



**FAA
Aircraft Certification Service
Airworthiness Certification Branch, AIR-230**

Light-Sport Aircraft Airworthiness Certification

Special Considerations for Special Airworthiness Certificates

Special Category Light-Sport Aircraft (SLSA)

A special airworthiness certificate in the light-sport category is issued to an aircraft that meets the definition of light-sport aircraft (LSA), is manufactured to the applicable consensus standards, and is one of the following five classes of the LSA category: airplanes, gliders, powered parachutes, weight-shift-control aircraft (commonly called trikes), and lighter-than-air aircraft (balloons and airships). When the aircraft meets all the eligibility requirements of Title 14 Code of Federal Regulations (14 CFR) §§ 1.1 and 21.190, it may be issued an airworthiness certificate in the LSA category.

Important Note – Transition Training

It is vital to receive proper training when transitioning into any aircraft. This is especially important for pilots with significant experience in legacy 14 CFR Part 23 certified aircraft transitioning to an LSA in the airplane class. LSAs can be and are very safe given the proper training, but are often lighter in weight and more responsive to control inputs than the aircraft most experienced pilots are used to in the legacy fleet. LSA can also feature unfamiliar engines and avionics. Training is necessary to learn the specifics of *any* design. For more information on transition training see Advisory Circular (AC) 90-109, "Airmen Transition to Experimental or Unfamiliar Airplanes."

What do I need to consider before purchase of an SLSA?

Be aware of the following (Ref. Order 8130.2, Airworthiness Certification of Aircraft and Related Products):

- This aircraft design has not been issued a type certificate (TC) by the FAA.
 - The FAA does not review, test or approve this design.
 - The FAA does not provide continued operational safety oversight of this design.
 - The design holder is responsible for the review, testing and approval of the design under industry consensus standards.
 - The design holder is responsible for the continued operational safety oversight of this design under industry consensus standards.

- This aircraft has not been manufactured under a production certificate (PC) issued and monitored by the FAA.
 - The FAA does not review or approve the manufacturing quality assurance system.
 - The FAA does not provide oversight of the manufacturing quality assurance system.
 - The manufacturer is responsible for the review and approval of the manufacturing quality assurance system under industry consensus standards.
 - The manufacturer is responsible to provide oversight of the manufacturing quality assurance system under industry consensus standards.
- The FAA issues a special airworthiness certificate in the light-sport category after the aircraft has been inspected and found to be in a condition for safe operation and the aircraft meets the eligibility requirements in 14 CFR § 21.190(b).
- The design, required equipment, quality assurance, production acceptance tests, aircraft operating instructions, maintenance and inspection procedures, identification and recording of major repairs and alterations, continued airworthiness manufacturer's assembly instructions [kit builders only], and any other appropriate requirements are stated as being in compliance with the applicable industry consensus standard on FAA Form 8130-15, Light-Sport Aircraft Statement of Compliance signed by the manufacturer or properly authorized entity. (Ref. 14 CFR § 21.190(c))
- There must be continued airworthiness support provided by the manufacturer or other viable entity for the owner/operator to fulfill the required responsibility detailed in the FAA regulations and the applicable industry consensus standards. (Ref. 14 CFR § 91.327)
- These aircraft may not be operated for compensation or hire except to tow a light-sport glider or an unpowered ultralight vehicle in accordance with 14 CFR § 91.309 or to conduct flight training.

What are my specific responsibilities as an owner of an SLSA?

Your specific responsibilities as an owner are detailed in the FAA regulations and the industry consensus standards.

- 14 CFR § 91.327 provides details on your responsibility to operate and maintain your aircraft in a condition for safe operation.
- Industry consensus standard on continued operational safety provides details for owner/operator responsibility for maintenance and continued airworthiness.
- Industry consensus standard on airframe emergency parachutes provides details on your responsibility to maintain the parachute system, if installed.

How do I get a copy of an industry consensus standard?

- First, you need to get a list of the industry consensus standards applicable to SLSA that have been accepted by the FAA for use by the light-sport aircraft industry. Here is a link to the FAA Light-Sport Aircraft web page:
 - http://www.faa.gov/aircraft/gen_av/light_sport/
 - Click on the link for "FAA Accepted ASTM Consensus Standards."

- Next, you need to contact ASTM International to get a copy of a specific consensus standard.
 - Consensus standards are copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. Individual reprints of the standards (single or multiple copies, or special compilations and other related technical information) may be obtained by contacting ASTM at this address, or at (610) 832-9585 (phone), (610) 832-9555 (fax), through service@astm.org (e-mail), or through the ASTM website at www.astm.org.

What does the special airworthiness certificate in the light-sport category really mean?

It means that there are operating limitations issued to this aircraft that you must be aware of and comply with. (Ref. 14 CFR § 91.327)

- Operating limitations issued as part of the special airworthiness certificate.
- Placards and markings.
- Pilot's Operating Handbook (POH) or Aircraft Operating Instructions (AOI).
- Maintenance and inspection procedures.
- Flight training supplement.

What is the duration of the airworthiness certificate for an SLSA?

As stated in 14 CFR § 21.181(a)(3): A special airworthiness certificate in the light-sport category is effective as long as-

- The aircraft meets the definition of a light-sport aircraft;
- The aircraft conforms to its original configuration, except for those alterations performed in accordance with an applicable consensus standard and authorized by the aircraft's manufacturer or a person acceptable to the FAA;
- The aircraft has no unsafe condition and is not likely to develop an unsafe condition; and
- The aircraft is registered in the United States.

Do I have to comply with an FAA Airworthiness Directive (AD) on SLSA?

While the FAA does not preclude the possibility of issuing an AD specifically for SLSA, an AD may be issued on a TC product (e.g. engines and propellers) incorporated into an SLSA and if necessary on products having other forms of FAA approval. 14 CFR § 91.327(b)(3) requires compliance with all applicable ADs.

- You may want to consider the components installed on an SLSA prior to purchase in regard to the impact of this requirement.

Do I have to comply with the manufacturer's Safety Directive on SLSA?

SLSA manufacturers will issue Safety Directives to correct unsafe conditions on their aircraft. To keep the SLSA airworthiness certificate valid, owners/operators must comply with all Safety Directives applicable to their aircraft as required by 14 CFR § 91.327(b)(4).

What if I don't want to comply with the manufacturer's Safety Directive?

In lieu of complying with a safety directive as published, an owner/operator may correct the unsafe condition in a manner different from that specified in the safety directive provided the person issuing the directive concurs with the action. (Ref. 14 CFR § 91.327(b)(4))

- If this method is not satisfactory and the owner/operator has evidence that the safety directive was issued for reasons not related to safety (i.e., not in compliance with the consensus standard), the owner/operator may provide this evidence to the FAA and request a waiver to operate the aircraft without complying with the safety directive. The FAA will only issue a waiver from the provisions of the safety directive based on a conclusion that the safety directive was issued without adhering to the applicable consensus standard.

If the owner/operator of the SLSA does not wish to comply with the safety directive, then the owner/operator of the aircraft may not operate the aircraft until the action specified in the safety directive has been accomplished.

- If the owner/operator intends to continue to operate the aircraft without compliance with the safety directive, the owner/operator may surrender the SLSA airworthiness certificate to the FAA or its representative and apply for an experimental LSA (ELSA) airworthiness certificate with new operating limitations.

Who can perform maintenance and inspections on SLSA?

(Ref. AC 65-32; 14 CFR §§ 65.85, 65.87, 65.107, 91.327, and Part 145)

Annual condition inspection may be performed by:

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station

100-hour inspection if used for flight training or towing may be performed by:

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station

Maintenance, repair and alterations may be performed by:

- LSA Repairman with Maintenance rating (as authorized by manufacturer)
- A&P or FAA-certificated repair station (as authorized by manufacturer)

NOTE: The owner and operator of an SLSA with a Sport Pilot or higher certificate can do simple "preventive maintenance" as specified by the manufacturer. (Ref. 14 CFR § 43.3(g))

Are there SLSA aircraft production or airworthiness issues that I need to be aware of?

(Ref. Light-Sport Aircraft Manufacturers Assessment (LSAMA) Final Report dated May 17, 2010, available from FAA Aircraft Certification Service, Production and Airworthiness Division (AIR-200))

During the 2008 Experimental Aircraft Association (EAA)/Federal Aviation Administration (FAA) Recreational Aviation Summit, the FAA Aircraft Certification Service, Production and Airworthiness Division (AIR-200) agreed to assess the current state of the light-sport aircraft (LSA) industry. AIR-200 chartered and sponsored an assessment team, comprised of individuals from several offices within the FAA organization.

The assessment team's goal was to review current LSA manufacturing industry systems and processes through on-site evaluation, analysis, and reporting. The team was also tasked to recommend enhancements to industry consensus standards for LSA design, manufacturing, continued airworthiness, and maintenance and FAA processes and procedures. The team's methodology was to collect data from LSA manufacturers, including their extensions and distributors, located in the United States. The team collected data on LSA industry compliance with applicable regulations, standards, and existing processes.

This report identifies four areas that need minor to significant improvement:

- Compliance with FAA-accepted consensus standards.
- Implementation of manufacturing systems.
- Understanding FAA regulatory requirements, policy and guidance, and industry consensus standards.
- Industry's system for managing, assessing, and maintaining the effectiveness of the consensus standards.

This report recommends correcting and improving several different areas of the LSA manufacturing industry and FAA policy and guidance:

- Take immediate steps to fully comply with FAA regulatory and consensus standard requirements.
- Standardize the continuous airworthiness notification process for all LSA types.
- Develop training to ensure industry fully understands FAA regulatory and policy requirements, and the methods and means to comply with those requirements.
- Establish periodic meetings between FAA and industry to work toward full compliance to FAA regulatory and consensus standard requirements.
- Conduct an initial conformity inspection of all first-time-manufactured LSA models.
- Continue assessments of manufacturers, extensions, and distributors.
- Review current accepted consensus standards for adequacy and revise existing standards or create new standards where necessary.

How can I easily identify an aircraft as an SLSA?

An SLSA must display the words "LIGHT-SPORT" near each entrance to the cabin, cockpit, or pilot station. This marking must be displayed at a 2-inch minimum to no more than 6-inch maximum height. (Ref. 14 CFR § 45.23(b))

NOTE: When an SLSA certification changes to an ELSA certification, the word "EXPERIMENTAL" must be displayed on the aircraft in lieu of "LIGHT-SPORT."
(Ref. 14 CFR § 45.23(b))

Experimental Light-Sport Aircraft (ELSA)

As defined in 14 CFR § 1.1 and the provisions of 14 CFR §§ 21.191 and 21.193, an experimental purpose for the operation of LSA is categorized within six classes of aircraft: airplanes, gliders, powered parachutes, weight-shift-control aircraft (commonly called trikes), gyroplanes, and lighter-than-air aircraft (balloons and airships).

What types of LSA are currently eligible for an ELSA airworthiness certificate?

- (1) Light-sport kit aircraft are eligible under 14 CFR § 21.191 (i)(2). (Ref. Order 8130.2G CHG 1, 4081.a.(1))
 - The aircraft kit is manufactured to the requirements of the applicable FAA-accepted consensus standards and manufactured by an LSA kit manufacturer issued an SLSA airworthiness certificate for an aircraft of the same make and model in accordance with 14 CFR § 21.193(e)(1).
 - The manufacturer's statement of compliance (SOC) meets 14 CFR § 21.190(c), except for 14 CFR § 21.190(c)(7).
 - The applicant is able to provide the aircraft documentation required by 14 CFR § 21.193(e).

- (2) Aircraft previously issued an SLSA airworthiness certificate under 14 CFR § 21.190 may be eligible under 14 CFR § 21.191(i)(3). (Ref. Order 8130.2G CHG 1, 4081.a.(2))

This may occur when -

 - The owner/applicant elects to no longer perform the LSA maintenance or service directives, in accordance with the manufacturer's instructions and the applicable FAA-accepted consensus standards.
 - The LSA manufacturer's continued airworthiness operations/continued airworthiness system is not maintained or no longer exists. This causes a condition of LSA ineligibility and a reduction in continued operational safety that may invalidate this special airworthiness certificate, causing it to no longer be in effect. That aircraft may be eligible in another experimental purpose with modified conditions of operation.

What do I need to consider before purchase of an ELSA?

These aircraft have no established FAA or industry design standards to meet other than those standards identified in the aircraft's operating limitations.

Be aware of the following (Ref. Order 8130.2, Airworthiness Certification of Aircraft and Related Products):

- An experimental certificate under 14 CFR § 21.191(i)(1) [Ultralight 2-seater transitioned before January 31, 2008] will no longer be issued.

For existing certificated transitioned aircraft -

- These aircraft did not have to meet the requirements of any consensus standard.
- These aircraft cannot be an ultralight vehicle under the provisions of 14 CFR § 103.1.

- These aircraft must continue to be in a condition for safe operation as demonstrated through a review of the aircraft records and flight history, and/or a series of flight tests.
 - Unless the FAA issues a Letter of Deviation Authority (LODA) these aircraft cannot be used for flight instruction for compensation or hire; however, they may be used for compensation or hire for towing of a light-sport glider or an unpowered ultralight vehicle in accordance with 14 CFR § 91.309.
- Light-sport kit aircraft under 14 CFR §§ 21.191(i)(2) and 21.193
 - The aircraft is constructed in accordance with the criteria set forth in the applicable consensus standards.
 - The aircraft must be assembled in accordance with the manufacturer's assembly instructions set forth in the applicable consensus standard.
 - The LSA kit does not have to meet the major portion requirements of 14 CFR § 21.191(g).

NOTE: The FAA does not evaluate or approve LSA manufacturer's kits. There is no FAA listing of approved or evaluated LSA kits or manufacturers.

- Before certification, alterations to the kit components or deviations from the assembly process must be coordinated with and approved by the LSA kit manufacturer and documented in the aircraft records.
 - After certification, for a major change to the aircraft (such as an alteration, modification, addition, or deletion), the FAA may modify the ELSA operating limitations with special restrictions for flight testing due to the aircraft modification.
 - The aircraft cannot be used for flight instruction for compensation or hire or for towing for compensation or hire.
- Aircraft previously issued an SLSA airworthiness certificate under 14 CFR § 21.190 that are now operating as an ELSA under 14 CFR § 21.191(i)(3).
 - These aircraft have previously been flight tested and are not required to have additional flight testing unless they have been altered from their original configuration.
 - For a major change to the aircraft (such as an alteration, modification, addition, or deletion), the FAA may modify the ELSA operating limitations with special restrictions for flight testing due to the aircraft modification.
 - These aircraft cannot be used for flight instruction for compensation or hire or for towing for compensation or hire.

The FAA inspection of an ELSA will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. The FAA will not perform any progressive inspections during the construction or assembly of the aircraft.

What does the experimental airworthiness certificate for operating a light-sport aircraft really mean?

It means that there are operating limitations issued to this aircraft that you must be aware of and comply with. (Ref. 14 CFR § 91.319)

- Operating limitations issued as part of the special airworthiness certificate.
- Placards and markings.
- Pilot's Operating Handbook (POH) or Aircraft Operating Instructions (AOI) or User Manual(s).
- Maintenance and inspection procedures or User Manual(s).
- Flight training supplement or User Manual(s).

What is the duration of the airworthiness certificate for an ELSA?

As stated in 14 CFR § 21.181(a)(4): The duration of an experimental certificate issued for operating light-sport aircraft is unlimited, unless the FAA establishes a specific period for good cause.

Who can perform maintenance and inspections on ELSA?

(Ref. AC 65-32; 14 CFR §§ 65.85, 65.87, 65.107, 91.319, and Part 145)

14 CFR § 21.191 (i)(1): Ultralight 2-seaters transitioned before January 31, 2008.

Annual condition inspection may be performed by:

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station
- Owner Repairman with Inspection rating

100-hour inspection, if used for flight training for compensation or hire under Letter of Deviation Authority (LODA), or towing for compensation or hire (no end date) may be performed by:

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station

Servicing (see NOTE), **repair and alterations** may be performed by:

- Anybody

NOTE: "Maintenance" is a common term but it is not used here because FAA uses the word maintenance to refer to a specific and higher level of service required by properly trained mechanics.

14 CFR § 21.191 (i)(2): Manufacturer's Aircraft Kit

Annual condition inspection may be performed by

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station

- LSA Owner repairman with Inspection rating

Servicing (see NOTE), **repair and alterations** may be performed by:

- Anybody

NOTE: "Maintenance" is a common term but it is not used here because FAA uses the word maintenance to refer to a specific and higher level of service required by properly trained mechanics.

14 CFR § 21.191 (i)(3): Converted from S-LSA

Annual condition inspection may be performed by

- LSA Repairman with Maintenance rating
- A&P or FAA-certificated repair station
- LSA Owner Repairman with Inspection rating (owner 16-hour course)

Servicing (see NOTE), **repair and alterations** may be performed by:

- Anybody

NOTE: "Maintenance" is a common term but it is not used here because FAA uses the word maintenance to refer to a specific and higher level of service required by properly trained mechanics.

How can I easily identify an aircraft as an ELSA?

An ELSA must display the word "EXPERIMENTAL" near each entrance to the cabin, cockpit, or pilot station. This marking must be displayed at a 2-inch minimum to no more than 6-inch maximum height. (Ref. 14 CFR § 45.23(b))

NOTE: When an SLSA certification changes to an ELSA certification, the word "EXPERIMENTAL" must be displayed on the aircraft in lieu of "LIGHT-SPORT." (Ref. 14 CFR § 45.23(b))

In addition to this marking the airworthiness certificate will indicate a purpose of "Operating Light-Sport Aircraft" along with the appropriate class of aircraft.