



“Riveting Reading”

North Carolina Wing Aircraft Maintenance

May 1, '19. Vol #18
By Major Martin ‘Stryker’ Heller

*N9930E’s New Fairings on struts,
wingtips, stabilizer and elevator*



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

1. April highlights: Quite a bit slower in flying hours than March, NCWG still supported SJ-afb Wings over Wayne Airshow, and another US Army ATC training mission which is rolling into May. Maintenance, however, did not let up. The Wing Maintenance Snapshot finally became all green at the end of the month. It’s the first time in a while and didn’t last more than a few hours. The issues below caused NCWG to lose half an airplane year for aircraft in maintenance which affects our flying hour average. But the maintenance results speak for themselves in performance and appearance. For example, N9930E is a 1985 C-182, that looks great.

2. Maintenance Month in Review: Last’s month’s report listed **N99885** getting a new artificial horizon. It actually got a new turn coordinator. The first is an expensive vacuum-driven gyro that tells you if your wings are level; the other is an expensive electric-driven gyro that basically does the same.

2a. 100-Hr/Annuals: Seven 100 hour/annual inspections this month; **N908CP, N99832, N4813C, N179CP and then N405CV** at the very end of the month. Some were leftovers from last month’s high push; **N9930E and N98426** were already on the ramp awaiting their turn. **N4813C** spent some time after its annual at KHZ because both NC-145’s aircraft had extensive annual inspections. ‘Frank’ got a new turn coordinator as well, and an ELT battery. The tear in the copilot seat was sewn, which has bugged us (and us bugging KFAY) for quite a while. Two months ago, we replaced the PSA Engineering 700 annunciator panel which might have been omitted.

N908CP went to KAND for a 100 hour/annual - turns out its propeller was not overhauled (or documented) back when its engine was overhauled as per CAP policy. So, it spent an extra two weeks at maintenance than expected and then found its way back to KILM/NC-023. Last month, we repositioned this C-172 to KFAY during the Army ATC mission; flying it out of hours. We then realized that it still needed both corrosion treatment, and a pitot-static check. Fortunately, we got those done fairly locally. **Please watch your aircraft’s expiration dates so we can minimize down-time/costs.**

N9930E’s elevator had some wear and tear issues, stemming from a previous repair. Considering we fly in an enlarged aluminum Pepsi can, there are certain parts you really want right...especially control surfaces. Even more so when you realize that this is a glider tow plane (Read: extra tail forces). The shop sent out for a replacement elevator which only took two weeks. Feeling vulnerable? The WWII, B-17 Flying Fortress’s control

surfaces are made of fabric. (Done to allow for quick repair without affecting its balance.) N9930E also received its long-awaited fairings, which is how they discovered the elevator issue in the first place. They re-welded the pilot seat support, trouble shot/ fixed the sagging brake pedal plaquing the aircraft, and a dozen things more. 'Thor' tried to receive a replacement KX-155 Bendix-King Comm/Nav, since the LCD digits were not lighting up. Unfortunately, after two bad radios were shipped, we sent her home to KLHZ awaiting the third replacement.

N99832 (the alternate glider tow plane) had a horizontal stabilizer crack in the center structure box. A small crack but a big repair. **N4813C** had it done 10 months ago. It's believed to be caused from pushing down on the horizontal stabilizer to move the aircraft. Then again, both aircraft were built in 1985. A **"Maintenance Mandate - Use of Tow Bars was issued on April 9th, 2019 stating the same.** (See photos below.) N99832 also had a pitot-static/transponder check done among many other minor repairs. (Go read your aircraft logbooks.)



N98426 received an overhauled carburetor...should only take 2-3 primer strokes to start now. Did we mention 'Sarah' got a replacement GDU 620 and GRS 77 back in late December. She just received new rear seatbelts. The ones installed during her refurbishment were too small--these are 5 inches longer (the standard size). Also she received new pulse lights, a VIRB mount, repeater capability, a cup holder, and a new P-T-T mount. She failed her post-annual run-up test when they discovered the vacuum pump was plumbed in wrong. So "Sarah" spent an extra day down at Southport, getting fixed; otherwise, the over-suction would prematurely age gyros.

N179CP also had no major issues during its annual; still an exhaust valve pushrod was cleaned; some touch-up paint, a cable re-routed, rusty hardware replaced on the exhaust system, an instrument panel light replaced, the rudder trim tab marker repainted, etc.... Catching little things early helps us all.

N405CV will have its corrosion protection done while in for annual. Still pretty new; hope not too much to fix.

2b. More Items: **N262CP** got its airbag seatbelt buckles replaced. **N938CP** got it's Becker re-installed when it came to KSUT for an oil change, plus some lights changed, throttle cable tightened, etc.... **N716CP** had an oil change and had its oil transducer cleaned. **N727CP** also had an oil change; perhaps its last on this engine. **NHQ** and **NCWG** are in discussions if the Lycoming SB1009BD can give a 200-hour extension to the TBO. **N179CP** doesn't qualify, but **N4813C** might; all due replacement engines soon. **N963CP** might have a bad battery; we'll know for sure soon. And as the month ended, **N9930E** did need a battery, **N726CP** had a flat tire, and **N4813C** has both a low oil temperature issue and developed a fuel leak from the right tank.

3a. Admin Tidbits: Aircraft Information Files (AIF) updates: 23 April 19 – New mission symbols. Document 2 (table of contents) and Tab 1, page 2, "mission symbols" have been updated. You can find them at: <https://www.gocivilairpatrol.com/programs/emergency-services/aircraft-operations/aif/aif-airplanes-balloons>



3b. NCWG crew chief patch... While other Operations functions (Operations staff, Standardization/Evaluations, Powered O-rides, and Glider ops) have an identifying patch, crew chiefs did not. This idea was presented at the Annual Operations meeting. Considered a 'morale patch', wearing it in uniform probably isn't an option. (The road kill is labeled "E.O.M." symbolizing the 'End of Month' reports.)

3c. If the shoe fits, should you still fly with it? Some footwear and rudder pedals don't match. Many of us who have flown tail draggers, especially with heel brakes (e.g., Piper Cubs) know to wear hard sole shoes. Else you may not feel the pedals through the thick rubber heels. Same goes for some military style boots... they may not give a good feel of the pedals. Be choosy on your footgear when you aviate....

3d. Staff Assistance Visit (SAV): The SAV came and went... apparently there was only one write-up: you probably guessed it, "Tire Pressure." Something, very hard to perfect due to temperature changes, and lack of immediate compressed air access...One more thing out of the way.

3e. The CAP Aircraft for Sale web address has changed: <https://www.gocivilairpatrol.com/members/cap-national-hq/logistics-mission-resources/aircraft-for-sale>; We just missed the sale of 25 aircraft on 19 April. If you look at what CAP off-loads, you'll get a better appreciation for how we care of our fleet. Some of the aircraft up for bid are newer and have less hours than NCWG's oldest models. **That's a reflection on all of us;** both in the upkeep, and in the daily, professional flight operations of all crews. Pat yourselves on the back.

3f. New Aircraft Checklists are coming: Smaller, spiral bound lists that fit in the smaller pockets. Lt Col Bailey sent out an email to the operations community on 23 April explaining the what's and whys. Some already in.

3g. NC Flag Boxes: Sometimes praise is not enough; those occasions warrant something to dust. So, in appreciation for their continued above and beyond support that makes the NCWG flying mission possible, a NC Flag boxes was delivered to the NHQ CAP Logistics Division. The flag was flown in 19 NCWG aircraft.



*Front row left to right: Gary Arthurs, Jennifer Ussrey, Gary Schneider and Johnny Dean.
Back row left to right: Jereme Watson and Rodger Kirkpatrick. Close up of Flag box on right side.*



3h. Homeland Security Ribbon For those unfamiliar, participation in 10 US Army ATC training sorties count towards earning this ribbon. Considering each day is usually two sorties; it only takes five times to qualify. Details in CAPR 39-3, para 21.L. dated 2 march 2018.

3i. New Aircraft Emergency Kits; 'they're really a-commin.' Hopefully by the time you read this, we'll have received, and started rebuilding / distributing the replacement Aircraft Emergency Kits. Housed in Pelican cases, it will keep food and equipment dry, and water intact.

3j. Help Wanted: If anyone is interested in spooling up in the aircraft maintenance world, let us know. CAPR 66-1 authorizes an individual for every 10 aircraft, so NCWG is a two-person job. Lt Col Chris Bailey and/or I won't be here forever, and there is plenty of continuity to pass along. Let us know if you're interested in stepping up to this Wing-level staff position.

4. "Dip-Stick of the Month": NC-145 at Franklin County is this month's winner. Despite having both aircraft down for extended maintenance, they still put on glider operations by renting a tow aircraft. (The Dip-Stick handle is in N9930E). The March winners had their Dip-Stick handles mailed directly mid-month--which should have been presented at the March Operations Meeting. Finally, dual aircraft locations will earn their second dip stick when the situation presents itself.



5. Thanks for taking the time to read this. Riveting Reading can also be found on the NCWG Operations / Aircrew Maintenance Webpage. If you have questions, you can reach me at 703-732-3264.

- Stryker -

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