EXPERIMENTAL AIRCRAFT ASSOCIATION

CHAPTER 1098

SHAWNEE, OKLAHOMA

The Shawnee, OK, EAA Chapter 1098 is an official chapter of the EAA, Wittman Airfield, Oshkosh, Wisconsin 54903. Phone 414-426-4800. Chapter1098 was organized to promote aviation in the community, provide camaraderie, sharing of aeronautical knowledge and skills among those with interest in grassroots aviation and who share the objectives of the EAA. Chapter dues are $20.00 per year, payable on 01 January. Normally our meetings are held on the fourth Saturday of the month at 2:30pm at Gordon Cooper Tech Aviation Campus, 2600N Airport Dr, Shawnee, OK 74804, Shawnee Airport (KSNL). Time, date and place are subject to change. Please check newsletter for latest meeting information.

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Welcome to the August issue of EAA Chapter 1098 newsletter. I trust everyone is staying out of the heat and maintaining hydration levels. These past few days have been particularly bad with excessive heat warnings. Stay safe if you venture out.

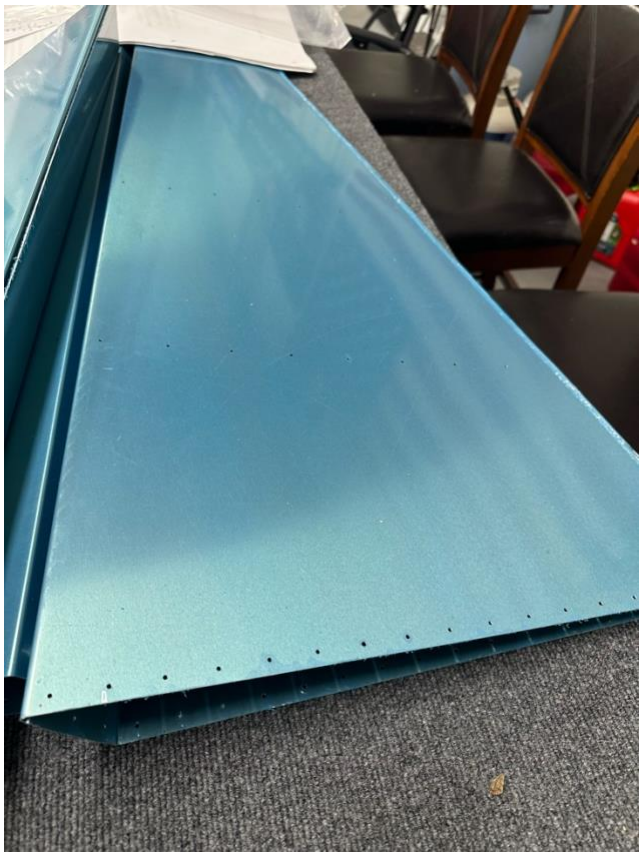
Our next meeting is scheduled for Saturday 26Aug23, 2:30pm at the Gordon Cooper Aviation Tech Campus. The invited speaker will be Virgil Irwin, who has kindly agreed to fly across with his Bearhawk 5 and share with us his experiences from building and flying this amazing aircraft. He will also include an outline of his MA Global Mission and how this amazing aircraft will support that mission in Niger, Africa. The plane is beautifully built with many upgrades including fuel injection, Garmin glass cockpit and is definitely worth seeing.

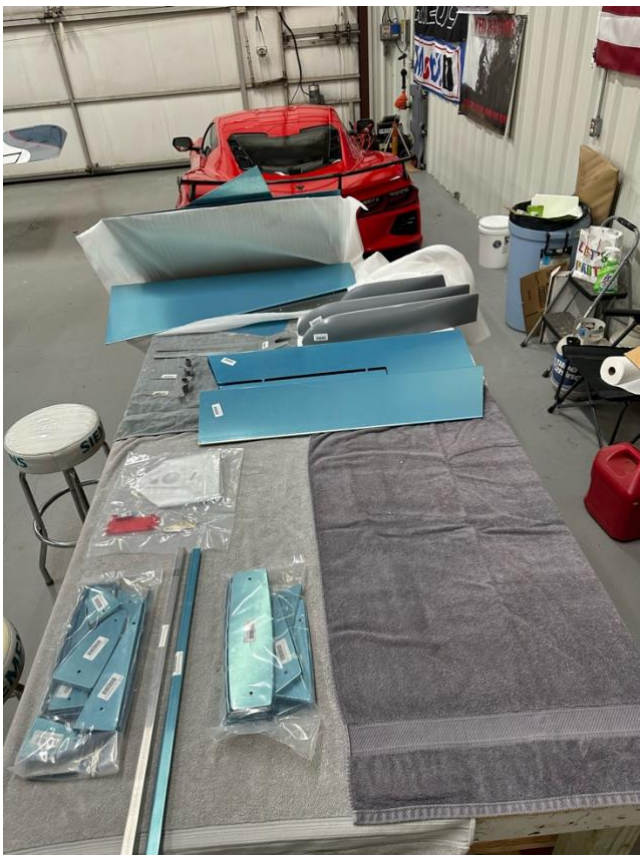
Purchase of an SPA Panther Airplane

The Sport Performance Aviation Panther is a beautifully styled single seat airplane designed for a variety of engines ranging from the 6 cylinder Corvair car engine, TCM O-200, O-240, Franklin 4B-235, Lycoming O-235, Jabiru 3300 or other 4 cylinder aviation engines in the 100 to 150HP range. The SPA Panther has affectionately been nicknamed an 'RV-3 done properly', embodying many features from the last 20 years of general aviation expertise and best practice. The SPA Panther also has the capability to fold it's wings so it can be stored in an enclosed car trailer or a small section of a hangar.

SPA Panther is a single seat Light Sport airplane with folding wings.

Our General Aviation Experimental vendors have been hard at work expediting the airframe build process and it's truly a pleasure with all the pre-bent and pre-drilled holes. The SPA Panther is no exception and the kit of parts come in a quick build format with all parts pre-cut and bent with rivet holes pre-drilled. The parts do need some minor polishing to deburr but otherwise each part is ready for assembly. Assembly is further expedited with the aid of pull rivets as opposed to the conventional bucked (or squeezed) rivets. Again, most general aviation experimental vendors are moving to this method of assembly. It certainly makes the process faster and based on the number of pull rivet aircraft already flying today, doesn't seem to be detrimental. (Zenith aircraft have been using pull rivet for many years along with the jet powered FLS Microjet). The main advantage of a pull rivet design over a buck rivet design is the ease with which construction can be completed without the need for an assistant.





Kit parts come pre-bent with rivet holes pre-drilled.

The pull rivet approach can be further enhanced with the aid of a Milwaukee 12V rivet gun. This is certainly easier on the hand compared to the conventional hand rivet gun. The cordless electric design negates the constraint and encumbrance of a hose from similar pneumatic tools.

Milwaukee 12V rivet gun aids with pulling rivets compared to a manual gun.

SPA Panther empennage kit comes with all parts individually wrapped along with a parts list and assembly drawings. Build instructions are very detailed and come in an on-line format.

Custom Fabricated 8x4' Workbench including carpeted surface to minimize scratching of parts during handling and assembly.

I am planning to complete this empennage kit over the winter, and I'll write a separate article with my experiences. I plan to move on to the wings once the empennage is complete. The fuselage front is space frame chassis with a metal skinned rear and will be tackled after the wings.

VMC and IMC Section

VMC Question:

Question: When planning a VFR departure, particularly at night in higher terrain or when obstacles are present, what is the standard climb gradient that an aircraft is expected to be able to meet to clear obstacles?

IMC Question:

Question: You're being vectored for a localizer approach, have been given a vector to intercept the final approach course outside the final approach fix, and are cleared for the approach. The approach plate identifies no feeder routes, and specifies "NoPT." A hold is depicted at the FAF with a notation of "4 NM". At what point can you begin a descent to the published altitudes?

VMC Answer:
Answer: The standard climb gradient for departure is **200 feet per nautical mile**, and in many cases, is insufficient to clear obstacles. We can dip into the readily available instrument procedures to find the required climb gradient to avoid obstacles.
If the standard climb gradient is not adequate to ensure terrain clearance, a non-standard climb gradient is determined, and a “T” in an upside down triangle is depicted on approach plates for the runway in question. The required climb gradient is provided in the published Takeoff Minimums, (Obstacle) Departure Procedures (ODP) and Diverse Vectors (Section L of the U.S. Terminal Publications).
Note that the climb **gradients** are provided as feet per nautical mile (nm), rather than climb **rates** feet per minute. Pilots can use the chart provided to calculate their climb gradient for their ground speed and climb rate (feet per minute). Note that the climb rate is dependent on aircraft weight and the prevailing density altitude.
Source: AIM paragraph 5-2-9.e

IMC Answer:
Answer: Generally, you can begin a descent once you are established on a published segment of the approach. The localizer needle must be uncaged (alive) to be considered established. Many approaches have no feeder routes, and initiate from a hold with defined leg lengths or timing. In this case, even if the localizer is alive, you cannot descend until you are within the prescribed boundaries for the hold. In this case, **the localizer needle must be uncaged and you must be within 4 nm of the FAF in order to descend** to the published altitude for the hold.
Source: AIM Section 4, Arrival Procedures