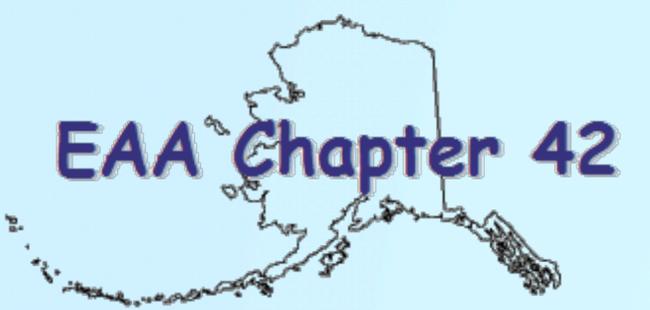


MOSAIC

Modernization of Special Airworthiness Certification



September, 2023
v 3.2

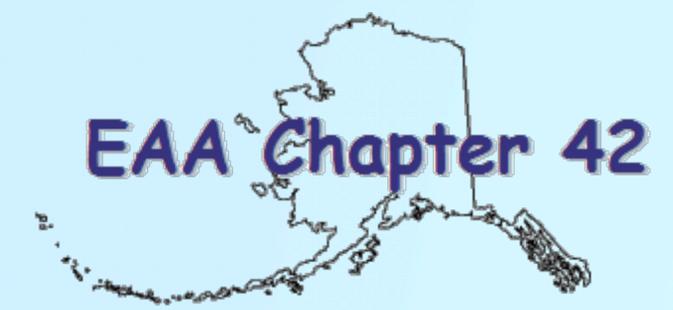


Imagine flying this



Without an FAA medical -
Just a driver's license

Welcome to MOSAIC

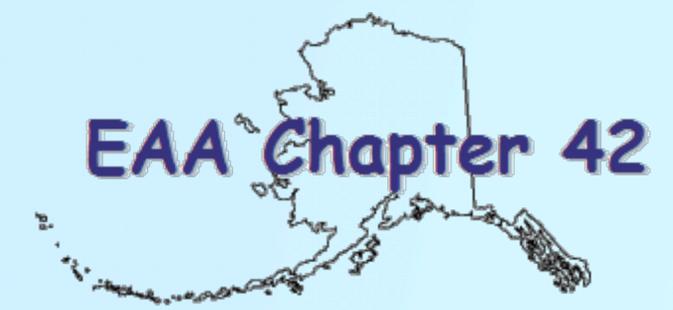


What is MOSAIC?

On July 24th the FAA published a Notice of Proposed Rulemaking (NPRM) that if adopted will provide great benefits to General Aviation

Open for comment until October 23rd. (May get extended)

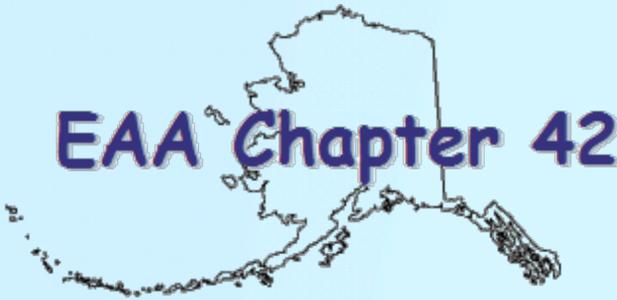
Possibly will be adopted in 12 to 24 months (?)



What MOSAIC does:

- Overhauls the current LSA rules established in 2004
- Greatly expands the list of aircraft that can be flown by Sport Pilots (or higher) with only a driver's license as a medical
- Many other areas (we won't be discussing)



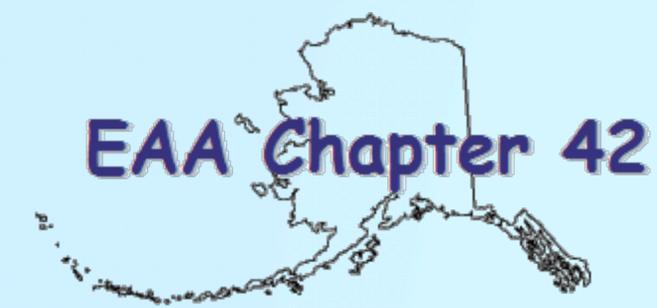


AOPA PILOT

MOSAIC

EXPLAINED

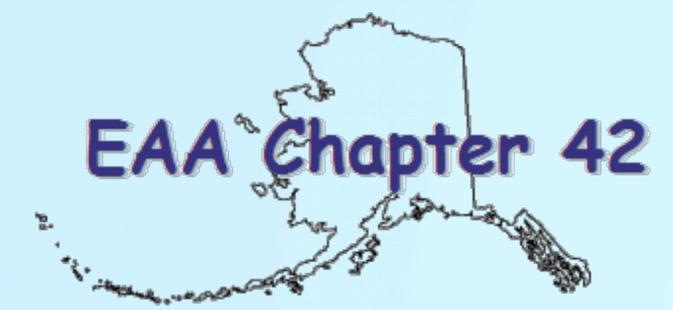




Why do I care?

- If concerned about renewing your medical, flying under Sport Pilot rules is an excellent option.
- You will be able to fly many more GA airplanes - such as the C-172
- Price, value and utility of these airplanes will increase (e.g. for flight schools)
- As a prospective new pilot, becoming a Sport Pilot will be simpler and cheaper than pursuing the Private Pilot certificate (i.e. only 20 hours vs. 40 hours)
And you can earn it in a C-172





More good news...

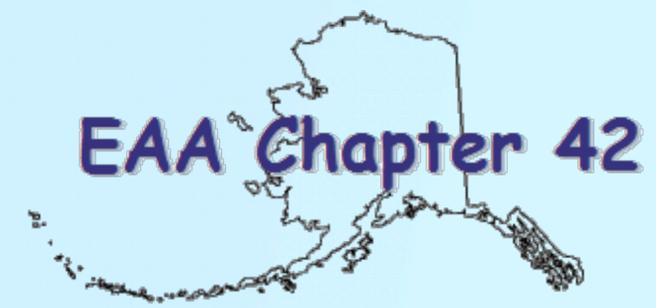
- Sport Pilot Instructors (14 CFR Part 61 Subpart K):
 - Could instruct in a much larger group of aircraft (e.g. C-172)
 - Easier Instructor certificate to obtain than the CFI
- New aircraft designs will be created
- Some current LSAs will enable a gross weight and useful load increase (i.e. Vashon Ranger)

(Plus a lot more...)





The Document



The NPRM document (the somewhat easier-to-read and comment version - 90 pages):

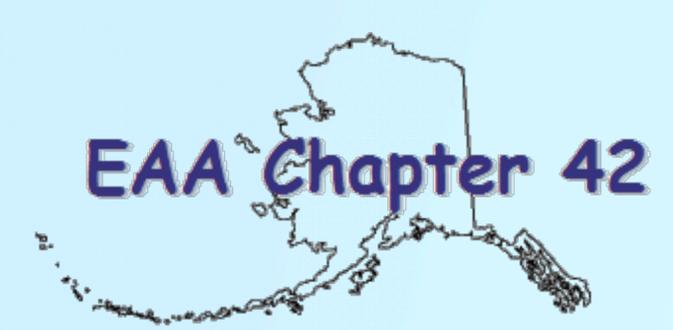
<https://www.federalregister.gov/documents/2023/07/24/2023-14425/modernization-of-special-airworthiness-certification>

This page includes links to:

- Submit a comment and to
- View previous comments

This link is also at:
eaa42.org/MOSAIC

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“LSA” vs. “Sport Pilot”

LSA - Light Sport Aircraft generally refers to the Aircraft and its certification rules
Its definition in §1.1 will be eliminated

Sport Pilot - generally refers to the Pilot certification requirement and operating limitations

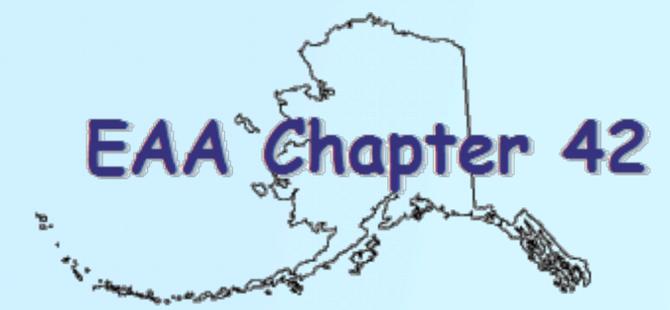


(In §1.1)

What is Light Sport currently?

Max speed in level flight at max continuous power
Vh 120 knots (138 mph)

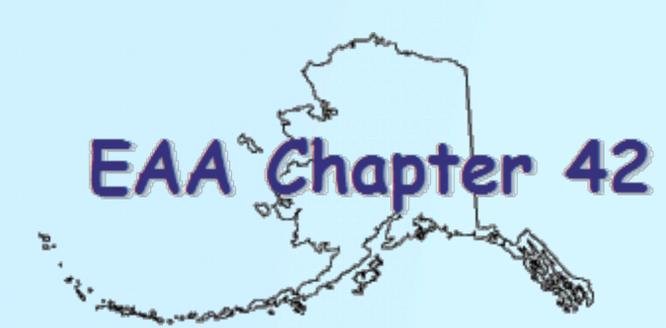




Proposed Light Sport Aircraft

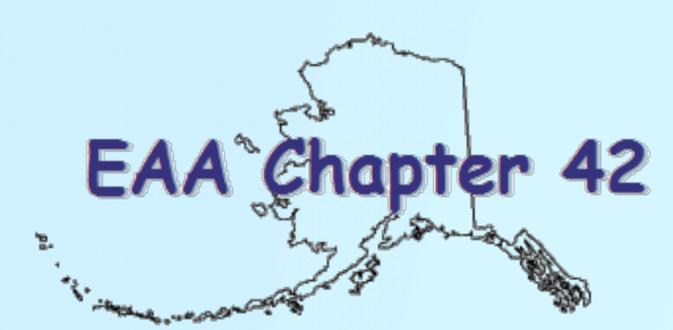
- “Clean” stall speed (V_{s1}) of 54 knots calibrated
- Maximum level flight speed (V_h) of 250 knots calibrated
- Limited to four seats
- Removal of limitations on retractable landing gear, in-flight adjustable propellers, and powerplant type
- Removal of aircraft type specification – allows helicopters, gyroplanes, powered-lift, etc.

This will become 14 CFR §22.190 and §61.316



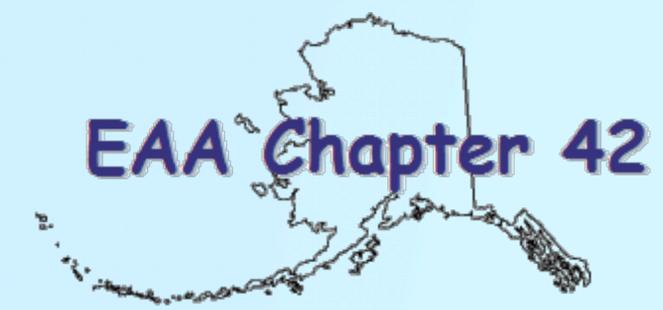
Light-Sport Aircraft

	Current	MOSAIC (July 2023 NPRM)
Aircraft class	Airplanes, gliders, LTA, PP, WSC, kit-built	Any
Max seats	2	4 seats for airplanes, 2 seats for other types
Max weight	1,320 lbs for land-based, 1,430 lbs for amphibious	N/A (around 3,000 lbs based on other parameters)
Max stall speed clean (V_{s1})	45 knots	54 knots for airplanes, 45 knots for other types if applicable
Max airspeed level flight (V_h)	120 knots	250 knots
Powerplant	Single reciprocating engine	Any
Propeller	Fixed	Any
Landing gear	Fixed (except glider/water)	Fixed or retractable
Commercial activities	Flight training	Flight training, aerial work
Alterations	All alterations approved by manufacturer or person approved by FAA	Minor alterations allowed without authorization from the manufacturer or person approved by the FAA



What is Sport Pilot currently?

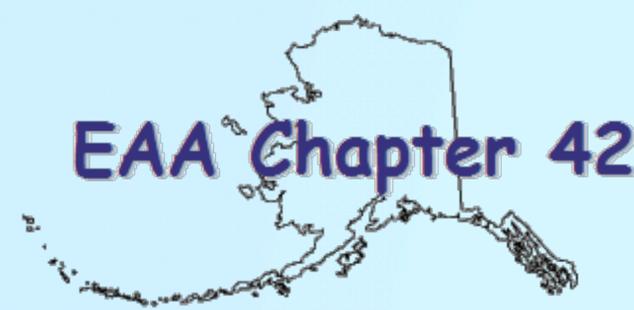
- **Privileges**
 - Day VFR
 - 10,000 feet MSL or 2,000 AGL, whichever is higher
 - Solo or one passenger
 - Fly in E and G airspace and with endorsement B, C and D
 - Can share operating expenses
- **Limitations**
 - US only license
 - No towing, carrying of a passenger or property for comp or hire or furtherance of a business
 - Limited to aircraft meeting the definition of LSA
- **Medical Requirements**
 - Valid state driver's license
 - Most recent medical not denied/suspended/revoked/SI withdrawn



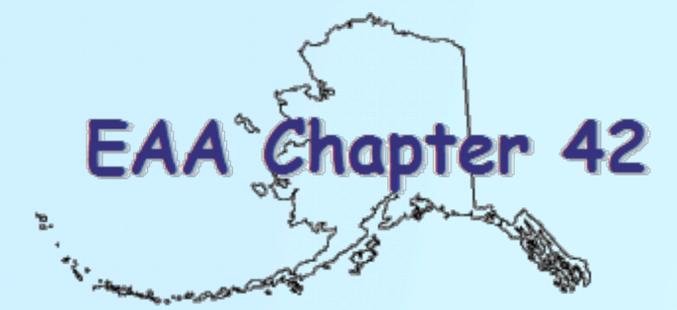
Proposed Sport Pilot Privileges

- May fly any aircraft meeting the new LSA definition, even if the aircraft is certified in another category (e.g. Standard, E-AB, etc.)
- Remain limited to one passenger (2 occupants total)
- With proper endorsements, could fly aircraft with retractable landing gear and constant-speed propellers
- Permitted to fly at night with a third-class medical certificate or BasicMed
- With appropriate ratings, could fly helicopters and powered-lift aircraft that are built under LSA with "simplified flight controls"

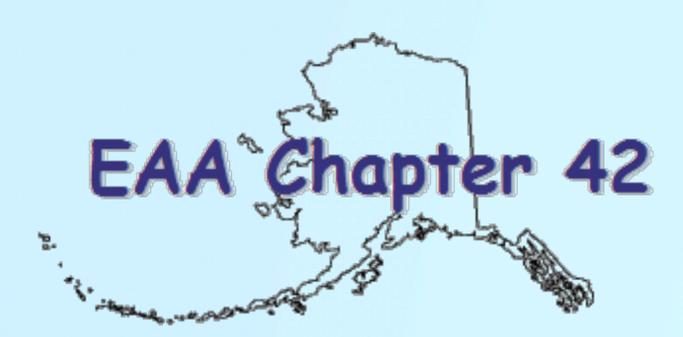
This will become 14 CFR § 61.316 and § 61.329



Sport Pilot		
	Current	MOSAIC (July 2023 NPRM)
Aircraft privileges	Airplanes, gliders, lighter-than-air (LTA), powered-parachutes (PP), weight-shift control (WSC), kit-built, gyroplanes	Airplanes, gliders, LTA, PP, WSC, gyroplanes Some helicopters and other types with simplified flight controls
Max seats	2 (2 occupants)	4 (2 occupants)
Weight	1,320 lbs (land)/1,430 lbs (sea)	N/A (around 3,000 lbs based on other parameters)
Max stall speed clean (V_{s1})	45 knots	54 knots for airplanes, 45 knots for other types if applicable
Max airspeed level flight (V_h)	120 knots	250 knots
Powerplant	Single reciprocating engine	N/A (for airplanes, only single engine rating available)
Propeller	Fixed or ground-adjustable	Fixed, ground-adjustable, automated, or manually controllable-pitch with endorsement
Landing gear	Fixed (except glider/water)	Fixed, or retractable with endorsement
Pilot endorsements	N/A	Manually controllable-pitch prop, retractable gear, complex, night
Medical	State-issued driver's license, most recent medical not denied/suspended/revoked/SI withdrawn	State-issued driver's license, most recent medical not denied/suspended/revoked/SI withdrawn, current FAA medical certificate or BasicMed required for night only
Limitations	Day VFR at or below 10,000 MSL	Day or Night VFR at or below 10,000 MSL (night requires endorsement and a current FAA medical or BasicMed)



What aircraft are affected by MOSAIC?



LSA / S-LSA / E-LSA

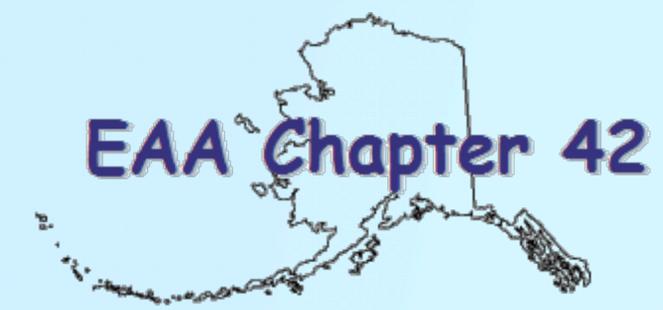
What are the differences?





LSA

Light-Sport Aircraft



Currently: Defined in 14 CFR §1.1

ANY aircraft meeting the weight, speed and stall limits...
LSA does NOT specify the Aircraft Certification category. Can be either:

1) A “Certified” Standard Category aircraft such as an Aeronca 7AC,
Ercoupe 415C, Piper J-3

—OR—

2) Experimental Light-Sport Aircraft “E-LSA”

—OR—

3) Special Light-Sport Aircraft “S-LSA”

—OR—

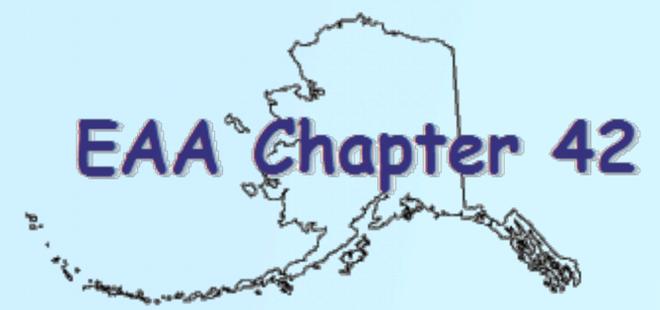
4) Experimental Amateur-Built Aircraft “E-AB” such as a Sonex



ANY pilot, Sport Pilot or above can fly these



S-LSA



Special Light-Sport Aircraft

Factory-built, ready-to-fly aircraft that are FAA-approved to meet industry ASTM 'consensus standards'.



Can be rented and used for flight instruction

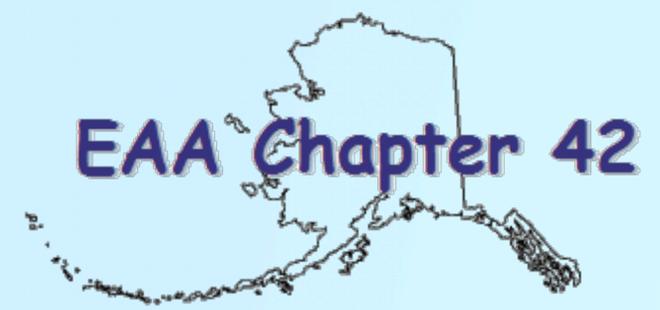
Must be maintained by an LSA Repairman with Maintenance rating (or A&P)

Can be converted to E-LSA (but then no longer used for commercial flight training or rented).

ANY pilot, Sport Pilot or above can fly these

E-LSA

Experimental Light-Sport Aircraft



One of three kinds:

1) A previously unregistered “ultralight-like” that was registered as an E-LSA before January 31, 2008

—OR—

2) A kit version of a Special Light-Sport Aircraft “S-LSA” such as an RV-12

—OR—

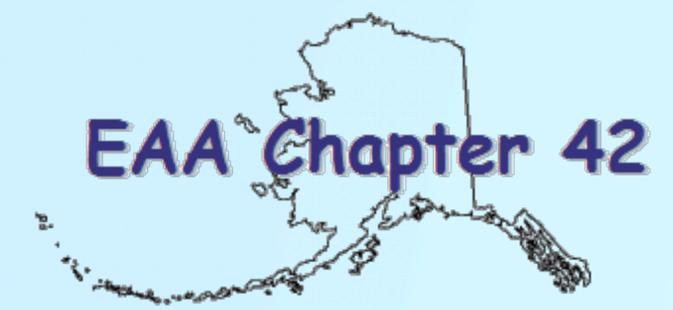
3) A Special Light-Sport Aircraft that the owner converts to E-LSA so he can make modifications and perform maintenance (but you can't go back...)



ANY pilot, Sport Pilot or above can fly these



Vintage Aircraft with a Vs1 ≤ 45 K (Currently "LSA")



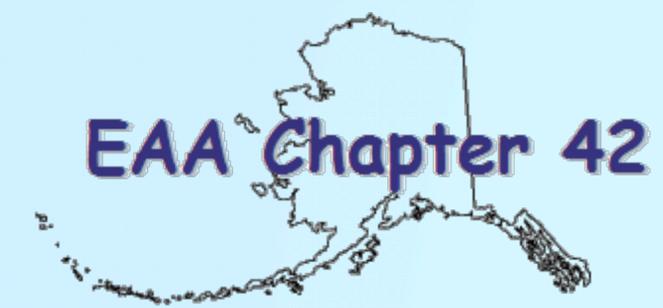
Aeronca 7AC + others
Ercoupe 415C, 415CD
Luscombe 8, 8A, 8B, 8C, 8D
Piper J-3, PA-11 + others
Taylorcraft (many models)



ANY pilot, Sport Pilot or above can fly these



Aircraft with a $Vs1 \leq 54$ K (Eligible in NPRM)



Cessna 120

Cessna 140

Cessna 150 (all models including Aerobat)

Cessna 152 (all models including Aerobat)

Cessna 162

Cessna 170 (all models)

Cessna 172 (all models EXCEPT IO-360 powered models T-41B, R172K, FR172)

Cessna 182 (182 through 182D - 1961)

Piper PA-18, PA-20, PA-22, PA-38 + others

Piper PA-28-140 (with 1,950 WTOGW-1964, 1965 to s/n 28-20940)





Aircraft with a $V_{s1} > 54 \text{ K}$ (Ineligible under NPRM)



- Beechcraft Sundowner 180
- Cessna 172RG
- Cessna 172 IO-360 variants (R172K, FR172, T-41B)
- Cessna 177 (all models)
- Cessna 180
- Cessna 182 (182E 1962 and later models)
- Cessna T182
- Cessna R182
- Cessna TR182
- Cessna 185
- Cessna 190
- Cessna 205 and above
- Diamond DA-40
- Grumman AA-5B
- Piper PA-24 Comanches
- Piper PA-28-140 (other than with 1,950 MTOGW)

STALL SPEED, POWER OFF				
Gross Weight 2800 LBS.	ANGLE OF BANK			
	0°	20°	40°	60°
CONFIGURATION				
FLAPS UP	65	67	75	92
FLAPS 20°	59	61	67	83
FLAPS 40°	58	60	66	82

LANDPLANE SPEEDS ARE MPH, CAS LANDPLANE

Figure 6-2. 65 MPH = 56.5 K
1964 Cessna 180 G POH





“The FAA encourages...” Innovative Avionics

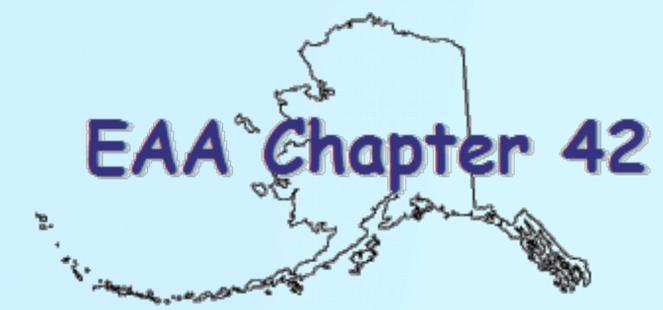


Non-certified - Non-TSO'd





Light Sport Repairman Certificate



Two Ratings (can be a little confusing)

Light Sport Repairman - Inspector (LSRI)

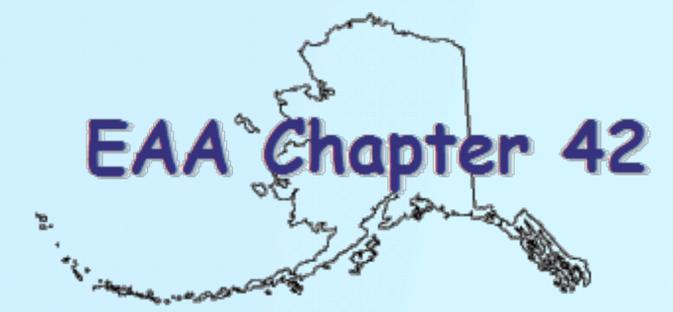
- Relatively easy to obtain - 16 hour course
- Can perform the annual condition inspection on your own E-LSA

Light Sport Repairman - Maintenance (LSRM)

- More extensive training required - 120 hours for airplanes (to be modified)
- Can perform the annual condition inspection and maintenance for compensation on [all] S-LSAs and E-LSAs

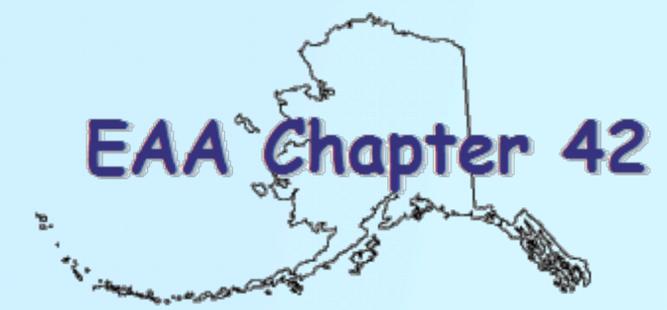


This will become 14 CFR § 65.109



EAA's Analysis

- We are pleased with the overall approach and many of the specific proposals in MOSAIC
- The rule will have a positive impact on GA by:
 - Increasing the utility of the Light Sport Aircraft category overall
 - Enabling entry of new aircraft into the fleet
 - Providing a more useful fleet of training aircraft
 - Offering more options for manufacturers to build aircraft that are commercially viable



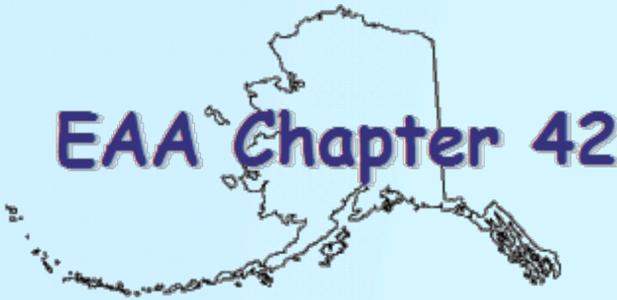
How to Comment

- Closing date: October 23rd, 2023*
- Submit comments at [regulations.gov](https://www.regulations.gov) (Docket FAA-2023-1377)
- Take your time – all comments will be considered equally, regardless of submission date
- Comments and suggestions supported by well-thought-out safety justifications have the highest impact
- Send us your thoughts: mosaic@eaa.org

**Subject to change based on extension request*



To comment:

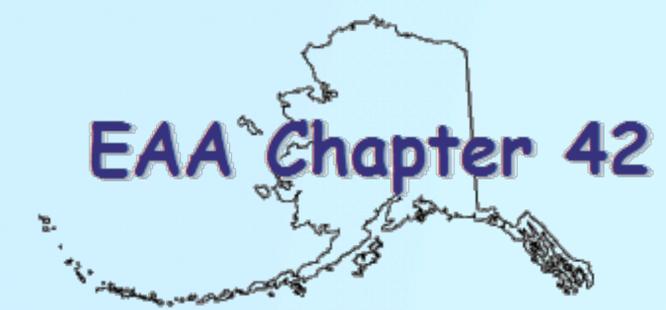


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When commenting, consider:

FAA Safety Continuum

<— — Lower Standard / Less Regulation / More Risk — — — — Higher Standard / More Regulation / Less Risk — — >

Aircraft Airworthiness Category	Ultralights, ParaGliders (+ similar)	Experimental Amateur-Built (Special A/W)	Light Sport + E-LSA	Standard Category "Certified"	Transport Category
FAR basis	Part 103 (No A/W cert.)	FAR 91.319 FAR 21.191	Part 21 (Current) Part 22 (Proposed)	Part 23 or CAR 3	Part 25

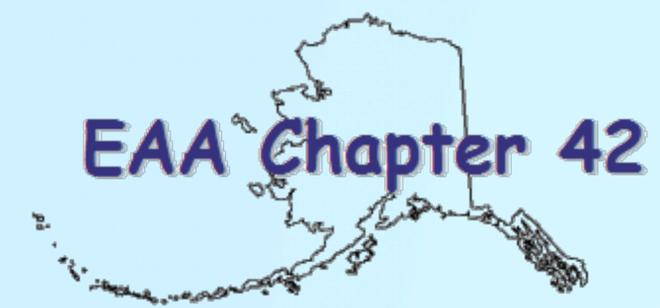
|<— — LSA Expansion area — — — — >|

Also: "Safety" and "Economic rationale"



The Comment Link (and other links) are on:

eaa42.org/MOSAIC



Not Secure | eaa42.org/mosaic.html

MOSAIC

Modernization of Special Airworthiness Certification

MOSAIC is open for comment here:

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

An alternate location to comment is here:
(Suggestion: only use one)

<https://www.regulations.gov/commenton/FAA-2023-1377-0001>

You may also send your comment(s) to the EAA here: mosaic@eaa.org
(This does NOT go to the FAA.)

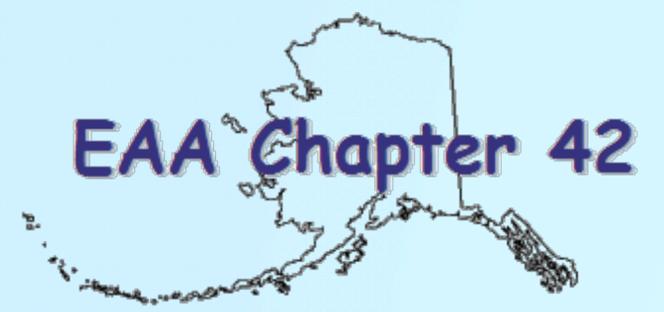
Our **MOSAIC Meeting Presentation slideshow** in pdf will be here after Tuesday night

Other MOSAIC links:

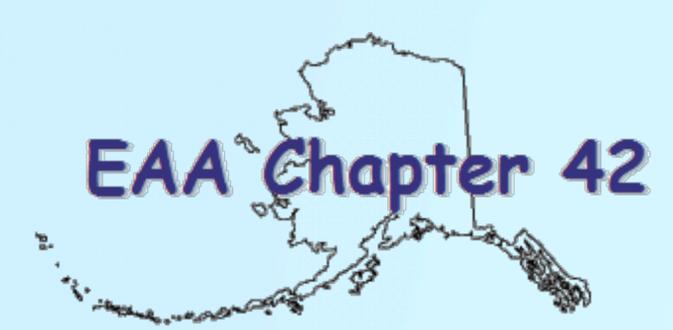
The Federal Register document (fine print, 90 pages long)
This is actually the easiest format to read the proposed regulations (near the end):
<https://www.govinfo.gov/content/pkg/FR-2023-07-24/pdf/2023-14425.pdf>

List of vintage aircraft that currently fall under LSA rules:
<https://flysportusa.com/lisa3.php>

An unofficial website that explains various medical requirements:
<https://gofly.sportaviationcenter.com/airplane-pilot-cfi/medical-requirements-airplane-pilot/>



Discussion and Questions



Adam White

Alaska Airmen's Association Government and Legislative Affairs Advocate

adam.white@alaskaairmen.org

alaskaairmen.org

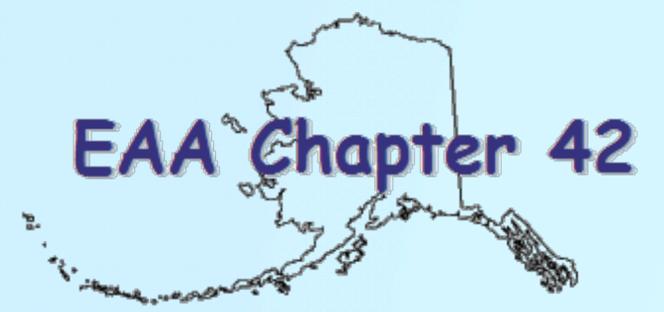
Rick Henry

EAA Chapter 42

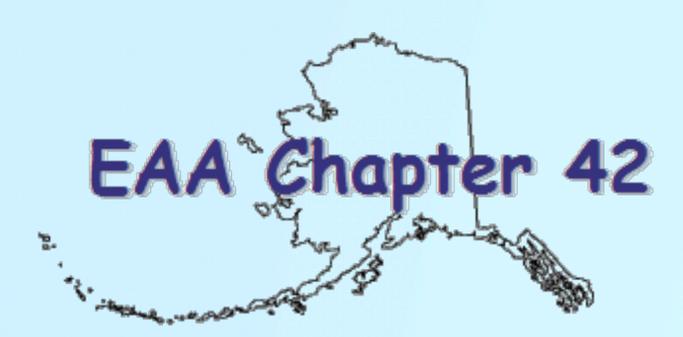
n727rh@gmail.com

rickhenry.com experimentalairplane.com

eaa42.org/MOSAIC



Thanks for joining us tonight!



END



