PRESIDENT'S CORNER

Greetings from my corner of the hangar. Summer has arrived in Arizona like a blow torch. Combining the summer heat with all the cancelled fly ins and airshows makes for a summer you want to put in the rear view mirror as soon as possible. One good thing, or possibly just an oversight, is that we have had free and unrestricted access to hangars and been able to enjoy flying our planes. I had managed to get a short term leave from the airline hoping to be able to finally get to fly to some summer fly ins. That didn't work out too good! I guess I will wait the two years until I reach TBO/retire at the airline to enjoy the summer air show and fly in circuit.

Hopefully everyone will have some ways they productively occupied their summer to share at our September live meeting.

See you around the airport!

Curtis

CHAPTER MEETINGS RESTART IN SEPTEMBER

One of the things our Chapter 1217 members enjoy is our monthly meetings and guest speakers, It is a chance to catch up with old friends and make new ones while getting to enjoy a presentation that can be humorous, educational and entertaining.

With all of the uncertainty surrounding the Corona Virus we thought it wise to take the summer off from having monthly meetings. It was a tough decision but with all the available meeting spaces closed and guest speakers reluctant to talk to groups it was a no win situation.

The Scottsdale Airport team has been in touch with me and are in agreement that starting the meetings in September is a good plan. There will be some minor protocols such as no dead bats and wearing your shoes on the opposite feet but the plan will change a hundred times between now and our September meeting.

Rest assured that for 22 years we have been having monthly meetings and we will get back to it when life gets back to normal.

FAA EXTENDS SOME DEADLINES

In an effort to help pilots that my have trouble getting instructors and Doctor appointments during the COVID shutdown the FAA has stepped up with some extensions to requirements.

Pilot Flight Reviews Those due in March - September 2020 will have a three month grace period.

Pilot Medical Certificates Extend medial validity three months for pilots due March - September 2020

Pilot Knowledge Tests Tests expiring March - September 2020 validity extended three months

CFI Renewals No additional extension beyond June 30

IA Renewal Three additional months April-June 2020 to meet one year renewal requirements

CZG FOXTROT CAFE TO CLOSE

The Foxtrot Café joins the list of businesses that will be permanently closing its doors this month. Amber and her family opened the café inside the Casa Grande Airport Terminal Building in May of 2015. The Café's final day of business here at the Airport will be Saturday, July 18, 2020.

NEW eVTOL IDEA

BETA Technologies debuted its new aircraft last month with a dramatic helicopter airlift of the sleek white model across Lake Champlain from Burlington, Vermont, to Plattsburgh, New York. Code-named Alia, the electric vertical-takeoff-and-landing (eVTOL) airplane is the successor to Ava, a smaller prototype the company used to experiment with propulsion strategies and learn about the tricky aerodynamics of small, electrified, vertical-lift flight.

According to company founder Kyle Clark, Alia's striking configuration and elegant shape owes a debt to the longest-migrating bird in the world, the Arctic tern. This includes a twin-tail assembly supported by angled trusses, dramatically arched wings, and arcing, tapered wingtips. The tern's tail configuration and wing stance "proved a great baseline to start from," Clark says.

For the tern, those features enable ultraefficient, long range flights. Beta hopes for similar performance. Its primary client, United Therapeutics, is developing man-made organs for human transplant and intends to use Beta's aircraft as an efficient, environmentally friendly distribution system.

Beta didn't release performance specifications, except to say that it aims to build a prototype that can fly 250 miles and charge in under an hour. Alia has a 50-foot wingspan, and will have a takeoff weight of 6,000 pounds—the prototype airlifted in Vermont on Friday weighed 3,800 pounds, having been stripped of batteries and other heavy components. The craft uses four horizontally mounted rotors for vertical lift and a single rear-facing propeller to boost speed in forward flight. The wide wings will generate lift for more efficient forward flight, instead of relying on the motors to do all of the work as in eVTOL aircraft that derive most of their lift from rotors. It will use existing battery technology and be deployed as part of an ecosystem that includes charging stations in urban centers, at hospitals, or in remote locations to extend the aircraft's range.

Beyond transporting organs, Beta hopes to expand to commercial applications, cargo, and passenger-carrying air taxis. It is one of two companies, along with Joby Aviation, recently selected by the US Air Force to advance to the next stage of development in its Agility Prime eVTOL program.

The aircraft's unusual shape will raise eyebrows, but its propulsion strategy is likely to raise even more—in the eVTOL aviation community, anyway. Many eVTOL developers use tilt-rotor systems in which multiple rotors point skyward for takeoff and landing then pitch forward for horizontal flight. Beta used that strategy for Ava, but it proved too complex for the engineers to want to deploy it in a production aircraft. "Our primary objective is to meet our first customer's mission, reliable organ delivery when and where it's needed," Clark says. "We couldn't have an aircraft that had any possibility of being grounded for repairs due to a complex system."

Instead of tilt-rotors, Alia uses four fixed rotors on the top of the aircraft and a pusher-prop in the rear to speed forward flight. This strategy required the development of new, ultra-efficient rotors, but they could be optimized for just one job—vertical flight—rather than two. This simplicity will not only make the aircraft more reliable, Beta contends, but also easier to certify and more affordable, because it will have fewer parts, compared with tilt-rotor systems, and lower maintenance costs.

Because the rotors and pusher motor each have a single job, engineers can optimize their designs without worrying about tradeoffs, says propulsion engineer Herman Wiegman, who designed energy storage systems for GE Global Research before leaving to help form Beta in 2016. "We also brought the motor design and fabrication totally in-house, which enables us to completely customize the design to this application," Wiegman says.

Similarly, Beta purchases its battery cells from well-known industrial suppliers, but designs and fabricates the packs in-house. The pack in Alia sits below the cabin, generating a low center of gravity

that gives the airplane greater stability and resistance to gusts of wind or turbulence—something Wiegman says will also help future passengers acclimate themselves to smaller aircraft than they're normally used to.

Beta hopes to begin testing the transition from vertical to forward flight in Plattsburgh sometime this summer. The aircraft has already been doing tethered hover tests and high-speed taxi tests, using landing gear in place of the skids planned for the final design. The idea, Clark says, is to understand its flight characteristics as a conventional airplane, then progress to gauging its performance as a helicopter, then finally as both combined. Beta is developing the flight-control system, avionics, and power management software to hone its performance to the point where it can reliably make both urgent transplant organ deliveries to hospitals and send passengers across towns or between cities.

Hopefully the developers budgeted a significant amount of cash to get this certified by the FAA. Using non certified engines, propellers, airframe components and batteries is not usually the fastest path to certification.

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CUBCRAFTERS NOSEWHEEL XCUB

Following a year-long public Market Survey effort, light aircraft manufacturer CubCrafters has officially decided to certify and offer a nosewheel option for its flagship Part 23 certified aircraft, the CC-19 XCub.

"Putting a nosewheel on a modern Cub type aircraft certainly surprised some people, but the overwhelming public response has been positive, especially among the more than 300 pilots that have had the opportunity to fly the airplane during the Market Survey phase," comments Brad Damm, CubCrafters VP of Sales & Marketing. "A nosewheel equipped XCub is a very easy airplane to fly that takes off shorter, lands shorter, and cruises faster than the tailwheel version. Once a pilot is in the airplane and experiences it, the advantages are obvious."

The company also notes that hundreds of hours of real-world use by a variety of pilots of varying skill levels during the Market Survey phase led to many design improvements that wouldn't otherwise have been possible in an internal-only development setting. Current and prospective customers were able to have a large influence on the final design of the nosewheel option for the aircraft.

"The added capabilities and value offered by the new nosewheel option are game-changing" continues Horgan. "The XCub is easily convertible between nosewheel and tailwheel, so you really get two airplanes in one. A fast, modern, easy-to-fly, tricycle gear aircraft and a traditional big-tire tailwheel Cub together. Both are very capable STOL aircraft designed for the backcountry missions that CubCrafters' airplanes have always excelled at."

With an extremely robust trailing-link nosewheel assembly and large tundra tires as an option for the mains, the nosewheel equipped XCub is capable of handling primitive landing strips and most off-airport type operations. Landing loads on the nosewheel are transmitted to the airframe by a heavy duty truss designed just for this application, and the entire nosewheel assembly itself is a bolt-on option that can be removed should the owner want to convert the airplane to a tailwheel configuration.
"This is something I've looked forward to for a long time," comments Jim Richmond, CubCrafters' Founder and CEO. "I've always believed that back-country flying should be open to more than just tailwheel rated pilots, and it's exciting to see that vision now becoming a reality!"

The XCub program has achieved a number of significant milestones in its short history. After initial FAA certification in June of 2016, the XCub was the first United States General Aviation aircraft to achieve non-TSO'd avionics approval for the Garmin G3X system in 2017. In 2019, CubCrafters collaborated with

Lycoming and Hartzell to offer the new lightweight CC393i fuel injected 215 horsepower engine and a new high-performance PathFinder 3-bladed composite propeller, for the XCub.

Badged as the “NX Cub” for aircraft leaving the Factory in the nosewheel configuration, the new tricycle gear option is available now on experimental XCubs through the company’s Builder Assist program, and CubCrafters expects to achieve FAA Part 23 certification in early 2021.

WHO IS CUBCRAFTERS

CubCrafters, founded in 1980 by current owner and CEO, Jim Richmond, is located at McAllister Field Airport (YKM) in Yakima, WA. CubCrafters’ roots are in the 90-year history of classic Cub-type aircraft, but its products and services are innovative and completely modern. CubCrafters designs and manufactures Part 23 Certified, LSA and Experimental aircraft. The company’s flagship XCub aircraft substantially expands the mission profile of personal adventure aviation aircraft with its higher speed, longer range and larger payload, and is now offered in both experimental and certified versions. The Top Cub, with a useful load of over 1,000 lbs., is the most up-to-date iteration of the historic Super Cub available. Now in its 3rd generation, the Carbon Cub has redefined expectations of “backcountry aircraft” with its lightweight, powerful engine options, and breathtaking performance.

NEW KIT JET MAKES FIRST FLIGHT

Stratos Aircraft announced on Thursday July second that its 716X single-engine jet has successfully completed its first flight. The flight lasted 22 minutes and included a full-power takeoff and climb to 13,500 feet followed by a series of maneuvers to evaluate handling characteristics. Stratos says it will be offering the 716X as an experimental kit, along with a builder’s assist program, while the company pursues FAA certification for the 716. This is a similar process that Epic Aircraft successfully accomplished. first a homebuilt version and then a certified version. Epic is based on the same airport in eastern Oregon.

“The first flight of the 716X went as briefed, which is a testament to the design quality and the professionalism of the crew here at Stratos,” said test pilot Sean VanHatten. “The aircraft is well harmonized, and its directional stability was very good. The Stratos Aircraft team should be very proud of this accomplishment, and I’m looking forward to continued flight testing of this new design.”

Stratos introduced the 714 proof-of-concept aircraft at AirVenture 2017 and decided to make a slightly longer version as its final design. The six-place 716X is powered by the Pratt & Whitney Canada JT15D-5 engine. It is expected to cruise at 400 knots and feature a fully automated pressurization system and air conditioning.

Continental 0-200 case with data tag and extras. $500-

Cleveland 6:00 x 6 used wheels, discs, bearings and double puck calipers $500-

Beech 18 fabric rudder, fits either side or make into a coffee table $200-

Beech Staggerwing carved desktop model with stand about a 12 inch wingspan $100-

Douglas DC-4 pedestal with throttles and controls. Perfect for your man cave $100-

Curtis Clark 602 710-4494

On Fred Gorrells add please remove DESIGNATED PILOT EXAMINER from his services