



“Riveting Reading”

Civil Air Patrol
North Carolina Wing
Aircraft Maintenance

June 1, '20. Vol #31
By Major Martin ‘Stryker’ Heller



N741CP: 2006 Cessna 182 with just over 2,900 hours, had its clear coat peeling off; NHQ authorized its repainting.

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

1. Motivational Quote: *“Only the paranoid survive.”* – Andy Grove

1a. NCWG Director of Operations (NCWG/DO) Comments: Lt Col Urbanek had to return to Maine in late May, so no column from him this month. He was working on a ‘phased, get back to somewhat normal plan’ before he left.

1b. NCWG Chief of Standardization & Evaluation (NCWG/DOV) Comments: The annual aircraft questionnaire has changed to: CAPF 70-5Q-A (See attachment 1). Old, on-line, answer sheets are being removed. Hope you saved yours.

2. May highlights: NCWG flew: **~141 Hours**. Every NCWG airplane flew; averaging 7.8 hours each. **May’s Top Hour Squadron** was: **NC-019/KAVL** for both 1st & 2nd place flying **N963CP & N99885 (17.5 & 12 hours respectively)**. **NCWG’s Top Pilot: Capt Scott Stevens (NC-019) with 7.9 hours**. Second place; Lt Col Christopher Bailey (NC-145): 7.5 hours.

2a. Maintenance Month in Review: No 100-hour/annuals: **N405CV** delayed due to weather; arriving 1 June.

2b. Other Maintenance Actions: For another month where we didn’t fly much, there was a conglomeration of maintenance issues addressed. **N963CP’s** new FM radio upgrade to TDFM9100 was completed and **‘Gumby’** flew back to **KAVL** on 1 May. A week later, **N963CP** had its rear seat reupholstered at home. Unfortunately, its new FLIR Camera has issues and **N963CP** returned to Safford to have the camera removed, at the end of May. **N741CP** was totally repainted & returned to **KECG** on 6 May. **N99885** and **N179CP** had oil changes. **N727CP** autopilot/trim button issues still plagued the airplane; the **KFAY** avionics shop did some circuit card maintenance and the problem seemed to go away. **N908CP’s** pilot window support arm disengaged as that spring in the doorframe broke, fixed at neighboring **KSUT**. A cotter pin fell out of **N179CP’s** pilot-side right brake pedal affecting both the pilot and copilot positions. **Sandy** landed without incident and repaired with the oil change. **N726CP’s** cargo door button fell off and was re-glued back on. Later, **‘Betty’** has issues with the pilot side radio transmissions. Radio noise which made pilot transmitting unreadable; new headset & Aux mike jackets and some wire end clean-up may have fixed it. **Betty’s** stall horn stopped working, and had to be cleaned out. Thus, the **KRDU** crew tail swapped & got to fly home in the just-cleaned & waxed **N179CP**. **N99885** is still having #1 Comm radio issues even though we just changed the radio and the antenna. They did discover **Echo’s** repeater limited range issues were due to connection cables. Both the airplane-to--repeater cable, and the repeater jack-to-FM antenna cable have too much impedance; they’ll be replaced next week at **KAND**. **N7360C’s** engine monitor had three probes not registering, the G500 Wind indicator also wasn’t, and **Lola** needed a new FM antenna. We deferred **N98426’s** biannual corrosion treatment about two months because **‘Sarah’** is on the cusp of going in her 100-hour inspection, and the COVID-19 restrictions ‘slowed her roll.’ On the other hand, **N726CP** and **N437BA** did have their corrosion-proofing done, but **N99832 & N179CP’s** were delayed until first week in June. **N7360C** had its their biannual pitot static check done but **N179CP’s** was also delayed due to the tail-swap. **N262CP’s** MFD outer control knob (lower right corner) stopped changing most pages in the MFD, getting checked out shortly. On the tail end of things, the light has gone out on **N716CP’s** rear position indicator. The crew chief is coordinating mobile support to change the bulb.



Reupholstered seats in N963CP at KAVL

2c. 'Clean Machines:' The following squadrons washed their aircraft in May: **N262CP by NC-022, N7360C and N938CP by NC-145, N9930E by NC-169 & N179CP by NC-170. N741CP** was repainted so it shouldn't need a wash for a while, and can't be waxed for six months.

2d. Oil Change by Time: COVID-19 flying restrictions may result in some NCWG aircraft requiring a 6-month oil changes before hitting 50-hours, starting in August. A rarity in NCWG, MAR's N358CP was the only aircraft needing a 6-month oil change in >4 years. Ironic since NCWG usually changes oil every other month, sometimes even monthly.



C-172 Stall Horn

2e. Checking Cessna Reed-type Stall Horns: In our COVID-19 world, one can understand not kissing the leading left wing edge on our C-172 aircraft. But it needs to be checked. We discovered one inoperative system recently, filled with bugs and such. So, that squadron just bought one of those accordion bottles and will give us a PIREP next month. You can find them on-line and at hobby shops. Another option is getting a foot of ~ ½ diameter hose. Remember to test the horn by creating a gentle vacuum (that's inhaling—not exhaling).

3. Aviation Maintenance Support Information:

3a. GPS database current cycle (2006) started May Apr 21th. Remember to update AMRAD; both changed & due dates.

3b. Aeronautical Information File (AIF) Updates: My 7 May email explains the litany of AIF changes since the new CAP Standards have been published. **Lt Col Bailey** updated & relocated NCWG's AIF page to the new website now found at: <https://ncwg.cap.gov/directorates/operations/aircraft-maintenance/aircrew-information-files-aif>. Crew Chiefs should expect to print and swap out about ½" worth of pages, from the Table of Contents through the various regulations.

3c. More New Wing Website transitions: The links to the Form 98A and Form 98G funding requests for Air and Ground Emergency Services training have been moved to the following location on the new NCWG website. <https://ncwg.cap.gov/directorates/operations/funding-request>. They are also still available on the old website; for now.

3d. "What's that Antenna For?" Our CAP fleet has more than the usual Cessna antenna configuration. **Lt Col Ray Davis** researched each of the 41 antennas on **KAVL's** two aircraft, and labelled them for pilot education. See attachments 3 and 4 for a depiction of the antennas on **N99885 (C-172) and N963CP (C-182)**. *What's on Your Aircraft?*

4. Thank you all for the support & for taking the time to read this. **Riveting Reading has moved to the new NCWG website:** <https://ncwg.cap.gov/directorates/operations/aircraft-maintenance> (thanks to Lt Col Chris Bailey). If you have questions, call 703-732-3264.

- Stryker -

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NCWG Aircraft Maintenance Officer

3 Attachments

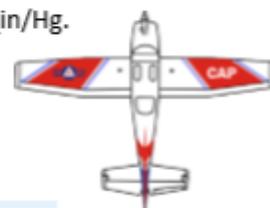
1. NCWG/DOV Comments
2. Antenna (KAVL) Description (N99885/C-172)
3. Antenna (KAVL) Description (N963CP/C-182T)

Attachment 1

CAP PILOT FLIGHT EVALUATION QUESTIONNAIRE			
MEMBER'S NAME & GRADE	CAPID	AIRCRAFT MAKE & MODEL	
CHECK PILOT NAME & GRADE	CAPID	SCORE	DATE

Complete this open book questionnaire using the Flight Manual/Pilot's Operating Handbook/STC. If a question or part of a question is not applicable, write in NA. The check pilot will review and grade the questionnaire. Minimum passing score is 80% corrected to 100%. The completed, scored, and corrected questionnaire will be filed in the pilot's flight records.

1. Total fuel capacity _____ gal. Usable fuel _____ gal. Location _____.
2. Number of fuel drains _____. Fuel color _____.
3. Today's average fuel burn is _____ GPH. Providing _____ hours of endurance.
4. Oil capacity is _____ quarts. Minimum for takeoff is _____ quarts.
5. Max takeoff weight _____. Max Landing weight _____.
6. Maximum RPM and MP for takeoff are _____ and _____ in/Hg.
7. C182/C206/ GA8 – Climb power MP _____ RPM _____.
8. White ARC _____ KIAS Range. Green ARC _____ KIAS Range.
9. Gliding distance @ 3,500ft AGL, Max Weight, Zero Wind _____.
10. This plane operates on a _____ volt electrical system. Main battery _____ volts.
11. Magnetos are checked at _____ RPM. RPM drop should not exceed _____ RPM
12. Useful load for today's flight is _____.
13. Takeoff & Landing distance for today's flight is T/O: _____ Landing: _____.
14. Today's Density Altitude is _____.



Va (maneuvering speed)	
Vso (stall, landing config)	
Vs1 (stall, cruise config)	
Vne (never exceed speed)	

Vx (best angle of climb, sea level)	
Vy (best rate of climb, sea level)	
Best glide Speed	

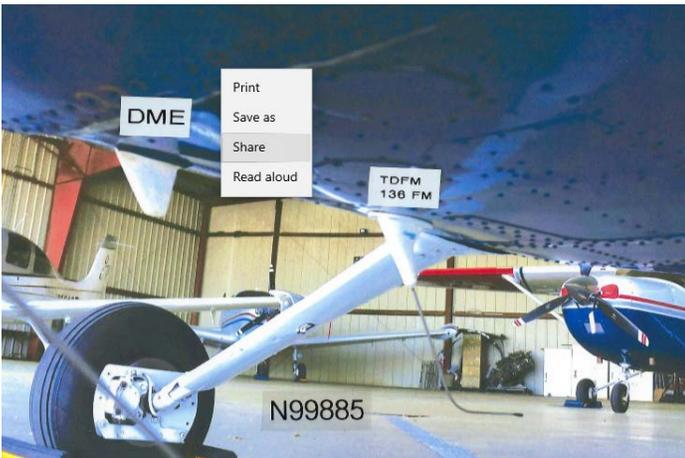
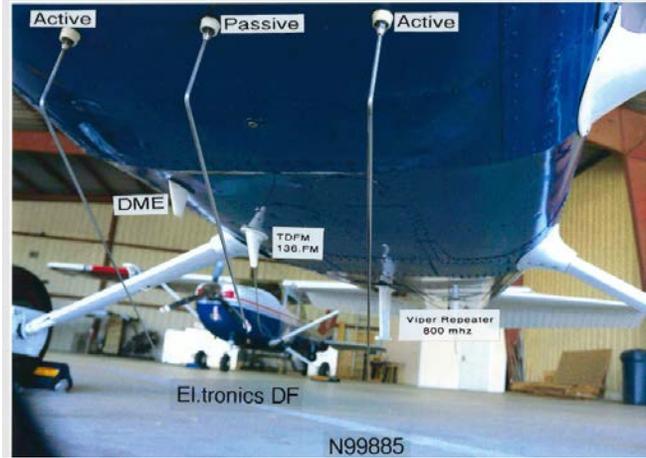
- Engine failure immediately after takeoff.

- Engine fire during start.

- Engine failure during flight (Restart).

- Autopilot or Electrical Trim Failure (if applicable) otherwise Engine Fire during flight

Attachment 2
 Aircraft Antenna Index (N99885/C-172)
 Photos and Labeling by Lt Col Ray Davis



Attachment 3
 Aircraft Antenna Index (N963CP/C-182T)
 Photos and Labeling by Lt Col Ray Davis

