

# Amateur-Built vs. SLSA vs. ELSA

**Are you a potential aircraft buyer confused by all these options? Start here.**

**W**ith the advent of the Light-Sport Aircraft category, potential lightplane buyers have two new choices: They can buy a ready-to-fly LSA (a Special Light-Sport Aircraft, or SLSA) or build an Experimental Light-Sport Aircraft (ELSA) from plans or a kit.

These new categories offer freedoms—and restrictions—different from those of the traditional Experimental/Amateur-Built aircraft. The final choice among the three will depend on the desires and goals of the customer.

Let's take a closer look at the differences between these two new LSA categories and Experimental/Amateur-Built aircraft.

## Traditional Homebuilts

Let's clear up one point right away: The Experimental/Amateur-Built (Ex/AB) category was *not* changed by the new rules. You are still allowed to build to your heart's desire as long as 51% of the tasks are performed for recreation or education. The new LSA categories are brand new, *not* changes to the Ex/AB rules.

If your Ex/AB homebuilt meets the basic definition of a Light-Sport Aircraft (given in 14 CFR Part 1), you can fly it with a Sport Pilot license (or higher license) without an FAA medical. The airplane remains in its original Experimental Amateur-Built category,

and *none* of the maintenance or modification rules of SLSA or ELSA apply. Forgive the redundancy, but let's just drive this point home, because it's one that's lost on many newcomers to the LSA rule: If you currently fly a 51% homebuilt that meets the LSA aircraft definition, you do not have to (nor can you) make any changes to the aircraft certification. If you don't want to renew your medical, you're simply able to fly it under Sport Pilot privileges as long as you conform to the more restricted flight rules.

A builder of an Ex/AB aircraft can receive a Repairman Certificate that allows him or her to perform the annual

condition inspection. This Repairman Certificate is applicable only to that particular aircraft and is not transferable to any subsequent owner. Those who purchase completed homebuilts must either have the original builder or a licensed A&P mechanic perform condition inspections.

Other than that, things are pretty much wide open. The owner may perform all maintenance and repairs and can make any modifications desired. If the modifications are major (such as changing engine type), the builder is required to have the aircraft inspected by the FAA or a Designated Airworthiness Representative (DAR) and fly off a test period.

	Experimental Category					Ready-to-Fly LSAs (Special LSA)		
	Experimental Light-Sport			Amateur-Built		Owner	LS-I	LS-M/A&P
	Owner	LS-I	LS-M/A&P	Owner	Repair-Man/A&P			
Modifications during construction	Not Authorized	Not Authorized	Not Authorized	Authorized to perform	Authorized to perform	N/A	N/A	N/A
Modifications after certification	Authorized to perform	Authorized to perform	Authorized to perform	Authorized to perform	Authorized to perform	Not Authorized	May Perform in certain cases	Not Authorized
Preventative maintenance	Authorized to perform	May Perform in certain cases	Authorized to perform	Authorized to perform	Authorized to perform	Authorized to perform	May Perform in certain cases	Authorized to perform
Repairs and major maintenance	Authorized to perform	May Perform in certain cases	Authorized to perform	Authorized to perform	Authorized to perform	Not Authorized	Not Authorized	Authorized to perform
100-hour inspection	Not Authorized	Not Authorized	May Perform in certain cases	N/A	N/A	Not Authorized	Not Authorized	Authorized to perform
Annual inspection	Not Authorized	May Perform in certain cases	Authorized to perform	Not Authorized	Authorized to perform	Not Authorized	Not Authorized	Authorized to perform

- ① Can perform if owner of aircraft.
- ② Former Part 103 two-seat exemption aircraft transferred to ELSA and used for training.
- ③ Only modifications specifically authorized by the aircraft manufacturer can be made.

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## Making the Choice

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### Special Light-Sport Aircraft

The rules for SLSA—basically, ready-to-fly LSAs—are closer to Standard category aircraft. Owners can perform limited preventative maintenance, but all repairs, major maintenance and required inspections are the province of professional aircraft maintainers.

However, a new type professional maintainer's license was created for the SLSAs: The Light-Sport Maintenance (LS-M) Repairman Certificate. The holder of an LS-M can perform maintenance, 100-hour inspections and the annual inspection for a particular LSA class (airplane, weight-shift, glider, etc.). Any A&P mechanic can also perform these tasks.

Those who modify Standard category aircraft must document the process with the local FAA office, either a Form 337 for minor modifications or a Supplemental Type Certificate for major ones that need FAA approval. The good news—neither Form 337s nor an STC is necessary for SLSAs. The bad news—that's because no one *can* modify an SLSA except in accordance with the aircraft manufacturer's procedures. (That's if you want the aircraft to remain an SLSA—we'll get into transitioning categories below.)

The FAA is completely out of the modification and maintenance loop on SLSAs. Tracking mechanical problems,

issuing mandatory safety alerts and approving modifications are all left in the hands of the manufacturer. The FAA does not issue ADs on SLSAs—but the manufacturer can issue a Safety Alert that owners must comply with. (ADs on certified parts on SLSAs—such as a Lycoming or Continental engines—are still mandatory.)

It's unknown how much leeway the manufacturers are going to grant. They may say, for instance, that any radio that fits within a given space may be installed as long as certain precautions are followed. Or, they may require the installation of a *particular* radio. In which case, you're stuck.

### Experimental Light-Sport Aircraft

ELSA is a brand-new certification category under the Experimental umbrella. While there are similarities to the Amateur-Built category, ELSA is entirely separate. Just because something is allowed in Ex/AB does not mean it's permitted in ELSA, or vice-versa.

There are three basic ways an aircraft can receive an ELSA airworthiness certificate: (1) conversion of a former two-seat ultralight trainer (through early 2008), (2) construction of the aircraft from an ELSA kit or plans, and (3) conversion of an existing SLSA.

It takes no FAA approval to put together an Ex/AB kit to sell to other builders. A potential ELSA manufacturer, however, must build a prototype aircraft, ensure it meets the LSA consensus standards, pass the FAA inspec-



Neither the Special Light-Sport Aircraft nor the Experimental Light-Sport Aircraft category is directly connected with the Experimental/Amateur-Built category.

tion and receive the SLSA certificate. At that point, the manufacturer can either begin producing ready-to-fly SLSAs or ELSA kits.

The building process is different from traditional homebuilts. Unlike Ex/AB aircraft, the ELSA builder must *strictly* comply with the manufacturer's instructions—no changes or modifications are allowed. Like the SLSA, if the manufacturer specifies a Fysbyn 5000 navcom, that's the only radio you may use. You must use the specified materials, you must use the named epoxy, and you must install the engine called for by the manufacturer.

In exchange for these considerable restrictions, there is no 51% requirement. An ELSA kit can be sold from 0% to 99% completed.

After the aircraft is inspected by the FAA (or DAR) and receives its ELSA airworthiness certificate...well, things open up considerably. The owner is no longer restricted by the manufacturer's instructions. He or she may change the aircraft as they desire as long as it still meets the gross weight, stall speed, cruise speed and other limitations of the LSA definition. The local FAA may also require a repeat of the test period.

Like an Ex/AB aircraft, the owner can also perform all maintenance. ELSA aircraft builders do not receive Repairman Certificates, so they cannot perform the annual condition inspections on their aircraft. However, they can take a 16-hour training course to receive the new Light-Sport Inspector (LS-I) Repairman Certificate. An LS-I holder can perform the annual on *any* ELSA that they own. Unlike subsequent owners of an Ex/AB, one will be able to take the course once and then annual any ELSAs they later buy.

Before you second-hand home-built owners clog the phone lines with your next question, here's the answer: An existing aircraft *cannot* be re-certified as an ELSA. I'd love to transition my purchased Fly Baby to ELSA so I could do my own annuals instead of finding an A&P every year, but no dice. The same holds true for new-construction Ex/AB aircraft, unless the kit manufacturer receives SLSA certification for the design. And even then, only airplanes begun subsequent to the certification would qualify.

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## Making the Choice

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### The SLSA to ELSA Transition

There is an interesting feature in the ELSA rules. As noted above, the owner of an existing SLSA can transition his or her plane to ELSA. This means you can buy a ready-to-fly aircraft, apply for an ELSA certificate, and, once it is received, you can do nearly *anything* you want.

Want an auto-engine airplane but don't want to spend years building an Ex/AB machine? Buy an SLSA, switch to an ELSA certificate, pull the installed engine, and put in your favorite Subaru or Honda. You'll need the FAA signoff and have to fly off a test period, and, of course, the plane must still meet the basic LSA definition.

That's probably the most interesting thing about ELSA: If you take the LS-I course, you'll have the same freedoms as an Ex/AB builder without having to actually build an aircraft! Buy a ready-to-fly plane, convert it to ELSA (if it isn't already), then do all your own maintenance and inspections and modify it to match your needs.

But the Ex/AB still has plenty of benefits as well: it'll cost you less overall (because in general, the more time you spend building, the less money you'll spend), you won't be limited to the flight restrictions if you fly with a Private Pilot license, and you won't have to take any course to be able to perform maintenance, modifications and inspections. Then there's that satisfaction knowing that you truly built your machine.

It's all a game of tradeoffs. The big thing to remember: SLSA, ELSA and Experimental/Amateur-Built are three separate categories with three sets of rules. Each category has its benefits, and each category has some drawbacks. By careful comparison of the rules, you can pick out the perfect ownership option for your situation. ✚

FOR MORE INFORMATION, visit <http://afs600.faa.gov/AFS610.htm>, the web site for the FAA's Light-Sport Aviation Branch.

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