

“Riveting Reading”

Civil Air Patrol
North Carolina Wing
Aircraft Maintenance

Feb 1, '20. Vol #27
By Major Martin ‘Stryker’ Heller



KAVL's shiny 1986 C-172 after a wash & wax.

Photo by Lt Col Ray Davis. 'Echo' has flown nearly 6,600 (Tach) hours

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

1. Motivational Quote: *"A pilot who says he has never been frightened in an airplane is, I'm afraid, lying."* - Louise Thaden *And the corollary:* "Fears are educated into us, and can, if we wish, be educated out." - Karl Augustus Menninger

2. January highlights: A normally slow winter flying month, January's pace picked up with support to the US Army air traffic control training facilities. These flights started on January 27th. Six → eight planes/day flew against two separate locations and will continue until February 5th. In January, **NCWG flew ~455 Hours**, with 15 aircraft, since **N4813C & N726CP** were down for extended maintenance (read: 30 hours/airplane). **Top hour earners were: KLHZ/N7360C (50) & KAVL/N99885 (47)**. Had Jan 31's weather not iced out the mountains, KAVL would have been number one. Honorable mention goes to: **KBUY/N262CP (44)**, **KINT/N405CV (38)**, **KSUT/N179CP (36)**, **KJQF/N716CP (32)**, **KLHZ/N938CP (30)**, **KFAY/N727CP (29)**, **KILM/N908CP (27)**, **KRWI--KMRH/N98426 (27)**, and **KAVL/N963CP (26) hours**.

3a. Maintenance Month in Review: New 100-Hr/Annuals included **N4813C**. The Army mission ran **N963CP, N179CP, N7360C, N262CP, N938CP and N9930E** out of time and are coming in as the month rolls over. **N437BA**, our glider, should also have its annual in early February. It's also being equipped with ADS-B out, so the pilots around KLHZ knows when the glider is airborne.

N4813C: "**Frank**" was dropped off at Winder, Georgia (KWDR) on New Year's Day, to receive an engine from CAP's C-172, N99709, which was being retired. That engine only had ~200 hours on it. **N4813C** is also having its propeller overhauled, an annual inspection, IFR certification, corrosion proofing and some minor repairs. Those included exchanging the intermittent GNS430, resealing the real windows, replacing some cowling fasteners and others under the copilot's side wing. Finally, they'll touched up the white paint and wash the airplane. We heard the engine is on, but the propeller and GPS are still out for repairs. They wouldn't say when **N4813C's** would return, but I'm guessing Feb 22nd at 18:47(Z).

N726CP: What appears to be solidarity with the Boeing 737-800 Max, '**Betty**' had been grounded since December 4th. Being a costlier part, NHQ needed more time for approval & funding. Thus, the elevator was ordered just after X-Mas. Extra elevators aren't stocked, so one had to be built and painted. It arrived at KSUT on 30 Jan, installed & the aircraft returned to **KRDU** on 31 Jan. **N726CP** was down for nearly two months; would have been a lot longer if '**Chihuahua**' hadn't bird-dogged it every 2-3 days.

3b. More Maintenance Actions: **N262CP, N99885, N819CP, N716CP & N908CP** had oil changes. **N727CP** should have one in a day or two. Previously, **N716CP** had an alternator failure; turns out just the alternator field wire broke. A new connector and a battery charge, along with a nose strut servicing got it squared away the next day. The engine for **N727CP** was ordered for an expected 25 MAR TBO (at 2,200 hours). **N7360C (Lola)** needed a new valve for its nose gear strut. **N98426 (Sarah)** starting issues

seem to re-appear and was serviced. Perhaps priming with espresso instead of 100LL might have been the problem. Turns out the primer line broke, and the left magneto (used to start engines) needed to be re-timed. Also, the left fuel quantity indicator transmitter was replaced since it was leaking fuel. This should resolve the gas smell in the cabin (insert your own joke here). **N99885's** primer pump problems re-appeared and **'Echo'** traveled to KSVH for repairs. It took longer to preheat the airplane, than for the mechanic to fix it. **N963CP 'Gumby'** had its front right seat back actuator installed, removing the temporary brace, and making the seat more flexible. Additionally, the beacon bulb died and was replaced. **N262CP's** alternator quit while at **KRDU**. NHQ overnighted a new unit, and on-field maintenance fixed it the same day. **N99885's** GPS was intermittently, dropping satellites, so a new GPS antenna was installed while on a A9 aircrew shuttle mission. It also had a new Push-to-talk switch installed at home station.

3c. What's in your Seatback? A Squadron Commander advised of a 'Catastrophic Vomit Bag failure' during AFROTC flights last weekend. Hazmat cleanup procedures were put into effect. The lesson is that many of these bags, whether stored in seatbacks, flight bags, or kneeboard pockets, might have been there quite a while, and their integrity could be compromised. We should take a look at all our preventative stock before we encounter another 'core breach of the regurgitation containment field.'

3d. Bulb Voltage: You might have noticed the exterior power door states 28 Volts. Since many (non-CAP) general aviation aircraft use a 12-volt system, mechanics tend to reach for that 12-Volt bulb, which will burn out immediately in our aircraft. If you need a bulb changed in your aircraft, be sure to remind maintenance they are 28 voltage lights so they don't destroy their inventory, & might cost us good will.



Clean NCWG aircraft:
KBUY (N262CP), KSUT
(N179CP) & KAVL
(N963CP) & N99885
photo above



3e. Good Weather Airplane Wash: KBUY washed **N262CP**; KSUT washed and Waxed **N179CP**, keeping those squadrons on the **'Nice'** list. The **'Other than Nice list'** (according to AMRAD as of 30 Jan) includes: **N908CP, N98426, N819CP, N938CP, N741CP, N727CP & N405CV**. That data block is above the 'Last GPS Update' block, so give yourselves credit (when credit is due). Speaking of GPS updates....

4. Aviation Maintenance Support Information:

4a. GPS database's next cycle (2002) was January 30th. But you knew that, right? You do now.

4b. Aeronautical Information File (AIF) Updates: NHQ's AIF page still shows the last update as 23 April. <https://www.gocivilairpatrol.com/programs/emergency-services/aircraft-operations/aif/aif-airplanes-balloons>

4c. New Flight Check Criteria & Procedures: Still in coordination at the highest CAP levels; stay tuned.

4d. New NCWG End of Month Excel Form Version: Per Col Ragland's Jan 26th, email, please download the latest F10 (version 36) before submitting reports for January 2020. That link is found on the NCWGCAP.Org webpage at: Home/Operations/aircraft maintenance.

4e. Pilotweb (.nas.faa.gov) is no longer providing NOTAM search capability: It still has great links to aviation info. But for NOTAMS, use: <https://notams.aim.faa.gov/notamSearch/> or the DoD NOTAM search engine at: <https://www.notams.faa.gov/>. Temporary Flight Restrictions are found at 'tfr.faa.gov.'

4f. Cross Wind Limitations: We know the CAP crosswind limitation is 15 knots. There is even a decal in the cockpit stating so. But how does the gust factor fit in? Is it, A) *adding half the gust factor*, or B) *CAP considers the gust factor the crosswind component*? The answer is 'B', and the documentation is found on the NHQ CAP Operations website at:

https://www.gocivilairpatrol.com/media/cms/Crosswinds_and_Gusts_89EE2A7ABF3DA.pdf

4g. 2021 CO Detectors: We just received and labelled the new CO detectors for your aircraft. Five have already been installed. If your aircraft (or squadron sister ship) makes it to KSUT before 7 February, we'll install it. Else, we'll bring the rest to the 2020 NCWG annual conference.

4h. Homeland Security Mission Credit: Remember, every 10 sorties (each day is usually two sorties) earns a ribbon, or a clasp. CAPR 39-3, Para 21.L. has details and you can download an excel file of your mission participation log from the Reports section of WMIRS. Make submissions on a CAP Form 2a.

4i. New Aircraft Checklists: You might have already seen the 29 Jan WMIRS Critical Read item stating: *Previously published CAP Standardized Aircraft Checklists for C172S G1000 and C182T G1000 aircraft contain incorrect emergency procedures for Engine Fire in Flight. This error has been corrected as of CAP Checklist Version Date 28 Jan 20. Previous versions of CAP's Standardized EP checklist should no longer be used. These checklists should be removed from CAP aircraft and destroyed.*

Additionally, a second, same day critical read item stated: *Previously published CAP Standardized Aircraft Checklists for C172P aircraft with STC SA4428SW (O-360 Lycoming 180 HP engine) and STC SA2196CE (gross weight increase to 2550) contained an incorrect glide speed on both the Normal Procedures (NP) and Emergency Procedures (EP) checklists. This error has been corrected as of CAP Checklist Version Date 29 Jan 20....* **NCWG will be developing and forward new checklists shortly** (probably at the NCWG Conference).

5. Thank you all for the support & for taking the time to read this. Riveting Reading can also be found on the NCWG Operations / Aircrew Maintenance Webpage. If you have questions, call 703-732-3264.

- Stryker -

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