



EAA Chapter 100 September 2021 Newsletter

<http://eaa100.org>

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EAA Chapter 100 is a nonprofit association involved in the promotion of aviation through adult and youth education, hands-on training, building and maintenance of experimental aircraft, and through community awareness programs.

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Reader submissions and comments are strongly encouraged.

Aeronautical Information Manual, Chapter 8, Section 1. Fitness for Flight

– FAA

8.1.1 Fitness For Flight

a. Medical Certification.

1. All pilots except those flying gliders and free air balloons must possess valid medical certificates in order to exercise the privileges of their airman certificates. The periodic medical examinations required for medical certification are conducted by designated Aviation Medical Examiners, who are physicians with a special interest in aviation safety and training in aviation medicine.
2. The standards for medical certification are contained in 14 CFR Part 67. Pilots who have a history of certain medical conditions described in these standards are mandatorily disqualified from flying. These medical conditions include a personality disorder manifested by overt acts, a psychosis, alcoholism, drug dependence, epilepsy, an unexplained disturbance of consciousness, myocardial infarction, angina pectoris and diabetes requiring medication for its control. Other medical conditions may be temporarily disqualifying, such as acute infections, anemia, and peptic ulcer. Pilots who do not meet medical standards may still be qualified under special issuance provisions or the exemption process. This may require that either additional medical information be provided or practical flight tests be conducted.
3. Student pilots should visit an Aviation Medical Examiner as soon as possible in their flight training in order to avoid unnecessary training expenses should they not meet the medical standards. For the same reason, the student pilot who plans to enter commercial aviation should apply for the highest class of medical certificate that might be necessary in the pilot's career.

1. CAUTION-

2. The CFRs prohibit a pilot who possesses a current medical certificate from performing crewmember duties while the pilot has a known medical condition or increase of a known medical condition that would make the pilot unable to meet the standards for the medical certificate.

b. Illness.

1. Even a minor illness suffered in day-to-day living can seriously degrade

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performance of many piloting tasks vital to safe flight. Illness can produce fever and distracting symptoms that can impair judgment, memory, alertness, and the ability to make calculations. Although symptoms from an illness may be under adequate control with a medication, the medication itself may decrease pilot performance.

2. The safest rule is not to fly while suffering from any illness. If this rule is considered too stringent for a particular illness, the pilot should contact an Aviation Medical Examiner for advice.

c. Medication.

1. Pilot performance can be seriously degraded by both prescribed and over-the-counter medications, as well as by the medical conditions for which they are taken. Many medications, such as tranquilizers, sedatives, strong pain relievers, and cough-suppressant preparations, have primary effects that may impair judgment, memory, alertness, coordination, vision, and the ability to make calculations. Others, such as antihistamines, blood pressure drugs, muscle relaxants, and agents to control diarrhea and motion sickness, have side effects that may impair the same critical functions. Any medication that depresses the nervous system, such as a sedative, tranquilizer or antihistamine, can make a pilot much more susceptible to hypoxia.

2. The CFRs prohibit pilots from performing crewmember duties while using any medication that affects the faculties in any way contrary to safety. The safest rule is not to fly as a crewmember while taking any medication, unless approved to do so by the FAA.

d. Alcohol.

1. Extensive research has provided a number of facts about the hazards of alcohol consumption and flying. As little as one ounce of liquor, one bottle of beer or four ounces of wine can impair flying skills, with the alcohol consumed in these drinks being detectable in the breath and blood for at least 3 hours. Even after the body completely destroys a moderate amount of alcohol, a pilot can still be severely impaired for many hours by hangover. There is simply no way of increasing the destruction of alcohol or alleviating a hangover. Alcohol also renders a pilot much more susceptible to disorientation and hypoxia.

2. A consistently high alcohol related fatal aircraft

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CALLBACK 499, August 2021 - Amateur / Homebuilt / Experimental Phenomena

-- Richard Fetcher

Some of the most energetic, devoted, and beloved aviation enthusiasts are pilots who have built or flown aircraft designated as Amateur/Homebuilt/Experimental in the ASRS Aircraft Make and Model Taxonomy. This group comprises a large number of different aircraft types, and the pilots who fly them are equally diversified. ASRS has received many engaging reports from this accomplished pilot contingent.

This month, *CALLBACK* shares reported incidents that highlight some familiar threats and unusual hazards experienced by pilots flying aircraft classified in the Amateur/Homebuilt/Experimental group. Enjoy the ever-present freedom and sense of adventure shared, but consider also the lessons revisited and the wisdom revealed.

Anatomy of One Unstable Approach

This private pilot chronicles an inadvertent oversight and subsequent efforts to compensate for it. Results were an unstable approach and aircraft damage.

■ *Due to the proximity of trees on the downwind leg of the traffic pattern, I inadvertently stayed above standard traffic pattern and approach altitudes. [During the] final turn, my altitude remained higher than a stable approach required. In an attempt to descend quickly, I deployed the speed brake to increase rate of descent on short final, which steepened the descent and increased the airspeed.... Sink rate and airspeed remained higher than required for a stabilized approach, resulting in a hard landing involving both main gear and the nose gear contacting the runway and a subsequent bounce. On the second contact with the runway, the nose gear collapsed, and the aircraft slid down the runway center.*

A ground observer later commented that after the ini-

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Secretary Comments

-- Jeff Hanson

EAA Chapter 100

Chapter 100 meeting 08-15-21

The August meeting was a successful annual chapter picnic. There was great weather and a great Turnout — including a few fly-ins. Thanks to Dwayne and Jim for putting this together once again. Your efforts are appreciated.

Respectfully submitted,

Jeff Hanson

Chapter Secretary

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tial bounce, the nose gear was turned perpendicular to the direction of flight and [began] a rapid oscillation upon second contact, which likely over-stressed the nose gear attach point to the point of failure. The nose gear wedged under the forward fuselage at an angle and created a strong left turning force. I attempted to assert directional control through differential braking but could not fully overcome the turning force. The aircraft departed the runway to the left approximately 1,000 feet from initial contact. [It] slid down an embankment for approximately 100 feet and came to rest in the grass area. An occupant was evacuated immediately without injury, and no fuel or oil was spilled in the environment. The aircraft suffered moderate damage to the nose cone, left canard tip, and left winglet bottom. In addition,...the nose gear...was sheared off.

The incident was preventable had I flown the standard traffic pattern with a standard approach to landing air-speed without the distractions from nearby trees and

[without] the psychological factor of the runway being shorter than I am used to, but well within the demonstrated capability of both my previous flights in type and the aircraft performance. Additional practice and proficiency flights in type would also have likely contributed to prevention by increasing [my] confidence and experience in the type flown.

Fuel Management

This commercial pilot experienced an engine failure, but the cause was not conclusively identified. Technique is implied.

■ I departed the airport for a pleasure flight. The flight was estimated to be two hours, and I topped off with fuel for a four-hour endurance. No flight plan was filed. I fly over this area frequently and navigate by ground reference. I first flew northwest to the western edge of a mountain range, then traveled east along the southern face of these mountains. My plan was to continue to fly along the mountain range to the east, and then south to land. While transitioning between the two ranges, I switched fuel tanks, and the engine immediately quit running. I switched back to the previous tank, turned on the boost pump, and increased the mixture. The propeller was windmilling. I waited for a few seconds for the engine to restart. When it did not restart, I pumped the throttle a few times. This was not successful, and the propeller stopped. I initiated my forced landing procedure at this point while turning over the engine with the key for another 20 seconds or so. I decided on the freeway. The landing was uneventful. The plane was [towed] from the freeway by a flatbed truck. The engine was restarted and a number of tests were done to isolate the cause of failure, but none could be found. I used a stretch of open road to take off and return. My Mechanic told me that I should always turn on the boost pump when switching tanks in a low wing [aircraft]. I am making this part of my normal procedure and only switching tanks when within gliding [distance] of an airport, whenever possible.

Where the Line Gets Fuzzy

A commercial, instrument-rated pilot received a complaint after conducting planned Part 91 operations in an amateur/ homebuilt/experimental aircraft that were

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deemed safe.

■ *Long Beach Harbor has a long history of seaplane operations that reach back to the dawn of aviation.... Late on a hazy, but otherwise benign weather, weekend afternoon, I departed the Long Beach Airport for a short flight to the harbor. From a vantage point at the foot of the Los Angeles River, I could see conditions were conducive to seaplane operations. I contacted the Tower to inform them of my intentions to conduct multiple seaplane operations within the southern boundary of their Class D airspace and received the usual acknowledgment...catchphrase, "At your own risk." The area chosen for those operations lay parallel to the shoreline and 150 feet south of the swimming buoys. I have conducted many seaplane operations in this same area over [many] years, as have other seaplane pilots. My first pass remained airborne at 50 feet above the surface to ensure there were no hazards in the water. The next three passes involved multiple touch-and-goes from the surface. I saw no swimmers south of the buoys. I departed the area southbound, climbing to pattern altitude plus 500 feet before turning 180 degrees back to the airport. Taxiing to parking, the Tower informed me there had been a complaint that my operations were too close to swimmers.*

An Open and Closed Case

This Flight Instructor encountered a mechanical failure that quickly became a critical problem. The situation was handled successfully, and the failure was described in detail.

■ *While flying back to the airport from a wonderful aerobatic flight, I was approaching from a direction that I rarely approach from. I was approximately 1,000 feet AGL slowing the aircraft in preparation to join cross-wind for landing. As I neared the centerline of the runway, I made a decision that I immediately regretted. I lowered my nose and dived towards the runway. At approximately 250 feet AGL, I conducted a low approach down the runway. At the end of the runway, I did a barrel roll, entering and exiting the maneuver at approximately 500 feet AGL. Maybe five seconds passed between the thought occurring and me completing the maneuver. I then departed the pattern and reentered for landing.*

This was an impulsive and completely stupid decision,

and while it resulted in no incident and was in a very remote area posing no danger to anyone, it was a deviation from my regular flying practices that I can only conclude was ego and impulse driven. I greatly regret my actions. And I greatly regret my lack of restraint and professionalism.

I have decided, in an attempt to retrain myself, to consult with regulation and aerobatic professionals to learn and retain as much regulation [knowledge] associated with aerobatic and low-level flight as possible and to not conduct any further solo aerobatics until I have completed a refresher course specifically for safe aerobatic maneuvers. I am also taking time to refresh my mindset and to acknowledge and stop impulsive and unsafe thought from entering my cockpit in any stage of flight.

Editor: All issues of CALLBACK can be seen at the URL <https://asrs.arc.nasa.gov/>

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accident rate serves to emphasize that alcohol and flying are a potentially lethal combination. The CFRs prohibit pilots from performing crewmember duties within 8 hours after drinking any alcoholic beverage or while under the influence of alcohol. However, due to the slow destruction of alcohol, a pilot may still be under influence 8 hours after drinking a moderate amount of alcohol. Therefore, an excellent rule is to allow at least 12 to 24 hours between "bottle and throttle," depending on the amount of alcoholic beverage consumed.

e. Fatigue.

1. Fatigue continues to be one of the most treacherous hazards to flight safety, as it may not be apparent to a pilot until serious errors are made. Fatigue is best described as either acute (short-term) or chronic (long-term).

2. A normal occurrence of everyday living, acute fatigue is the tiredness felt after long periods of physical and mental strain, including strenuous muscular effort, immobility, heavy mental workload, strong emotional pressure, monotony, and lack of sleep. Consequently, coordination and alertness, so vital to safe pilot performance, can be reduced. Acute fatigue is

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prevented by adequate rest and sleep, as well as by regular exercise and proper nutrition.

3. Chronic fatigue occurs when there is not enough time for full recovery between episodes of acute fatigue. Performance continues to fall off, and judgment becomes impaired so that unwarranted risks may be taken. Recovery from chronic fatigue requires a prolonged period of rest.

OBSTRUCTIVE SLEEP APNEA (OSA). OSA is now recognized as an important preventable factor identified in transportation accidents. OSA interrupts the normal restorative sleep necessary for normal functioning and is associated with chronic illnesses such as hypertension, heart attack, stroke, obesity, and diabetes. Symptoms include snoring, excessive daytime sleepiness, intermittent prolonged breathing pauses while sleeping, memory impairment and lack of concentration. There are many available treatments which can reverse the day time symptoms and reduce the chance of an accident. OSA can be easily treated. Most treatments are acceptable for medical certification upon demonstrating effective treatment. If you have any symptoms described above, or neck size over 17 inches in men or 16 inches in women, or a body mass index greater than 30 you should be evaluated for sleep apnea by a sleep medicine specialist. (https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html) With treatment you can avoid or delay the onset of these chronic illnesses and prolong a quality life.

f. **Stress.**

1. Stress from the pressures of everyday living can impair pilot performance, often in very subtle ways. Difficulties, particularly at work, can occupy thought processes enough to markedly decrease alertness. Distraction can so interfere with judgment that unwarranted risks are taken, such as flying into deteriorating weather conditions to keep on schedule. Stress and fatigue (see above) can be an extremely hazardous combination.

2. Most pilots do not leave stress "on the ground." Therefore, when more than usual difficulties are being experienced, a pilot should consider delaying flight until these difficulties are satisfactorily resolved.

g. **Emotion.** Certain emotionally upsetting events, including a serious argument, death of a family member,

Newsletter Editor

-- Art Howard

Now that September is here, start planning the fall flights to see the fall colors from the air. Think of the increased performance in the cooler weather. It is still not winter, so you should not get cold during preflight.

Just be sure and check the weather for any early fog or snow flurries. Fall color flights are VFR (Visual Flight Rules) as you want to see the colors and not be in marginal visual conditions.

Fly safe and enjoy the change in seasons!

separation or divorce, loss of job, and financial catastrophe, can render a pilot unable to fly an aircraft safely. The emotions of anger, depression, and anxiety from such events not only decrease alertness but also may lead to taking risks that border on self-destruction. Any pilot who experiences an emotionally upsetting event should not fly until satisfactorily recovered from it.

h. **Personal Checklist.** Aircraft accident statistics show that pilots should be conducting preflight checklists on themselves as well as their aircraft for pilot impairment contributes to many more accidents than failures of aircraft systems. A personal checklist, which includes all of the categories of pilot impairment as discussed in this section, that can be easily committed to memory is being distributed by the FAA in the form of a wallet-sized card.

i. **PERSONAL CHECKLIST. I'm physically and mentally safe to fly; not being impaired by:**

Illness

Medication

Stress

Alcohol

Fatigue

Emotion

Editor: For the complete article, please go to URL: https://www.faa.gov/air_traffic/publications/atpubs/aim_html/chap8_section_1.html

Items for Sale

Editor: Please send me a description and photo, if you have one, and I will place your for sale item here.

“More than anything else the sensation is one of perfect peace mingled with an excitement that strains every nerve to the utmost, if you can conceive of such a combination.” –Wilbur Wright

“Once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.” – Leonardo da Vinci

Editor: From URL: <https://aviationhumor.net/the-biggest-collection-of-insightful-quotes-about-flying/>

Editor: The airspace depicted below shows where you need ADS-B out. There is a lot of airspace where you **do not need** ADS-B out, including KRST and KTOB. (FAA)

Editor: This is from the EAA Young Eagles Pilot Guidelines brochure: **Pilot Requirements**

The Young Eagles pilot requirements are basic, but **MUST** be followed.

- ◆ Be a current EAA® member and hold an appropriate airman’s certificate (sport pilot or greater)
- ◆ Possess a current medical certificate (if applicable)
- ◆ Be current to carry passengers in the aircraft you plan to use
- ◆ Have a current flight review
- ◆ Complete the Young Eagles registration form before the flight, including parent or legal guardian signature, and pilot signature
- ◆ Conduct flights in an aircraft that is in airworthy condition
- ◆ Have aircraft passenger liability insurance for the aircraft used (owned, rented, or borrowed)
- ◆ Adhere to all applicable Federal Air Rules (FARs)
- ◆ Complete both the online training and basic background check as a part of EAA’s Youth Protection Policy. For more information, visit EAA.org/YouthProtection.

Editor: Make sure you are current to fly Young Eagles at the EAA Chapter 100 Young Eagles events. September was canceled. Hopefully, this event will occur next year.

