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Safety Regulations for Amusement Rides and Devices

Secs. 29-136-1—29-136-15.

Repealed, March 2, 1998.

Connecticut Mechanical Amusement Ride and Device Regulations

Sec. 29-136-1a. The Connecticut mechanical amusement ride and device regulations: Purpose and applicability

(a) Regulations of the Department of Public Safety Sections 29-136-1a to 29-136-11a, inclusive, shall be known as the Connecticut Mechanical Amusement Ride and Device Regulations.

(b) Nothing in Sections 29-136-1a to 29-136-11a, inclusive, shall be intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by Sections 29-136-1a to 29-136-11a, inclusive, provided that technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency and provided that the system, method, or device shall be approved for its intended purpose.

(Adopted, effective March 2, 1998)

Sec. 29-136-2a. Authority having jurisdiction

As used in Sections 29-136-1a to 29-136-11a, inclusive, “the authority having jurisdiction” means the Commissioner of Public Safety. The Commissioner of Public Safety is the authority having jurisdiction regarding the proper administration, application, interpretation, and modification of the requirements contained within Sections 29-136-1a to 29-136-11a, inclusive.

(Adopted, effective March 2, 1998)

Sec. 29-136-3a. Definitions

As used in Sections 29-136-1a to 29-136-11a, inclusive:

(1) “Amusement” means any circus or carnival presented in the open, including a place where one or more mechanical amusement rides or devices capable of accommodating five or more persons are presented for amusement or entertainment purposes, and any circus, carnival or other portable show or exhibition presented under any single tent, air-supported plastic or fabric or other portable shelter, and involving the assembly of 100 or more persons.

(2) “Carnival” means a transient enterprise offering amusement and entertainment for the public in, upon or by means of mechanical amusement rides or devices.

(3) “Concession Booth” means a structure or enclosure used at a fair, carnival or park from which amusements are offered to the public.

(4) “E-1” means an individual with an unlimited electrical contractor’s license issued by the Connecticut Department of Consumer Protection in accordance with the provisions of Section 20-332 of the Connecticut General Statutes.

(5) “Engineer” means a Connecticut licensed professional engineer with civil, electrical, structural or mechanical disciplines and having knowledge of mechanical amusement rides and devices, who has been approved by the Commissioner of Public Safety to inspect and determine the safety of such rides and devices.

(6) “Fair” means an enterprise principally devoted to the exhibition of products of agriculture or industry, to which the operation of mechanical amusement rides and devices or concession booths is an adjunct.

(7) "Homemade Ride or Device" means a mechanical amusement ride or device that was not manufactured by a recognized manufacturer or any mechanical amusement ride or device which has been substantially altered without the approval of the manufacturer.

(8) "Inspection" means the physical examination of a mechanical amusement ride or device and the grounds and area around such ride or device, made by the Commissioner of Public Safety or his designee.

(9) "Inspector" means a Connecticut licensed professional engineer, an electrical official with an E-1 electrical rating, municipal building official, or the Commissioner of Public Safety or his designee.

(10) "Kiddie Ride" means a mechanical amusement ride or device designed primarily for use by children 12 years of age and under.

(11) "Major Alteration" means a change in the type, capacity, structure, electrical or hydraulic systems, or mechanism of a mechanical amusement ride or device. This includes any change that would require approval of the manufacturer or an engineer.

(12) "Major Ride" means a mechanical amusement ride or device designed to carry adults and children in or on a vehicle suitable for conveying persons.

(13) "Mechanical Amusement Ride or Device" means any device or system requiring the supervision or control of an operator, designed and presented for entertainment, excitement or pleasure by physically conveying five or more persons, or providing a walkway for five or more persons to move themselves along, around or over a course in any direction as a form of amusement. This definition shall not include the following:

(A) any non-electrical, non-mechanical playground equipment including, but not limited to, swings, seesaws, spring mounted animal features, rider propelled merry-go-rounds, climbers, playground slides, trampolines, and physical fitness devices; or

(B) any permanently installed special amusement building designed and constructed in accordance with the Connecticut Fire Safety Code and the Connecticut State Building Code.

(14) "Owner" means the proprietor, operator, agent or possessor of such amusement.

(15) "Repair" means to restore a mechanical amusement ride or device to a condition equal to or better than the original design specifications.

(16) "Ride Control Access System" means a device, barrier or mechanism that prohibits unauthorized activation of the mechanical amusement ride or device.

(17) "Ride File Jacket" means a file concerning an individual mechanical amusement ride or device which contains nondestructive test reports on the testing firm or corporation's official letterhead; the name of the ride or device; the manufacturer and date of manufacture; maintenance records; records of any alterations; serial number; daily check lists and engineer's reports.

(18) "Ride or Device Manufacturer" means any firm or corporation that manufactures mechanical amusement rides or devices, including homemade rides or devices.

(19) "Ride or Device Operator" means the person in charge of a mechanical amusement ride or device who caused such ride or device to operate, having direct control of the starting, stopping, or speed of a mechanical amusement ride or device.

(20) "Special Amusement Building" means any building that is temporary, permanent, or mobile, and containing a device or system that conveys passengers or provides a walkway along, around, or over a course in any direction as a form of amusement, and arranged so that the egress path is not readily apparent due to

visual or audio distractions or an intentionally confounded egress path, or is not readily available due to the mode of conveyance through the building or structure.

(21) “Stop Order” means any order issued by an inspector for the temporary cessation of a mechanical amusement ride or device.

(Adopted, effective March 2, 1998)

Sec. 29-136-4a. Ride and device manufacturers

(a) All mechanical amusement rides or devices manufactured after January 1, 1993 shall conform to the standards set forth in the fourth edition of the American Society for Testing and Materials (ASTM) Standards on Amusement Rides and Devices (1992).

(b) Homemade rides or devices shall be built to conform to or exceed the standards set forth in the fourth edition of the ASTM Standards on Amusement Rides and Devices (1992), and shall be certified by an engineer approved by the Commissioner of Public Safety as meeting such standard.

(c) The standards promulgated by the American Society for Testing and Materials (ASTM) are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; telephone number, (610) 832-9500.

(Adopted, effective March 2, 1998)

Sec. 29-136-5a. Annual inspection and certification of mechanical amusement rides and devices by approved engineers

(a) No mechanical amusement ride or device shall be operated in this state unless it is annually inspected by an engineer approved by the Commissioner of Public Safety, and the engineer has certified to the Commissioner of Public Safety that:

(1) in his or her judgment, the mechanical amusement ride or device conforms to or exceeds the standards set forth in the fourth edition of the ASTM Standards on Amusement Rides and Devices (1992), and is reasonably safe for public use; or

(2) in his or her judgment, the mechanical amusement ride or device is not reasonably safe for public use, and the reasons therefor.

(b) The engineer shall inspect a mechanical amusement ride or device in a disassembled configuration prior to the initial use in Connecticut each year and as often as the Commissioner of Public Safety shall direct. If the mechanical amusement ride or device is homemade or altered beyond manufacturer acceptance, or the manufacturer fails to make recommendations as to the disassembled configuration, the engineer shall recommend what is deemed to be a disassembled configuration for the purpose of the engineer’s inspection. In all cases, the mechanical amusement ride or device shall be disassembled to the extent necessary so that its components may be viewed.

(c) The engineer, during the annual inspection, shall determine:

(1) if the mechanical amusement ride or device is a product of a registered ride or device manufacturer;

(2) if the mechanical amusement ride or device is homemade or so altered that the manufacturer will no longer accept it as its product;

(3) if the mechanical amusement ride or device is required to undergo nondestructive testing, and the extent of such testing; and

(4) if the ride file jacket is complete and contains current information.

(d) The engineer’s certification to the Commissioner of Public Safety shall state that the inspection of the individual mechanical amusement ride or device was conducted while the mechanical amusement ride or device was in a disassembled

configuration; that the mechanical amusement ride or device components were found to be structurally sound, free of cracks, bends, breaks and other defects; that the mechanical amusement ride or device was subjected to nondestructive testing where required (a copy of the test firm's report of such testing shall be attached to the engineer's report); and that the mechanical amusement ride or device did not require further repairs of any type prior to its assembly and operation; or that the mechanical amusement ride or device was unsafe. If the mechanical amusement ride or device is determined to be unsafe, the engineer's certification shall list the reasons for such determination. If a mechanical amusement ride or device is altered, the owner of such ride or device shall inform the engineer of the extent of the work. The engineer's report to the Commissioner of Public Safety shall note any alterations and evaluate them for conformance with applicable standards.

(e) **Nondestructive testing.**

(1) Nondestructive testing shall be conducted in accordance with the manufacturer's instructions.

(2) If the ride or device manufacturer has no requirements pertaining to nondestructive testing, or if the mechanical amusement ride or device is homemade or has been so altered that the manufacturer will no longer accept it as its product, an engineer approved by the Commissioner of Public Safety shall determine the areas of the mechanical amusement ride or device to be tested, the method of nondestructive testing to be used, and the frequency of such testing.

(3) Testing shall be conducted by an independent and qualified testing agency in accordance with the standards set forth in the fourth edition of the ASTM Standards on Amusement Rides and Devices (1996). Testing by a mechanical amusement ride or device owner or manager shall not be acceptable.

(f) **Aquatic rides and devices.**

All manufacturer safety requirements pertaining to the operation of the mechanical amusement ride or device shall be followed. The Commissioner of Public Safety may set additional safety requirements in the interest of life safety.

(Adopted, effective March 2, 1998)

Sec. 29-136-6a. General set up requirements for mechanical amusement rides and devices

(a) Blocking, when used, shall be placed on a sound foundation. Concrete blocks, hollow blocks, hollow boxes or other hollow core items shall not be used for this purpose. Cribbing and crossing of blocks is required when stacking two or more blocks, or at the discretion of the inspector. The manufacturer's or engineer's recommendations shall be followed when available.

(b) The passenger carrier and safety restraints shall be in good, serviceable condition.

(c) All pins, bolts, and other fasteners shall be safely locked with snap rings, cotter keys, or other types of locking devices to keep the pins, bolts, and other fasteners in their proper place. The pins and bolts shall be in place and of proper size and type, as specified by the manufacturer or engineer. No nails, screws, wire, or other unauthorized items shall be used as fasteners.

(d) The mechanical amusement ride or device shall be operated within its designed revolutions per minute rating with a balanced load. Mechanical amusement rides or devices shall not be overloaded. In the interest of public safety, the Commissioner of Public Safety may order the reduction of the revolutions per minute allowed on a mechanical amusement ride or device.

(e) Mechanical amusement rides or devices using gasoline or diesel-fueled engines shall not be fueled while the engine is running or passengers are on such ride or device.

(f) Moving or hot parts including, but not limited to, belts, chains, gears, shafts, knuckle joints, and exhaust pipes that pose risk of injury to the public shall be effectively guarded to prevent contact.

(g) All electrical junction boxes shall be locked or sealed, and properly identified as such, and have proper fencing around them.

(h) All mechanical amusement rides or devices shall be provided with a fully charged, currently inspected and approved fire extinguisher for Class A, B and C fires.

(i) Major rides or devices shall be set up a minimum of 12 feet apart. Kiddie rides shall be spaced a minimum of 6 feet apart. The measurement shall be taken from the outer edges of the moving parts of each mechanical amusement ride or device or its maximum extension.

(Adopted, effective March 2, 1998)

Sec. 29-136-7a. Responsibilities of mechanical amusement ride and device owners and operators

(a) The ride or device operator shall be at least 18 years of age and trained in normal and emergency shut-down procedures of the mechanical amusement ride or device. The operator shall be properly trained, familiar with and adequately supervised to ensure the safe operation of the mechanical amusement ride or device.

(b) The ride or device operator shall not be under the influence of alcohol, drugs, or both, while performing operator duties.

(c) The ride or device operator shall follow all manufacturer safety requirements and such additional safety requirements as may be set by the Commissioner of Public Safety in the interest of life safety.

(d) No ride or device operator shall jam, tamper with or alter any ride or device or device controls.

(Adopted, effective March 2, 1998)

Sec. 29-136-8a. Investigations and inspections: Applications for a license to conduct an amusement

(a) Upon receipt of an application for an amusement license for a mechanical amusement ride or device subject to Sections 29-136-1a to 29-136-11a, inclusive, and the provisions of Chapter 532 of the Connecticut General Statutes, the Commissioner of Public Safety may enter upon and investigate and inspect the lands, buildings and locations where mechanical amusement rides or devices are being set up or located for the purpose of determining whether such rides or devices are reasonably safe from fire and casualty hazards.

(b) No mechanical amusement ride or device shall be placed in service unless it bears an inspection registration seal issued by the Commissioner of Public Safety. The inspection registration seal shall contain:

- (1) the name of the owner of the mechanical amusement ride or device;
- (2) the serial number of the mechanical amusement ride or device;
- (3) the year of manufacture;
- (4) the identification number established by the Commissioner of Public Safety;
- (5) the name of the manufacturer;
- (6) the current yearly inspection sticker; and
- (7) the name of the mechanical amusement ride or device.

(c) In addition to the inspection conducted in accordance with Section 29-136-5a, a mechanical amusement ride or device shall be inspected in an assembled configuration for the purposes of this section.

(d) The general public shall not be allowed to attend or gain access to any mechanical amusement ride or device until the amusement license has been issued by the Commissioner of Public Safety.

(e) The investigation and inspection by the Commissioner of Public Safety shall include, but shall not be limited to, the following:

(1) all passenger-carrying vehicles, including restraint devices, latches, sharp edges, empty light sockets, seats and slide surfaces;

(2) the grounds of the amusement area, exits, entrances, ramps, stairways, and passageways, including lighting for the night season;

(3) communications equipment, if the mechanical amusement ride or device is so equipped, including electric eye operation for safe movement of vehicles;

(4) brake operations, in accordance with the manufacturer's recommendations;

(5) fences, guards, steps and wire rope, structural steel, electrical wires and blocking;

(6) a minimum of one full cycle operation of the ride or device;

(7) the ownership of such ride or device, together with any lease agreements.

(f) The Commissioner of Public Safety may retain one or more outside consultants with specialized knowledge and experience in any circumstance that a mechanical amusement ride or device is of such a size, configuration, or so equipped that a specialist is needed to assure that such ride or device is reasonably safe for human use.

(g) A stop order may be issued whenever a mechanical amusement ride or device is found not to be in compliance with Sections 29-136-1a to 29-136-11a, inclusive, or Chapter 532 of the Connecticut General Statutes.

(Adopted, effective March 2, 1998)

Sec. 29-136-9a. Mechanical amusement ride and device specifications and owner obligations

(a) If a mechanical amusement ride or device is materially rebuilt or so modified as to change its original action, it shall be identified by a different name or identification number or both and be inspected by an approved engineer.

(b) Repairs shall be carried out in accordance with the manufacturer's or engineer's instructions and shall utilize replacement parts which meet or exceed original equipment specifications.

(c) It shall be the responsibility of the mechanical amusement ride or device owner to obtain all safety alert or maintenance bulletins and strictly adhere to the manufacturer's or engineer's requirements.

(d) The owner shall maintain a current ride file jacket.

(e) All major alterations or other modifications shall be submitted in writing to the manufacturer or an approved engineer for review. The manufacturer's or engineer's comments shall be kept in the ride file jacket.

(f) The assembly and disassembly of a mechanical amusement ride or device shall be performed by or under the immediate supervision of a person experienced in the proper performance of such work with respect to such ride or device.

(g) Parts shall be properly aligned and shall not be bent, distorted, cut, omitted or otherwise deformed to force them into place. Parts requiring lubrication shall be lubricated in the course of assembly in compliance with the manufacturer's or engineer's recommendations. Fastening and locking devices such as bolts, cap screws, cotter pins and lock washers shall be installed where required. Nuts and

lock nuts shall be installed to the recommendations of the manufacturer or engineer. Welding of parts upon which safe operation depends shall be done by welders certified in accordance with the requirements of the American Welding Society. Any work performed by a welder shall be approved by the manufacturer or engineer and noted in the mechanical amusement ride or device record and filed in the ride file jacket.

(h) Tools and equipment used in the assembly and disassembly of mechanical amusement rides or devices shall be of proper size and recommended by the manufacturer or the engineer for such purpose.

(i) Daily inspection of mechanical amusement rides or devices shall be required whenever such ride or device is to be used. The inspection shall be made by the owner or the owner's agent. The inspection shall include the operation of control devices, speed-limiting devices, brakes and other equipment provided for safety including, but not limited to, pins, bolts, keys, and other fasteners. The manufacturer's or engineer's recommendations for inspection shall also be followed. A record of each inspection shall be filed in the ride file jacket.

(j) All power transmission devices and associated moving parts shall be shielded from the public in accordance with the manufacturer's or engineer's recommendations.

(k) Hydraulic systems shall be checked for leaks, damaged pipes and worn or deteriorated hoses. Only manufacturer or engineer-approved hydraulic fluid shall be used. Maximum pressures shall not exceed the manufacturer's or engineer's recommendations.

(l) Pressure relief valves or devices, including but not limited to, compressed air and gas devices, shall be tested in accordance with the manufacturer's or engineer's recommendations. Test records shall be kept in the ride file jacket.

(m) All fabrics constituting part of a mechanical amusement ride or device shall meet the requirements of the small-scale test contained in NFPA 701-1996, Standard Methods of Fire Tests for Flame-Resistant Textiles and Films. The standards promulgated by the National Fire Protection Association (NFPA) are available from the National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269; telephone number, 1-800-344-3555.

(n) The storage and use of flammable and combustible liquids shall comply with the requirements of the Connecticut Flammable and Combustible Liquids Code, as adopted by the Commissioner of Public Safety pursuant to Section 29-320 of the Connecticut General Statutes.

(o) The storage and use of liquefied petroleum gas shall comply with the requirements of the Connecticut Petroleum Gas and Liquefied Natural Gas Code, as adopted by the Commissioner of Public Safety pursuant to Section 29-331 of the Connecticut General Statutes.

(p) The installation of gas equipment and gas piping shall comply with the requirements of the Connecticut Gas Equipment and Piping Code, as adopted by the Commissioner of Public Safety pursuant to Section 29-329 of the Connecticut General Statutes.

(q) In all locations where vehicles and persons may travel, electrical cables shall be protected by approved methods such as, but not limited to, matting or trenching.

(r) Each electrically or mechanically operated amusement ride or device shall be provided with a control access system. Said system shall prevent such ride or device from starting by a single action.

(s) Safe and adequate means of access to and egress from mechanical amusement rides or devices shall be provided. All passageways shall be free from debris, obstructions, projections and other hazards. All surfaces shall be constructed of materials designed to prevent slipping and tipping. The width of passageways shall not be less than the width of exit doors or stairs to which they lead.

(t) A fixed mechanical amusement ride or device permanently erected shall be set on properly designed and constructed foundations or footings and secured to such footings in a manner that conforms to the manufacturer's or engineer's recommendations. Foundations and footings shall meet the minimum requirements of the Connecticut State Building Code, adopted by the Commissioner of Public Safety pursuant to Section 29-252 of the Connecticut General Statutes.

(u) All mechanical amusement rides or devices shall be surrounded by fencing. Each fence opening shall have a hinged gate adequate to prevent a child from inadvertently entering the enclosed area. Each gate that swings in the direction of travel upon entering the area where the mechanical amusement ride or device is located shall include a latching device that engages when the gate is shut. Fences and gates shall also be constructed and installed so as to prevent riders or spectators from touching the mechanical amusement ride or device and fences or gates at the same time. Not later than January 1, 1999, all fencing and gates shall be at least 42 inches high, constructed so as to prevent passage of a sphere or round object 4 inches in diameter through all openings, and shall be designed, constructed and erected to prevent overturning or climbing by spectators or riders. Fencing and gates manufactured before January 1, 1993 and physically attached to the mechanical amusement ride or device by the manufacturer may remain in service at the discretion of the authority having jurisdiction.

(v) Fixed mechanical amusement rides or devices are required to be dismantled for inspection by the approved engineer or the contractor performing nondestructive testing. The extent of dismantling shall be determined by the manufacturer or engineer and the contractor performing the nondestructive testing.

(w) Mechanical amusement rides or devices are not to be set in the path of natural drainage.

(x) Separation distances required by NFPA 70, National Electrical Code, shall be maintained between mechanical amusement rides or devices and electrical lines, except that greater distances may be required by an inspector in the interest of safety.

(y) It shall be the responsibility of the mechanical amusement ride or device owner to ensure that ride and device operators are trained in the operation of such ride or device, based on the recommendations of the manufacturer or engineer. The owner shall maintain records in each ride file jacket regarding the training each such operator has received, including the nature of the training, when it was received, and the source of the training.

(z) Special amusement buildings shall comply with the requirements of the Connecticut Fire Safety Code and the Connecticut State Building Code as adopted by the Commissioner of Public Safety pursuant to Sections 29-292 and 29-252, respectively, of the Connecticut General Statutes.

(Adopted, effective March 2, 1998)

Sec. 29-136-10a. Ride file jacket

(a) Each mechanical amusement ride or device shall have a current ride file jacket. The file shall be kept on the grounds where the mechanical amusement ride or device is being operated.

(b) The ride file jacket shall contain the nondestructive test report on the testing contractor's official letterhead; the name of the ride or device, the manufacturer and date of manufacture; maintenance records; records of operator training; records of any alterations; serial number; daily check lists; and engineer's report. An English-language owner or operator's manual shall also be part of the file. In the case of a homemade ride or device, an engineer approved by the Commissioner of Public Safety shall prepare an English-language owner or operator's manual.

(c) The ride file jacket shall be presented to the approved engineer or inspector upon his or her request.

(d) In cases of a homemade ride or device, the ride file jacket shall contain a serial number assigned by an engineer approved by the Commissioner of Public Safety, together with maintenance records, any information identifying such ride or device and its manufacturer, and documentation regarding nondestructive testing requirements.

(Adopted, effective March 2, 1998)

Sec. 29-136-11a. Electrical equipment, service and permit

(a) All electrical equipment, wiring and installation shall comply with NFPA 70, National Electrical Code, as referenced within the Connecticut State Building Code in effect at the time of the inspection.

(b) It shall be the responsibility of the owner or manager of the amusement company to ensure that written approval of the electrical service and equipment hookup is obtained from the local building official of the municipality in which the amusement is located prior to the inspection conducted in accordance with Section 29-136-8a.

(c) In the event that the building official is unavailable to inspect the electrical service and equipment hookup, the following emergency provisions shall apply:

(1) The owner or manager of the amusement company shall obtain written approval from an electrician licensed by the State of Connecticut as an E-1 that the electrical service and equipment hookup complies with the standards set forth in subsection (a) of this section.

(2) The electrician referred to in subdivision (c) (1) of this section shall not be the person or a person employed by any firm or corporation responsible for installing the electrical service or equipment hookup.

(d) All electrical junction boxes shall be locked or sealed, properly protected from contact with the general public and identified as such.

(Adopted, effective March 2, 1998)