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Standard Guide for Auditing Amusement Rides and Devices¹

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1. Scope

1.1 This guide establishes guidelines for auditing conformance to ASTM Committee F24 Standards during an audit of an amusement ride or device within a defined scope.

1.2 *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.*

1.3 *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

F747 Terminology Relating to Amusement Rides and Devices

F770 Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices

F1159 Practice for Design of Amusement Rides and Devices that are Outside the Purview of Other F24 Design Standards

F1193 Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices

F2291 Practice for Design of Amusement Rides and Devices

3. Terminology

3.1 Reference Terminology **F747**.

¹ This guide is under the jurisdiction of ASTM Committee F24 on Amusement Rides and Devices and is the direct responsibility of Subcommittee F24.30 on Maintenance and Inspection.

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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.

4. Significance and Use

4.1 The purpose of this guide is to establish guidelines for audits of amusement rides and devices.

4.2 An audit can include inspections, evaluations, or examinations during the design, manufacturing, installation, commissioning, operation, or major modification of an amusement ride or device.

4.3 When audits are performed, they shall occur during the relevant stages of an amusement ride or device's design, manufacture, installation, commissioning or major modification. This guide does not require recurring design, manufacturing, installation, commissioning, or major modification audits.

5. General

5.1 Auditor(s) shall have sufficient relevant education, experience, and training to properly audit an amusement ride or device as defined in this standard.

5.1.1 Evidence of auditor(s) relevant education, experience, and training shall be made available upon request by party(ies) requesting the audit.

5.1.2 Auditor(s) shall read and become familiar with contents of the applicable referenced documents.

5.2 The auditor must prepare for and comply with all personal health and safety requirements as they pertain to the scope of the audit.

5.3 Inspection tools, test equipment, gauges, or other devices shall be in proper working order and, where applicable, calibrated. Calibration shall be established by a record of calibration showing calibration traceable to accepted standards specific to the equipment used (for example, AISC, ASME, ANSI, etc.).

5.4 Audit recording formats shall be mutually agreed upon by auditor and auditee before the audit is initiated.

5.4.1 Actual findings or statements, or other information that is related to the audit(s) shall be included in the audit record(s). Audit record(s) may include but not limited to, written documentation, photo(s), video(s), spreadsheet(s), and list(s).

5.4.2 The auditor's name(s) and date(s) of the audit(s) performed shall be included in the auditing record(s).

6. Design Audit Program

6.1 When performing an audit of a new design of an amusement ride or device, the auditor shall review conformance to Practice **F2291** or the applicable F24 standard in effect at the time of the design.

7. Manufacturing Audit Program

7.1 When performing an audit of the manufacturing of an amusement ride or device, the auditor(s) shall review conformance to Practice **F1193**.

8. Installation and Commissioning Audit Program

8.1 When performing an audit of the installation and commissioning of an amusement ride or device, the auditor(s) shall:

8.1.1 Perform an inspection of equipment condition per Section 9 through Section 13 of Practice **F1193**.

8.1.2 Review conformance to Practice **F770**.

9. Major Modification Audit Program

9.1 When performing an audit of the design of an amusement ride or device, the auditor shall review conformance that the design specific to the major modification meets Practice **F2291** or the applicable F24 standard.

9.2 When performing an audit of a major modification to an amusement ride or device as defined in Terminology **F747**, the auditor(s) shall perform the following where applicable:

9.2.1 Review conformance to Owner/Operator's Operations and Maintenance Training Program per Practice **F770**.

9.2.2 Owner/operator's conformance to manufacturer's maintenance and inspection requirements.

9.2.3 Review conformance to manufacturer's requirements and documentation per Practice **F1193**.

9.2.4 Evaluate all documentation that is available for the modification and that this information reflects the in-field installation.

9.2.5 Confirm that all documentation pertaining to the modifications was included in the supporting documentation needed to properly train, inspect, maintain, and operate the ride or device per the design requirements.

9.2.6 Review conformance of the operational functionality as it complies with the operational specifications provided by the engineer, designer, or manufacture as per Practice **F1193**.

10. Operation Audit Program

10.1 When performing an operation audit, the auditor(s) shall:

10.1.1 Review conformance to Owner/Operator's Operations and Maintenance Training Program per Practice **F770** and Practice **F1193**.

10.1.2 Review conformance of documentation and that it reflects the current configuration of the ride and device in operation.

10.1.3 Review conformance as to the operational functionality per the operational specifications as provided in Section 11 and 12 of Practice **F1193**.

11. Keywords

11.1 inspection; inspector

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