

(g) If one or more of the following conventional air brake equipment items is removed, repaired, or replaced only that portion which is renewed or replaced must be tested to satisfy the provisions of this section:

- (1) Brake reservoir;
- (2) Brake cylinder;
- (3) Piston assembly;
- (4) Vent valve;
- (5) Quick service valve;
- (6) Brake cylinder release valve;
- (7) Modulating valve or slack adjuster; or
- (8) Angle cock or cutout cock.

[64 FR 25660, May 12, 1999, as amended at 65 FR 41309, July 3, 2000; 74 FR 25174, May 27, 2009]

§ 238.313 Class I brake test.

(a) Each commuter and short-distance intercity passenger train shall receive a Class I brake test once each calendar day that the train is placed or continues in passenger service.

(b) Except as provided in paragraph (i) of this section, each long-distance intercity passenger train shall receive a Class I brake test:

(1) Prior to the train's departure from an originating terminal; and

(2) Every 1,500 miles or once each additional calendar day, whichever occurs first, that the train remains in continuous passenger service.

(c) Each passenger car and each unpowered vehicle added to a passenger train shall receive a Class I or Class IA brake test at the time it is added to the train unless notice is provided to the train crew that a Class I brake test was performed on the car within the previous calendar day and the car has not been disconnected from a source of compressed air for more than four hours prior to being added to the train. The notice required by this section shall contain the date, time, and location of the last Class I brake test.

(d) Each Class I brake test shall be performed by a qualified maintenance person.

(e) Each Class I brake test may be performed either separately or in conjunction with the exterior calendar day mechanical inspection required under § 238.303.

(f) Except as provided in § 238.15(b), a railroad shall not use or haul a pas-

senger train in passenger service from a location where a Class I brake test has been performed, or was required by this part to have been performed, with less than 100 percent operative brakes.

(g) A Class I brake test shall be performed at the air pressure at which the train's air brakes will be operated, but not less than 90 psi, and shall be made to determine and ensure that:

(1) The friction brakes apply and remain applied on each car in the train until a release of the brakes has been initiated on each car in response to train line electric, pneumatic, or other signals. This test shall include a verification that each side of each car's brake system responds properly to application and release signals;

(2) The brake shoes or pads are firmly seated against the wheel or disc with the brakes applied;

(3) Piston travel is within prescribed limits, either by direct observation, observation of a piston travel indicator, or in the case of tread or disc brakes by determining that the brake shoe or pad provides pressure to the wheel. For vehicles equipped with 8½-inch or 10-inch diameter brake cylinders, piston travel shall be within 7 to 9 inches. If piston travel is found to be less than 7 inches or more than 9 inches, it must be adjusted to nominally 7½ inches. Proper release of the brakes can be determined by observation of the clearance between the brake shoe and the wheel or between the brake pad and the brake disc.

(4) The communicating signal system is tested and known to be operating as intended; a tested and operating two-way radio system meets this requirement;

(5) Each brake shoe or pad is securely fastened and correctly aligned in relation to the wheel or to the disc;

(6) The engineer's brake valve or controller will cause the proper train line commands for each position or brake level setting;

(7) Brake pipe leakage does not exceed 5 pounds per square inch per minute if leakage will affect service performance;

(8) The emergency brake application and deadman pedal or other emergency control devices function as intended;

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(9) Each brake shoe or pad is not below the minimum thickness established by the railroad. This thickness shall not be less than the minimum thickness necessary to safely travel the maximum distance allowed between Class I brake tests;

(10) Each angle cock and cutout cock is properly positioned;

(11) The brake rigging or the system mounted on the car for the transmission of the braking force operates as intended and does not bind or foul so as to impede the force delivered to a brake shoe, impede the release of a brake shoe, or otherwise adversely affect the operation of the brake system;

(12) If the train is equipped with electropneumatic brakes, an electropneumatic application of the brakes is made and the train is walked to determine that the brakes on each car in the train properly apply;

(13) Each brake disc is free of any crack in accordance with the manufacturer's specifications or, if no specifications exist, free of any crack to the extent that the design permits;

(14) If the equipment is provided with a brake indicator, the brake indicator operates as intended; and

(15) The communication of brake pipe pressure changes at the rear of the train is verified, which may be accomplished by observation of an application and release of the brakes on the last car in the train.

(h) *Records.* A record shall be maintained of each Class I brake test performed.

(1) This record may be maintained in writing or electronically, provided FRA has access to the record upon request.

(2) The written or electronic record must contain the following information:

(i) The date and time that the Class I brake test was performed;

(ii) The location where the test was performed;

(iii) The identification number of the controlling locomotive of the train;

(iv) The total number of cars inspected during the test; and

(v) The signature or electronic identification of the inspector.

(3) This record shall be maintained at the place where the inspection is con-

ducted or at one central location and shall be retained for at least 92 days.

(i) A long-distance, intercity passenger train that misses a scheduled calendar day Class I brake test due to a delay en route may proceed to the point where the Class I brake test was scheduled to be performed. A Class I brake test shall be completed at that point prior to placing the train back in service.

(j) In addition to complying with all the Class I brake test requirements performed by a qualified maintenance person as contained in paragraphs (a) through (i) of this section, railroads operating passenger equipment that is not designed to permit the visual observation of the brake actuation and release without the inspector going on, under, or between the equipment in accordance with § 238.231(b) shall perform an additional inspection. At a minimum, the additional inspection requirement for such equipment shall include all of the following:

(1) An additional inspection by a qualified maintenance person of all items and components contained in paragraphs (g)(1) through (g)(15) of this section;

(2) The additional inspection shall be conducted at an interval not to exceed five (5) in-service days and shall be conducted while the equipment is over an inspection pit or on a raised inspection track; and

(3) A record of the additional inspection shall be maintained pursuant to the requirements contained in paragraph (h) of this section. This record can be combined with the Class I brake test record.

[64 FR 25660, May 12, 1999, as amended at 65 FR 41309, July 3, 2000; 71 FR 61862, Oct. 19, 2006]

§ 238.315 Class IA brake test.

(a) Except as provided in paragraph (b) of this section, either a Class I or a Class IA brake test shall be performed:

(1) Prior to the first morning departure of each commuter or short-distance intercity passenger train, unless all of the following conditions are satisfied:

(i) A Class I brake test was performed within the previous twelve (12) hours;