

# LSA Registration Categories...



*What's  
the Difference?*





Light Sport Aircraft (LSA) can be found registered in four categories: Normal/Primary, Amateur-Built, Experimental Light Sport (ELSA), and Special Light Sport (SLSA). Since any aircraft that meets the LSA definition can be flown by Sport Pilots with the appropriate endorsements why should you care how your aircraft is registered? For a lot of reasons - read on to learn what the advantages and disadvantages are to each category.

#### **NORMAL CATEGORY**

Since virtually no light, Light Sport Aircraft (LSA) are found in this category, I'll only cover it very briefly. Under the LSA rules aircraft registered as SLSA and ELSA can be maintained and inspected by

Light Sport Repairman of different stripes. But aircraft registered as normal or primary category must be maintained and inspected by Airframe & Powerplant (A&P) mechanics or authorized FAA maintenance facilities. These aircraft are under the same maintenance rules as our larger general aviation brethren (Cessnas, Cirrus, Piper, etc.). They cannot be converted to an SLSA or ELSA registration. Like SLSA aircraft, these aircraft can be used for compensation or hire by those with the proper certificates.

#### **AMATEUR-BUILT**

Like the aircraft above amateur-built aircraft maintenance rules pre-date the LSA rules. While anyone can work on them (they are

experimental aircraft) only the original builder and A&Ps can do the annual inspections. But that is not as bad as the other differences between an experimental amateur-built and an experimental light sport aircraft (ELSA). The table below lays out those differences and they are significant. If you are thinking about buying an amateur-built LSA instead of one that can be registered ELSA you need to be sure you understand what the real cost is before you head down this path. There are some LLSA manufacturers out there and they would like you to believe there is no difference between Amateur-Built and ELSA - that is not true.

*(See Figure 1)*

Item/Registration Type	Amateur-Built	ELSA
Proof of eligibility	Must show that you built / fabricated at least 51% of the aircraft	<ul style="list-style-type: none"> <li>No 51% requirement</li> <li>Can convert any SLSA into an ELSA</li> <li>Can register any ELSA compliant kit as an ELSA</li> </ul>
Must meet SLSA standards	No	Yes. This requires more work on the part of the manufacturer which should improve the safety of aircraft in this category.
Phase I Testing	Minimum of 40 hours	Minimum of 5 hours (this gets back to the item above – more work in the form of standards compliance by the factory mean less testing work for you).
Can change the configuration of the aircraft?	Not without having your aircraft re-inspected and then going into the minimum 40 hour phase 1 testing again.	Yes. No re-inspection necessary and you only have to put yourself back into phase 1 testing again (typically 5 hours).
Maintenance	Anyone can maintain	Anyone can maintain
Annual Inspection	Only the original builder, an A&P, or a FAA certified facility can do.	<ul style="list-style-type: none"> <li>Any owner who completes the 16 hour inspection course</li> <li>Light Sport Repairman with Maintenance rating (LSRM)</li> <li>A&amp;P or FAA certified facility</li> </ul>
Use for Compensation/Hire	No.	No. Some transitioning ultralights have this privilege until Jan 2010.

Figure 1.

Item/Registration Type	SLSA	ELSA
Use for Compensation/Hire	Yes	No. While some transitioning ultralights have this privilege it goes away after Jan 2010.
Annual Inspection	LSRM, A&P, FAA Facility	Owner if he has completed the 16 hour inspection course
Maintenance	<ul style="list-style-type: none"> <li>Preventive: Owner</li> <li>All Other: LSRM, A&amp;P, FAA Facility</li> </ul>	All maintenance can be done by the owner.
Resale	Higher – buyers are attracted by the fact that an SLSA is professionally maintained and can be used for compensation or hire.	Lower – there is risk for the buyer when purchasing an aircraft maintained by an amateur which cannot be used for compensation or hire.

Figure 2.

### SPECIAL VERSUS EXPERIMENTAL LIGHT SPORT AIRCRAFT (SLSA VS. ELSA)

SLSA aircraft are the LSA equivalent to larger general aviation, type certificated aircraft. The difference is that they are built to consensus standards versus FAA standards. But what does that really mean? Consensus standards are standards developed by industry, pilots, and the FAA together. This is the same model used to develop cars, paints, toys, etc. Manufacturers who follow these standards can self-certify their products. This is much cheaper than the type certification process that larger general aviation aircraft must go through. These savings are then passed on to the customer. This is one of the reasons SLSA aircraft, particularly LLSA aircraft, are so much cheaper than other manufactured aircraft.

The downside to “self-certification” is that you have to take the manufacturer’s word for their compliance with standards. The FAA is completing a survey of SLSA manufacturers to determine just how well they are conforming to the standards. Based on a statement released recently the FAA stated they had completed surveying 80% of their targeted manufacturers and they were pleased with what they were seeing. The final results probably won’t be released until AirVenture 2009 but based on what the FAA is saying now it looks like the manufacturers are doing a good job of self-regulating themselves.

Even so, if you are in the market for an SLSA you might want to look first at manufacturers whose compliance has been independently audited. AirBorne Australia, the man-

ufacturer of AirBorne weight-shift aircraft (trikes), has been independently audited by CASA (the Australian equivalent of the FAA) for LSA compliance. Other overseas manufacturers may have the same level of audit performed by their FAA equivalents - if so they will be glad to show you. Another source of independent audits is LAMA (Light Aircraft Manufacturers Association). Members of LAMA can request an independent audit. This doesn’t happen automatically with membership so make sure you follow-up to see if the audit has taken place and whether or not the manufacturer passed.

Advantages of SLSA over ELSA - this is probably the question I am asked most often. I’ve laid out the differences in the table above. (See Figure 2).

## SUMMARY

So let's summarize the key differences between the different LSA registration categories. Keep in mind these categorizations have nothing to do with your pilot certificate - all can be flown with a sport pilot certificate/endorsement. But the registration type does affect maintenance, inspections, testing, and use for compensation/hire.

Item/Registration Type	Normal/Primary	Amateur-Built	ELSA	SLSA
Compensation/Hire	Yes	No	No	Yes
Maintenance	A&P	Anyone	Anyone	LSRM/A&P
Annual Inspections	A&P	Builder/A&P	Owner	LSRM/A&P
Flight Testing	NA	40 hours	5 hours	NA
Resale <sup>1</sup>	Good	Poor	Ok	Best

*1 - These are anecdotal ratings based on observation - not statistical data. Normal/Primary category aircraft tend to be much older than SLSA and have more restrictive (more expensive) maintenance requirements - both work to lower resale value compared to SLSA.*

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## ABOUT THE AUTHOR

Terri Sipantzi is the Owner/Operator of Precision Windsports, Inc. based in Lynchburg, VA. Precision Windsports is a full service (sales, training, and maintenance) weight-shift light sport aircraft dealer specializing in AirBorne Trikes. Terri's qualifications include Commercial/Instrument SEL, Sport Pilot CFI WSC, FAA Designated Pilot and Instructor Examiner WSC, Light Sport Repairman with Maintenance rating (airplane, WSC, and PPC), and FAA Designated Airworthiness Representative (WSC). He is a frequent contributor to magazines such as "EAA Light Sport" and "Ultraflight Magazine." You can reach Terri at:

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