

Standard Practice for Continued Airworthiness System for Light Sport Gyroplane Aircraft¹

This standard is issued under the fixed designation F2415; 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 practice covers continued operational safety monitoring of light sport gyroplane aircraft.
- 1.2 This practice applies to light sport gyroplane aircraft seeking civil aviation authority approval in the form of flight certificates, flight permits, or other like documentation. This practice applies to kit and ready-to-fly aircraft supplied by a manufacturer.
- 1.3 Certification of compliance with specific individual processes in CEN UNI EN 9100, version 2005 or later, may be presented as compliance with similar representative individual requirements of this ASTM continued airworthiness monitoring standard.
- 1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.
- 1.5 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. Referenced Documents

2.1 ASTM Standards:²

F2352 Specification for Design and Performance of Light Sport Gyroplane Aircraft

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

2.2 CEN Standard:³

CEN UNI EN 9100 Quality Management Systems – Aerospace Series

3. Terminology

- 3.1 *Definitions:*
- 3.1.1 *light sport gyroplane, n*—powered rotorcraft designed in accordance with Specification F2352.
- 3.1.2 *manufacturer*, *n*—any entity engaged in the production of a light sport gyroplane aircraft or light sport gyroplane aircraft kit.

4. Significance and Use

4.1 The purpose of this practice is to establish a method by which safety of flight issues are discovered, evaluated, and corrected for the purpose of maintaining operational safety of a light sport gyroplane aircraft.

5. Current Owner List Documentation

- 5.1 A current owner list will be maintained by the manufacturer that includes all aircraft in service by serial number and registration number, together with the name and address of the owner.
- 5.2 In cases where the presiding aviation authority records of registered owners is sufficient for tracking aircraft and the manufacturer has access to such records, the manufacturer may elect to utilize such records for complying with this section.

6. Responsibilities of the Manufacturer

- 6.1 Manufacturer's Responsibilities—LSA gyroplane manufacturers shall develop and implement a system of receiving, evaluating, and correcting safety of flight and service difficulty issues.
- 6.1.1 Manufacturer shall evaluate all safety of flight and service difficulty reports and shall initiate corrective action as needed to correct any safety of flight related issues.
- 6.1.2 Manufacturer shall not use notices of corrective action to promote or make mandatory non-safety of flight related equipment upgrades or additions.
- 6.1.3 The manufacturer shall provide with the delivery of each LSA gyroplane documented continued airworthiness instructions in the English language. These instructions shall include at least the following:
- 6.1.3.1 A method for the owner/operator to report maintenance, service, and safety difficulties to the manufacturer, in accordance with Section 8.

¹ This practice is under the jurisdiction of ASTM Committee F37 on Light Sport Aircraft and is the direct responsibility of Subcommittee F37.50 on Gyroplane.

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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 Available from European Committee for Standardization (CEN), 36 rue de Stassart, B-1050, Brussels, Belgium, http://www.cenorm.be.

- 6.1.3.2 A method for the owner/operator to obtain and verify that they have the latest safety of flight information developed by the manufacturer, in accordance with Section 9.
- 6.1.3.3 Instructions pertaining to annual and 100-h inspection items, as needed.

7. Responsibilities of the Owner/Operator

- 7.1 Current owners shall make all service publications, as defined in this practice, available to all operators of the aircraft to which they apply.
- 7.2 An owner/operator choosing not to comply with an FAA or the aircraft manufacturer's mandatory service requirement may place the aircraft into the experimental light sport aircraft certification status.
- 7.3 An owner/operator may propose an alternate means of addressing a mandatory service requirement by submitting documentation, technical information, or both, to the aircraft manufacturer to support compliance with Specifications F2352 and F2972.

8. Monitoring, Investigation, and Remedial Action

- 8.1 Manufacturers must provide definitions for those service difficulties to be reported to the manufacturer by the owners/operators.
- 8.2 Manufacturers must provide a means for owners/operators to report such service difficulties.
- 8.3 Manufacturers shall maintain contact with authorized resellers and owners who report incidents or other situations that might relate to safety, operations, or maintenance of aircraft produced and placed in service.
- 8.4 Manufacturers will promptly investigate all reported failures, malfunctions, or defects and develop the appropriate corrective action.
- 8.5 Manufacturers must document all service difficulty reports and maintain a record of the analysis used in determining the level of response.
- 8.6 Manufacturers shall issue a notice of corrective action in relation to the magnitude of the service problem as defined in Sections 9 11.
- 8.7 Manufacturers who have utilized components or products that carry an FAA Type Certificate (TC) or products manufactured under the authority of a Technical Service Order (TSO) must address all relevant service bulletins (issued by the manufacturer of said component or product) and FAA Airworthiness Directives (AD) through issuance of a service directive that stipulates an approved method of compliance.
- 8.8 The manufacturer shall consider alternate means of addressing a mandatory service requirement proposed by the owner/operator in accordance with 7.3, and shall issue denial or acceptance of the proposal in writing to the owner/operator making the proposal.

9. Notice of Corrective Action-Safety Directive

9.1 A safety directive shall be distributed by the manufacturer to all owners when a condition is found to exist that may

also exist in other aircraft from that manufacturer, and which may cause a deviation from original design or unsafe condition for flight, rendering the aircraft unairworthy. This safety directive shall contain the manufacturer's prescribed corrective action. This corrective action detailed in the safety directive is mandatory. This corrective action may be in the form of a maintenance procedure, inspection procedure, or other procedures deemed appropriate by the manufacturer. This must be performed and documented in the individual aircraft logs in order for the aircraft to comply with ASTM standards. When a safety directive is issued, immediately provide a copy to the presiding aviation authority.

10. Notice of Corrective Action-Service Bulletin

10.1 Service bulletins will be issued by the manufacturer to all owners. A service bulletin does not require immediate action but is recommended for future action. A service bulletin may be issued as a result of the manufacturer developing a design change or a service procedure change that will improve the operation or maintenance of the aircraft. Service bulletins are not mandatory to maintain the aircraft's compliance with ASTM standards.

11. Notice of Corrective Action-Notification

11.1 The manufacturer shall issue notification letters on any subject that is considered helpful to the owners/operators. Such letters are intended to maintain a good rapport with the owners/operators, encourage feedback on service and other problems, or to circulate items of interest that an owner/operator may feel would be of value to other owners/operators. A notification letter does not include any mandatory owner/operator actions.

12. Document Maintenance, Preservation, and Access

- 12.1 Copies Maintained—In order to help ensure that the fleet of aircraft remains airworthy, the manufacturer shall maintain documentation on file showing compliance with Specifications F2352 and F2972, and Practice F2415. Upon the event that the original manufacturer ceases to exist as a viable business entity, the original manufacturer shall arrange for the continued maintenance of this documentation on file, including the current owner's list. This documentation showing compliance with the standards and any safety directive bulletins shall be copied and maintained at a physically safe location. For purposes of this practice, a physically safe location is one which is at least 33 m (100 ft) from the main production facility, such that a fire could not destroy both sets of records.
- 12.2 Access Assurance—This documentation should be available in such a manner that it can be properly obtained for continued airworthiness support in the event that existing avenues of recovering the information are destroyed. This documentation shall be retained such that in the event that a future entity wishes to continue supporting the airworthiness of the make and model involved, they may do so by making use of the original manufacturer's documentation. The original manufacturer may either keep these documents on file so that they will be available at any future date, or shall turn them over

to a responsible agency such as the Federal Aviation Administration (FAA) or other industry entity for safekeeping. The location and contact for accessing these documents shall be presented in the Pilot Operating Handbook, and any revision to this information shall be disseminated through service bulletins to the aircraft owners. Any acquisition of documentation for

purposes of maintaining airworthiness shall follow the then applicable laws or rules concerning intellectual property rights.

13. Keywords

13.1 gyroplane; light sport aircraft

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