



Standard Specification for Required Product Information to be Provided with Weight-Shift-Control Aircraft¹

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1. Scope

1.1 The following requirements apply for the manufacture of weight-shift-control aircraft. This specification includes Aircraft Operating Instructions (AOI) and Flight Training Supplement (FTS) requirements for aircraft that were designed and manufactured in accordance with ASTM Standards.

1.1.1 This specification covers the minimum requirements for information that shall be provided by the manufacturer or seller of new light sport aircraft, engines, or propellers as a part of the initial sale or transfer to the first-end user.

1.1.2 This specification does not apply to the sale or transfer of used light sport aircraft, engines, or propellers.

1.2 This specification applies to aircraft seeking civil aviation authority approval, in the form of flight certificates, flight permits, or other like documentation.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 Definitions:

2.1.1 *weight-shift-control, n*—powered aircraft with a framed pivoting wing and a fuselage, controllable only in pitch and roll by the pilot's ability to change the aircraft's center of gravity with respect to the wing. Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces.

2.2 Acronyms:

2.2.1 *AOI*—aircraft operating instructions

2.2.2 *FTS*—flight training supplement

2.2.3 *MIP*—maintenance and inspection procedures

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3. Significance and Use

3.1 The purpose of this specification is to provide the minimum information necessary for the proper identification and operation of each light sport aircraft.

4. Information Requirements

4.1 The information given shall be included where applicable on the information plate as specified in 4.2. In addition, the documented operating and maintenance instructions specified in Sections 5 and 6 are to be furnished by the manufacturer or seller at the time of initial sale of each aircraft.

4.2 *Information Plate*—A manufacturer-issued fire proof information plate, printed in English or as defined by the governing civil aviation authority or agency in which the aircraft was initially sold, shall be permanently affixed to the aircraft in a visible location and shall be designed to remain legible for the expected life of the aircraft. The information plate shall be made of steel and have the required information either stamped or engraved onto the plate.

4.2.1 *Serial Number*—A manufacturer-issued unique identifying number or code affixed to the aircraft.

4.2.2 *Name and Manufacturer*, including the name of the manufacturer's city, state, and country.

4.2.3 *Model*—A manufacturer-issued unique identifying name, number or code assigned to each manufactured type of aircraft having the same structural design or components.

4.2.4 *Date of Manufacture*—The date (month and year) determined by the manufacturer that the aircraft met his required design and manufacturing specifications.

4.2.5 *Markings and Placards*:

4.2.5.1 The aircraft must be marked with the following placard: *The aircraft operating instructions must be carried with the aircraft. Occupants must be familiar with information necessary for safe operation.*

4.2.5.2 Each marking and placard must be displayed in a conspicuous place and may not be easily erased, disfigured, or obscured.

5. Aircraft Operating Instructions (AOI)

5.1 Each aircraft must include a set of aircraft operating instructions which includes:

5.1.1 *Operating Limitations*—The instructions shall include listings of all appropriate air-speed limitations for stall and maximum speed, maximum wind limitations, weight and balance, and power plant limitations.

5.1.2 *Operating Data*—The instructions shall include information concerning normal and emergency procedures and other pertinent information.

5.1.3 *Format*—The AOI shall contain the following sections in order of listing:

5.1.3.1 *General*—Includes illustration of aircraft, lists the approved engine(s), propeller(s), fuel, oil, and any definitions of abbreviations and terminology.

5.1.3.2 *Limitations*—A listing of limits including, but not limited to, the airspeed(s), approved maneuvers, and engine operating limits.

5.1.3.3 *Emergency Procedures*—A listing of emergency procedures for items such as engine failure, air restart, fire, and so forth.

5.1.3.4 *Normal Procedures*—This section shall cover the manufacturer's recommended procedures for normal operations such as preflight inspections, takeoff, and landing configuration.

5.1.3.5 *Performance*—Information related to the performance of the aircraft in various environmental and operating conditions such as fuel range, takeoff distances, and landing distances. Additional data shall be provided on performance at (at least one) different flight weight and at (at least one) different density altitude.

5.1.3.6 *Weight and Balance*—Information related to weight and center of gravity requirements for the safe operation of the aircraft.

5.1.3.7 *Description of the Aircraft and its Systems*—A general description of the aircraft, controls, instruments, and optional equipment.

5.1.3.8 *Handling, Servicing, and Maintenance*—Information related to the approved maintenance procedures, manuals, and approved sources for information or maintenance, or both.

5.1.3.9 For weight-shift-control aircraft, the following additional information shall be provided in the AOI, as required:

(1) *Aircraft Speed*—Maximum and minimum speeds in miles per hour.

(2) *Aircraft Weight*—Maximum and minimum total aircraft flight weights.

(3) *Environmental Restrictions*—Recommendations for operational restrictions relating to environmental conditions such as, but not limited to, wind, rain, and extreme heat or cold.

5.1.4 *Supplements*—This section shall include any additional information that the manufacturer wishes to add.

5.1.5 *Data Location and Contact Information*, for recovery of certification documentation, should the original manufacturer lose its ability to support the make and model.

5.1.6 *Setup and Breakdown*—Instructions for setup, breakdown, and preflight inspection provided in the AOI must be sufficiently detailed for a trained pilot to be able to fulfill these actions competently.

6. Maintenance and Inspection Procedures (MIP)

6.1 Each aircraft shall have an MIP document provided for the aircraft that complies with an accepted standard.

7. Aircraft Flight Training Supplement (FTS)

7.1 Each aircraft shall have an FTS that describes features, performance, and procedures unique to that aircraft model.

8. Manufacturer's Statement of Compliance

8.1 Each aircraft, aircraft engine, and propeller shall include a statement identifying the ASTM standards used for the design, quality control, continued maintenance, and production acceptance testing of the product, and attesting to the fact that the product is in compliance with the provisions of those specifications.

9. Operator's Responsibility

9.1 The following statement shall be included in the AOI: "There are inherent risks in the participation in recreational aviation aircraft. Operators and passengers of recreational aviation aircraft, by participation, accept the risks inherent in such participation of which the ordinary prudent person is or should be aware. Pilots and passengers have a duty to exercise good judgment and act in a responsible manner while using the aircraft and to obey all oral or written warnings, or both, prior to or during use of the aircraft, or both."

10. Keywords

10.1 light sport aircraft; special airworthiness certificate; weight-shift-control aircraft

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