Title 49: Transportation
PART 215—RAILROAD FREIGHT CAR SAFETY STANDARDS

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Subpart D—Stenciling

§ 215.301 General.

The railroad or private car owner reporting mark, the car number, and built date shall be stenciled, or otherwise displayed, in clearly legible letters and numbers not less than seven inches high, except those of the built date which shall not be less than one inch high:

(a) On each side of each railroad freight car body; and

(b) In the case of a tank car, in any location that is visible to a person walking at track level beside the car.

§ 215.303 Stenciling of restricted cars.

(a) Each restricted railroad freight car that is described in §215.205(a) of this part shall be stenciled, or marked—

(1) In clearly legible letters; and

(2) In accordance with paragraphs (b) and (c) of this section.

(b) The letter “R” shall be—

(1) Placed immediately below or to the right of the car number;

(2) The same color as the reporting mark; and

(3) The same size as the reporting mark.

(c) The following terms, to the extent needed to completely indicate the basis for the restricted operation of the car, shall be placed on the car following the symbol “R” in letters not less than one inch high:

(1) Age.

(2) Coupler.

(3) Draft.

(4) Bearings.

(5) Truck.

(6) Underframe.

(7) Wheels.

(8) Yoke.

§ 215.305 Stenciling of maintenance-of-way equipment.

(a) Maintenance-of-way equipment (including self-propelled maintenance-of-way equipment) described in §215.3(c)(3) shall be stenciled, or marked—

(1) In clearly legible letters; and

(2) In accordance with paragraph (b) of this section.

(b) The letters “MW” must be—

(1) At least 2 inches high; and

(2) Placed on each side of the car.

[44 FR 77340, Dec. 31, 1979, as amended at 45 FR 26711, Apr. 21, 1980]

Appendix A to Part 215—Railroad Freight Car Components

List of components whose use is restricted by §215.203 of this part.

A. Air brakes:

The “K” type.

B. Axles:

1. Former AAR alternate standard tubular type.

2. Axle with letters “RJ” stamped on the end of the journal.

C. Couplers:

1. AAR type “D”, top or bottom operated.

2. AAR type “E” with 5&inch; by 7&inch; shank.

D. Draft arrangement:

1. Miner FR–16 and FR–19–F draft gears.

2. Farlow draft attachment.

E. Plain journal bearings:

Cartridge type.

F. Roller bearings:

1. Nippon Sieko Kabushiki Kaish (NSK) size 61/2&inch; by 12&inch; (marked “AAR 11”).

2. Hyatt cylindrical bearing, all sizes (marked “AAR 2”).

3. SKF “Piggybacker” spherical roller, size 6&inch; by 11&inch; (marked “AAR 7”).

G. Trucks:

1. Arch bar type.

2. Truck with cast steel pedestal side frame, short wheel base, and no bolster.

H. Truck bolsters:

1. A bolster with one of the following pattern numbers listed according to manufacturer:

A.S.F.	Dresser (Symington)	Birdsboro	Lenoir car works
21183–B	BO 5234	1458	CS–184.
		1468	
21183–N	BO 5263	1471	CS–611.
	BO 7076		
21648–C	BO 7076–A		
22056–E	BO 7115		

2. Bolster cast before 1927.

3. Bolster without an identification mark or pattern number.

I. 1. Truck side frames:

A side frame with one of the following pattern numbers listed according to manufacturer:

A.S.F.	National castings	Buckeye	Dominion
7273	33793–1B	3–1776	TF–5100
7323		F–420	
21362 (cast prior to June 1941)			

Pittsburgh steel foundry	Scullin steel	Bettendorf	Canadian steel foundry
31673	42–CS–180	UT 456	26565

4–1862			
3–1674	4665		
4–2045	4770		
12897	4942		
12921	5220		
21263	5364		
	5364–C		
	5364–E		
	5811–A		
	5869–B		
	6577–A		

2. Side frame cast before 1927.

3. Side frame without an identification mark or pattern number.

4. Side frame with an “I”, “T”, or “L” section compression or tension member.

J. Wheels:

1. Cast iron wheel.

2. Cast steel wheel marked “AAR X–2.”

3. Southern cast steel wheel manufactured before May 7, 1958.

4. Griffin, three-riser cast steel wheel, ball rim design, 70-ton capacity.

5. Griffin, three-riser cast steel wheel, two-wear, 70- and 50-ton capacity, 33 inch, (marked X–5 or CS–2).

6. Wrought steel wheel manufactured before 1927, as indicated by marking on wheel.

7. Cast steel wheel marked AAR X–4.

8. Davis cast steel wheel.

9. One-wear, 70-ton Southern (ABEX) U1 cast steel wheels dated May 7, 1958 through December 31, 1969.

A. Wheels dated May 7, 1958, to January 1, 1964, are marked with the symbol “70T” cast on the back of the wheel plate; they are not marked “U–1.”

B. Wheels dated January 1, 1964 through December 31, 1969, are marked with the symbols “CJ–33” and “U–1” *or* “70T” and “U–1” cast on the back of the wheel plate.

K. Yokes:

1. Riveted type.

2. Keyless type.

3. Vertical key type.

Appendix B to Part 215—Schedule of Civil Penalties[1]

Section	Violation	Willful violation
Subpart A—General:		
215.9 Movement for repair:		
(a), (c)	([1])	([1])
(b)	$2,500	$5,000
215.11 Designation of qualified persons	2,500	5,000
215.13 Pre-departure inspection	2,000	4,000
Subpart B—Freight Car Components:		
215.103 Defective wheel:		
(a) Flange thickness of:		
(1) 7/8&inch; or less but more than 13/16&inch;	2,500	5,000
(2) 13/16&inch; or less	5,000	7,500
(b) Flange height of:		
(1) 1 1/2&inch; or greater but less than 1 5/8&inch;	2,500	5,000
(2) 1 5/8&inch; or more	5,000	7,500
(c) Rim thickness of:		
(1) 11/16&inch; or less but more than 5/8&inch;	2,500	5,000
(2) 5/8&inch; or less	5,000	7,500
(d) Wheel rim, flange plate hub width:		
(1) Crack of less than 1&inch;	2,500	5,000
(2) Crack of 1&inch; or more	5,000	7,500
(3) Break	5,000	7,500
(e) Chip or gouge in flange of:		
(1) 1 1/2&inch; or more but less than 1 5/8&inch; in length; and 1/2&inch; or more but less than 5/8&inch; in width.	2,500	5,000
(2) 1 5/8&inch; or more in length; or 5/8&inch; or more in width	5,000	7,500
(f) Slid flat or shelled spot(s):		
(1)(i) One spot more than 2 1/2&inch;, but less than 3&inch;, in length	2,500	5,000
(ii) One spot 3&inch; or more in length	5,000	7,500
(2)(i) Two adjoining spots each of which is more than 2&inch; but less than 2 1/2&inch; in length	2,500	5,000
(ii) Two adjoining spots both of which are at least 2&inch; in length, if either spot is 2 1/2&inch;, or more in length	5,000	7,500
(g) Loose on axle	6,000	8,500
(h) Overheated; discoloration extending:		

(1) more than 4&inch; but less than 4 1/2&inch;	2,500	5,000
(2) 4 1/2&inch; or more	5,000	7,500
(i) Welded	5,000	7,500
215.105 Defective axle:		
(a)(1) Crack of 1&inch; or less.	2,500	5,000
(2) Crack of more than 1&inch;	5,000	7,500
(3) Break	6,000	8,500
(b) Gouge in surface that is between the wheel seats and is more than 1/8&inch; in depth	2,500	5,000
(c) End collar with crack or break	2,500	5,000
(d) Journal overheated	5,000	7,500
(e) Journal surface has: a ridge; a depression; a circumferential score; corrugation; a scratch; a continuous streak; pitting; rust; or etching	2,500	5,000
215.107 Defective plain bearing box: general:		
(a)(1) No visible free oil	1,500	3,000
(2) Lubricating pad dry (no expression of oil observed when pad is compressed)	5,000	7,500
(b) Box lid is missing, broken, or open except to receive servicing	1,000	2,000
(c) Contains foreign matter that can be expected to damage the bearing or have a detrimental effect on the lubrication of the journal and bearing	2,500	5,000
215.109 Defective plain bearing box: journal lubrication system:		
(a) Lubricating pad has a tear	1,000	2,000
(b) Lubricating pad scorched, burned, or glazed	2,500	5,000
(c) Lubricating pad contains decaying or deteriorating fabric	2,500	5,000
(d) Lubricating pad has an exposed center core or metal parts contacting the journal	2,500	5,000
(e) Lubricating pad is missing or not in contact with the journal	5,000	7,500
215.111 Defective plain bearing:		
(a) Missing	5,000	7,500
(b) Bearing liner is loose or has piece broken out	2,500	5,000
(c) Overheated	5,000	7,500
215.113 Defective plain bearing wedge:		
(a) Missing	5,000	7,500
(b) Cracked	2,500	5,000
(c) Broken	5,000	7,500
(d) Not located in its design position	5,000	7,500
215.115 Defective roller bearing:		
(a)(1) Overheated	5,000	7,500
(2) (i) Cap screw(s) loose	2,500	5,000
(ii) Cap screw lock broken, missing or improperly applied	1,000	2,000

(3) Seal is loose or damaged, or permits leakage of lubricant	2,500	5,000
(b)(1) Not inspected and tested after derailment	2,500	5,000
(2) Not disassembled after derailment	2,500	5,000
(3) Not repaired or replaced after derailment	5,000	7,500
215.117 Defective roller bearing adapter:		
(a) Cracked or broken	2,500	5,000
(b) Not in its design position	5,000	7,500
(c) Worn on the crown	2,500	5,000
215.119 Defective freight car truck:		
(a)(1) A side frame or bolster that is broken	5,000	7,500
(2)(i) Side frame or bolster with crack of: 1/4&inch; or more, but less than 1&inch;	2,500	5,000
(ii) 1&inch; or more	5,000	7,500
(b) A snubbing device that is ineffective or missing	2,500	5,000
(c) Side bearing(s):		
(1) Assembly missing or broken	5,000	7,500
(2) In contact except by design	5,000	7,500
(3), (4) Total clearance at one end or at diagonally opposite sides of:		
(i) more than 3/4&inch; but not more than 1&inch;	2,500	5,000
(ii) more than 1&inch;	5,000	7,500
(d) Truck spring(s):		
(1) Do not maintain travel or load	2,500	5,000
(2) Compressed solid	2,500	5,000
(3) Outer truck springs broken or missing:		
(i) Two outer springs	2,500	5,000
(ii) Three or more outer springs	5,000	7,500
(e) Truck bolster-center plate interference	5,000	7,500
(f) Brake beam shelf support worn	2,500	5,000
215.121 Defective car body:		
(a) Has less than 2 1/2&inch; clearance from the top of rail	2,500	5,000
(b) Car center sill is:		
(1) Broken	6,000	8,500
(2) Cracked more than 6&inch;	2,500	5,000
(3) Bent or buckled more than 2 1/2&inch; in any 6′ length	2,500	5,000
(c) Coupler carrier that is broken or missing	2,500	5,000
(d) Car door not equipped with operative safety hangers	5,000	7,500
(e)(1) Center plate not properly secured	5,000	7,500
(2) Portion missing	2,500	5,000
(3) Broken	5,000	7,500
(4) Two or more cracks	2,500	5,000

(f) Broken sidesill, crossbearer, or body bolster	2,500	5,000
215.123 Defective couplers:		
(a) Shank bent out of alignment	1,000	2,000
(b) Crack in highly stressed junction area.	2,500	5,000
(c) Coupler knuckle broken or cracked	2,500	5,000
(d) Coupler knuckle pin or thrower that is missing or inoperative.	2,500	5,000
(e) Coupler retainer pin lock that is missing or broken	1,000	2,000
(f) Coupler with following conditions: locklift inoperative; no anticreep protection; or coupler lock is missing, inoperative, bent, cracked, or broken	2,500	5,000
215.125 Defective uncoupling device	2,500	5,000
215.127 Defective draft arrangement:		
(a) Draft gear that is inoperative	2,500	5,000
(b) Yoke that is broken	2,500	5,000
(c) End of car cushioning unit is leaking or inoperative	2,500	5,000
(d) Vertical coupler pin retainer plate missing or has missing fastner	5,000	7,500
(e) Draft key or draft key retainer that is inoperative or missing	5,000	7,500
(f) Follower plate that is missing or broken	2,500	5,000
215.129 Defective cushioning device	2,500	5,000
Subpart C—Restricted equipment:		
215.203 Restricted cars	2,500	5,000
Subpart D—Stencilling:		
215.301 General	1,000	2,000
215.303 Stencilling of restricted cars	1,000	2,000
215.305 Stencilling of maintenance-of-way	1,000	2,000

[1]A penalty may be assessed against an individual only for a willful violation. Generally, when two or more violations of these regulations are discovered with respect to a single freight car that is placed or continued in service by a railroad, the appropriate penalties set forth above are aggregated up to a maximum of $16,000 per day. However, a failure to perform, with respect to a particular freight car, the predeparture inspection required by §215.13 of this part will be treated as a violation separate and distinct from, and in addition to, any substantive violative conditions found on the car. The Administrator reserves the right to assess a penalty of up to $100,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

Failure to observe any condition for movement set forth in paragraphs (a) and (c) of §215.9 will deprive the railroad of the benefit of the movement-for-repair provision and make the railroad and any responsible individuals liable for penalty under the particular regulatory section(s) concerning the substantive defect(s) present on the freight car at the time of movement.

Maintenance-of-way equipment not stenciled in accordance with §215.305 is subject to all requirements of this part. See §215.3(c)(3).

[53 FR 52925, Dec. 29, 1988, as amended at 63 FR 11620, Mar. 10, 1998; 69 FR 30593, May 28,

2004; 72 FR 51196, Sept. 6, 2007; 73 FR 79701, Dec. 30, 2008]

Appendix C to Part 215—FRA Freight Car Standards Defect Code

The following defect code has been established for use by FRA and State inspectors to report defects observed during inspection of freight cars. The purpose of the code is to establish a uniform language among FRA, States, and the railroad industry that will facilitate communication, recordkeeping, and statistical analyses. The code may not be substituted for the description of defects on bad order tags affixed to cars being moved for repair under §215.9. However, it may be used to supplement that description.

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215.125 Defective Uncoupling Device.

215.127 Defective Draft Arrangement.

215.129 Defective Cushioning Device.

Restricted Equipment

215.203 Restricted Cars.

Stenciling

215.301 Improper Stenciling.

215.303 Improper Stenciling of Restricted Cars.

215.305 Improper Stenciling of Maintenance-of-Way Equipment.

Description of Defects

215.009 Failure to meet conditions for movement of defective cars for repairs.

215.011 Designation of Qualified Persons.

(A)(1) Railroad fails to designate persons qualified to inspect freight cars;

(2) Persons designated does not have knowledge and ability to inspect freight cars for compliance with the requirements of this part.

(B) Railroad fails to maintain written record of:

(1) Each designation in effect;

(2) The basis for this designation.

215.013 Failure to perform pre-departure inspection.

215.015 Periodic Inspection.

(A) Railroad fails to perform the periodic inspection as required by June 30, 1980 on:

(1) High utilization car built prior to December 31, 1977;

(2) Non-high utilization car built prior to December 31, 1971;

(B) A freight car improperly stenciled for periodic inspection.

215.103 Defective Wheel.

(A)(1) Flanges7/8&inch; or less at3/8&inch; above the tread;

(2) Flanges13/16&inch; or less at3/8&inch; above the tread;

(3) Flanges3/4&inch; or less at3/8&inch; above the tread;

(B)(1) Flange is 11/2&inch; or more from the tread to top of flange;

(2) Flange is 15/8&inch; or more from the tread to top of flange;

(3) Flange is 13/4&inch;.

(C)(1) Rim thickness is11/16&inch; or less;

(2) Rim thickness is5/8&inch; or less;

(3) Rim thickness is9/16&inch; or less;

(D) Wheel cracked or broken in: (1) rim, (2) flange, (3) plate or (4) hub area.

(E) Wheel chip or gouge in flange:

(1) 11/2&inch; length and1/2&inch; in width or more;

(2) 15/8&inch; length and5/8&inch; in width or more;

(3) 13/4&inch; in length and3/4&inch; in width or more.

(F) Wheel has slid flat spot or shelled spot:

(1) 21/2&inch; in length or more;

(2) Has two adjoining flat spots each of which is 2&inch; in length or greater;

(3) A single flat spot 3&inch; in length or more;

(4) Has two adjoining flat spots one of which is at least 2&inch; in length and the other is 21/2&inch; or greater.

(G) Has a loose wheel.

(H) Overheated with discoloration extending: (1) More than 4&inch;; (2) 41/2&inch; or more.

(I) A welded wheel on car that is not moving for repairs.

215.105 Defective Axle.

(A) Cracked or broken:

(1) Cracked 1′ or less;

(2) Cracked greater than 1&inch;;

(3) Broken or cracked with visible separation of metal.

(B) Gouge between wheel seats more than1/8&inch; in depth:

(C) Broken or cracked end collar on plain bearing axle.

(D) Overheated journal.

(E) Surface of plain bearing journal or fillet has (1) ridge, (2) depression, (3) circumferential score, (4) corrugation, (5) scratch, (6) continuous streak, (7) pitting, (8) rust, (9) etching.

215.107 Defective plain bearing box.

(A) (1) Does not contain visible free oil;

(2) A journal box with dry pad.

(B) Lid is missing, broken or open except to receive service.

(C) Box has foreign matter that will damage bearing or prevent lubrication.

215.109 Defective plain bearing box: journal lubrication system.

(A) Pad torn half the length or width.

(B) Scorched, burned or glazed.

(C) Contains decaying or deteriorated fabric.

(D) Has exposed core except by design of metal parts in contact with journal.

(E)(1) Missing;

(2) Not in contact with journal.

215.111 Defective plain bearing.

(A) Missing, cracked or broken.

(B)(1) Bearing lining is loose;

(2) Broken out piece.

(C) Overheated as evidenced by:

(1) Melted babbit;

(2) Smoke from hot oil;

(3) Journal surface damaged.

215.113 Defective plain bearing wedge.

(A) Missing.

(B) Cracked.

(C) Broken.

(D) Not located in design position.

215.115 Defective roller bearing.

(A)(1) Overheated;

(2) Loose or missing cap screw;

(3) Roller bearing seal loose or damaged permitting loss of lubricant;

(4) Two or more missing cap screws.

(B)(1) Failure to inspect if involved in derailment;

(2) Failure to disassemble if required under this part;

(3) Failure to repair or replace defective roller bearings.

215.117 Defective roller bearing adapter.

(A) Cracked or broken.

(B) Not in design position.

(C) Worn excessively as shown on Figure 1 in relief portion.

215.119 Defective freight car trucks.

(A)(1) Side frame or bolster broken;

(2) Cracked1/4&inch; or more in transverse direction on tension member;

(3) Cracked 1&inch; or more in transverse direction on tension member.

(B) Has ineffective snubbing devices.

(C)(1) Missing or broken side bearing;

(2) Side bearing in contact except by design;

(3) Excessive side bearing clearance at one end of car;

(4) Excessive side bearing clearance on opposite sides at diagonal ends of car.

(D)(1) Has truck springs that will not maintain travel or load;

(2) Truck springs that are compressed solid;

(3) Has two springs broken in a cluster;

(4) Has three or more springs broken.

(E) Truck bolster and center plate interference preventing rotation.

(F) Has broken beam shelf supports worn so that shelf will not support beam.

215.121 Defective car body.

(A) Improper clearance—less than 21/2&inch; from top of rail.

(B) Center sill is:

(1) Broken;

(2) Cracked more than 6&inch;;

(3) Bent or buckled more than 21/2&inch; in any 6-foot length.

(C) Coupler carrier is:

(1) Broken;

(2) Missing;

(3) Non-resilient when used with coupler with F head.

(D) Car door not equipped with operative safety hangers.

(E) If center plate:

(1) Any portion missing;

(2) Broken or cracked as defined in this part.

(F) Broken side sills, crossbars or body bolster.

215.123 Defective couplers.

(A) Coupler shank bent.

(B) Coupler cracked in highly stressed area of head and shank.

(C) Coupler knuckle broken.

(D) Coupler knuckle pin or knuckle throw:

(1) Missing;

(2) Inoperative.

(E) Coupler retainer pin lock:

(1) Missing;

(2) Broken.

(F)(1) Coupler locklift is inoperative;

(2) No anti-creep protection;

(3) Coupler lock is (i) missing, (ii) inoperative, (iii) bent, (iv) cracked or (v) broken.

215.125 Defective uncoupling device.

(A) Fouling on curve.

(B) Unintentional uncoupling.

215.127 Defective draft arrangement.

(A) Draft gear inoperative.

(B) Broken yoke.

(C) End of car cushioning unit:

(1) Leaking;

(2) Inoperative.

(D) Vertical coupler pin retainer plate:

(1) Missing;

(2) Has missing fastener.

(E) Draft key or key retainer:

(1) Inoperative;

(2) Missing.

(F) Follower plate missing or broken.

215.129 Defective cushioning device unless effectively immobilized.

(A) Broken.

(B) Inoperative.

(C) Missing parts.

215.203 Operating a restricted car, except under conditions approved by FRA.

Stenciling

215.301 Failure to stencil car number and built date on freight car as required.

215.303 Failure to stencil restricted car as required.

215.305 Failure to stencil maintenance-of-way equipment as required.

Appendix D to Part 215—Pre-departure Inspection Procedure

At each location where a freight car is placed in a train and a person designated under §215.11 is not on duty for the purpose of inspecting freight cars, the freight car shall, as a minimum, be inspected for the imminently hazardous conditions listed below that are likely to cause an accident or casualty before the train arrives at its destination. These conditions are readily discoverable by a train crew member in the course of a customary inspection.

1. Car body:

(a) Leaning or listing to side.

(b) Sagging downward.

(c) Positioned improperly on truck.

(d) Object dragging below.

(e) Object extending from side.

(f) Door insecurely attached.

(g) Broken or missing safety appliance.

(h) Lading leaking from a placarded hazardous material car.

2. Insecure coupling.

3. Overheated wheel or journal.

4. Broken or extensively cracked wheel.

5. Brake that fails to release.

6. Any other apparent safety hazard likely to cause an accident or casualty before the train arrives at its destination.

[45 FR 26711, Apr. 21, 1980, as amended at 73 FR 79701, Dec. 30, 2008]

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