

How the MOSAIC Rule Impacts the Soaring Community

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The long-awaited Modernization of Special Airworthiness Certification (MOSAIC) rule has finally been published in the Federal Register. As of July 24, 2025 new rules regarding the definition and operation of Light Sport Aircraft, certification and endorsements needed by Sport Pilots, and certification and privileges of Repairman Certificates (Light Sport) have all changed. This article focuses on how some of those changes affect our soaring community. For a complete description of how these changes affect other aviation communities please read the 717 page document.

While the MOSAIC rule was published in July 2025, the rule allows for some transition periods from several months to 1 year before some of those rules become effective. Be sure and follow the most current FAA regulations before taking action to allow a sport pilot to operate a specific glider.

To understand these changes, it is important to know that the FAA uses a hierarchical structure, called the safety continuum, when creating or updating regulations. For aircraft, the Airworthiness certificate each aircraft has demonstrates this structure. At the bottom, with the least FAA defined safety structure are aircraft with Experimental Amateur Built (EAB) Airworthiness Certificates. For our soaring community, the top are aircraft with Standard Airworthiness Certificates.

For glider pilots a Light Sport pilot requires the least amount of training while Flight Instructors require the most. The MOSAIC rule also places this same training structure on mechanics and inspectors with lower training requirements and privileges for Repairman (Light Sport) than Aviation Mechanics.

It is important to recognize that an aircraft must have a specific airworthiness certificate to be legal to fly in the US. In addition, a pilot, other than student, must have a certificate that lists the level (Sport to CFI) with the category and class of the aircraft that pilot is authorized to fly. This means a private glider pilot may fly a glider that has any appropriate airworthiness certificate, while a sport glider pilot may fly any glider that meets the limitations for a light sport glider as set out in 14 CFR 22.100 regardless of the airworthiness certificate it was assigned.

In 2004 the FAA created a definition in 14 CFR part 1.1 of a Light Sport Aircraft. This definition contained 13 items of which 4 directly impacted which gliders could receive an Experimental Light Sport Airworthiness certificate. The FAA also stated that this Light Sport Aircraft definition was limited to single engine land or sea airplanes, gliders, balloons, powered parachutes, weight-shift-control aircraft, and gyroplanes. This limited a glider to a maximum takeoff weight of 1320 lbs, a maximum V_{NE} of 120 Kts CAS¹, a maximum V_{S1} stall speed (without lift-enhancing devices) of 45 Kts CAS, and a maximum of 2 seats. Two additional items allowed gliders to have a fixed or feathering propeller and/or a fixed or retractable landing gear.

The new MOSAIC rule (mostly) eliminates this definition. It also adds helicopters with simplified flight controls, powered-lift and airship aircraft to the list of potential Light Sport Aircraft. All new Light Sport aircraft will receive a Special Airworthiness Certificate in the Light Sport category. 14 CFR

1 CAS Calibrated Air Speed

21.181(a)(3)(iv) states that aircraft originally certificated prior to July 24, 2026 will have to meet the existing Light Sport Aircraft definition as enumerated in sub-parts (A) to (L) of this rule. These sub-parts contain the identical text from the old definition. Thus if you have a glider that has a current Experimental Light Sport Airworthiness Certificate it's weight and airspeed limits remain.

The new MOSAIC rule created 14 CFR part 22.100. This regulation defines a Light Sport Glider as one having a maximum of 2 seats (airplanes can have 4 seats but only a pilot and 1 other person), a V_{S0} of 45 kts CAS (V_{S1} of 45 Kts CAS for weight-shift-control aircraft and 61 Kts CAS for airplanes). There is a 250 Kts CAS maximum airspeed for all aircraft, and an unpressurized cabin. Note these are Calibrated Air Speed (CAS) numbers not Indicated Air Speed (IAS), your Pilot Operating Handbook will contain a conversion chart.

It is important to recognize the elimination of a maximum V_{NE} for gliders and of a maximum weight limit for all aircraft. This means that gliders that meet the stall speed limits but had V_{NE} limits above 120 kts may now be flown by Sport Pilots. To put this in perspective, under the old rules a SGS 2-33A glider could be flown by a sport pilot, but not an ASK-21. The ASK-21 has a 151 Kt V_{NE} while the 2-33's is 98 MPH. On July 24, 2026 (next year) the new rules take effect and a sport pilot would be authorized to fly both gliders. It also means that a sport pilot with Airplane Single Engine Land certificate can fly a Cessna C-172 airplane.

The MOSAIC rule also clarified that a Light Sport Airplane can be used to tow a glider if the manufacturer determines that this can safely be done. A statement in the airplane's Pilot Operating Handbook will assert that this model airplane can safely perform this task. However, 61.69 still defines that a pilot must have at least a private rating in airplanes single engine land to be the tow pilot. Sport pilots cannot fly a towplane towing a glider.

14 CFR Subpart J describes the rules related to Sport Pilots. It defines how to obtain a Sport Pilot certificate and what the operating limitations are. On the FAA's safety continuum, a Sport Pilot has more training than a student pilot but less training and fewer privileges than other pilots. Thus there are greater restrictions on the aircraft they can fly and where they can fly those aircraft.

14 CFR 61.23(c)(1)(ii) defines the medical requirements for a sport pilot requiring them to hold either a FAA medical certificate or a U.S. driver's license.

The 2004 rules stated that a sport pilot could fly an aircraft that meet the definition in 14 CFR part 1.1. This prevented airplane pilots from flying airplanes with multiple engines, retractable landing gear, or in-flight adjustable propellers. It also limits all sport pilots to day VFR conditions with a maximum altitude of 10,000 ft MSL over the entire country. Note that gliders were allowed to have retractable gear and in-flight adjustable propellers under these 2004 rules. The MOSAIC rule relaxes some of these restrictions. Airplane pilots can now receive additional training and endorsements to remove the retractable gear and in-flight adjustable propeller restrictions.

A sport pilot with endorsements in any category/class can also receive training and an endorsement to operate at night. However, the FAA does require that sport pilots who wish to operate at night MUST have a medical certificate, either a Class 1, 2, or 3 medical or Basic Med. This goes beyond the sport pilot medical requirements for daytime operations.

One limit that did NOT change is the 10,000 ft MSL ceiling. Sport pilots may not fly over 10,000 ft MSL in any aircraft. Note, there is a 2,000 ft exception when the terrain exceeds 10,500 ft so flights can clear peaks that high while staying at most 2,000 ft above this peak. This limit applies to ALL sport pilots regardless of category or class of the aircraft. Thus sport pilots with a glider rating are prohibited from flying a glider above 10,000 ft MSL!

Historically, an individual who had any existing pilot certificate, one that listed the category and class of aircraft the pilot was certificated for, could add sport pilot privileges in another category or class by obtaining training from a CFI and then taking a proficiency check with a second CFI. No practical test with an examiner was required.

Going forward, in some cases a rated pilot must take a practical flight test for a sport pilot certificate. All initial pilot certificates, other than student, are issued by a designated pilot examiner or FAA Aviation Safety Inspector (ASI). It does not matter if this is a sport or private pilot certificate, your first pilot certificate always requires a practical test. For other than sport pilot any additional rating requires a new practical test, and in some cases a new knowledge test as well. MOSAIC changes the certificate testing rules for airplane and helicopter sport pilots. These pilots will always require a practical test with a pilot examiner regardless of any existing certificates or ratings they currently have. Thus a private glider pilot seeking sport pilot privileges in an airplane must now take a practical test with an examiner. However, an private airplane pilot seeking a sport pilot glider rating may fly with 2 CFI's as per the old rules. Remember though, the 10,000 ft MSL limit on this rating!

Lastly, this article briefly describes how MOSAIC may change who has the authorization to inspect or repair a glider which has a Special Airworthiness Certificate in the Light Sport category. An individual with a Repairman (Light Sport) certificate with a maintenance or inspection rating can perform this work. Any Repairman (Light Sport) may perform conditional inspections, 100 hour inspections, or make minor repairs and alterations. One thing they can't do is supervise individuals who do not hold this repairman certificate.

The old rules allowed individuals to attend a part 147 school to receive training in the maintenance and inspection of light sport aircraft. A graduate of this course was then authorized to work on a specific aircraft identified by make, model, and serial number. MOSAIC changes this to allow schools to train repairman, a lower status than mechanic, on specific categories and classes of light sport aircraft. Thus a repairman can be certified to work on gliders, regardless of the make, model, or serial number. Individuals that have existing repairman certificates will be grandfathered into this new system.

The FAA did recognize that gliders come in both powered and non-powered variants, but the airworthiness certificate does not recognize this difference. Therefore schools have 1 year to update their repairman training program for glider repairman to ensure that they are trained properly for both types of gliders. In other cases schools have 90 days to update their aircraft specific training courses.

Another new rule is that a glider repairman can perform a conditional inspection on a glider with an experimental Amateur Built airworthiness certificate. The goal is to allow pilots who have purchased a used home-built glider (e.g.; HP series, Woodstock) and thus do not have builder inspection privileges to find someone to perform this annual inspection.

In summary, more gliders can now be flown by a sport pilot as the V_{NE} limit has been removed. However, make sure to check the gliders Pilot Operating Handbook to ensure the stall speed does not exceed the V_{S0} 45 Kt CAS limit. Transition training and testing for non-glider pilots seeking sport pilot privileges in a glider has not changed. Repairman (Light Sport) certificates will allow repairman and inspectors to work on any aircraft in the category/class they received training in.

These are the major items in MOSAIC that will impact our glider community.