9th. They have potluck meetings throughout the summer. This was the first one that I had been able to attend for several years. As with all potlucks, the food was outstanding and so was the fellowship. One of their members had his Model T roadster on display. It's registered as a 1922, but he says that the serial plate is the only actual 1922 part on the car.

Our annual Young Eagles Rally is set for September 24<sup>th</sup> and there's a lot of work to be done to prepare for it. If you would like to help Matt and Rebecca with the planning and coordination

before the event, please contact them or me. There is more information about volunteering for the event later in this newsletter.

By the time you read this, AirVenture 2016 will be history. If you go, you will return home with a lot of great memories and probably a lighter wallet. Hope to see you there.

The monthly breakfast for August will be held on Saturday, August 6<sup>th</sup> at the Cedar Falls Family Restaurant. The chapter meeting will be Tuesday, August 16<sup>th</sup>.

Let's get some daylight under those airplane tires!

Warren Brecheisen  
President,  
EAA Chapter 227

***Save the Date!***  
***227 Young Eagles Rally!***  
***Saturday, September 24<sup>th</sup>***

The chapter will host a Young Eagles Flight Rally  
Saturday, September 24<sup>th</sup>, 8am - 12 noon  
Waterloo Regional Airport, Livingston Aviation

***We need your help!*** We need volunteers for the following areas:

- ✈ planning/coordination
- ✈ registration
- ✈ runners
- ✈ pilots
- ✈ airplane parking
- ✈ ground school
- ✈ gate security

Please call or email Matt & Rebecca if you can help:

Phone: 319-266-0421      Email: [matthewevers@mchsi.com](mailto:matthewevers@mchsi.com)

***Take a FREE airplane ride & learn about flying!***  
***Become a Young Eagle! Receive a certificate & logbook!***



**EAA YOUNG EAGLES**  
**FLIGHT RALLY**

**Saturday, September 24, 2016**

(weather permitting, with Sunday as alternate)

**8:00am – 12:00pm**

**Waterloo Regional Airport  
Livingston Aviation**

**For ages 8-17**

**Register on-site anytime between 8:00-11:30**

**A Parent/Legal Guardian must be present at Registration**  
**Rides will be given on a first-come, first-served basis**

Hosted by:

Experimental Aircraft Association (EAA) Chapter 227  
For more information, visit [www.eaa227.com](http://www.eaa227.com)

Please help  
promote this event  
by posting the flyer  
around the area!

[click here for a  
downloadable  
Young Eagles poster](#)

### Sully Fly Out, June 28<sup>th</sup> by John Bender



Good time at Sully.  
All went well.



### Platteville Fly Out, June 29<sup>th</sup> by John Bender

Another great event today. New place.  
Joe Weber suggested in Cuba City.  
7 of us.



### Lone Rock Fly Out, July 1<sup>st</sup> by John Bender

Another SUPER day at Lone Rock.  
13 of us. All went well.  
Makes lots of traffic on my ADS-B system.  
Bought a new iPad Pro which you can see better in bright sun light.  
Screen shots are to show more detail of entire area with all the traffic.



More photos on page 4



## Lone Rock Fly Out, July 1<sup>st</sup> continued



## Ames Fly Out, July 5<sup>th</sup> by John Bender

Another great Flyout.  
10 of us made it to Ames - HICKORY PARK.  
Thanks to the 3 'girls' that were along today.  
As usual, food was terrific.  
Easy to see why it is always busy.



### Sully Fly Out, July 14<sup>th</sup> by John Bender



SUPER day for an early morning flyout. Nice walk down town, and cafe was very busy. There was a lot of traffic while on way to Sully.

### Rushford Flight Breakfast, July 16<sup>th</sup> by Warren Brecheisen

Several of our intrepid Chapter 227 members flew to Rushford, MN for a breakfast, sponsored Chapter 919, on Saturday, July 16. What a great day to fly and what a great breakfast! The food was very good- I'd say about an 8 or 9 out of 10 for flight breakfasts. They served hash browns that were probably the best I've ever eaten. They had a container for a free will offering for breakfast.



The FBO office at Rushford is in a house-like building at the airport. Our members ate inside the house, although there were picnic tables for those who wanted to eat outside. One of the things I especially liked about this particular fly-in was the lack of general public attendance. This took the worry out of leaving one's airplane out with people

around that know little about planes. I figured I would get an early start to beat the crowd and found I was approaching the airport along with at least 3 other airplanes that were close by. When I was on the ground at around 7:40, there were already at least a dozen airplanes on the field and they weren't starting to serve until 8:00. So much for the early start idea! Airplanes were constantly landing and taking off while I was there. I enjoy all the flight breakfasts I attend but I have to say that this one became an instant favorite with me.





## Decorah Fly Out, July 18<sup>th</sup> by John Bender



Chuck R & John D flew to Decorah.

"Great day for flying".

## Cresco Fly In, July 24<sup>th</sup> by John Bender

Sorry - forgot to take pics on ground.  
Nice crowd there.  
Got very overcast.  
All was good.



## 2 Million and Counting from eaa.org



**July 28, 2016** Jodie Gawthrop of Westchester, Illinois, officially became EAA's 2 millionth Young Eagle in a flight flown by actor Harrison Ford, chairman of the Young Eagles program from 2004-2009. Jack J. Pelton, EAA CEO and chairman of the board, said this milestone shows how committed the organization and its volunteers are to making a difference. "I think this program will stand the test of time, and hit 3 million quickly."

## EAA AirVenture Oshkosh Voted No. 1 Airshow in USA Today's 10Best from eaa.org

**July 24, 2016** EAA members and supporters managed to pull through and secure a win for EAA AirVenture Oshkosh as the best air show in America. In all, there were 20 air shows in the category. Thank you to the EAA community your enthusiastic support and to all who spread the word via social media and encouraged others to vote.

## ***EAA Reaches Its Goal!***

### ***Third-Class Medical Reform Now Law!***

*President signs FAA funding bill that includes aeromedical reform from eaa.org*

A huge number of EAA members and other aviators will now be free from many of the expenses and hassles of the current FAA medical certification system under legislation signed on July 15 by President Obama reforming that system. The provision was included in an FAA funding extension that replaces a short-term funding measure that expired on July 15.

"It's important to celebrate this moment, which has been a long time coming and resulted from an incredible amount of work over the past five years," said Jack J. Pelton, EAA CEO/Chairman. "EAA was a leader in getting this done because it was the right thing to do for members, working in cooperation with fellow aviation organizations, congressional leaders, and others to persistently pursue this path against many challenges. This win is for everyone who loves recreational flight."

Details of the new provision, its timeline, and what it means for pilots are outlined in EAA's [Frequently Asked Questions sheet](#) on third-class medical reform.

Appreciation from EAA members quickly came via social media and other channels to thank EAA's persistence in getting medical reform to the finish line:

- "Props to EAA ... for helping shepherd this through!"
- "Good job to all at EAA who have worked tirelessly for our benefit ... you all ROCK!"
- "That is great news! Really believe this will have a positive influence on our industry."
- "It's been a long haul. Thanks for staying the course."
- "Now maybe someday I can fly again!"

Aeromedical reform has been a top advocacy priority of EAA members for a number of years, and led to EAA and AOPA initially petitioning the FAA for changes in the third-class medical certification process. The goal was to reduce the unnecessary regulatory and expense barriers that pushed aviators out of recreational flying and kept potential pilots from engaging in aviation. This new law, which will fully take effect within the next 12 months, surpasses the initial petition request by including more pilots and aircraft.



## Contact Tower *by Larry Lyman, Retired ATC*

**“The controller needs to know who you are, where you are and what you need!”**

Let's begin at the beginning... taxiing for departure. Always remember to let the controller know who is calling; when there are five or ten aircraft on frequency, believe it or not, the controller may not be able to recognize your voice without your callsign! Please use your callsign on EVERY transmission! Remember that the controller needs to know who you are, where you are and what you need! Do you have the current ATIS information? Let your controller know by saying the appropriate ATIS code. Otherwise, the controller is required to tell you the runway, wind and altimeter. But don't think that simply

listening to the ATIS long enough to hear the right code is sufficient. The ATIS will tell you of abnormalities that may be important to you, as well as advising you of current SIGMETs, NAVAID outages and other important information. When you tell the controller you have the current information, you are saying that you are aware of everything contained on that ATIS broadcast.

When taxiing on any airport, be sure that you know and observe the airport markings as you taxi on the airport. Which side of the hold lines should you remain behind? I have had pilots turn off an

active runway and hold short of the broken double line, rather than taxi across it and then hold beyond the double solid line. Make sure you don't cross those solid lines outbound from the ramp until the controller advises you where and how to taxi! Someone else that you may not be aware of might already be taxiing on that taxiway directly in front of you. If you aren't sure what a sign or marking means, be sure to ask your instructor or even the local FBO operator BEFORE you try to interpret it... your guess may sound good, but it may be completely wrong...OOPS!

***Congratulations Larry Lyman on your retirement!  
Thank you for your support and dedication  
for 16 years as an ALO ATC***

**LiveATC.net**  
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<b>ICAO:</b> KALO <b>IATA:</b> ALO <b>Airport:</b> Waterloo Regional Airport
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<b>KALO Airport Info</b> ( <a href="#">AirNav</a> ) ( <a href="#">iFlightPlanner</a> )
<b>KALO VFR Sectional Chart</b> ( <a href="#">iFlightPlanner</a> )
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## ***Tech Notes - Power Up! Part 2***

***by Mike Lewis***

Last month I discussed some options for powering your homebuilt. I suggested that this month I would share my experiences in overhauling an engine for my project. Actually I should back up a bit. When I selected an engine for the Diamant, I bought a Lycoming O-320 from a Trade-A-Plane ad. It was listed as about 3300 hrs total time and 0 SMOH and it happened to be located in LeMars, Iowa. It came out of a Piper Tri-Pacer. I talked to the seller, Steve Pritts, who was the A&P and Al for Degner Aviation in LeMars and we struck a deal. After talking with Steve and telling him my plans for the engine, he explained that he had not reassembled the engine yet, but maybe since I was putting it in a homebuilt, I would like to reassemble it myself. Sounded reasonable to me, so off I went. I bought a shop manual and enlisted the help of some Cedar Rapids A&Ps, got the engine reassembled and learned a lot in the process.

On my second engine project, which I referred to last month, I bought a first run core, and rebuilt it. If you are going to overhaul your own engine, I think I would have to stress as a first and most important step to buy the overhaul manual, read it and understand it. A parts manual would also be money well spent. The Lycoming manual deals with most all of Lycoming's air

cooled reciprocating lines, so there are many fine details that may or may not be specific to your engine. Again, make sure you understand and know the difference. Second, use the correct tools so plan on buying a few. There are some unique tools required that you just can't do the job without. Next, get to know a good A&P who will answer questions when necessary. Along similar lines, don't hesitate to call your engine manufacturer's tech help line. This might be a good place to point out something. You will probably be relying on your local A&P for advice here. Remember, he is in business so be prepared to pay for his help.

So what is really involved in overhauling your engine? Probably the majority of the work is just disassembly, inspection and parts replacement, and reassembly. Usually the first step will be disassembly. As a practical matter you will need an engine stand. This is typically a steel tube with a set of three legs making a tripod, and a disc welded on top that has a bolt pattern to match your crankshaft flange. The engine is then bolted (front down) via the prop flange to the stand.

The first disassembly will probably be to remove any baffles, then all accessories (carburetor, mags, starter, alternator etc.). Next there will be a rear cover or accessory case and the oil sump to take

off. You can remove the mag drive and idler gears, tach drive shaft, etc. Then comes cylinders. Reference your overhaul manual here, as connecting rod contact with the crankcase can damage the crankcase cylinder bores in if not properly done. Once the cylinders are removed, the connecting rods can be removed.

At this point you have a bare case with crankshaft and camshaft installed. The Lycoming case halves were assembled using gasket shellac and a silk thread in the parting line. That probably leaves them "stuck" together even after the case half bolts are removed. In my case I was "chicken" to try to split the case halves so I took it to Neiderhauser Airways and had Larry Grumman do that. The next work that was required would have to be done by Larry and his guys anyway so it only made sense to me to let him split the case. After the case is split the cam followers can be removed. Then the hydraulic units can be removed from the cam follower bodies (assuming you have hydraulic lifters). You have been reading your overhaul manual so you know you should not use a magnetic pick to remove the hydraulic units, right?

***"I would have to stress as a first and most important step..."***

***"...don't hesitate to call your engine manufacturer's tech help line."***

*Continued on page 10*

## ***Tech Notes - from page 9***

***“...you  
and you’re  
A&P must  
decide...”***

That “next work” was cleaning the case and inspecting it, inspecting the crankshaft, and camshaft. The case halves were soaked in a solvent bath overnight first. This removes the paint and all the “gunk” from all the little passages. Once cleaned, the case can be inspected for any minute cracks. This is done with a process called Zyflo. It is a dye penetrate process. The dye is applied to the aluminum case, and then developed and observed under ultraviolet light I believe.

Assuming the case is still deemed usable, there are several bearing surfaces that are measured. There is a table of limits included in the overhaul manual that will define what is allowed. Usually there will be factory new limits (maximum and minimum) and serviceable limits. If all limits are within the range you will accept (new or serviceable) it is on to the next step. If however you have a feature that is out of limits, you and your A&P must decide if it can be re-

paired. As an example, if a cam bearing bore is oversized, it may be repaired by slightly machining down the joint faces of the case, and then reboring the cam bearing bores as well as the crankshaft bearing bores. This is something that would be farmed out to a shop that specializes in this type of work.

Next month I’ll pick this with the crankshaft.

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## **THE BOOK NOOK**

### **Contact! The Story of the Early Aviators by Henry Villard Reviewed by Warren Brecheisen**

***“...the  
Americans  
considered  
the airplane  
a useless  
curiosity...”***

My wife, Dorothy, spotted this gem of a book on sale for half price at the Charles Lindbergh museum in Little Falls, Minnesota. If you have ever wondered what went on in the aviation world between the Wright Brothers first flight and the start of World War I, this is the book to read. It talks about most of the early pioneers of aviation: Orville and Wilber Wright, Glen Curtiss, Santos Dumont, Louis Bleriot, Lincoln Beachy and a host of others that mostly I had never heard of.

I knew that the US was far

behind the Europeans in the development of aviation when World War I broke out, but I never knew why. This book explains how that happened. Basically, Americans considered the airplane a useless curiosity in the early days and development of the automobile was the primary focus here. In Europe, and especially in France, the airplane fired the imaginations of the people and aeronautical science advanced rapidly and was spurred on by numerous flight contests for speed, altitude and other performance parameters. The Curtiss JN-4 (Jenny) was

the best airplane the US had at the outbreak of the war, but it was only good enough to serve as a trainer for that conflict.

This book is full of names, facts and figures and history. At times all the data can get a little tedious to read, but mostly it’s an exciting history that makes one appreciate the sacrifices many people (including their lives) made in the quest for better and safer airplanes during the early years of aviation.

## Chapter Classifieds

**Thank you to Rex Pershing who has donated some tools to the chapter!**  
 Along with them is a prop extension to sell and donate the proceeds to the chapter.

**FOR SALE:**

**SAE 1 Prop Spacer**

It is a 6 inch extension off a  
 Lycoming 235 that uses 3/8 inch bolts.  
 \$100 or best offer

Please Contact:

Doug Mattson

[dougmatton@gmail.com](mailto:dougmatton@gmail.com)

319-939-0179



**FOR SALE:**

**Continental C85-12F Engine**  
 from a Cessna 140.

I cleaned and pickled  
 this engine before 2000.  
 Asking \$2500

C85-12F Engine

**Carburetor "MA3SPA"**

I used it on the O290 engine in  
 my exp Mustang II.  
 Asking \$400

I have more photos if needed.

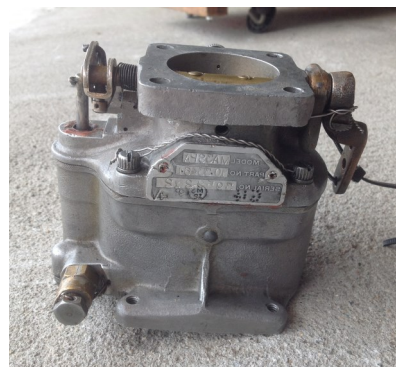
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Please contact:

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Carburetor

Whether you are looking to sell something or looking to buy,  
 please send your information to [chrisr@cfu.net](mailto:chrisr@cfu.net).

*And be sure to let me know when it sells!*



## NEWSLETTER INFORMATION

If you have an article, picture, or anything else you would like to share in a future newsletter, please contact:  
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## EAA CHAPTER 227 LEADERSHIP

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**Do you have anything aviation related that you would like to sell?  
Please let us know so we can include items in  
CLASSIFIED ADS**

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