

## *“Riveting Reading”*

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

**Sep 1, '20. Vol #34**  
By Major Martin 'Stryker' Heller



## **NC DOT Aviation Art Contest:**

Held each year, 2020 had 2,420 entries w/1 three age categories. Shown is NC DOT Communications' Senior 6<sup>th</sup> place finisher by Mohamed Almahboosh. See more at: <https://www.ncdot.gov/initiatives-policies/students-youth/aviation-art-contest/Pages/aviation-art-contest-2020.aspx>

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

- 1. Motivational Quote:** *“Good judgment comes from experience. Unfortunately, the experience usually comes from bad judgment.”*  
Attributed to Barry LePatner, Wil Rogers, Fred Rose, C. H. White, Simon Bolivar Buckner Jr among others.

**1a. NCWG Director of Operations (NCWG/DO) Comments:** His monthly philosophy is in Atch 1

**1b. NCWG Director of Stan/Eval (NCWG/DOV) Comments:** Remember to get funding and fly your Form 70-5A's before CAP closes out funding somewhere late but before the end, of September.

**1c. Aug Highlights:** August began with Hurricane (Isaias) and it didn't get much better flying-wise. NCWG started the month operating under Phase 0, however, NCWG/CC authorized flying at Phase 1 protocols. Air operations in NCWG (and SCWG) were jumpstarted with a 'TFR Charlotte Outreach' initiative where TFR posters were delivered to airports in the KCLT area ahead of the Republican National Convention. Week two: NCWG started flying the U.S. Army ATC support mission at Harnett County (KHRJ) from 12-20 Aug. Unfortunately, between thunderstorms and a COVID-19 rebound, the US Army cancelled the second week of AOB flying. Mountain Fury, hosted at KAVL by NC-019, was also delayed until Sept 11-13 for weather. Despite all that, **NCWG flew 354 hours; doubling July's hours.** All NCWG airplanes flew & the fleet averaged 20.8 hours/aircraft. **Aug's Top Hour Squadrons were: NC-019/N963CP/KAVL– 43 hours & NC-022/N262CP /KBUY flew 36 hours.** **NCWG's Top Aug Pilot: Capt Jason 'Dan' Moore, NC-143 with 16.6 hrs; 2<sup>nd</sup> place, Lt Wendy Peters, NC-048, 13 hrs. 3<sup>rd</sup> Place, Lt Col Wallace Cortney, NC-019, 12.7 hours. Number 1 for Aug in C-Missions sorties (read: paid for own flying) was: Capt Sandra Smith, NC-052 with 6.3 hours. Capt David Hartman was second and flew 4.8 C-mission hours of his 10.1 total hours. See Atch 2 for the Fiscal Year-to-date summary of the top 10, A-Mission, total airtime & Top 4, C mission hours.**

**1d. NCWG's Annual Hours/Aircraft Standing:** With all the COVID19 and Phase 0 status, one might be curious on how NCWG stands compared to other wings. Fear not, **we're still #1 in the country** in flight hours/aircraft, but not by much. Per the July Form 18 numbers, NCWG has 176 hours per (17) aircraft. Second place is NHWG with 162.8 hours and third place is the DC wing with 151.7. NCWG has flown 3,346 hours in FY20. Despite COVID19, 8 of 17 NCWG aircraft have exceeded NHQ's annual goal of 200 hours per aircraft. 4 more (N4813C, N405CV, N741CP & N99832) could get there. **Realize there are just 3 weeks more FY2020 flying which would result in 2/3rds of the fleet making the goal.**

**2. Maintenance Month in Review:** Seven aircraft in for 100-hour/Annuals: **N726CP, N98426, N7360C, N938CP, N99885, N262CP, and N741CP.** Sept's annuals will include: **N179CP and N4813C.**

- **N726CP (Betty)** did need a new G1000 battery, and a baggage door latch. Completed 13 Aug; home on 14 Aug.
- **N98426: (Sarah):** IFR Cert, Corrosion protection, new Weight and Balance, some new instrument panel decals, new left main tire, new nose wheel bearings, & a new 'little flap' on the flap switch. Completed 13 Aug, home 15 Aug.
- **N938CP (Max):** Completed 10 Aug. Done at home station at our new consolidated maintenance facility.
- **N7360C (Lola):** Completed 11 Aug. Because of the AOB mission and Mountain Fury, we deferred the magneto overhaul, repair the MVP engine monitor system, replace the internal lighting rheostat and verify the 2 EGT works. All that work is now done, except for the magneto overhauls. Should be completed by 6 Sept.
- **N99885 (Echo):** Held off on 500-hour magneto, as there are 40 hours left. Maintenance discovered oil on bottom of crank-case and tighten/torqued the bolts. Had to replace right flap skin support bracket, right elevator outboard bearing, and straightened the radios out. Replaced the primer pump, fixed right seat frame, & pilot seat rollers,

replaced left seatbelt assembly, secured left side panel by door jam, tightened vacuum pump exhaust fittings, all oil return lines, rocker cover gaskets and a new right tire. They washed and ran the engine to ensure no oil leaks....

This may seem like a lot for an old airplane (CAP owns ~80, even older C-172N&P's models). But appreciate **that in FY19 & 20, N99885 was flown more than nearly any other aircraft in CAP.** We may not be #1; but we're up there.

- **N262CP (George):** The #2- & #3-cylinder exhaust valves were sticking so the valve guides were reamed, right main tube replaced due to slow leak, nose wheel bearings replaced due to excessive rust. Went home on 22 Aug.
- **N741CP: Bleu** got her beacon fixed, its ELT battery replaced, a new weight and balance after aircraft was painted a few months back; also checked the aileron rigging and trim operation. Maintenance reviewed the low vacuum pump performance, replaced the right main tire, and replaced a few missing screws near the pilot's head. The FM radio (TDFM-136) wasn't transmitting well, and was replaced. Still waiting on the magneto overhaul return and should go back to KECG next week. We even put the '**Bleu**' label on the airframe.

**2a. Other Maintenance Actions:** **N716CP** got its propeller and governor rebuilt; **N9930E** got its propeller and governor rebuilt...all NCWG airplanes got their propellers and governors rebuilt!! (when and where appropriate). **N963CP** is having its recently replaced copilot GMA (Audio panel) replaced at the moment. Gumby also replaced an intermittent Pilot PTT. Next, the throttle cable had slack...maintenance found & fixed...wait for it..."a big nut loose in the cockpit." **N726CP's** right tire was found flat early morning on 6 Aug. Crew Chief, **Major Jeremy Browner** did outstanding coordination and hounding **Jet Logistics**, to fix **Betty's** tire within hours. (Rumor is he threatened them with 20-hours of G1000 briefings). Seriously, **shout-outs to Major Browner** for the work above, along with **Lts, Irv Goldstein, Kasper Kubica** and **Wendy Peters** for relocating **N726CP** and **N98426** to **KSUT** for maintenance. Additional shout-outs for **Major John Phillips, Capt John Matter, Major Chuck Dawson, Major Fred Draper** and **Major James Newton** for moving **N98426** and **N9930E**. These time-sensitive moves, in the challenge of summer thunderstorms, allowed the aircraft to get mandatory inspections and returned to service in time for the AOB mission and Mountain Fury; which of course, were then cancelled/postponed due to COVID19/thunderstorms, respectively. **N716CP** gets an oil change 1 Sept.

**N99885** (Echo's) Directional Gyro decided to go its own way; replaced on 11 Aug at KGMU. **N716CP** received a new oil pressure sensor, returned home on 11 Aug. On 14 Aug, **N437BA** (Blanik L-23 glider) was grounded for AD2020-16-05. The one-time inspection of the rudder control cable attachment screws and hinge bolts is happening while you read this. **N7160C** (Lola's) electrical system wasn't charging—mechanics adjusted the regulator. **N179CP** (Sandy) blew a nose wheel strut; rebuilt that same afternoon—**more accolades to the our KSUT consolidated maintenance shop.** **N727CP's** Comm 2 wasn't transmitting strongly & was looked at the same time it was getting its bi-annual IFR/XPNDR certification.

If we're doing shout-outs for good work, then we need to scream for **N819CP crew chief, Lt Todd Milstead**. A burned-out strobe power supply might have parked **N819CP** as newer C-182 Aircraft Operations Manuals' KOELs show it's a grounding item. Thus, strobe power supplies have become really hard to acquire and even Cessna has a technical alternative solution. While NHQ was trying to find/ship the approved alternative & installation instructions, Lt Milstead found a power supply. Armed with only a screw driver and a flashlight, he located two on the airfield, got them to the maintenance shop, saving several hundreds of dollars and avoiding a possible weeklong grounding. Way to go!!!

**3. Aviation Maintenance Support Information: GPS database current cycle (2010) started Aug 13<sup>th</sup>; next 2011: 10 Sep.**

**3a. Aeronautical Information File (AIF) Updates:** For the past four months, I've been harping on major NHQ AIF changes after a year off for restructuring the system, (in preparation for Nov's Compliance Inspection). Honestly, I wasn't sure crew chiefs are paying attention so I started auditing the AIFs. Pleasantly surprised; **N726CP** and **N98426** were in good shape; although still needed a few changes/updates. Take care as some tabs have changed (the new CAPR 70-1 is now Tab 9; the Mission Symbols CAPR 72-2 has replaced the two-sheet, unnumbered page, ORM updated, CAPR 60-2 went away, etc...) Again, best to sit in front of the computer, with the AIF, and Tab-by-Tab, go through the links at:

<https://ncwg.cap.gov/directorates/operations/aircraft-maintenance/aircrew-information-files-aif>

3b. **NC Dept of Transportation Annual Airport Directory:** Some of us carry that (free) 5 x 7", spiral bound, notebook which the state produces about every year. You can download a .pdf version at:

<https://www.ncdot.gov/divisions/aviation/Documents/nc-airport-guide.pdf>

3c. **ELT Success info – Another point of View:** AVWEB is a twice a week, free aviation e-newsletter. It's worth seeing two recent items; an article and video on ELTs. CAP received some shout-outs in both items. For reference, each ELT battery change, every 24 months, is upwards of \$500 (NCWG has 18). <https://www.avweb.com/multimedia/why-cheapskate-pilots-dont-like-406-elts> <https://www.avweb.com/insider/its-time-to-sunset-the-elt-requirement/>

3d. **Sanitizing the cockpit:** Right way (Repeating from the April 2020 Riveting Reading): Start by watching the California Wing's video on aircraft 'cleansing': [https://youtu.be/NOEs\\_jip-nU](https://youtu.be/NOEs_jip-nU). Official guidance on what to/not to use is at: <https://www.gocivilairpatrol.com/members/cap-national-hq/logistics-mission-resources/aircraft-management/hot-news>. **Note there are two posts, 20 & 23 March (so far).** The biggest take-away is **don't spray anything on the G1000 screens**. Only use good quality micro-fiber clothes. Not even those "high-quality", dollar-store, electronic screen wipes. Considering the G1000 isn't a touch screen, it's surprising how many finger prints are on them. While the video talks of using a 1:10 bleach solution, **others advise just using iso-propyl alcohol on metal surfaces, buttons and switches** so the cleanser doesn't corrode the electrical system. Especially don't saturate them to the point they drip.

And recently AOPA published an article on the wrong way to sterilize the cockpit which will cost a lot of bucks to repair.

[https://www.aopa.org/news-and-media/all-news/2020/august/20/improper-disinfectant-appears-to-damage-two-skyhawks?utm\\_source=ebrief&utm\\_medium=email](https://www.aopa.org/news-and-media/all-news/2020/august/20/improper-disinfectant-appears-to-damage-two-skyhawks?utm_source=ebrief&utm_medium=email)



**3e. Glorious New Checklists: (Update)** On Aug 7<sup>th</sup>, the **Chihuahua Copy Center** mailed out these, pilot friendly, laminated, booklet size, new checklists to crew chiefs. They should have discarded both the old, laminated booklets and the single page update last month. Now, there should only be two checklist booklets in the aircraft. But those pages are in the wrong order. Newer, new ones were mailed out on 19 August. Replace again & leave just one each for the pilot & for the MO.

**3f. Still Putting on Pounds:** Watch out & capture in the Weight & Balance (W&B) how much stuff is in the airplane. N98426 was re-weighed & the **empty weight increased 139 #'s** (There were math errors (Read: less useful load.)) The NCWG W&B program is already updated. **What we can control is how much stuff we add.** Everything else put in that aircraft weighed in at: **49#s; not including another 19#s** of aircraft maintenance records. Next time you're out at the aircraft, see what doesn't need to be there (extra chocks, cleaning materials, manuals, etc.... Remember to also capture flight bags/coolers when doing your W&B. We are already fudging since NCWG W&B program uses our 'naked' eServices weight.



**3g. Lobster 'Tale' Special: Safety Reminder:** CAPR 70-1, Para 9.4.5. Prohibits Hand Propping. You won't want to lose a claw or two. Besides, would you really want to fly an airplane (other than VFR to get it to maintenance) if the battery was so weak, the plane needed to be jumped?



**Tire Numbers on  
CAP Vehicles**

**3h1. Tire Quiz:** (Looking at the pictures to the left: **1) What does the number represent?**

- A. The number of times the tire has been replaced.
- B. The number of potholes the axle can take before breaking.
- C. Part of the combination to the vehicle key box.
- D. The cold tire pressure in pounds per square inch.
- E. The height above the ground of these numbers in centimeters.

**3h2. How often should the tire pressure be check?**

- A. Never...it was set by Cessna/Ford when the aircraft/vehicle was built.
- B. Before flying/driving the vehicle/airplane in the morning.
- C. When you get to your destination.
- D. Monthly.
- E. Anytime it doesn't look right.



These Double D (or D-D/E) answers were brought to you by the, 'Let's not get a three-pete writeup during our next inspection committee'. (LNG3WDNIC).

4. Thank you all for the support & for taking the time to read this. If you have questions, call 703-732-3264.

*- Stryker -*

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2 Attachments

1. NCWG/DO Comments
2. Top 10 NCWG Flying Hour Pilots

**Riveting Reading – Sept 2020 - Attachment #1  
NCWG/DO Inputs (Lt Col Urbanek)**

Needful Things. Those items in life we just cannot do without. In our business, that would be air operations, that is faster planes, smarter pilots, and higher weather. {Best not to mix that up} Planes, pilots, PARTICIPATION, and weather. Participation, finding somebody healthy, flying any and all missions, making it up as you go, flying all the required and routine items of all the flight profiles.

Needful Things. All of you reading this know the deal. Like me, many of you wrote this fiscal year off two months ago. For those two-thirds of you who have chosen not to fly, God bless you and keep you, and I sincerely thank you for everything you have contributed to the cause. I hope to see you bouncing down the runway next year once we escape the Wuhan madness and your life becomes somewhat normal.

For those of you actively participating, however, the gold goes to the bold. Type away with abandon on the 98's and get your buns in those fine pieces of plastic and sheet metal. With a little effort several AC could reach 200 hours. Just a thought, could we have funding (a tracking number) before we start entering missions in WIMRS? A gentle reminder.

Needful Things. We need to tell you this and You need to listen. In the year of our Lord 2021 we may need to move airplanes. Operations (me & the gang of 6) are not in the business of bullying, promising, or threatening. We are, however, in the business of protecting the Wing Commander and his assigned assets. "No fly, goodbye." Needful Things. We need you, you need us, and we all need each other to get through this mess.

**Attachment 2 – NCWG FY20 “Top 10” Pilot Hour Earners (as of 31 Aug 2020/ 5pm)**

Pilot	Unit	A Hrs	B Hrs	C Hrs	Total pilot Hrs	Ranking Left Seat Hrs	Other seat hours	Total Hours	Ranking by Total Hours
Bennett , Michael T, Capt	NC-145	85.9	26.7	0	112.6	1	4.9	117.5	2
Peters , Wendy J, 1 <sup>st</sup> Lt	NC-048	65.8	29.9	3.3	99	2	35.3	134.3	1
Herring Jr, Morris C, Capt	NC-171	44.9	47.5	0	92.4	3	18.4	110.8	5
Urbanek , Matthew D, LTC	NC-001	60.3	27.6	0	87.9	4	27.9	115.8	3
Courtney , Wallace C, LTC	NC-019	39.9	40.5	0	80.4	5	32.6	113.0	4
Mason , Robert C, LTC	NC-171	35.7	35.2	0	70.9	6	7.8	78.7	10
Noffke , Heino , Capt	NC-170	34.7	27.1	6.5	68.3	7	25.3	93.6	7
Brandon , Robert M, Capt	NC-082	46.3	16.9	0	63.2	8	17.3	80.5	9
Stevens , Scott E, Major	NC-019	49.5	10.6	0	60.1	9	26.7	86.8	8
Shelley, Gary M, Capt	NC-057	34.4	24.9	0	59.3	10	34.5	93.8	6
<b>NCWG FY2020 - Top 4 C-Mission Hours – Left Seat</b>									
Palmer Anthony, 1 Lt	NC-121	6.3	0	17.2	23.5	1			
Courtney , Rheta L, LTC	NC-019	7.5	0	13.3	20.8	2			
Jackson , Bryce H, LTC	NC-019	0	0	12.7	12.7	3			
McIntosh , Jacob D, 1 LT	NC-019	1.6	0	12.7	14.3	4			