King Air

A MAGAZINE FOR THE OWNER/PILOT OF KING AIR AIRCRAFT

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Expert Level Aviating: Deliberate Practice

by Matthew McDaniel

Aviation, like most activities, requires a certain level of expertise. However, it can also be pursued at a wide variety of levels, from recreational for a few dozen flight hours a year, to professional for a thousand flight hours (or more) per year. Thus, "expert" is a loaded term that can mean a variety of things depending on the context, the audience and the pilot in question. I would argue that aviation, in the broadest sense, is a topic and activity where becoming an expert in all matters is absolutely impossible. However, reaching an expert level of knowledge and skill in your particular aviation niche is both attainable and common.

“ … expert level performance in almost any activity … comes from expert level practice.”

Research indicates that being a true expert is less about natural abilities and more related to how consistently and deliberately you practice to improve. (Courtesy: King Air Academy)

Does practice really make perfect?

How many times have you watched a star athlete, an air show aerobatic pilot or maybe a world-renowned musician perform and afterward commented, "Whoa, that person is amazingly talented!"? It's a common reaction anytime we witness expert level displays of skill. But is it accurate? Is talent predominantly responsible? Until very recently, most of us would have said yes (at least in a qualified sense). Even in the recent past, scientists agreed with the commonly held belief that expert level performance was tied closely with natural ability. As a result, from a psychological perspective, scientific research into discovering what really creates an expert was delayed.

Many people refuse to pursue a long-held dream because they think they just aren't cut out for it or due to a self-perceived lack of talent. Others see themselves as able to pursue something as a hobby or for recreation, but never at an expert level because they "lack the natural talent" of an expert. New research has found that outside of obvious physical or genetic advantages (height in some sports, for example), this simply doesn't reflect the reality of most "experts."

Few pilots would argue that the way we initially learn any skill and get better at it is via "practice-practice-practice." As a 30-plus-year flight instructor, one of my favorite pieces of advice to clients has been, "No one ever became good at crosswind landings by avoiding crosswind landings." Yet, as with so many things in life, quality can be just as important as quantity. Indeed, the most recent scientific research indicates that expert level performance in almost any activity comes not from natural talent or even constant repetition. Rather, it comes from expert level practice. Practice that is targeted, meaningful and knowledge/skill expanding: deliberate practice.

Not only that, the research goes on to say that the difference between expert performers and "normal" adults of similar age is a lifelong pursuit of deliberate efforts (in both education and practice) to improve in their specific area of expertise. So, who then are the true experts? Those with almost unheard of levels of natural abilities in a given area? More likely, it is those who maintain and practice at high levels consistently, over years or decades; always striving to not only maintain their performance, but improve. The research indicates it is rarely about or as simple as what you are born with. Instead, it is more about how consistently and deliberately you practice to improve.

Being Deliberate

The experts are not just authorities within their given domain. They are also experts at developing and maintaining high levels of practice which help improve their performance. Many are likely experts at developing such techniques on their own. Others, however, may be experts at surrounding themselves with exceptional coaches, instructors or practice partners who help them to improve by pushing them into higher levels of practice and/or exercises designed to maintain current knowledge/skill levels and to improve and expand abilities, as well. When applied properly and consistently, deliberate practice can overcome differences in cognitive abilities and even in physical attributes.

The famous World War II fighter pilot, turned test pilot, turned world-renowned air show pilot Robert A. "Bob" Hoover is a good example. He told the story many times of overcoming two issues in his early flight training. The first was airsickness. In his earliest lessons he would become physically ill within minutes of leaving the ground. He overcame this by simply persevering. He'd endure the airsickness long enough to return for landing, managing each time to stretch his time between takeoff and becoming ill just a few additional minutes over the previous flight. In time, he completely overcame his airsickness. His second was a deep fear of aerobatic flight. Yet, his goal of becoming a fighter pilot could never come to fruition without first becoming skilled at aerobatic flight maneuvers. He overcame this fear by putting himself into aerobatic flight attitudes while flying solo, knowing that once into the maneuver, he'd have no choice but to fly himself out of it. In short order, he had mastered aerobatics at levels even his instructors could not match. Years later, he'd be quick to admit it probably wasn't the safest way to learn aerobatics. What it was, however, was deliberate practice used to overcome physical and psychological limitations that, eventually, led to his ability to perform at expert levels.

Can Deliberate Be Fun?

The answer to that question is a definite "maybe." Practice in a deliberate fashion is not the same as work, nor play, nor the simple act of repeating a task ad nauseam. Being deliberate in one's practice requires effort that will likely reach beyond what most consider "fun." It will also come with little or no monetary reward. In fact, it will likely cost a practicing pilot in time, aircraft operating expenses, instructor fees and added maintenance costs. So, most psychological experts would say that it's not inherently pleasurable. Yet, that doesn't mean it has to lack any level of enjoyment.

Deliberate practice can certainly be designed to be fun. Within aviation, doing so will likely require flexibility. For example, for IFR pilots, one form of deliberate practice might be to fly and practice approach procedures in actual instrument meteorological conditions (IMC) down to or near published approach minimums. Many such pilots will even find such practice enjoyable. Be sure to take an appropriately experienced and proficient CFII along, as conditions and your own proficiency dictate. Patience and flexibility will be required to wait for such conditions to develop. Schedules will need to be flexible enough to take advantage of such conditions when it is safe to do so. When the stars align and these types of practice sessions can become reality, my experience is that both trainer and trainee benefit. They come away feeling like they learned something, honed their skills, challenged themselves and even had fun in the process.

Deliberate practice that is easier to schedule might include practice flights where you deem the autopilot off limits. From first takeoff to final landing, you practice hand flying. Through maneuvers or approach procedures (or both), hand flying exclusively will absolutely present opportunities to increase division of attention, multi-tasking and aircraft control skills. Conversely, flights where the autopilot is used to practice fully coupled departure, arrival and approach procedures can also be a form of deliberate practice, where improving your

FURTHER READING

The author credits the following sources. The information they contain is far more in-depth than what is presented in this article and if you are interested in the topic, reference them, as well.

"*The Role of Deliberate Practice in the Acquisition of Expert Performance*" by K. Andres Ericsson

"*Bounce: Mozart, Federer, Picasso, Beckham, and the Science of Success*" by Matthew Syed

"*Talent is Overrated: What Really Separates World-Class Performers from Everyone Else*" by Geoffrey Colvin

"*Outliers: The Story of Success*" by Malcolm Gladwell

automation management is the goal. In either case, using airports, instrument procedures (IAPs) or practice areas you don't use regularly will benefit your learning more than using the same places and IAPs you are already deeply familiar with. Either can be fun by simply breaking up the monotony of your routine practice and making it more deliberate in nature.

Combining deliberate practice with adventure flying can also be a way to inject fun into the equation. However, I caution against relying too much on combining adventures and training/practice. Such flying often involves long cross-country flight segments that are filled mostly with low-key cruise flight that is not overly beneficial. It can be, in fact, almost the antithesis of deliberate practice. Designing deliberate practice sessions requires a bit more creativity than simply saying, "I've always wanted to go to [insert destination]. Let's do that today and make it into a lesson."

Defining Deliberate Practice

According to K. Andres Ericsson, the late Swedish psychologist and professor who researched the psychological nature of expertise and human performance, deliberate practice will have four essential components:

1. The practicer must be motivated to attend to the task while truly exerting effort to improve performance.
2. The task needs to be designed specifically to take into account preexisting knowledge so that the task can be correctly understood from the beginning or after a brief period of instruction.
3. The practicer needs to be able to receive immediate and informative feedback. One must know and understand the results of their performance.
4. Repetition of the same or similar tasks is required to achieve expert level results.

Within aviation, the use of skilled instructors can help achieve elements #2 and #3 (and #4, to a lesser extent). The practicer is solely responsible for bringing motivation – element #1 – to the table and for ensuring they consistently adhere to repetition, element #4. *Your* contribution to successful deliberate practice cannot be overstated. You cannot allow yourself to be an excuse maker.

It is how you practice that matters the most. Your practice must challenge you. Repetition is important, but once a task is mastered, that repetition must be moved up a notch so that you are not repeatedly doing what you already know how to do at a level below what you are capable of. So a keen self-understanding of your weaknesses and strengths is critical. From that, invent tasks to address weaknesses and to further develop strengths.

It's Not a Pylon Race. It's a Long Cross-Country.

Be aware though, experts are not made overnight. Accelerated courses are common in aviation, but never do they produce experts. True expertise is gained through years of deliberate practice. The process takes consistent efforts spread out over long periods of time. Massive efforts condensed into short periods of time can be highly effective for passing tests. But, the new-found knowledge must be put into immediate and consistent practice to "stick" long term. Even then, the accelerated trainee will only retain what there was time to learn in their short course of instruction. Deliberate practice must be added thereafter and it must be applied consistently, even increasingly, growing in both intensity and frequency, to reach levels that could be considered "expert."

Too much for too long can create burnout and the desire to step away from an activity. In turn, that begins the erosion of skills and knowledge through disuse. Balance is a critical element to reaching expert levels. While your practice has to be deliberate, intense and consistent, it must be conducted in a way that doesn't lead to extreme psychological or physical fatigue and burnout. Pace yourself to keep energy and motivation in reserve, in order to keep deliberate practice sessions frequent enough to develop your skills and knowledge, but sized and spaced appropriately to keep you wanting to come back for more on subsequent days. KA

Matthew McDaniel is a Master & Gold Seal CFII, ATP, MEI, AGI, & IGI and Platinum CSIP. In 33 years of flying, he has logged over 20,000 hours total, over 5,800 hours of instruction-given and over 2,500 hours in various King Airs and the BE-1900D. As owner of Progressive Aviation Services, LLC (www.progaviation.com), he has specialized in Technically Advanced Aircraft and Glass Cockpit instruction since 2001. Currently, he is also a Boeing 737-Series Captain for an international airline, holds 8 turbine aircraft type ratings, and has flown over 120 aircraft types. Matt is one of less than 15 instructors in the world to have earned the Master CFI designation for 10 consecutive two-year terms. He can be reached at: matt@progaviation.com or 414-339-4990.

2023 Tax Incentives for Business Aircraft

by Daniel Cheung, CPA

Bonus depreciation continues to impact purchase decisions of many taxpayers. While the general rule is 80% bonus depreciation for business assets, business aircraft may qualify for 100% bonus depreciation in 2023.

If you have signed a purchase agreement prior to 2023 and made a non-refundable deposit of at least $100,000 – you qualify to take 100% bonus depreciation in 2023 when the aircraft is delivered.

Due to an oversight on the drafting of the legislation in 2017, 100% bonus depreciation may be available for any business aircraft acquired in 2023, if you follow the literal reading of the statute as written. Ultimately, your CPA handling your tax preparation and filing will decide whether to rely on 100% bonus depreciation in 2023 due to this technicality.

If 80% bonus depreciation is taken in 2023, the remaining 20% of the acquisition costs will be depreciated over the useful life of the aircraft, which is six tax years for aircraft operated under Part 91.

Something else to look into is "Section 179 Expensing," which is available for aircraft under a $4.05M purchase price. This expensing provision allows up to $1.16M of the purchase price of an aircraft to be deducted in the year of acquisition. Earned income and non-aircraft equipment purchases can impact the amount of expensing available.

Managing Audit Risks

The last couple of years have seen dramatic changes in the business aviation industry. The pandemic and the inconvenience of airline travel have led to many first-time business aircraft buyers. Tax benefits have played a role in attracting many business owners to acquire aircraft for business travels. With Congress increasing funding of the Internal Revenue Service (IRS), this is a good time to review the audit risk of aircraft ownership and what taxpayers can do to mitigate the risk.

One of the most common questions I address with prospects and clients: "Will I be audited by the IRS because I write off an aircraft?" Contrary to popular belief, it is extremely rare to be picked for an income tax audit by the IRS, even when a business aircraft is involved in your income tax filings. Although, certain reporting scenarios are indeed "high" risk and can draw attention from IRS auditors. The primary objective of our tax planning is to avoid aircraft ownership structures that "stick out like a sore thumb" and are more likely to draw IRS attention.

For example, reporting an aircraft on Form 1040, Schedule C, Profit or Loss from Business (Sole Proprietorship) with sizable tax loss due to bonus depreciation will be an invitation for an IRS examination.

"While the general rule is 80% bonus depreciation for business assets, business aircraft may qualify for 100% bonus depreciation in 2023."

Similarly, an aircraft holding company filing as an S corporation (Form 1120-S) or a Partnership (Form 1065) reporting a significant tax loss will also generate unnecessary interest from the IRS.

Even though it is a rare occurrence, we strongly recommend that our clients keep extremely detailed records to support the business use of their aircraft. Personal use of a business aircraft should also be handled based on the nature of the personal use. If you are audited, the key to success is your ability to establish that the aircraft is ordinary and necessary to support your business activities, and be able to support this claim with contemporaneous documentation, which includes detailed flight log records. Emails and calendar entries to collaborate that a business meeting took place will be very effective.

Managing state sales tax audit risk

Unlike IRS income tax audits, state sales and use tax audits occur on a regular basis. In some states, it is a certainty that an aircraft owner will receive a sales/use tax inquiry from the State Department of Revenue after the purchase of an aircraft. Therefore, if you are claiming a sales tax exemption on the purchase of an aircraft, you should be prepared to present documentation and flight logs to support the exemption claimed.

With the advancement of flight tracking websites, and the common requirement of state aircraft registration, it is highly unlikely that you can avoid scrutiny of your aircraft from state taxing authorities by utilizing a Delaware or Montana LLC. I refer to this state tax avoidance strategy as playing a game of "hide and seek." If caught, you will owe tax on the purchase plus penalty and interest.

State sales and use tax planning varies greatly from state to state. Some of the more common exemptions that may be available are:

- Interstate commerce exemption
- Occasional or private party purchase exemption
- Rental and leasing exemption
- Commercial charter use exemption

Due to the mobile nature of aircraft, it is important to determine if your aircraft may be subject to the jurisdiction of multiple states, such as the state of a second home or office locations. KA

Daniel Cheung is a principal of Aviation Tax Consultants, LLC (*www.aviationtaxconsultants.com*), which is celebrating its 20th anniversary in 2023. ATC's consulting services include the elimination or reduction of sales and use tax, maximizing income tax savings, controlling the cost of personal use of the aircraft, complying with passive activity loss and related party leasing rules and Federal Aviation Regulations. Cooperation with client's current tax and legal advisors is welcome and encouraged.

King Air Gathering

April 12-14, 2023 • St. Augustine, Florida

King Air expert Tom Clements speaking at a previous King Air Gathering. There will also be presentations given by representatives from Textron Aviation, Garmin and Pratt & Whitney.

Plans are coming together for King Air Gathering 2023 being held at the World Golf Village in St. Augustine, Florida.

Attendees will fly into Jacksonville Executive at Craig Airport (JAXEX) in Jacksonville, Florida, and utilizing the FBO services of Sky Harbor Aviation. From there complimentary transportation (during designated times) will take attendees to the World Golf Village, located about 30-45 minutes south of JAXEX.

All seminars and vendor exhibits will be held at the World Golf Village and start off with a radar course and welcome reception on arrival day. Other seminar subjects include Easily Remembering Emergency Procedures, Medical Issues and King Air Pilots, Weather and Market Updates, as well as presentations from Textron Aviation, Garmin and Pratt & Whitney. King Air experts Tom Clements, Dean Benedict and Chip McClure will be speaking, and attendees will also hear from SR-71 Blackbird pilot and "Sled Driver" author Brian Shul.

The World Golf Village is offering special pricing for rooms to those attending the

King Air Gathering. The resort features two championship golf courses collaboratively designed by Arnold Palmer, Jack Nicklaus, Sam Snead and Gene Sarazen, as well as an IMAX movie theater, outdoor pool, spa, fitness center, and complimentary shuttle service to downtown St. Augustine.

The Gathering would not be possible without the support of the exhibitors and sponsors, especially the Platinum sponsors: Blackhawk Aerospace, BLR, Raisbeck Engineering and Stevens Aerospace and Defense Systems.

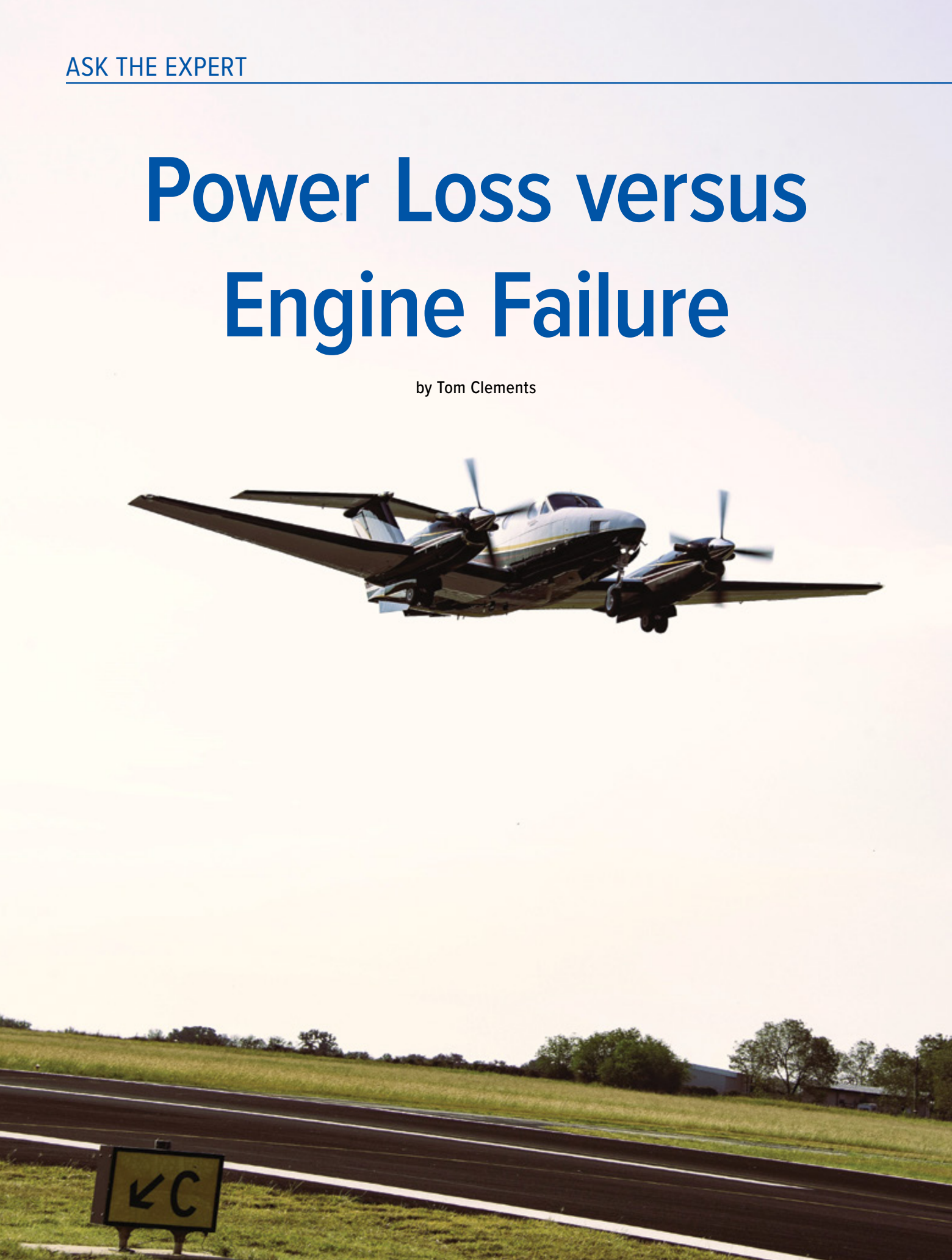
Updates and more details will be included in upcoming issues of this magazine as well as the website: *www.kingairnation/gathering*

Don't miss the opportunity to join with other King Air owners and pilots while learning something new. Make plans now to attend King Air Gathering 2023, April 12-14.

The World Golf Village in St. Augustine, Florida, is the location for the 2023 King Air Gathering and is offering special pricing for rooms to those attending.

Power Loss versus Engine Failure

by Tom Clements



Let's see a show of hands: How many of you have experienced an honest-to-goodness engine fire in a King Air? As I expected, no hands are up. How about an honest-to-goodness engine failure, such as a main bearing going bad, or the RGB (Reduction Gearbox) uncoupling, or the high-pressure, engine-driven fuel pump failing, or an FCU (Fuel Control Unit) runaway? Yes, I see a smattering of hands now. Finally, hold up your hand if you've experienced a significant rollback in power, a rollback that caused no engine damage. Wow! Now I see a lot of hands are raised! (You didn't know that I could see you through these pages, did you?)

For every true engine failure in the PT6-powered world, I believe there have been at least 10 times as many power rollbacks. Heck, maybe it's 100 times as many. Of these rollbacks, a sizable number have been due to mechanical problems beyond the pilot's control. These mechanical malfunctions include such things as: an open P3 supply line to the FCU, an open P_y line between the FCU and the fuel topping governor, a slipping connection between the power lever cable and the beta cam box, and some internal FCU metering valve malfunction.

However, compared to these reasons for a loss of engine power that are beyond the pilot's ability to control, there is one malfunction that leads to more rollbacks than any other and it is indeed within the pilot's ability to control. Most of you know what I am going to give as the reason, don't you? It is *Power Lever Migration*, the tendency for the power lever to spring back toward idle caused by a spring on its connection to the beta cam box.

The pilot action that prevents the spring from always pulling the power lever toward idle is ensuring that the power lever's friction control is exerting enough resistance to the spring force.

I have addressed the importance of proper power lever friction setting in *The King Air Book,* in past magazine articles, in classes that I have taught and in a lot of replies written on the great *BeechTalk* website. I won't belabor the point further here in this venue. Instead, I want to emphasize the proper steps of "The Drill" for when an engine problem is encountered in your King Air.

On the *BeechTalk* forum, in its "Beech Twins" section, there is a superb thread entitled *Martin Pauly Video, Twin Training, "The Drill."* Martin travels to Mason City, Iowa, to receive training with Doug Rozendaal in Doug's B55 Baron. Doug is an exceedingly accomplished pilot and instructor. Our getting to observe this training via the video is both enjoyable and educational. Even though it is dealing with a piston twin, King Air pilots will benefit from watching it. Take time to view it (*https://www.beechtalk.com/forums/viewtopic.php?f=3&t=162213&hilit=The+Drill*). It will be time very well spent.

The Drill starts with setting the proper pitch attitude and then doing the mantra most of us learned during our initial multi-engine training. It starts with: Mixtures, Props, Throttles, Flaps, Gear. In the King Air, it has one less step: *Power, Props, Flaps, Gear.* I call these "Your Four Friends" and I consider them so important that I made their discussion the very first chapter in *The King Air Book*.

Let's see what the POH has written concerning engine problems for the most populous King Air model, the B200. The first one in *Emergency Procedures, Section 5*, is titled "Emergency Engine Shutdown." Here is what the POH states:

EMERGENCY ENGINE SHUTDOWN

- ENGINE TORQUE INCREASE – UNSCHEDULED (Ground or Flight)
  (Not responsive to Power Lever Movement)
- ENGINE FIRE IN FLIGHT
- ENGINE FAILURE IN FLIGHT

Affected Engine:

1. Condition Lever – FUEL CUT OFF
2. Propeller Lever – FEATHER
3. Firewall Shut-off Valve – CLOSED
4. Fire Extinguisher (if installed) – ACTUATE (if required)

There are four more steps that deal with shutting off the generator and some other things.

Now let's look at this procedure from that same section of the POH:

ENGINE FAILURE AFTER LIFTOFF (If Conditions Preclude an Immediate Landing)

1. Power – MAXIMUM ALLOWABLE
2. Airspeed – MAINTAIN (takeoff speed or above)
3. Landing Gear – UP
4. Propeller Lever (inoperative engine) – FEATHER (or verify FEATHER if autofeather is installed)
5. Airspeed – VYSE (after obstacle clearance altitude is reached)
6. Flaps – UP

The POH procedures for other models are usually almost identical to the ones written here.

Where is *The Drill* in these procedures? In the *second* one, an argument could be made that at least most of the steps in *The Drill* are there. First step – Power? Yes, that is step one. But if you already know that an engine failure has occurred – and it seems as if the checklist writers assume this to be the case since "Engine Failure" is in the title – then it seems that ensuring power is at "Maximum Allowable" would involve only the remaining powerplant. If this "failure" is due to Power Lever Migration and we attended to only the other engine's power lever, we have not addressed this easily correctable problem! Not to mention, of course, that autofeather requires *both* power levers to be well-advanced for *either* side to automatically feather.

Second step of *The Drill* – Props? Nowhere to be seen here. "Don't be a nitpicker, Tom! The prop levers are already full forward for takeoff!" Are they? A lot of model 300 pilots have made a takeoff with them back at the minimum speed decent (1,450 RPM) because the POH tells you (quite stupidly in my opinion) to have them there for all ground operations.

Third step of *The Drill* – Flaps? This doesn't get mentioned until Step 6, but I am satisfied with that. The takeoff performance charts are quite thorough for the 200 series and if we have decided to use approach flaps for takeoff – to gain the benefit of a lower V_2 speed and a shorter accelerate-go distance – then it is proper procedure to leave them alone until attaining both 400 feet and V_{YSE}.

Fourth step of *The Drill* – Gear? Yes, it's in the procedure correctly.

Now let's examine the *first* of these two POH procedures that I have presented: Emergency Engine Shutdown. The first two reasons for doing this procedure make good sense: Torque runaway and fire. (I am still waiting to hear of any inflight PT6 fire.) The third reason, "Engine Failure in Flight," however? How do we (already a bit shook up by a loss of some power) really know that the engine has failed? What if it is merely a case of Power Lever Migration that would be immediately corrected if we only did Step 1 of *The Drill*?! Would it not be horribly embarrassing to pull the condition lever into fuel cutoff when the only thing wrong was that the power lever slipped back a bit?

"You're being OCD about this, Tom! Any pilot is going to notice the power lever moving back and will then push it forward!" Oh, how I wish you were correct on that opinion! Yes, I bet seeing the migration and reacting properly to it has happened thousands of times with no bad outcome at all. What about that one-in-a-thousand times, however, when the motion was not seen? When the

The first four steps of *The Drill.*

pilot was looking out the windshield or at the instruments intently when he moved his hand away from the power levers to reach for the landing gear handle and hence missed seeing the motion? I am convinced more than one fatal takeoff crash has resulted.

This is why I emphatically wish that *The Drill* were always the first four steps when a loss of power is suspected. If, *after* moving both power levers and both prop levers fully forward and making sure the flaps and gear are where you want them to be, we now still have an obvious lack of power, then proceed with the rest of *The Drill* … the "Identify, Verify and Feather" steps.

The "Four Friends" that I have been discussing here in relation to a suspected power loss also lend themselves perfectly to three other King Air procedures. For an IFR missed approach or a VFR Balked Landing, "Power, Props, Flaps and Gear" is a great procedural memory jogger. An emergency descent uses the same four steps, albeit with some different actions.

Let me tell you of an event I observed in which a perfectly good engine was shut down by mistake. One of my King Air recurrent training students – an experienced, capable pilot – was flying "under the hood" during our recurrent flight training session. I asked him to pretend that we were encountering icing conditions so he turned on all of the ice protection items. I pulled the left condition lever into fuel cutoff and after a couple of seconds pushed it back up to low idle. Since auto-ignition was armed and hence the ignitors had started sparking as torque went below 400 ft-lbs, the engine did a lovely windmilling relight and was spooling up to normal operation. As soon as the sudden loss of power was felt, the pilot began by doing *The Drill*. Both power levers got advanced, both prop levers went full forward, and the flaps and gear were verified up. Meanwhile, the left engine had returned to normal operation, matched with the right. The pilot was still pushing quite hard on the right rudder pedal and the skid ball was well to the left.

I am sure some will accuse me of doing a "dirty trick" and certainly I realize that the pressures of flying on instruments during recurrent training – when you know bad things are going to happen because of that evil instructor beside you! – are a huge factor. Nevertheless, forgetting to extend the ice vanes in icing conditions could lead to ice ingestion causing a flameout followed by a relight. That is what I had tried to replicate here.

In the student's mind, having felt the sudden loss in power, he "knew" that I had given him an engine

failure and he proceeded with the rest of *The Drill's* steps: Identify, Verify, Feather. Identify? There was no dead engine now but there was a dead foot since he was still stomping on the right pedal, causing a very uncoordinated flight condition! The poor fellow pulled the left power lever back – failing to notice that indeed power was being reduced dramatically – pulled the propeller lever into feather, and even continued to start to pull the condition lever into cutoff. I blocked his hand to prevent that from taking place, took the controls, and had him remove the hood. I pointed out the condition we were in … a perfectly good left engine at idle with its propeller feathered, turning about 400 RPM.

The big mistake was not executing the "Identify" step of *The Drill* correctly. I think, in his mind, he had identified the left engine as the dead one the instant he felt the initial yaw toward the left. He never considered that the sneaky CFI (me!) would reintroduce fuel and the engine would come back to life.

Another one of my students was almost snail-like in conducting *The Drill* when I gave him an engine failure during cruise. He did each step so very, very slowly, it was almost excruciating to watch. But you know what? I never saw him make a mistake in the procedure throughout our numerous training sessions over the years. What's the adage? "Haste Makes Waste." Golly, is that ever true!

I am realistic enough to realize that my opinions and beliefs will not cause every POH's emergency procedures to be revised, maybe not even one. Nevertheless, in my dreams I would prefer the concept of "Engine Failure" be replaced with the concept of "Suspected Power Loss." Until you've done *The Drill* how do you know that the engine has truly failed? Give it a chance to return to normal operation before you shut it down!

King Air expert Tom Clements has been flying and instructing in King Airs for over 50 years and is the author of "The King Air Book" and "The King Air Book II." 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 books, 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.*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The "Hollywood" Travel Air

On a cold December day in 1928, famous actor Wallace Beery walked into Olive Ann Mellor's office, flashed his famous grin and plunked down a wad of greenbacks to pay for his custom-built Travel Air monoplane

by Edward H. Phillips

During 1929, the monoplane made many cross-country flights piloted by Beery, who was often accompanied by his Hollywood friends. He shared his penchant for flying with many people, including a young, relatively unknown actor named Clark Gable. (Special Collections and University Archives, Wichita State University Libraries)

Ms. Mellor was stunned, not only by the sudden presence of an esteemed Hollywood star in her humble office, but even more so by the roll of thousand dollar bills resting on her desk. "There's the balance I owe for my airplane, 10 thousand bucks, paid in full," bellowed Beery as he looked down upon Ms. Mellor with a smile. "I'm Wallace Beery, glad to meet you." Quickly recovering her composure, Olive Ann returned the compliment, hastily made out a receipt and handed it to Beery. He smiled again, bid Ms. Mellor good day and disappeared through the doorway into the factory. Seizing what she knew was a once in a lifetime moment, she picked up the wad of bills and allowed the other three young ladies in the office to hold $10,000 in their hands, to see it, feel it and smell it if only for a brief moment. Olive Ann knew none of them were ever likely to enjoy that experience again.[1]

Wallace Beery was in Wichita, Kansas, to take delivery of his special Type A6000A cabin monoplane. Completed only a few days before his arrival, company test pilot Clarence Clark had put his personal stamp of approval on its performance and declared it ready for delivery. Beery had been a successful actor in Hollywood since 1913 and starred in many silent films such as "Robin Hood" and "The Sea Hawk." During the late 1920s he made the transition from silent movies to "talkies" and in 1931 was awarded an Oscar for his performance in "The Champ."

By the time Beery ordered his custom-built Travel Air in 1928, he had been flying for about four years and had owned an early production Travel Air type BW biplane. His financial success at the box office allowed him to freely indulge his aeronautical desires and he eventually chose the bullish Type A6000A as his next aerial mount. Although the Travel Air Company did

Beery and Walter Beech strike a pleasant pose beside the actor's factory-fresh monoplane. Beery was an accomplished pilot and held a Transport license. He began flying in 1925 and previously owned a Travel Air Model BW biplane. By 1929, demand for open cockpit biplanes was waning as more pilots, especially business owners, preferred enclosed cabin monoplanes. Celebrities such as Wallace Beery were no exception.
(Edward H. Phillips)

not "invent" the cabin monoplane, Walter Beech was among the first to foresee the growth of business aviation and the need for a modern airplane designed specifically to meet the unique requirements of that market. These included a spacious cabin capable of accommodating up to six occupants, the ability to mount office equipment such as a desk, typewriter and dictation machine, and above all, lend itself to customization.

In 1927 Beech had orchestrated an extensive market survey of Travel Air clientele and found that a majority would gladly trade their open cockpit biplanes for an enclosed cabin monoplane. As a result of the survey, company engineers created the Type 6000 that flew for the first time in April 1928. It later formed the basis for larger, more powerful versions such as the Type 6000B and the A6000A. Engineers Herb Rawdon, Walter Burnham, Cecil Barlow and Howard Bacchus redesigned the airframe to accept engines up to 300 hp. In addition, the forward cabin width was increased 4 inches and length increased by 5 inches; the throttle quadrant was relocated to the center of the instrument panel and the crank mechanism for the windows was improved.

The 6000B was powered by a nine-cylinder Wright J6-9 static, air-cooled radial engine rated at 300 hp while the larger A6000A boasted a massive, 425-hp Pratt & Whitney radial powerplant. Although built in much smaller numbers than the dominant 6000B, the A6000A offered customers more power and utility than was available with the standard airplane.[2]

When the company received Beery's order for an A6000A, it specified a list of custom appointments worth $1,000. These included seats upholstered in velour, a specially-built divan installed in the cabin so Beery could nap on long flights, a folding card table was built and installed and the actor paid an additional $195 for the optional lavatory

The A6000A was fitted with a special interior that included a divan and a lavatory (visible at rear of cabin) with hot/cold running water, mirror and white enamel tile. The lavatory was an option available for any Type 6000-series cabin monoplanes and proved useful for long cross-country flights. (Edward H. Phillips)

in the aft cabin (it was another upgrade that would prove useful on cross-country trips). Hot/cold running water flowed to the sink by gravity from a tank installed above the lavatory. A small, wall-mounted cabinet and a non-flushing toilet completed the interior of the space, which was attractively tiled in white enamel.[3]

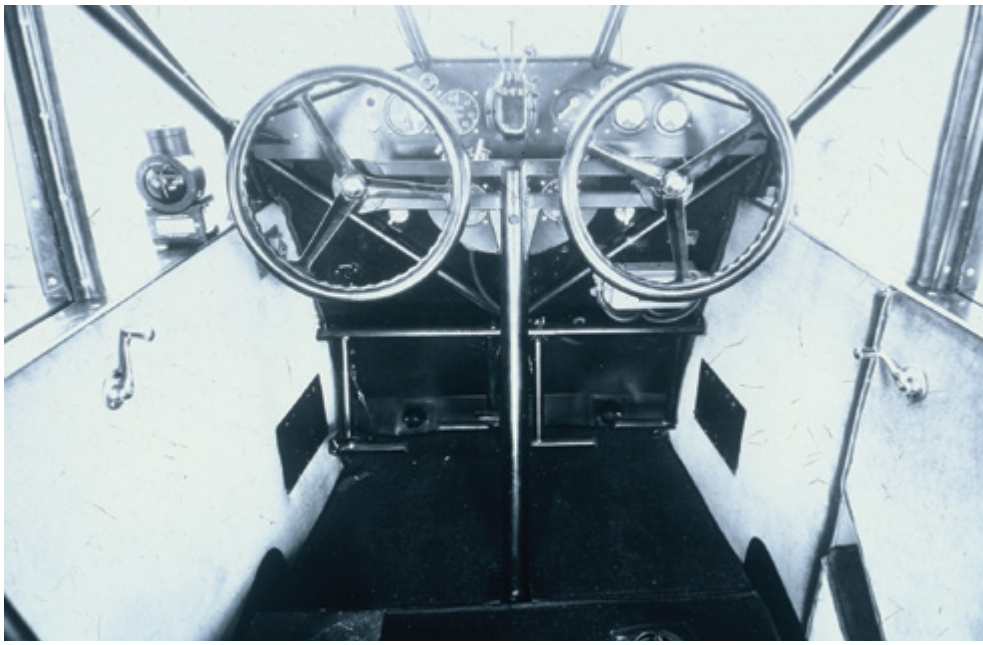
The upgrades made to Beery's airplane did not end with the cabin. Rawdon and his engineering team had to make major modifications to the basic Type 6000B airframe to ensure it could handle the big Pratt & Whitney R-985 engine. The forward fuselage section and engine mount area were reinforced with stronger tubing of increased wall thickness, a new engine mount was designed and the landing gear strengthened to cope with the airplane's higher gross weight.[4]

Wing area was increased 60 square feet for a total area of 340 compared to 282 square feet for the Type 6000B, and the wings were reinforced with steel tubing to handle the increased area and higher wing loading. The increased area allowed for an additional 80 gallons of fuel bringing total capacity to 130 gallons – a necessity since the thirsty R-985 gulped more than 30 gallons of fuel per hour at a cruise power setting. When the final bill was tallied Wallace Beery owed

Travel Air a whopping $20,000 – a staggering sum in 1928. It was the most expensive airplane the company built in its brief, five-year existence.

After flying with company pilot "Pete" Hill to become familiar with the monoplane, Beery and his employee George Maves took off from Travel Air Field December 18 en route to Los Angeles, California. Maves, who reportedly learned to fly under the able tutelage of famous aviator Art Goebel, had been hired by Beery chiefly to serve as a mechanic to maintain the A6000A and keep it ready for flight.[5]

Beery was pleased with his new ship and flew it regularly during the next 15 months, including a number of long cross-country flights for which the airplane was well suited. For example, according to the Davis-Monthan Aviation Field



The "flight deck" of a Travel Air monoplane was relatively advanced for 1928 with gyroscopic flight instruments, a panel-mounted quadrant for throttle, mixture and spark controls. Round, Deperdussin-type control wheels were common on many cabin airplanes of the era, and were standard equipment for Travel Air monoplanes. Visibility from the cockpit was somewhat restricted by the windshield structure, which was redesigned on later Type 6000 airplanes.
(Special Collections and University Archives, Wichita State University Libraries)

Register in Tucson, Arizona, Beery landed the airplane at the Tucson airfield March 14, 1929. He was carrying a full load of passengers from Los Angeles en route to El Paso, Texas.

In March 1930, the airplane was being flown by Maves when it crashed and was destroyed by impact and a post-crash fire in the vicinity of San Gabriel, California. Beery told reporters that Maves did not have permission to fly the ship, which was based at United Airport in Burbank. Beery had recently flown the Travel Air for five hours and knew of no mechanical problems with the airplane. Maves, his wife Cynthia and a pilot named Lynn Hayes were killed. According to local news reports dated March 25, 1930, witnesses told Department of Commerce officials that the monoplane "approached Valley Boulevard from the south" at a low altitude of about 300-600 feet before it began a turn to the left. Instead of rolling out of the bank the ship "fell off" and then "plunged, nose down," to the ground.

The newspapers reported that Beery was "much affected" when he learned of the accident. He said he had employed Maves "at various periods" totaling about 18 months as a mechanic and "had flown many hours with him." The accident, however, did not deter Beery from continuing to fly. He remained an active pilot until 1941 when America entered World War II. KA

Notes:

1. This story was related to the author by one of those young ladies who, 60 years after the event, still remembered the sight, feel and smell of big money as if it were yesterday.
2. After Travel Air was acquired by Curtiss-Wright in 1929, these designations were changed to Type 6B and Type A6A, respectively.
3. Although cramped for the average adult, the lavatory was functional and proved to be a popular option with customers.
4. The Type 6000B had a maximum gross weight of 4,230 pounds compared to 5,250 pounds for the Type A6000A.
5. According to internet sources, Maves had been a member of the popular "Thirteen Black Cats" aerial stunt team before accepting employment with Beery. He eventually took a job flying for Pickwick Airways but later resumed his employment by Beery and accompanied him to Wichita to accept the A6000A.

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, Kansas. 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.

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Textron Aviation recently announced that an electrically driven air conditioning system will soon be a standard feature on all new production Beechcraft King Air 360 aircraft. This new feature provides cooled air throughout the cabin while the aircraft is on the ground and in flight, enhancing passenger and crew comfort. Deliveries with the new air conditioning system are expected to begin in the coming months.

The new electric air conditioning system is built into the structure of the aircraft, and it does not impact any cabin space. It can operate without the aircraft engines running by plugging into a ground power unit (GPU). The system offers an environmentally friendly solution by cooling the cabin without the use of the aircraft engines.

PWI Entry Door LED Light for Beechcraft King Air Receives PMA Approval

PWI has received Parts Manufacturer Approval (PMA) production approval from the Federal Aviation Administration (FAA) for its LED Entry Door Light for Beechcraft King Air 200, B200/250, 300, B300/350 models*. When the passenger cabin door is lowered, this LED light illuminates the ground below the door. Mounted between the engine and the fuselage under the pilot side wing, this LED provides passengers with a well-lit entry to the aircraft.

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*The King Air 90 does not have an entry door light. KA

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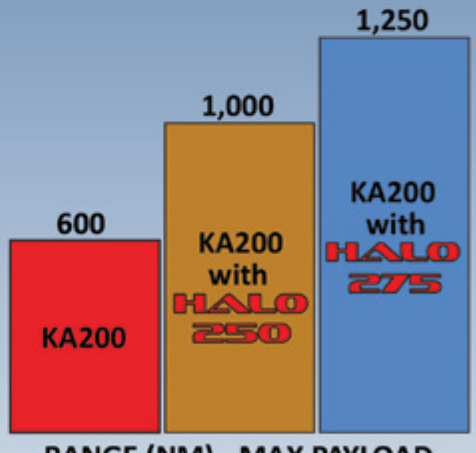

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