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Title 49 –Transportation

Subtitle B –Other Regulations Relating to Transportation

Chapter II –Federal Railroad Administration, Department of Transportation

Part 215 –Railroad Freight Car Safety Standards

Authority: 49 U.S.C. 20103, 20107; 28 U.S.C. 2461 note; and 49 CFR 1.89.

Source: 44 FR 77340, Dec. 31, 1979, unless otherwise noted.

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.

Index

General

215.009 Improper Movement of Defective Cars.

215.011 Designation of Qualified Persons.

215.013 Failure to Perform a Pre-departure Inspection.

215.015 Failure to Complete Initial Periodic Inspection as Required.

Freight Car Components

Suspension System

215.103 Defective Wheel.

215.105 Defective Axle.

215.107 Defective Plain Bearing Box: General.

215.109 Defective Plain Bearing Box: Journal Lubrication System.

215.111 Defective Plain Bearing.

215.113 Defective Plain Bearing Wedge.

215.115 Defective Roller Bearing.

215.117 Defective Roller Bearing Adapter.

215.119 Defective Freight Car Truck.

Car Bodies

215.121 Defective Car Body.

Draft System

215.123 Defective Couplers.

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) Flanges $\frac{7}{8}$ " or less at $\frac{3}{8}$ " above the tread;
- (2) Flanges $\frac{13}{16}$ " or less at $\frac{3}{8}$ " above the tread;
- (3) Flanges $\frac{3}{4}$ " or less at $\frac{3}{8}$ " above the tread;

(B)

- (1) Flange is $1\frac{1}{2}$ " or more from the tread to top of flange;
- (2) Flange is $1\frac{5}{8}$ " or more from the tread to top of flange;
- (3) Flange is $1\frac{3}{4}$ ".

(C)

- (1) Rim thickness is $1\frac{1}{16}$ " or less;
- (2) Rim thickness is $\frac{5}{8}$ " or less;
- (3) Rim thickness is $\frac{9}{16}$ " 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) 1 $\frac{1}{2}$ " length and $\frac{1}{2}$ " in width or more;
- (2) 1 $\frac{5}{8}$ " length and $\frac{5}{8}$ " in width or more;
- (3) 1 $\frac{3}{4}$ " in length and $\frac{3}{4}$ " in width or more.

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

- (1) 2 $\frac{1}{2}$ " in length or more;
- (2) Has two adjoining flat spots each of which is 2" in length or greater;
- (3) A single flat spot 3" in length or more;
- (4) Has two adjoining flat spots one of which is at least 2" in length and the other is 2 $\frac{1}{2}$ " or greater.

(G) Has a loose wheel.

(H) Overheated with discoloration extending: (1) More than 4"; (2) 4 $\frac{1}{2}$ " 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";
- (3) Broken or cracked with visible separation of metal.

(B) Gouge between wheel seats more than $\frac{1}{8}$ " 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) Cracked $\frac{1}{4}$ " or more in transverse direction on tension member;
- (3) Cracked 1" 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 $2\frac{1}{2}$ " from top of rail.
- (B) Center sill is:
 - (1) Broken;
 - (2) Cracked more than 6";
 - (3) Bent or buckled more than $2\frac{1}{2}$ " 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.