

EAA Chapter 691 Newsletter August 2025

Will Fox working on the GTP-30 Turboprop propulsion system for his Pegazair - (Circa 1995).

On the Web @ eaachapter691.org

EAA 691 is:

President: Will Fox

Vice President: John George

Secretary: Pierre Levy

Treasurer: David Young

Board Member: Andrew Devecchio

Web Editor: Marilyn Phillips

Newsletter Editor: April Fox

Young Eagle Coordinator: April Fox

Young Eagle Workshops: Walt Atchison

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Upcoming Events

➔ Meetings Schedule (unless
otherwise noted) ➔

9:30am - social time

10:00am - business meeting

10:30am - speaker/workshop/
training

Upcoming Events

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

On Saturday August 16th EAA Chapter 691 will conduct a Flight Rally for EAA Chapter 691 members who do not have access to an airplane. All our members are invited to join us for the event. Coffee and donuts will be available in the Terminal Building at 7:30 AM. The pilot briefing is at 8:00 AM with flights starting shortly thereafter and ending at 10:00 AM. Following the Rally we will have a brief business meeting and then a presentation on Oshkosh 2025 by John George. The Chapter will host a cookout for members and volunteers in Roger's hangar (northwest end of the runway) starting at 11:30AM.

President's Report

by Will Fox



Check out our Chapter YouTube channel at <https://www.youtube.com/@eaachapter691> for the latest videos. For a schedule of upcoming events, go to the Chapter website at <https://www.eaachapter691.org/upcoming-events/>

Member Flight Rally This Month

This coming Saturday August 16th, we plan to give our members who don't have access to an airplane a chance to take a flight in a fellow member's airplane. The rides will be available from 8:15 AM until 10:00 AM and will last 20 to 30 minutes. It looks like the weather will be great and it should be a lot of fun. You don't need to signup, but if you get chance, send me an email so I get an idea of how many folks to plan on. Following that we will have a short business meeting and then a presentation and discussion about AirVenture /OshKosh 2025. John George, who flew his Bonanza into the show with Gary Goodard as co-pilot, will give a presentation and lead the discussion. Steve Bruketta also attended the show this year and brought home lots of info on what it's like. Following that we will have a cookout with brats and burgers up at Roger's hangar on the NW end of the airport.

We had a great Young Eagle Rally last month in Los Alamos with plenty of pilots and ground crew on hand to make sure every kid got a ride. Daniel Burger and his wife flew up in their R22 from Edgewood to put it on static display for the parents and kids. Skip Egdorf and Owen Denning also had our XLE Flight Simulator - N691YE up and running as well. It was great fun for all and there were a lot smiles on those kids faces.

Things have been moving along very nicely on the Electric Dragonfly project. Primarily because our members and young Eagles have been really pitching in at the Saturday and Sunday afternoon build sessions. I'll give a short update on that progress at the Saturday meeting. See you Saturday when we get a chance to "Slip the surly bonds of Earth and dance the skies on laughter-silvered wings ..."☺



The Young Eagles Rally on Saturday July 19th at the Los Alamos Airport was great fun.



Dana and Owen Denning training a future pilot at the Young Eagle Rally.

Letter from the editor

by April Fox



Hello Aviation Enthusiasts!

We have an exciting year lined up and are looking for motivated aviation enthusiasts to assist us in our EAA Young Eagle Rallys and our Dragonfly electric aircraft project. EAA 691 is going to need your help!

Please consider volunteering your time for upcoming youth events and/or Dragonfly Build Sessions. For more information please reach out to myself, Andrew Devecchio, or Will Fox if you are interested and want to help. We look forward to hearing from you! Contact April at forkfox@gmail.com



**EAA Chapter 691 Young Eagle Rally –
KLAM – July 2025**



Tech Corner

by Will Fox



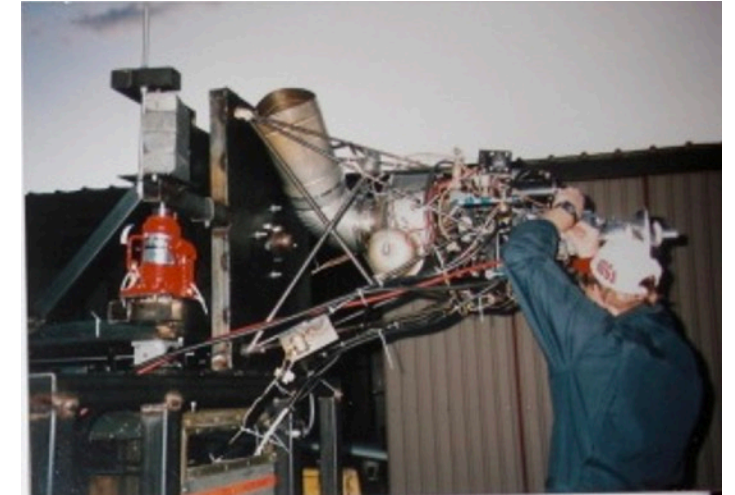
One Too Many Experimentals

In my last article, I mentioned that my Pegazair once had a Rotax 914 before I swapped it for an IO-360. But before either of those, I had an even crazier idea. I was going to put a gas turbine on it. I actually built and tested the setup before the voice of reason (my wife) stepped in.

Back in the '90s, I was hunting for a STOL airplane to build. I'd flown a RANS S-7, Zenith 701, and a Kitfox, but none had the mix of speed and short-field performance I wanted. Then I saw the Pegazair-100 at Sun 'n Fun in '95. It flew like a two-seat Helio Courier and had good slow speed manners and was still quick in cruise. I went up to Canada to try it. The controls were smooth, the stall was gentle, and it handled beautifully. I ordered a kit on the spot.

The stock Pegazair used a 100-hp Continental O-200. That was fine for sea level, but not great for the thin air in northern New Mexico. I wanted something lighter, stronger, and to be honest, cooler. I'd seen a little Garrett AiResearch GTP-30 turbine at Sun 'n Fun, and it was just the thing. The guy showing it, Terry, was a character. He was part promoter, part test pilot, part moonshine maker, and a big fan of Hooters. He told me he had a couple of low-time units, so I bought one for \$2,500.

I still needed a propeller that could go from flat pitch to full feather. At Oshkosh I met Harry, who had a new adjustable-pitch design that looked perfect. I paid up front for an early delivery (mistake). A month later, his phone still worked. A month after that, it didn't. Harry had gone bankrupt. He offered me a prototype prop instead. I figured I'd never see it, but a week later it showed up with a note about how to take care of it.



The Garrett AiResearch GTP-30 is a light weight gas turbine engine capable of 100 hp. It is shown here installed on my test stand to measure its performance.

The turbine spun way too fast for the prop, so I tracked down a machinist named Larry. He built PSRUs for car-engine conversions and agreed to make me one with a much bigger reduction ratio. Larry was 80 years old, sharp as a tack, and drove like a madman in an old Pontiac with no seatbelts. “Who’s gonna throw an old guy in jail for speeding?” he laughed. We shook on the deal, and six weeks later, he had it ready.

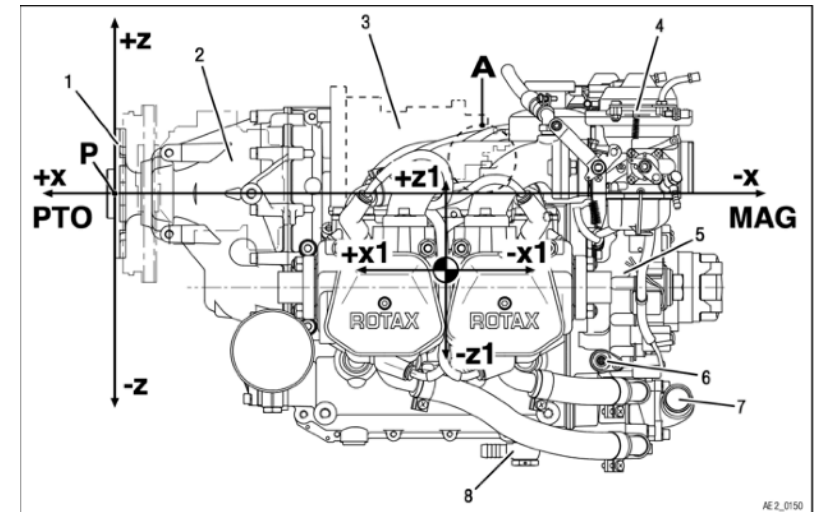
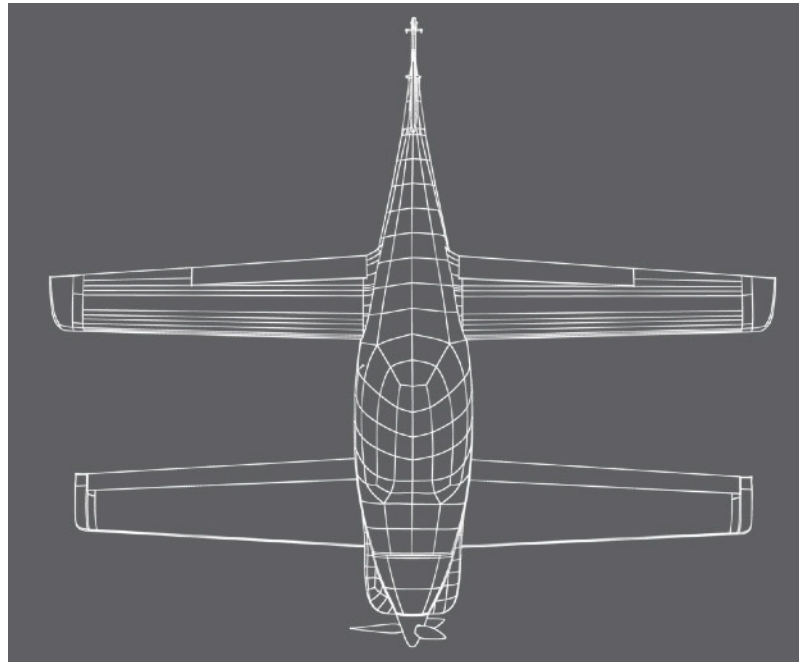


With all the parts together, I set up the engine on a test stand, planning to run the FAA’s 150-hour endurance test. That’s when the problems started. The starter struggled to spin both the turbine and the prop to idle speed, which overheated the starter and drove turbine inlet temps sky-high. Under load, the PSRU got hot and foamed the oil. I fixed those issues, but then came the real kicker. At full power, the turbine drank over 20 gallons an hour. The Pegazair’s tanks only held 24. That night, I told my wife I’d need bigger tanks. She shook her head and said, “Sounds like your experimental engine is making your experimental airplane even more experimental. Why don’t you just buy that Rotax 914 you’ve been talking about, and while you’re at it, get a parachute.” I’ve learned not to argue with a good woman, so I did exactly that.

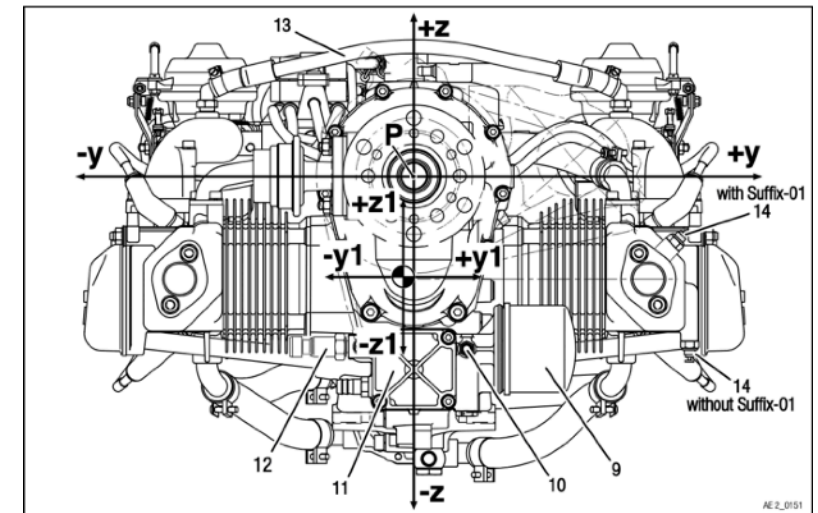
The GTP-30? It’s still sitting on my test stand. One day, maybe, I’ll fire it up again.

PS The names were changed to protect the innocent©

Dragonfly Build Sessions



Dragonfly Build Session 4



Clickbait

3D Model of Rotax 912

<https://configurator.flyrotax.com/view/912%20ULS/2>

Rotax Factory Tour

<https://www.youtube.com/watch?v=h925DJhP2TQ>

iPad based avionics

<https://www.falkenavionics.com/flightview-efis-features-functions/>

MicroAir T-3000 advanced avionics

<https://www.youtube.com/watch?v=Qv1ikw9vwJM>

Phenomenal Synthetic Vision - Nighthawk

<https://www.youtube.com/watch?v=JmDoiOlu014>

Small Turboprop engines

<https://www.youtube.com/watch?v=k4Rg50z7DFc>

Hey Kids! Keep an eye
out for upcoming
work sessions to
Electrify the
Dragonfly!



EAA Chapter 691 Membership Application/Renewal Form



Please consider making a donation to our 501c(3) non-profit by mailing this form along with \$35 a single membership or \$40 for a family membership 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: