

# Thomas P. Turner's Mastery of Flight®

www.thomaspturner.com

## FLYING LESSONS for July 31, 2025

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In most cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference in your success as the scenario unfolds. So apply these FLYING LESSONS to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command and are ultimately responsible for the decisions you make.**

FLYING LESSONS is an independent product of MASTERY FLIGHT TRAINING, INC.

Pursue *Mastery of Flight*®

### ***This week's LESSONS:***

I'm fresh back from Oshkosh—well, maybe not quite so fresh—so let's hit a couple items before we get back to our usual format next week.

#### **On the Air**

FLYING LESSONS reader and long-time friend Max Trescott received a listener comment to his [Aviation News Talk](#) program a few weeks back. The listener is a sailplane pilot wanting to begin training to earn Airplane privileges. He is evaluating **three options** for his powered aircraft training, one of which is **buying a Beech Bonanza** as his training airplane. The other choices are a school with **traditional training airplanes** and another well-known provider using cool new-ish **Light Sport** designs. Max invited me to join [this interview](#) with the listener in which the three of us discuss **the pros and cons of each option** and how they might **best fit the pilot's training goals**.

#### **MOSAIC**

*With apologies to my international readers for whom this package of new regulations does not apply...*

**The Final Rule for the Modernization of Special Airworthiness Aircraft Certification (MOSAIC)**, announced at Oshkosh, is a massive **redesign of Light Sport Aircraft (LSA) certification** that also has provisions for **expanding** the types of aircraft that may be flown by a **Sport Pilot**. There are also a number of miscellaneous provisions that is each of great importance to the segment of the industry it concerns. MOSAIC is the result of many years of negotiation and data evaluation by aircraft manufacturers; advocacy associations like the General Aviation Manufacturers Association ([GAMA](#)), the Aircraft Owners and Pilots Association ([AOPA](#)), the Experimental Aircraft Association ([EAA](#)) and others; and regulators (FAA). A [Notice of Proposed Rulemaking for MOSAIC](#) was published in 2023 and hundreds of public comments were received from organizations and individuals.

**FAA answered** the comments and they are addressed in the [Final Rule document](#) published on the Federal Register on July 24, 2025. Changes to Sport Pilot privileges go into effect October 22, 2025, 90 days after the Rule's effective date. The remaining provisions of MOSAIC become law July 24, 2026, one year after the publication date.

**FAA states** in the preamble to the Final Rule that its primary motivation for considering and eventually codifying MOSAIC was concern for the higher accident rate of Experimental/Amateur-Built (E/AB) aircraft compared to that of certificated designs, and to promote design and

capability of new LSA types to make production aircraft more capable and perhaps more attractive to pilots and aircraft owners than E/ABs. The Final Rule states, with emphasis added:

FAA intends for these expansions to increase the safety of recreational aviation by **encouraging aircraft owners, who may be deciding between an experimental aircraft or a light-sport category aircraft, to choose light-sport category aircraft that are higher on the safety continuum** and, therefore, meet higher aircraft certification requirements. FAA also intends for this rule to **increase the safety of light-sport category aircraft** by eliminating the prescriptive weight limit for light-sport category aircraft that hinders safety-enhancing designs and by adopting new design, production, and airworthiness requirements.

**MOSAIC's Final Rule** consists of three distinct results:

1. Redefinition of Light Sport Aircraft certification (as currently, through industry-based ASTM consensus standards) of new production aircraft, increasing performance and equipment to meet FAA's goal of more capable small aircraft;
2. Expansion of the types of aircraft that may be operated by pilots under Sport Pilot rules, including many legacy certificated aircraft; and
3. Adding to the approved uses of certain Special Category aircraft.

There are several additional provisions for Light Sport repairman certificates and other items related to Light Sport aircraft and Sport Pilots.

## Legacy Aircraft and LSA Rules

**MOSAIC does *not*** permit redesignating a legacy certificated aircraft as an LSA and thereby loosening its maintenance, modification and inspection requirements. Included in the MOSAIC Final Rule is an amendment to 14 CFR 22 that states:

### §22.100 Eligibility.

(a) To be eligible for a special airworthiness certificate in the light sport category issued under §21.190 of this chapter, an aircraft must...

(6): Not have been previously issued a standard, primary, restricted, limited, or provisional airworthiness certificate, or an equivalent airworthiness certificate.

**Legacy airplanes** like a Cessna 172, a Piper Arrow or a Beech Bonanza are certificated in the Standard category (including Normal, Utility, Aerobatic) so they may not be recertified as LSA. Other provisions for relaxed maintenance and parts certification requirements for Standard category personal aircraft that had been discussed in the years leading up to MOSAIC did not make it into the Final Rule. **Nothing in MOSAIC changes the maintenance, modification or inspection requirements of a type certificated aircraft.** As its full name implies, the Modernization of Special Aircraft Certification is primarily concerned with permitting **newly designed Light Sport Aircraft** to be put into production with a significant reduction in regulatory requirements and with additional performance that makes them more attractive compared to other options.

## Sport Pilot Privileges

**Perhaps the most publicly anticipated** provision of the new regulatory package, MOSAIC's amendments to Part 61 of the Federal Air Regulations make a big change to a large number of legacy type certificated aircraft: they may be flown by a Sport Pilot. Sport Pilots are not required to hold an FAA medical certificate or participate in BasicMed. If the pilot has a current **U.S. state-issued driver's license** they may operate as pilot-in-command of aircraft meeting certain requirements **without any additional medical screening**. They must adhere to any limitations and restrictions that apply to that driver's license ("must wear corrective lenses," "not valid at night," etc.) and "any judicial or administrative order applying to the operation of a motor vehicle" (suspensions, revocations, etc.).

**A pilot who holds** a Recreational or higher pilot certificate may upon the effective date of the new rule exercise the privileges of a Sport Pilot using this so-called “**driver’s license medical.**” There are, of course, some caveats.

**§61.23 Medical certificates: Requirement and duration.**

(c)(2) A person using a U.S. driver's license to meet the requirements of...exercising sport pilot privileges must—

- (ii) Have been found eligible for the issuance of at least a third-class airman medical certificate at the time of his or her most recent application (if the person has applied for a medical certificate);
- (iii) Not have had his or her most recently issued medical certificate (if the person has held a medical certificate) suspended or revoked or most recent Authorization for a Special Issuance of a Medical Certificate withdrawn; and
- (iv) Not know or have reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner

**Flying as a Sport Pilot** is *not* an option if you’ve failed your last medical or have had an application for a Special Issuance medical withdrawn. It is not an option if your most recent medical certificate was suspended or revoked. Self-certification before all flights still applies: you cannot know or be expected to know of a condition that impacts safety of flight. This includes medications, fatigue, ear infections, etc. It also includes this from the FAA website:

**What medical conditions does the FAA consider disqualifying?**

The following conditions are listed in the regulations as disqualifying medical conditions; however, in many cases when the condition is adequately controlled, the FAA will issue medical certification contingent on periodic reports.

- Angina pectoris
- Bipolar disease
- Cardiac valve replacement
- Coronary heart disease that has been treated or, if untreated, that has been symptomatic or clinically significant
- Diabetes mellitus requiring hypoglycemic medications
- Disturbance of consciousness without satisfactory explanation of cause
- Epilepsy
- Heart replacement
- Myocardial infarction
- Permanent cardiac pacemaker
- Personality disorder that is severe enough to have repeatedly manifested itself by overt acts
- Psychosis
- Substance abuse
- Substance dependence
- Transient loss of control of nervous system function(s) without satisfactory explanation of cause.

Other conditions not specifically listed in the regulations are also disqualifying. For further information refer to the Guide for Aviation Medical Examiners ([www.faa.gov/ame\\_guide](http://www.faa.gov/ame_guide)).

**“Adequately controlling”** one of these conditions, which with an FAA medical would require a Special Issuance, is open to interpretation for the Sport Pilot. For your own safety and that of your passenger (Sport Pilot limits you to only one passenger), get your doctor’s or an Aviation Medical Examiner’s advice before flying while being treated for any disqualifying conditions.

## **Sport Pilot privileges** edited for applicability to airplanes:

### **§61.316 What are the performance limits and design requirements for the aircraft that a sport pilot may operate?**

(a) If you hold a sport pilot certificate, you may act as pilot in command of an aircraft that, since its original certification, meets the following requirements:

- (1) A maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices ( $V_{S1}$ ) [flaps up, in] airplanes which...have a  $V_{S1}$  speed of not more than 59 knots CAS [calibrated airspeed] at the aircraft's maximum certificated takeoff weight and most critical center of gravity.
- (2) A maximum seating capacity [in] airplanes...of four persons.
- (3) A non-pressurized cabin....
- (5) ...the loss of partial power would not adversely affect directional control of the aircraft and the aircraft design must allow the pilot the capability of establishing a controlled descent in the event of a partial or total powerplant failure....

(b) If you hold a sport pilot certificate, you may act as pilot in command of an aircraft that has retractable landing gear or an airplane with a manual controllable pitch propeller if you have met the training and endorsement requirements....

**The MOSAIC Final Rule** introduces some confusion related to stall speed. It permits new LSAs to have a landing configuration stall speed ( $V_{S0}$ ) as high as 61 knots calibrated airspeed, the same as type certificated single-engine aircraft. There is no limit on flaps up stall speed ( $V_{S1}$ ) for new LSAs. But Sport Pilots are limited to flying aircraft with no more than a 59 KCAS  $V_{S1}$  regardless of that aircraft's  $V_{S0}$ .

**MOSAIC also has not changed** these operational limits on Sport Pilots (§61.316):

- Day VFR conditions (night privileges may be added by endorsement);
- 10,000 feet MSL or lower or 2000 feet AGL, whichever is higher;
- No operation when the flight or surface visibility is less than three statute miles (no "one mile and clear of clouds" in Class G airspace; no Special VFR in class D if visibility is the limiting factor);
- No operation without visual reference to the surface (no flight above a solid undercast).
- No more than two persons aboard the aircraft including the pilot (even though four-seat airplanes are approved).

**High performance and complex airplane** privileges for Sport Pilots may now be added by endorsement under MOSAIC.

**Better minds than mine** will pore over the minutia of the Final Rule and interpret and explain its provisions. Pilots, Aviation Maintenance Technicians and flight instructors may have to change their way of doing things when the Sport Pilot privileges and the remaining provisions become law upon their effective dates.

[EAA is hosting a webinar](#) August 7 at 7 pm U.S. Central time (0000Z 8 AUG) "to explain this monumental rule change that delivers Sport Pilot 2.0." **I've registered to attend**; perhaps you should too.

See:

<https://aviationnewstalk.com>

<http://aviationnewstalk.jibsvn.com/391-should-you-learn-to-fly-in-a-bonanza-max-trescott-and-tom-turner-talk-training-options-ga-news>

<https://thomaspturner.com/wp-content/uploads/2025/07/MOSAIC-2025.pdf>

[www.gama.aero](http://www.gama.aero)

[www.aopa.org](http://www.aopa.org)

[www.eaa.org](http://www.eaa.org)

<https://www.federalregister.gov/documents/2023/07/24/2023-14425/modernization-of-special-airworthiness-certification>

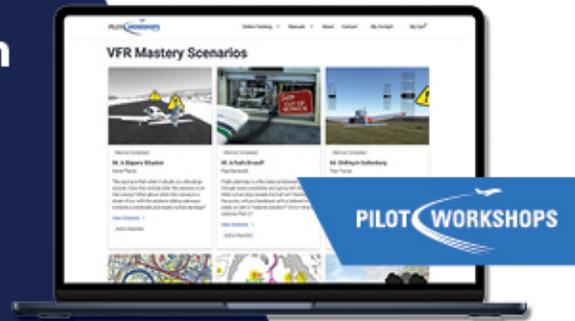
[https://pages.eaa.org/WBN2025-08-07MOSAICISHERE\\_LP-Registration.html](https://pages.eaa.org/WBN2025-08-07MOSAICISHERE_LP-Registration.html)

Questions? Comments? Supportable opinions? Let us know at [mastery.flight.training@cox.net](mailto:mastery.flight.training@cox.net).

## Exercise Your Pilot Brain

IFR Mastery from PilotWorkshops delivers a challenging, real-world IFR scenario every month that tests your knowledge and hones your decision making skills.

FREE TRIAL



[https://pilotworkshop.com/products/ifr-mastery?utm\\_source=flyinglessons&utm\\_medium=emailbanner](https://pilotworkshop.com/products/ifr-mastery?utm_source=flyinglessons&utm_medium=emailbanner)



National Association of Flight Instructors

Code: MOFSAVE10

For less than the cost of an hour of instruction, you can have access to:

- Hours of educational content
- Members-only discounts on products and services
- Networking opportunities



[nafimentor.org](https://nafimentor.org)

Join 1,000s of others like you who are dedicated to aviation safety and training.

See <https://nafimentor.org/>

Share safer skies. [Forward FLYING LESSONS to a friend.](#)



Please help cover the ongoing costs of providing **FLYING LESSONS** through this secure PayPal [donations link](#).

Or send a check made out to **Mastery Flight Training, Inc.** at 247 Tiffany Street, Rose Hill, Kansas USA 67133. Thank you, generous supporters.

### Thank you to our regular monthly financial contributors:

Steven Bernstein, Montclair, NJ. Robert Carhart, Jr., Odentown, MD. Greg Cohen, Gaithersburg, MD. John Collins, Martinsburg, WV. Dan Drew, Rob Finfrock, Rio Rancho, NM. Norman Gallagher. Bill Griffith, Indianapolis, IN. Steven Hefner, Corinth, MS; Ellen Herr, Ft Myers, FL. Erik Hoel, Redlands, CA. Ron Horton. David Karalunas, Anchorage, AK. Steve Kelly, Appleton, WI. Karl Kleiderer. Greg Long, Johnston, IA. Rick Lugash, Los Angeles, CA. Richard McCraw, Hinesburg, VT. David Ovad, Resiertown, MD. Steven Oxholm, Portsmouth, NH. Brian Schiff, Keller, TX. Paul Sergeant, Allen, TX. Paul Uhlig, Wichita, KS. Richard Whitney, Warrenton, VA. Jim Preston, Alexandria, VA. Johannes Ascherl, Munich, Germany. Bruce Dickerson, Asheville, NC. Edmund Braly, Norman, OK. Steven Hefner. Lorne Sheren, New Vernon, NJ. "The Proficient Pilot," Keller, TX. Ed Stack, Prospect Heights, IL. Kynan Sturgiss, Hereford, TX. Bluegrass Rental Properties, LLC, London, KY. John Foster. Joseph Victor, Bellevue, WA. Chris Palmer, Irvine, CA. Barry Warner, Yakima, WA. Todd LeClair, Cadiz, KY. Jim Hopp, San Carlos, CA. Adrian Chapman, West Chester, PA.

### Thanks also to these donors in 2025:

John Teipen (two 2025 donations). N. Wendell Todd. David Peterson. Jay Apt. SABRIS Aviation/Dave Dewhirst. Gilbert Buettner. David Larsen, Peter Baron, Glen Yeldejian, Charles Waldrop, Ian O'Connell, Mark Sletten, Lucius Fleuchaus. Thomas Jaszewski. Lauren McGavran. Bruce Jacobsen, Leroy Atkins, Coyle Schwab, Michael Morrow, Lew Gage, Panatech Computer (Henry Fiorentini), Andy Urban, Wayne Colburn, Stu Spindel, Dave Buetow, Ken Vermar, Dave Wacker, Bill Farrell, David Miller, Daniel Norris, Robert Sparks, Bill Cannon, David Yost, Don Bowles. Ed Shapiro, Mark Kolesar, William Weber, Anonymous Oshkosh donor, John Whitehead (two 2025 donations)



### Pursue *Mastery of Flight*<sup>®</sup>

Thomas P. Turner, M.S. Aviation Safety  
Flight Instructor Hall of Fame Inductee  
2021 Jack Eggspuehler Service Award winner  
2010 National FAA Safety Team Representative of the Year  
2008 FAA Central Region CFI of the Year

FLYING LESSONS is ©2025 Mastery Flight Training, Inc. For more information see [www.thomaspturner.com](http://www.thomaspturner.com). For reprint permission or other questions contact [mastery.flight.training@cox.net](mailto:mastery.flight.training@cox.net).