

Brake Systems—Performance Requirements,” (Adopted 1999; Revised: 2002, 2004, 2008);

(2) AAR S-4210, “ECP Cable-Based Brake System Cable, Connectors, and Junction Boxes—Performance Specifications,” (Adopted: 1999; Revised 2002, 2007);

(3) AAR S-4220, “ECP Cable-Based Brake DC Power Supply—Performance Specification,” Version 2.0 (Adopted: 1999; Revised: 2002);

(4) AAR S-4230, “Intratrains Communication (ITC) Specification for Cable-Based Freight Train Control System,” Version 3.0 (Adopted: 1999; Revised: 2002, 2004);

(5) AAR S-4240, “ECP Brake Equipment—Approval Procedure” (Adopted: 2007);

(6) AAR S-4250, “Performance Requirements for ITC Controlled Cable-Based Distributed Power Systems,” Version 2.0 (Adopted: 2003; Revised: 2004);

(7) AAR S-4260, “ECP Brake and Wire Distributed Power Interoperability Test Procedures” (Adopted: 2007); and

(8) AAR S-4270, “ECP Brake System Configuration Management” (Adopted: 2008).

(b) *Approval.* A freight train or freight car equipped with an ECP brake system and equipment covered by the AAR standards incorporated by reference in this section shall not be used without conditional or final approval by AAR in accordance with AAR Standard S-4240, “ECP Brake Equipment—Approval Procedures” (2007).

(c) *Configuration management.* A railroad operating a freight train or freight car equipped with ECP brake systems shall adopt and comply with the configuration management plan developed in accordance with the AAR standards incorporated by reference in this section. FRA reserves the right to audit a manufacturer’s configuration management plan at any time.

(d) *Exceptions.* (1) A freight car or freight train equipped with a stand-alone ECP brake system shall be excepted from the requirement in § 232.103(l) referencing AAR Standard S-469-47, “Performance Specification for Freight Brakes.”

(2) The provisions addressing the introduction of new brake system tech-

nology contained in subpart F of this part are not applicable to a freight car or freight train equipped with an ECP brake system approved by AAR in accordance with paragraph (b) of this section, conditionally or otherwise, as of the effective date of this rule.

(e) *New technology.* Upon written request supported by suitable justification and submitted pursuant to the special approval procedures in § 232.17, the Associate Administrator may except from the requirements of subpart F of this part the testing of new ECP brake technology, demonstration of new ECP brake technology, or both, where testing or demonstration, or both, will be conducted pursuant to an FRA-recognized industry standard and FRA is invited to monitor the testing or demonstration, or both.

(f) *Modification of standards.* The AAR or other authorized representative of the railroad industry may seek modification of the industry standards identified in or approved pursuant to paragraph (a) of this section. The request for modification will be handled and shall be submitted in accordance with the modification procedures contained in § 232.307.

§ 232.605 Training requirements.

(a) *Inspection, testing and maintenance.* A railroad that operates a freight car or freight train equipped with an ECP brake system and each contractor that performs inspection, testing, or maintenance on a freight car or freight train equipped with an ECP brake system shall adopt and comply with a training, qualification, and designation program for its employees that perform inspection, testing or maintenance of ECP brake systems. The training program required by this section shall meet the requirements in §§ 232.203(a), (b), (e), and (f).

(b) *Operating rules.* A railroad operating a freight train or freight car equipped with an ECP brake system shall amend its operating rules to govern safe train handling procedures related to ECP brake systems and equipment under all operating conditions and shall tailor its operating rules to the specific equipment and territory of the railroad.

(c) *Locomotive engineers.* A railroad operating a freight car or freight train equipped with an ECP brake system shall adopt and use in its training program under part 240 specific knowledge, skill, and ability criteria to ensure that its locomotive engineers are fully trained with the operating rules governing safe train handling procedures related to ECP brake systems and equipment under all operating conditions and tailored to the specific equipment and territory of the railroad.

§ 232.607 Inspection and testing requirements.

(a) *Trains at initial terminal.* A freight train operating in ECP brake mode shall receive the following inspections at its point of origin (initial terminal):

(1) A Class I brake test as described in § 232.205(c) by a qualified mechanical inspector (QMI); and

(2) A pre-departure inspection pursuant to part 215 of this chapter by an inspector designated under § 215.11 of this chapter.

(b) *Trains en route.* (1) Except for a unit or cycle train, a train operating in ECP brake mode shall not operate a distance that exceeds its destination or 3,500 miles, whichever is less, unless inspections meeting the requirements of paragraph (a) of this section are performed on the train.

(2) A unit or cycle train operating in ECP brake mode shall receive the inspections required in paragraph (a) of this section at least every 3,500 miles.

(3) The greatest distance that any car in a train has traveled since receiving a Class I brake test by a qualified mechanical inspector will determine the distance that the train has traveled.

(4) A freight train operating in ECP brake mode shall receive a Class I brake test as described in § 232.205(c) by a qualified person at a location where the train is off air for a period of more than:

(i) 24 hours, or

(ii) 80 hours, if the train remains inaccessible to the railroad and in an extended-off-air facility. For the purpose of this section, an extended-off-air facility means a location controlled by a sole shipper or consignee which re-

stricts access to the train and provides sufficient security to deter vandalism.

(c) *Cars added en route.* (1) Each freight car equipped with an ECP brake system that is added to a freight train operating in ECP brake mode shall receive a Class I brake test as described in § 232.205(c) by a qualified person, unless all of the following are met:

(i) The car has received a Class I brake test by a qualified mechanical inspector within the last 3,500 miles;

(ii) Information identified in § 232.205(e) relating to the performance of the previously received Class I brake test is provided to the train crew;

(iii) The car has not been off air for more than 24 hours or for more than 80 hours, if that train remains in an extended-off-air facility; and

(iv) A visual inspection of the car's brake systems is conducted to ensure that the brake equipment is intact and properly secured. This may be accomplished as part of the inspection required under § 215.13 of this chapter and may be conducted while the car is off air.

(2) Each car and each solid block of cars not equipped with an ECP brake system that is added to a train operating in ECP brake mode shall receive a visual inspection to ensure it is properly placed in the train and safe to operate and shall be moved and tagged in accordance with the provisions contained in § 232.15.

(d) *Class III brake test* (1) A Class III brake test shall be performed on a freight train operating in ECP brake mode by a qualified person, as defined in § 232.5, to test the train's brake system whenever the continuity of the brake pipe or electrical connection is broken or interrupted.

(2) In lieu of observing the brake pipe changes at the rear of a freight train with the end-of-train telemetry device referred to in §§ 232.211(c) and (d), the operator shall verify that the brakes applied and released on the rear car of the freight train by observing the ECP brake system's display in the locomotive cab.

(e) *Initialization.* (1) A freight train operating in ECP brake mode shall be initialized as described in paragraph (e)(2) whenever the following occurs:

(i) Class I brake test.