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Minimum diameter—One (1) inch wrought iron, steel, or other material of equivalent strength.

Minimum clearance—Four (4), preferably six (6) inches except at brace and fastening locations.

(iii) Location:

Vertical—One (1) at each corner of car extending from platform end sill to level of lower horizontal safety railing or to suitable bracket at roof.

Horizontal—Upper: Across each end of car near outer edge securely braced with vertical supports not less than 48 nor more than 54 inches above top of platform extending not less than full width of platform excluding hand brake stanchion area.

Horizontal—Lower: Across each end of car near outer edge securely braced with vertical supports not less than 36 nor more than 42 inches above top of platform excluding hand brake stanchion area. An opening may be provided near center. Such opening shall be provided with a secure safety chain(s) not less than ¼-inch diameter wrought iron, or steel, or other secure suitable closure.

(iv) Manner of application:

Safety railing shall be securely fastened with ½-inch bolts or rivets when possible and securely supported. A weld at connection of vertical and horizontal safety railing and vertical supports is permissible when those appliances are fabricated as a single unit.

(b) Kick plates

(i) Number: Four (4).

(ii) Dimensions:

Minimum thickness 10-gauge wrought iron, steel or other material of equivalent strength.

Width—Minimum 24 inches.

Height—Minimum 24 inches.

(iii) Location: One near each side on each end. Outer edge not more than 12 inches from adjacent vertical safety railing with bottom edge near top of platform. Hand brake stand may serve as part of kick plate.

(iv) Manner of application: Securely fastened by ½-inch bolts or rivets, or weld.

(v) Vertical hand rail supports spaced not more than eighteen (18) inches apart may be used in lieu of kick plates.

(5) That stove pipe shall be secured to prevent turning.

(6) That windows shall be laminated safety-type glass or equivalent.

Existing caboose cars with platforms. Running boards may be removed from Caboose Cars with Platforms built or under construction on or before June 1, 1970, when each of the following conditions have been met:

(1) That ladder treads above safety railing, roof handholds including ladder extensions, and cupola handholds specified in paragraphs (c), (d), and (e) of this §231.10 are removed.

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(2) That an appropriate notice be posted in protective manner or stenciled in interior of caboose stating “operating employees are prohibited under all conditions from occupying the roof of this caboose.”

(3) That a safe means must be provided to assure the safety of an operating employee when required to clean or maintain windows of a caboose without running boards.

(4) That end platform safety railing and handhold arrangement will be deemed to meet requirements except as to upper safety railing and kick plates, when those appliances are not provided. When vertical supports are not more than twenty-four (24) inches apart, such supports may be used in lieu of kick plates.

(5) That the following additional safety appliances (when not so provided) shall be securely installed at outer edge of each platform:

(a) Safety railing.

(i) Number:

Horizontal upper—Two (2).

(ii) Dimensions:

Minimum diameter—One (1) inch wrought iron, steel, or other material of equivalent strength.

Minimum clearance—Four (4), preferably six (6) inches except at brace and fastening locations.

(iii) Location:

Horizontal—Upper: Across each end of car near outer edge securely braced with vertical supports not less than 48 nor more than 54 inches above top of platform extending not less than full width of platform excluding hand brake stanchion area. Ladder tread not more than two (2) inches below level of upper safety railing may serve as a portion of said safety railing.

(b) Kick plates or vertical supports—Same as provided for caboose cars with platforms built after June 1, 1970, this note. See above.

(6) That stove pipe should be secured to prevent turning.

(7) Cupola or bay windows shall be laminated safety-type glass or equivalent and all other caboose windows shall be so provided on or before June 1, 1975.

[33 FR 19663, Dec. 25, 1968, as amended at 35 FR 10149, June 20, 1970]

§231.11 Caboose cars without platforms.

(a) *Hand brakes*—(1) *Number.* Same as specified for “Box and other house cars” (see §231.1(a)(1)).

(2) *Dimensions.* Same as specified for “Box and other house cars” (see §231.1(a)(2)).

(3) *Location.* (i) Each hand brake shall be so located that it can be safely operated while car is in motion.

(ii) The brake shaft on caboose cars without platforms shall be located on end of car to the left of center.

(iii) Carriers are not required to change the brakes from right to left side on steel or steel-underframe cars with platform end sills, in service July 1, 1911, except when such appliances are renewed, at which time they must be made to comply with the standards prescribed.

(4) *Manner of application.* Same as specified for "Box and other house cars" (see § 231.1(a)(4)).

(b) *Brake step.* Same as specified for "Box and other house cars" (see § 231.1(b)).

(c) *Running boards*—(1) *Number.* Same as specified for "Box and other house cars" (see § 231.1(c)(1)).

(2) *Dimension.* Same as specified for "Box and other house cars" (see § 231.1(c)(2)).

(3) *Location.* (i) Full length of car, center of roof. (On caboose cars with cupolas, longitudinal running boards shall extend from cupola to ends of roof.)

(ii) Outside-metal-roof cars shall have latitudinal extensions leading to ladder locations.

(4) *Manner of application.* Same as specified for "Box and other house cars" (see § 231.1(c)(4)).

(d) *Sill steps.* Same as specified for "Box and other house cars" (see § 231.1(d)).

(e) *Side-door steps*—(1) *Number.* Two. (If caboose has side doors.)

(2) *Dimensions.* Minimum length, 5 feet. Minimum width, 6 inches. Minimum thickness of tread, 1½ inches. Minimum height of back stop, 3 inches. Maximum height from top of rail to top of tread, 24 inches.

(3) *Location.* One under each side door.

(4) *Manner of application.* Side-door steps shall be supported by 2 iron brackets having a minimum cross-sectional area ⅞ by 3 inches or equivalent, each of which shall be securely fastened to car by not less than two ¾-inch bolts.

(f) *Ladders*—(1) *Number.* Four.

(2) *Dimensions.* Same as specified for "Box and other house cars" (see § 231.1(e)(2)).

(3) *Location.* Same as specified for "Box and other house cars" (see § 231.1(e)(3)), except when caboose has side doors, then side ladders shall be located not more than 8 inches from doors.

(4) *Manner of application.* Same as specified for "Box and other house cars" (see § 231.1(e)(4)).

(g) *End-ladder clearance.* (1) No part of car above end sills within 30 inches from side of car, except buffer block, brake shaft, brake wheel, brake step, running board, or uncoupling lever shall extend to within 12 inches of a vertical plane, parallel with end of car and passing through the inside face of knuckle when closed with coupler horn against the buffer block or end sill, and no other part of end of car or fixtures on same above end sills, other than exceptions noted in this subparagraph, shall extend beyond the outer face of buffer block.

(2) Carriers are not required to make changes to secure additional end-ladder clearance on cars in service July 1, 1911, that have 10 or more inches end-ladder clearance, within 30 inches of side of car, until car is shopped for work amounting to practically rebuilding body of car, at which time they must be made to comply with the standards prescribed.

(h) *Roof handholds*—(1) *Number.* Four.

(2) *Dimensions.* Same as specified for "Box and other house cars" (see § 231.1(g)(2)).

(3) *Location.* (i) One over each ladder, on roof in line with and running parallel to treads of ladder, not less than 8 nor more than 15 inches from edge of roof.

(ii) Where stiles of ladders extend 12 inches or more above roof, no other roof handholds are required.

(iii) Carriers are not required to change the location of handholds on cars in service July 1, 1911, except end handholds under end sills, where the appliances are within 3 inches of the required location, except that when cars undergo regular repairs they must then be made to comply with the standards prescribed.

(4) *Manner of application.* Roof handholds shall be securely fastened with not less than ½-inch bolts with

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nuts outside (when possible) and riveted over, or with not less than ½-inch rivets.

(i) *Cupola handholds*—(1) *Number*. One or more.

(2) *Dimensions*. Minimum diameter, five-eighths of an inch, wrought iron or steel. Minimum clearance, 2, preferably 2½ inches.

(3) *Location*. (i) One continuous cupola handhold extending around top of cupola, not more than 3 inches from edge of cupola roof.

(ii) Four right-angle handholds, one at each corner, not less than 16 inches in clear length from point of angle, may take the place of the one continuous handhold specified, if locations coincide.

(iii) Carriers are not required to change the location of handholds on cars in service July 1, 1911, except end handholds under end sills, where the appliances are within 3 inches of the required location, except that when cars undergo regular repairs they must then be made to comply with the standards prescribed.

(4) *Manner of application*. Cupola handholds shall be securely fastened with not less than ½-inch bolts with nuts outside and riveted over or with not less than ½-inch rivets.

(j) *Side handholds*—(1) *Number*. Four.

(2) *Dimensions*. Same as specified for “Box and other house cars” (see §231.1(h)(2)).

(3) *Location*. (i) Horizontal, one near each end on each side of car, not less than 24 nor more than 30 inches above center line of coupler. Clearance of outer end of handhold shall be not more than 8 inches from end of car.

(ii) Carriers are not required to change the location of handholds on cars in service July 1, 1911, except end handholds under end sills where the appliances are within 3 inches of the required location, except that when cars undergo regular repairs they must then be made to comply with the standards prescribed.

(4) *Manner of application*. Same as specified for “Box and other house cars” (see §231.(h)(4)).

(k) *Side-door handholds*—(1) *Number*. Four: Two curved, two straight.

(2) *Dimensions*. Minimum diameter, five-eighths of an inch, wrought iron or

steel. Minimum clearance, 2, preferably 2½ inches.

(3) *Location*. (i) One curved handhold, from a point at side of each door opposite ladder, not less than 36 inches above bottom of car, curving away from door downward to a point not more than 6 inches above bottom of car.

(ii) One vertical handhold at ladder side of each door from a point not less than 36 inches above bottom of car to a point not more than 6 inches above level of bottom of door.

(iii) Carriers are not required to change the location of handholds on cars in service July 1, 1911, except end handholds under end sills, where the appliances are within 3 inches of the required location, except that when cars undergo regular repairs they must then be made to comply with the standards prescribed.

(4) *Manner of application*. Side-door handholds shall be securely fastened with not less than ½-inch bolts with nuts outside (when possible) and riveted over or with not less than ½-inch rivets.

(1) *Horizontal end handholds*—(1) *Number*. Same as specified for “Box and other house cars.” (See §231.1(i)(1)).

(2) *Dimensions*. Same as specified for “Box and other house cars.” (see §231.1(i)(2)).

(3) *Location*. (i) Same as specified for “Box and other house cars” (see §231.1(i)(3)), except that one additional end handhold shall be on each end of cars with platform end sills as heretofore described, unless car has door in center of end. Said handhold shall be not less than 24 inches in length, located near center of car, not less than 30 nor more than 60 inches above platform end sill.

(ii) Carriers are not required to change the location of handholds on cars in service July 1, 1911, except end handholds under end sills, where the appliances are within 3 inches of the required location, except that when cars undergo regular repairs they must then be made to comply with the standards prescribed in said order.

(4) *Manner of application*. Same as specified for “Box and other house cars” (see §231.1(i)(4)).

(m) *Vertical end handholds.* Same as specified for "Box and other house cars" (see § 231.1(j)).

(n) *Uncoupling levers.* Same as specified for "Box and other house cars" (see § 231.1(k)).

§ 231.12 Passenger-train cars with wide vestibules.

(a) *Hand brakes*—(1) *Number.* Each passenger-train car shall be equipped with an efficient hand brake, which shall operate in harmony with the power brake thereon.

(2) *Location.* Each hand brake shall be so located that it can be safely operated while car is in motion.

(b) *Side handholds*—(1) *Number.* Eight.

(2) *Dimensions.* Minimum diameter, five-eighths of an inch, metal. Minimum clear length, 16 inches. Minimum clearance, 1¼, preferably 1½ inches.

(3) *Location.* Vertical, one on each vestibule door post.

(4) *Manner of application.* Side handholds shall be securely fastened with bolts, rivets, or screws.

(c) *End handholds*—(1) *Number.* Four.

(2) *Dimensions.* (i) Minimum diameters, five-eighths of an inch, wrought iron or steel. Minimum clear length, 16 inches. Minimum clearance, 2, preferably 2½ inches.

(ii) Handholds shall be flush with or project not more than 1 inch beyond vestibule face.

(3) *Location.* Horizontal, one near each side on each end projecting downward from face of vestibule end sill. Clearance of outer end of handhold shall be not more than 16 inches from side of car.

(4) *Manner of application.* End handholds shall be securely fastened with bolts or rivets. When marker sockets or brackets are located so that they can not be conveniently reached from platforms, suitable steps and handholds shall be provided for men to reach such sockets or brackets.

(d) *Uncoupling levers.* (1) Uncoupling attachments shall be applied so they can be operated by a person standing on the ground.

(2) Minimum length of ground uncoupling attachment, 42 inches, measured from center line of end of car to handle of attachment.

(3) On passenger-train cars used in freight or mixed-train service, the uncoupling attachment shall be so applied that the coupler can be operated from left side of car.

§ 231.13 Passenger-train cars with open-end platforms.

(a) *Hand brakes*—(1) *Number.* Each passenger-train car shall be equipped with an efficient hand brake, which shall operate in harmony with the power brake thereon.

(2) *Location.* Each hand brake shall be so located that it can be safely operated while car is in motion.

(b) *End handholds*—(1) *Number.* Four.

(2) *Dimensions.* Minimum diameter, five-eighths of an inch, wrought iron or steel. Minimum clear length, 16 inches. Minimum clearance, 2, preferably 2½ inches. Handholds shall be flush with or project not more than 1 inch beyond surface of end sill.

(3) *Location.* Horizontal, one near each side of each end on face of platform end sill, projecting downward. Clearance of outer end of handhold shall be not more than 16 inches from end of end sill.

(4) *Manner of application.* End-handholds shall be securely fastened with bolts or rivets.

(c) *End-platform handholds*—(1) *Number.* Four. (Cars equipped with safety gates do not require end-platform handholds.)

(2) *Dimensions.* Minimum clearance, 2, preferably 2½ inches, metal.

(3) *Location.* Horizontal from or near door post to a point not more than 12 inches from corner of car, then approximately vertical to a point not more than 6 inches from top of platform. Horizontal portion shall be not less than 24 inches in length nor more than 40 inches above platform.

(4) *Manner of application.* End-platform handholds shall be securely fastened with bolts, rivets, or screws.

(d) *Uncoupling levers.* (1) Uncoupling attachments shall be applied so they can be operated by a person standing on the ground.

(2) Minimum length of ground uncoupling attachment, 42 inches, measured from center of end of car to handle of attachment.