



Designation: **F770–15 F770 – 17**

Standard Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices¹

This standard is issued under the fixed designation F770; 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 provides guidelines for operations, maintenance, and inspection procedures for amusement rides and devices to be performed by the owner/operator.

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

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

3. Significance and Use

3.1 The purpose of this practice is to delineate information and to establish procedures for the ~~operation of operation,~~ maintenance, inspection, and training for amusement rides and devices.

4. Owner/Operator's Responsibility

4.1 The owner/operator shall develop a program with necessary tasks to operate and maintain the amusement ride or device. The program shall include but not be limited to:

4.1.1 An operations program as outlined in Section 5;

4.1.2 A maintenance program as outlined in Section 6;

4.1.3 An inspection program as outlined in Section 7, and

4.1.4 A training program as outlined in Section 8.

5. ~~Owner/Operator's Responsibility~~ Operations Program Requirements

5.1 ~~Operating Document—Each~~The owner/operator shall prepare an Operating Document for each amusement ride or device based on the recommended instructions and specifications provided by the manufacturer. This Operating Document shall be made available to each amusement ride or device operator and attendant. The Operating Document shall include but not be limited to:

5.1.1 Specific amusement ride or device operation policies and procedures with pertinent information from the manufacturer's instructions, ~~including:~~including, but not limited to:

5.1.1.1 Description of the amusement ride or device ~~operation:~~operation;

5.1.1.2 Specific duties of each assigned operator(s) and attendant(s) position(s) of the amusement ride or ~~device:~~device;

5.1.1.3 General safety ~~procedures:~~procedures;

5.1.1.4 Instructions on specific procedures to follow in the event of unusual conditions or an interruption of operation, including an Evacuation Plan outlined in ~~4.4.5.2, and~~

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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.

5.1.1.5 Additional instructions from the owner/operator.

4.1.2 Specific emergency procedures in the event of an abnormal condition or an interruption of service:

4.2 The ride or device operator of each amusement ride or device shall conduct a daily pre-opening inspection of each ride or device prior to carrying passengers. This inspection shall include but not be limited to the following:

4.2.1 Visual check of all passenger-carrying devices, including restraint devices and latches.

4.2.2 Visual inspection of entrances, exits, stairways, and ramps.

4.2.3 Test of all communications equipment necessary for the operation of the ride or device.

4.2.4 Prior to carrying passengers, the ride or device shall be operated for a minimum of one complete operating cycle.

4.3 The owner/operator shall provide and document training under the supervision of a trainer for each operator and attendant of an amusement ride or device. This training shall include, but not be limited to the following:

4.3.1 Instructions on amusement ride or device operating procedures.

4.3.2 Instructions on specific duties of the assigned operator and attendant position(s) of the amusement ride or device.

4.3.3 Instructions on general safety procedures.

4.3.4 Instructions on specific procedures to follow in the event of unusual conditions or an interruption of operation.

4.3.5 Demonstration by the trainer of the operation of the amusement ride or device.

4.3.6 Demonstration by the trainee, under the supervision of the trainer, of the operation of the amusement ride or device.

4.3.7 Additional instructions or training under the supervision of a trainer deemed necessary by the owner/operator.

5.2 *Evacuation Plan*—The owner/operator shall have and maintain an evacuation plan for each amusement ride or device.

5.2.1 The owner/operator shall consider:

5.2.1.1 Standard load/unload area ~~evacuations are~~ evacuation as the preferred method protocol;

5.2.1.2 Amusement ride or device manufacturer's ~~recommendations~~ recommendations;

5.2.1.3 Conditions of the environment that could impact an ~~evacuation~~ evacuation;

5.2.1.4 Personnel responsible for performing an ~~evacuation~~ evacuation;

5.2.1.5 Notification and cooperation with the outside agencies and entities intended to participate in an ~~evacuation~~ evacuation;

5.2.1.6 Identification and location of equipment to support an ~~evacuation~~ evacuation;

5.2.1.7 Equipment that may be required to communicate with riders during an ~~evacuation process~~ evacuation process;

5.2.1.8 Access and egress requirements for personnel and equipment to evacuate the amusement ride or ~~device~~ device;

5.2.1.9 Actions required prior to evacuation to prevent inadvertent motion of the amusement ride or device, vehicle(s), carrier(s) and surrounding equipment in the ~~evacuation pathway~~ evacuation pathway;

5.2.1.10 Order or sequence of evacuation to ~~evacuate riders efficiently and safely~~ evacuate riders safely;

5.2.1.11 An appropriate means of egress for ~~evacuees~~ evacuees;

5.2.1.12 Removal of riders unable to assist in their own evacuation ~~due to~~ because of disability, medical condition or other ~~reasons~~ reasons, and

5.2.1.13 Procedures for arranging medical assistance as required during an evacuation. ~~38998e99b21/astm-f770-17~~

5.2.2 The owner/operator shall provide and document training on the evacuation plan.

5.2.3 The owner/operator shall periodically review the evacuation plan and make adjustments as needed.

5.3 *Denying Entry*—The owner/operator of an amusement ride or device may deny entry to the amusement ride or device to any person, if in the opinion of the owner/operator the entry may cause above normal exposure to risk of discomfort or injury to the person who desires to enter, or if in the opinion of the owner/operator the entry may jeopardize the safety of other patrons or employees.

5.3.1 Ride/Amusement ride or device operators should be given guidelines on the special considerations concerning patron size, and the special considerations applicable to physically disabled and mentally impaired patrons, related to their/the particular amusement ride or device.

5.4 *Signage*—Signs or other media presented by the owner/operator for ~~instruction to the public~~ instructions for riding shall be prominently placed, ~~bold in design, with wording short, simple, and to the point~~ placed at all patron entrances and other appropriate locations as deemed necessary by the owner/operator. Signs shall be bold in design and concise.

5.4.1 Signs to display operational instructions or requirements, or both, for use of the amusement ride or device may be posted at the ~~waiting/loading area or other appropriate location and~~ Instructions, restrictions, and warnings may include height ~~requirements~~ requirements, health restrictions, and other duties and obligations of the passengers/riders such as, but not limited to, those listed in Section 59.

5.4.2 Entrances to machinery rooms or restricted areas, or both, should be posted when necessary to warn unauthorized persons not to enter.

6. ~~Patron Responsibility~~ Maintenance Program Requirements

6.1 *Required Program*—There are inherent risks in the participation in or on any amusement ride, device, or attraction. ~~Patrons~~ The owner/operator of an amusement ride, device, or attraction, by participation, accept the risks inherent in such participation of which the ordinary prudent person is or should be aware. Patrons have a duty to exercise good judgment and act in a responsible

manner while using the amusement ride, device, or attraction and to obey all oral or written warnings, or both, prior to or during participation, or both; ride or device shall read and become familiar with the contents of the manufacturer's maintenance instructions and specifications when received. Based on the manufacturer's recommendations, each owner/operator shall implement a program of maintenance, testing, and inspection providing for the duties and responsibilities necessary in the care of each amusement ride or device.

6.1.1 This program of maintenance shall include a checklist to be made available to each person performing the regularly scheduled maintenance on each amusement ride or device. The checklist shall include but not be limited to:

- 6.1.1.1 Preventive maintenance assignments to be performed;
- 6.1.1.2 Inspections to be performed;
- 6.1.1.3 Special safety instructions, where applicable; and
- 6.1.1.4 Any additional recommendations of the owner/operator.

6.2 *Water Quality*—The owner/operator shall maintain appropriate water quality within an amusement ride or device where individuals can reasonably be expected to ingest or contact water volume sufficient to pose a substantial health risk.

6.3 *Replacement Parts*—Replacement parts for amusement rides and devices shall be:

6.3.1 Procured from the original manufacturer of the amusement ride or device, using the appropriate manufacturer-supplied identifying nomenclature; or

6.3.2 Procured or produced using appropriate original manufacturing drawings or specifications, or both, if available; or

6.3.3 Procured or produced using specifications derived from sufficient analysis to ensure parts of equivalent functions and quality, to those provided by the original manufacturer and in accordance with Practice [F1193](#).

6.3.4 Manufactured in conformance with Practice [F1193](#).

6.4 *Non-Destructive Testing*—Patrons have a duty to not participate in or on any amusement ride, device, or attraction when under the influence of drugs or alcohol. The owner/operator shall be responsible for implementing a program of testing based on the recommendations of the section on Non-Destructive Testing Requirements of Practice [F1193](#).

5.3 Patrons have a duty to properly use all ride or device safety equipment provided.

7. Maintenance Inspection Program Requirements

6.1 Each owner/operator of an amusement ride or device shall read and become familiar with the contents of the manufacturer's maintenance instructions and specifications when received, as provided in [3.1](#). Based on the manufacturer's recommendations, each owner/operator shall implement a program of maintenance, testing, and inspection providing for the duties and responsibilities necessary in the care of each amusement ride or device. This program of maintenance shall include a checklist to be made available to each person performing the regularly scheduled maintenance on each ride or device. The owner/operator's checklist (on a ride-by-ride basis) shall include but not be limited to:

- 6.1.1 Description of preventive maintenance assignments to be performed.
- 6.1.2 Description of inspections to be performed.
- 6.1.3 Special safety instructions, where applicable.
- 6.1.4 Any additional recommendations of the owner/operator.

6.2 The owner/operator of the amusement ride or device shall provide training for each person performing the regularly scheduled maintenance on the ride or device, pertaining to their assigned duties. This training shall include, but not be limited to, the following:

6.2.1 Instruction on inspection and preventive maintenance procedures.

6.2.2 Instruction on the specific duties of the assigned position.

6.2.3 Instruction on general safety procedures.

6.2.4 Demonstration of the physical performance of the assigned regularly scheduled duties and inspections.

6.2.5 Supervised observation of the maintenance person's physical performance of their assigned regularly scheduled duties and inspections.

6.2.6 Additional instructions deemed necessary by the owner/operator.

7.1 *Pre-opening Inspection*—Prior to carrying passengers, the owner/operator shall conduct or cause to be conducted a daily documented and signed preopening inspection, based on provided instructions, to ensure the proper operation of the ride or device. The inspection program shall include, but not be limited to, the following: The owner/operator of amusement rides or devices shall have an inspection program consistent with the inspections outlined in this practice and Practice [F1193](#).

6.3.1 Inspection of all passenger-carrying devices, including restraint devices and latches.

6.3.2 Visual inspection of entrances, exits, stairways, and ramps.

6.3.3 Functional test of all communication equipment necessary for the operation of the ride.

6.3.4 Inspection or test of all automatic and manual safety devices.

7.1.1 Inspection or test of the brakes, including service brakes, emergency brakes, parking brakes, and back stops. Prior to carrying riders, the owner/operator shall conduct or cause to be conducted a daily documented and signed preopening inspection.