

The Aero Center

RUN-UP

Bismarck Aero Center & Mandan Aero Center

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MAINTENANCE CORNER

Read below about new Airworthiness Directives that may affect your Piper or Cessna aircraft.

Piper: There have been two Airworthiness Directives (ADs) recently released that will affect most piper owners. Older PA28 and 32 models have an AD that requires an inspection to look at the wing spar near the fuselage for corrosion. This requires either a borescope inspection, if possible, or the installation of a new access panel. The AD is due at the first annual or 100-hour inspection after December 28, 2020 and it is due every seven years thereafter.

The other AD is for inspecting wing spar bolt holes, where the wing spar attaches to the fuselage. The inspection calls for an eddy current inspection on the holes, which means the bolts need to be removed for the inspection to be performed. This is applicable to most PA28 models (Warrior, Archer, Dakota, Arrow) that have the tapered wing designs, but it is also affects some Cherokee Six models and Saratoga models. This AD has a formula for calculating the “factored service

hours”. If you have more than 5,000 factored service hours, then you need to have the required inspection performed. Bismarck Aero Center has already performed many of these inspections and has the new bolts in stock. Due to the eddy current portion of the inspection, we work with Electrical Test Instrument (ETI) testing in Bismarck. We are the only FAA approved non-destructive inspection repair station in the area. The AD is not repetitive.

Cessna: In early 2020, the FAA released an AD for Cessna 210’s that required an inspection for corrosion/cracks on the lower surface of the carry through spar, underneath the headliner. This inspection also requires eddy current to be performed. The FAA has now also issued a notice of proposed rulemaking to add the later models of the 210, as well as the 177 Cardinals. If you own a later model 210 (210N, R, P210N, P210R, T210N, T210N) or a Cardinal, you will want to start thinking about making plans to get the inspection done.

- Erik Peterson, Lead Maintenance Technician

GET TO KNOW YOUR TECH

Kolton Montieth, Flightline Technician

Full-Time Flightline Technician at Bismarck Aero Center for almost two years

Q: Where did you grow up?

I grew up in New Salem, ND, and have lived in the Bismarck-Mandan area since 2015.

Q: How did you get started in aviation?

I got my start in aviation when I joined the ND National Guard as an aircraft maintainer. My mom, Nikki, had the same job in the Guard!

Q: What is your favorite airplane?

My favorite airplane is the Husky A-1C.



SPOTTED ON THE RAMP:

Sikorsky UH-60
Blackhawk



*BAC is proud to be an
Air Elite FBO & provide great
service to all our customers.*



The UH-60 Blackhawk is a four-blade, twin engine, utility helicopter. First produced in 1974, this helicopter was put into service in 1979. The long, low profile shape allows it to be transported easily by a C-130 Hercules. It lifts 2,600 pounds internally or 9,000 pounds of cargo externally by sling. Missions range from tactical transport of individuals to carrying water to fight wildfires (like how our local ND National Guard did with the Medora grass fires).

Upcoming Events



19 AUG	National Aviation Day
19 AUG	Larks Baseball STEM Expo at 3:30 PM
12 SEPT	Bismarck Aero Center Fly-In
7 OCT	Props & Hops (Mandan Aero Center)

We recommend confirming
upcoming events with local
airports or organizers.



New Faces



DEAN BECK Flightline Technician II

Dean joins BAC after retiring from his full-time career in the field of social work. Dean is highly respected amongst his professional peers and everyone that he has touched throughout his career. As the previous owner of a counseling clinic, Dean understands some of the challenges with operating a small business in North Dakota. By working at BAC part time, Dean will be able to apply some of his hands on agricultural skills from his upbringing in southwest North Dakota. Dean views the opportunity at BAC as a way to get involved in an industry that has always tempted his curiosity. Welcome, Dean!

MATTHEW KNUTH Certified Flight Instructor

Prior to starting his career in aviation, Matt worked in agriculture, mining, and heavy equipment operation. After leaving mining, Matt went all-in on the start of his aviation career by going from a Private Pilot to completing his Instrument Flight Rules (IFR), Certified Flight Instructor (CFI), and Commercial Pilot tickets in less than 12 months. Matt flew nearly 300 hours during this process! Along with aviation, Matt has been active in his hometown Fire Department, Emergency Medical Technician (EMT), and the American Cancer Society. He is looking forward to growing his aviation experiences under Ray in our flight instruction department. Welcome, Matt!



Congratulations



EDEN WEST Business Administration Intern

Eden has accepted the challenge of becoming our Business Administration Intern for the 2021 Summer. Having grown up around aviation most of her life, Eden has been very active in Civil Air Patrol and involved with aviation programs throughout high school. She just finished up her associate degree in Business Administration at Bismarck State College. Originally, Eden joined BAC to explore the opportunities to grow her passion for aviation. Now, with this part-time internship, Eden will start applying her educational experiences at the Bismarck Airport. will allow Eden to start applying some of her educational experience at the airport. She will also continue in her part-time role as a Flightline Technician. Please help us congratulate Eden on her achievements!



COVID-19 did not allow us to have an Aviation Career Day this year, so we created a Virtual Career Day, filming over two hours of Local Aviation Professionals.



On May 24, we celebrated our maintenance team for National AMT Day.



Check out the sweet new paint job for our trainer C172 Skyhawk.



N1664V is still undergoing a few upgrades, but we look forward to having it available to rent in the near future!



June 13 saw the return of the Planes & Pancakes Mandan Fly-In. There was a great turnout of aircraft and families to enjoy the beautiful morning. All around, it was a great day for the newly named Mandan Regional Airport - Lawler Field!



PRODUCT SPOTLIGHT

Garmin Adds GFC 500 Aircraft Approvals Available Now for Select Piper PA-24 Aircraft

Garmin recently announced they have received the FAA Supplemental Type Certificate (STC) for the GFC 500 autopilot in select Piper PA-24 series aircraft. Intended for qualifying piston engine aircraft, the GFC 500 delivers superior in-flight characteristics, self-monitoring capabilities and minimal maintenance needs when compared to older-generation autopilot systems.

The GFC sports these features:

- Cost-effective, precise and smooth in-flight characteristics, built-in self-monitoring capabilities and lower cost of ownership when compared to older autopilot systems aircraft, GFC 500 is



COME FLY WITH US *Flight Instruction Tip*

Another North Dakota winter in the books and summer is just around the corner! Vacations, fly-ins, airplane family excursions, the North Dakota Passport Program, the Fargo AirSho, the EAA AirVenture Oshkosh, and other airshows abound during the summer months. Summer weather is usually pretty good, but there are always those afternoon storms that can catch you off guard. This can put you on the doorstep of having to shoot an instrument approach in rain and probably a bit of turbulence.

As we all know, student pilots learn Density Altitude (DA) is pressure altitude corrected for nonstandard temperature. A high DA results when hot air makes the density of the air less than what it would normally be at a given pressure altitude. A quick look at some aircraft performance charts shows that a noticeable reduction in performance begins to show at DA's as low as 3,000 feet. That means that an airport at about 1,500 feet MSL becomes a high-DA airport, when the outside

temperature exceeds about 85 degrees Fahrenheit; this perfectly describes here in the Midwest on a typical summer afternoon. Even low-altitude airports begin to exhibit high-DA traits during the hottest of summer days. Of course, higher elevation fields can have high DA almost all year long. Humidity displaces oxygen, so high humidity can negatively affect aircraft performance on a hot day too.

Have you ever stood on an asphalt parking lot during a hot summer day? The local temperature might be significantly higher than the ambient air nearby, as the dark surface absorbs heat and transfers it into the air. The DA on or near the runway, where it matters most, may be even higher than the calculated DA using the official airport temperatures. Give yourself a significant margin when applying results from performance calculations.

Happy Flying! Ray Brooks, Lead CFI



Interested in flight instruction at BAC?
Contact Ray: 701-223-4754 or
rayb@bismarckaero.com

PRODUCT SPOTLIGHT *Continued*

- Designed for light piston, fixed-wing aircraft, GFC 500 is now available for a growing list of aircraft models.
- Leverages certificated flight instruments such as the G51 and GI 2757 for attitude reference, and optionally flight displays such as the G3X Touch2 or G500 Txi2 for display of autopilot modes and flight director cues.
- Robust feature set, including safety features such as underspeed and overspeed protection, a dedicated re-

turn-to-level (LVL) mode button, Garmin ESP (Electronic Stability and Protection), Flight Director (FD), coupled approaches and missed approaches when paired with a compatible navigator and much more.

- Offers 2-axis (pitch and roll) capabilities with optional pitch-trim; yaw damper optionally available on select aircraft.

If you are interested in learning more about the GFC 500 updates, call me at 701.223.4754 or email at Krish@bismarckaero.com. *The Tech Guy, Kris*

SEPTEMBER 12

FLY-IN & DRIVE-IN

PRESENTED BY

puklich



PANCAKE BREAKFAST • AIRPLANE RIDES • GIVEAWAYS



Do you know your **TRIVIA?**

Denver-based aerospace company Boom Supersonic is working on the 'Overture' airliner. It is expected to be net-zero carbon from day one, and optimized to run on 100% sustainable aviation fuel (SAF). It is slated to roll out in 2025, fly in 2026, and expected to carry passengers by 2029. Which airline has an agreement to purchase 15 of these supersonic aircraft for their fleet?

- A) American Airlines
- B) Delta Air Lines
- C) Southwest Airlines
- D) United Airlines

Submit your answer by 7/15 for a chance to win a \$25 gift card! Contact Shae at shaeh@bismarckaero.com or message us on our Facebook page.

The answer to our previous question is B. In 1921, the first crop dusting test flight was flown in a Curtiss JN-6 "Jenny". Congratulations to Doug Alm for being this quarter's lucky winner!

Photo courtesy of Boom Supersonic

Keep up to date with events, aviation news & cool aircraft! Follow us at:

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2301 University Drive Bldg. 53
Bismarck, N.D. 58504
701.223.4754
www.bismarckaero.com

