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full length of car not less than forty (40) nor more than fifty (50) inches above center line of coupler. Clearance of each end of handhold shall be not more than eight (8) inches from side of car. When construction will not permit the use of a single handhold, four (4) handholds, each not less than sixteen (16) inches in length may be used, provided dimensions and location coincide.

(4) *Manner of application.* End handholds shall be securely fastened with not less than one-half (½) inch bolts with the nuts outside (when possible) and riveted over, or with not less than one-half (½) inch rivets. When marker sockets or brackets are located so that they cannot be conveniently reached, suitable steps and handholds shall be provided for men to reach such sockets or brackets.

(g) *Uncoupling levers.* Each car shall be equipped to provide means of coupling and uncoupling without the necessity of men going between the cars.

§ 231.24 Box and other house cars with roofs, 16 feet 10 inches or more above top of rail.[1]

(a) *Hand brakes*—(1) *Number.* Same as specified for ''Box and Other House Cars.''

(2) *Dimensions.* Same as specified for ''Box and Other House Cars.''

(3) *Location.* Each hand brake shall be located so that it can be safely operated from the end-platform. Each brake shaft shall be located on end of car to left of center and not more than twenty-four (24) inches from left side of car.

(4) *Manner of application.* Same as specified for ''Box and Other House Cars.''

(b) *End-platforms*—(1) *Number.* Two (2).

(2) *Dimensions.* Width, not less than ten (10) inches. Length, full width of car.

(3) *Location.* One (1) on each end of car not more than eight (8) inches above center sill.

(4) *Manner of application.* Each end-platform shall be securely supported by not less than four (4) metal braces having a minimum cross sectional area three-eighths (⅜) by one and one-half (1½) inches or equivalent which shall be securely fastened to body of car with not less than one-half (½) inch bolts or rivets. The outside edge of each end-platform shall be not less than six (6) inches from 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 cushioning device (if used) at full buff. End-platform shall be made of running board material as specified for ''Box and Other House Cars.''

(c) *Sill steps.* Same as specified for ''Box and Other House Cars.''

(d) *End-ladder clearance.* No part of car above end-sills within thirty (30) inches from side of car, except buffer block brake-shaft, brake wheel, end-platform, horizontal end handholds, or coupling lever shall extend to within twelve (12) inches of a vertical plane parallel with end of car and passing through the inside face of knuckle, when closed with the coupler horn against the buffer block or end-sill and cushioning device (if used) at full buff, and no other part of end of car or fixtures on same above end-sill, other than exceptions herein noted, shall extend beyond outer face of buffer block.

(e) *Side handholds*—(1) *Number.* Sixteen (16).

(2) *Dimensions.* Same as specified for ''Box and Other House Cars.''

(3) *Location.* Horizontal: Four (4) near each end and on each side of car spaced

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[1] (a) Each car of this type built or rebuilt after (January 1, 1976) or under construction prior thereto and placed in service after (effective date) shall be equipped as specified in § 231.27(a) through (h) and (j) or, if it has roof hatches, as specified in § 231.28.

(b) Each car of this type placed in service after November 23, 1964 and before (effective date) shall be equipped—

(1) As specified in § 231.24; or

(2) As specified in § 231.27(a) through (h) and (j); or

(3) If it has roof hatches, as specified in § 231.28.

(c) Each car of this type placed in service before October 22, 1964, or under construction on October 22, 1964 and placed in service before November 23, 1964, shall be equipped—

(1) As specified in § 231.1; or

(2) As specified in §§ 231.1 and 231.27(i); or

(3) As specified in § 231.27(a) through (h) and (j); or

(4) If it has roof hatches, as specified in § 231.28.

not more than nineteen (19) inches apart and with the bottom handhold located not more than twenty-one (21) inches from top tread of sill step, and top handhold shall coincide in height with horizontal end-platform handhold, a variation of two (2) inches being allowed. Spacing of side handholds shall be uniform within a limit of two (2) inches from top handhold to bottom handhold. Clearance of outer ends of handholds shall be not more than eight (8) inches from end of car.

(4) *Manner of application*. Same as specified for ''Box and Other House Cars,'' except each bottom handhold shall have foot guard or upward projection not less than two (2) inches in height near inside end.

(f) *Horizontal end handholds*—(1) *Number*. Four (4).

(2) *Dimension*. Same as specified for ''Box and Other House Cars.''

(3) *Location*. One (1) near each side of each end of car on outer edge of end platform, projecting downward with clearance of outer end not more than sixteen (16) inches from side of car.

(4) *Manner of application*. Same as specified for ''Box and Other House Cars.''

(g) *Horizontal end-platform handholds*—(1) *Number*. Two (2).

(2) *Dimensions*. Same as specified for ''Horizontal End Handholds'' for ''Box and Other House Cars,'' except length shall extend across end of car.

(3) *Location*. Extending across each end of car, not less than forty-eight (48) nor more than sixty (60) inches above tread of end-platform with clearance at each end of not more than four (4) inches from side of car, supported by an extra leg near center of handholds.

(4) *Manner of application*. Same as specified for ''Horizontal End Handholds'' for ''Box and Other House Cars.''

(h) *Vertical end-handholds*—(1) *Number*. Four (4).

(2) *Dimensions*. Minimum diameter five-eighths (⅝) of an inch, wrought iron or steel. Minimum clearance, two (2), preferably two and one-half (2½) inches.

(3) *Location*. One (1) on each side of each end of car, not more than four (4) inches from side of car, extending downward from end of horizontal end-platform handhold to within eight (8) inches above tread of end-platform. One (1) continuous handhold with two (2) right angles, or two (2) right angle handholds, may take the place of two (2) specified vertical end-handholds and one (1) horizontal end-platform handhold, provided the dimensions and locations coincide, and extra legs at points of angle and center are provided and securely fastened to car.

(4) *Manner of application*. Same as specified for ''Box and Other House Cars.''

(i) *Uncoupling levers*. Same as specified for ''Box and Other House Cars.''

(j) *Painting and stenciling*. (1) That portion of each end of car more than fifteen (15) feet above top of rail shall be painted with contrasting reflectorized paint and shall bear the words ''No running board'' to the left of center and ''Excess height car'' to the right of center.

(2) Lettering to be not less than three (3) inches high. On each side-sill near end corner there shall be painted a yellow rectangular area with a three-fourths (¾) inch black border containing the words ''This car excess height—no running board.'' Lettering to be not less than one and one-half (1½) inches high. When car is equipped with center sill or underframe cushioning device having more than twelve (12) inches longitudinal impact absorbing travel, and a part of the uncoupling device and/or brake pipe is located parallel to the exposed end of the center sill, such part shall provide at least two (2) inches of clearance near the coupler of sufficient length to permit use as an emergency handhold during air hose coupling operation and the top of exposed ends of sliding center sill shall be coated with anti-skid paint.

[33 FR 19663, Dec. 25, 1968, as amended at 40 FR 34347, Aug. 15, 1975]

§ 231.25 Track motorcars (self-propelled 4-wheel cars which can be removed from the rails by men).

(a) *Handbrakes* (*includes foot operated brake*). Each track motorcar shall be equipped with an efficient handbrake so located that it can be safely operated while the car is in motion. Each handbrake shall be equipped with a ratchet or other suitable device which