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Standard Specification for Pilot's Operating Handbook (POH) for Light Sport Airplane[1]

This standard is issued under the fixed designation F2746; 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 This specification provides the minimum requirements for a Pilot's Operating Handbook (POH) for an aircraft designed, manufactured, and operated as a light sport aircraft.

1.2 This specification defines the POH information that shall be provided by the aircraft manufacturer of a new airplane or airplane kit as a part of the initial sale or transfer to the first-end user.

NOTE 1—The POH may also be referred to as an Aircraft Operating Instruction (AOI). However, POH is considered the approved nomenclature.

1.3 This specification applies to an airplane seeking civil aviation authority approval, in the form of flight certificates, flight permits, or other like documentation as a light sport aircraft.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

F2245 Specification for Design and Performance of a Light Sport Airplane

F2295 Practice for Continued Operational Safety Monitoring of a Light Sport Aircraft (Withdrawn 2019)[3]

F2972 Specification for Light Sport Aircraft Manufacturer's Quality Assurance System

3. Terminology

3.1 *Definitions:*

3.1.1 *flight training supplement (FTS), n*—additional information provided by the airplane manufacturer to provide instruction in special or unusual pilot operation not covered in normal flight training.

3.1.2 *original equipment manufacturer (OEM), n*—company that controls the engineering and design rights for (*1*) the LSA or an assembly, subassembly, accessory, or part installed in the aircraft; (*2*) the consumable materials, tools, fixtures, and test equipment used to service or maintain the aircraft.

3.2 *Acronyms:*

3.2.1 *IAS*—indicated airspeed

3.2.2 *POH*—pilot's operating handbook

4. General Requirements

4.1 The POH provides information on the following areas for a specific model of aircraft:

4.1.1 Operating procedures and limitations.

4.1.2 Performance.

4.1.3 Installed controls, indicators, equipment, and accessories. This information shall be included through one of the following methods:

4.1.3.1 Detailing the information, including component OEM data, within the POH supplements.

4.1.3.2 Referencing separate component OEM provided instructions or manuals.

4.1.3.3 Any combination of 4.1.3.1 and 4.1.3.2.

4.2 The POH technical content shall be consistent with the data developed in accordance with Specification F2245.

4.3 The POH shall be delivered in accordance with required product information requirements.

4.4 The POH shall be structured in accordance with the requirements in Section 5.

[1] This specification is under the jurisdiction of ASTM Committee F37 on Light Sport Aircraft and is the direct responsibility of Subcommittee F37.20 on Airplane.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

4.5 The POH content shall be in accordance with the requirements of Section 6.

4.6 All revisions, omissions, errors, changes, or updates to the POH shall be tracked and distributed to the owner of record in accordance with the continued airworthiness requirements of Practice F2295 and the quality assurance requirements of Specification F2972.

4.7 The POH shall present a consistent style, format, and appearance.

4.8 All measurements shall be consistent with the equipment and instrumentation installed in the aircraft.

4.9 Flight speeds shall be presented as indicated airspeed (IAS).

5. Structure

5.1 Title Page,

5.2 Record of Manual Revisions Page,

5.3 Table of Contents Page,

5.4 Introduction,

5.5 No. 1 - General Information,

5.6 No. 2 – Limitations,

5.7 No. 3 - Emergency Procedures,

5.8 No. 4 - Normal Procedures,

5.9 No. 5 – Performance,

5.10 No. 6 – Weight and Balance, and Equipment List,

5.11 No. 7 - Description of Airplane and Systems,

5.12 No. 8 – Handling and Servicing,

5.13 No. 9 – Supplements.

6. Content

6.1 *Title Page*—Shall be the POH cover and provide the following information:

6.1.1 Publication number,

6.1.2 The words 'Pilot's Operating Handbook,'

6.1.3 Airplane name,

6.1.4 Model number,

6.1.5 Airplane Registration Number (show the words 'Airplane Registration Number' with a blank to enter the data),

6.1.6 Airplane Serial Number (show the words 'Airplane Serial Number' with a blank to enter the data), and

6.1.7 Date (show the date of issue).

6.2 *Record of Manual Revisions*—This page shall provide a form on which the owner can note all updates and changes to the POH.

6.3 *Table of Contents*—This page shall provide the major headings, paragraphs, and page numbers to assist the owner in finding information in the POH.

6.4 *Introduction*—This page(s) shall provide the following information:

6.4.1 A list of the ASTM standards used for the design, construction, continued airworthiness, and reference compliance with this standard,

6.4.2 The name and contact information of the manufacturer of the aircraft, and

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

6.5 *No. 1 – General Information:*

6.5.1 Introduction to airplane.

6.5.2 Summary of the performance specifications to include (can be in a table):

6.5.2.1 Gross Weight,

6.5.2.2 Top speed at sea level and cruise speed at a stated power setting and altitude,

6.5.2.3 Full fuel range with reserves required by the governing civil aviation authority at a stated power setting and altitude,

6.5.2.4 Rate of climb (V_x to V_y),

6.5.2.5 Stall speed: Flaps not extended and flaps extended,

6.5.2.6 Total fuel capacity, total usable fuel, and approved types of fuel, and

6.5.2.7 Maximum engine power output at a stated RPM.

6.6 *No. 2 – Limitations:*

6.6.1 Airspeed Indicator speed range markings.

6.6.2 Stalling speeds at maximum takeoff weight (V_S and V_{S0}),

6.6.3 Flap extended speed range (V_{S0} to V_{FE}),

6.6.4 Operating maneuvering speed (V_O) at gross weight and minimum weight,

6.6.5 Never exceed speed (V_{NE}),

6.6.6 Service ceiling,

6.6.7 Load factors,

6.6.8 Approved maneuvers,

6.6.9 Total fuel capacity, total usable fuel, approved types of fuel, and, if applicable, maximum zero wing fuel weight (W_{ZWF}),

6.6.10 Maximum engine power output at a stated RPM,

6.6.11 Applicable environmental limitations, if any, and

6.6.12 Applicable VFR night or IFR use limitations, if any.

6.7 *No. 3 – Emergency Procedures:*

6.7.1 General Information,

6.7.2 Airspeeds for Emergency Procedures, and

6.7.3 Emergency Checklist. Provide these as applicable to the LSA covered in the POH:

6.7.3.1 Engine fire during start,

6.7.3.2 Engine failure during takeoff,

6.7.3.3 Loss of engine power in flight,

6.7.3.4 Emergency landing without engine power,

6.7.3.5 Precautionary landing with engine power,

6.7.3.6 Fire in flight,

6.7.3.7 Loss of oil pressure,

6.7.3.8 High oil pressure,

6.7.3.9 Emergency descent,

6.7.3.10 Alternator failure,

6.7.3.11 Overvoltage,

6.7.3.12 Inadvertent spin,

6.7.3.13 Inadvertent icing encounter,

6.7.3.14 Loss of primary instruments, and

6.7.3.15 Loss of flight controls.