

## § 232.409

the train and shall be equipped with an operable two-way radio that communicates with the locomotive engineer; and

(ii) The locomotive engineer shall periodically make running tests of the train's air brakes until the failure is corrected; and

(3) Each en route failure shall be corrected at the next location where the necessary repairs can be conducted or at the next location where a required brake test is to be performed, whichever is reached first.

[66 FR 4193, Jan. 17, 2001, as amended at 67 FR 17584, Apr. 10, 2002]

### § 232.409 Inspection and testing of end-of-train devices.

(a) After each installation of either the front or rear unit of an end-of-train device, or both, on a train and before the train departs, the railroad shall determine that the identification code entered into the front unit is identical to the unique identification code on the rear unit.

(b) After each installation of either the front or rear unit of an end-of-train device, or both, on a train and before the train departs, the functional capability of the device shall be determined, after charging the train, by comparing the quantitative value of the air pressure displayed on the front unit with the quantitative value of the air pressure displayed on the rear unit or on a properly calibrated air gauge. The end-of-train device shall not be used if the difference between the two readings exceeds three pounds per square inch.

(c) A two-way end-of-train device shall be tested at the initial terminal or other point of installation to determine that the device is capable of initiating an emergency power brake application from the rear of the train. If this test is conducted by a person other than a member of the train crew, the locomotive engineer shall be notified that a successful test was performed. The notification required by this paragraph may be provided to the locomotive engineer by any means determined appropriate by the railroad; however, a written or electronic record of the notification shall be maintained in the cab of the controlling loco-

## 49 CFR Ch. II (10–1–05 Edition)

motive and shall include the date and time of the test, the location where the test was performed, and the name of the person conducting the test.

(d) The telemetry equipment shall be tested for accuracy and calibrated if necessary according to the manufacturer's specifications and procedures at least every 368 days. The 368 days shall not include a shelf-life of up to 92 days prior to placing the unit in service. This test shall include testing radio frequencies and modulation of the device. The date and location of the last calibration or test as well as the name of the person performing the calibration or test shall be legibly displayed on a weather-resistant sticker or other marking device affixed to the outside of both the front unit and the rear unit; however, if the front unit is an integral part of the locomotive or is inaccessible, then the information may be recorded on Form FRA F6180-49A instead, provided that the serial number of the unit is recorded.

[66 FR 4193, Jan. 17, 2001, as amended at 66 FR 29502, May 31, 2001; 67 FR 17584, Apr. 10, 2002]

### Subpart F—Introduction of New Brake System Technology

#### § 232.501 Scope.

This subpart contains general requirements for introducing new brake system technologies. This subpart is intended to facilitate the introduction of new complete brake system technologies or major upgrades to existing systems which the current regulations do not adequately address (*i.e.*, electronic brake systems). This subpart is not intended for use in the introduction of a new brake component or material.

#### § 232.503 Process to introduce new brake system technology.

(a) Pursuant to the procedures contained in § 232.17, each railroad shall obtain special approval from the FRA Associate Administrator for Safety of a pre-revenue service acceptance testing plan, developed pursuant to § 232.505, for the new brake system technology, prior to implementing the plan.

(b) Each railroad shall complete a pre-revenue service demonstration of