



EAA Chapter 691 Newsletter

February 2023

From my banner towing days- would love to
Showcase YOUR PHOTO HERE!

On the Web @ www.eaa691.org

EAA 691 is:

President: Will Fox

Vice President: John George

Secretary: Pierre Levy

Treasurer: David Young

Web Editor: Marilyn Phillips

Newsletter Editor: April Fox

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Upcoming Events

➔ **Meetings Schedule (unless otherwise noted)** ←

9:30am - social time

10:00am - business meeting

**10:30am -
speaker/workshop/training**

February 18th, 2023:

Chapter Flyout to Grants (KGNT), 9:00- 11:00AM.

March 11th, 2023:

Young Eagles Workshop - KLAM Terminal Building, 8:30AM-3:30PM.

March 18th, 2023:

Chapter Fly-out to Navajo Lake -Navajo Lake Airport (1V0) - 9:00-11:00 AM.

April 15th, 2023:

Building Skills Training – Composites- Los Alamos Hangar - 10:00-12:00 AM

May 20th, 2023:

Back Country Flying – Ron Keller KSAF Jet Center Hangar, 10:00AM-12:00 AM.

This Saturday, February 18th **Flyout to the Airway
Heritage Museum in Grants NM (KGNT)**

All are welcome, pilots will meet @ KGNT @ 9:00am,
Pilot briefing online at www.eaa691.org



Young Eagles Workshop



Designed and Sponsored by Chap 691 Green Chile
Chapter of Experiment Aircraft Association to offer
learning and hands-on activities for youths ages 11 to 17

**11 March 2023 (8:30am -3:30pm)
At Los Alamos County Airport**

Interested Parties Contact:
Walt Atchison (wla116920@gmail.com)
Will Fox (tailspinfox@gmail.com)



- Intro to General Aviation
- The Art of Aviating
- The Art of Navigating
- The Art of Communicating
- Building Aircraft
- Hands on Wing Rib Project



Letter from the editor

by April Fox



It's that time of year again when legislature is passed in our great state of NM. There are a few bills on the table this year, and as per the NMPA, some that are requesting the termination of leaded fuel by 2028. Please find the information below and consider contacting your local representatives and Senators.

From NMPA:

"A Senate bill to ban leaded fuel by January 1, 2028 is of concern to many of our members.

•**SB 238 No Aviation Fuel with Lead**

Sales: "RELATING TO AVIATION; PROHIBITING THE SALE OF AVIATION FUEL THAT CONTAINS LEAD BEGINNING JANUARY 1, 2028."

An [NMDOT Analysis](#) indicates the federal push is for 2030. AOPA is opposing this bill. Although NMPA pilots are anxious for unleaded fuel, our concern is ensuring that an alternative full replacement unleaded fuel will be readily available throughout NM before we forbid the sale of leaded fuel.

When it goes to the Senate Transportation committee, practicality arguments may be better addressed. Track continued bill progress here: [SB238 - NM Legislature \(nmlegis.gov\)](https://www.nmlegis.gov/sb238) "

Please don't hesitate to send me articles, photos of you flying, or your build projects- I'm always looking for newsletter content. Thanks!

President's 2022 Report

by Will Fox



The Midcontinental Airway.

"The only constant in life is change"– Heraclitus

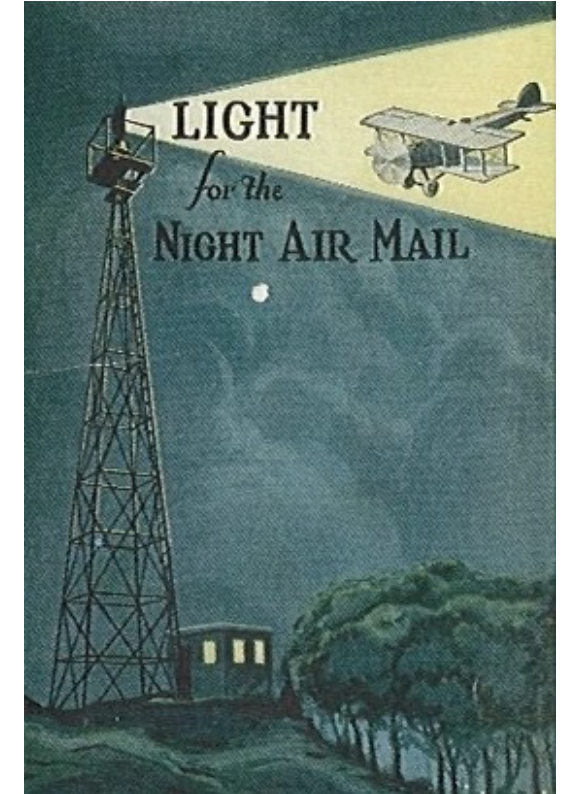
We have a flyout to Grants (KGNT) on Saturday February 18th to visit the Aviation Heritage Museum that's right on the airport. The tour will begin at 9:00 am. You won't want to miss this if you are an aviation history buff or interested in New Mexico's role in the development of the Midcontinental Airway.

[Charles Lindberg](#) was heavily involved in the development of this route. He had landed in Santa Fe a year or so prior to promote the future of aviation and noted in a speech to an enthusiast crowd that aircraft engines were now powerful enough to fly into and out of high elevation airstrips like the one in Santa Fe.

During Lindberg's speech, [Katherine Stinson Otero](#), a resident of Santa Fe, was introduced as the world's greatest woman flyer. Katherine was 19 years old in 1910 when she became the fourth woman in the US to earn a pilot's license. She went on to become a very accomplished flyer and stunt pilot. She toured the US doing exhibition flying and was known as the "Flying Schoolgirl". She started a flying school with her sister and brother and helped train pilots for WWI. She and her mother went on to start the Stinson Aircraft Company.

The city of Santa Fe had hastily constructed the 1000 foot long dirt strip that straddled Cerrillos Road just south of Santa Fe in anticipation of Lucky Lindy's arrival. When he got ready to depart the next day he said, *"You've made a fine start, go ahead and finish it. The next thing you'll want is a hangar, of course."* At the time there was no hangar on the airstrip, just a barb wire "corral" of sorts to protect The Spirit of Saint Louis from the eager crowds.

New Mexico has a rich aviation heritage that needs to be explored to be truly appreciated. The weather looks good for Saturday so I hope to see you in Grants.



"The [Western New Mexico Aviation Heritage Museum](#) features two 1929 historic structures: a 51-foot airway beacon tower, and its electric-generator shed." Courtesy of Cibola County Historical Society.



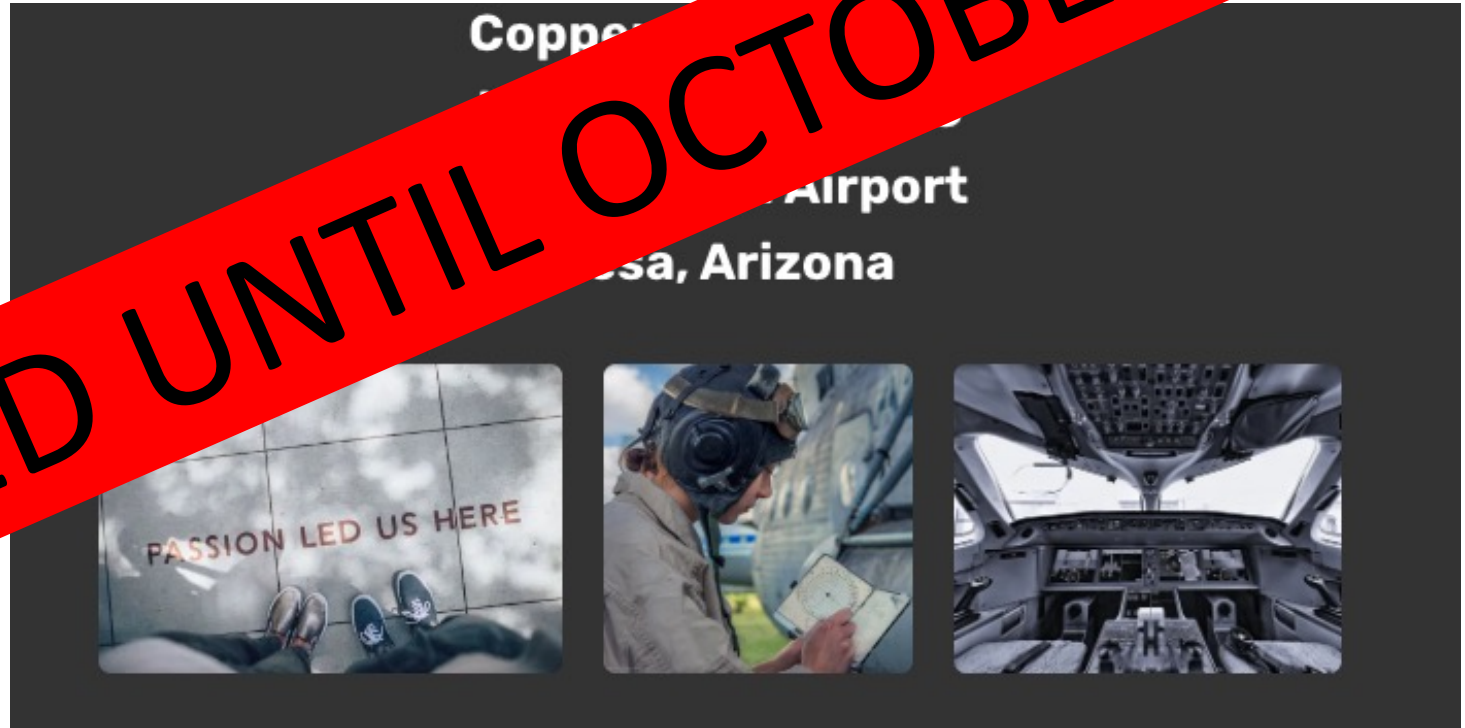
Member Happenings

A few members are headed for the Copperstate Fly-in March 24-26 in Mesa AZ.

They are staying at the

La Quinta
Wyndham

6500 Peristition Springs Blvd.
Mesa, AZ 85206



POSTPONED UNTIL OCTOBER

Tech Corner

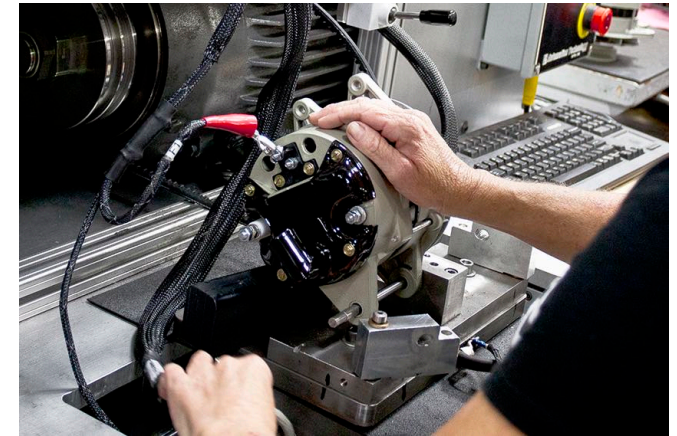
by Will Fox



Alternator Failure

I suddenly noticed the “Alternator Failure” light on the annunciator panel had come on. I stared at it a moment hoping it would go off, and then I looked over at the bus voltage which was showing 24.5 volts instead of the normal 27.9 volts. I looked at the breaker panel and none of the breakers had popped out. I immediately wondered how long the red light had been on. I was returning from a cross country flight on a nice evening, and it was getting close to dusk. My eyes had been outside the cockpit most of the time watching the changing colors and scenery as the sun set. I hadn’t been looking at the panel much. Aircraft batteries don’t last all that long without the alternator to charge them, maybe 15 to 30 minutes with everything turned on. I began turning off everything I didn’t need at the moment, including the radios, navigation and strobe lights, alternator, etc. I needed to conserve electricity. I was over the mountains, it was getting dark, and I needed enough juice left to lower the gear for landing. I turned to go direct to the airport, hoping I wouldn’t have to use the emergency gear release.

The Questair Venture has an emergency mechanical gear release system should the electrical system fail; but to be honest, I would hate to rely on it. It is a one shot system that mechanically releases the landing gear when you actuate a couple of control cables. However, the cables are very stiff, regardless of how well they are lubricated, and also located in a manner as to make it difficult to apply much force when you try to pull on them. I carry a pry bar just in case fear and adrenaline are insufficient to do the job. Upon release, gravity in combination with a couple of nitrogen struts push the gear down and forward into position. You need to slow the plane down to below 90 kts for the struts to be able to overcome the force on the landing gear due to the airstream. I test the system annually during the condition inspection and am always somewhat amazed that it actually seems to work. It is not easy to simulate the air loads though with the plane on the jacks, so it is important to make sure the struts are up to the job. They should be replaced periodically and naturally they are difficult to swap out, because that is often the way of things when it comes to required maintenance on aircraft. I hoped they would do their job if needed. In all honesty, the system is a bit gimmicky and needs to be redesigned and made more robust and easier to actuate. It is on my to-do list, but that wasn’t going to help me right now.



Keeping your alternator in good shape is important. Experts recommend that you have it inspected every 500 hours.



I was about 15 minutes out of Los Alamos when I had noticed the “Alternator Failed” light. I didn’t know how long it had been on before that. I guessed that the alternator hadn’t been out of action for more than a few minutes because the annunciator panel was right in front of me at the top of the panel. An annunciator panel is a nice feature and all planes should have one. Unfortunately many don’t, and your first inkling of an electrical system failure is when the radio sounds scratchy and your transmissions become unreadable. I thought about putting the gear down immediately, but in the Venture that triples the drag and cuts the speed in half. It would be dark and the battery would be completely dead by the time I got to Los Alamos, so I nixed that plan.

Ten miles out, I turned one of my radios back on and made a radio call announcing that I was inbound for landing. A medivac helicopter responded saying they were 8 miles out and inbound as well. I told them I had an alternator failure and asked them if I could land first. They said no problem, and that they would follow me in. There’s nothing like having instant help right behind you when you’re on approach and worried about your gear coming down! Five miles out I looked at the battery voltage and it was down to 24 volts (about 45% capacity), so I hit the gear down switch and watched the gear come down and the green lights come on. That was a relief! It was getting dark, so I turned the navigation and strobe lights back on in case there was any other traffic in the area. The landing was better than most, which is often the case when a pilot is worried about the gear in a retractable gear airplane. I taxied to the hangar and shut down, happy to have me and the plane in one piece.

An alternator failure can range from an inconvenience to an emergency depending on the conditions and situation. Day VFR in good weather and with plenty of airports to land at, it’s an inconvenience. IFR and in the clouds, it’s an emergency. In my case it was no big deal, but that would have changed in a hurry if I hadn’t been able to get the gear down.

I learned a few things from this experience. One is that I should have tried cycling the alternator switch to try to restore electrical power. Turns out that this can sometimes get a voltage regulator back on line if it has a problem. It wouldn’t have helped in my case, but it is a good thing to know. Secondly, battery voltage is a good indication of remaining capacity, so it might be nice to have a chart of that handy. Thirdly, I need to move the redesign of the emergency gear release farther up the to-do list. And finally, a back-up source of electrical power might not be a bad idea, particularly if I’m going to be flying over the mountains in the dark.

Level	Voltage
100%	26.00 Volts
90%	25.55 Volts
80%	25.00 Volts
70%	24.60 Volts
60%	24.30 Volts
50%	24.10 Volts
40%	23.90 Volts
30%	23.62 Volts
20%	23.32 Volts
10%	23.02 Volts
0%	21.00 Volts

An accurate volt meter can tell you what the state of charge is for your battery. In my case I have a 24 volt AGM lead acid battery. At 24.5 volts it has close to 70% capacity left. When I landed my volt meter read 24.0 volts indicating that I had about 45% capacity left. Green means full current capability. Yellow means diminished current capability. Red means severely diminished current capability. Note, battery capacity and voltage will decrease with high discharge rates.

EAA Chapter 691 Membership Application/Renewal Form



Please mail this form along with \$25 to our Chapter Treasurer, Checks can be made out to EAA Chapter 691:

David Young
819 Gonzales Rd
Santa Fe, NM 87501

Name: _____

Spouse/partner's Name: _____

EAA #: _____ Expiration Date (MM/YY) ____ / ____

Address: _____ City: _____ State: _____ ZIP: _____

E-mail: _____

Home phone: _____

Work phone: _____

Cell phone: _____

Please list your currently flying A/C and any finished or in-progress projects: