



# Standard Practice for Compliance Audits to ASTM Standards on Light Sport Aircraft<sup>1</sup>

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## 1. Scope

1.1 This standard practice establishes the minimum set of requirements for auditing programs, methods, and systems, the responsibilities for all parties involved, and qualifications for entities conducting audits against ASTM standards on Light Sport Aircraft.

1.2 This standard provides requirements to enable consistent and structured examination of objective evidence for compliance that is beneficial for the LSA industry and its consumers. It is the intent of this standard to provide the necessary minimum requirements for organizations to develop audit programs and procedures.

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 *action plan*—an audited entity’s plan to address audit findings that describes response actions, parties responsible for their execution, and expected completion dates.

2.1.2 *audit (compliance audit)*—a systematic, documented, and objective review of an audited entity to evaluate its compliance status relative to audit criteria.

2.1.3 *audit criteria*—the set of requirements that are applicable to the audited entity and specified in the audit scope. Examples may include standards, regulations, and laws.

2.1.4 *audit data*—information obtained during an audit to support audit findings.

2.1.5 *audit finding*—a statement of audited entity conditions at the time of the audit by evaluation against audit criteria. Audit findings shall be based upon verifiable audit data and may be either positive or negative with respect to audit criteria.

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2.1.6 *audit objective(s)*—broad statement(s) of what the audit intends to accomplish.

2.1.7 *audit plan*—documentation that describes the audit.

2.1.8 *audit program*—an auditing entity’s overarching collection of approaches, methods, systems, etc. toward the goal of achieving an audit objective(s) and in compliance with this standard.

2.1.9 *audit protocol*—a method designed to collect information to support the audit objective(s) based upon audit criteria.

2.1.10 *audit purpose*—reason for the audit.

2.1.11 *audit report*—a written summary of audit findings that is objective, clear, concise, constructive, and timely.

2.1.12 *audit scope*—a description of what is to be audited. The audit scope shall include a description of the period under review, the audited entity, and the audit criteria.

2.1.13 *audit team*—one or more auditors responsible for conducting an audit. The audit team may be supported by technical experts and auditors-in-training.

2.1.14 *audited entity*—a facility, organization, or part thereof, that is the subject of an audit.

2.1.15 *auditing entity*—the organization that provides the audit program and authorizes, or initiates the audit process. The auditing entity may be internal or external to the audited entity.

2.1.16 *auditor*—a person qualified to conduct an audit.

2.1.17 *independence*—a condition characterized by organizational standing where an auditor is free to conduct an audit without being controlled or influenced by others.

2.1.18 *lead auditor*—an auditor designated to lead and manage the audit.

2.1.19 *objectivity*—a condition characterized by the absence of bias, influences, and conflicts of interest that affect or have the potential to compromise audit findings.

2.1.20 *open issues*—potential audit findings that cannot be verified or resolved without additional information.

2.1.21 *period under review*—the time interval over which conditions at the audited entity are evaluated against audit criteria.

2.1.22 *records*—documentation and other forms of recorded information.

2.1.23 *working papers*—records collected and developed by an auditor through the use of audit protocols.

### 3. Significance and Use

3.1 The purpose of this standard practice is to provide the minimum requirements for the conduct of compliance audits.

3.2 The intended use of standard is to provide a basis for an internal or external entity to develop an audit program. An audit program defines specific requirements for the execution of audits for a particular objective. An example of an audit program would be an external (third party) audit of LSA manufacturer's quality assurance system.

3.3 Compliance to this standard would insure that audit programs and those who develop and execute them are following a consensus set of minimum requirements.

3.4 This standard does not mandate either internal or external audits.

3.5 An auditing entity cannot request or approve an audit.

3.6 *Other Audit Criteria*—Other audit criteria may be included in the audit scope if specified in the audit plan. Examples include safety, technical, operational, and management requirements. Items that are outside the scope of auditable criteria may be submitted as observations for possible resolution. However these are not binding and are not mandatory.

3.7 *Additional Services*—Additional services are outside the scope of an audit objective. Examples of such services are consultation to resolve negative or open findings or any other service where the auditing entity conducts an activity other than an audit for the audited entity.

3.8 *Compliance Assurance*—An audit is only an indicator of the compliance health of the facility and/or organization during only the period under review and therefore has limited compliance assurance and is not assumed to be exhaustive.

3.9 *Level of Review is Variable*—The audit scope may vary to meet different audit objectives. For example, the audit scope may include only selected audit criteria, selected period under review, or selected portions of a facility or organization.

### 4. Audit Program

4.1 The auditing entity shall develop and document an audit program that conforms to this practice prior to carrying out an audit. The audit program and its documentation is internal to the auditing entity.

4.2 The audit program shall specify an audit purpose and audit objective(s).

4.3 The audit program shall specify the procedures and guidelines that will be used to conduct the audit process in Section 5, including target timelines. As practical, the program should also provide drafts of audit-specific information such as audit scope, audit plan, and audit reports.

4.4 The audit program shall contain requirements for record management as specified in Section 10.

4.5 The audit program shall define criteria for audit status levels. Examples of audit status include pass/fail, open/closed, or complete/incomplete.

4.6 The audit program shall include auditor qualifications as specified in Section 11.

4.7 The audit program shall define guidelines and procedures for identifying and reporting any compromise of auditor qualifications.

### 5. Audit Process

5.1 An audit shall at a minimum involve three activities. These are: preparation activities, execution activities, and reporting activities.

5.2 *Preparation*—Preparation activities occur before execution and are intended to plan, organize, and communicate the execution and reporting activities for a specific audit. The result of the preparation activities is the audit plan (Section 6). The audit plan shall be agreed upon between the auditor and the audited entity in a timely manner prior to the execution of an audit.

5.3 *Execution*—The audit plan is carried out between the audit team and audited entity during this activity. These activities may occur remotely and/or during an on-site visit, as specified by the audit plan. Execution activities shall include communication activities Section 7 and data gathering activities Section 8.

5.4 *Reporting*—Reporting activities occur after audit execution between the auditor and audited entity. Reporting deliverables and milestones occur following execution; however, preparatory work may occur at other times during the process. Reporting shall include documentation activities specified in Section 9.

### 6. Audit Plan

6.1 An audit plan shall contain the following:

6.1.1 The audit objective;

6.1.2 Audit scope;

6.1.3 Identities of the auditing entity, audited entity, and audit team;

6.1.4 Audit schedule;

6.1.5 Record management and confidentiality procedures; and

6.1.6 Logistics.

6.2 *Background Information*—Background information should be used as appropriate to develop the audit plan or refine an existing audit plan. Background information may consist of records, process and site descriptions, operation and maintenance manuals, compliance inspection reports, previous audit reports, notices of violations, and other relevant information.

6.3 *Schedule*—A schedule of audit activities shall be developed and documented. The schedule shall clearly document the expected timeline between the auditing and audited entity with respect to audit execution, reporting audit findings, and action plans as applicable.

6.4 *On-site Logistics*—If an on-site visit is planned, issues such as scheduling a site orientation meeting, identifying site contacts, scheduling the site visit dates, and resolution of lodging and transportation logistics should be addressed.

## 7. Communication

7.1 Communication between the audited and auditing entities during an audit shall include an opening conference at the start of an audit and a closing conference at the end of an audit. Conferences at some interval during the audit may also be included as applicable and specified in the audit plan.

NOTE 1—The opening and closing conferences are intended to facilitate clear communication between the audit team and audited entity. These communications may occur in person or via remote communication means as detailed in the audit plan.

7.2 *Opening Conference*—This conference brings together the audit team and appropriate members of the audited entity staff to confirm the audit plan and other necessary details. The meeting should facilitate the subsequent gathering of information by the audit team and encourage discussion of any questions or concerns. The audited entity should provide an overview of the facility operations for the audit team during the opening conference.

7.3 *Closing Conference*—The closing conference summarizes the overall results of the audit and provides an opportunity for audited entity personnel to discuss and question draft audit findings. Reporting procedures should be discussed at the closing conference including time frames, a process for resolving challenged audit findings, and for closing or reporting any open issues.

7.4 *Team Meeting(s)*—Meetings of the audit team should be conducted as necessary to share information and ensure timely and consistent completion of the audit. Draft audit findings and audit plan issues should be discussed among audit team members prior to the closing conference.

## 8. Protocols

8.1 Audit data shall be gathered and evaluated by the audit team to support audit findings consistent with the audit objective. The audit team should utilize a combination of audit protocols to ensure consistency in gathering audit data. Types of audit protocols include:

8.1.1 *Physical Inspections*—Physical inspections of the audited entity's facilities, documentation, working practices, quality systems, etc. This protocol primarily applies to on-site visits.

8.1.2 *Interviews*—Interviews to obtain information on audited entity practices and procedures that are subject to the audit scope and plan. Appropriate management, staff, employees, and, if applicable, contractors, may be interviewed.

8.1.3 *Records Review*—Records may include but are not limited to reports submitted to regulatory entities, procedures, design and analysis methods, and manufacturing processes.

8.2 Gathered data is considered a record and is subject to record management.

## 9. Documentation

9.1 Audit protocols should be completed and documented, or explanations provided for open issues, in accordance with the audit plan.

9.2 *Audit Report*—A final audit report shall be issued by the auditing entity to the audited entity that presents audit findings and status.

9.2.1 A draft audit report should be developed for review and comment.

9.2.2 Audit findings that are resolved within the period under review shall be included as audit findings in the audit report and may be noted as resolved.

9.2.3 Final audit findings shall be based upon the most recent verifiable audit data from the period under review that is available to the audit team.

9.2.4 Any comments on audit findings, a draft audit report, or the final audit report shall be made in a timely manner according to the timelines agreed upon in the audit plan. Failure to provide comments within this timeline shall not prevent issuance of the final audit report.

9.3 *Action Plan*—The audited entity shall develop a written action plan to follow-up on negative findings and open issues presented in the audit report. This action plan shall be submitted to the auditing entity.

9.3.1 For findings that require corrective action, a record of the completion of the corrective action should be documented and submitted to the auditing entity.

9.3.2 The action plan shall be documented in a timely manner as specified in the audit plan.

9.3.3 The action plan shall include measures to prevent reoccurrence of the finding.

9.3.4 If the audited entity disagrees with a finding, this disagreement shall be documented and submitted to the auditing entity.

9.3.5 In all cases, the audited entity is ultimately responsible for compliance to audit criteria requirements.

## 10. Record Management

10.1 Records collected by audit protocols are considered either audit data or working papers and shall be managed. Records may be, but are not limited to, physical items or documents, copies of such items or documents, and electronic data of various forms.

10.2 The content of all records, whether audit data or working papers, shall be considered confidential to the entity to which the content or data belongs, unless otherwise specified in the audit plan.

10.3 Management of records shall include the following:

10.3.1 Procedures for handling and disclosure of confidential records.

10.3.2 Policy for record retention, including the disposition of records.

10.4 Working Papers management shall include the following additional requirements:

10.4.1 A system to facilitate working paper review and protect against tampering.

10.4.2 A system for managing corrections and revisions of working papers.

## 11. Qualifications

11.1 An auditor shall conduct an audit with the care, diligence, skill, and judgment expected of any auditor in similar circumstances.

11.2 The auditing entity and the auditor shall disclose actual or potential issues compromising auditor qualifications.

11.3 An auditor shall be competent, objective, and independent.

11.4 *Competence*—An auditor shall have a working knowledge of the provisions of this standard and audit criteria relevant to his or her area of audit responsibility.

11.5 *Independence*—An auditor should be independent of the audited entity. As applied to internal audits, this would require that the auditing entity not have direct internal responsibility for compliance to the audit criteria under review. Both parties shall evaluate the risks (bias, overinformed, etc.) of limited resources in the performance of an audit.

11.6 *Audit Team Staffing*—The audit team shall collectively be able to implement the audit plan. The following shall be considered in assembling an audit team:

- 11.6.1 Knowledge of audited entity operations;
- 11.6.2 Knowledge of audit criteria;
- 11.6.3 Experience in auditing;
- 11.6.4 Workload;
- 11.6.5 Communication, technical, language, or other skills needed;
- 11.6.6 Knowledge of these requirements;
- 11.6.7 Ability to remain objective; and
- 11.6.8 Ability to manage confidential business information.

## 12. Responsibilities

12.1 The following defines the primary responsibilities of the entities involved in the audit program and audit execution.

12.2 *Auditing Entity Responsibilities*—The auditing entity shall:

- 12.2.1 Determine the need for and develop an audit program;
- 12.2.2 Specify or approve the audit purpose;
- 12.2.3 Select the lead auditor; and/or audit team;
- 12.2.4 Provide qualified auditor(s);
- 12.2.5 Provide a quality assurance and quality control program that may include evaluations of audit procedures, auditor qualifications, auditor effectiveness, and audit reports;
- 12.2.6 Support auditor(s) and the auditing function including management of audit data, audit findings, and audit reports in a responsible manner; and
- 12.2.7 Disclose any issues that may compromise auditor qualifications to parties involved in the audit.

12.3 *Lead Auditor Responsibilities*—The lead auditor shall ensure the efficient and effective execution of an audit plan. To do this the lead auditor shall work through the auditing entity to:

- 12.3.1 Develop an audit plan;

12.3.2 Gather appropriate audited entity background information;

12.3.3 Assemble a qualified audit team;

12.3.4 Communicate with the audited entity regarding audit plan issues. For example, schedule, logistics, access, availability of audited entity staff to interview, audit team needs, etc.;

12.3.5 Manage the audit team;

12.3.6 Serve as the primary point of communication between the audit team and any other entity regarding the audit plan, audit findings, and audit reports;

12.3.7 Seek to prevent and resolve problems that could affect audit quality and timeliness;

12.3.8 Ensure the audit is conducted in accordance with this practice;

12.3.9 Notify the parties involved in the audit of conditions that may prevent audit completion in accordance with the audit plan;

12.3.10 Prepare an audit report;

12.3.11 Communicate in writing with the audited entity regarding audit report issues. For example, initial findings, responses to findings, actions plans in place, resolved issues during audit, etc.;

12.3.12 Disclose issues to the auditing entity that may compromise auditor qualifications.

12.4 *Auditor Responsibilities*—An auditor shall support the lead auditor in the execution of the audit plan. To do this, an auditor shall:

12.4.1 Understand the audit plan and their individual area of responsibility;

12.4.2 Follow lead auditor direction;

12.4.3 Review audit criteria and any protocols to be used, and establish a personal work plan for assigned areas of responsibility;

12.4.4 Collect sufficient relevant audit data to support audit findings;

12.4.5 Develop and document audit findings;

12.4.6 Assist in preparing audit reports;

12.4.7 Maintain audit data and documentation in a secure manner;

12.4.8 Disclose issues to the auditing entity that may compromise auditor qualifications.

12.5 *Audited Entity Responsibilities*—The audited entity shall:

12.5.1 Ensure that the audit is supported, including cooperating with the auditor(s) to ensure that audit objectives are met;

12.5.2 Provide the auditing entity with requested background information in a timely manner;

12.5.3 Ensure audit team safe, timely, and complete access;

12.5.4 Provide the audit team with facility escorts knowledgeable of audited entity operations, to accompany auditor(s) on physical inspections;

12.5.5 Assist auditor in identifying pertinent personnel and in scheduling interviews;

12.5.6 Ensure audit team access to documents needed to develop audit findings;

12.5.7 Ensure those facilities and operations audited accurately represent normal and known abnormal conditions;

12.5.8 Inform audit team of abnormal conditions;



12.5.9 Take measures to ensure that the audit team is provided with accurate and complete answers to questions;

12.5.10 Provide written response to audit report(s) that may include action plans, implemented and planned, and any disagreement with findings in a timely manner in accordance with the audit plan;

12.5.11 Develop and implement measures to prevent recurrence of negative findings;

12.5.12 Retain audit reports as specified in the audit plan.

### **13. Keywords**

13.1 audit; compliance; light sport aircraft; LSA

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