



EAA Chapter 691 Newsletter

May 2023

“Tell the shooter to cut me loose!” Paul Price’s plane in Kanab UT- Thanks Paul!

On the Web @ eachapter691.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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**THIS
Saturday
May 20
@ SAF**

Join us this Saturday, May 20 at the Santa Fe Jet Center for Ron Keller's talk on **Back Country Flying**. Ron has been an integral part of the back country aviation community here in New Mexico for many years. He is the [RAF New Mexico State Liaison](#) and an active member in the [NMPA's Back Country Committee](#).



Ron Keller





Come with us to Navajo Lake Airport!

Sunday, May 21, 2023.

(note chapter meeting Saturday May 20, KSAF)

Plan to arrive 9-10 am.

Bring chairs and supplies for a brunch at the airfield, and/or join us for a boat tour of the lake, see the Navajo Lake Marina, and have lunch at the Marina restaurant.

Plan to return homeward by 2 pm.

SurfNTurf boats of Santa Fe will provide boats and transport to and from the airport.

Airport is unattended, with no services.

Runway 6/24 is 5022x 60 ft, asphalt, in good condition.

CTAF is 122.9

Nearest Airports are

Durango, CO KDRO, ASOS 120.625

Farmington, NM KFMN ATIS 127.15

1V0 is 90 nm (direct) from KLAM, E14, 105 NM from KSAF

For more information, or to request or volunteer to give a ride, contact John George or Will Fox.

jsg.lanm@gmail.com

tailspinfox@gmail.com



Lat/Long: 36-48-29.8460N 107-39-09.4110'
36-48.497433N 107-39.156850W
36.8082906,-107.6526142
(estimated)
Elevation: 6478.2 ft. / 1975 m (estimated)

Upcoming Events

➔ Meetings Schedule (unless otherwise noted) ←

9:30am - social time

10:00am - business meeting

10:30am -
speaker/workshop/training

May 20th, 2023:

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

May 21st, 2023:

Chapter Fly-out to Navajo Lake and brunch followed by a Marina visit - Navajo Lake Airport (1V0) - 9:00 AM-2:00 PM.

June 17th, 2023:

Chapter Flyout to Reserve and brunch – Reserve Airport (T16) , 9:00-11:00 AM.

Check out our Chapter Website at <https://www.eaachapter691.org> for more information about upcoming activities.

President's Report

by Will Fox



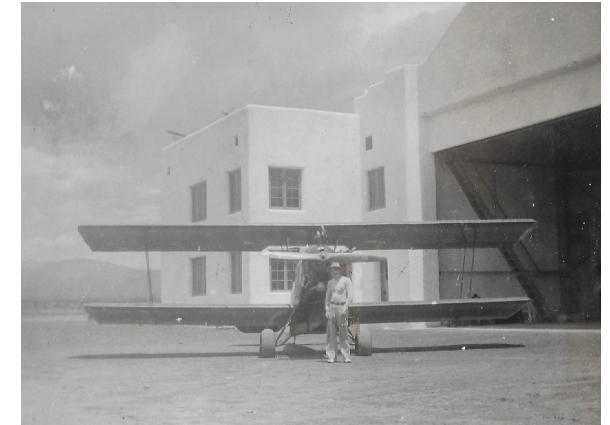
Summer Flying

It looks like it is going to be a really good Summer for flying this year. The snowy winter and the wet spring bodes well for some great summer flying. NOAA declared the end of our La Nina in March and the prospects for a El Nino this fall and winter are looking better and better. So lets all plan to get out and do some bug smashing.

This coming Saturday, May 20, 2023 at 10:30am in the Santa Fe Jet Center Pilot Lounge, Ron Keller will talk to us about **Back Country Flying**. Ron is the main mover and shaker in the New Mexico Pilot's Association Back Country program and and is an excellent speaker, so I'm sure you'll enjoy his presentation. As usual Social time starts at 9:30am with coffee and donuts followed by a short business meeting at 10:00am and then Ron's talk at 10:30am.

The **Next** day, Sunday May 21st, 2023 is our flyout to the Navajo Lake Airport (1V0) for a morning of Bring-Your-Own-Brunch-And-Lawn-Chair Meeting. Be there or be square at 9:00am. But that's not all. John George has arranged for a trip to the Navajo Lake marina for lunch and a boat ride for those that are interested. If you need a plane ride, call me and I'll try to find you one (505 690-7132).

Bill Sauter down in Santa Fe recently donated some really interesting airplane parts to the Chapter. It turns out that Bill's dad was a pilot and collected parts from all types of different aircraft and Bill was looking for a good home for them. Of particular interest is a collection of parts from a Laird Swallow. The Swallow was a tandem, 2- place, bi-wing trainer developed in the 1920s. The one Bill had was in an accident and got banged up and is not complete, but appears to be restorable. Swallow's are a pretty rare breed and we are told by the larger aviation community that it would be great if we could restore it. Well the Chapter now has the Swallow along with a number of other vintage aircraft parts stored up in Los Alamos thanks to the EAA 691 Aircraft Movers☺ Skip Egdorf has done a lot of research on the Swallow and we will try to get him to give us a good writeup for a future newsletter.



Laird Swallow in front of the old Santa Fe airport.



EAA 691 Aircraft Movers taking a flying break.

Letter from the editor(s)

by April Fox



I want to extend a big thank you to all the members who have helped to put together kits and those who have volunteered to display their planes (weather permitting) for the STEM Santa Fe young women's aviation workshop in June. I feel very grateful to be a part of such an awesome and dynamic chapter!

Looking forward to seeing you all at the upcoming chapter meeting in Santa Fe.

Thanks again to everyone who contributes to the newsletter. Send your photos to forkfox@gmail.com to be featured in upcoming newsletters!

Best,
April

Member Happenings



Working on wing-rib build kits with Skip.





Skip taught some of us how to build wing-rib kits for the upcoming STEM Santa Fe workshop in June. We are also cutting kits for aluminum cell phone holders to teach young girls how to rivet.



David's Glider Lessons at Vinon Sur Verdon



Tech Corner

by Will Fox



Sticky Valves

I had just taken off and the end of the runway was going under my nose, when the engine suddenly started vibrating like crazy and lost power. I didn't know for sure in the moment what had happened but I tried shoving the mixture in to see if it made any difference. It didn't, so I let the nose drop and turned back towards the runway. I was pretty much in automatic mode at that point. The ground rush in the turn would have been startling if I had never seen it before, but I had practiced this maneuver a number of times so I expected it. I could tell I didn't have a lot of altitude to spare but I had enough, so when I rolled out of the 270 degrees of turn over the runway I was still 50' AGL. I landed and turned off the runway onto the ramp at midfield. As I taxied over to a tiedown, the engine cleaned up and started running normally again. I ran the engine up and did a magneto and mixture check and everything checked out. The engine instruments all looked fine. I hate to admit this, but I thought about taking off again and climbing up over the airport and then flying back to home base which was only 15 minutes away. It sure would be easier to troubleshoot and work on the plane in my hangar with all my tools... At that point however, with great resistance and enormous effort, my rational brain took over my rat brain and told me that wasn't the smartest idea I ever had. As I sat there in the plane and wondered what could have happened to the engine, I remembered Liard River. I was a brand new pilot on the trip of a lifetime when, in the middle of nowhere the airplane engine started misbehaving...

My buddy Charlie and I were in Anchorage, Alaska waiting for the weather to clear so we could fly our C-150 thru Lake Clark Pass and get on with our trip to Dillingham. We were wandering around the ramp looking at planes when we met an old mechanic working on one of them. He asked us if we had flown in with the C-150 and where we were from. We told him we were from Los Alamos, New Mexico, and he asked us how we got so lost:-). We had a great conversation with him and at one point he asked us if our C-150 had been experiencing any "Morning Sickness". I had just gotten my pilot license and Charlie was half way through his training so we were both pretty new to aviation and had no idea what he was talking about. We admitted our ignorance, and he explained to us that Morning Sickness was a symptom of a [sticky valve](#). He told us it was caused by the extra lead content in 100LL avgas that by then had replaced the old 80/87 avgas. The extra lead created a buildup that would stick to the inside of the valve guide causing an interference fit



The exhaust valve on this Lycoming is stuck open.

between the valve and the guide. It was called Morning Sickness because the valve would stick when you first started the engine in the morning after the engine had cooled down overnight. The valve usually stuck open and caused the engine to run rough until it warmed up a little bit and the clearance opened up enough for the valve springs to be able to close the valve. Then it would run fine. He asked if that had ever happened to us. Turns out that we had noticed the engine would run rough sometimes after a cold start, but we figured it was because we primed it a little too much. Probably Morning Sickness he said, and the problem is that there would come a day when there was so much lead in the valve guide that it would stay stuck open. When that happens he said, "You need to know how to do the "Rope Trick".

We thought he was pulling our leg so we started looking around for the other jokers that were going to start laughing at the two numbnuts from New Mexico. We didn't see anybody else and he kept talking, so we looked at each other, shrugged our shoulders and kept listening. The Rope Trick, he explained, was a way to get the valve unstuck should it stick open and needed a little push to free it up. First you have to find the cylinder with the stuck valve. You do that by running the engine and then feeling each cylinder until you find the one that is cold because it isn't firing. Then you take the top spark plug out, and turn the prop until the piston is at bottom dead center. Next you poke several feet of rope into the cylinder until it won't hold any more. Then you turn the prop to compress the rope against the stuck-open valve and when you get enough force on it, the valve will snap shut with a bang. After that you pull the rope out, put the spark plug back in and start the engine, and it will run fine. For a while. Then he gave us a serious stare and said it wouldn't work forever so we should ream the valve guides for a more permanent fix, sooner rather than later. We could tell now that he was dead serious. He went on to tell us how we could ream the exhaust valve guide without pulling the cylinder as long as we had a few tools, a reamer, and some dental floss. I quietly wondered if they called that the [Floss Trick](#)☺ Then he pulled some nylon rope out of his tool bag, gave it to us, and said it might get us out of a tough spot sometime. He wished us luck and got back to fixing the plane he was working on. The next day it started to clear up and the clouds lifted up over Lake Clark Pass just enough to let us get through and go on to Dillingham.

Well, guess what happened? A couple of weeks later we were headed home, when we landed one evening at a remote strip along the Liard River in Canada. It was a beautiful place but the mosquitoes were terrible. We smeared ourselves with DEET but that didn't stop the little buggers from flying into our mouths and ears and anywhere else they could. We stood in the smoke of the campfire to eat dinner and then called it a night and headed for the tent to go to sleep. You could hear the buzzing through the tent walls. No sleeping under the stars that night. The next morning we got up and the mosquitoes were just as bad. We skipped breakfast and packed up quick as we could, jumped in the plane, and after killing a couple hundred mosquitos that followed us in, cranked the engine up. You guessed it, Morning Sickness!!



An airstrip on the Liard River in Canada. We stuck a valve in the Continental O-200 on our Cessna 150 on a visit to Alaska. I remember two things about this airstrip. The mosquitos and using the Rope Trick to unstick the valve☺

The engine was running rough as a cob, and even though we warmed it up good and ran it up to full power (only 3 cylinders firing) it wouldn't smooth out. We tried shutting it down and starting it again but nothing worked. After 20 minutes we gave up and shut her down. We looked at each other and flipped to see who would go out, pull the cowl, and try the Rope Trick. I lost. I remember two things about Liard River, mosquito bites and the Rope Trick worked.

A few days later we were in Wyoming on a dreary rainy morning and started the engine up and once again it had Morning Sickness. We warmed it up and ran it up to full power and then back to idle a few times and the valve came unstuck and it ran fine. We breathed a sigh of relief because we didn't want to have to do the Rope Trick again or ream the valves, plus we had major gethomeitis. As we taxied out to the runup area the valve stuck again. That had never happened before while the engine was running so that got our attention big time. Time to ream the exhaust valves! A mechanic on the field let us borrow some tools, a reamer, and his hanger and showed us how to fish the valve in and out of the valve guide and the spark plug hole using dental floss and safety wire so we could ream the valves without pulling the cylinders just like the Alaska mechanic had said. That little ole Continental O-200 ran like a charm after that and got us home safe and sound. In fact, we flew for a few hundred hours after that with no problems before we sold it so we could buy another airplane.

That was it! I knew I must have stuck a valve on the takeoff at the Espanola airport. It had to be. Now that I thought about it, the warning signs had been there all along and I had been too stupid to see them. Every once in a while over the last couple of years, the Lycoming IO-360 on the Pegazair would idle rough for a few seconds on startup, particularly in colder weather. In fact, one time my buddy Doug, commented that it might be Morning Sickness. Then just a few weeks ago, on a long, low power, cruise descent on a cold day, I felt a brief shudder go through the airframe and then go away as soon as I added a bit of power. Most likely a valve trying to stick. My engine had been talking to me and I had not been listening. I borrowed my buddy John's hangar and started checking the exhaust valves with a borescope. I definitely saw some lead buildup. I pulled the valve covers and before long I found the culprit. The #2 exhaust valve was stuck so tight in the guide that I couldn't budge it by hand. I ended up having to tap it out of the guide using a brass drift punch. As it turned out I needed to ream all of the exhaust valve guides because they all had lead built up in them, but #2 was the only one where the deposit had created an interference fit. The Rope and Floss Tricks once again came to my rescue, and before long my Lycoming was running good as new.

What did I learn from this experience? It will do you well to listen to your airplane and the old mechanics that work on them.



You can see the black deposits removed from my IO-360 on the reamers to the right. The [McFarlane reamer](#) has a pilot section on the front end that is the same diameter as the valve stem so you can get the reamer started straight. The rest of the reamer is sized for the valve guide. In the upper picture you can see deposits from the #2 exhaust valve guide on both sections of the reamer. The red stuff is grease to catch the deposits as you ream the valve guide.



In the lower picture you can see deposits from the #3 exhaust valve guide, but only on the aft section of the reamer because there was still a slight amount of clearance between the valve and the guide.

Click Bait

Transwing - Unique swing wing VTOL

<https://www.youtube.com/watch?app=desktop&v=kA1ENhXLqTo&feature=youtu.be>

Peter Muller's NG2- Reality or Renderware - Aviation has more than its fair share of crackpots with dreams of impossible aircraft designs. Check this one out.

https://www.youtube.com/watch?v=j31gyNJn_uk

Top 6 EVTOLS - The future helicopters are coming.

<https://www.youtube.com/watch?v=Ryy-7tcZqC8>

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: