



**North Carolina Wing
Aircraft Maintenance
July 1, 2018, Ed #7
“Riveting Reading”**

**By Major Martin Heller -
NCWG/LGM (a.k.a. Aircraft
Maintenance Officer (AMO))**

To: All NCWG Operations Officers and Crew Chiefs

1. You flew nearly 700 hours in June. Special events included two separate US Army ATC training efforts and Summer Encampment besides the normal SAR training, cadet orientation, check rides, pilot training and NC-Misc flights. And that doesn't count the MER Flight Academy flying which starts today. If you didn't fly, then you're missing big opportunities. And for those of you that did, let me pass along the appreciation of knowing how long, hard and hot those days were in the cockpit, out on the tarmac, and while feeding the WMIRS electronic beast.

From low to high; N179CP, N819CP, N4813C, N405CV & N908CP exceeded 40 hours flying time. N963CP, N262CP and N99832 exceeded 50 hours. **And N716CP flew a whopping 73.9 hours.**

2. Month in Review: N358CP (“Mesa”) had steering problems; which turned out to be a brake issue, quickly resolved at KBUY. Several aircraft had low manifold pressure readings which turned out to be clogged pressure orifices. N179CP and N7360C had annuals/100hrs. N179CP also had corrosion control treatment done and N819CP's is pending. N99885 and N741CP had flap issues. Another pilot induced, flat tire (read: landing on the brakes) which got fixed the next day. While we flew an estimated, 3,000 landings this month, this is one that got noticed. What I appreciate was team work, and individual efforts to get the crew home, the tire replaced, the aircraft relocated, and put into service for glider operations two days later.

Four days before the NCWG Wing Summer Encampment, we were in great shape. Crew chiefs ensured all their C-172s had fresh oil changes. These aircraft followed-on to the MER National Flight Academy and needed at least 25 hours flying time after encampment. N726CP was getting a simple 100 hour inspection. Usually, no big deal on a fairly new airplane. Unfortunately, the #2 cylinder was bad & others showed lesser signs of corrosion. And then....

It seems NCWG got hit with an electronic magnetic pulse (EMP): N7360C, N405CP & N358CP alternators went bad. (N358CP also needed a new battery), N262CP's right wingtip strobe burned out (which is a grounding item). N99832 and N4813C also had exterior light issues, but not grounding. N963CP had its magnetometer quit, and N741CP's flap motor died (in the up position, make access hard). Not to be left out N99885's carburetor heat cable decided to “take a break” right before leaving for MER National Flight Academy. Again, the crew chiefs/maintenance facilities at KAVL, KFAY, and KINT got their aircraft ‘MER NFA’ perfect just in time.

Despite herculean effort from the maintenance shops and crew chiefs, by the start of encampment, half our fleet was grounded. Later in the week, three planes were returned to service, but offset by another sent for its 100-hour. **For all the flying we did, at least 10 aircraft will be needing their 100hr/annual inspection in July, besides the two already in the shop.**

3. Admin Tidbits:

A. **Aircraft Information Files (AIF) and Flight Logs looked much better.** Thank each of the crew chiefs for making it happen. At encampment, the AIF books got were reviewed. Old binders, credit card holders and section tabs were changed out for new. The only common discrepancy was holding old to old forms (get those Form 71s, fire extinguisher, VOR logs and non-AIF listed items out of the book). What's in there is 'inspectable' by the FAA (or USAF). Let's not give them any room to blemish us.

B. **WMIRS Entries: 'Big Brother Does Watch.'** For those unaware, discrepancies, especially those that ground an aircraft, are seen at higher levels. The good news is that it may help get parts moving faster and give us more options/experience (NCWG has just 3% of the CAP aircraft fleet). On the other hand, entries could cause confusion (read: flurry of emails) if the entries are speculative. Just like you have sensitive body areas, leadership is highly cognizant to certain airplane parts: namely, engines, tail tie-downs, tires and nose wheels issues. If your inner voice starts telling you to check before posting, please pay attention. The Group/Wing Ops and maintenance staff are more than eager to help.

C. **CAP NCWG Driver Licenses:** Get yours yet? Remember, it might be your ride home in the rare event a CAP aircraft has a grounding issue off-station. Instructions were in the 4th Edition, 28 Mar 18 edition, attachment 1.

4. **Maintenance Tidbits: 'Jamming the seat and side pockets'.** With all the add-on GPS, transponder, ADS-B, and moving map displays, the cockpit is teeming with instruction manuals. Their common home is behind the seats. Unfortunately, those rear seat pockets are just glued in position and never meant to take the size or weight of the plethora of avionics manuals. We're experimenting with a magazine rack fastened below the rear right seat to keep the books accessible. You may want to declutter those pockets as well; and just keep what you need.

5. **Summer Encampment:** We flew about 99 o-ride sorties and ~65 commuting sorties in four days of flying. Tuesday's flying a complete weather cancel but fortunately, the Blackhawk helicopter were able to give rides in the afternoon. Other times, we lost the morning first go, or even both morning flights for VFR pilots who couldn't get in. Only N819CP, N908CP, N716CP and N99832 flew every day. N358CP, N726CP, N741CP and N963CP didn't fly at encampment for maintenance reasons. Special shout out to the air operations crew including, Lt Col Chris "Chihuahua" Bailey – Air Boss, Major Kathy "Shutter" Nicholas, WMIRS WONK, Capt Daniel M. Everhart, our critical "GO-4" & Cadet Major Zoe "Awesome-er" Vestal, Cadet Operations Officer, each of whom served with me all week. Also helpful were the day workers flown in

from KFAY, KBUY & KINT among other locations, to help feed WMIRS its diet of sortie and receipt info.

Lt Robert “Bulldog” Rimmer flew the most cadet rides/hours but did not high total hours. The top three flyers by hours are as follows.

- 1) Capt Matt Kruggel: 11.2 (A5) + 11.7 (A15) = 22.9 hours (3 days – KMRH commute)
- 2) Capt Cliff Herring: 8 (A5) + 11.9 (A15) = 19.9 hours (5 days – KFAY commute)
- 3) Lt “Bulldog” Rimmer: 2.1 (A5) + 12.7 (A15) = 14.8 hours (stayed in Albemarle)

Lt Col Bailey installed the new, “United States Air Force Auxiliary” decals to the gray stripe on the aircraft tails per NHQ guidance. He also updated decals on the CAP ground vehicles in attendance at encampment.

6. **Pop Quiz Time:** While not boldface material, the following information should be in your mission pilot mental tool box. Test yourself in attachment 1, on **FM radio operations**.

(Answers: 1D, 2C, 3D, 4D, 5D, 6 1:e, 2:h, 3:b, 4:g 5:f 6:c a=Louisiana d=made up j=Kentucky, 7D)

7. Thanks for taking the time to read this and keep somewhere for your continuity. Riveting Reading can also be found on the NCWG Operations / A/C Maintenance Webpage. If you have questions, you can reach me at 703-732-3264.

- Stryker -

Major Martin Heller, CAP
NCWG Aircraft Maintenance Officer
mheller@ncwgcap.org

Riveting Reading, July 1, 2018, Ed #7

Attachment 1

Quiz on FM Radio Operations

1) **You are flying along, dutifully monitoring Air 2 and Guard 1 on the FM radio.**

What frequencies are you tuned to?

- a) I don't know; the frequencies are channelized in the aircraft, and radio info in AIF Tab 7.
- b) Air 2 is channel 4, Guard 1 is a toggle choice.
- c) One could also be on channel 11 (2P), which is digital
- d) All of the above

2) **You get a call from the North Carolina Wing Director of Operations, his call-sign is:**

- a) Ops 1
- b) Longleaf Ops
- c) Longleaf 6
- d) Longleaf 74

3) **Longleaf 1 is the NCWG Commander. Middle East Region & Nat'l HQ Commander's call-signs are:**

- a) Arabian Sand 1 and Blue Sky 1
- b) CAPSTONE 1 and CAPicorn 1
- c) Can't answer since CAP callsigns are For Official Use only (FOUO)
- d) Middle East 1 and Red Sky 1

4) **The FM radio doesn't want to transmit. It powers up but isn't going out. The probable reason is:**

- a) You haven't made the right selection in the annunciation panel.
- b) You have the MO/Rear seat (2/3) transmit switch for the wrong seat
- c) There is a VIPER radio in the airplane and you have the FM/Comm switch in the 'Comm' position.
- d) Some of the above

5) **The National Operations Center (NOC) needs to talk to your aircraft. They would reach you by:**

- a) Getting an FM message on Guard 1 or Air 2 from "Avenging Spirit"
- b) Wouldn't happen, FM nor VHF doesn't reach several states away
- c) The NOC wouldn't go direct to aircraft, but work through the Wing.
- d) All of the above

6) **You're supporting SAR operations in the region. Match the adjoining states callsigns:**

- | | | |
|---------------------|----------------|-------------------|
| 1) South Carolina | a. Mud Bug | g. Diamond Flight |
| 2) Virginia | b. Skyline | h. Jefferson |
| 3) West Virginia | c. Monuments | i. CAPSTONE |
| 4) Delaware | d. Corporate | J. Moonshine |
| 5) Maryland | e. Sand Lapper | |
| 6) National Capital | f. Free State | |

7) **You're waiting out weather & decided to find the list of CAP voice call-signs. On-line you learn:**

- a) They are available through the CAPNHQ homepage on the Communications link (below the WMIRS link) buried in a library under the general information tab.
- b) Googling CAP voice call sign list will also get you this information
- c) Some Wings have FOUO information available without password protection
- d) All of the above.

North Carolina Wing Aircraft Maintenance, July 1, 2018, Ed #7 “Addendum”
“Riveting Reading” By Major Martin Heller - NCWG/LGM (Aircraft Maintenance Officer (AMO))

To: All NCWG Operations Officers and Crew Chiefs

1. Sharing this Newsletter: Feel free to forward document as you see fit. It is sent to the Operations Officers and Crew Chiefs lists. Commanders and Safety officers also receive those blasts by design. While several suggested it includes other topics, and increase the audience, I want to keep the newsletter short, helpful and timely. By having squadron leadership or functional managers forward the newsletter, he/she can emphasize key points and/or pile-on the ‘atta-boys’ contained within.

2. Corrections to the July 1, ed #7 Newsletter:

- a. (Para 2): N819CP’s corrosion treatment was completed o/a 22 June.
- b. (Para 4): Jamming the Seat and side pockets:



I typed before trying the idea in the aircraft. As shown left, the magazine holder won’t fit under aircraft with rear seat airbags. Please don’t jam something on the (read: very pricey) airbag support system. We’re open for ideas on how to keep the encyclopedia of manuals out of the seat pockets. If you’ve had success, let us know.

c. (Para 4) Maintenance Tidbits: (addition): Control Yoke Lock installation. As simple as seems, some pilots don’t notice they are pinching the wiring bundle going to the yoke. Wires, bent repeatedly over time, will break.



Left: Notice the bending of the control yoke wiring bundle.
Right: ‘Right way.’



Lost: YETI ~24 oz coffee mug saying ‘BarnHill’ (or something like that)
Found: (months ago) Ladies small gold ring with stones.
Contact me at: mheller@ncwgcap.org

d. (para 5) A. Capt Matt Kruggel’s callsign “Gizzard” was omitted. B. Capt Cliff Herring’s callsign has not yet been established. Polls are still open for ideas. Traits include: Hard-working, flawless pilot, dedicated, and tired. C. The number 4 top encampment flying hour pilot was Major George (formerly) “Boomer” (now) “Freq” Tudder with 13.7 hours.

-- Stryker --

Major Martin Heller, CAP
NCWG Aircraft Maintenance Officer