

WINTER 2024



The Landing Paradigm P2



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THE LANDING PARADIGM By Gene Benson, Pilot and Aviation Educator

A s pilots, we all take pride in our landings. Regardless of how successfully a flight was conducted, our passengers judge our competence by the quality of our landing. *Yet, landing accidents and incidents are by far the most common events that result in crumpled airplanes.* That makes sense because landings are arguably the maneuver that requires the high-

est level of pilot skill and proficiency.

The adage, "use it or lose it" applies to many aspects of the human body and the human mind. Physiologic disuse of our muscles leads to muscle atrophy. Disuse of our complex skills leads to skill atrophy. Landing an airplane, especially when conditions are not ideal, is certainly a complex skill relying on both physical and mental agility.

The decline of these skills in pilots is typically referred to as "skills fade." The retention interval of skills naturally varies from person-to-person but other factors can reduce the rate of decay. The biggest factor is how well the skill was learned before a period of disuse or of reduced use. A thoroughly learned complex skill will have a longer retention interval than if the skill was learned only to a minimum standard. Also, competency in a thoroughly learned complex skill will be regained much more quickly and easily after a period of disuse or of reduced use.

Skills fade occurs in a continuous downward slide, initially quite rapidly, then more gradually as the more time has elapsed since initial training. *Skill decline is fastest in the first few months*

after learning the skill and motor skills decline faster than knowledge skills. Re-

fresher training can usually restore a skill quickly providing it was well-learned in the past. If the skill was weak when initially learned, refresher training can easily become remedial training and establish competency at a higher level than was initially attained.

Airline and business aviation pilots undergo recurrent training mainly to counter skills disuse. Many of the complex skills required of these pilots are not routinely used even though the pilots fly frequently. Engine failure during takeoff on the runway just below V1 and rapid decompression at altitude are just two examples. Very few pilots of small, general aviation airplanes have the advantage of regularly scheduled recurrent training to refresh complex skills. Landing in a gusty, crosswind is one example of such a skill. How thoroughly did the pilot learn the complex skill required during initial training? How frequently has the pilot used that skill in the recent past? Was that skill refreshed during the most recent flight review? The flight review before that one? Even if a pilot has not encountered a gusty crosswind recently, refresher training can restore the skill or at least identify the weakness for correction by remedial training.

The required biennial flight review is not sufficient. Even if the flight review is conducted per the



regulations and by a competent and conscientious instructor, all weaknesses in pilot performance may not be identified. Going back to our gusty crosswind example, the flight review may have been scheduled well in advance of the flight and occurred on a perfect flying day with light wind down the runway and clear skies. The conscientious instructor might conduct landings at an airport where a crosswind runway is available, but if the wind is very light and steady, the crosswind landing skill cannot be adequately evaluated.

Many, but not all, complex piloting skills can be evaluated and refreshed in a quality general aviation simulator. Our example skill involving the gusty crosswind landing is one that cannot. General aviation simulator manufacturers freely admit that their devices do not have the fidelity to accurately represent the last few feet of the descent to the touchdown. Landings in general, and particularly the skill necessary to acquire and maintain proficiency in a gusty crosswind landing, are best learned, practiced, and evaluated the old-school way, in the airplane.

It is not easy to ensure continued competency in all the complex skills needed to safely fly as pilotin-command. It can be costly and inconvenient when it comes to scheduling to fly in the necessary and desired conditions. We must recognize that all pilots do not have the resources or flexibility to accomplish that and that pilots will fly when they are not fully competent in all tasks. *Pilots must not succumb to illusory superiority or optimism bias and recognize when some skills may have deteriorated due to lack of use.* Though it is not ideal to fly when not all skills are at their peak, a realistic evaluation of anticipated flight conditions and planning to avoid any situation in which those skills might be required is a good step.

References:

https://skybrary.aero/articles/skill-fade

https://jmvh.org/article/skill-fade-in-military-medical-training-aliterature-review-of-supraglottic-airway-use-in-the-prehospitalenvironment/*

Gene Benson has had a lifetime of aviation experience. He has lived and breathed aviation from his first official flying lesson at the age of 14, to his first solo on his sixteenth birthday, to his 8,000 hours of flight instruction given. He has served as the Dean of Aeronautics for an aviation college, as an instructor for a major domestic airline, consultant to several foreign and domestic airlines, and to business aviation. His academic background includes degrees in psychology, education, and business. His specialty now is the application of human factors to error reduction and safety in aviation and other industries. He is presently a FAASTeam Lead Representative and has recently served as a member of the NBAA Safety Committee. View Gene's work at genebenson.com and vectorsforsafety.com.*







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SAFETY PRODUCT SPOTLIGHT



COULD THE LIGHTSPEED DELTA ZULU BE THE WORLD'S SAFEST AVIATION HEADSET?

The first aviation headsets were invented for the military just seven years after the Wright Brothers flew. They were big, clunky, uncomfortable, and didn't do much to protect a pilot's hearing. Those early headsets were Bakelite with little or no padding. But still, they made it easier to hear radio transmissions.

It took several decades before headsets started cropping up in any numbers in GA aircraft. These were passive noise reduction units from companies like David Clark that offered more hearing protection and greater clarity to communicate with ATC so as not to miss important transmissions. But they were still big and heavy, and it was still loud inside a GA cockpit. The annals of aviation are filled with stories of pilots who suffered hearing loss from years of flying while wearing ineffective headsets, or no headset at all.

The real quantum leap in aviation headset technology came in the late 1970s when Bose introduced active noise reduction (ANR). ANR was the last major advancement, and that was more than 40 years ago. Since then, headset technology has progressed in more subtle ways. Headsets have become lighter, more comfortable, and more feature-rich with less clamping force. Some manufacturers, like Lightspeed Aviation, have since added Bluetooth and features like the ability to record and playback ATC transmissions. Fast forward to 2022, Lightspeed took safety to a place it had never been with the introduction of the Delta Zulu, the first digital headset. Delta Zulu has a built-in carbon monoxide detector and is the first of its kind to have the ability to compensate for a pilot's hearing loss.

The Lightspeed Delta Zulu has a carbon monoxide detector in the ear cup, near your mouth, and by your nose where you're actually breathing in the carbon monoxide. Allan Schrader, the founder and president of Lightspeed Aviation says, "The pilot can select the thresholds of warning. There's a cautionary level and a critical level. You can select whether you want a tone, or a voice and you can select whether you start being warned at 10 parts per million, 11, 12, all the way up to 50."

Since the effects of CO are cumulative, the Delta Zulu warns you periodically of the level of CO you're breathing. The insidious danger of CO poisoning is that there's no way to know it's happening until it's too late and your thinking is getting foggy or you're starting to get a headache or fall asleep. The Delta Zulu allows you to select a voice warning that will alert you as CO levels rise so you know when it's time to get back on the ground and investigate the problem.

Lightspeed has collected data from more than 50,000 flights that show the life-saving value of the Delta Zulu.

The other safety feature built into the Lightspeed Delta Zulu is what Schrader calls "hearing compensation." It is especially valuable for older pilots who have experienced hearing loss over the years. He's careful not to call it an integral hearing aid but it does function to positively impact hearing acuity in the frequency ranges where an individual has experienced hearing loss.

He says, "Basically it works pretty simply. You put on the headset and go to a quiet place to take a hearing test like one you'd take at the audiologist. Once you've finished the test, you can change the way the ATC sounds, to compensate for elements of your hearing loss.

You can program the Delta Zulu for any hearing loss that you self-report after the hearing test. When you're done, you have recorded your hearing in your left ear different from your right ear, relative to a standard of what good hearing would be.

Both the carbon monoxide detector and the hearing compensation are pilot-controllable through an app. Once you have selected the settings, you no longer need to use the app. The Delta Zulu saves your preferences and goes with you from flight to flight and even plane to plane. To learn more about this groundbreaking technology, visit www.lightspeedaviation.com.



By Pilot Insurance Center Avemco Insurance Company's partner for pilot-friendly term life insurance

WHAT PILOTS SHOULD KNOW ABOUT LIFE INSURANCE

Beyond mastering the art of navigating the skies, pilots must also consider the importance of safeguarding their loved ones and their financial well-being. One crucial instrument in achieving this is life insurance.

Unlike generic life insurance policies, pilot life insurance is specifically designed to address the unique risks associated with aviation. These policies consider factors such as flight hours, type of aircraft flown, and overall health, providing tailored coverage that you can feel confident about. Start your year off right by considering the following:

Has your aviation status changed? – more experience, new ratings, new aircraft flown?	?	Has your financial situation improved since you initiated your policy?	?
Does your current policy fit your current needs? Bigger family, bigger mortgage, more income?	?	Was the policy issued at less than preferred rates?	?
Are there any beneficiary changes that	7	Was the policy issued as a smoker	2
should be considered?		and you no longer smoke?	

As the leading provider of life insurance within the aviation industry for over 25 years, The Pilot Insurance Center has shared 3 things that will help guide you toward the right policy:

Buy Life Insurance from an experienced aviation insurance agent.

We provide quotes from underwriters who are well-versed in all things aviation for level-term and universal life insurance.

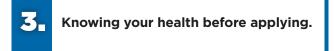
- Buying life insurance through your home or auto insurance agent or from life insurance online quote engines are likely the most expensive options for a pilot. They usually don't understand the pilot guidelines of the life insurance companies, resulting in an increased premium at approval.
- Buying life Insurance from an Affiliate Group usually has regular rate increases and is not level-term.
- Buying life insurance through your employer nearly always has a general aviation exclusion.

2. Find the right carrier with the appropriate aviation guidelines before applying.

Pilot Insurance Center researches each life insurance company's aviation underwriting guidelines



regularly. Having a working knowledge of these constantly changing guidelines and working with carriers to improve them for pilots. An incomplete understanding of these guidelines can result in the wrong underwriting classification, increased premium, and sometimes an aviation exclusion.



Your overall health information is an important component of the applicant's underwriting process. Your agent will guide you in properly completing the health information required. Be prepared to supply your doctor's information, medical history, family history, and prescription information.

The Bottom Line

What is the best way to buy low-cost life insurance for pilots? Get a level premium life insurance policy from an aviation specialist at an independent life insurance agency. The Pilot Insurance Center provides the best choices for an aviator. Whether you are a Student Pilot or an ATP, they work to find you the best policy to fit your needs.

The staff at PIC are happy to answer any questions regarding the information found here and further assist you with life insurance in general. Learn more at <u>www.avemco.com/termlife</u> or call 800-380-8376 and speak with an Aviation Life Insurance Specialist at PIC.

START YOUR QUOTE FROM PIC HERE

Any information that you provide directly to PIC on its website is subject to the privacy policy posted on their website, which you should read before proceeding. Avemco assumes no responsibility for their privacy practices or your use of their website.

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NON-PROFIT SPOTLIGHT

WINGS INDUSTRY NETWORK

E-Z Wings Lives up to its Name by Making the WINGS Pilot Proficiency Program Easier to Navigate

There is a proven correlation between pilot proficiency training and fewer accidents. That's not hard to believe and the insurance companies know it, too. One of the easiest ways to let your insurance company know you're getting recurrent training is to complete a phase of the WINGS Pilot Proficiency Program from the FAA. WINGS training comes in several forms, from online and in-person seminars to in-air training with a CFI.

If there was any criticism of the WINGS program, it's that it was a fairly intense multi-step process on behalf of an instructor to validate WINGS credit for a student or for a student to request WINGS credit.

Now, a collaboration of flight training experts has come together to form the WINGS Industry Network, with the goal of improving the WINGS Program, including making it easier for instructors to give WINGS credits and for pilots to receive them. To that end, the WINGS Industry Network has developed the E-Z WINGS app, which significantly simplifies and streamlines the process.

E-Z WINGS cuts through the red tape with an app

so you no longer have to get on your computer to request credit and then get your flight instructor to validate the credit. E-Z WINGS makes it easy to find and submit FAA WINGS phase activities in order to earn or validate WINGS phases for check rides, flight reviews, IPCs, and more, as soon as you complete the activity. The instructor can do it all after they're done flying and before you leave the airport.

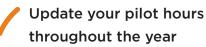
Avemco is a strong supporter of The WINGS Pilot Proficiency Program. Not only do we provide premium credits to Avemco customers who participate in WINGS, we present all participants with WINGS lapel pins upon program completion. When a participant completes any of the three phases of the program – Basic, Advanced, or Master – they can receive the corresponding lapel pin to proudly display.

You can learn all about E-Z WINGS and download the app <u>here</u>.

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*Premium credits are subject to underwriting guidelines.

THINGS IN MY HANGAR YOU MIGHT NOT KNOW YOU WANTED IN YOURS

By Jason Blair, ATP, CFI-I, MEI-I, FAA Designated Pilot Examiner, AGI

Hangars seem to collect "stuff," some of it useful for aviation, much of it in many cases just things we needed to put somewhere and had extra room in the hangar. But what about the things that might be useful for your aviation-related activities? Some things we keep in hangars are more commonly recognized, but a few I have collected over my years are probably a little less obvious and present in fewer hangars.

As I was looking around my hangar the other day, that thought struck me, and I thought it might be interesting to share with other aircraft owners a few things from my hangar that they might want to add to their own.

Clip-On Shop Light

It's cheap, it's mobile, you can clip it on a cowling, a strut, inside the plane on the dash or yoke, and it gets you stable light when you need to work or find something you dropped. Available from pretty much any home improvement store, these basic lights coupled with an extension cord have been highly useful more times than I can count in my hangar. One upgrade I always make? Put an LED light bulb in them instead of an incandescent. They will continue to work through more instances of dropping the light. (Personal experience showing through here.)

Single Step Stool

Just reaching the top of cowlings, a nav light to change a bulb (on a high-wing aircraft), or to clean the upper part of the fuselage requires just enough extra step much of the time for which a ladder would be overkill. Check your local hardware store, and you can get one of these, most of the time, for under \$20.00. I prefer ones without wheels, for obvious

reasons.



Rolling Storage Cart

Running back and forth in the hangar for parts, tools, or cleaning supplies as you work around your aircraft gets tedious. Bring those supplies with you with a rolling storage

cart! I have two in my hangar. I roll them around, I store parts on them when we are working on stuff, I keep tools in the bottom of them, and I don't have to run back and forth to the table in the corner. It's partially an organizational thing, partially convenience, and it is just good money spent. I got mine delivered from an online store, for less than \$100 per cart. A little shopping around might find them locally, or even cheaper, but it was an easy solution for me. It may be one of the more costly items on this list, but in the grand scheme of things, it has been well worth it to me.

Rolling Creeper

Crawling under the plane to clean the belly, pull inspection panels, or just find that screw you dropped can be hard on the knees, the back, and your head when you get up too quickly. I find that keeping a rolling creeper in the hangar makes all of these things just a little bit easier and more convenient. These are easily found at your local hardware chain, and even some auto supply stores. Yeah, online stores will deliver them also. Expect to spend \$50-70 unless you want to upgrade to the deluxe model, which you can certainly do. There are lots of options for creepers. Mine is pretty basic and gets the job done.



Yoga Mat

One of my personal favorites is available from any sports store. Large department stores now carry them, or it is possibly just lying around your house already. An extra thick yoga mat can be laid down on the floor while you are working, over a hot engine while you check something, put on an aircraft wing to protect it or to lay tools on without having them slip off, or any number of other creative uses. Oh, you could put it on that rolling creeper I mentioned above also to make laying down softer as you clean that belly. I honestly



can't imagine not having one in my hangar ever again! 15-20 dollars will easily get you one.

There are certainly more common things people keep in their hangars; hopefully, you find these tips a little less common and helpful. If you already had them all in your hangar, you are either ahead of the game or have been snooping around where I keep my plane!

Jason Blair is an active single- and multi-engine instructor and an FAA Designated Pilot Examiner with over 5,000 hours total time and over 3,000 hours instruction given and has flown over 100 different makes and models of general aviation aircraft. In his role as Examiner, over 1,500 pilot certificates have been issued. He has and continues to work for and with multiple aviation associations that promote training and general aviation. He also consults on aviation training and regulatory efforts for the general aviation industry. Jason Blair has published works in many aviation publications, a full listing of which can be found at <u>www.jasonblair.net</u>.



Readback is your chance to tell us what you think about everything we have to say and do – including our PIREPs, articles, emails and previous issues of the *On Approach* newsletter. Content has been or may be edited for length and style before publication.

RESPONSES TO "GOING BEYOND JUST BASIC COMPLIANCE TRAINING IN YOUR AIRCRAFT"

Yes, Mr. Blair is certainly correct with his advice. As a CFI, CFII, MEI I have found after 30+ years of flying that recurrent training is a must if we are to continue flying with proficiency. I find that teaching students gives me a certain amount of proficiency, but to fly my Bonanza I find that it is necessary to seek out my BPPP instructor and go over type specific training. The Wings program is built to do exactly that. I encourage all my students to fly with different instructors after receiving their rating as there is always something new to learn. Learning in Aviation is a lifelong endeavor

--Carl Miller

I thought the recent "PIREP" was very useful. I especially like flying with different instructors

and in different aircraft. A different viewpoint on common procedures can enhance awareness and improve skills.

--Russ Read

RESPONSES TO "FROM THE SUBJECTIVE TO THE OBJECTIVE - MAKING BETTER DECISIONS"

I love your PIREPs and this one is another gem. Yes, we do tend to take shortcuts sometimes and I have to admit I have too. However, after reading this PIREP, no more shortcuts for me going forward.

-Junaid Adil

Great PIREP! Excellent contrast between various aviation risk management tools. The key point of shifting away from subjective in favor of objective is key to reducing emotional/external pressures. To put this principle into action I have preloaded CWX Brief mobile app with my personal minimums. When I load a route and update with forecast weather, it provides a great visual go, no-go output by taking my personal minimums into account. It reflects exactly the key point Gene Benson makes in this PIREP. Thank you AVEMCO for reinforcing this important safety concept.

--John Boyland Instrument Rated Private Pilot

Years ago, an NTSB investigator taught that the problem with pilots was not judgment but

decision-making. I would like to see an in-depth analysis of the root neuropsychological reasons really good pilots make really bad decisions. Many of us in Alaska are haunted by the crash and death of a 50-year 25-thousand-hour commercial pilot. He flew into the wrong canyon in the snow. He had lots of local experience and good GPS. He passed up the opportunity to land for coffee and cookies 15 minutes before he impacted. His dispatcher knew he was in the wrong place by the inreach tracker.

--Dick Sutliff

Good info to review and dust off the thought process in planning for a flight - be it just a hop about the patch or a long cross country. That thinking ' Nothing to this flying - I have been at it a LONG time ' has a way of biting one in the BUTT. I enjoy reading these PIREPS - get a lot out of them and wanted to comment a bit.

--Dennis Copeland KBRO

I enjoyed this month's PIREP and I have attached information about my Hypoxia experience. Years (68) ago the military was about the only place you could experience Hypoxia; now there are facilities all over the country for civilians. Feel free to modify my experience and add info about current facilities which might motivate the pilots you insure to experience their hypoxia symptoms.

--Ben Vernazza

COMING TO A HANGAR NEAR YOU!

The most fun we have all year is meeting you in person and strengthening our ties within the aviation community.

Avemco will be exhibiting at the following aviation tradeshows and more in 2024:

FEBRUARY 15-16 NGPA Industry Expo Palm Springs Convention Center Palm Springs, CA Booth #621

FEBRUARY 16-18 AOPA Fly-In Buckeye Buckeye Municipal Airport (KBXK) Buckeye, AZ Booth # TBD APRIL 2-14 Sun 'n Fun Lakeland, FL Booth #C-058

JULY 22-28 EAA AirVenture Oshkosh, WI Booth #1159-A

MARCH 21-23 Women in Aviation International Orlando World Center Resort & Convention Center Orlando, FL Booth # TBD

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