

# MOSAIC: New Rules for Pilots, Aircraft, and Maintenance

KEITH TSCHOHL

INTENDED FOR: EAA CHAPTER 691

MARCH 21, 2026

# Abstract

Expanded pilot certification rules, effective since October 2025, now allow Sport Pilot certificate holders access to a vastly wider range of aircraft than before, including approximately three quarters of certificated general aviation aircraft. Repairman certificate privileges have expanded to allow condition inspections to be performed on experimental amateur-built aircraft. Revised aircraft certification rules, which become effective July 2026, have eliminated weight limitations for light-sport aircraft and shifted to a performance-based criteria, allowing approval of larger aircraft and newer powerplant technologies compared to the legacy light-sport aircraft rules.

- ▶ Will the new Sport Pilot rules really make it faster and cheaper to learn to fly?
- ▶ Will I need an FAA medical to fly under Sport Pilot? Can existing Private Pilot certificate holders exercise Sport Pilot privileges without a medical or BasicMed?
- ▶ What are the limitations to Sport Pilot privileges?
- ▶ What “traps” I need to be aware of if I fly under Sport Pilot in northern New Mexico?
- ▶ Did any rules change regarding maintenance of certificated aircraft?

# Caveats

- ▶ This discussion will focus on the **airplane** category, **single-engine land** class
- ▶ Sport Pilot also includes ASES, glider, rotorcraft (gyrocopter), rotorcraft (helicopter with simplified flight controls), lighter-than-air (airship), lighter-than-air (balloon), powered parachute, weight-shift-control categories
- ▶ Light-Sport category now includes *“any class of aircraft to be eligible for certification... provided the aircraft meets the performance-based requirements... and the eligibility criteria”* (MOSAIC Final Rule)

# It began with ultralights

- ▶ **March 15, 1975: John Moody attached a 12.5 hp McCulloch engine to an Icarus II hang glider and flew it from Long Lake near Muskego, WI**
- ▶ **His demonstration at Oshkosh '76 sparked the growth of powered ultralights over the next several years**



# Reigning in chaos with Part 103

5

- ▶ Hang gliders had been unregulated for several years without major issue
- ▶ Engines created conflicts!
  - ▶ More range, higher altitude, higher speed
  - ▶ FAA noted three near mid-air collisions in the preamble to the Part 103 Final Rule
- ▶ September 2, 1982: Part 103 Final Rule
- ▶ Mostly a “hands off” regulation:
  - ▶ *“The intent of the FAA is to provide for safety in the national airspace with a minimum of regulation.” (47 FR 38772)*
- ▶ Vehicle requirements
  - ▶ 254 lb max empty weight
  - ▶ 5 gallons max fuel
  - ▶ Single seat
  - ▶  $V_s \leq 24$  KCAS
  - ▶  $V_H$  (full power in level flight)  $\leq 55$  KCAS
  - ▶ No airworthiness, certification, or registration requirements
- ▶ Operating requirements
  - ▶ Day and twilight VFR only
  - ▶ No operations over congested areas
  - ▶ No operations in controlled airspace without prior authorization
  - ▶ No training or pilot certification requirements
- ▶ Waiver provision (two seats, weight limitations, etc. for training)

*“The ultralight community is expected to take positive action to develop [safety] programs in a timely manner... Should this approach fail... **further regulatory action will be necessary.**”*

(Foreshadowing!)

# 2004 Light Sport Aircraft Rule

- ▶ Why?
  - ▶ Close the gap between Part 103 and Parts 23/61/91
  - ▶ Regulate the heavy, 2-seat Part 103 ultralights used for “training” (wink-wink)
- ▶ Established new pilot and aircraft certification categories
- ▶ Common set of prescriptive standards: “Light Sport Aircraft” (LSA)

Requirement	Light Sport Aircraft (2004 definition)
Maximum seats	2
Maximum gross weight	1320 lb
Maximum clean stall speed ( $V_{s1}$ )	45 KCAS
Maximum speed in level flight ( $V_H$ )	120 KCAS
Landing gear	Fixed only
Propeller	Fixed or ground adjustable
Powerplant	Single, reciprocating only
Pressurized cabin	No

# 2004 Rule: Sport Pilot

- ▶ Sport Pilot established as airmen certification category
- ▶ FAA medical certificate not if you have an unrestricted US driver's license
- ▶ Reduced training requirements and limited privileges versus Private Pilot
- ▶ Eligible to fly only aircraft meeting the LSA definition
  - ▶ But, regardless of aircraft certification category
  - ▶ Standard, E-AB, S-LSA, E-LSA, etc.,
- ▶ Certificates are not issued with ratings (category, class, type)

Requirement	Sport Pilot (2004 rules)
Passengers	Pilot + 1
Day VFR	Yes; minimum 3 sm visibility
Without visual reference to the surface ("over the top")	No
Night VFR	No
IFR	No May not act as safety pilot even under VFR
Altitude	10000' MSL or 2000' AGL, whichever is higher
Class B, C, D airspace or other airports with control towers	Yes, with endorsement
Class A airspace	No

# 2004 Light-Sport Category

- ▶ Includes airplane, glider, balloon, powered parachute, weight-shift-control, gyroplane classes
- ▶ Special airworthiness certificates
  - ▶ S-LSA: (Special Light Sport Aircraft): Issued under industry consensus standards for factory-built aircraft
- ▶ Experimental airworthiness certificates
  - ▶ E-LSA: (Experimental Light Sport Aircraft): Includes kits built to industry consensus standards and conversion of “fat ultralights” (amnesty expired January 2008)
  - ▶ “Downgrades” from S-LSA
- ▶ Did not change certification of existing aircraft
  - ▶ A 1946 J-3 Cub is not an S-LSA even though it met the LSA definition; still requires an A&P for maintenance and annual inspection

# 2025 Rule (MOSAIC)

- ▶ Addresses 20 years of technical innovations and solves some of the shortcomings in 2004 rule
- ▶ Expands Sport Pilot eligibility and privileges
  - ▶ Effective October 22, 2025
  - ▶ EAA: “Sport Pilot v2.0”
- ▶ Greatly expands eligibility for certification of Light-Sport category aircraft
  - ▶ Effective July 24, 2026
  - ▶ EAA: “LSA v2.0” (IMO a bit of a misnomer)
- ▶ Expands privileges of Repairman (Light Sport) certificate
- ▶ Eliminates 2004 “Light Sport Aircraft” definition
  - ▶ **Aircraft and pilot certification no longer share the same criteria**

# Sport Pilot v2.0: Training requirements (ASEL)

10

- ▶ Be at least 17 years of age
- ▶ Minimum of 20 hours of flight time (vs 40 hours PP) including at least:
  - ▶ 15 hours dual instruction
  - ▶ 5 hours solo
  - ▶ 2 hours cross-country
  - ▶ 10 full stop landings at an airport
  - ▶ One 75-mile solo cross country
- ▶ Endorsements required for additional privileges
  - ▶ Class B, C, D airspace or other airports with control towers
  - ▶ Retractable gear, pilot-controllable props
  - ▶ Night (3 hours of instruction, including a 25-mile cross country)
- ▶ Add-ons for other categories and class (excluding airplane and helicopter) are via “proficiency check” and endorsement, not DPE checkride

*“EAA has been training pilots in our three-week Sport Pilot Academy in an average of 35 hours... average training time for a private pilot is 75 hours”*

# Sport Pilot v2.0: What can I fly? (ASEL)

Requirement	Sport Pilot “v1.0” (2004 rules)	Sport Pilot “v2.0” (2025 rules)	Private Pilot
Maximum seats	2	4	Not specified <sup>1</sup>
Maximum gross weight	1320 lb	Not specified <sup>1</sup>	Not specified <sup>1</sup>
Maximum clean stall speed ( $V_{s1}$ )	45 KCAS	59 KCAS	Not specified
Maximum speed in level flight ( $V_H$ )	120 KCAS <sup>2</sup>	Not specified <sup>2</sup>	Not specified
Landing gear	Fixed only	Fixed; retract with endorsement (61.331)	Fixed; retract May need endorsement (61.31(e))
Propeller	Fixed or ground adjustable	Fixed, ground adjustable, controllable pitch (endorsement)	Fixed, ground adjustable, controllable pitch
Powerplant <sup>3</sup>	Single, reciprocating only	Single	Single
Pressurized cabin	No	No	Yes

**All sport pilot requirements are based on the aircraft as originally certificated, per 14 CFR 61.316**

<sup>1</sup>Private pilots require medical certificates for >7 seats and >12500 lb. Sport pilots are ineligible for type ratings.

<sup>2</sup>Separate training and endorsement for  $V_H$  up to 87 KCAS and  $V_H > 87$  KCAS. See 61.315(c)(14) and 61.327

<sup>3</sup>HP endorsement required irrespective of certificate for >200 HP. Type rating requirement precludes turbojet aircraft for Sport Pilot

# Sport Pilot v2.0: How can I fly?

Requirement	Sport Pilot "v1.0" (2004 rules)	Sport Pilot "v2.0" (2025 rules)	Private Pilot
Medical certification	State-issued driver's license	State-issued driver's license	FAA 3 <sup>rd</sup> class medical or BasicMed
Passengers	Pilot + 1	Pilot + 1	Not specified
Day VFR	Yes	Yes	Yes
Without visual reference to the surface ("over the top")	No	No	Yes
Night VFR	No	Yes, with endorsement and 3 <sup>rd</sup> class medical / BasicMed	Yes
IFR	No May not act as safety pilot even under VFR	No May not act as safety pilot even under VFR	If instrument rated and current; may act as safety pilot
Altitude	10000' MSL or 2000' AGL, whichever is higher	10000' MSL or 2000' AGL, whichever is higher	Not specified

# Sport Pilot v2.0: How can I fly?

13

Requirement	Sport Pilot "v1.0" (2004 rules)	Sport Pilot "v2.0" (2025 rules)	Private Pilot
Class B, C, D airspace or other airports with control towers	Yes, with endorsement	Yes, with endorsement	Yes
Class A airspace	No	No	Yes; requires IFR flight plan or glider/balloon waiver
Towing	No	No	Yes (gliders)
For compensation or hire	No	No	No
In furtherance of a business	No	No	If incidental to the operation of the business (not carrying passengers or property for compensation or hire)
§ 91.146 charitable airlifts	No	No	Yes
International	No (Not ICAO recognized)	No (Not ICAO recognized)	Yes

# Sport Pilot v2.0: Possible Traps

14

These apply to holders of Sport Pilot certificates, and except for the endorsement requirements, to holders of higher certificates using driver license medicals

## ▶ **Altitude limitations**

- ▶ 10000' MSL + 2000' AGL retained from original Sport Pilot rule

## ▶ $V_H$ endorsement requirements

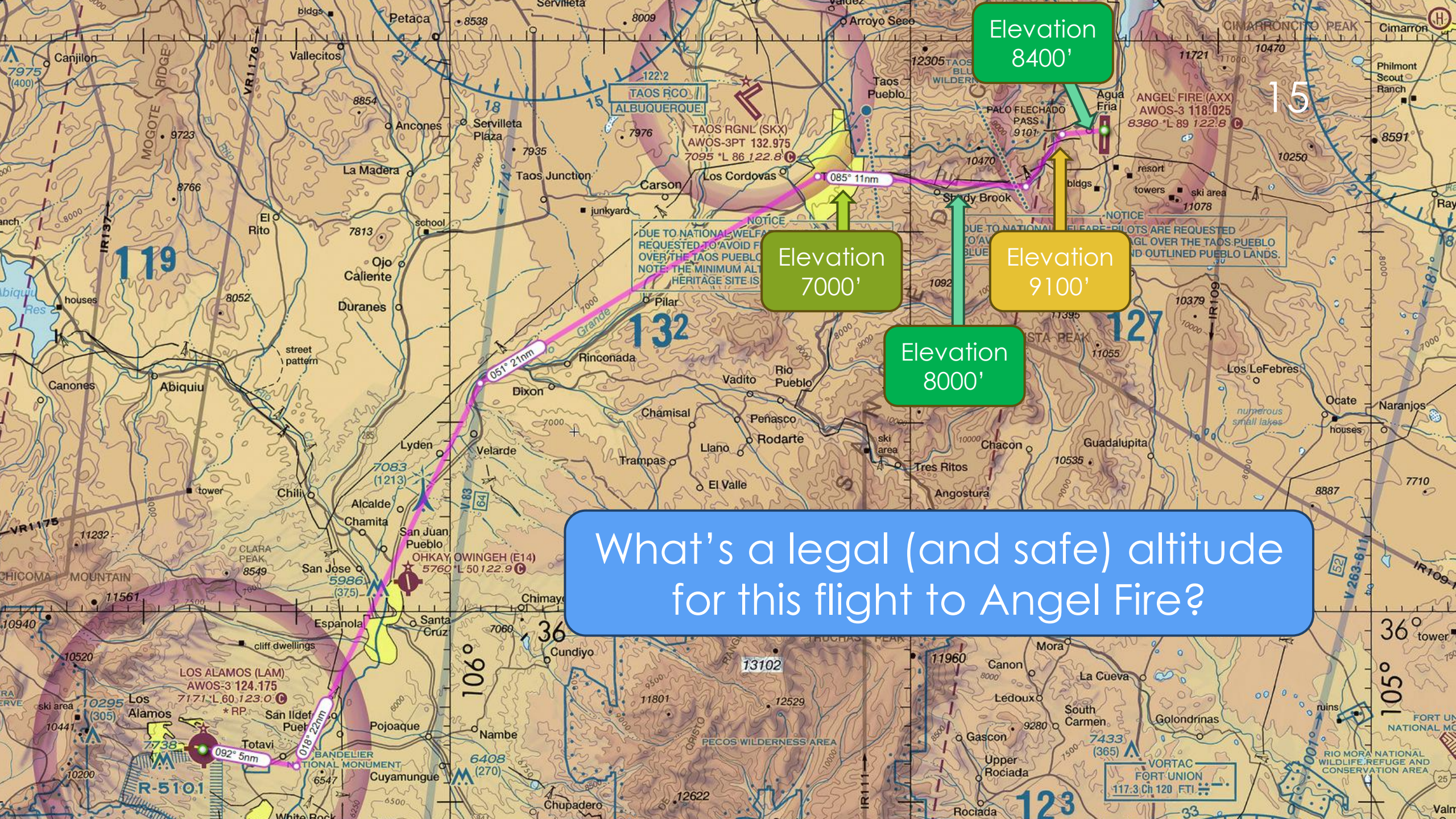
- ▶ Separate training required for  $V_H \leq 87$  and  $> 87$  KCAS

## ▶ No “VFR over the top”

## ▶ No “furtherance of a business”

## ▶ Can't act as safety pilot

## ▶ Medical is required for night flight



Elevation 8400'

Elevation 7000'

Elevation 9100'

Elevation 8000'

What's a legal (and safe) altitude for this flight to Angel Fire?

# Can I use Sport Pilot privileges with my Private Pilot certificate?

- ▶ Yes, but Sport Pilot limitations apply if you don't have a medical
- ▶ If your certificate is rated in category and class (e.g. ASEL) per § 61.303:
  - ▶ Have a medical certificate?
    - ▶ “You do not have to hold any of the endorsements required by this subpart, nor do you have to comply with the limitations in § 61.315.”
  - ▶ US driver's license only?
    - ▶ “You do not have to hold any of the endorsements required by this subpart, **but you must comply with the limitations in § 61.315.**”
- ▶ If you are not rated in category and class, Sport Pilot privileges for categories other than airplane or helicopter are added via a “proficiency check” with second instructor and logbook endorsement per § 61.321

# CFI-SP: Relaxed rules for instructors

17

- ▶ Basic requirements for Sport Pilot instructors (Part 61 Subpart K) mostly unchanged from 2004 rule, with additions addressing rotorcraft and new Sport Pilot privileges
- ▶ Requirements for CFI-SP (ASEL):
  - ▶ Sport Pilot certificate
  - ▶ 150 hours total time
    - ▶ 50 hours ASEL
    - ▶ 25 hours cross-country time, including 10 hours cross country ASEL
    - ▶ 15 hours in Sport Pilot eligible SEL airplane meeting the limits and requirements of 61.316
  - ▶ Driver's license or medical certificate
- ▶ Do not need Commercial Pilot certificate or instrument rating

# Light-Sport category v2.0

- ▶ These rules apply to **aircraft** certification starting July 2026
- ▶ Aircraft meeting these criteria could require a private pilot certificate to fly
- ▶ Permitted use expanded to include “aerial work” such as pipeline patrol or aerial survey; requires mfg approval and appropriate pilot rating

Requirement	Light-Sport Category, Airplane (2025 definition)
Maximum seats	4
Maximum gross weight	None
Maximum landing configuration stall speed ( $V_{s0}$ )	61 KCAS
Maximum speed in level flight ( $V_H$ )	250 KCAS
Landing gear	Not prescribed
Propeller	Not prescribed
Powerplant	Not prescribed
Aircraft class	Any

# Repairman (Light-Sport) and E-AB

19

- ▶ Repairman (Light-Sport) certificate with an inspection rating allows you to perform annual condition inspections on your own E-AB or E-LSA aircraft
  - ▶ Inspection rating is the 16-hour course
  - ▶ E-AB inspection privileges are new in 2025; in lieu of 51% rule
  - ▶ Experimental certificates per § 21.191 (g), (i), (k), or (l)
- ▶ Repairman (Light-Sport) certificate with a maintenance rating is more general
  - ▶ Annual condition on owned or non-owned E-AB and E-LSA aircraft certificated per § 21.191 (g), (i), (k), or (l)
  - ▶ Maintenance and return to service on S-LSA certificated per § 21.190
  - ▶ Typically a 3-week course
- ▶ Eligibility for both ratings is limited to the aircraft category and class for which the Repairman certificate holder has been trained
- ▶ Eligibility does not extend to standard category aircraft

# Discussion

## ▶ References

- ▶ “Modernization of Special Airworthiness Certification”, 90 FR 35034, <https://www.federalregister.gov/documents/2025/07/24/2025-13972/modernization-of-special-airworthiness-certification>
- ▶ “MOSIAC Is Done: Welcome to Sport Pilot 2.0”, EAA Sport Aviation, September 2025