

“Riveting Reading”

Civil Air Patrol North Carolina Wing Aircraft Maintenance

Nov 1, '20. Vol #36

By Major Martin ‘Stryker’ Heller



COVID19 prevented, among lots of things, our annual operations meeting...still on hold...

USAF-CAP Compliance
Inspection Results: Para 1d.

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

1. **Motivational Quote:** "Sometimes you have to go up really high to see how small you are." - Felix Baumgartner

1a. **NCWG Director of Operations (NCWG/DO) Comments: ‘Editing WMIRS after Flight Release’** See Attachment 1.

1b. **FY20 Highlights: NCWG flew 3,784 hours in FY20.** The COVID 19 restrictions reduced our flying ~21% from FY19’s 4,800 hours. NCWG averaged **222 hours/aircraft**, exceeding CAP’s standard goal of 200 hours/aircraft... only one of two Wings (other was NHWG) to do so, and making us, again, **the #1 CAP Wing in hours/aircraft for the 5th straight year.** **N99885 (NC-019/AVL)** was the top aircraft (Perhaps in the country (again?)) with **332 hours**. **NC-022/KBUY – N262CP** logged 294 hours. Both FLIR aircraft (**NC-145/KLHZ (N938CP) & NC-019/KAVL (N963CP)**) flew 264 hours. In total, 11 aircraft passed the 200-hour mark, three more would also have, if two less days of US Army training weren’t cancelled for weather. That left 3 aircraft in the 157-hour range, which is still better than 42 other CAP Wing aircraft averages. **NCWG flew 36% of all Mid-Atlantic Region FY20 hours.** Find statistics for end-of-year awards in WMIRS/reports.

1c. **Oct Highlights:** In Oct, NCWG flew: ~**262 hours**. **Oct Top Hour Squadrons were:** **NC-048/KRDU: N726CP (44.1), NC-019/KAVL: N963CP (30.5) & N99885 (28.2).** NC-022/KBUY/N262CP and NC-305/KECG/N741CP both flew more than 20 hrs. These squadrons carried the wing as 4 NCWG aircraft didn’t meet 15 hours and 6 aircraft didn’t even fly 10 hours. Note: no aircraft had a maintenance excuse. **October’s NCWG Top Left Seat time pilots were: Lt Col Matthew Jones (11.2), Capt Don Briola (10.9) and Major Scott Stevens (10.0), all from NC-019/KAVL.**

1d. **USAF-CAP Compliance Inspection:** The official results are scheduled to come out in early November; but by most indications (read: not many people fired (yet)) we did at least okay. A shout out to **Lt Col Tedesco** for leading the effort.

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

2b. **Aircraft in Annuals:** **N716CP:** Needed new brake pads, a new left main tire, new race and bearings too, along with sets in the nose gear. The shop replaced some instrument panel lights, fixed the cowl flaps, replaced the broken dip stick (really), and did biannual corrosion protection. We thought the propeller needed re-clocking, but it’s ‘blade down’ position has the least vibration. The pilot seatbelt was more than untangled, all airbag seatbelts were removed and replaced with the standard belts per NHQ directive; gaining 8#s of useful load (Read: New Weight and Balance). **It’s AIF earned an ‘A.’** **N716CP** went home on 27 Oct. **N963CP: Gumby** started its annual on 26 Oct. Both fuel systems will need new sending units, right tire needed attention and both sets of magnetos are due a 500-hr overhaul. →→

2c. **More Maintenance Actions:** **N726CP, N9930E, N819CP and N938CP** got oil changes. **N963CP (Gumby)** propeller governor started leaking oil. Removed and repaired off station, then returned/installed (before 100-hr). **N179CP** had its rear seat removed for recovering. See item 3e for more maintenance issues regarding propeller governors. →→

3. **Aviation Maintenance Support Information:**

3a. **GPS database current cycle (2012) starts Nov 5th:** Remember to update AMRAD; both changed & next due dates.

3b. **What’s in a Name?** Ever wonder how some aircraft received their nickname. The NCWG Select Committee on Intelligence aircraft nicknames just bestowed three more names to our fleet. See Attachment 2 for the reasons.

3c. FAASTeam/General Aviation Joint Steer Committee Guidance. See Attachment 3 for recommendations when picking an aircraft up from maintenance. What you don't know or check, could bite you.... We have great maintenance, but there are a lot of moving parts and panels removed. A thorough pre-flight provides more than peace of mind. NHQ strongly recommends that only experienced pilots be tasked with retrieving aircraft coming out of maintenance and that return flights only be performed in Day VFR conditions.

3d. Dirty Bird List: Washing each aircraft every six months is a CAPR 66-1, para 7.4.5. requirement. Seven aircraft were washed in October before it got too cold. Our glider, **N437BA** is overdue. But, (notice subtle hint) it may get washed with **N938CP & N7360C** (KLHZ) due in November. Also due are: **N716CP** (KJQF) **N98426** (KEWN) & **N9930E** (KIXA).

3e. Advisory Directives (AD): Two recent FAA AD's may affect the NCWG fleet. AD2020-19-06, effective Nov. 3, affects propeller governors and invoked to prevent failure of the idler gear bearing. The quick answer is that we're at 80% percent in compliance, and should be complete by Feb. It's better to be lucky than good, and **NCWG is lucky to have the maintenance we have, because they are good.** Besides (alphabetically) **Belle Aviation (KAVL), Cape Fear Air Works (KSUT), Iredell Air Care (KSVH), Jet Logistics (KRDU), Rogers Aviation (KFAY) and Total Flight Solutions (KLHZ), one shop really shone this this month. H & H Triad (KBUY)** who overhauls our propellers & propeller governors, was on the ground floor of this issue and stopped using the affected parts in 2016. Thus, all our propeller governors rebuilt since then avoided this Advisory Directive. Just **N405CV** needs review. **N819CP** needs her propeller & governor overhauled.

The other AD, AD 2020-18-01 was prompted by 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.** If found, the repair is ~\$6-10K. We'll have this taken care of during their next 100 hour/annual inspection. See Attachment #4 for AD Tracking on both of these issues.



Rear Seat Lever



3f. Trivia Time: 'What Does This Lever Do?' I'll give you a hint; there are two of them under the rear seats. All aircrew members should know; since they start out as mission scanners. It's the seatback recliner release. If your seat is leaning too far back, it will return it upright. **But it won't work if your seat is broken.** How does that happen you ask? Well, when us larger folks push our shoulders against the seat to reposition ourselves, the seat back supports can actually get bent. **Rear seats were designed for stationary passengers; not aerial photographers bouncing around.** Ask the squadron now assigned **N716CP.** In the past, maintenance did all they can to 'un-mess' **N716CP's** rear seat sans replacing it. 'Don't let this happen to your plane.' Use stomach muscles.

3g. NCWG Aerial Photographer Website: During the transition to the NCWG's new website, some stuff becomes hard to find. **Here is the AP link** for those who haven't bookmarked it (yet): <https://paperlesswing.ncwgcap.org/index.cfm?fuseaction=page.display&pageid=571>

3h. Winter's Coming: With the colder months ahead, just a reminder to make sure your aircraft's engine has warmed up enough, before doing high RPM operations (read: engine run-up & flight). That little **white oil temperature arrow** needs to be in the 'green' else our engine may go into the **RED.** Speaking of run-ups, a gentle reminder that door windows need to be closed, to prevent hinge damage. NCWG leadership doesn't care that Cessna says it's okay in flight, Cessna doesn't pay our maintenance repair. That's why we installed photographer windows in each airplane. Where is that written you ask? In the upcoming CAPR 66-1, NCWG Supplement. Stay tuned....

3i. AMRAD Education: The new Aircraft Maintenance Reporting and Documentation (AMRAD) is now 15-months-old and had really made most of our aircraft chores and data coordination easier. That said, two quick reminders: [First, any](#)

maintenance action that will cause a bill, needs to be entered as a discrepancy. NHQ/LG can't pay the shop unless there is discrepancy listed against the aircraft tail number. **Second; keep big issues separate, but small issues together.** I.e., "Aircraft engine at TBO"... separate discrepancy; three screws missing, a vent cover broken and the window shade ripped, combine those into the 100 hour/annual discrepancy and laundry list them. **Attn: all aircrews:** please, please, please, don't enter a discrepancy until you talk with your crew chief. Some stuff doesn't need to be in there... **Thanks!!!**



3j. Rope-a-Dope: Remember to keep the connecting cord between the cowling plugs **in front of the propeller blades.** This allows the propeller to eject the cowling plugs if you missed pulling them out during the pre-flight (It happens). If the cord is behind the blades, you'll cook the \$30-\$45K engine before take-off. Having the cord in front of at least one blade will scratch the cowling and maybe shred the plug; but that's easy to fix. One could literally polish those cowling scratches off (another subtle hint).

3k. Crew Chief Education: For those new to the role, or haven't done certain tasks in a while, be aware we store our continuity on the NCWG.CAP.gov webpage. <https://ncwg.cap.gov/directorates/operations/aircraft-maintenance> hosts the Crew Chief 201 presentation, list of crew chiefs, end of month procedures, aircraft cleaning procedures & more.

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

- Stryker -

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NCWG Aircraft Maintenance Officer

4 Attachments

1. NCWG/DO Comments
2. NCWG Aircraft Nicknames
3. FAAST Advanced Pre-Flight After Maintenance
4. FAA Advisory Directive (AD) Tracking

NCWG Director of Operations Guidance

Attachment 1

A few short words for All pilots and Crew: PLEASE. Once a sortie has been released, do not go in and perform any EDIT function. This voids the flight and sends a world-wide message out to all of us and NHQ. The NCWG failed this portion of the inspection due to numerous violations from our well-meaning personnel. Aircraft, Date, Time, Crew, location, or W&B changes will void the release. Only the FRO who released the flight can make changes within the EDIT function once the sortie has been released. Remember: the next WING inspection started...1 October 2020.

v/r

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Attachment 2
NCWG Aircraft ‘Nicknames’

Nbr	N-Number	Type	Year	Based At:	Nickname	Remarks
1	N262CP	182T	2018	BUY	George	Named for the auto-pilot that flies a lot
2	N405CV	182T	2017	INT	Loki	Greek god of mischief
3	N938CP	182T	2015	LHZ	Max	Can carry a <u>‘maximum’</u> load
4	N726CP	172S	2015	RDU	Betty	First & only time glider tow story
5	N179CP	182T	2012	SUT	Sandy	Based at an oceanside location
6	N727CP	182T	2010	FAY	Waldo	Designated aircraft for ‘Waldo’ camera
7	N963CP	182T	2007	AVL	Gumby	Part of CAP’s tenet of flexibility
8	N741CP	182T	2006	ECG	Bleu	Named for ‘blue’ CAP decal after paint job
9	N819CP	182T	2006	SVH	Dixie	Transferred in from SCWG
10	N716CP	182T	2005	JQF	Caroline	‘Sweet Caroline’ in North Carolina
	N358CP	182T	2005	Utah	Mesa	Not totally rebuilt from ashes like the Phoenix, but it was close.
11	N437BA	L23	2002	LHZ	n/a	Dedicated to the late Steve Merritt
12	N908CP	172S	1999	ILM	FLO	Short for Hurricane Florence
13	N99885	172P	1986	AVL	Echo	Due to primary role as an airborne repeater
14	N98426	172P	1985	EWN	Sarah	Good looking, older gal that’s from Alaska and pulls to the right
15	N4813C	172P	1985	FAY	Frank	Short for Frankenstein; one of the first CAP refurbished aircraft
16	N9930E	182R	1985	IXA	Thor	Tow plane’s light weight, provides great pulling power
17	N99832	172P	1985	INT	Spartacus	Squadron named
18	N7360C	U206G	1977	LHZ	Lola	‘Show Girl’ that needs a lot of attention

Attachment 3
FAAST Advanced Pre-Flight After Maintenance
(See Separate .pdf file)

Attachment 4
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)
cleared	N262CP	C-182T	12	KBUY		Evaluated at H&H Triad 27 Oct
Pending	N405CV	C-182T	30	KINT	Scheduling oil change &	Eval at H&H Triad in Jan/Feb
cleared ¹	N938CP	C-182T	48	KLHZ	Done during oil change	Do at Total Flight Solutions Rebuilt: HH Triad 9/23/2019
cleared ¹	N179CP	C-182T	40	KSUT	Done during shop visit	under WP # 232583 Rebuilt: HH Triad 8/10/2020, WO #24159(?)
cleared ¹	N716CP	C-182T	0	KJQF	Done during 100hr	
cleared ^{1,2}	N727CP	C-182T	42	KFAY	Need logbook & prop gov stamped at 100HR	Rebuilt: HH Triad 4/2020 under WO #23960
cleared ¹	N963CP	C-182T	2	KAVL	Done during oil change	Rebuilt: HH Triad 3 May 17 under WO # 070584
cleared ^{1,2}	N741CP	C-182T	19	KECG	Need logbook & prop gov stamped at 100HR	Rebuilt: HH Triad 8 Mar 16 under WO 21396 (B4 service bulletin)
Pending	N819CP	C-182T	12	KSVH	Going to H&H for prop & Governor overhaul	NHQ writing purchase order. Expect plane at KBUY on 2 Nov.
cleared ^{1,2}	N9930E	C-182R	46	KIXA	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