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King Air is distributed at no charge to all registered owners of King Air aircraft. The mailing list is updated bi-monthly. All others may subscribe by writing to: King Air, P.O. Box 1810, Traverse City, MI 49685, or by calling 1-800-447-7367. Rates for one year, 12 issues: United States \$15.00, Canada \$24.00 (U.S. funds), all other foreign \$52.00 (U.S. funds). Single copies: United States \$6.50, Canada/Foreign \$9.00.

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King Air is wholly owned by Village Press, Inc. and is in no way associated with or a product of Textron Aviation.

King Air (ISSN 1938-9361), USPS 16694 is published monthly by Village Press, Inc., 2779 Aero Park Drive, Traverse City, Michigan 49686. Periodicals Postage Paid at Traverse City, MI. POSTMASTER: Send address changes to King Air, Village Press Inc., P.O. Box 1810, Traverse City, MI 49685. Telephone (231) 946-3712. Printed in the United States of America. All rights reserved. Copyright 2025, Village Publications.

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‘A Shining Example of Aviation’s Heart’

Industry organizations join Textron Aviation in inviting King Air operators to participate in the Special Olympics Airlift happening in June 2026.

During the industry’s Experimental Aircraft Association AirVenture fly-in convention in Oshkosh, Wisconsin, leading general aviation organizations – including EAA and the General Aviation Manufacturers Association – announced their collective support and endorsement of the 2026 Special Olympics Airlift event.

Organized by Textron Aviation, the Special Olympics Airlift mobilizes hundreds of volunteer Beechcraft, Cessna and Hawker pilots and aircraft to create the world’s largest peacetime airlift and provide a once-in-a-lifetime experience for Special Olympics athletes. The event will transport hundreds of athletes and coaches across the country to the 2026 Special Olympics USA Games in Minnesota’s Twin Cities.

The industry is calling on owners and operators of King Air models, along with other Beechcraft, Cessna and Hawker aircraft, to come together on Friday, June 19, 2026, and Saturday, June 27, 2026, to enable champions from all corners of the nation to travel to and from the host city, regardless of financial or logistical challenges.

“The Special Olympics Airlift is one of the most inspiring demonstrations of what aviation can do to uplift lives and unite communities,” said Jack J. Pelton, EAA’s chairman and CEO. “EAA is proud to support this extraordinary mission, and we deeply appreciate the dedication of the pilots and volunteers who make it possible. It’s a shining example of aviation’s heart.”

Since the inception of the Special Olympics Airlift in 1987, general aviation owners have transported more than 10,000 athletes and coaches to various Special Olympics World and USA Games. During the 2026 event, participating aircraft known as doves are expected to touch down or take off from St. Paul Downtown Airport Holman Field (KSTP) every three minutes throughout a 10-hour period.

“The Special Olympics Airlift is an excellent example of how the general aviation community bands together to



PHOTO CREDIT: TEXTRON AVIATION

Who can volunteer?

Owners and operators of the following aircraft can participate in the 2026 Special Olympics Airlift by volunteering their aircraft, crew, fuel and time:

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support special missions and give back. This noble effort provides Special Olympics athletes and coaches with the transportation necessary to create lasting memories of the games and inspiring achievements by the competitors,” said James Viola, president and CEO, GAMA.

Source: txtav.com **KA**

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Our anonymous King Air 350 operator advised that “increased performance is very real and an undeniable improvement” with MT-Propeller’s new 7-blade props.



Blade Assessment

A Part 91 operator in Texas offers a performance report since upgrading to MT-Propeller's 7-blade Whisper Prop system.

by Grant Boyd

In April, *King Air* magazine highlighted that MT-Propeller Entwicklung GmbH received supplemental type certificate approval for the 7-blade Whisper Prop system on King Air 300 series aircraft. The upgrade is distributed by BLR Aerospace LLC, and as the name implies, it is marketed as the quietest propeller option for this model of King Air.

As a reminder, the advantages advertised with the new propeller system include:

- General performance improvement (8% takeoff & climb)
- No propeller speed restrictions on ground while operating in low idle
- Lower ITTs at high altitude, allowing a top speed increase up to 6 KTAS or longer engine life
- Aesthetic ramp appeal
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A Part 91 operator based in Texas believes they are the first to install the upgrade, having had the propellers swapped on their King Air 350 in June. The company's aviation department manager and chief pilot, who is a former American Airlines captain, advised that this is not the first King Air propeller upgrade the company has pursued.

"We previously operated a King Air E90, which had the 3-blade props and was the first airplane that the corporation ever had. While it was a nice airplane, it was loud and there was lots of vibration from the props," he said. "Over a period of a couple of years, I told the boss [company's CEO] that there was an option to make this a much more comfortable ride. There is a company out

of Germany that makes composite, no vibration props with an interesting aerodynamic design. They're very quiet and I think it would be worth our money if we are going to keep this airplane for a while."

The board of directors OK'd the upgrade, understanding it would improve flights for the company's pilots and personnel flying in the back. The operator reports a 7.5 to 8.5 decibel noise reduction, depending on where you are in the aircraft during cruise. The vibration was nearly eliminated.

A few years later, the E90 was replaced with a late-year, low-time King Air 350 that offered additional seating and increased performance. While this operator has requested to provide feedback anonymously to protect their corporate identity, they are excited to share with others what they've experienced with the 7-blade upgrade.

"Just like I had before, I told the CEO that we have a couple of options to make this a better airplane," the chief pilot explained. "BLR Aerospace had the 5-blade propellers approved for the King Air 350, like they had for our last King Air. And they just came out – they're brand spanking new – with a 7-blade model of the same prop. I think they are going to be even quieter than the 5-blade model in terms of noise reduction, and they're claiming better acceleration and a better climb."

While they've only had a few flights since upgrading to the 7-blade option, the operator said they are pleased so far.

"We picked up the airplane after the props were installed and did some testing of it before flying back home. The acceleration was noticeably greater than our old 4-blade props," he said. "We got to V₁ and I pulled



One of the purported benefits of MT-Propeller’s 7-blade Whisper Prop system is an increase in ramp appeal.



Textron Aviation’s Wichita Service Center completed the operator’s upgrade to the MT-Propeller 7-blade Whisper Prop system.

the power back to idle, and the aerodynamic braking from the 7-blade props stopped the airplane – without using any brakes. So, we did that a couple of times and then we took off down the runway for a takeoff. It was like flying a jet instead of a turboprop. The initial climb was amazing.”

Since the new propellers were not used in the original FAA certification of the King Air 350, the performance improvement can’t be used for flight planning and the

improvements are not quantified on any performance charts. But it does give this operator additional comfort knowing that the aircraft is more capable than they plan for in their missions.

“We measured the noise, and it was not as much of a difference as I expected it to be,” the pilot said. “It was about 2 to 2.5 decibels in the cockpit and immediately behind the cockpit, less than the 4-blade props. But the frequency of the noise was different, and we can

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“It was like flying a jet instead of a turboprop. The initial climb was amazing.”

converse in normal tones with our headsets off. I told my colleague that we are going to have to be careful because they are going to be able to hear what we say back in the cabin.”

Preliminary reports from passengers agree with the newfound quietness, as well as a reduction in overall airframe vibration. “Uncannily smooth” was how the flight has been described. The aviation department manager doesn’t explicitly state whether the approximately \$250,000 upgrade has been worth it, as they are awaiting the final verdict from all team members. But the consensus is that the reduction in cabin noise and vibration will be appreciated by those in the cockpit and the cabin.

One downside to the new props is a possible reduction in cruise speed. This operator notes a minimal difference of 2 to 3 knots in their King Air 350. The reduction was as high as 5 to 7 knots from previous cruise speeds in the E90, though. **KA**

Grant Boyd holds a doctorate of education and is a private pilot and business aviation professional with a passion for writing. His background includes aviation marketing, communications, customer service and sales roles.

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Pushing Your Limits?

by Pete Marx

We have all been to some sort of training class as a pilot. In these classes we have been shown the limitation section of the pilot operating handbook (POH), otherwise known as the aircraft flight manual (AFM). After the books have been closed and class is over, it is very easy for us to never think about the limitation section again. We have red lines on all the instruments, which will keep us out of trouble, right? Maybe, maybe not.

Many PT6 engines installed in King Airs have a cruise climb ITT limit that is lower than the max cruise limitation. Is this limit depicted with a red line on the ITT gauge? No, it is not. If you are flying a King Air with this limit, it should be memorized so that during climb the engine power will be set without breaking a limitation. If you have modified your King Air with different engines, you will need to look at your AFM supplement, which supersedes the original AFM limitation section, to see if the limitation has been removed or changed.

PT6 engines are very good engines. If maintained correctly, the chances of having an abnormal engine

start are very low. Many clients I have instructed have never had an abnormal engine start while operating their King Air – a testament to the PT6 engines.

Let's say we add fuel during an engine start in our PT6 engine and the ITT shoots up rapidly. What do we do next? Following the King Air 90 and 200 series AFMs, we would move the condition lever to cutoff and motor the engine for the remainder of the starter duty time. In the 300 series airplanes, the AFM says to motor the engine until the ITT gets below 400 degrees.

Why the difference? To answer this question, we have to discuss the starter duty cycle. In the 90 and 200 series King Airs, the starter is limited to 40 seconds on, 60 seconds off, 40 seconds on, 60 seconds off, 40 seconds on, 30 minutes off. The reason for the 40 seconds on is to prevent the starter from overheating. This limit is in place to protect the starter while the starter is doing all the work driving the engine (the engine is not producing any power). If you forget to turn off the starter during engine start, you won't be the only one who has done this – the starter will just go along for the ride, not hurting anything at all. You will figure this out when you can't get the generator to turn on. Oh yeah, I need to turn off the starter before the generator control unit will allow the starter to be a generator.

Back to the hot start. In the 90 and 200 series airplanes, the procedure directs you to motor the engine for the remainder of the starter duty time of 40 seconds to reduce the ITT. That 40-second duty time cycle should be more than enough time to reduce the ITT down below 300 to 400 degrees ITT.

Hmmm, how do I know how much time has passed since I turned on the starter? I know, I can count the time in my head during start. In reality, it is difficult to perform an abnormal procedure while keeping track of time in your head. One way to help yourself is to start a timer when the start switch is moved to the ON position.



Hot start on the left engine

If there is a hot start, when you motor the engine, you will only need to reference the timer to know when to discontinue motoring at 40 seconds.

In the 300 series King Airs, the starter duty cycle is 30 seconds on, 5 minutes off, 30 seconds on, 5 minutes off, 30 seconds on, 30 minutes off. During the start sequence, it may take 10 to 15 seconds before we even add fuel. By the time we recognize the hot start and chop the fuel, it may be as long as 20 seconds. Remember, in the 300 series airplanes, it tells us to motor the engine until the ITT gets below 400 degrees. Motoring for only 10 seconds may not be enough time to reduce the ITT.

I think the hot start procedure was written in such a way to prioritize the ITT, instead of the 30-second starter limit. This prioritization will cause the ITT of the engine to be decreased, thus saving the engine and sacrificing the starter. The engine is much more expensive when compared to a starter.

What happens if we add fuel during engine start and there is no ITT? How long will you wait before you do something? The first part of the procedure says: "If no ITT rise is observed within 10 seconds after moving the condition lever to LOW IDLE..." this does not mean you



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have to wait 10 seconds. It means you should not add fuel for more than 10 seconds without a light off. The more time that passes, the more fuel pools in the engine. For example, during start when you add fuel, there is a malfunction with the ignition system causing it not to spark, then suddenly it operates correctly ... click, boom! All the fuel ignites. This is NOT good for your expensive engine! What to learn: If it does not light off within the normal time for your engines, cut the fuel and turn off the starter. Get the checklist out and follow it.

These start malfunction checklists do not include bold or memory items as published. They are not practical to perform as a “read and do” checklist. Therefore, these items should be committed to memory. In addition, include a timer at the beginning of your engine start sequence. It will potentially save the owner of the aircraft a great deal of money by complying with these procedures in the event of a start malfunction.

Maneuvering speed & turbulent air penetration speed

Some other limitations that are important:

- maneuvering speed (V_a)
- turbulent air penetration speed (V_b)

Maneuvering speed is defined as the maximum speed at which full control deflections can be made without risking structural damage.

Flying at or below V_a means that the airplane will stall before the structure is damaged by excessive loads. If you encounter a gust that causes a sudden, significant increase in load factor while flying above V_a , the aircraft could experience structural failure.

Well, that sounds easy: To prevent structural damage, I will fly at V_a and I will have no risk for structural damage, right? Not so much in the real world. Turbulence will increase the load factor but can and usually does increase

the airspeed momentarily. Therefore, if you are flying at exactly V_a thinking you are safe and you encounter turbulence, your load factor and airspeed will increase, causing the possibility of structural damage.

Another important thing to understand is that V_a changes with the aircraft weight. V_a decreases as weight decreases, and it increases as aircraft weight increases. It is a mistake to assume that as long as you are at or below V_a , you can move the controls from stop to stop repeatedly without damaging the aircraft.

To clarify this point, 14 CFR part 25 states: “Flying at or below the design maneuvering speed does not allow a pilot to make multiple large control inputs in one airplane axis or single full control inputs in more than one airplane axis at a time without endangering the airplane’s structure.” Although GA aircraft are certificated under 14 CFR part 23, this point is still valid.

Due to this, the best practice would be to slow to the turbulent air penetration speed. In the King Air B200, V_a is 181 knots and V_b is 170 knots. Notice V_b is slower than V_a , giving you a buffer.

These are just a few ways in which limitations affect our everyday flying and why our training events highlight the limitation section of the AFM/POH. Often, we go to training to check a box for our insurance company, but understanding our airplane better can lead to a safer, more efficient pilot. **KA**

Pete Marx has more than 30 years of experience in the aviation industry, from flying as a captain and first officer on Beech 1900s, Jetstream 42s and Dash 8s for commuter airlines to flying cargo as a flight engineer and check airman in the Airbus 300 and DC-8 for DHL. He has been instructing in King Airs for the past 13 years and is currently an instructor at King Air Academy in Phoenix, Arizona.



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From Rough Around the Edges to Badass:

Transforming the Third Production King Air 350

by MeLinda Schnyder

Photography by Andy Phan unless noted





Sean Mickler is CEO of Jacob White Construction and an airline transport pilot with King Air 300 series, Cessna Citation 500 series and Embraer Phenom 300 type ratings.

COURTESY PHOTO



Sean Mickler with son Rory dressed for the job.

Some people told Sean Mickler he was crazy for investing the money and time needed to transform a 35-year-old Beechcraft King Air into the perfect transport for business and personal missions.

Now that he's done it, yeah, he agrees he was nuts and admits he probably wouldn't have done it knowing what he knows now. When he located the airplane in 2023, it wasn't quite a barn find but it's safe to say the airplane hadn't received the care it should have.

"If you would have told me three years ago that we would be buying the third production King Air 350 and making her like new from where she sat, I never would have believed it," he said.

Despite the challenges, Mickler is thrilled to be flying a 1989 King Air 350, serial number FL-3, customized to his preferences and needs for less than the cost of acquiring a factory-new King Air.

"We didn't expect to own a 350, and now we can't imagine living without it," he said. "Our story became a bit of a love story: An old girl with not so many hours,



Stevens Aerospace completed the latest upgrade to FL-3 in May 2025: installing the Garmin G1000 NXi avionics suite.

living in a T-hangar at a rural Texas airport. She just needed the opportunity to show the world that being an early serial number doesn't mean she can't compete with the rest of 'em."

Construction + Aviation

Mickler is CEO of Jacob White Construction, a commercial development and contracting business based out of Houston, Texas. His partner in the aircraft owns and operates a national steel fabricating and erection business. Both work with clients across the U.S.

Mickler has a degree in aviation business from Purdue University and has been flying for more than 20 years. He said his grandfather owned more than 27 airplanes over his lifetime, including a Queen Air, and his father is also a pilot, having used aircraft when he started a small construction business in 1980 that grew into JWC.

With airline transport pilot and flight instructor certificates, Mickler is type-rated in the B300, CE-500 (Cessna Citation 500 series) and EMB-505 (Embraer EMB-505 Phenom 300). Prior to the 350, he owned and flew a Citation Super S-II, Piper Cheyenne, Beechcraft Baron B58, Piper Aerostar and Beechcraft Bonanza.

Growing up around airplanes, he planned a career in aviation but the economic recession when he left college in 2009 thwarted those aspirations.

"I came back home to work for the family business, and I quickly learned it was more fun to fly when you want than to fly when you have to," the 37-year-old father of three said.

Fortunately, JWC allows him to connect the development and construction business with his passion for aviation.

"Aviation has always been at our core," he said of the business. "We build a lot of FBOs, hangars and airfield infrastructure projects around the country. We've always loved working in aviation because we're so passionate about construction and aviation."

JWC also does significant work in the healthcare, life sciences, hospitality, education and commercial interiors sectors.

"We're always using airplanes to move teams around quickly and efficiently," he said. "About 80% of the time I'm not even on the airplane – my teams and customers are using them. My partner in the airplanes is not a pilot but he also loves the versatility and economics of using the aircraft to benefit his business goals."

In 2021, the partners ordered an Embraer Phenom 300 and knew there was a multi-year backlog. While waiting for delivery, they began thinking about replacing their Cessna Citation S-II business jet with a twin turboprop.

“It was a mix of the operating cost of a legacy Citation combined with some of the tax benefits we could utilize,” Mickler said. “It just made sense to go buy an airplane that had a different mission capability.”

Mickler had familiarity and comfort with the Cheyenne series and his partner brought up the popularity and support available with the King Air series.

“We started looking at Cheyenne III and King Air 200 aircraft, and we soon realized the delta on the capital costs to go from a 200 to a 350 was nothing,” he said. “The only added burden of the 350 was the requirement to get a type rating.”

How it started

“The King Air market was crazy in 2023,” Mickler recalled. “I saw an ad pop up on controller.com for a King Air 350 based in Wharton, Texas – about a 90-minute drive from us. I followed the airplane on FlightAware when it was returning to its home base. I called the pilot as soon as he landed and told him I was at the airport and asked if he would show me the airplane.

“We made an offer on the spot and arranged a pre-purchase inspection at Million Air Houston.”

The appeal of this airframe was easy to understand: It had only 4,000 original hours and just 33 hours since engine overhauls. The downside was that not only had the airplane been underutilized for three decades as a Part 91 aircraft operated by a large farming business, Mickler felt it hadn’t received the care that most Part 25 aircraft receive. Records showed it had hopped around maintenance shops and there were other peculiarities.

“In fact, we came close to walking away from the airplane and made the owner a high concession offer that was accepted,” Mickler said.

Ultimately, the partners decided they would roll the dice, but not without help.

“Dean Benedict was paramount in my constant myriad of question asking,” Mickler said of the King Air maintenance authority who also writes for *King Air* magazine. “I hired Dean to come down and aid the FBO in the pre-buy, research and flight testing to make sure we didn’t miss anything. Dean was extraordinarily professional and a true pleasure to work with. At times, I think he thought we were a bit crazy.”

They took possession of FL-3 in July 2023 and immediately started a six-month restoration process.

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New paint helped transform FL-3: before (top), during (middle) and after (bottom).





Aside from getting the aircraft caught up on its maintenance phases, they had props, gear and brakes done while awaiting paint and interior slots at Murmer Aircraft Services at Houston Southwest Airport (KAXH).

Their \$450,000 ticket with Murmer included replacing cabin insulation, upgrading deicing boots, installing CoolView windows and AvFab window shades, adding interior and exterior LED lighting and refurbishing passenger and crew seats.

From Murmer, FL-3 was wheeled over to Temple Electronics for \$250,000 in upgrades there.

“The previous owners installed a European STC that made it, to our knowledge, the only 350 in the U.S. with

an approved GTN750 and Dual Garmin 600 installation, similar to what is found quite often in the King Air 200,” Miekler said. “While we liked this because our other aircraft had this set up, the fact that the autopilot had to remain the original King Air 350 Collins Autopilot was always a negative, coupled with the fact that we had to keep the original analog engine gauges. Temple recut the panel, cleaned up standby instrumentation, installed XI units and trouble shot multiple avionics issues the previous owners had learned to live with. Unfortunately for us this meant tens of thousands of dollars of chasing gremlins through a foreign STC.”

Temple’s work also included installing Avance L3 WiFi (“We didn’t realize this would soon become obsolete with



A thorough interior refresh of FL-3 included refurbishing seats, installing CoolView windows and AvFab window shades, adding LED lighting and replacing cabin insulation.

JWC's Aviation Construction Services

CEO Sean Mickler isn't the only one at Jacob White Construction who is passionate about aviation. The company's hands-on knowledge of aviation runs deep, with every corporate officer and many members of their staff holding private, commercial or airline transport pilot ratings.

Chances are you've seen work completed by their Aviation Construction Services division. They've built many private hangar facilities and handled airfield infrastructure projects around the country. Clients have included the Federal Aviation Administration, the Smithsonian at Johnson Space Center and Raytheon, among others.

They are long-time collaborators with Texas-based Million Air. Among the many projects done in coordination with the FBO network are departure lounges, office spaces, hangars, ramp spaces, parking and fuel farms. Recent projects include Million Air White Plains (KHPN) and Million Air Austin (KAUS).

"This year we've used the King Air a lot to go back and forth to Marathon for a cool new FBO concept in the Florida Keys that's going to mix an FBO with an island-like eatery where visitors can watch planes coming and going," Mickler said. "We've also made trips to Austin and Addison here in Texas for Million Air projects, as well as Bozeman, Montana, and Birmingham, Alabama."

He said building aviation facilities goes beyond constructing buildings, it's about creating spaces that keep the aviation world moving smoothly, efficiently and safely.

"Between my degree in airport management and air traffic management and my team's background in aviation, we know the operational needs and understand regulatory requirements, including how to navigate the entitlement process with airport authorities. It helps that we understand the language."



CREDIT: MILLION AIR

JWC worked alongside architects and Million Air on this 23,500-square-foot ski lodge-inspired structure that opened at the Million Air White Plains (KHPN) facility in 2019.



“I love the Phenom 300 but I’m *in love* with the King Air 350,” owner and pilot Sean Mickler said. The aircraft are shown here at KHOU, their home airport.

“... the world becomes a lot smaller with a 350. As soon as we started stretching her legs and seeing what she could do, we realized this is probably the most badass airplane we’re ever going to own.”

the birth of Starlink.”) and the latest in annunciator panels from Luma Technologies to provide clear, crisp LED lighting in the cockpit.

They got FL-3 back in time for a full year of flying in 2024.

How it’s going

“Getting the airplane to the point that it was flyable and we could see the type of utility it had – that helped wash away all the pain of the journey,” said Mickler, adding that since he’d not previously flown a King Air he had no concept of its versatility.

The partners put 450 hours on FL-3 in 2024, flying as far west as Cabo San Lucas, as far north as the northeast Canadian border, as far south as Panama and as far east as the out islands of the Bahamas. An aircraft they had planned to only use throughout Texas proved to be fast and comfortable enough to be flown anywhere in the Northern Hemisphere and most of the time nonstop. Still, its bread-and-butter missions are sub-600 nautical miles.

“I never thought a King Air 350 could take our family, friends and employees to New York nonstop out of Houston in the middle of the summer. Being able to load up 11 people, their luggage and fly 1,200 miles is

great,” Mickler said. “When you realize you essentially own a mini airliner that can take you pretty much coast to coast with one stop or anywhere in Central America nonstop, the world becomes a lot smaller with a 350. As soon as we started stretching her legs and seeing what she could do, we realized this is probably the most badass airplane we’re ever going to own.”

Late in 2024, they took delivery of the Phenom 300 they’d ordered in 2021. It made them appreciate the King Air 350 even more: short runway operation, less penalized by short cycles and wet or contaminated runways, better cabin seating configuration and greater weight flexibility.

“I always tell people if we knew how versatile the 350 was, we might not have ordered a Phenom 300,” Mickler said. “Truthfully, I think we’ve got the best of the light jet world and we’ve got the best of the turboprop world. I love the Phenom 300 but I’m *in love* with the King Air 350.”

Flying with the Phenom’s Garmin G3000 flight deck for four months also made them realize they needed to bring the final chapter of FL-3’s upgrades to life.

“Once we realized the capability of the Garmin integrated systems, we decided the King Air 350’s avionics needed to be upgraded to the G1000 NXi,” Mickler said. “We wanted to upgrade not only for value reasons but for safety and support.”

Stevens Aerospace in Tennessee completed the avionics work in late May, and Mickler said Stevens will continue to be FL-3’s maintenance partner along with local mechanic Roy Hoefar of Trident Aviation Services handling day-to-day needs alongside Million Air Aviation Technical Services.

Managed by American Jet International DBA Million Air Charter and based at William P. Hobby Airport (KHOU), the King Air is flown for the partners’ use an average of four days a week. Mickler is one of four pilots who bounce between their Phenom 300 and King Air 350.

“We gave FL-3 a new breath of life and now she’s flying a lot,” Mickler said. “Everyone loves and adores her, from our employees to our customers to our families. This really did become a love story.” 

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The ninth installment of the King Air Gathering is heading back to Texas Hill Country. Mark your calendars and plan to join the King Air community for training, speakers and camaraderie March 26-29, 2026, at Gillespie County Airport (T82) and the iconic Hangar Hotel in Fredericksburg, Texas.

KAG was held at T82 in 2018 and 2019 and was popular among attendees and companions. Organizers are finalizing plans to bring together owners, operators, pilots, trainers, maintenance providers, FBOs and manufacturers.

Watch for more details from King Air Nation in the coming months. Vendor participation and sponsorship options will be released soon, and registration is set to open in December. **KA**



PHOTO CREDIT: HANGAR HOTEL



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Blackhawk Awaiting Approval for Latest King Air 350 Engine/Prop STC

The Blackhawk Group announced at EAA AirVenture in late July that it has submitted all flight test data to the Federal Aviation Administration and is awaiting supplemental type certificate approval for the integration of Hartzell Propeller's 5-blade composite propeller with Blackhawk's XP67A Engine+ upgrade for King Air 350 aircraft.

The combination provides a 24% increase in available horsepower, according to Blackhawk, which adds that operators can expect improved performance including cruise speeds exceeding 337 knots and climbs to FL350 in fewer than 18 minutes.

Hartzell's 5-blade composite propeller sheds approximately 10 pounds per side of the aircraft compared to standard 4-blade aluminum propellers. A reduced diameter lowers cabin and exterior noise while improving comfort and operational efficiency.

Blackhawk's XP67A Engine+ upgrade replaces the stock Pratt & Whitney Canada PT6A-60A engines with 1,200 SHP PT6A-67A powerplants. The company said the XP67A has been in service for more than eight years and continues to demonstrate reliability and improved performance across a wide range of operating environments, including high and hot conditions.

"This STC approval is a major step forward for King Air 350 operators seeking to elevate the performance of their aircraft without the cost of a new airframe," said Edwin Black, president of Blackhawk's Proprietary Upgrades division. "By combining Hartzell's cutting-edge propeller technology with our proven XP67A engine upgrade, we're offering a next-level solution that maximizes value, performance and long-term ROI."



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Black added: “The Hartzell composite propeller has been tested extensively with over 50,000 flight hours, 20 lightning strike simulations and more than 200 bird strike tests. It boasts unlimited blade life and a proven track record of reliability across global fleets. The result is increased fuel efficiency, reduced maintenance demands and maximized uptime for operators.”

The Hartzell 5-blade propeller/XP67A upgrade pairing is available to new and existing Blackhawk King Air 350 customers.

“We’re proud to launch this game-changing 5-blade carbon fiber propeller STC for Blackhawk-powered King Air 350s,” said JJ Frigge, president of Hartzell Propeller. “It’s the ultimate performance upgrade – lighter, quieter and engineered for maximum thrust and ramp appeal. Operators can now unlock the full potential of their Blackhawk conversion with unmatched efficiency and style.”

Source: blackhawk.aero

Blackhawk Reaches 2,000th PT6A Engine Delivery Milestone

The Blackhawk Group said it has received delivery of its 2,000th Pratt & Whitney Canada PT6A engine since the modification provider’s original founding in 1999.



The PT6A engine has been a cornerstone of general aviation since its inception. With more than 500 million flight hours and tens of thousands of engines in service, the PT6A remains one of the most reliable and trusted turboprop engines in the world. Since 1999, Blackhawk has partnered with operators of Beechcraft King Airs, Cessna Caravans, Piper Cheyennes, Daher TBMs and Pilatus PC-12s to deliver PT6A upgrades.

Blackhawk’s XP Engine+ programs offer a range of PT6A models including the PT6A-52, -61, -67A, -67P, -66D, -135A and -140. The company said these factory-new engines not only enhance aircraft performance but also provide peace of mind with zero-time status, full factory warranties and the latest advancements in PT6A technology, especially when it comes to the XP67A upgrade for the King Air 300/350 series, which Blackhawk said is its most transformative conversion.

“Deciding to do the XP67A Blackhawk conversion on our King Air 300 was the best decision we have made,” said Rob Van Hofwegen, a King Air 300 pilot. “It meets every expectation that was presented to us and has performed in a way that gives us a better safety margin while saving us money year after year. When I go to recurrent and share my stories, everyone’s eyes get big when I describe my rocket ship of a King Air to them. I would highly recommend that anyone considering the Blackhawk conversion do it. You will not regret it!”

Blackhawk, headquartered in Phoenix, Arizona, said its PT6A upgrade programs have helped operators avoid costly overhauls and achieve higher resale values while improving mission readiness and reliability.

“This milestone is more than a number – it’s a reflection of the trust our customers place in us and the strength of our collaboration with Pratt & Whitney Canada,” said Blackhawk CEO Chad Cundiff. “At The Blackhawk Group, we’re driven by a belief that legacy aircraft still have untapped potential. The 2,000th PT6A engine delivery is proof that when you pair the right technology with the right team, performance has no limits.”

Source: blackhawk.aero

Textron Aviation Marks 55 Years of the Wichita Service Center, 45 at its Houston Service Center

Textron Aviation’s network of service centers is marking two major operating milestones this year. The Wichita Service Center at Eisenhower National Airport (KICT) is celebrating 55 years, while the Houston Service Center at William P. Hobby Airport (KHOU) turns 45. Both provide maintenance, interior upgrades and exterior modifications for Beechcraft, Cessna and Hawker customers.

Wichita’s 440,000-square-foot service center is the largest of the company’s 20 service centers around the world and is adjacent to Textron Aviation headquarters.



Textron Aviation’s Wichita Service Center celebrates 55 years in 2025.



Textron Aviation's Houston Service Center marks 45 years of operation in 2025.

When the facility first opened as the Citation Service Center in December 1970, it was 7,500 square feet and capable of holding six Citations at once. Today, the massive facility can accommodate more than 100 aircraft simultaneously. Nearly 600 employees currently work at the Wichita Service Center, including four who have been with the company for more than 40 years.

“When I talk with customers who bring their aircraft to the Wichita Service Center, they say they feel confident coming to the experts who built their aircraft right here in the Air Capital of the World,” Steve Schatzman, general manager of the Wichita Service Center, said in a news release.

The Wichita Service Center provides all scheduled and unscheduled maintenance services, heavy structural work, paint, avionics and interior refurbishments. The facility is considered a key hub for major modifications and upgrades thanks to its highly skilled mechanics and technicians.

The Houston Service Center is a 58,000-square-foot facility that first opened in 1980. Six employees have worked in the facility for nearly 40 years.

With its proximity to the southern border of the U.S., the Houston Service Center employs multiple bilingual service representatives and technicians and is a certified foreign repair station with approval from Mexico and Costa Rica. The center supports more than 20 surrounding airports including two major airports in KHOU and George Bush Intercontinental Airport (KIAH).

“We’re grateful for our dedicated employees who have consistently delivered unparalleled support and to our customers for trusting us with their aviation needs for the last 45 years,” Chad White, general manager of the Houston Service Center, said in a news release.

In addition to its company-owned 20 service centers – including 11 domestic service centers – Textron Aviation’s jet and turboprop customers have access to a global network of more than 300 authorized service facilities. The company also offers a mobile support program featuring more than 50 mobile service units and on-site service technicians and support.

Source: txtav.com/service **KA**



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Teacher's Pet

In 1948, senior management at Beech Aircraft Corporation saw the need for a new military trainer to equip postwar air forces. Their solution was the Model 45 Mentor, which would become one of the most popular Beechcrafts built.

by Edward H. Phillips

When World War II ended with the unconditional surrender of Japan in September 1945, the United States Army Air Forces and the U.S. Navy continued to train cadets in the Boeing-Stearman PT-13 and N2S biplanes, respectively, before progressing to advanced trainers such as the North American AT-6 Texan and SNJ monoplanes.

Although the AT-6 and SNJ were well suited to the task, their thirsty, static, air-cooled radial engines gulped fuel and their airframes were aging fast. In 1948 Walter H. Beech and his engineers realized there was an opportunity to replace the venerable AT-6/SNJ with a modern and cost-effective airplane that could do the work of both a primary and basic trainer.

A series of design studies commenced that year. Fortunately, time and development costs were reduced by using the Model 35 Bonanza airframe as a foundation for the new Beechcraft. The Model 35's airframe and Continental engine had established a record of dependability since the airplane's certification in 1947, and two years later the fourth Model 35 built was flown by William Odom 4,957 miles nonstop from Hickam Field Oahu, Territory of Hawaii, to Teterboro Airport in northern New Jersey in 36 hours, 2 minutes.

Although there is evidence that the design studies did include incorporating a V-tail on the Model 45 Mentor, it was rejected in favor of a conventional vertical stabilizer that was more suitable for a military trainer. Overall, the Model 45's



CREDIT: EDWARD H. PHILLIPS COLLECTION

The U.S. Air Force began flying the T-34A in 1953. Similarity to the Model 35 Bonanza is obvious, however the wing's angle of incidence was slightly different while span remained at 32 feet, 10 inches. All T-34A trainers were powered by a six-cylinder Continental O-470-13 rated at 225 horsepower.



The U.S. Navy began operating the T-34B in 1954 and took delivery of 423 Mentors before production ended in 1957. The only visible difference between the T-34A and T-34B was deletion of the small triangular fillet at the bottom of the rudder. The two variants used the same engine.

dimensions were similar to those of the Bonanza, but the Mentor featured a narrow fuselage and tandem seating for an instructor and student pilot. In addition, a Plexiglas, three-piece sliding canopy covered the cockpit and provided both occupants excellent visibility.

A prototype was completed late in 1948, powered by a Continental E-185 six-cylinder, opposed piston engine rated at 185 horsepower at takeoff and 165 horsepower for cruise. The airframe was designed to withstand 10 positive and -4.5 negative G – more than adequate for instructing pilots in aerobatics and combat maneuvering. Veteran Beechcraft chief test pilot Vern L. Carstens took the prototype aloft for its maiden flight on Dec. 2, 1948. Maximum speed was 176 mph at an altitude of 10,000 feet, with a cruise speed of 160 mph at a gross weight of 2,650 pounds.¹

Development continued through 1949, and a Model 45 was sent on a nationwide tour of military bases in the United States and Canada to demonstrate the Mentor to officials of the U.S. Air Force and the Royal Canadian Air Force. Later, the airplane was shipped across the Atlantic Ocean where Beech demo pilots flew more demonstrations to showcase the Model 45's capabilities to military forces in Western Europe. One of the more interesting demonstrations, however, occurred in 1949 during the National Air Fair held at Chicago's O'Hare International Airport.

On July 4, a Model 45 was flown by two-time women's aerobatic champion Miss Betty Skelton before thousands of spectators. Beech Aircraft Corporation historian William H. McDaniel described it this way: "Proving that brute strength was not required to put the Mentor through a breathtaking array of maneuvers standard in military combat operations, pretty, petite, 100-pound

Betty Skelton – only 22 years old and a two-time women's aerobatic champion – thrilled the cheering crowds. To sober-minded military observers, they were a reminder of the need for continued readiness to maintain air power in being for the defense of the free world – a reminder already accented by the Communist blockade of Berlin."²

Walter Beech believed in the value of public aerial demonstrations, but he was seeking orders from the military and by the end of 1949 he had received none. In the wake of major budget cuts to America's armed forces after World War II, money was scarce and both the U.S. Air Force and Navy were looking for airplanes that would give them "the most bang for the buck."

In March 1950, the Air Force placed an order for three YT-34 Mentors for in-depth evaluation as a primary/basic pilot training airplane. Their projected economy of operation, which was predicted to be significantly less than existing aircraft employed in that role, was a major factor in the decision to test the new Beechcraft.

According to company records, the three airplanes were designated Model A45T by the factory and YT-34BH by the Air Force. As part of the evaluation, two of the three airplanes were powered by Continental E-185-8 engines rated at 185 horsepower, while the third airplane was equipped with a Continental E-225-8 powerplant that produced 225 horsepower for takeoff.

All three Mentors were tested thoroughly not only by experienced pilots, but also by pilot instructors and their students as part of the daily training routine. During the testing period, the trio of YT-34BH accumulated more than 400 hours of flight time in only 32 days. That feat was followed by a function and reliability check that lasted nearly 24 hours and involved seven landings with

In 1972, company engineers redesigned the T-34B to accept a Pratt & Whitney Canada PT6A-25 turboprop engine at the behest of the Navy. Rated at 400 shaft horsepower, the engine breathed new life into the aging Mentor airframe.



rapid turnarounds to refuel and change pilots. These flights were conducted at the remote site of Edwards Air Force Base, California.³

One other feat that was unintentional but did much to convince Air Force officials of the Beechcraft's battleship construction: It was reported that during one of the evaluation flights a pilot accidentally struck a cable while flying at more than 180 mph. The cable, stretched across the wide span of a canyon, did not break but nearly stopped the Mentor's forward motion before spinning it around. With less than 400 feet of altitude to work with, the pilot managed to regain airspeed and control and flew back to the base. Upon inspection, only the right wing surfaces and leading edge suffered damage and bore the imprint of the cable.

Satisfied with every aspect of the rough-and-ready Model 45, in 1953 the Air Force ordered a small number of Mentors designated T-34A (company designation A45). The first two Mentors were delivered in September of that year, followed by another 88 trainers in 1954. All of these airplanes were powered by the Continental O-470-13 engine rated at 225 horsepower. Performance included a maximum speed of 189 mph and a cruise speed of 175 mph at a gross weight of 2,950 pounds. Service ceiling was 20,000 feet. When production ended in October 1956, the factory had delivered 353 airplanes.⁴

The Royal Canadian Air Force also wanted the T-34A, and in 1954 the Canadian Car & Foundry Company, Ltd, Fort William, Ontario, obtained a license from Beech Aircraft Corporation to build the Mentor. The Canadian company built 25 airplanes for the RCAF and eventually another 100 for the U.S. Air Force, bringing total production of the T-34A to 453 airplanes.

Meanwhile, the U.S. Navy had been giving serious consideration to modernizing its aging fleet of primary trainers. The Navy Bureau of Aeronautics conducted a series of very tough evaluations at Naval Air Station Pensacola, Florida. Beech Aircraft provided the Navy with one of the earliest Mentors built, but it easily held its own against competing aircraft. Despite its age, the airplane was praised by Navy pilots for its rugged construction, and particularly its nearly indestructible landing gear. During testing that lasted from September until December 1953, the airplane was subjected to abuse at the hands of pilots learning how to land on the deck of an aircraft carrier. Unlike the Air Force that had long runways to land on gently, the Navy taught its aviators to slam the airplane down on the deck to catch the arresting cable and trap the airplane. Although the landings washed out the gear of some competing aircraft, the Mentor's tricycle landing gear never failed under those severe conditions.

In the summer of 1954, the Navy announced that the Model 45 (company designation D45) had won the competition and would become the Naval Air Training Command's primary trainer. Initial deliveries began in December. There were only a few distinctions between production Mentors for the Air Force and Mentors for the Navy. These included:

- A small, triangular fillet at the bottom of the rudder was deleted.
- Provision was made for differential braking that allowed nose wheel steering for maneuvering on the ground (the T-43A featured a steerable nose wheel using the rudder pedals, much like that of the commercial Model 35).

- Rudder pedals were adjustable instead of adjusting the seat.
- Wing dihedral was increased slightly.
- The overall exterior paint scheme used a highly visible, bright yellow color that Navy officials believed would make the airplanes more visible in the air and around the training airfields.

Production of the T-34B began in October 1954, and continued unabated until October 1957, when the last 12 airplanes were delivered. During those three years a total of 423 Mentors rolled off the assembly lines. In 1954-1955, 45 were delivered, followed by 219 in 1955-1956, 147 in 1956-1957 and 12 in 1957-1958.

Performance was almost identical to that of the T34A, with a maximum speed of 188 mph at a gross weight of 2,985 pounds (empty weight was 2,170 pounds). Maximum diving airspeed was 280 mph. All T-34B were powered by six-cylinder, air-cooled, opposed Continental O-470-13 engines that developed 225 horsepower for takeoff, and were fitted with Beech-built two-blade, constant-speed propellers that helped the Mentor achieve a respectable rate of climb at sea level of 1,280 feet per minute.

During a 10-year period spanning 1948-1958, Beechcraft employees eventually built 1,904 examples of the Model 45.⁵

Much to the Navy's delight, the T-34B's record as a primary trainer allowed the service to reduce the number of flying hours to 36 from 74 because students learned more quickly in the Beechcraft than in the SNJ with its conventional landing gear configuration. The Mentor also slashed the time required to solo by more than 50%, and the overall accident rate decreased as well compared with the SNJ. In short, the T-34B taught fledgling naval aviators better and more quickly while drastically reducing operating costs.

It is interesting to note that in 1961 the Navy reported that since flight operations began in 1956 at Pensacola, more than 9,000 naval aviators had been trained in the T-34B. These airplanes had flown more than 445,000 hours and boasted a safety record five times better than their predecessors. Navy training squadron VT-1, operating from Saufley Field in Pensacola, reported a record 75,000 consecutive accident-free flying hours surpassed only by VT-3's 80,000-hour record.

One T-34B, the 39th to roll off the Wichita assembly line, earned a gold seal of approval from Naval Air

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Aerobatic pilot Julie Clark wowed crowds in her T-34A for many years before retiring from the airshow circuit in 2019. She purchased the airplane surplus from the U.S. Air Force in 1976 for \$18,000 and completed an in-depth restoration in 1981.

Training Command after completing more than 5,000 hours and traveling 700,000 miles in the air. More than 100 Navy and Marine Corps pilots had been trained in the aircraft, which records showed had made 16,459 landings, 4,604 loops, 3,401 spins and 17,904 stalls while being refueled 3,325 times.⁶

During the early 1960s, the U.S. Air Force began phasing out its fleet of T-34A trainers in favor of jet-powered basic training aircraft. A competition was won by Cessna Aircraft Company's twin-jet T-37 that featured side-by-side seating for the instructor pilot and the student. In the mid-1950s, Beech Aircraft Corporation did build its own version of a jet trainer designated as the Model 73. It was powered by a single turbojet engine and its airframe borrowed heavily from the Model 45. Although the airplane flew well and made many demonstration flights, it failed to win any orders from military forces.

As for the Navy's fleet of Mentors, they soldiered on faithfully for more than 35 years until 1975 when deliveries began of the much improved T-34C. In 1973, the Navy awarded Beech Aircraft a contract to develop a turboprop version of the T-34B, and the first of two YT-34C prototypes flew in 1974. Beech engineers modified the T-34B airframe to accept a Pratt & Whitney Canada PT6A-25 turboprop engine rated at 400 shaft horsepower.

The engine and other systems upgrades would extend the life of the venerable Mentor for another 25 years until being replaced by the Beechcraft T-6A Texan II – another PT6A-powered airplane that is currently serving both the U.S. Air Force and Navy as a basic trainer. The Navy accepted 18 T-34C trainers in 1975, to be followed during the next seven years by more than 330 airplanes. A final batch of 19 trainers were delivered in 1989.

The T-34C had a maximum speed of 246 mph and possessed a service ceiling of more than 30,000 feet. It featured a wingspan of 33 feet, 4 inches and a fuselage length of 28 feet, 8.5 inches. In addition to the U.S. Air Force and Navy, the U.S. Army took delivery of six T-34C trainers in 1987 from Navy inventory. Three aircraft replaced aging North American T-28 Trojan with their static, air-cooled radial engines that had been flown by the Army Aviation Engineering Flight Activity based at Edwards AFB, California. Another three were operated by the Army Airborne Special Operations Test Board located at Fort Bragg, North Carolina.⁷

The factory also built an export version of the T-34C known as the T-34C-1, powered by a 550-shp PT6A engine. It was intended primarily as a basic trainer but could be equipped to operate as a light attack aircraft. The chief modification centered on four hard points under the wings that could accommodate up to 1,200

pounds of ordnance. In the late 1970s, the Ecuadorian Air Force took delivery of 14 airplanes, and Peru, Morocco, Argentina and Indonesia also ordered the T-34C-1.

Commercial and export versions of the Mentor received the company designation Model B45. According to factory records, 85 were delivered in 1953-1954, 47 in 1954-1955 and 21 in 1955-1956. Another 45 were delivered in 1956-1957 followed by 29 in 1957-1958 and 91 in 1958-1959 when production was terminated.

In 1953, Chile ordered more than \$1 million worth of T-34A trainers after the Beechcraft proved superior to American, British and French competitors. Chile eventually operated a fleet of 65 Mentors. Japan soon followed by obtaining a license for Fuji Heavy Industries to build the T-34A, and 137 aircraft were completed. Other armed forces that flew the T-34A include the Mexican navy and the Venezuelan air force.

The first sale of Mentors for civilian use occurred in 1958 when the International Training center for Civil Aviation in Mexico bought four airplanes to train pilots.

The exact number of Beechcraft Mentors being flown by civilian pilots worldwide is unknown, but a reasonable

estimate is 100-150. The airplane is prized by sport pilots for its robust airframe and aerobatic capabilities, and some airplanes have been painted in U.S. Air Force and Navy color schemes that replicate the Mentor in service as a warbird. 

Edward H. Phillips, now retired and living in the South, has researched and written eight books on the unique and rich aviation history that belongs to Wichita, Kansas.

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