Designation: F2243 – 11 (Reapproved 2013)

Standard Specification for Required Product Information to be Provided with Powered Parachute Aircraft[1]

This standard is issued under the fixed designation F2243; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 The following requirements apply for the manufacture of powered parachute aircraft. This specification includes pilot operating handbook requirements for powered parachute 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 powered parachute 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 requirements prior to use.*

2. Terminology

2.1 *Definitions:*

2.1.1 *powered parachute, n*—aircraft comprised of a flexible or semi-rigid wing connected to a fuselage in such a way that the wing is not in position for flight until the aircraft is in motion. This aircraft has a fuselage with seats, engine, and wheels (or floats), such that the wing and engine cannot be flown without the wheels (or floats) and seat(s). Unique to the powered parachute is the large displacement between the center of lift (high) and the center of gravity (low), which is pendulum effect. Pendulum effect limits angle of attack changes, provides stall resistance and maintains flight stability.

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 Number*—A manufacturer-issued unique identifying 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.

5. Aircraft Operating Instructions

5.1 Each light sport aircraft must include an 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 Aircraft Operating Instructions shall have the following sections in order of listing

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5.1.3.1 *General*—Includes illustration of aircraft, lists the approved engine(s), propeller(s), fuel, and 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, etc.

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.

5.1.3.5 *Performance*—Information related to the performance of the aircraft in various environmental and operating conditions such as fuel range, take off 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 powered parachute aircraft, the following additional information shall be provided in the Aircraft Operating Instructions, 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.

6. Maintenance Manual

6.1 Each aircraft shall have a maintenance manual provided for the aircraft that covers the minimum of the requirements as defined by the aircraft manufacturer.

6.1.1 These shall include, as a minimum, mandatory parachute assessment by manufacturer accepted personnel at the end of the second year of service and thereafter at the intervals specified by the parachute condition as specified by the reviewer and test.

6.1.2 These tests shall include porosity, strength and deformation evaluations.

7. Manufacturer's Statement of Compliance

7.1 Each aircraft, aircraft engine and propeller shall included 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.

8. Operator's Responsibility

8.1 One of the following statements shall be included in the pilot operating handbook and posted in the aircraft passenger area so that it is visible to both the pilot and passenger upon entry or when seated in the aircraft:

8.1.1 "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."

8.1.2 "PASSENGER WARNING: This is a Special Light-Sport Aircraft and does not comply with federal safety regulations for standard aircraft."

9. Keywords

9.1 light sport aircraft; powered parachute aircraft; special airworthiness certificate