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Standard Guide on Wing Interface Documentation for Powered Parachute Aircraft¹

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1. Scope

1.1 This guide covers the manufacture of powered parachute aircraft and their qualification for certification.

1.2 This guide 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 to determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F2240 Specification for Manufacturer Quality Assurance Program for Powered Parachute Aircraft

F2241 Specification for Continued Airworthiness System for Powered Parachute Aircraft

F2242 Specification for Production Acceptance Testing System for Powered Parachute Aircraft

F2243 Specification for Required Product Information to be Provided with Powered Parachute Aircraft

F2244 Specification for Design and Performance Requirements for Powered Parachute Aircraft

3. Terminology

3.1 *Definitions:*

3.1.1 *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, that 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 the pendulum effect. The pendulum effect limits angle of attack changes, provides stall resistance, and maintains flight stability.

4. Interface Documentation

4.1 Interface documentation is the data necessary for the aircraft manufacturer to complete overall certification to ASTM powered parachute standards. The following data represents a guide to recommended type, detail, and general format for data transfer from a major subcontractor to the aircraft manufacturer.

4.2 *Manufacturer's Reference Documents*—The following are reference documents that should be supplied to the manufacturer by the subcontractor. These are intended to be maintained at a current status and referenced by documents provided with each delivered product.

4.2.1 *Quality Assurance Manual*—In order to meet the requirements of Specification F2240, it will be necessary for the manufacturer to have a current copy of the subcontractor's quality assurance manual on file. This manual needs to show that written procedures are in effect for:

- 4.2.1.1 Drawing control,
- 4.2.1.2 Component control,
- 4.2.1.3 Receiving inspection,
- 4.2.1.4 Material identification,
- 4.2.1.5 Inspection,
- 4.2.1.6 Non-conforming material handling, and
- 4.2.1.7 QA audits.

4.2.2 *Continued Airworthiness*—In order to meet the requirements of Specification F2241, it will be necessary for the manufacturer to have a current copy of the subcontractor's continued airworthiness manual on file.

4.2.3 *Production Acceptance Testing*—In order to meet the requirements of Specification F2242, it will be necessary for the manufacturer to have a current copy of the subcontractor's production acceptance testing written procedure on file.

4.2.4 *Maintenance Manual Coordination*—In order to meet the requirements of Specification F2243, it will be necessary for the manufacturer to have a current copy of the subcontractor's maintenance manual on file.

¹ This guide is under the jurisdiction of ASTM Committee F37 on Light Sport Aircraft and is the direct responsibility of Subcommittee F37.30 on Power Parachute.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.