| U.S. Department of Transportation<br>Federal Railroad Administration | Sample Car Inspection Checklist for:<br>Tank cars with side platforms - §231.7 | | | OMB No. 2130-0565<br>Rev. 06/24/2004 |
|---|---|---|---|---|
| Inspector(s): | Inspection Location: | | Date: | Region: |
| Builder: | Car Initials & Number: | Car Type: | Cars to be Built: | Builder Job # |

| Item | Number - Dimensions - Location - Manner of Application<br>All brackets used solely to support safety appliances are mechanically affixed, except tank car tanks per MP&E TB 98-14 | CFR Reference* | Notes |
|---|---|---|---|
| Hand Brake | Except for box and other house cars that comply with either 231.27 or 231.28, each box and other house car shall be equipped to meet the following specifications: | | |
| | ☐ One efficient handbrake which shall operate in harmony with the power brake installed on the car. | 231.1(a)(1) | |
| | ☐ Each such handbrake shall provide the same degree of safety as the design shown on plate A. | 231.1(a)(1)(i) | |
| | ☐ Or provide the same degree of safety as that specified in 231.27. | 231.1(a)(1)(ii) | |
| | ☐ The brake shaft shall be not less than 1¼ inches in diameter, of wrought iron or steel without weld. | 231.1(a)(2)(i) | |
| | ☐ Each brake wheel may be flat or dished, not less than 15 inches in diameter of malleable iron, wrought iron, or steel. | 231.1(a)(2)(ii) | |
| | ☐ Each handbrake shall be so located that it can be safely operated while car is in motion. | 231.7(a)(3)(i) | |
| | ☐ The brake shaft shall be located on end of car to the left of center. | 231.7(a)(3)(ii) | |
| | ☐ There shall be not less than four inches clearance around rim of brake wheel. | 231.1(a)(4)(i) | |
| | ☐ Outside edge of brake wheel shall be not less than four 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. | 231.1(a)(4)(ii) | |
| | ☐ Brake chain shall be of not less than ⅜, preferably 7/16, inch wrought iron or steel, with a link on the brake rod end of not less than 7/16 inch wrought iron or steel. [1] | 231.1(a)(4)(vi) | |
| | ☐ Brake wheel shall be held in position on brake shaft by a nut on a threaded extended end of brake shaft; said threaded portion shall be not less than three-fourths of an inch in diameter; said nut shall be secured by riveting over or by the use of a lock nut or suitable cotter. | 231.1(a)(4)(xiii) | |

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| Sill Steps | ☐ Four sill steps<br>☐ Minimum cross-sectional area ½ x 1½ [2] inches, or equivalent [3] of malleable iron, wrought iron, or steel.<br>☐ Minimum length of tread, ten inches.<br>☐ Minimum clear depth, eight inches. [4]<br>☐ One near each end of each side of car, so that there shall be not more than 18 inches from end of car to center of tread of sill step.<br>☐ Outside edge of tread of step shall be not more than four inches inside of face of side of car.<br>☐ Tread shall be not more than 24, inches above the top of rail.<br>☐ Sill steps exceeding 21 inches in depth shall have an additional tread.<br>☐ Sill steps 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. | 231.1(d)(1)<br>231.1(d)(2)<br><br><br><br>231.1(d)(3)(i)<br><br>231.1(d)(3)(ii)<br><br>231.1(d)(3)(iii)<br>231.1(d)(4)(i)<br>231.1(d)(4)(ii) | |
| Side Handholds | ☐ Four or more.<br>☐ Minimum diameter, ⅝ of an inch, wrought iron or steel. [2]<br>☐ Minimum clear length, 16 inches<br>☐ Minimum clearance, two inches.<br>☐ Horizontal, one on face of each side sill near each end. Clearance of outer end of handhold shall be not more than 12 inches from end of car.<br>☐ If side safety railings are attached to tank or tank bands, four additional vertical handholds shall be applied, one as nearly as possible over each sill step and securely fastened to tank or tank band.<br>☐ Side 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. | 231.7(c)(1)<br>231.1(h)(2)<br><br><br>231.7(c)(3)(i)<br><br>231.7(c)(3)(ii)<br><br><br>231.1(h)(4) | |
| End Handholds | ☐ Four.<br>☐ Minimum diameter, ⅝ of an inch, wrought iron or steel. [2]<br>☐ Minimum clear length, 16 inches, preferably 24 inches.<br>☐ A handhold 14 inches in length may be used where it is impossible to use one 16 inches in length.<br>☐ Minimum clearance, two inches.<br>☐ Horizontal, one near each side of each end of car on face of end sill. Clearance of outer end of handhold shall be not more than 16 inches from side of car.<br>☐ Horizontal end 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. | 231.7(d)(1)<br>231.1(i)(2)(i)<br><br>231.1(i)(2)(ii)<br><br>231.1(i)(2)(iii)<br>231.7(d)3)(i)<br><br>231.1(i)(4) | |

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| Tank Head Handholds | ☐ Two. (Not required if safety railing runs around ends of tank)<br>☐ Minimum diameter, ⅝ of an inch, wrought iron or steel. [2]<br>☐ Minimum clearance, two inches.<br>☐ Clear length of handholds shall extend to within six inches of outer diameter of tank at point of application.<br>☐ Horizontal, one across each head of tank not less than 30 nor more than 60 inches above platform.<br>☐ Tankhead handholds shall be securely fastened. | 231.7(e)(1)<br>231.7(e)(2)<br><br><br><br>231.7(e)(3)(i)<br><br>231.7(e)(4) | |
| Safety Railings | ☐ One continuous safety railing running around sides and ends of tank, securely fastened to tank or tank bands at ends and sides of tank; or two running full length of tank at sides of cars supported by posts.<br>☐ Not less than ¾ of an inch, iron.<br>☐ Running full length of tank either at side supported by posts or securely fastened to tank or tank bands, not less than 30 nor more than 60 inches above platform.<br>☐ Safety railings shall be securely fastened to tank body, tank bands, or posts. | 231.7(f)(1)<br><br><br>231.7(f)(2)<br>231.7(f)(3)<br><br>231.7(f)(4) | |
| Uncoupling Levers | ☐ Two uncoupling levers.<br>☐ May be either single or double, and of any efficient design.<br>☐ Handles of uncoupling levers, except those shown on Plate B or of similar designs, shall be not more than six inches from side of car. *(Plate B is the primary application you will see)*<br>☐ Uncoupling levers of design shown on plate B and of similar designs shall conform to the following prescribed limits:<br>☐ Handles shall be not more than 12 inches from sides of car. Center lift arms shall be not less than 7 inches long.<br>☐ Center of eye at end of center lift arm shall be not more than 3½ inches beyond center of eye of uncoupling pin of coupler when horn of coupler is against the buffer block or end sill. (See plate B.)<br>☐ End of handles shall extend not less than four inches below bottom of end sill or shall be so constructed as to give a minimum clearance of two inches around handle. Minimum drop of handles shall be 12 inches; maximum, 15 inches overall (see Plate B).<br>☐ One on each end of car. When single lever is used, it shall be placed on left side of end of car. | 231.1(k)(1)<br><br>231.1(k)(2)(i)<br><br><br>231.1(k)(2)(ii)<br><br>231.1(k)(2)(iii)<br><br>231.1(k)(2)(iv)<br><br><br>231.1(k)(2)(v)<br><br><br>231.1(k)(3) | |

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| End Ladder Clearance | ☐ No part of car above end sills within 30 inches from side of car, except buffer block, brake shaft, brake-shaft brackets, brake wheel or uncoupling level 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. | 231.7(h)(1) | |
| Other CFR Sections | ☐ Inspect all components to ensure compliance with the regulations.<br>☐ Ensure all brake components are located so that an inspection can be safely conducted without an inspector placing himself in a precarious or unsafe position, *(TB MP&E 98-32).* | | |
| Misc. | ☐ Check for any sharp or protruding objects or areas on the equipment that may create a safety concern or personal injury.<br>☐ Check for potential pinch points at all safety appliance arrangements.<br>☐ Check to ensure that all brackets used solely to support a safety appliance are mechanically fastened. The use of weld on brackets is prohibited.<br>☐ Check to ensure compliance ***with all applicable federal regulations***.<br>☐ Verify coupler height 31½ inch minimum, 34½ inch maximum. | 231.31(a)(1) | |
| Digital Photos | ☐ General Arrangement Photo Sheet ~ No Deviations Noted (six photos minimum, A & B ends, each corner at 45 degree angle)<br>☐ Deviation Photo Sheet ~ Deviations Noted: As many photos as necessary to fully depict, document and illustrate CFR deviations (e.g. 215, 229, 231 & 232) | | |

***** The CFR reference sections noted throughout the check list refers to the *actual* regulatory requirement.

**Footnotes:**

**1** TB MP&E 98-53 ...⅜ inch alloy chain and ½ inch steel alloy chain currently being used by new car manufacturers exceed the specifications.
**2** TB MP&E 98-18 Ladder treads, handholds of circular cross-section, 13/16 inch diameter and sill steps, ⅝ inch thick and 2 inches wide, when constructed of 6061-T6 aluminum alloy exceeds the current Federal Railroad Administration's requirements.
**3** Equivalent must meet or exceed the cross sectional area the result of which may not be less than ¾ inch.
**4** TB MP&E 98-13 Clear depth means a vertical space the width of, and above the sill step material or strap and should be clear and unobstructed for 8 inches
**5** Variance allowed due to construction of car. Note exception on F6180.4.

**IMPORTANT NOTE**: **Equipment that is not adequately addressed in Part 231**. For examples: There are no ladder requirements in §§231.29 or 231.30. However, if additional safety appliances are used on *any type of equipment*, (i.e., §231.18 Cars of special construction), they must meet the dimension, location, and a manner of application requirements. This logic holds true regardless of the equipment inspected. When applying §231.6 during a sample-car inspection on an auto rack, you will encounter components not mentioned in that section such as ladders, stenciling, end ladder clearance, etc. These additional components must meet the appropriate requirements. If there is any doubt, consult your regional specialist.

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