

**“Riveting Reading”**

**Civil Air Patrol  
North Carolina Wing  
Aircraft Maintenance**

**Aug 1 '22 Vol #57**

*By Lt Col Martin ‘Stryker’ Heller*



# AMRAD



(Aircraft Maintenance Repair and Documentation)

Enter New Discrepancy

[https://www.gocivilairpatrol.com/media/cms/AMRAD\\_Users\\_Guide](https://www.gocivilairpatrol.com/media/cms/AMRAD_Users_Guide)

Please enter discrepancies before requesting maintenance coordination. (Especially 100-hour inspections)

To: NCWG Commanders, Operations Officers, Crew Chiefs & Aircrews;

**1. Motivational Quote:** *“A pint of sweat will save a gallon of blood.”* George Patton, General, USA  
(The aviation corollary is that a thorough pre-flight will save a pint of sweat.)

**1a. NCWG Director of Standardization/Evaluation (NCWG/DOV) Comments:** Several months ago, the Air Force added a great safety enhancement and benefit for CAP Pilots in ForeFlight. We have an opportunity to take advantage of another safety benefit. Between now and the end of the calendar year all pilots will have a Profile #7 proficiency flight with a CAP IP made available. Watch for an email with details. **Lt Col Arnie "Speedway" 🇺🇸 "Andresen, USAF/Auxiliary**

**1b. July Highlights:** For the month, NCWG flew ~**310 hours**: about 105 hours less than of June’s 415 hours. **N819CP** is still being painted. **KLHZ** closed its runway for repairs and we repositioned **N7360C to KJNX**. **N938CP** went into its 100-hour early as it’s FLIR attachment needs to be hangered and stuck at KLHZ. Weather wasn’t a friend, between rain and wind, cancelling several flights. **N908CP and N726CP** went to Camden, SC, in support of the **National Flight Academy - Mid-Atlantic Region (NFA-MAR)**.

**1c. Top Hour Flying Aircraft/Squadrons:** **NC-048 & NFA-MAR flew N726CP 74 hours**. **NC-023 & NFA-MAR flew N908CP 35 hours**. Other notables included: NC-022/KBUY/N262CP/31 hours, NC-121/KJDF/N716CP/25 hours, NC-160/KEWN/N98426/25 hours, NC-171/KFAY/N727CP/22 hours. Nine airplanes didn’t meet the 20 hours/month goal. But there is another AOB mission in August so future flying opportunities exist.

**1d. Top Hour Flying Individuals:** **Lt Col Jeremy Browner in N726CP for 36 hours**; mostly instructing from the right seat at Camden, SC (KCDN) during NFA-MAR. **Capt Joseph Keller, NC-048** flew 18 hours & **Capt Cliff ‘Beast’ Herring, NC-171**, flew 13 hours. **Cadet/Lt Col Justin Endre, NC-170** (on an EAA Ray scholarship) & **Cadet/Capt Rachel Smith, NC-048** (flying 48 hours in CAP aircraft in July) [earned their private pilot’s licenses.](#)

## **2. Maintenance Month in Review:**

**2a. Bad & Good news:** **Brunswick Airworks** has moved its operations back to its parent company at KBUY. Thus, we lost our consolidated maintenance facility at KSUT. We still have some maintenance capability at KBUY but their shop probably won’t be doing annuals for CAP due to their workload and our needs. I can’t say enough good things about **Addison Crowl, Kyle Grandin** and **Conrad Wondolowski** who treated our aircraft better than we do. Wishing them all the best in their future endeavors and know these talented general aviation mechanics will do well. We are securing maintenance support at **KSUT** (east ramp) with **Oak Island Aviation**. As their workload just vastly increased by becoming the only aircraft maintenance shop at KSUT, we/they will need to determine if they can also handle being a CAP consolidated maintenance facility.

**2b. Really Bad news:** Coming out of annual with reskinned controlled surfaces and more, **a thunderstorm ripped N437BA** (our L-23 glider) and its tie-downs out of the ground at **KLHZ**. It was tossed into another aircraft on the ramp breaking the glider’s vertical stabilizer. The estimated repair bill will probably total it. Awaiting NHQ’s decision.



### 2c. Aircraft in Annuals:

**N726CP:** 'Betty' flew from KRDU non-stop to KLHZ on 19 June to start its 100-hour. No major finding with the exception of a hairline crack in the spinner. A replacement spinner has been ordered. The biannual corrosion proofing was also completed. The aircraft was returned to service on 26 June.

**N727CP** reached its' 100 hours but doesn't have a shop to go to until **KLHZ** runway re-opens. Because it needs both a 500-magneto overhaul, and an IFR certification, it was too risky to come to KSUT just before they closed. We pre-positioned a replacement ELT battery at KSUT, but had to mail it to KFAY for the above reasons.

**N938CP:** *Max* went into its 100-hour/annual. It is scheduled for magneto service along with a corrosion proofing.

**2d. Other Maintenance Issues:** NCWG fleet oil changes included: **N405CV, N99885, N908CP & N726CP. N99832** needed a new starter motor as the previous motor housing cracked. **Spartacus** also got new fuel primer O-rings. **N908CP** needed a new muffler, vacuum gauge and battery, and then was sent to Camden, SC, along with **N726CP** in support of **NFA-MAR** as **N99832** was NMC. Both aircraft returned July 17<sup>th</sup>. **N726CP's** stall horn reed was jammed with bugs again and cleaned out. Also, **Betty** got three replacement rubber cowling fasteners. **N179CP's** left magneto bit the dust, 84 hours since its 500-hour inspection. Turns out the previous hard landing that broke the nose gear mounting brackets also loosened the magnets and gear drive. Its high-speed spinning caused all sorts of arcing and such. A rebuilt magneto replaced it. **N98426** is taking in water in the baggage area. 'Sarah' will get its rear window resealed as part of its next 100-hour inspection.

**2e. Assault & Battery:** A reminder that battery water levels should be just up to where the plastic 'parenthesis ( )' touch. You can actually see the water sheen change at the right level. Overfilling isn't as bad as under filled, but still isn't good. We just replaced a 14-month-old battery due to lack of service (two cells' plates 'exploded'). Please remind maintenance to service the battery when doing the oil change. They have many customers and may forget this, yet another, CAP/NCWG unique request. IAW CAPP 130-2, page 2, **CAP pilots and uninsured mechanics can service aircraft batteries that don't involve removing the cowling.** That's all of our C-182s since the battery is in the tail. That said, we probably don't want to touch our FLIR birds due to their systems in the baggage compartment. You may want to have help or a tail-stand to ensure the back of the aircraft doesn't hit the ground when doing so.

**2f. Logbook Scan plea:** Please submit the logbook inputs as scanned PDF's, not pictures. There are tons of free applications out there that will scan the document. It takes us 4 extra steps to convert it when someone sends in a picture. Not complaining to our shops, who do us the favor to even send them, but to our 'uniformed' fellow pilots / crew chiefs. You would be surprised to know how often we dive back into the virtual logbooks instead of calling you for information. It's in everyone's best interest that we have the virtual logbooks current.

**2g. Oil Analysis Reports:** As mentioned last month, blue folders were forward to each aircraft's crew chief for inclusion in the logbook bag. The folder has a note saying: 'go look on-line.' We just populated the SharePoint files for each aircraft's recent oil reports which will be part of an ongoing process at every 100-hour inspection.

**2h. N819CP's Paint. 'Dixie'** was fitted with a facemask to prevent COVID. It is awaiting its CAP decals, also some new wing & tail fairings.



### 3. Aviation Maintenance Support Information:

**3a. GPS database cycle 2207 current cycle started 14 July** including Safe Taxi. *Is your aircraft database up to date?*

**3b. Clean Machines: N726CP** was our only dirty bird, but flew a lot this month. Come 1 Sept, it will be 90-days overdue for a washing and will be grounded. Doesn't matter which squadron owns it that day; the music will stop.



Strong winds pulled all of NCWG Glider's Tiedowns out of the ground.

**3c. Little known, CAP Reg Requirements of the Month:** CAPP 130-3, 2.2.1 referencing CAPP 130-2, page 8; **Aircraft Tie-Down Anchors for Turf Surfaces:** It's easy to Monday morning quarterback and perhaps it would not have made a difference. That said, the 'temporary tie-down, lawn parking spot the glider occupied, went from days to years, vastly increasing the glider's exposure. It's an expensive lesson to re-learn. There should be at least two take-aways from this loss. First; check to ensure your aircraft's tie-down location is secure. (We had one location without even tie-down ropes for a while.) Second, look at your aircraft's emergency tie-down kit. Do those ropes and hooks even hold? My squadron has decided to upgrade to the 'Claw' Tie-Down system. It's pricey, (~\$120), heavy (8#), and doesn't meet CAP 130-2 requirements. But as a temporary measure (read: hours, not months), it's better than those dog leash holders many aircraft owners have as a temporary measure. NCWG might consider the same for the whole fleet, but at \$600K/aircraft, my squadron isn't taking the chance.

**3d. Parking Risk Assessment:** We should be doing a risk assessment annually for both our hangar and ramp-based aircraft. Guidance is being sent out to crew chiefs now. The point is to prevent hangar rash and other issues that CAP has already experienced. Perhaps it should be part of the annual Wing Safety Day, and is something for discussion.

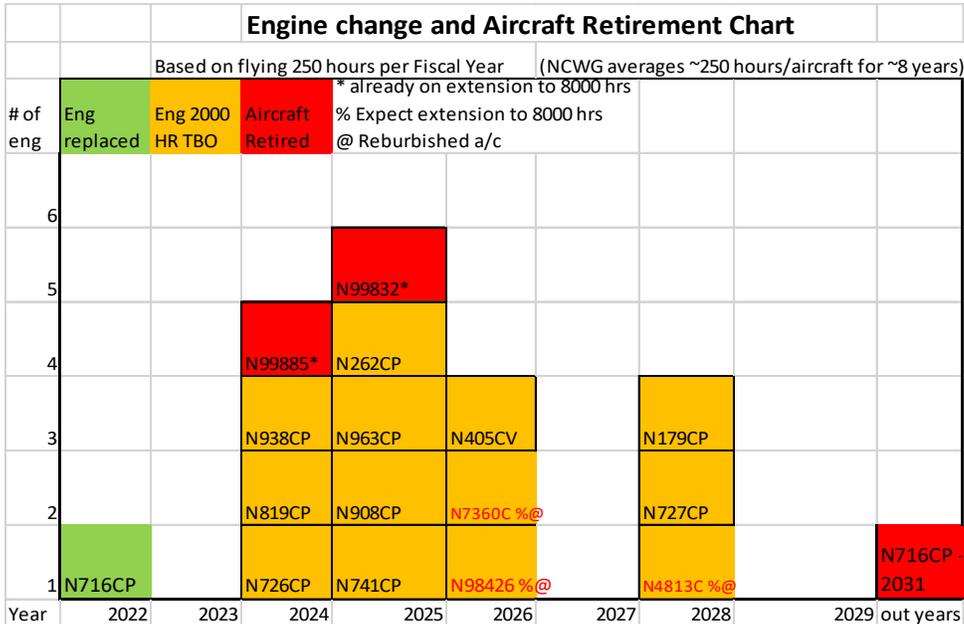
**3e. Aircrew Inflight Guide:** For those unaware, there is a CAP Inflight Guide with lots of helpful information. One can print it out & bind it, or just keep an electron copy on your iPad. It's found at:

[https://www.gocivilairpatrol.com/media/cms/Inflight\\_Guide\\_2013\\_14A2613AC3F47.pdf](https://www.gocivilairpatrol.com/media/cms/Inflight_Guide_2013_14A2613AC3F47.pdf)

**3f. ForeFlight Weight and Balance:** Our request to have those 40 pounds in the baggage area added to the ForeFlight Weight and Balance program went nowhere. It's a legal thing; they have to use what is on the latest W&B report. For those intent on using Foreflight for W&B, don't forget to add the junk in the trunk weight (along with all the stuff in your hands). For those more electronically talented, you can add the 40#s to your aircraft profile. Here is a link to get you started: <https://foreflight.com/releases/14-2/>

**3g. Engine/Aircraft Replacement Forecast:**

NCWG has about 3 percent of the CAP aircraft fleet. Thus, our priorities may not carry much weight. But we can forecast when we'll need replacement engines, and replacement aircraft as NHQ/LG usually will retire an aircraft at 6,000 hours. **N99885 & N99832** are already on extensions to 8,000 hours so will be sold. **N7360C, N4813C & N98426** might be extended to 8,000 since they were refurbished.



This chart shows which aircraft should reach an engine TBO based on hours. If we fly 300 hours per airplane; which we often had, the chart will move to the left. So far, we're looking good for next year, but the following three years are busy.

**4. Miscellaneous News:**

**4a. Batesville Provides 50+ Ways to Leave Your Lover.** Realize that none of us are getting out alive. I am currently handling an estate, and want to warn you that dealing with an out-of-state will in North Carolina is a challenge. The NC Dept of Justice wants current statements from the original witness and notary, (as if you can even find them). For what it costs to redo a will, you'll want to get it re-accomplished in North Carolina. The July 2022 Consumer Report magazine, page 32, has a good article on a variety of other reasons to do so now. And what about the rest of your stuff, should you have a 'really bad day?' Are your affairs in order that someone could find your will, your wishes, your assets, your insurance policies, your notification list and all your account passwords? With what we do, and the growing craziness in this country, you'll want update that 'doomsday folder' and make it findable. Not that any of this has to do with airplane maintenance or trust in our mechanics, but kiln accidents have been known to happen.

**4b. '988' Mental Helpline:** On a related note (*this is serious*), "Those seeking support during a mental health or emotional crisis may dial 988 to connect to a nationwide support network as of 16 July. The transition to a simplified 3-digit number is meant to increase access to the National Suicide Prevention Lifeline & will operate similar to 911."

(*This not so much*): **NEWG** is currently assigned **N988CP**; a 1997 C-172R. Perhaps we can help that wing with an aircraft naming contest. Possibilities include: 'Helper', 'Hotline', 'U.O.K.', 'Looking up,' 'Hope,' 'Metal Health' and 'Sanctuary'. Let us know your inputs and we can pass them along.

**5.** Thank you all for the support & taking the time to read this Riveting Reading. All the Riveting Reading newsletters are available on the Wing website (NCWGCAP.org) under 'Members/Operations/Aircraft Maintenance.' You can reach me by email at: [mheller@ncwgcap.org](mailto:mheller@ncwgcap.org) or via phone at (703) 732-3264.

- Stryker  -

Martin Heller, Lt Col, CAP  
NCWG Aircraft Maintenance Officer