

King Air

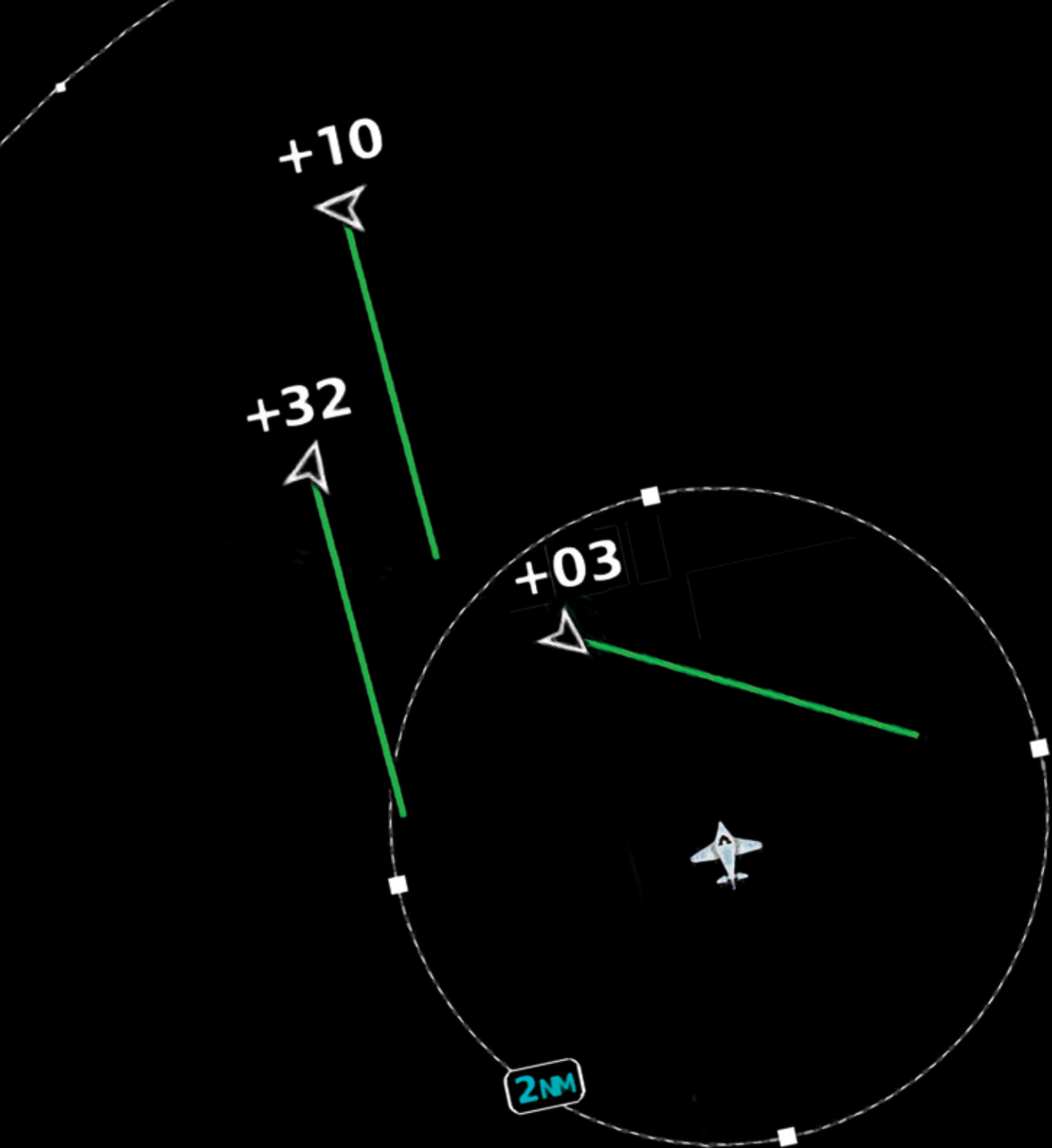
A MAGAZINE FOR THE OWNER/PILOT OF KING AIR AIRCRAFT

SEPTEMBER 2018 • VOLUME 12, NUMBER 9 • \$6.50



Conversation Starter

Eye-catching B200GT shares critical message



MORE TO SEE. BECAUSE THERE'S PLENTY TO AVOID.

G1000® NXi meets the requirements for ADS-B "Out" and displays cutting-edge ADS-B "In," including animated subscription-free NEXRAD radar and TargetTrend™ relative-motion traffic, which offers better situational awareness of traffic and how it might affect you. Garmin G1000 NXi for King Air. How will you use it next? Learn more at Garmin.com/G1000NXi.


GARMIN.



EDITOR

Kim Blonigen

EDITORIAL OFFICE

2779 Aero Park Dr.,
Traverse City MI 49686
Phone: (316) 652-9495
E-mail: editor@blonigen.net

PUBLISHERS

J. Scott Lizenby
Dave Moore
Village Publications

GRAPHIC DESIGN

Luana Dueweke / Rachel Wood

PRODUCTION MANAGER

Mike Revard

PUBLICATIONS DIRECTOR

Jason Smith

ADVERTISING DIRECTOR

John Shoemaker
King Air Magazine
2779 Aero Park Drive
Traverse City, MI 49686
Phone: 1-800-773-7798
Fax: (231) 946-9588
E-mail: johns@villagepress.com

ADVERTISING EXECUTIVE ASSISTANT

Betsy Beaudoin
Phone: 1-800-773-7798
E-mail: betsybeaudoin@villagepress.com

SUBSCRIBER SERVICES

Rhonda Kelly, Mgr.
Kelly Adamson
Molly Costilow
Diane Smith
Jamie Wilson
P.O. Box 1810
Traverse City, MI 49685
1-800-447-7367

ONLINE ADDRESS

www.kingairmagazine.com

SUBSCRIPTIONS

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.

COVER PHOTO

Photo courtesy of
Elliott Aviation

Contents

2

Purpose Reflected – Paint Scheme Mirrors Nonprofit's Aim to Raise HIV Awareness

by MeLinda Schnyder

8

Aviation Issues – SAFO, FAA Bill Update and Runway Closures

by Kim Blonigen

10

Ask the Expert – “War Stories” Part 3

by Tom Clements

18

“The Last Staggerwing”

by Edward H. Phillips

27

Value Added

29

Technically...

32

Correspondence

32

Advertiser Index



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 2018, Village Publications.

ADVERTISING: Advertising in King Air does not necessarily imply endorsement. Queries, questions, and requests for media kits should be directed to the Advertising Director, King Air, P.O. Box 1810, Traverse City, Michigan 49685. Telephone 1-800-773-7798.

MANUSCRIPTS: King Air assumes no responsibility for unsolicited manuscripts, photographs, or art work. While unsolicited submissions are welcome, it is best to query first and ask for our Writer's Guidelines. All unassigned submissions must be accompanied by return postage. Address queries and requests for Writer's Guidelines to the editor.

PURPOSE REFLECT

Paint scheme mirrors nonprofit's aim to raise HIV awareness

by MeLinda Schnyder



Explaining the design on their King Air's exterior allows CAN Community Health to inform people of its mission to eliminate the spread of the HIV virus; operating the B200GT allows CAN to fulfill that mission. (Courtesy Elliott Aviation)

Air traffic controllers, FBO personnel, fellow pilots and passengers have all commented about the striking paint scheme on the 2008 Beechcraft King Air B200GT owned and operated by CAN Community Health, Inc.

Getting people to notice the aircraft is exactly what the organization's leaders wanted when they shunned traditional stripes for a bold design using their brand colors of red, black and white.

"It makes people ask us about it and why we painted it that way, and then the conversation happens," said Richard E. Carlisle, president and CEO of CAN Community Health, based in Sarasota, Florida. CAN is a private, not-for-profit organization that provides a full range of services for people living with sexually transmitted diseases that include HIV, hepatitis C and all forms of STDs.

TESTED



Nobody wants to talk about HIV, he said, but it needs to be talked about because preventing exposure, being tested and seeking treatment after a positive test are keys to eliminating the spread of the virus.

“You don’t hear as much about HIV lately but the spread of the virus is actually at an all-time high,” Carlisle said. “We want people to understand this is a significant problem and that everybody needs to be careful and know their status in order to eliminate the spread of HIV.”

The deep red in the paint scheme represents a person feeling overwhelmed by news that they have tested

positive for HIV. Jagged, uneven lines represent the difficult transition a person has from the devastation of finding out they are HIV-positive to the realization that with treatment they can live a normal life, illustrated by the white paint. The black splotches symbolize the difficult times when a patient is going through treatment to get their viral load under control.

Explaining the design on the King Air’s exterior allows CAN to inform people of its mission; operating the King Air allows CAN to fulfill that mission.

CAN’s mission

CAN started in 1991, coincidentally the same year that professional basketball player Magic Johnson publicly announced he had tested positive for the HIV virus and helped dispel the stereotype that the risk of infection was limited to homosexuals and drug addicts.

While much progress has been made in preventing and treating HIV since the height of the epidemic (it was first listed as a cause of death in 1987), HIV and AIDS remain a serious health problem for the United States and countries around the world. The Centers for Disease Control and Prevention estimate that 1.1 million people in the United States were living with HIV at the end of 2015, the most recent year this data is available. Worldwide, prevalence is estimated at about 36.7 million people.

“AIDS is the stage of HIV everyone hears about and it is the final stage,” Carlisle explained. “You don’t hear about it as much anymore because not as many people reach that stage thanks to medications now available. We’re able to save people’s lives today, where as before contracting HIV was close to a death sentence.

In the United States, the stigma of the disease and a lack of resources are among the obstacles to people getting tested and then getting treatment with a positive test for the virus,” he said.

“In a lot of places, particularly in the southeast, HIV services are generally only offered through one or two private infectious disease physicians or at the health department,” Carlisle said. “The private physicians have a full workload and can’t take on more patients and if you drive by these health departments, you’ll see 20 to 30 people waiting to get in. If they don’t get in that day, then they start over the next day.”

CAN owns and operates clinics that offer medical, dental, psychological and lifestyle counseling to patients regardless of their ability to pay. They provide HIV specialty care by board-certified infectious disease trained physicians. CAN partners with a local agency that is often already providing non-clinical services, such as prevention counseling, testing and case management.

“We go into a Columbia, South Carolina; a Jackson, Mississippi, or a Columbus, Georgia, and we look for



The paint job, completed by Elliott Aviation in Moline, Illinois, on the CAN Community Health King Air is designed to mirror the experiences of a person who tests positive for HIV. The organization wants it to be a conversation starter for a difficult but necessary conversation about the risk of HIV/AIDS.

(Courtesy Elliott Aviation)

a partner that is already working in that space but doesn't provide clinical services." Carlisle said. "They already know the community and the patients. Through a partnership, we bring in the clinical services. We try to create a one-stop shop so when the patient comes through the door, all the services they need can be provided in that one location."

States reporting the highest rates of people living with HIV are predominantly in the South and the Northeast. The Centers for Disease Control and Prevention also reports that southern states generally are behind other regions in knowledge of HIV status and the health of people with HIV. CAN targets hotspots mostly in the South and along the Eastern Seaboard where HIV prevalence is high and a lack of services is hindering people from getting adequate care.

"Everywhere we go to set up a clinic, we know that about half the

people who have been diagnosed with HIV do not seek out treatment," Carlisle said. "More than any other chronic illness, people with HIV don't want anyone to know they have it. There's shame involved from friends, co-workers and even family. It's very sad because those are the people who still die from AIDS. If we can get people into treatment and get their viral load under a detectable level, they won't spread the virus. Our main goal is eliminating the spread of the virus."

Since Carlisle became CEO in April 2015, CAN has grown from 34 employees at 10 clinic locations to 235 employees at 31 locations. Another 12 locations are in some form of development, including two in Puerto Rico and one as far north as Virginia and New Jersey.

"Partnerships in Morristown, New Jersey, or in Norfolk, Virginia, would not be on my radar if we didn't have this plane," Carlisle said of the King Air B200GT. "We have too much

to do and it takes too much time to set up a new location that far away from our base in Sarasota. We can't afford the cost of flying commercially or all the downtime for people to wait in airports with layovers and delays. This airplane makes all the difference."

'Our most expensive tool'

"For a not-for-profit to own a King Air, some people might look at it and think that it is a waste of money," Carlisle said. "It's the complete opposite, it's such a savings for us. Geographically we are covering about a third of the country now and there is no way we could do that efficiently with commercial airlines. It's our most expensive tool in our toolbox, but the King Air is the perfect tool for us."

Carlisle worked with Matt Jensen, a 42-year-old lifelong pilot who is a licensed general contractor with a background in commercial



CAN Community Health is a private, not-for-profit organization that operates 31 clinics in the southeast U.S. They provide a full range of services for people living with sexually transmitted diseases that include HIV, hepatitis C and all other forms of STDs.

(Courtesy CAN Community Health)

construction, to establish a logistics office for CAN. As director of logistics, Jensen is involved with real estate development and construction for the organization, while also coordinating CAN's transportation assets.

The two put together a feasibility study that CAN's board of directors unanimously approved. They started with a 2003 Beechcraft Bonanza A36 in 2016, flying three to five days a week to visit clinics throughout Florida.

"The organization didn't have any experience with having an aviation department so we wanted to prove the concept to the board and everyone involved in the company," Carlisle said.

The proof of concept worked well: employees from all levels of the organization flew on the Bonanza and CAN realized cost and time savings. The company was ready to expand its range with a larger airplane and looked for a twin-engine they could fill with people and fuel.

JACKSON
JETCENTER
AVIONICS | MAINTENANCE | PARTS

CHOOSE A PARTNERSHIP
BUILT ON TRUST.

*Rockwell
Collins*



JACKSON JET CENTER is proud to offer Next Gen avionics solutions and upgrades for the **Rockwell Collins** Pro Line 21 avionics suite. Modernization packages meet all ADS-B In & Out FAA mandates and expand your Pro Line 21 capabilities to add LPV, RF, ADS-B, and Synthetic Vision.

CALL NOW - Cooper Kalisek - 208.991.7294

JACKSONJETCENTER.COM • 3815 Rickenbacker St. • Boise, ID 83705



CAN Community Health purchased this 2008 King Air B200GT in March of this year and while getting a gross weight increase and new paint job, the organization decided to have Elliott Aviation overhaul the interior. The remodel included a seat design change; installing new veneer, carpet and plating; and adding LED lighting, USB ports and the new King Air 350i style headliner. (Courtesy Elliott Aviation)

In March 2018, CAN purchased the 2008 Beechcraft King Air B200GT.

“We knew before we bought the airplane that we wanted to improve its utility by adding a gross weight increase,” said Jensen, who earned his type rating – necessary because of the GWI – at Flyright, Inc. in Concord, North Carolina. “From what we heard, we could wait as long as a year to get the parts from Beechcraft to convert a plane so we looked for a King Air that already had high float gear. We found an airplane with about

What you need to know about HIV/AIDS

HIV stands for human immunodeficiency virus. It weakens a person’s immune system by destroying important cells that fight disease and infection. It is the virus that can lead to AIDS – acquired immunodeficiency syndrome – if not treated. Unlike some other viruses, the human body can’t get rid of HIV completely, even with treatment. So once you get HIV, you have it for life. While no effective cure exists for HIV, it can be controlled with proper medical care.

You can get or transmit HIV only through specific activities. Most commonly, people get or transmit HIV through sexual behaviors and needle or syringe use.

Everyone between the ages of 13 and 64 should get tested for HIV at least once. If your behavior puts you at risk after you are tested, you should think about being tested again.

Source: Centers for Disease Control and Prevention



CAN Community Health’s Rick Carlisle, president and CEO (right), and Matt Jensen, director of logistics, worked together to establish CAN’s logistics office. Jensen flies the King Air 35 to 45 hours a month. (Courtesy CAN Community Health)

1,900 hours on the airframe that had just gone through phase 1-4 at the company service center in Tampa.”

Jensen coordinates the King Air’s maintenance, using Aircraft Engineering, Inc. in Bartow, Florida, and Textron Aviation’s Tampa Service Center. This summer they contracted Elliott Aviation in Moline, Illinois, for what started as an avionics upgrade to Garmin G1000 NXi and installation of the CenTex Halo 275 STC kit to convert maximum takeoff weight to 14,000 pounds.

CAN expanded the work into a comprehensive revamp to optimize the downtime while still having the Bonanza in the fleet to rely on for the three months the King Air was unavailable.

“We completely refurbished the airplane aesthetically, we did performance enhancements and as they had the plane apart we fixed everything down to if a nut or bolt wasn’t right,” Jensen said.

The exterior paint is topped with a ceramic coating that Jensen said has almost eliminated sooting issues and reduced cleanup time incredibly. Additionally, Elliott mounted LoPresti Boom Beam lights and completed the Raisbeck EPIC Platinum performance package by installing swept props, enhanced leading edges, ram air recovery system, wing lockers and high flotation gear doors.

“Ours is a B200GT that has the -52 engines on it, which perform really well, and we are seeing true airspeed increases of 12 to 15 knots since the installation of the performance enhancements,” Jensen said.

Elliott also refreshed the aircraft’s interior with a seat design change; installing new veneer, carpet and

Elliott Aviation of Moline, Illinois, installed Raisbeck's performance enhancements on CAN's King Air B200GT, including swept props, enhanced leading edges and wing lockers, and also added the CenTex Halo 275 STC kit. (Courtesy Elliott Aviation)



plating; and adding LED lighting, USB ports and the new King Air 350i style headliner.

In the first month since having the airplane back in operation, feedback has been tremendous.

"We've had control towers tell us it's the best paint scheme they've ever seen on a plane," Carlisle said. Added Jensen, "Every FBO that we've flown into has commented on the paint."

It was a productive month, too. Six members of the executive team flew 3.5 hours in the King Air to meet with potential partners for the New Jersey clinic and sealed the deal while there.

Waves of CAN employees at all levels and departments (IT, compliance, risk management, patient care) will travel to the site during implementation and opening of the clinic.



CAN Community Health upgraded to the Garmin G1000 NXi avionics suite in its 2008 King Air B200GT. (Courtesy Elliott Aviation)

"There is a lot of activity around opening a clinic and if you had to fly commercial for all of that, it would take twice as long and be twice as expensive," Carlisle said.

The aircraft is also used to visit existing clinics and at least 60 different employees have flown on it. Jensen flies the King Air 35 to 45 hours a month. A typical mission

is 2.5 hours flight time with three to six passengers, though CAN regularly carries full fuel and nine on board.

"It's an amazing airplane and has quickly become one of my favorite airplanes I've ever flown," he said. "It'll do whatever you want it to do and it'll do it with a lot of class." **KA**

SAFO, FAA Bill Update and Runway Closures

by Kim Blonigen

SAFO Issued on Work Conducted by AeroBearings Includes PT6 Engines

The Federal Aviation Administration (FAA) issued a Safety Alert for Operators (SAFO) advising of improper maintenance provided by AeroBearings of Arlington, Texas, by conducting work without the necessary approved data. The company therefore could not determine whether the bearings met the OEM's design specifications.

AeroBearings' previously held a certificate which covered aeronautical anti-friction bearings used in turbine engines, auxiliary power units (APU), rotorcraft drive systems and accessory applications. The company's capability list (<https://www.faa.gov/aircraft/repair/2>) includes Pratt & Whitney Canada PT6 engines.

Recommended action per the SAFO is to "inspect aircraft records, engine records, APU records, accessory records, FAA Form 8130-3 airworthiness approval tags, and aircraft part inventories for any bearings approved for return to service by AeroBearings LLC ... Any bearing found to be overhauled, repaired, or inspected by AeroBearings LLC that is not installed should be quarantined until the suspect bearing undergoes a recertification inspection to determine airworthiness prior to installation."

For bearings currently installed, the SAFO recommends that "owners/operators have the suspect bearings inspected at the next piece parts exposure and ... also closely monitor the suspect bearings' health using the OEM's recommendations or other approved maintenance program methods."

General questions or comments regarding this SAFO should be directed to the Aircraft Maintenance Division's Repair Station Branch at (202) 267-1675.

FAA Reauthorization Bill Update

With Congress back in session the week of Aug. 13, a letter signed by 33 general aviation (GA) organizations was sent to Senate leaders requesting they "move expeditiously to consider legislation for a long-term reauthorization of the Federal Aviation Administration (FAA)."

The House already passed its version of a long-term bill (April 27) lasting five years, which is why the GA organizations want the Senate to approve a bill soon so there is time for the House and Senate to reach a final

GET Your Airplane Built Into an Executive Desktop Model

ORDER EASILY
866.580.8727
 direct +1.602.633.4646

FACTORYDIRECTMODELS.COM

OFFICIAL BEECHCRAFT SUPPLIER

FDM

Beechcraft King Air 350

agreement by Sept. 30, when the current bill expires. The letter stated, "The FAA and the traveling public have been subjected to short-term extensions of the FAA's authority since 2015, and these stopgap measures have negatively impacted the FAA's activities." ... "The FAA is foundational to the incredible safety record of aviation in the United States, making critical airport and air traffic investments in communities across this country and enabling innovation and the integration of new technology into the aviation system. The FAA's success and that of the aviation system will be significantly enhanced by progress and passage of a long-term FAA reauthorization bill."

As of press time, there had been no updates published on the status of the bill in the Senate.

Runway Closures/Temporary Changes at High Traffic Airports

At Seattle-Tacoma International Airport (SEA), a runway construction project has closed Runway 16L/34R, with a reopening planned for Friday, Nov. 23, 2018. (This date could change due to unforeseen changes in the schedule.)

The operational plan during the closure is to utilize Runway 16R/34L for arrivals only, with Runway 16C/34C

to be used as the primary departure runway. The arrival rates will be adjusted at the airport to accommodate the operational needs of the scheduled demand by raising the arrival rate during peak arrival times and lowering the rate during peak departure times.

The rates will be more favorable on a south configuration in VFR conditions, and least favorable when IFR on a north flow. Delays can be expected during IFR conditions with airborne delays of up to 15-30 minutes. Ground delay programs for arrivals can also be expected during days with IFR weather conditions with delays exceeding 60 minutes during peak arrival times.

Due to the availability of only a single departure runway, departure delays of up to 30 minutes should be anticipated during the peak departure periods.

Also, Georgia's Dekalb-Peachtree Airport (PDK) is undergoing EMAS (Engineered Material Arresting System) installation for Runway 21L. The task has been broken down in phases and will result in shortened runway lengths for Runway 21L/3R.

The entire project is scheduled to last through December 2018. Aircraft operators should check airport NOTAMs before operation to confirm runway distances available during the work, as schedules could change due to weather. **KA**



INITIAL & RECURRENT TRAINING

www.kingairacademy.com Located in Sunny Arizona (KDVT)



RESOURCES

Visit Our Website for:

- Articles by Tom Clements
- King Air Training Videos
- What Other Pilots Are Saying

TAILORED

- Personalized Instruction
- Your Schedule - Not Ours
- Model & Serial Number Specific
- In-Aircraft Training (your King Air or ours)

Call or Email Us Today
602-551-8100
info@kingairacademy.com



“War Stories” – PART 3

by Tom Clements



I am continuing more of my personal King Air “War Stories” for this month’s article.

Fuel Transfer and Crossfeed

It is exceedingly common for all of us to incorrectly use “Fuel Transfer” and “Fuel Crossfeed” interchangeably. However, the words actually refer to very different things. Correctly, *Transfer* should always refer to the movement of fuel from the King Air’s Auxiliary tank on one side into the Main tank on that same side whereas *Crossfeed* should refer to fuel going from one side’s Main tank to the opposite engine. We use Transfer on almost all of our flights in 90-series airplanes, except on shorter hops in the E90 and F90-series. We also use Transfer on the E90, F90, A100, B100, 200- and 300-series for longer flights. Crossfeed is hardly ever used, unless we

are faced with a single-engine situation on the way to or from Europe, where no landing fields are nearby.

Here’s the point: The only way to know that Transfer and Crossfeed are actually working as they should is to periodically monitor the fuel quantity gauges. Let’s imagine that we got distracted in operating our 90, A90, B90, or C90 and simply forgot to turn on our Transfer Pump switches, left and right, after starting. We would of course get a “No Transfer” annunciator eventually to remind us to activate the pumps, right? Wrong!

Those annunciator lights only are enabled when the Transfer Pump switches are in the On position ... or in the top, Auto, position for the later C90A and after models. Leave the pump switches off and you will never get a warning of your error!

In the E90, A100 and B100 models, if we forget to turn on the Aux Transfer switches, the “Aux Empty” lights on the fuel panel will never illuminate. It is easy to overlook the fact that as much as about 600 pounds of Aux fuel, 300 per side, is now useless. Do you realize that if the Main tanks go completely empty that the remaining Aux fuel becomes unusable even if we *then* turn on the Aux Transfer switches? That is because there will be no motive fuel flow from the Main tank to the Jet Transfer Pump on that side to initiate the transfer.

Thank goodness Beech automated the fuel transfer system on the 200- and 300-series, right? Since the opening of the motive flow valve to the jet pump is now automated and we no longer need to move a switch, it’s fool-proof, right? No, it isn’t. You see, if a shop rag fell into the Aux Tank filler and got sucked into the jet pump’s pickup port so as to block it, the system would never illuminate the No Transfer light – on the fuel panel on the 200-series and

APEX AVIATION

Looking for Lou?
Let our Factory Trained Experts at APEX AVIATION give your King Air the care it deserves.

LOU TAYLOR
King Air Expert

Maintenance Services
AOG Apex “Go-Team” Available
Aircraft MX Management
Hot Section Inspections
Preventive Maintenance & Inspections
Pre-Purchase Evaluations
Aircraft Detailing

Avionic Services
ADS-B Upgrades
Avionics Installations
Repair and Overhaul
VFR/IFR/RVSM Certifications
Instrument Exchange
Instrument Repair and Installation



www.apexaviationlv.com

Henderson Executive Airport (KHND)
1410 Jet Stream Drive
Suite 100
Henderson, NV 89052
(702) 735.2739

North Las Vegas Airport (KVGT)
2634 Airport Drive
Suite 106
North Las Vegas, NV 89032
(702) 636.6555

MAKE YOUR NEXT FLIGHT EPIC

Transform your King Air's takeoff distance, climb, speed
and range with Raisbeck's EPIC Performance Package
for the King Air 200 Series and 90 Series



Raisbeck EPIC Packages take advantage of the benefits provided by each individual Raisbeck system, combining them into a certified package to enhance your aircraft's performance—not to mention a smoother ride for your passengers. It's the best investment you can make for your King Air.

(800) 537-7277 | sales@raisbeck.com | www.raisbeck.com



on the Caution Annunciator panel on the 300-series – because the pressure switch would still feel proper pressure in the jet pump’s discharge line even though the pressure there would come only from the motivating fuel flow with no Aux fuel being moved.

So, friends, here’s the takeaway: You **MUST** regularly examine both positions of your fuel quantity gauges – Total and Nacelle in the C90-type systems; Main and Aux in the 200-type system – to verify that the Aux Fuel level is properly decreasing. If you’re not doing this at least once every 30 minutes, please change your habit pattern!

As for Crossfeed, it is similar but not exactly the same. In the C90-style (and straight 100-style) of fuel system, the absence of the Fuel Pressure annunciator on the *Receiving side*, the side we are sending the fuel to, after we have turned off its own Boost Pump is a good verification that the Crossfeed valve has truly opened and that the feeding side’s Boost Pump is still functioning normally, supplying fuel pressure and fuel flow to the receiving side. The 90, A90, and B90 have actual boost pump Fuel Pressure gauges which easily indicate if the feeding side’s fuel is coming across.

Not so, however, on all models with an engine-driven boost pump: E90, F90-series, A100, B100, 200- and 300-series. Now, the receiving side’s Fuel Pressure

annunciator will be extinguished due to the pressure coming from this side’s boost pump, regardless of whether the fuel that is creating that pressure has come out of the opposite nacelle tank – as it should be doing during Crossfeed – or has come, incorrectly, out of its own side’s nacelle tank due to a Crossfeed valve that failed to energize open or the feeding side’s Standby Pump not working. Remember that in all models except the 350, the Crossfeed annunciator only indicates that the normally-closed Crossfeed valve is receiving voltage, not that the valve has truly gone to the open position.

To emphasize the main point again: You must periodically observe the fuel quantity gauges on both sides to know with certainty whether your fuel Transfer and Crossfeed systems are functioning as you expect.

Now for the war stories: I found a model 200 once that was mis-wired such that the Crossfeed switch activated the incorrect Standby pump. When you wanted to send fuel left-to-right, it was going right-to-left. A 350 model I was in, one with less than 150 hours since new, was found to have its fuel quantity gauges wired “backward.” The left gauge read the right side and the right gauge the left. Geez!

Before I leave this topic, let me remind you of a “gotcha” that, I think, helped cause a brand-new C90GTi to

sink in the Caribbean on its delivery flight to South America from the Wichita factory in 2012. Although the crew thought that they had given a request to fill all fuel tanks during their overnight stop in Florida, the FBO fueled only the Nacelle filler caps, thinking that this was the fuel order that was requested. How could the crew not have noticed that their quantity was low before takeoff?

This pilot was experienced in King Air 200s but was new to the C90-series. I speculate that he misread the fuel gauges. Instead of the “Total” and “Nacelle” readings he was actually seeing with the quantity selector switch Up or Down, I think he was expecting to see what he was used to seeing from his 200 experience: Up for “Main” and Down for “Aux.” Let’s see: 1,000 pounds in each side’s Main and 300 in each Aux...yes, that’s full fuel, about 1,300 pounds per side. But no, the total quantity was the 1,000 pounds per side that he was reading, comprised of 300 in the Nacelle and 700 in the Main. Not quite enough to make Aruba from Ft. Lauderdale.

DISCOVER THE DIFFERENCE, DISCOVER THE NEW RTC



RTC
An ASSE Company

KING AIR SIMULATOR
BASED TRAINING

WWW.RTCPILOT.COM/KINGAIRMAG

**INITIAL TRAINING
RECURRENT TRAINING**

**KING AIR 90
KING AIR 200
KING AIR PRO PILOT
200/90 TRANSITION**

833-471-2725

Aeronautical Systems Engineering, Inc. All Rights Reserved

AVCON
INDUSTRIES, INC.

**Creative Answers To
Unique Requirements**

- Camera & Scanner Provisions
- Radomes, Hard Points & Special Mission Mods
- Cargo Doors & Freighter Conversions
- ISR
- Raisbeck Engineering Dealer



Newton City-County Airport
714 North Oliver, Hangar-M
P.O. Box 748
Newton, Kansas 67114
USA

(877) 88-AVCON (Toll Free)
(316) 294-2642 Phone
(316) 294-2644 Fax
sales@avconindustries.com
www.avconindustries.com
FAA CRS #B92R922N

Butler National Corporation

The E90 We Wouldn't Shut Down

Back in the early 1980s, a recurrent training customer of mine operated an E90 model for a lettuce grower with holdings in the Central and Imperial Valleys of California as well as near Hermosillo, Mexico. I had trained this pilot previously and knew him to be a competent professional. After our ground school sessions, the airplane's owner had a lengthy trip scheduled for the next day. I agreed to work my flight training into this trip since there was scheduled to be three or four hours of waiting time down in Mexico before our return.

Bright and early we departed from John Wayne Airport (KSNA) in Santa Ana, flew to Bakersfield (KBFL) to pick up the owner, made a short hop and a stop in Imperial (KIPL) to pick up a couple of other passengers, then went on to Hermosillo (MMHO). We shut down, said goodbye to the passengers, took a short break, then completed our flight training briefing and headed for the airplane. We would be working within about a 50-mile radius of Hermosillo, VFR, with excellent weather. An hour or so into the flight the left Generator Out annunciator illuminated. We ran the checklist procedure – verified 28 volts on both side's main buses, tried a generator switch reset – but to no avail. The left loadmeter still showed that the left generator was dead, carrying no load at all.

The student and I discussed our situation. If this was a generator failure only, meaning that the starter motor still worked, then it was reasonable that we could continue operating on one generator alone and complete the day's mission. (No, we had no MEL, Minimum Equipment List, the only way we could legally carry on with only one generator. Remember that this was back in the early '80s and the fears of enforcement repercussions were not the same as they are today. Plus, the weather was severe clear throughout our entire route.) On the other hand, if the starter motor was also inoperative, then we were stranded in Mexico until a replacement unit could be found, shipped in, installed and signed off. That could easily take many days.

So how do we determine if the starter is still able to operate? Here was our plan: At the safe altitude where we had been doing our air work – around 8,000 feet – we would shut down the left engine by placing its Condition Lever into Fuel Cutoff. We would not feather the propeller but allow it to windmill while the N_1 slowed. Once the compressor speed stabilized we would conduct the "Air Start – Starter Assist" procedure. If the N_1 spooled up normally then we would know that the starter was still functional. If it did not, however, we would then conduct the "Air Start – Windmilling Engine and Propeller" procedure and realize that if we wanted to get back home that day we could never shut that engine down on the ground!

With the engine shutdown and windmilling, we moved the Ignition and Engine Start switch to the Up position.

Immediately, a loud, disconcerting noise filled our headsets and the N_1 did not budge. Almost immediately the noise stopped and we turned the Starter switch off. We lowered the nose, picked up about 200 KIAS, turned on the Auto-Ignition switch and advanced the Condition Lever forward to Low Idle to conduct the windmilling air start procedure. This went well and soon we had both engines matched together as we headed back to the airport.

We had filled the outboard, main, tanks in Hermosillo before we took off on the training flight so had a significant amount of fuel onboard; would it be enough to complete all of our legs back to KSNA? It looked doubtful. However, it certainly looked like we had enough fuel to get back into the States, clearing customs in Calexico before heading on to Imperial. If we did that, at least the replacement starter-generator would not have to be shipped to Mexico and face the customs/import delays.

We landed and asked the tower/ground controller for permission to park on the far edge of the ramp since we needed to keep our left engine running. There were hardly any other airplanes around and permission was immediately given. My student went inside to contact the owner and tell him of our situation and ask him to expedite his return for departure. (No cell phones back then so he had to use a landline inside.) Meanwhile, I was going to stay with the airplane – shutdown on the ramp with the left engine still running at idle – and periodically turn on the battery to monitor oil pressure and temperature on that side. Thank goodness this was a PT6 that could idle for hours with no concern of overheating!

When I switched the battery on after about 10 minutes, the oil temperature and pressure were fine but how come the right fuel quantity gauge was reading zero?! Hmmm, I had better do a current limiter check. I pushed both voltmeter buttons and the left side read battery voltage properly while the right side reads nothing ... zero, nada, kaput. That means the right current limiter has been blown.

Oh, now it made sense to me! The broken starter-generator must have failed in such a way that when I tried using it as a starter, the current draw was much higher than normal. That high load on the right generator must have dropped its voltage so much that we heard the weird noise in the headsets. But almost immediately, the current limiter responded correctly to the excessive current by melting, by blowing ... the noise ceased as the generator's load came back into the normal range. On the way back to the airport with both engines running but with both the left generator and the right current limiter out simultaneously, the left Generator Bus was being fed only by the battery while the right side was being fed normally by the operating generator. Plus, the battery was no longer being charged.

But now, with the right engine shutdown we had no voltage at all on the right side since the blown current limiter prevented the battery from reaching that side.

Although gaining access to current limiters could be quite a chore in the earlier 90-series, by the time this particular E90 was manufactured, Beech had made the task much easier by relocating the limiters from their old position on the floor inside the cockpit pedestal to their new position under an easily-accessed panel between the pedestal and the co-pilot's seat. I rolled back that area of carpet, removed the panel by releasing the two panel fasteners with a screwdriver ... and then realized that I lacked a tool to undo the old limiter and replace it with one of the two spares that Beech nicely attaches to the bottom side of the access panel.

However, I hailed the fuel truck driver as he passed by and asked if he had a crescent wrench that I could borrow. (A half-inch socket wrench is the preferred tool but, hey, the old crescent wrench works in a pinch.) He had a wrench and within 15 minutes the old limiter was out, the spare was in, and voltage now appeared on both sides ... and the right fuel quantity gauge again worked properly. (The right fuel panel receives its power from the right Generator Bus, also known as the right Main Bus. By the way, for you pilots who operate King Air models with the "Five Bus" electrical system – sometimes called

the Triple-Fed System – this current limiter failure would not affect you in the same way. Plus, it would be highly unlikely to even happen since the current limiter has some protection during cross-starting.)

The pilot returned and informed me that the owner and the other passengers would be returning soon. They showed up nearly two hours later. The pilot met them, explained the situation, and escorted them to the cabin door while making sure they gave the spinning left propeller a wide berth. I momentarily feathered the left propeller to minimize the prop wash and exhaust smell as they boarded.

Off we go back to the good ol' United States. The pilot did this trip regularly and personally knew the FBO and customs people along the way. He was able to explain why we had to keep the left engine running while we cleared customs and everyone he spoke with was quite accepting of that fact. When we got to Imperial, even the lineman was happy to add some fuel to both sides, while the left engine kept idling. (I was glad that the E90's filler cap was close to the wing tip, not midway out as on the C90.)

Well after dark we completed the flight and shut down both engines back at KSNA. Mission accomplished. I am estimating that the left engine ran, nonstop, for over seven hours.

BLACKMAC.
PERFORMANCE UPGRADE

McCAULEY
PROPELLERS
FOR YOUR KING AIR



- New lower prices
- TC and STC kits
- New easy catalog

Propeller and spinner kits available for most Beechcraft® King Air® A90, A90-1, A90-4, B90, C90, C90A, E90, 100, A100, 200, 200C, 200CT, 200T, A200C, A200CT series aircraft.

McCAULEY
mccauley.textron.com

Contact McCauley today to request a quote.
U.S. +1.800.621.PROP | INTERNATIONAL +1.316.831.4021

FEWER ADS | LONGER TBOs | SINGLE-PIECE HUB

© 2018 Textron Aviation Inc. All rights reserved. McCauley, its logo, Blackmac, Beechcraft and King Air are trademarks or service marks of Textron Aviation Inc. or an affiliate and may be registered in the United States.

Your Beechcraft Parts Source



www.selectairparts.com



New • Overhauled • Used



"Call Us. We Speak Beechcraft!"

1-800-318-0010

Int'l: 540-564-0010
Email: sales@selectairparts.com

P.O. Box 219
Weyers Cave, VA 24486

F90 Wingtip = Bonanza Wingtip

When I was still operating *Flight Review, Inc.* out of Hayward, California, I received a call from a fellow who owned and operated an aircraft salvage business in northern California. An owner-pilot whom I knew had wrecked his nice F90 on a dirt and gravel airstrip at a resort near the southern tip of the Baja Peninsula and the gentleman who called had purchased the salvage rights from the Mexican government. It turns out that an insurance inspector had written the airplane off as a total loss because of a cracked main spar yet the salvage guy had inspected it and determined that the crack could easily be repaired, so he got the airplane for the proverbial dime on the dollar.

The pilot had come in too low, caught the main gear on the berm of a road, ripped one gear off, and careened into the cactus beside

the strip. To add insult to injury, he had also left the airplane there without making a report to the Mexican authorities. He flew back to the United States on a friend's Cessna 414 so in the eyes of Mexico he was a wanted man.

After the salvage yard owner had inspected the wreckage, he concluded that it was reasonable to bid on the wreckage and then, with a couple of new propellers and the landing gear being locked down, he could safely fly it back to northern California, do a proper repair, and sell the airplane for quite a handsome profit.

This fellow had no King Air experience so he called me to ask for a day of my time. He wanted to (1) learn how to start the PT6s, and (2) learn some educated guesses on the speeds and fuel flows he could expect on the flight back home with the gear down.



Replacement Windows for Your King Air

- ✓ Cooler Cabin Temperatures
- ✓ Reduces IR (up to 62.8%)
- ✓ Reduces UV (up to 99%)
- ✓ Reduces Pilot Fatigue
- ✓ Preserves Aircraft Interior

Good morning! I just wanted to let you know that we have finished our King Air project and it came out fantastic! I must tell you that your windows are nothing short of amazing!! Their ability to knock down the heat is simply extraordinary. We have flown a couple of trips now, and even in the hot Oklahoma sun, the airplane is down to a comfortable temperature by the time we reach the end of the runway."

Sincerely,
Bryson Pogson
Owner/Director of Business Development
Turbine Aircraft Services



1.800.379.6840
www.LeeAerospace.com

Contact us today to schedule your King Air 90, 100 & 200 Recurrent Training customized for you.

Fly confidently

NATIONALFLIGHT
SIMULATOR

www.NationalFlightSimulator.com
steve@NationalFlightSimulator.com | 866.505.0077

“Excellent King Air Recurrent Training, great instructor, solid program and outstanding equipment.”
D.S. – King Air C90

MORE

Maintenance On Reliable Engines

EXTEND PT6A ENGINE TBO TO 8000 HOURS

www.morecompany.net

We met at the conference room in the Beechcraft West facility at the Hayward airport and proceeded with the requested training. He was a sharp individual and I soon felt better that this “boondoggle” might work out better than I had first envisioned.

Near the end of the day, the fellow mentioned that the only thing preventing him from immediately leaving for Baja was the fact that he had not yet found an F90 wingtip to replace the left one that had been damaged when the gear collapsed. “Wait a minute,” I said. “You have already told me that the fuel vent system near the wingtip, and the tip itself, has been damaged so that you do not plan to add enough fuel to have it near the tip. All you really need is a tip for aerodynamic purposes, not one that fully complies with the F90 design. Right?”

“Yes, exactly!” was his reply. “Then why not use one of the Bonanza tips you have at the salvage yard?” I asked.

“What?!” he queried. “It wouldn’t fit!” “Yes, it will,” I said. “It’s the same size.”

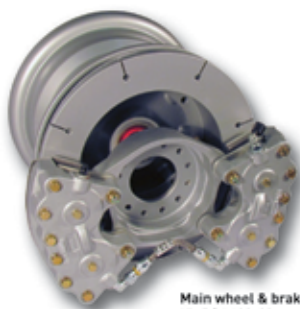
“No way!” With measuring tape in hand, we proceeded to walk into the Beechcraft West hangar and, by luck, found both an F90 and a V35B there. Out came the tape measure and – voila! – an exact match. I have rarely seen an individual as happy as this fellow was at that moment! His wingtip search was over.

If you have not known of this before, learn it now: The wing section outboard of the nacelle on a King Air has the exact same shape and size as the wing on Bonanzas, Barons, Dukes, Twin Bonanzas and Queen Airs. Different spar strengths? Different fuel cells? Different aileron attachment and design? Different wing bolt design and installation in some? Different wing tip extension lengths, the length outboard of the ailerons? Yes, to all of these possibilities, but the basic wing airfoil shape and size ... identical for all.

Until next month ... and we’ll get off this War Story detour for a change. Have you enjoyed the stories? There are more to come. **KA**

King Air expert Tom Clements has been flying and instructing in King Airs for over 46 years, and is the author of “The King Air Book.” He is a Gold Seal CFI and has over 23,000 total hours with more than 15,000 in King Airs. For information on ordering his book, contact Tom direct at twcaz@msn.com. Tom is actively mentoring the instructors at King Air Academy in Phoenix.

If you have a question you’d like Tom to answer, please send it to Editor Kim Blonigen at editor@blonigen.net



Main wheel & brake/ Rodas e freios principais
Kit P/N 199-90

Together, we can support all your King Air braking needs, one landing at a time.

Juntos podemos apoiar todas as suas necessidades de freio King Air, um pouso de cada vez.

The following King Air 90 models are now certified under European approval EASA #10039114 and Brazilian approval ANAC #9210-04:

Os seguintes modelos King Air 90 são agora certificados sob aprovação europeia EASA N°10039114 e aprovação brasileira ANAC N°9210-04:

• 65-90	• B90	• C90-1	• C90B	• C90GTi
• 65-A90	• C90	• C90A	• C90GT	• C90GTx

Cleveland
Wheels & Brakes

1-800-BRAKING (1-800-272-5464)
Visit our website to see our full list of
King Air conversion kits and more
www.parker.com
www.clevelandwheelsandbrakes.com

Parker Aerospace

TSO High Altitude FAA Approved Mask



with
comfort fit
headgear

**King Air Replacement Mask
Carbon Fiber**

aerox
Phone (800) 237-6902
www.aerox.com

Beechcraft
King Air 90
Series

Beechcraft
King Air 200
Series

Beechcraft
King Air 350

Cessna
Caravan
Series

Cessna
Conquest I

Piper
Cheyenne
Series



59%

Increased
Climb Rate



30 hrs

Average Annual
Time Saved



270+ ktas

Maximum
Cruise Speed



10%

Savings in
Operating Costs



2 weeks

Typical Engine
Installation



19,000 ft

Single Engine
Service Ceiling

YOUR KING AIR 90, REDEFINED THE BLACKHAWK XP135A ENGINE⁺ UPGRADE



36%
Increase in
Available
Horsepower

The brand-new, higher horsepower PT6A-135A engines deliver better safety margins, faster cruise speeds, improved climb, and access to more airports.

IS AN UPGRADE RIGHT FOR YOU?

The XP135A Engine⁺ Upgrade is the most cost-effective solution for King Air 90 operators who seek improved performance, return on investment, and a better flying experience.

**CALL TODAY FOR A SAFER, HIGHER-PERFORMING,
MORE RELIABLE KING AIR 90 WITH THE
BLACKHAWK XP135A ENGINE⁺ UPGRADE.**



+1 (844) 832-4456 + info@blackhawk.aero + www.blackhawk.aero

“The Last Staggerwing”

In 1946 the realities of a postwar commercial airplane market forced Walter H. Beech to abandon a Beechcraft from the past in favor of a Beechcraft of the future.

by Edward H. Phillips

The Beechcraft Model 17 was more than a flying machine; it was legendary. From the moment it first took flight, the airplane endured the test of time and resisted the relentless pace of aeronautical technology to earn its reputation as the paragon of cabin biplanes and the quintessential business aircraft of the Golden Age of Aviation in the United States. Conceived and created in the midst of the worst economic depression America had ever experienced, the Beech Model 17 represented a tremendous gamble for Walter H. Beech. By 1932 business empires

were crumbling, many high-value stocks had become worthless, widespread unemployment left millions without jobs, and the rising threat of Communism fueled a growing social discontent.

To Walter Beech, his wife Olive Ann and engineer Ted Wells, the bullish biplane that first thundered aloft in November 1932 was worth the risk of failure. Wells had designed a cabin biplane that could hit 200 mph, land at 60 and feature a comfortable cabin that rivaled any Cadillac in a General Motors showroom. Despite these desirable characteristics, the Beechcraft Model 17R1, priced at more than \$15,000, proved almost impossible to sell in a market devastated by the debacle on Wall Street that began in October 1929. During 1932 and well into 1933, the infant Beech Aircraft Company had built two airplanes and sold none. Although Olive Ann Beech once told the author that the company never approached bankruptcy during those lean years, documents indicate that it was teetering on the brink of insolvency.

Entrepreneur Beech and engineer Wells knew the future of their tiny enterprise relied entirely on the merits of the fledgling design – merits they believed would provide the new Beechcraft its best chance for success in a crippled industry already littered with costly failures. The biplane’s negative stagger wing arrangement represented a departure from conventional thinking but gave the pilot unprecedented visibility. Another major innovation for an aircraft of its class was the electrically

operated retractable landing gear that reduced drag and increased speed.

Although the name *Staggerwing* was not adopted by Beech Aircraft Company and did not appear in any of its publications, the moniker stuck and still survives today. The Model 17 series gradually became the premier, single-engine business airplane of the 1930s, chiefly because it blended superior performance, low direct operating costs and value with an ambience its competitors failed to achieve. By 1934-1935, sales of the new B17L were growing – the fruits of a critical decision made by Wells and Beech in 1933 to build a smaller version of the cabin biplane that would sell for about \$8,000.



Theodore A. Wells was a talented engineer, experienced pilot and an accomplished sailor. He was responsible for creating the Model 17R1 that marked the return of Walter H. Beech to the commercial airplane business. (Wichita Public Library)

**YOUR ONE-STOP
SOLUTION FOR
NORTHEAST KING AIR
MAINTENANCE**



- Heavy Maintenance
- Interiors
- Aircraft Paint
- Avionics Upgrades
- ASDS-B & More



**C&L Aviation
Group**

www.cla.aero
+1 207 217 6050
inquiries@cla.aero



Mating the thrifty, 225-horsepower Jacobs seven-cylinder, static, air-cooled radial engine to Ted's smaller airframe resulted in a winning combination that at least stood a chance of success in the light airplane marketplace. By 1934 the B17L had put Walter Beech's company on the road to profitability. In addition to commercial sales, during the mid-to-late 1930s the United States Army and Navy found the Model 17 could be adapted to survive the rigors of military duty. By the end of World War II, 412 Army UC-43 and Navy GB-1/GB-2 aircraft had been produced for the allied war effort.

An early production Model B17L was photographed soon after emerging from the Beech Aircraft Company factory on East Central Avenue. Note the cabin entry door that was only found on the left side unless the optional right-side door was ordered. The airplane was delivered to a customer in November 1934. Powered by the reliable Jacobs R-755 (L-4) radial engine, the B17L series proved to be the right airplane at the right time, despite the economic depression that gripped America. (Textron Aviation)

Retail Sales & Wholesale Aquisitions

Let the
King of
King Airs
 Serve You



CLIENT TESTIMONIAL: "In the last 10 years Murphy Acquisitions has represented us in the purchase and/or sale of roughly 15 King Air B200's & 300's. Every transaction went smoothly as we have found them to be very professional, efficient, and proficient. At all times I knew my best interests were being represented by John Murphy and his team. When you are looking to buy or sell a King Air, your next call, and best call, should be to Murphy Acquisitions."

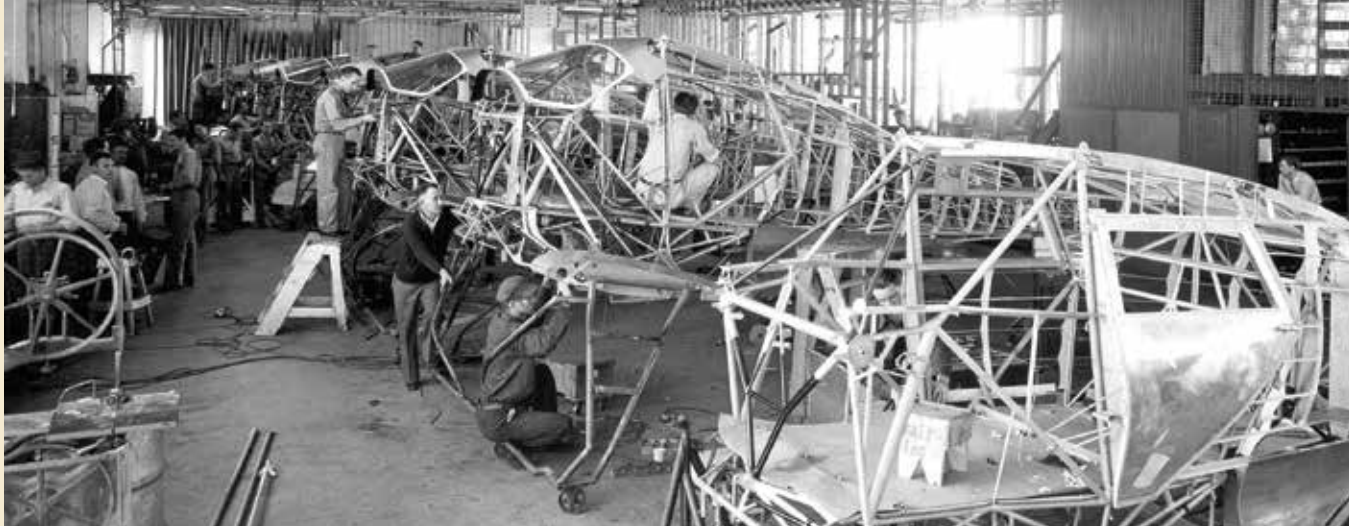
— Telford Allen, T&T Capital, Bangor, ME

KingOfKingAirs.com

(512) 864-7111

John@MurphyAcq.com


MURPHY
 ACQUISITIONS™



A late 1930's photograph of the fuselage assembly line illustrates the labor-intensive nature of the Model 17 series. The amount of time and the high cost of handcrafting required to build the classic Beechcraft would be a major factor in its demise after World War II. (Textron Aviation)

After victory in Europe and the defeat of Japan in 1945, postwar America rapidly transitioned to a peacetime economy that gave birth to the largest boom in aviation since the epic solo flight of Charles A. Lindbergh 18 years earlier. The civilian market was soon flooded with war-surplus aircraft such as the Boeing/Stearman PT-13 and PT-17 open cockpit biplanes, Cessna UC-78 and AT-8 twin-engine trainers, and Beechcraft UC-43/

GB-1 and -2 single-engine ships, and UC-45 twin-engine Beechcrafts, many of which had been returned by Great Britain and other allies in accordance with provisions of the 1941 Lend-Lease agreement.

Walter Beech's postwar plan was to resume production of the venerable Model D17S but upgrade the design to create the G17S version. By 1945 Mr. Beech, contrary to a myth perpetrated nearly 100 years ago that he was a staunch advocate of the biplane, clearly recognized that the future of general aviation lay with the all-metal monoplane, and during 1944-1945 his engineers had created a winner in the modern Model 35 *Bonanza*.



Your Expert King Air Maintenance Solution



- Avionics Upgrades
- Mobile Response Team
- Structural Modifications and Repair
- Aircraft Inspections
- PT-6 Engine Repair Facility
- Authorized Raisbeck Dealer

Call Winner Aviation today! 1.800.837.4964

www.winner-aviation.com

KYNG-Ohio


Walter Beech knew that the Model 17 had always been an airplane that was largely hand-built and was extremely labor-intensive to manufacture. There was no denying that if he decided to build the Model G17S the end product would be a stately, powerful and robust Beechcraft that would continue to outclass its competitors. The market, however, had changed dramatically, and customers were looking for a modern airplane that would provide economical aerial transportation. Walter's chief competition, the Piper Aircraft Corporation in Pennsylvania, and in particular, the Cessna Aircraft Company located across town, were planning new designs that promised to relegate the aging welded steel tube and fabric-covered aircraft of the 1920s-1930s to the salvage yard.

Officials of both companies understood what the postwar private pilot and flying businessman wanted in the next-generation light airplane. Piper was developing the PA-6 *Sky Sedan*, a four-place monoplane with retractable landing gear, a maximum speed of 160 mph and a price tag of \$4,000. Cessna president Dwane L. Wallace had his engineers hard at work developing Project P-370, also dubbed the "Family Car of the Air" that had a projected maximum speed of 140 mph. Both airplanes, had they been placed into production, would have proven worthy adversaries of the Bonanza, but Piper cancelled the Sky Sedan in 1946 and the P-370 did not progress beyond a mockup of the fuselage.

As for Beech Aircraft Corporation, when World War II ended in the Pacific and Japan surrendered unconditionally, the men and women of the company could look back on the previous four years with pride and a great sense of accomplishment. Beechcrafters had built and delivered more than 7,300 airplanes to the United States Army Air Forces and the United States Navy. Of these, more than 5,200 were AT-11, AT-7 and SNB military versions of the prewar commercial Model C18S.

With the Axis powers in their death throes, during the summer of 1945 the United States Defense Commission gradually began releasing materials for the

manufacture of commercial airplanes, chiefly to help support the resumption of peacetime production. Walter Beech and other company officials had been planning in earnest for a reconversion since earlier that year. Only two weeks after the Japanese surrendered, Beechcraft workers had completed a detailed factory inventory and was well along in preparation for production of the postwar Model D18S twin-engine monoplane. In addition, on December 7, 1945, a mere 16 weeks since victory over Japan had been secured, the Civil Aeronautics Administration issued the first postwar Approved Type Certificate to Beech Aircraft Corporation for the D18S.



AVILON | A Revolution
Fit For A KingAir

A true revolution is in the air. The first ever fully integrated cockpit for the retrofit market, Avilon's innovative architecture brings unprecedented value to the King Air cockpit. At \$175K installed, the system boasts four customizable displays, FMS, Synthetic Vision, Autopilot, PBN, ADS-B and TAWS A. The exclusive Path Guidance Panel™ allows for tactical aircraft control and enhanced situational awareness. Avilon is changing the paradigm of fully integrated cockpits. Experience the revolution with Avilon.

SANDEL | AVILON
sandel.com



The first Model 17R1 built underwent a series of modifications before it was sold in May 1934 to the Ethyl Corporation as an executive transport. The distinctive design of the biplane illustrated the design talent of engineer Ted Wells. In December 1935, the hard-working Beechcraft was destroyed in a crash near Nunda, New York, killing pilot Dewey Noyes and an official of the Ethyl Corporation. (Staggerwing Museum Foundation)

Although the new “Twin Beech” took center stage on the production line, the venerable Model D17S had not been neglected. Unlike its all-metal siblings the D18S and Model 35 Bonanza, four years of war and technological progress had finally rendered Ted Well’s wood and fabric biplane obsolete. Despite Mr. Beech’s desire to produce a next generation of the Staggerwing, the attractive biplane would be more of a manufacturing liability than an asset to the company’s balance sheet and nobody knew that better than Walter himself. Studies indicated that to compensate for skyrocketing labor and material costs that were a byproduct of the war, customers would have to pay \$29,000 for the new model dubbed the G17S. By contrast, a standard-equipped Bonanza was priced at a mere \$7,000 and offered similar performance for much less money.

In 1946, \$29,000 was considered an exorbitant amount of money for a biplane born in the 1930s, and Beech realized that the cost alone would severely limit sales. Beginning with its introduction in 1932, the Model 17 had always been an expensive airplane to build. Walter and Ted, however, knew that was the price they had to pay to reap the performance benefits provided by the

biplane’s clean, aerodynamic design. In an era when semi-monocoque, all-metal aluminum alloy airframes were being pioneered by visionaries such as Jack Northrop and Donald Douglas, the Beechcraft’s steel tube fuselage and empennage were welded together using proven but time-consuming acetylene gas technology that dated back to World War I.

The robust steel jigs necessary to hold the thin-walled tubing in place during the welding process were heavy and required periodic maintenance. The highly skilled men who performed the delicate task of blending hot flame and rod against cold steel had to possess a keen eye, a deft touch and work quickly to create an acceptable joint that not only met exacting standards but kept the production line rolling along smoothly. The rugged Pratt & Warren fuselage truss was largely concealed under complex, hand-made spruce fairings that gave the airplane its attractive shape. Assembling and installing the fairings, which covered the upper and lower surfaces and both sides of the fuselage framework, took considerable time to accomplish correctly so that later when the cotton fabric was applied to the skeletal framework, it would shrink tightly to give the Staggerwing its graceful lines.



Grasping a parachute in his left hand, in October 1939 Walter Beech prepared to board a Model F17D for its first flight. Beech was called upon occasionally to help the small team of company pilots assigned to test new Beechcraft biplanes. (Textron Aviation)

The two plate glass windshield sections were developed specifically for the Model 17 by Pittsburgh Plate Glass, and were fitted into place before fabric was applied. The process of stretching the linen over the fuselage and stitching it snugly to the fairings had to be perfect before coats of butyrate dope were applied, shrinking the fabric taut. The factory had a special area for this purpose that was equipped with massive brick firewalls and a large sliding barrier that would prevent flame from spreading throughout the complex if a fire erupted.

The highly flammable cellulose nitrate dopes were bought from a number of suppliers including the Merrimac Chemical Company, Glidden and Berry Brothers. The multiple coats of clear, silver and final color were sprayed onto the fabric inside special paint booths. Overall, the doping process was laborious – it was necessary to wet-sand the fabric between applications to ensure a smooth finish of the final gloss color coat that everyone would see. Both skill and experience were required to obtain the hand-rubbed, shiny paint finish that became a hallmark of the Model 17 series.

It was possible (for an extra fee) for a customer to order a unique paint scheme, but the factory frowned upon the choice of white, chiefly because it failed to adequately protect the silver-colored dope that protected the cotton from the sun's damaging ultraviolet rays that gradually

deteriorated that fabric's fibers and decreased strength. According to a letter from company vice president John P. Gaty to Beechcraft dealers dated November 1940, "It is requested that customers be discouraged from ordering planes painted white. Because white airplanes require several more coats of paint than any other color, the result is that the thick film of paint cracks very easily. Considerable trouble has been experienced with all planes painted white and your customers should always be plainly warned that we will not make any service adjustments on a white paint job." Obviously, another disadvantage was the additional few pounds of weight imposed because of the extra coats.

Building the Model 17's wings was another labor-intensive operation but did include some automation. The spruce spars were fabricated to specifications by automatic routers and planers that significantly reduced man-hours required to complete a shipset. By contrast, building wing ribs was a relatively easy process for a skilled worker but still required many different pieces of wood to be placed into a jig for nailing and gluing together, along with gussets for reinforcement.

Despite the adverse economics of manufacturing a postwar Model 17, Walter Beech decided to proceed with development of the next-generation cabin biplane. Ted Wells assigned assistant chief engineer M.A. Chester and

Lumatech LED™

**Reliability & Performance
You Can See...**

**King Air
BeechJet
208 Caravan
Bell 206 & 412**

LT Lumatech Technologies LLC
Partners in Quality & Innovation
Phone: 425.643.4000, x305 info@lumatech.com

program manager Al Clark the task of breathing new life into the aging Beechcraft, officially designated the G17S.

Based solely on the popular D17S that had been in production since 1937, the G17S would receive a number of important upgrades aimed at fostering customer appeal in an effort to help justify its high price. By September 1945, Clark had completed an outline of changes that included:

- Relocating the Pratt & Whitney R-985AN-3-1 or R-985AN-3 forward slightly to improve load distribution.
- Designing a new engine mount to accommodate the engine installation.
- Incorporating a new, pressure-type engine cowl with a single, manually controlled cowl flap mounted at the bottom, trailing edge.
- Increasing the area of the vertical stabilizer to 7.98 square feet to provide increased directional stability.
- Installing an improved cabin ventilation system to provide increased airflow for the pilot and passengers.
- Fairing the fuselage more smoothly into the engine cowl to present a more pleasing contour, and

covering the fuselage aft with aluminum alloy sheet (including upper and lower wing fillets), skin formers and bulkheads. In addition, wing walks were to be replaced with metal surfaces.

- Adopting a larger, two-piece windshield.
- Installing a redesigned instrument panel featuring a new control wheel and relocated engine and propeller controls.
- Using a hydraulic valve to replace the parking brake lever.
- Improved brake master cylinders. Goodyear single-disc brake system. New main landing gear doors.
- Redesigning the entire cabin interior including window sills and trim. Cabin sidewalls were to be covered with beige Spanish leather from the instrument panels aft to the pilot's seat. Gray-green Candair broadcloth from the front seats aft to the baggage compartment. Beige Candair broadcloth was applied to the cabin headliner. The cabin floor was carpeted with a sand-colored Candair Lock-Tite weave. As for the seats, they were covered with gray-green Bedford cord fabric. Leather was available as an option.
- Changing from wire-wrapped turnbuckles on control cables to swaged-type fittings.
- Wing rib stitch spacing reduced to six inches from 6.5 for the D17 series.

By February 1946 general specifications and performance of the Model G17S had been confirmed by engineering and approved by the sales department. The airplane's maximum speed at an altitude of 5,500 feet was projected to be 212 mph with a cruising speed (75 percent power setting) at 10,000 feet of 201 mph. Four fuel tanks in the fuselage and wings held 124 gallons (170 gallons optional) and would provide a zero-wing range of 1,000 statute miles.

In an effort to spur sales the aircraft's \$29,000 purchase price was based on an overhauled R-985 engine that would reduce the price to \$25,000, but only if the customer supplied the factory with a complete installation package for the powerplant, including the exhaust system. Another \$500 allowance was given if the customer provided a Hamilton-Standard Model 2D30-237 two-blade, constant-speed propeller. To further reduce costs, only three finish colors were available – Loening Yellow with Consolidated Blue or Insignia Red trim, Consolidated Blue with Loening Yellow trim, and Insignia Red with Loening Yellow or Consolidate Blue trim.

The last Model D17S built before the United States entered World War II in December 1941 was constructor number 424 (registered NC21934) that became the prototype for the postwar Model G17S. To test the major engine installation modifications

KING AIR WINDOW INSERTS

STC'D-PMA/FAA APPROVED

What Is the Difference
Between the G & D Aero Tinted Window Insert
and the Polaroid Interior Window Insert?

The \$\$\$\$\$ Cost

With the G & D Aero tinted window you have full time protection against the sun *and* the ability to keep your passengers cool and comfortable. No need to make any adjustments to the windows because the inserts work *full time*.

G & D AERO PRODUCTS
951-443-1224



Postwar publicity photograph depicted a family of four about to embark on a flight in their Beechcraft Model G17S. The airplane was constructor (serial) number 424 – the last Model D17S built before America's entry into World War II and the prototype for the postwar G17S series. The new landing gear door panels, however, had not been installed.

(Textron Aviation)

incorporated in to the modified Beechcraft, Al Clark and his team of engineers began a series of flight tests with a new cowling installed. Those tests indicated the need for changes and after further modifications a final configuration was tested and approved along with all the other upgrades to the airframe and cabin interior.

The G17S would be built in the company's Plant Two facility located south of the main factory campus. The facility had been home to production of the

UC-43 and GB-2 airplanes during the war. Plans called for allotting up to 50 delivery positions for the airplane for the 1946 model year.

In addition, Beech Aircraft Corporation's marketing and sales force, both in-house and in the field, began extolling the attributes of the G17S to potential customers and taking orders. Initially the factory had orders for 32 airplanes, but then troubles began as the number of sales contracts fell to 25, and of those only two buyers had plunked down a check for 25 percent of

Reliance

CITATION • KING AIR • CONQUEST • CARAVAN

"When the decision was made to get back into aircraft ownership, we knew we could rely on Yingling to find the perfect King Air 350 for our mission. Yingling's in-house ability to handle all of our maintenance needs is a breath of fresh air. When they came to our rescue on an out of town AOG, we knew they have our best interests at heart. It's like having our own ground crew."

Paul P., Chief Pilot

CONTACT US NOW FOR YOUR ADS-B SOLUTION.



316.943.3246 or toll free: **800.835.0083** [FBO OPEN 24/7]

<http://www.yinglingaviation.com>

LOCATED AT THE DWIGHT D. EISENHOWER NATIONAL AIRPORT 2010 AIRPORT ROAD, WICHITA, KS 67209


the total price. Eventually consumer interest in the G17S fell further to 20 airplanes. Many customers had cancelled their orders in favor of the twin-engine Model D18S or chose to await delivery of the Model 35 Bonanza.

Initial deliveries of the G17S finally began on July 13, 1946, when constructor number B-1 was accepted by the Cuban Dominican Sales Company. The Civil Aeronautics Authority (CAA) issued Approved Type Certificate 779 to the G17S on October 11, 1946. Airplanes that were eligible for the approval were constructor number 424 and B-1 through B-20. Although all of the airplanes were manufactured in 1946, not all were delivered that year. Constructor numbers B-1 through B-15 and B-20 were completed at the factory and delivered to customers beginning in July 1946 through July 1947. Another four of the Beechcrafts,

B-16 through B-19, were built using parts obtained from the Henry Seale Aviation Supply Company located in Dallas, Texas. Beech Aircraft records state that these airplanes were sold back to the Henry Seale Company, which resold the biplanes to customers. The last Staggywing was delivered on June 17, 1949.

By the late 1940s the dwindling supply of spare parts to keep the aging Model 17 series in the air was rapidly becoming a serious problem. As far back as September 1945 the company had notified all owners and operators that the growing shortage of parts would affect the maintenance and repair of their airplanes, and by 1949 the factory's postwar stock of Model 17 spares had been exhausted.

As a result, by 1950 all Model 17 tooling had disappeared from the factory floor and back shops. Although every vestige of the

Staggywing was gradually erased from the daily operations of the Beech Aircraft Corporation, the biplane that birthed that company left a rich and unforgettable heritage that will always be unmatched by any business aircraft in its class. 

For further information about the history and preservation of the Beechcraft Model 17 series biplanes, go to www.beechcraftm.org.

Ed 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, Kan. His writings have focused on the evolution of the airplanes, companies and people that have made Wichita the "Air Capital of the World" for more than 80 years.



ice shield de-icing systems *De-icing Never Looked This Good*

Ice Shield De-icing Systems offers wing boots, propeller boots, wire harnesses, and much more.
Offering guaranteed 48-hour delivery and first class customer service.
Ice Shield is a **Faster, Better Smarter** way to protect your aircraft from icing conditions.
For more information please visit our website www.iceshield.com or 800.767.6899



FlightSafety Introduces PT6 Familiarization Training for Pilots

FlightSafety International recently announced a new PT6 engine familiarization training program for pilots. The aviation training company says the new PT6 training will provide pilots who fly PT6-powered turboprop aircraft with the operating fundamentals. The course includes basic theory, engine to airframe interface, and best practices while operating the engine. It will also be beneficial for pilots who are transitioning from piston powered to turbine powered aircraft.

The course will be offered at FlightSafety's Learning Centers in Botucato, Brazil; Montreal, Canada; and at other locations in the near future.

FlightSafety provides advanced, technology-based maintenance training for many Pratt & Whitney Canada engine families including turboprop, turbofan and turboshaft engines as well as for auxiliary power units (APUs). It has been the authorized training provider for Pratt & Whitney Canada since 2010 and has delivered close to 14,000 courses for the company's engines and APUs to customers from 126 countries to date.

CoolView Replacement Windows Now Available for King Airs

Lee Aerospace now has FAA/PMA-approved CoolView replacement windows available for the King Air. CoolView's advanced thin metallic composite barrier system is engineered to block up to 62.8 percent of the infrared rays or heat coming through the windows. In addition, the windows block virtually all (99 percent) ultraviolet rays. This process is internal, within the window construction. It is not a process or external coating that will wear or ever need to be reapplied.

Lee Aerospace has both cockpit and cabin replacement windows available and say that along with a much cooler cabin, CoolView windows provide a safer environment for your health-conscious pilots and passengers.

For more information, contact Lee Aerospace by calling (800) 379-6840 or (316) 636-9200, email to sales@leeaerospace.com or going to their website at www.LeeAerospace.com.

Rockwell Collins Names Hampton Aviation as Authorized Dealer

Rockwell Collins recently announced that Hampton Aviation of Mena, Arkansas, has joined its network of authorized dealers and installers.

Since 2003, Hampton Aviation has been the premier King Air inspection and repairs facility for the U.S. Army, Air Force and Navy. The maintenance facilities capabilities include complete inspections, heavy structural repair and maintenance, spar replacement or repair, sheet metal work, pre-purchase inspections, and paint and interior.

Garmin® Expands Navigation Databases to include South America

Garmin has announced the addition of new, cost-effective Garmin Navigation Database information for South America. This database will soon be available in the newly expanded Americas OnePak, which

Your Source for King Air Landing Gear



- Inspect • Overhaul • Exchange • Install
- Complete Ship Sets • King Air Aircraft Maintenance

TRACEAVIATION
FAA CERTIFIED REPAIR STATION R30R997X
 LIMITED AIRFRAME • POWERPLANT • LANDING GEAR
 601-936-3599 • www.traceaviation.com

offers coverage in North, Central and South America and provides database updates across all Garmin avionics and a portable in a single aircraft.

New to South America, the Garmin Navigation Database provides a trusted and convenient path to incorporate the latest database information within select Garmin avionics. Data such as instrument procedures, frequencies and airport data are included in this database. Coverage of the new Garmin Navigation Database in South America starts at \$149 USD for a single update and \$399 USD for an annual subscription for the GTN™ 650/750 touchscreen series or GNS™ 430W/530W navigators.

OnePak annual database updates

Pilots operating across the Americas are offered significant savings with OnePak annual

database subscriptions, which combines the Garmin Navigation Database and many other Garmin databases (where available) to provide additional data options that suit their needs. For one annual price, databases within OnePak subscriptions can be downloaded to multiple Garmin avionics and one qualifying portable in a single aircraft. The Americas OnePak that incorporates the new South America data is available on compatible products for \$724 USD, which includes the Garmin Navigation Database, Terrain and Basemap and can also include the Airport Directory, IFR en route charts, VFR sectional charts, Obstacles and SafeTaxi®. The purchase of a OnePak subscription also provides existing Garmin Pilot™ subscribers with an upgrade to Garmin Pilot IFR Premium that includes coverage in South America.

The Garmin Navigation Database and OnePaks are compatible with the following certified avionics:

- GTN 650/750 touchscreen navigators
- GNS 430W/530W navigators
- G500 TXi™/G600 TXi/G700 TXi/G500H TXi flight displays
- G500/G600/G500H flight displays
- G1000®, G1000 NXi, G2000®, G3000®, G5000®, G1000H® and G5000H Integrated Flight Decks¹

The new Garmin Navigation Database with South American coverage is expected to be available by October. To purchase and download the new Garmin Navigation Database or OnePak database subscriptions and to view additional database pricing or coverage information, visit: www.flyGarmin.com.

¹ Prices vary depending on aircraft class and avionics configuration

Blackhawk XP Engine+ Upgrades Receives FAA Approval for FAST™ Engine Monitoring Solution

Blackhawk Modifications recently announced Pratt & Whitney Canada's (P&WC) completion of a Supplemental Type Certificate (STC) allowing the installation and operation of their Flight Data Acquisition, Storage and Transmission System (FAST™) on Blackhawk-equipped King Air 200/300 series aircraft. In addition to the FAA signoff, the FAST solution has also gained EASA and TCCA approval for Blackhawk integration.

The FAST system is a digital diagnostics and prognostics tool which captures, analyzes and wirelessly transmits full-flight data intelligence to operators or maintenance technicians within 15 minutes of engine shut down. This technology is said to provide owners and operators with greater situational awareness regarding their engine performance which will help maximize aircraft availability, optimize maintenance planning, reduce operating costs, and avoid delays and cancellations.

Blackhawk will provide the FAST Solution through their Authorized Dealer Network, which currently spans about 85 facilities worldwide. Contact Blackhawk for pricing and availability at (254) 755-6711 or www.blackhawk.aero. **KA**



KingAir Technically...

RECENT
SERVICE BULLETINS,
ADVISORY DIRECTIVES
AND SAFETY
COMMUNICATIONS

From Service Letter MTL-57-01

Date: July 20, 2018

Wings – Lower Forward Wing Bolt Crush Washer Inspection/Replacement

Compliance – MANDATORY: This service document must be accomplished within 200 flight hours or twelve months from the date of receipt, whichever occurs first.

A service document published by Textron Aviation may be recorded as *completed* in an aircraft log only when the following requirements are satisfied:

1. The mechanic must complete all of the instructions in the service document, including the intent therein.
2. The mechanic must correctly use and install all applicable parts supplied with the service document kit. Only with written authorization from Textron Aviation can substitute parts or rebuilt parts be used to replace new parts.
3. The mechanic or airplane owner must use the technical data in the service document only as approved and published.
4. The mechanic or airplane owner must apply the information in the service document only to aircraft serial numbers identified in the *Effectivity* section of the document.
5. The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

No individual or corporate organization other than Textron Aviation is authorized to make or apply any changes to a Textron Aviation-issued service document or flight manual supplement without prior written consent from Textron Aviation.

Textron Aviation is not responsible for the quality of maintenance performed to comply with this

document, unless the maintenance is accomplished at a Textron Aviation-owned Service Center.

EFFECTIVITY:

Model	Serial Numbers
F90	F90LA-1 thru LA-225 with Kit 90-4077 and Kit 101-4024-3 installed
H90 (T44A)	LL-1 thru LL-61 with Kit 90-4077 and Kit 101-4024-3 installed
C99	U-50, U-165 and on, with Kit 90-4077 and Kit 101-4024-3 installed
65-90, 65-A90, 65-A90-1, 65-A90-4, B90, C90, E90	All serials with Kit 90-4077 and Kit 101-65-A90-2, 65-A90-3,
99, 99A, 99A (FACH), A99, A99A, B99	All serials with Kit 90-4077 and Kit 101-4024-3 installed
100, A100 (U-21F), A100A, A100C, B100	All serials with Kit 90-4077 and Kit 101-4024-3 installed



Trusted experts on King Air engine accessories & starter generators since 1965

B&S AIRCRAFT
Parts & Accessories • Wichita, KS 67211

AMETEK MRO
AN COMPANY

1-800-835-2961

LABOR HOURS:
For planning purposes only:

Work Phase	Labor Hours
Modification	8
Inspection	2

Reason: Alternate 90-380058-1 Washer Assembly has been determined to provide premature torque indication.

This could lead to cracking of the wing fitting. This washer assembly may have been installed during incorporation of Kit 101-4024-3.

Warranty: This service document is mandatory. Eligible airplanes may qualify for parts and labor coverage to the extent noted in the Labor Hours and Material Availability sections of this document.

Airplanes identified within the serial number effectivity of this service document must have active Airframe warranty coverage on the original issue date of this document and the coverage must be active on the day the work is accomplished. **KA**

NOTE:

As a convenience, service documents are now available online to all our customers through a simple, free-of-charge registration process. If you would like to sign up, please visit the Customer Access link at www.txtavsupport.com to register.

The above information may be abbreviated for space purposes. For the entire document, go to www.txtavsupport.com.

CAT Exhaust Gas Extractors

STRONGER, MORE EFFICIENT,
AND ALLOWS HIGHER SPEEDS

A ceramic coating keeps CAT EGE's from discoloring



commuterairtechnology
META SPECIAL AEROSPACE

405.694.4755
WWW.COMMUTERAIR.COM
7301 NW 50th St., Oklahoma City, OK 73132

Had Enough \$100 Hamburgers? Fly to help land, water and wildlife



Unique flight opportunities available for 1000+ hour pilots.



Volunteer your flying to help endangered species and more.

LIGHT HAWK
CONSERVATION FLYING

Learn more at www.lighthawk.org/volunteer

Left: Chris Crisman/TNC/LightHawk; Right: Lincoln Athas/WCC/LightHawk

COMBAT WOUNDED THEY'VE GOT HE^{ART}, THEY NEED WINGS

Imagine returning home from combat facing devastating injuries
and long-term hospitalization-- in a facility hundreds of miles away from your family.

Imagine somebody brings you together.



The VAC provides free air transportation to wounded veterans and their families for medical and other compassionate purposes through a national network of volunteer aircraft owners and pilots.

FIND OUT HOW YOU CAN MAKE A DIFFERENCE.

VeteransAirlift.org

952-582-2911

Correspondence



Correction

In the August 2018 issue of *King Air* in Ed Phillips' historical article titled "Cessna's Last Stand," on page 27, the wrong photo caption was published.

It should have been:

The C-34 evolved into the 1937 C-37, 1938 C-38 and finally, the 1939 C-145/C-165. Known unofficially as the Cessna Airmaster, the four-place monoplane saved Clyde Cessna's company. (Textron Aviation)

Our apologies for any confusion this may have caused.



ADVERTISING INDEX

Apex Aviation Inc.....	10
AVCON Industries Inc.....	12
B & S Aircraft.....	29
B/E Aerospace, Inc.....	26
Blackhawk Modifications.....	17
C & L Aviation Group.....	18
Cleveland Wheels & Brakes.....	16
Commuter Air Technology.....	30
Elliott Aviation.....	Inside Back Cover
Factory Direct Models.....	8
G & D Aero Products Inc.....	24
Garmin International.....	Inside Front Cover
Hillaero Modification Center.....	28
Jackson Jet Center & Rockwell Collins.....	5
King Air Academy.....	9
Lee Aerospace.....	15
Lighthawk.....	30
Luma Technologies, Inc.....	23
MORE Company.....	15
Murphy Acquisitions Inc.....	19
National Flight Simulator.....	15
NBAA.....	Back Cover
Paul Bowen.....	32
Raisbeck Engineering.....	11
Recurrent Training.....	12
Sandel Avionics.....	21
Select Airparts.....	14
Shaw Aerox LLC.....	16
Textron Aviation.....	14
Trace Aviation.....	27
Veterans Airlift Command.....	31
Winner Aviation Inc.....	20
Yingling Aviation.....	25

AIR TO AIR

Paul Bowen

Aviation Fine Art
on canvas and metal

Bowen@AirToAir.net
316-263-5537

www.AirToAir.net



GARMIN'S #1 G1000 NXi RETROFITTER

At Elliott Aviation, we are Garmin's #1 King Air G1000 NXi retrofitter and we've completed **more Garmin G1000 installations than all other dealers in the world COMBINED!** We're so confident in our experience that we offer new installations on a G1000 NXi with a 15-day, \$3,000 per day guaranteed downtime. For current G1000 owners, the NXi gives you a cost-effective, plug-and-play solution that can be completed in **as little as two days**. As a Factory Authorized King Air Service Center, Elliott Aviation offers on-site training to make sure you are comfortable with your system before you leave.

The Garmin G1000 NXi Features the Following Upgrades over the Standard G1000:

- SurfaceWatch Runway Monitoring Technology
- Optional Cockpit Connectivity Including Automated Database Transfer
- MFD Display-Like in the HSI on the PFD (Can Include SafeTaxi, Flight Plan, METAR's and More)
- Greater Display Resolution and Brightness
- Improved Map Performance
- Many More Improvements!


GARMIN

MOLINE DES MOINES MINNEAPOLIS 800.447.6711



ELLIOTT
AVIATION

www.elliottaviation.com

DEDICATED TO HELPING BUSINESS ACHIEVE ITS HIGHEST GOALS.



HE FLEW THROUGH FOG ALMOST AS
THICK AS AN FAA REGULATIONS BOOK.

Rear Admiral Richard E. Byrd didn't know what was coming — heck, he couldn't even see the ground. But his goal was to reach the North Pole. And he found a way to make it happen. That's the attitude we admire at NBAA. It's why we've compiled hundreds of resources for our members. So whether it's higher profits, greater efficiency or more customer visits, we monitor the conditions so you can keep your sights set on your goals. Because business aviation enables people to reach places they otherwise couldn't. And at NBAA, we enable business aviation.

Join us at nbaa.org/join.