The FRA amended the workplace safety regulations by adding the subpart below which prescribes safety standards for railroad on-track roadway maintenance machines and hi-rail vehicles. The purpose of the standards is to protect roadway workers operating such equipment.

§ 214.7 Definitions

Designated official means any person(s) designated by the employer to receive notification of non-complying conditions on on-track roadway maintenance machines and hi-rail vehicles.

Hi-rail vehicle means a roadway maintenance machine that is manufactured to meet Federal Motor Vehicle Safety Standards and is equipped with retractable flanged wheels so that the vehicle may travel over the highway or on railroad tracks.

Hi-rail vehicle, new means a hi-rail vehicle that is ordered after December 26, 2003 or completed after September 27, 2004.

On-track roadway maintenance machine means a self-propelled, railmounted, non-highway, maintenance machine whose light weight is in excess of 7,500 pounds, and whose purpose is not for the inspection of railroad track.

On-track roadway maintenance machine, existing means any on-track roadway maintenance machine that does not meet the definition of a “new on-track roadway maintenance machine.”

On-track roadway maintenance machine, new means an on-track roadway maintenance machine that is ordered after December 26, 2003, and completed after September 27, 2004.

§ 214.501 Purpose and scope.

(a) The purpose of this subpart is to prevent accidents and casualties caused by the lawful operation of on-track roadway maintenance machines and hi-rail vehicles.

(b) This subpart prescribes minimum safety standards for on-track roadway maintenance machines and hi-rail vehicles. An employer may prescribe additional or more stringent standards that are consistent with this subpart.

(c) Any working condition that involves the protection of employees engaged in roadway maintenance duties covered by this subpart but is not within the subject matter addressed by this subpart, including employee exposure to noise, shall be governed by the regulations of the U.S. Department of Labor, Occupational Safety and Health Administration.

§ 214.503 Good-faith challenges; procedures for notification and resolution.

(a) An employee operating an on-track roadway maintenance machine or hi-rail vehicle shall inform the employer whenever the employee makes a good faith determination that the machine or vehicle does not comply with FRA regulations or has a condition that inhibits its safe operation.

(b) Any employee charged with operating an on-track roadway maintenance machine or hi-rail vehicle covered by this subpart may refuse to operate the machine or vehicle if the employee makes a good-faith determination that it does not comply with the
requirements of this subpart or has a condition that inhibits its safe operation. The employer shall not require the employee to operate the machine or vehicle until the challenge resulting from the good-faith determination is resolved.

(c) Each employer shall have in place and follow written procedures to assure prompt and equitable resolution of challenges resulting from good-faith determinations made in accordance with this section. The procedures shall include specific steps to be taken by the employer to investigate each good-faith challenge, as well as procedures to follow once the employer finds a challenged machine or vehicle does not comply with this subpart or is otherwise unsafe to operate. The procedures shall also include the title and location of the employer’s designated official.

§ 214.505 Required environmental control and protection systems for new on-track roadway maintenance machines with enclosed cabs.

(a) The following new on-track roadway maintenance machines shall be equipped with enclosed cabs with operative heating systems, operative air conditioning systems, and operative positive pressurized ventilation systems:

   (1) Ballast regulators;
   (2) Tampers;
   (3) Mechanical brooms;
   (4) Rotary scarifiers;
   (5) Undercutters; and
   (6) Functional equivalents of any of the machines identified in paragraphs (a)(1) through (a)(5) of this section.

(b) New on-track roadway maintenance machines, and existing on-track roadway maintenance machines specifically designated by the employer, of the types identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, shall be capable of protecting employees in the cabs of the machines from exposure to air contaminants, in accordance with 29 CFR 1910.1000.

(c) An employer shall maintain a list of new and designated existing on-track roadway maintenance machines of the types identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto. The list shall be kept current and made available to the Federal Railroad Administration and other Federal and State agencies upon request.

(d) An existing roadway maintenance machine of the type identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, becomes “designated” when the employer adds the machine to the list required in paragraph (c) of this section. The designation is irrevocable, and the designated existing roadway maintenance machine remains subject to paragraph (b) of this section until it is retired or sold.

(e) If the ventilation system on a new on-track roadway maintenance machine or a designated existing on-track roadway maintenance machine of the type identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, becomes incapable of protecting an employee in the cab of the machine from exposure to air contaminants in accordance with 29 CFR 1910.1000, personal respiratory protective equipment shall be provided for each such employee until the machine is repaired in accordance with § 214.531.
(f) Personal respiratory protective equipment provided under paragraph (e) of this section shall comply with 29 CFR 1910.134.

(g) New on-track roadway maintenance machines with enclosed cabs, other than the types identified in paragraphs (a)(1) through (a)(5) of this section or functionally equivalent thereto, shall be equipped with operative heating and ventilation systems.

(h) When new on-track roadway maintenance machines require operation from non-enclosed stations outside of the main cab, the non enclosed stations shall be equipped, where feasible from an engineering standpoint, with a permanent or temporary roof, canopy, or umbrella designed to provide cover from normal rainfall and midday sun.

§ 214.507 Required safety equipment for new on-track roadway maintenance machines.

(a) Each new on-track roadway maintenance machine shall be equipped with:

(1) A seat for each operator, except as provided in paragraph (b) of this section;

(2) A safe and secure position with handholds, handrails, or a secure seat for each roadway worker transported on the machine. Each position shall be protected from moving parts of the machine;

(3) A positive method of securement for turntables, on machines equipped with a turntable, through engagement of pins and hooks that block the descent of turntable devices below the rail head when not in use;

(4) A windshield with safety glass, or other material with similar properties, if the machine is designed with a windshield. Each new on-track roadway maintenance machine designed with a windshield shall also have power windshield wipers or suitable alternatives that provide the machine operator an equivalent level of vision if windshield wipers are incompatible with the windshield material;

(5) A machine braking system capable of effectively controlling the movement of the machine under normal operating conditions;

(6) A first-aid kit that is readily accessible and complies with 29 CFR 1926.50(d)(2); and

(7) An operative and properly charged fire extinguisher of 5 BC rating or higher which is securely mounted and readily accessible to the operator from the operator’s work station.

(b) Each new on-track roadway maintenance machine designed to be operated and transported by the operator in a standing position shall be equipped with handholds and handrails to provide the operator with a safe and secure position.

(c) Each new on-track roadway maintenance machine that weighs more than 32,500 pounds light weight and is operated in excess of 20 mph shall be equipped with a speed indicator that is accurate within ±5 mph of the actual speed at speeds of 10 mph and above.

(d) Each new on-track roadway maintenance machine shall have its as built light weight displayed in a conspicuous location on the machine.

§ 214.509 Required visual illumination and reflective devices for new on-track roadway maintenance machines. Each new on-track roadway maintenance machine shall be equipped with the following visual illumination and reflective devices:
(a) An illumination device, such as a headlight, capable of illuminating obstructions on the track ahead in the direction of travel for a distance of 300 feet under normal weather and atmospheric conditions;
(b) Work lights, if the machine is operated during the period between one-half hour after sunset and one-half hour before sunrise or in dark areas such as tunnels, unless equivalent lighting is otherwise provided;
(c) An operative 360-degree intermittent warning light or beacon mounted on the roof of the machine. New roadway maintenance machines that are not equipped with fixed roofs and have a light weight less than 17,500 pounds are exempt from this requirement;
(d) A brake light activated by the application of the machine braking system, and designed to be visible for a distance of 300 feet under normal weather and atmospheric conditions; and (e) Rearward viewing devices, such as rearview mirrors.

§ 214.511 Required audible warning devices for new on-track roadway maintenance machines. Each new on-track roadway maintenance machine shall be equipped with:
(a) A horn or other audible warning device that produces a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the device shall be clearly identifiable and within easy reach of the machine operator; and
(b) An automatic change-of-direction alarm which provides an audible signal that is at least three seconds long and is distinguishable from the surrounding noise. Change of direction alarms may be interrupted by the machine operator when operating the machine in the work mode if the function of the machine would result in a constant, or almost constant, sounding of the device. In any action brought by FRA to enforce the change-of-direction alarm requirement, the employer shall have the burden of proving that use of the change-of-direction alarm in a particular work function would cause a constant, or almost constant, sounding of the device.

§ 214.513 Retrofitting of existing on-track roadway maintenance machines; general.

(a) Each existing on-track roadway maintenance machine shall have a safe and secure position for each roadway worker transported on the machine and protection from moving parts of the machine.
(b) By March 28, 2005, each existing on-track roadway maintenance machine shall be equipped with a permanent or portable horn or other audible warning device that produces a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the device shall be clearly identifiable and within easy reach of the machine operator.
(c) By March 28, 2005, each existing on-track roadway maintenance machine shall be equipped with a permanent illumination device or a portable light that is securely placed and not handheld. The illumination device or portable light shall be capable of illuminating obstructions on the track ahead for a distance of 300 feet under normal weather and atmospheric conditions when the machine is operated during the period between one-half hour after sunset and one-half hour before sunrise or in dark areas such as tunnels.
§ 214.515 Overhead covers for existing on-track roadway maintenance machines.
(a) For those existing on-track roadway maintenance machines either currently or previously equipped with overhead covers for the operator’s position, defective covers shall be repaired, and missing covers shall be reinstalled, by March 28, 2005 and thereafter maintained in accordance with the provisions of § 214.531.
(b) For those existing on-track roadway maintenance machines that are not already equipped with overhead covers for the operator’s position, the employer shall evaluate the feasibility of providing an overhead cover on such a machine if requested in writing by the operator assigned to operate the machine or by the operator’s designated representative. The employer shall provide the operator a written response to each request within 60 days. When the employer finds the addition of an overhead cover is not feasible, the response shall include an explanation of the reasoning used by the employer to reach that conclusion.
(c) For purposes of this section, overhead covers shall provide the operator’s position with cover from normal rainfall and midday sun.

§ 214.517 Retrofitting of existing on-track roadway maintenance machines manufactured on or after January 1, 1991.
In addition to meeting the requirements of § 214.513, after March 28, 2005 each existing on-track roadway maintenance machine manufactured on or after January 1, 1991, shall have the following:
(a) A change-of-direction alarm or rearview mirror or other rearward viewing device, if either device is feasible, given the machine’s design, and if either device adds operational safety value, given the machine’s function. In any action brought by FRA to enforce this requirement, the employer shall have the burden of proving that neither device is feasible or adds operational safety value, or both, given the machine’s design or work function.
(b) An operative heater, when the machine is operated at an ambient temperature less than 50 degrees Fahrenheit and is equipped with, or has been equipped with, a heater installed by the manufacturer or the railroad.
(c) The light weight of the machine stenciled or otherwise clearly displayed on the machine, if the light weight is known.
(d) Reflective material, or a reflective device, or operable brake lights.
(e) Safety glass when its glass is normally replaced, except that replacement glass that is specifically intended for on-track roadway maintenance machines and is in the employer’s inventory as of September 26, 2003 may be utilized until exhausted.
(f) A turntable restraint device, on machines equipped with a turntable, to prevent undesired lowering, or a warning light indicating that the turntable is not in the normal travel position.

§ 214.518 Safe and secure positions for riders. A roadway worker, other than the machine operator, is prohibited from riding on any on-track roadway maintenance machine unless a safe and secure position for each roadway worker on the machine is clearly identified by stenciling, marking, or other written notice.
§ 214.519 Floors, decks, stairs, and ladders of on-track roadway maintenance machines. Floors, decks, stairs, and ladders of on-track roadway maintenance machines shall be of appropriate design and maintained to provide secure access and footing, and shall be free of oil, grease, or any obstruction which creates a slipping, falling, or fire hazard.

§ 214.521 Flagging equipment for on-track roadway maintenance machines and hi-rail vehicles. Each on-track roadway maintenance machine and hi-rail vehicle shall have on board a flagging kit that complies with the operating rules of the railroad, if
(a) The equipment is operated over trackage subject to a railroad operating rule requiring flagging; and
(b) (1) The equipment is not part of a roadway work group; or
(2) The equipment is the lead or trailing piece or equipment in a roadway work group operating under the same occupancy authority.

§ 214.523 Hi-rail vehicles.
(a) The hi-rail gear of all hi-rail vehicles shall be inspected for safety at least annually and with no more than 14 months between inspections. Tram, wheel wear, and gage shall be measured and, if necessary, adjusted to allow the vehicle to be safely operated.
(b) Each employer shall keep records pertaining to compliance with paragraph (a) of this section. Records may be kept on forms provided by the employer or by electronic means. The employer shall retain the record of each inspection until the next required inspection is performed. The records shall be made available for inspection and copying during normal business hours by representatives of FRA and States participating under part 212 of this chapter. The records may be kept on the hi-rail vehicle or at a location designated by the employer.
(c) A new hi-rail vehicle shall be equipped with:
(1) An automatic change-of-direction alarm or backup alarm that provides an audible signal at least three seconds long and distinguishable from the surrounding noise; and
(2) An operable 360-degree intermittent warning light or beacon mounted on the outside of the vehicle.
(d) (1) The operator of a hi-rail vehicle shall check the vehicle for compliance with this subpart, prior to using the vehicle at the start of the operator’s work shift.
(2) A non-complying condition that cannot be repaired immediately shall be tagged and dated in a manner prescribed by the employer and reported to the designated official.
(3) Non-complying automatic change of direction alarms, backup alarms, and 360-degree intermittent warning lights or beacons shall be repaired or replaced as soon as practicable within seven calendar days.

§ 214.525 Towing with on-track roadway maintenance machines or hi-rail vehicles. (a) When used to tow pushcarts or other maintenance-of-way equipment, each on-track roadway maintenance machine or hi-rail vehicle shall be equipped with a towing bar or other coupling device that provides a safe and secure attachment.
(b) An on-track roadway maintenance machine or hi-rail vehicle shall not be used to tow pushcars or other maintenance-of-way equipment if the towing would cause the machine or hi-rail vehicle to exceed the capabilities of its braking system. In determining the limit of the braking system, the employer must consider the track grade (slope), as well as the number and weight of pushcars or other equipment to be towed.

§ 214.527 On-track roadway maintenance machines; inspection for compliance and schedule for repairs.
(a) The operator of an on-track roadway maintenance machine shall check the machine components for compliance with this subpart, prior to using the machine at the start of the operator’s work shift.
(b) Any non-complying condition that cannot be repaired immediately shall be tagged and dated in a manner prescribed by the employer and reported to the designated official.
(c) The operation of an on-track roadway maintenance machine with a non-complying condition shall be governed by the following requirements:
   (1) An on-track roadway maintenance machine with headlights or work lights that are not in compliance may be operated for a period not exceeding 7 calendar days and only during the period between one-half hour before sunrise and one-half hour after sunset;
   (2) A portable horn may be substituted for a non-complying or missing horn for a period not exceeding seven calendar days;
   (3) A fire extinguisher readily available for use may temporarily replace a missing, defective or discharged fire extinguisher on a new on-track roadway maintenance machine for a period not exceeding 7 calendar days, pending the permanent replacement or repair of the missing, defective or used fire extinguisher;
   (4) Non-complying automatic change of direction alarms, backup alarms, and 360-degree intermittent warning lights or beacons shall be repaired or replaced as soon as practicable within 7 calendar days; and
   (5) A structurally defective or missing operator’s seat shall be replaced or repaired within 24 hours or by the start of the machine’s next tour of duty, whichever is later. The machine may be operated for the remainder of the operator’s tour of duty if the defective or missing operator’s seat does not prevent its safe operation.

§ 214.529 In-service failure of primary braking system.
(a) In the event of a total in-service failure of its primary braking system, an on-track roadway maintenance machine may be operated for the remainder of its tour of duty with the use of a secondary braking system or by coupling to another machine, if such operations may be done safely.
(b) If the total in-service failure of an on-track roadway maintenance machine’s primary braking system occurs where other equipment is not available for coupling, the machine. A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to $22,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A. may, if it is safe to do so, travel to a clearance or repair point where it shall be placed out of service until repaired.
§ 214.531 Schedule of repairs; general. Except as provided in §§ 214.527(c)(5), 214.529, and 214.533, an on-track roadway maintenance machine or hi-rail vehicle that does not meet all the requirements of this subpart shall be brought into compliance as soon as practicable within seven calendar days. If repairs are not made within seven calendar days, the on-track roadway maintenance machine or hi-rail vehicle shall be placed out of on-track service.

§ 214.533 Schedule of repairs subject to availability of parts.
(a) The employer shall order a part necessary to repair a non-complying condition on an on-track roadway maintenance machine or a hi-rail vehicle by the end of the next business day following the report of the defect.
(b) When the employer cannot repair a non-complying condition as required by § 214.531 because of the temporary unavailability of a necessary part, the employer shall repair the on-track roadway maintenance machine or hi-rail vehicle within seven calendar days after receiving the necessary part. The employer may continue to use the on-track roadway maintenance machine or hi-rail vehicle with a non-complying condition until receiving the necessary part(s) for repair, subject to the requirements of § 214.503. However, if a non-complying condition is not repaired within 30 days following the report of the defect, the employer shall remove the on-track roadway maintenance machine or hi-rail vehicle from on-track service until it is brought into compliance with this subpart.
(c) If the employer fails to order a part necessary to repair the reported noncomplying condition, or if it fails to install an available part within the required seven calendar days, the on-track roadway maintenance machine or hi-rail vehicle shall be removed from on-track service until brought into compliance with this subpart.
(d) Each employer shall maintain records pertaining to compliance with this section. Records may be kept on forms provided by the employer or by electronic means. The employer shall retain each record for at least one year, and the records shall be made available for inspection and copying during normal business hours by representatives of FRA and States participating under part 212 of this chapter. The records may be kept on the on-track roadway maintenance machine or hi-rail vehicle or at a location designated by the employer. _ 4. Appendix A to part 214 is amended with the addition of the following new entries for subpart D.

Appendix A—Schedule of Civil Penalties

49 C.F.R. Part 214