

AIR FORCE AERO CLUBS

ISSUE NO 2 | DECEMBER 2023 - WINTER | VOLUME 2



PROGRAM

Key Dates, reminders & overall program updates

SAFETY

Quarterly Safety Topic provided to customize your safety meeting.

MAINTENANCE

Topics for managers & maintenance to consider.

Dover Aero Club

2023 AMC Safety Award Recipient

AFSVC AERO CLUB SME'S

Stacey Farland
Program Manager

Lt Col Sean Orme
Director of Operations
& Safety

William (Bill) Kendrick
Director of Maintenance

Cannon Aero Club

Sunset Flights



Key Dates

- **15 Jan 23:** 1Q AF Form 270's

FY24 PMR's - ****CHANGES****

*Specific Dates TBD

January 2024:

Eglin

February 2024:

Holloman

March 2024:

Kirtland

April 2024:

Kadena/Yokota

May 2024:

JBER

September 2024:

Hanscom/Dover

To prepare for a PMR:

- Complete scheduled tasks (safety meeting, flight, wing appointed advisors)
- Update SharePoint Site with items listed "virtual" from the self-assessment checklist
- Lay up specific aircraft for maintenance inspections

Hello all!

First, let me say this newsletter is intended for you and Aero Club staff. The information in it, should not be sent directly to your Aero Club members or posted online, like with previous safety grams, but rather used as a guide to develop safety meetings and cater to your audience, implement maintenance procedures with your staff or use other feedback to improve your overall program.

Next, I want to highlight the incredible year we had in FY23. Overall, revenue increased roughly \$300K and our program NIAD improved dramatically from (\$167.7K) to \$530K! We did all of this with our aircraft still only being available ~60% of the time.

On the topic of availability, ensure you're doing everything you can as a manager to ensure parts are ordered in a timely manner, and contracts are initiated early, especially for engines. Manufacturers are still facing long lead times and it's important that you request for funding for engines at or before TBO based on the flying hours of that aircraft. As a reminder, if engines continue to meet airworthiness standards prescribed in DAFMAN 34-101, para 10.19, you can continue to fly it until it hits a maximum of 30%. To go above 30%, you can seek a waiver; however, it's unlikely to happen quickly or may not be approved at all. Aero Club waivers are scrutinized more heavily due to the increased liability and nature of our operation.

And for our primary topic: As our slow season approaches, now is a good time to review annual data for your aircraft and make appropriate adjustments to your expenses as needed. As I reviewed the end of year operating statements, there were many issues going unnoticed: billing errors, high personnel expenses, incorrect revenue, etc. The operating statement is on the Aero Club Manager to check and ensure accuracy. Here are some red flags to notice:

-Dues: Whatever amount you're charging in dues should match the number of members you're reporting on your AF Form 270. If you have 100 members and charge 30 a month, \$3K should be in your dues GLAC and 100 members reported. We are constantly receiving errors in the number of members on 270's which is nowhere close to the amount of revenue brought in 502. Don't report that you have members that aren't paying dues.

-7210000 Fuel/Oil: When looking at your overall aircraft revenue for the month, compare that to your fuel GLAC. If it's exceeding 50% of your rental rate, it is likely time for a rate increase once insurance and maintenance is paid for. Verify this with your cost analysis worksheet.

-Misc Income/Expenses: Always verify this GLAC does not have any unapproved 1876's, insurance payouts (these shouldn't hit your bottom line!), and unrealized expenses. We have found thousands of dollars in errors!

-Insurance: At the end of each quarter, look at your total insurance accrual and compare that to the billing I send out. Did you accrue too much? Too little? Any discrepancy will require correction and it's better to catch it sooner than later.

-Compare overall revenue last year to this year: is your revenue up/down & why?

Lastly, ensure you email us anytime an aircraft is down in excess of 30 days and continue to update your maintenance status tracked on the SharePoint site. Feel free to keep this information in your back pocket or request a training with me to go over your operating statement line by line. We look forward to getting back on the road and visiting many of you next year. Fly safe!

Stacey Farland

Aero Club Program Manager

SAFETY

USAF Aero Club Teams,

For this quarter, I want to focus on one of the critical phases of flight as well as offer my specific philosophy when it comes to landing in that “a pilot is only as good as their next landing”. More specifically, no one cares if you greased on your last six landings if you prang one (or bend metal) on your next landing. Since I’m in more of a desk job now and currently my currency (to say nothing of my proficiency) is minimal, I will soberly acknowledge that this mantra will weigh especially heavy on me for the first several flights once I start flying again more regularly. However, this is not to say there are no mental tools or methodologies which pilots (at any point in their flying experience) can use to help regain their crosscheck and stable in the pipe (approach to rollout).

Part of what has motivated me concerning this topic is not only my personal experience, but also Bill Kendrick and I have discussed multiple “welp, that landing was not good” at some of the local airports here in the San Antonio area. Now, I am not a fan of “Monday morning quarterbacking” nor do we know all the details, but seeking to learn from and work to avoid the unfortunate circumstances of fellow aviators is always prudent in the flying business. To aid pilots in this effort, I will offer a slightly modified version of an approach I was taught when I was a Lieutenant.

First, what are the goals of the “8 Steps to a Good Landing”:

1. To offer a more mechanical flying tool for instructors to instruct and analyze landings, but also give new pilots a process to step them through their approaches to landings to help build measurable/consistent flying acumen.
2. Diagnose the root cause of poor landings. For example, a pilot may find they fly great approaches, but struggle in the transition to the landing attitude.

8 Steps to a Good Landing:

1. Ensure you and your fellow pilot are appropriately seated for the aircraft in which you are flying. Good sight picture and full control employment are this step’s primary focus (this should be taken care of during preflight).
2. Fly a stable approach. More specifically, maintain your cross check (inside and out).
3. Pick an aimpoint and stick to it.
4. Decision point to continue or abort the landing (ex. on speed, on centerline when passing 100ft...good position to land from).
5. Trend over the threshold (ex. what is the wind doing now or has ceased to do to the aircraft).
6. Transition to the landing attitude (smooth and consistent round-out)
7. Transition your focus to the end of the runway. Use the horizon and your peripheral vision.
8. Pull the power as appropriate for your aircraft and environment (ex. a strong headwind in a light aircraft may require a slower power pull versus a heavier aircraft with a slight tailwind).

Now, obviously applying these steps will not automatically equate to “perfect landings, 100% of the time”, but having the essence of these steps in the back of your mind when flying as an instructor or for fun on your own time are very likely to help aid you in stopping a negative trend early in the process and better ensure you make a safe landing the majority of the time.

Have fun and fly safe,

Sean Orme, Lt Col, USAF

Director of Operations & Safety USAF Aero Clubs

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MAINTENANCE

Aircraft Preventive Maintenance



I received a call a month or so ago from a customer needing nose strut servicing on a Cessna 172H. I told him that I could come service it as soon as possible and asked him what was going on with the strut. He hesitantly admitted that he had attempted to service it himself because it was "a little low." Well, something went wrong while servicing, and he "received a hydraulic fluid bath".

I asked him if he was legal to service the strut (I knew the answer but curious if he did), and he wasn't sure. But it's just a Schrader valve, how difficult could it be? It's just like airing up a bicycle tire, right? Indeed, it's not that difficult, but there is a documented procedure, and if you're not experienced, bad things can (and did) happen. I asked him how much pressure he put in the strut, and all he would say is "probably more than I should have." I told him that he had possibly blown the seals in the strut, and if so, a costly rebuild would be in order. Lesson learned...hopefully.

While this customer was legal to service his own strut (reference FAR Part 43, Appendix (A) (c) (3)), certified (or legal) in no way suggests qualification! There is a specific and detailed procedure for doing this type of job in the manufacturer's service manual, and if you as an aircraft owner/operator (with appropriate certifications and tools that I will discuss later) decide to tackle the job, it is HIGHLY recommended that you purchase or download the service manual, and follow it to the letter to prevent costly and embarrassing mishaps like this one.

I had another customer ask me if he could do his own oil change. I told him that he could, but he was going to need to know how to do it as it's a little more complicated than an automobile oil change. I explained what tools/supplies he needed (container, hose, funnel, 1" wrench, torque wrench, safety wire and safety wire pliers). I thought this would scare him off and I would just go do the job, but he was persistent and did it himself. Great! However, I received a call from the IA that did his annual inspection later, and he told me that the owner had safety-wired the oil filter completely wrong. So, what if the oil filter had backed off in flight due to not being properly safety-wired, and he lost his engine oil? I hope there's a nice landing site within gliding distance. Again, bad things can happen, and preventive maintenance should not be taken lightly.

Aircraft repairs are costly, there's no denying that. And I believe owners/operators should do what they can to keep costs down. However, if you decide to go down this road, make sure you get the proper training, documentation, and tools/parts to do the repair correctly. Also, don't hesitate to contact a local A&P/IA mechanic and ask if he/she would be willing to do some training.

So, how do you know what "preventive maintenance" you as an owner/operator are allowed to perform? Below are some FAA regulations taken from the eCFR website with noted highlights in **yellow**:

§ 43.3 Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations.

(a) Except as provided in this section and § 43.17, no person may maintain, rebuild, alter, or perform preventive maintenance on an aircraft, airframe, aircraft engine, propeller, appliance, or component part to which this part applies. Those items, the performance of which is a major alteration, a major repair, **or preventive maintenance, are listed in appendix A.**

...

(d) A person working **under the supervision of a holder of a mechanic** or repairman certificate may perform the maintenance, preventive maintenance, and alterations that his supervisor is authorized to perform, **if the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly and if the supervisor is readily available, in person, for consultation.** However, this paragraph does not authorize the performance of any inspection required by Part 91 or Part 125 of this chapter or any inspection performed after a major repair or alteration.

...

(g) Except for holders of a sport pilot certificate, **the holder of a pilot certificate issued under part 61 may perform preventive maintenance on any aircraft owned or operated by that pilot which is not used under part 121, 129, or 135 of this chapter.** The holder of a sport pilot certificate may perform preventive maintenance on an aircraft owned or operated by that pilot and issued a special airworthiness certificate in the light-sport category (ecfr.gov, 2023).

To further explain/summarize the highlighted regulations, ONLY items specifically listed in FAR 43 Appendix (A) (c) are considered "preventive maintenance". So, if it's not on this list, owner/operators are not allowed to perform...unless you're working under the supervision of a certified/qualified person. In this case, you can perform the work BUT ONLY if that person is "readily available, in person for consultation". Phone conversations don't qualify. Lastly, you must be a certified pilot, in addition to being the owner or operator of the aircraft in question.

I hope this clarifies what can be done to an aircraft without a mechanic's certification, but again, always ask when in doubt. Aircraft mechanics are costly, so do some research and reading of the regulations, ask your local A&P's, get a copy of service documentation, and see what all you can do and how much you can save. But don't be that person that just grabs an air hose and tries to air up a gear strut that has hundreds of pounds of pressure on it and get that proverbial "fluid bath". Oh, and speaking of that gear strut Shrader valve, don't ever try to use your fingernail to let out a little air (like you can do to a bike tire) when it's sitting too high. The pressure on that strut is more than enough to peel your fingernail right off...OUCH!!!!

Blessings to you all, fly safe, and keep the dirty side down.

Bill Kendrick, NF-IV, USAF

Aero Club Maintenance Quality Assurance Director