

“Riveting Reading”

Civil Air Patrol
North Carolina Wing
Aircraft Maintenance

Jan 1, '21. Vol #38

By Major Martin ‘Stryker’ Heller



Photo by 1 Lt Ken King, Commander NC-305, KECG.

If you have a great photo as well; submit for possible publishing here...

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

1. Motivational Quote: *“Flying best glide speed tells you when you’ll touch down...knowing ‘miles per 1000 feet’ tells you all the places you’ll go; if only you know.” See the Pilot Operations Handbook for that aircraft’s glide ratio....*

- From William K. Kershner/Dr. Theodor Seuss "Ted" Geisel.

1a. NCWG Director of Operations (NCWG/DO) Comments: See Attachment 1.


1b. Dec Highlights: NCWG flew ~285 hours in Dec; nearly 30 more hours than November, and that’s with both **N819CP** and **N727CP** off-line for the month. NCWG wasn’t tasked with the 24 Dec, Defensive Counter Air patrol; still, not a bad December. **Top Hour Flying Squadrons:** **NC-121/KJQF** -- **N716CP** (33) beating out **NC-022/KBUY’s** N262CP’s (31.1) only because N262CP lost a week for a 100-hour inspection. **NC-019/KAVL** flew **N99885 (29.7) & N963CP (21.2)**. Impressive shows by **NC-145/KLHZ--N7360C (27)**, **NC-171/KFAY--N4813C (26)**, **NC-305/KECG--N741CP (24.4) & NC-048/KRDU** flying **N726CP (22)**. Two aircraft flew less than 10 hours; worse, two others flew under 5 hours-- Not a good, ‘Nice list’ start.

December’s NCWG Top Left Seat time pilots (taller than 5’ 5”) were: 1st Lt James Coffee/NC-171 (KFAY) with 13.6 hours, and 1st Lt Gregory Brown/NC-145 (KLHZ) with 13.5 hours. The top ‘C’ Mission pilot was C/CMSgt Jackson Cook/NC-019 (KAVL) flying 9.8 hours. *Seems I might be overlooking somebody.... FYI: CAPR 36-1 doesn’t list ‘height.’*

2a. Maintenance Month in Review:

2b. Aircraft in Annuals: **N262CP (George)** just went to KLHZ just before X-Mas. One squawk is that the autopilot seems to quit on occasion, forcing pilots to actually fly the airplane. Plus, a strobe is out (again), tires need attention (they always get looked at). During January, five aircraft are projected for 100-hour inspections, & three for oil changes. →→

2c. More Maintenance Actions: While not an AD yet, the NTSB released a recommendation regarding oil filter adapters on Continental engines. Some of their older engines didn’t use an oil filter but a screen instead. One particular after-market manufacturer had issues with oil leakage and issued service bulletins. NHQ, being more cautious *{something about CAP Lives Matter}* mandated checking and grounding/fixing affected aircraft. Of CAP’s 68 possible affected aircraft, NCWG has two; **N7360C** and **N9930E**. **N7360C** was checked during a recent oil change; it doesn’t have the affected manufacturer’s part. **N9930E** also doesn’t show having an STC for the affected part, but we’ll double check the next time it comes in for periodic maintenance. Attachment 2 shows the status of NCWG’s open Advisory Directives.

N727CP  had Transponder along with G1000 buttons issues. On the move to maintenance, the electric fuel pump failed. Adding to that aircrews’ fun morning, the aircrew chase plan, **N4813C**, had a flat tire. Fortunately, **Rogers Aviation** on the airfield, replaced the tube right away, and got ‘**Frank**’ rolling again. **N726CP (Betty):** One of the Landing lights, identified during last maintenance was changed out. When you wonder why new airplanes cost \$400-600K, perhaps these thousand-dollar landing lights are part of the reason. **Betty’s** stall horn failure which the KOEL requires for flight; a replacement stall horn reed installed at KLHZ and it went home. **N716CP (Carolina)** had its oil changed.

3. Aviation Maintenance Support Information:

3a. GPS database current cycle (2014) started Dec 31st. Remember to update AMRAD; both changed & next due dates. There has been a change to the magnetic variation file on the G1000 aircraft. Most units have had success as part of their normal navigation database upload. If it didn’t automatically update, the G1000 will tell you. If it does, look at

your G1000 GMU software (on Aux/systems page) to see if the version is between 7.00 & 7.71. If so, crew chiefs will need to follow the instructions in Garmin Service Advisory 1612 Rev F at: <https://s23634.pcdn.co/en-US/aviationalerts/wp-content/uploads/2020/11/1612F.pdf>.

3b. How old is the MAR fleet? The average age of MAR fleet of 66 aircraft is ~2004. WVWG happens to fly the oldest fleet of MAR's seven wings average age; 1999. NCWG's fleet average age is ~2000. VA and MD are slightly newer at 2002. SCWG, DEWG and DCWG are 2010/2011 respectfully. No surprise the 'Congressional Wing' gets the newest aircraft. The oldest airplanes in the region include: NCWG's 1977 C-206, VAWG's 1979 C-172N also its 1980 C-182Q, and WVWG's C-172N with > 7,500 hours. NCWG's 1985 C-172Ns, N99832 (KINT) & N99885 (KAVL) have flown > 6,800/6,700 hours respectively. For those awaiting NCWG's new C-182, note CAP's 2020 CAP aircraft delivery was slipped a year. With possible aircraft losses (whether natural disaster or man-made, or even maintenance issues that cost too much to fix) there is always a possibility that aircraft could be reassigned. Stand by to stand by....

3c. New Carbon Monoxide Detectors: The 2022 CO Detectors were distributed via mail to the aircraft crew chiefs just before X-Mas. Be sure to install before 31 Jan 2021 and update the information in AMARD.

3d. Wipe Away, Wipe Away, Wipe Away All.... (not): Don't just go cleaning things in the name of COVID19 protocols.



Do you see what I see? A list; fading on the panel...it won't bring us info at all... it won't bring us info at all. We believe this is an alcohol induced event... as in someone wiped isopropyl alcohol on the paint in the cockpit. And it's a newer plane too. Attachment 3 has a re-print of NHQ/LG's COVID19 care instructions. It mentions using diluted isopropyl alcohol, but nothing about the decals nor paint on the panel. Remember that chemicals can affect surfaces (maybe we shouldn't have slept through that chemistry class). The point is, watch what you are doing when rubbing/ spraying chemicals/ cleaners on surfaces. Why would somebody even be touching this area anyway? Every pilot I've seen just sets the power settings at the top of the green. BTW, the G1000 displays aren't touch screen neither...although you couldn't tell by all the finger prints.

3e. Quiz Time: What books are needed in the cockpit? A) AIF B) Aircraft Operating Manual C) G1000 manual (if equipped) D) Your checkbook E) All of the above or F) Some of the above. Why do I even ask? Because when we find the aircraft operating manual in the baggage area, we try to get your attention. And while it's rare that you need some/all of the above books in the cockpit, when you do, (i.e., finding the glide ratio) they need to be reachable.

3f. Baby, its Cold Outside: Remember all that winter flying stuff. Dress warmly, make sure there isn't frost on the wings, and pre-heat the engine if the engine temperature is 25 degrees or colder. Many people that care about engines will tell you to preheat below 40 degrees... easier said than done, but engines are expensive. Make sure they are warm.

4. Thank you all for the support & for taking the time to read this. Riveting Reading can also be found on the Wing website (NCWGCAP.org) under 'Members/Operations/Aircraft Maintenance.' If you have questions, call 703-732-3264.

- Stryker -

Martin Heller, Major, CAP
NCWG Aircraft Maintenance Officer

3 Attachments

1. NCWG/DO Comments
2. FAA Advisory Directive (AD) Tracking
3. NHQ/LG Aircraft Cleaning Instructions

NCWG Director of Operations Guidance

Attachment 1

“Luck is when opportunity meets preparation”. Maybe. Or maybe the universe is not quite as organized as we want to believe it is. I am by nature a thankful person, knowing that there are far too many unfortunate things happening to too many good people and not enough bad ones, and grateful not to be either one. It has been a terrific year. We didn’t kill anybody, we didn’t destroy any airplanes, we have plenty of funding, and nobody in Operations has quit yet. I have always believed in setting low standards: they are easier to reach and you are just as happy at the end of the year. Of course, pilots still continue to screw up log sheets and WMIRS, we have at least four AC that are not even close to being flown enough, and we are assuredly going to lose some damn fine pilots due to exhaustion, frustration, and the COVID chaos. And yet, it could be so much worse. For now, turn off the news, hug your loved ones, and stay safe and sane. I promise to catch up with the beatings next year.

M

Matthew D. Urbanek, Lt. Colonel, CAP

North Carolina Wing

Director of Operations

Matthew.Urbanek@ncwgcap.org

828-432-6066 / 207-563-5066

Attachment 2
NCWG Fleet Compliance with recent Advisory Directives (Ads)

AD 2020-19-06, effective Nov. 3, Affects propellor governors' idler gear bearing. Complete within 50 hours or next oil change or 100-hour, whichever comes first.

Status	Tail #	CAP Acft Model	Tach Time hours to next mx as of: (Oct 20)	Based	Plan	Remarks (Prop Governor)
Pending	N405CV	C-182T	30	KINT	Scheduling oil change & Need logbook & prop gov stamped at 100HR	an Eval at H&H Triad in Jan/Feb Rebuilt: HH Triad 8 Mar 16 under WO 21396 (B4 service bulletin)
cleared ^{1,2}	N741CP	C-182T	19	KECG	H&H rebuilt prop & Governor - 16 Nov 20	Situation snowballed; engine getting new crankshaft.
cleared	N819CP	C-182T	12	KSVH	Need logbook & prop gov stamped at 100HR	Rebuilt: HH Triad 8/14/2020 Under WO # 24185

¹ Prop Governor rebuilt by H & H Triad who doesn't use affected bearings. (Have H&H Triad letter).

² Still need logbook entry to close out the discrepancy by acknowledging that AD 2020-19-6 is N/A

AD 2020-18-01: Cracks found in the lower area of the forward cabin doorpost bulkhead. This AD requires repetitively (every 36 months) inspecting the lower area of the forward cabin doorposts at the strut attach fitting for cracks and repairing any cracks. The NCWG aircraft affected are the C-172Ps; N99832, N99885, N98426, N4813C, and our lone C-182R; N9930E.

Status	Tail No	Year	CAP Aircraft Model	Tach Time to next mx (as of 20 Oct)	Based	Plan	Remarks
Open	N9930E	1985	C-182R	40	KIXA	Next 100 hr @ KLHZ	Est Feb 2021
Open	N4813C	1986	C-172P	86	KFAY	Next 100 hr @ KSUT	Est Mar 2021
Open	N98426	1986	C-172P	70	KEWN	Next 100 hr @ KSUT	Est Apr 2021
Open	N99832	1986	C-172P	38	KINT	Next 100 hr @ TBD	Est Jan/Feb 2021
Open	N99885	1986	C-172P	70	KAVL	Next 100 hr @ KAVL	Est early Jan 2021

New Potential AD: After-market Oil Filter Mounts for Continental Engines in place of a brass screen. (Both F&M Enterprises and Stratus manufactured versions). NHQ mandated review and grounding if affected.

Status	Tail No	Year	CAP Aircraft Model	On-Line Record Review	Based	Plan	Remarks
Open	N9930E	1985	C-182R	Not shown	KIXA	Engine and STC logbook didn't show	Probably not-applicable; will evaluate at next oil change.
Open	N7360C	1977	C-206-U	Not Shown	KLHZ	Physically evaluated when changing oil	Non-applicable

Riveting Reading – Jan 2021 - Attachment #3
NHQ/LG -- COVID-19 AIRCRAFT & VEHICLE CARE

March 20, 2020

To safely operate our aircraft and vehicles during the COVID-19 outbreak we need to disinfect and sanitize them to keep our personnel safe. This video was created by the CAWG to demonstrate sanitizing of Aircraft and Vehicles for COVID-19. Remember to never spray anything directly onto the screens or displays. Lysol can be used as well as the bleach solution they demonstrate in this video.

https://youtu.be/NOEs_jip-nU

We still recommend the use of a bleach solution or Lysol for disinfecting/sanitizing the aircraft **since** these (**Textron**) chemicals are not available. (**Too pricey/too large quantity**). This is a bit different than the soap and water recommended below. Soap and water will clean soiled items but will not disinfect/sanitize the items cleaned as Textron notes in their instructions. Also notice that Textron specifically recommends an alcohol solution be used on all electronic displays and that bleach solutions and Lysol not be used on these components.

If you're unable to attain these disinfectants due to shortages, we recommend these alternative cleaning options (Please note, cleaning may remove germs, viruses and other contaminants from surfaces, but may not be effective to kill them):

- Aircraft furnishings: We recommend using isopropyl alcohol (IPA)/water mix (60% IPA/40% water, by volume). For best results, wipe the surface with an IPA/water mix and let it dry. This mix can also be sprayed onto soft surfaces, like carpet, but **do not use this IPA/water mix on aircraft leather and windows.**
- Leather and windows: Any commercially available soap and water, such as dishwashing soap, can be used.
- Electronic displays: For glass products with anti-reflective (AR) coating, use a concentration of greater than 50% Isopropyl Alcohol (IPA) with a micro-fiber cloth to prevent scratches. Do not use bleach or Lysol® wipes, or any cleaners with Citric Acid or Sodium Bicarbonate as these can etch the coating on these displays. AR glass is used on displays and touchscreens in the Garmin G1000, G3000, and G5000 systems, as well as Collins Proline21 and Proline Fusion. Do not use IPA on acrylic, Lexan, or Polycarbonate screens such as the Garmin GNS 430/530.

The following options are not approved for use in Textron Aviation aircraft:

- Ozone generators: Ozone can be highly reactive to organic materials. Depending on its degree of ozonation, this method may degrade surfaces or rubber hoses.
- Hydrogen Peroxide: any solution of hydrogen peroxide may evaporate when used as a mist, degrading leathers, acrylic, or polycarbonate window coatings.

<https://www.gocivilairpatrol.com/members/cap-national-hq/logistics-mission-resources/aircraft-management/hot-news/covid-19-aircraft-care>