

Chapter 12

Passenger Equipment Safety Standards Part 238

Introduction

The Federal Railroad Administration added Part 238 containing Passenger Equipment Safety Standards on May 12, 1999 (64 FR 25540) and issued responses to petitions for reconsideration on July 2, 2000 and April 23, 2002 (65 FR 41284 and 67 FR 19970). The regulation became effective on July 12, 1999. The guidance contained in this section of the compliance manual addresses specific issues or questions raised since the issuance of this rule. For information or guidance of a specific provision not covered in this manual, the preamble discussions contained in the publications noted above should be consulted and reviewed. FRA intends to update this portion of the manual on a regular basis to include any new issues or guidance arising during the implementation of these somewhat new provisions.

The following provides guidance to be used by Federal and State Inspectors when conducting inspections of passenger equipment for compliance with federal laws and regulations. It is important that agency enforcement policies be adhered to by every Inspector when conducting inspections, so that uniformity of enforcement activity is achieved.

The procedures provided in both this manual and FRA's General Manual should be observed when assessing the need for appropriate corrective actions regarding non-compliance with the passenger equipment safety standards. It should be noted that there is significant interplay between the provisions contained in this part and provisions contained in other parts of the federal regulations. These include: The Locomotive Safety Standards in Part 229; the Safety Appliances Standards in Part 231; and the Passenger Train Emergency Preparedness regulations contained in Part 239. When an MP&E Inspector determines that a deficiency exists on passenger equipment which may not be conducive to safe operation, the Inspector must decide if the defect(s):

- ▶ Is a Part 238 defect;
- ▶ Should be documented on the F6180.96 - Inspection Report;
- ▶ Warrants the issuance of a violation;
- ▶ Warrants the issuance of a Special Notice for Repairs under Part 216; and/or
- ▶ Should be reported to the railroad as an unsafe condition(s), not encompassed in the Federal regulations.

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The following discussion addresses various issues that have arisen during the implementation of the passenger equipment safety standards and provide guidance on its enforcement:

238.3 Applicability.

The requirements of Part 238 do not apply to tourist, scenic, historic, or excursion operations even if they operate over the general railroad system. Transportation of passengers to a particular destination is not the purpose of a tourist or scenic railway. The requirements also do not apply to circus trains.

238.5 Definitions.

Actuator means a device directly actuated by the movement of the brake cylinder piston which provides an indication of the piston travel.

The actuator moves as a direct action of the brake piston when applying retarding force or from a load cell that reads brake shoe pressure.

Brake indicator means a device, actuated by brake cylinder pressure, which indicates whether brakes are applied or released.

This device is operated by other than directly off the piston movement such as pressure switches located in the brake pipe or low pressure head.

Calendar day means a time period running from one midnight to the next midnight on a given date. *This is the same as a calendar day inspection required in the locomotive standards. One inspection for each day, or part of a day, the equipment is used in service.*

Locomotive, MU means rail rolling equipment self-propelled by any power source and intended to provide transportation for members of the general public; however, this term does not include an MU locomotive propelled by steam power unless it is used to haul an intercity or commuter passenger train.

Unlike the definition in Locomotive Safety Standards MU in this rule includes MU passenger locomotives powered by a number of sources.

Passenger car means rail rolling equipment intended to provide transportation for members of the general public and includes a self-propelled car designed to carry passengers, baggage, mail, or express. This term includes a passenger coach, cab car, and an MU locomotive. In the context of

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articulated equipment, "passenger car" means that segment of the rail rolling equipment located between two trucks. This term does not include a private car.

Passenger car as defined includes MU Locomotives. Thus, whenever the term "passenger car" is used then MU locomotives are included unless expressly excluded. MU locomotives as well as traditional locomotives remain under the requirements found in section 229 with the exception of those items in 238 not expressly addressed in 229, such as deadman pedals or alerters. MU locomotives are required to be inspected by a QMP, such an inspection may satisfy the requirements for a locomotive daily inspection under part 229, if it includes all items addressed in that part. However, a locomotive daily inspection under part 229 will not satisfy the need for the exterior mechanical inspection required by the passenger equipment safety standards unless it is performed by a QMP and only if it covers all components and parts addressed in part 238. If a traditional locomotive receives a daily inspection under part 229 by other than a QMP those items not covered in locomotive safety standards (part 229) but are addressed in passenger equipment safety standards (part 238) must be re-inspected by a QMP (ex: dynamic brake, alerter/deadman).

Power car means a rail vehicle that propels a Tier II passenger train or is the lead vehicle in a Tier II passenger train, or both.

Power cars are considered locomotives and must comply with the Locomotive Safety Standards with the exception of those items defined in 229.3(a)(Applicability) as well as any requirement specifically applicable under part 238.

238.9 Responsibility for compliance.

This section establishes two levels of liability depending on the nature of the defect or inspection for which non-compliance with this part is being alleged. A strict liability standard is applied to non-conformity with any of the safety appliance and power brake provisions of Part 238, including the inspection provision addressing such components. Paragraph (a)(1) makes clear that a railroad may not use, haul, permit to be used or hauled on its line, offer in interchange, or accept in interchange any train or equipment with one or more conditions not in compliance with Part 238's power brake or safety appliance provisions or the involved inspection provisions. A reasonable person standard is applied to all other conditions not in compliance with part 238, other than the safety appliance and power brake provisions. Paragraph (a)(2) makes clear that for other than safety appliance or power brake defects, a railroad may not use, haul, permit to be used or hauled on its line, offer in interchange, or accept in interchange any train or equipment with one or more conditions not in compliance with part 238 if the railroad has actual knowledge of the facts giving rise to the violation, or a reasonable person acting in the circumstances and exercising reasonable care would have that knowledge.

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Strict liability applies to the use or haul of equipment with defective safety appliances. If a piece of passenger equipment is discovered with a defective safety appliance or power brake and it is not being used or hauled pursuant to the statutory provisions contained in 49 U.S.C. § 20303 and the movement of defective equipment provision of 238.15, appropriate enforcement action must be taken. If a railroad is unaware of the existence of a defective condition, it cannot be considered to be properly hauling the equipment for repairs under either the statute or 238.15. Knowledge of the defect need not be established. Inspectors are expected to use sound judgement together with the guidance outlined in the General Manual and Chapter 3 of this manual when deciding whether the issuance of a violation report is appropriate.

Reasonable person liability standard is a somewhat lower standard of liability than the strict liability standard noted above. Under this standard a railroad subject to this part is liable only if it knew, had notice, or should have known of the existence of either a defective condition on the equipment or the failure to inspect and test the equipment as prescribed in this part. Thus, when seeking a violation of a requirement or provision, other than a safety appliance or power brake requirement, FRA must establish that the railroad had actual knowledge of the condition or a reasonable person exercising reasonable care would have such knowledge. Consequently, a violation report must discuss the Inspector's basis for finding that the railroad knew or reasonably should have know of the presence of the defective condition. Inspectors should be as specific as possible when detailing this information.

Paragraph (b) of this section states that in order to establish a violation, FRA must prove that the equipment was "used or hauled" in defective condition. Thus, evidence of an actual "haul" of the defective equipment in a train is always sufficient to support a violation. In addition, this section makes clear that FRA will consider a piece of equipment "in use" and subject to potential civil penalties prior to departure but after a railroad has or should have completed its required inspections and is deemed ready for service. Thus, FRA is not necessarily required to wait for a car with a defective safety appliance or power brake to depart or engage in an actual "haul" in order to assess a violation. If inspectors rely on the above interpretation the violation report must establish that the railroad had completed all necessary inspections capable of discovering the alleged defective condition. Therefore, evidence must be included in the violation report which establishes the inspector's basis for this finding. Be as specific as possible, include names, if available. Remember this is added enforcement flexibility and may not be the appropriate approach in many situations, in many circumstances the best approach is still to establish actual use or movement of the equipment.

Paragraph (c) clarifies FRA's position that the requirements of this part are applicable not only to any "railroad" subject to the part but also to any "person," as defined in 238.5, that performs any function required by part 238. Although various sections of the regulation address the duties of a railroad, FRA intends that any person who performs any action on behalf of a railroad or any

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person who performs any action covered by the rule is required to perform that action in the same manner as required of a railroad or be potentially subject to FRA enforcement action.

238.15 Movement of passenger equipment with power brake defects.

(b) Any equipment that is found with a defective air brake during a Class I or IA brake test may only be moved in a non-revenue train after meeting all additional requirements in the movement of brakes that becomes defective en-route. Secondary braking systems such as dynamic braking may be continued in service under the conditions found in 49 CFR 238.303(e)(15)(i)&(ii).

When railroads move equipment with brakes that become defective en-route Inspectors should consider more than just the equipment conditions to decide if it is safe to unload passengers at the next station. They should look at the location as to the safety of passengers, overloading equipment, weather, and a number of other concerns. Railroads should not be cited for exercising good judgement to insure the safety of their passengers.

If the train reaches its final destination and all passengers have detrained the railroad must then move the equipment for repair out of service without passengers. This includes trains that operate to a final destination where the crew would normally change ends perform a Class II brake tests to operate the equipment towards a repair facility, the return trip must be out of service with out passengers.

Paragraph (e) - Coupler mates or similar equipment that are physically joined by a trailer or container operated at the rear of a passenger train that has a braking problem resulting in a truck brake system being cut out does not constitute inoperative brakes at the rear of the train unless both trucks are cut out.

238.17 Movement of passenger equipment with other than power brake defects.

The off-site QMP could make required determinations when defective running gear is involved and report via radio or telephone without being on the scene.

238.109 Training qualification, and designation program.

Paragraph (a). Beginning on January 1, 2002, each railroad shall have adopted a training, qualification, and designation program for employees and contractors that perform any of the inspections, tests, or maintenance required by this part, and shall have trained such employees and contractors in accordance with the program.

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If the railroad utilizes a contractor or another railroad to provide required training the railroad should adopt the training plan being used and keep good records. FRA believes that good records is the cornerstone of the training requirements.

The tests, inspections, and maintenance, required to be performed by a QMP is identified in each section where it is required, an example would be a person who is a QMP qualified to perform a exterior calendar day mechanical inspection (238.303) finds a wheel with a condemnable defect. After the condition is reported the car moves to a wheel true machine for repair. The rule requires that the inspector be a QMP to perform the exterior calendar day mechanical inspection but there is no such requirement for the wheel true operator, and no requirement that a QMP inspect the equipment upon release from the wheel true facility.

Paragraph (b)(8). Requires supervisors to complete the program that covers the employees whom they supervise, including refresher training;

Supervisors as discussed in the requirement are first line supervisors of QMP's and these supervisors must complete a program that covers the same material as the QMP employees they supervise. This requirement is only for the first line supervisor.

Paragraph (b)(10). Railroads must designate in writing that each employee and contractor has the knowledge and skills necessary to perform the safety-related tasks that are part of his or her job;

Employees are not required to carry a card that lists their qualifications but railroads must maintain a list of employees qualifications and be able to provide that information to FRA upon request.

238.119 Rim-stamped straight-plate wheels.

Paragraph (a)(1). Except as provided in paragraph (a)(2) of this section, on or after November 8, 1999, no railroad shall place or continue in service any vehicle, other than a private car, that is equipped with a rim-stamped straight-plate wheel if a brake shoe acts on the tread of the wheel for the purpose of slowing the vehicle.

This is only for rim stamped straight plate wheels with tread braking, this does not include hub stamped straight plate wheels.

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238 Subpart D Inspection, Testing, and Maintenance Requirements for Tier I Passenger Equipment

238.303 Exterior calendar day mechanical inspection of passenger equipment.

Paragraph (a). Except as provided in paragraph (f) of this section, each passenger car and each unpowered vehicle used in a passenger train shall receive an exterior mechanical inspection at least once each calendar day that the equipment is placed in service.

The requirement includes passenger cars as defined that includes MU passenger locomotives and all other equipment hauled in a passenger trains.

Calendar day inspection is required for any calendar day the passenger equipment is used in service, a calendar inspection is not governed by the amount of time the equipment was used. A passenger car that arrives at 12:20 in the morning on any given day would be required to receive a calendar day mechanical inspection.

If a long haul passenger car receives a daily mechanical inspection and departs, and some time after midnight the car becomes defective and is set out the railroad would not be responsible to perform a daily inspection for the day that it was used in service and set out, but would have to perform an inspection prior to placing the car into another train or before moving the car for the purpose of repair.

The daily inspection of MU locomotives and control car locomotives performed under the requirements of locomotive daily inspection (229.21) does not fulfill the requirements for daily mechanical inspection of passenger equipment unless performed by a QMP qualified for that inspection. Conventional locomotives can be inspected by people the railroad deems qualified (229.21(c) who are not QMP's with the exception of those items specifically addressed in the Passenger Equipment Safety Standards not covered in the Locomotive Safety Standards, such as dynamic brakes and alerters.

238.305 Interior calendar day mechanical inspection of passenger cars.

Paragraph (c)(5). The words "Emergency Brake Valve" are legibly stenciled or marked near each brake pipe valve or shown on an adjacent badge plate.

The requirement "Emergency Brake Valve" is preferred but inspectors should use good judgment a large number of these valves are marked " Brake Emergency Use Only" inspectors should take no exception to this or other markings that meet the intent.

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238.307 Periodic mechanical inspection.

Paragraph (a). Railroads shall conduct periodic mechanical inspections of all passenger cars and all unpowered vehicles used in a passenger train as required by this section or as warranted and justified by data developed pursuant to paragraph (a)(2) of this section. A periodic inspection conducted under part 229 of this chapter satisfies the requirement of this section with respect to the features inspected.

The requirement includes passenger cars as defined that includes control car locomotives and MU passenger locomotives. Those items of inspection that are performed as part of the 92 day, annual, or biannual inspection required as part of the locomotive safety standards do not require to be included in the periodic under the passenger equipment periodic inspection.

Paragraph (b). Each periodic mechanical inspection required by this section shall be performed by a qualified maintenance person.

The inspection of the equipment must be performed by a QMP. If a defect has been identified it must be repaired before the equipment is returned to service, there is no requirement that a QMP make the repairs or re-inspect the equipment when repairs are completed.

Paragraph (c). The periodic mechanical inspection shall specifically include the following interior and exterior mechanical components, which shall be inspected not less frequently than every 184 days. At a minimum, this inspection shall determine that:

The 184 day requirement was issued after the 180 day requirement contained in 239.107(b)(2) and supercedes that requirement.

238.311 Single car test.

Paragraph (b). Each single car test required by this section shall be performed by a qualified maintenance person.

As in previous inspection requirements the single car test must be performed by a QMP, the regulation does not require associated work such as removal or replacement of valves to be performed by a QMP.

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Amtrak requested and was granted approval of an alternate standard for performing single car tests of Talgo equipment. This request was assigned docket number "FRA-2003-16666 a copy of the decision letter is available in the MP&E Waiver section of this Compliance Manual.

APTA requested and was granted approval of an alternate standard for performing single car tests of passenger equipment. The approval allows the railroad to use the original APTA Code of Test identified in the Passenger Equipment Safety Standards or the alternate test code dated March 24,2003, which allows the test to be performed at the pressure that the brake system is operated at. Railroads are free to use either test as needed. This request was assigned docket number "FRA-2005-20053, a copy of the test code is available from APTA "@apta.com".

238.313 Class I brake test.

The requirements in 238.313(a) include passenger cars and passenger equipment being moved by a passenger railroad, with exception of movements in compliance with 238.15 movement of passenger equipment with power brake defects, shall receive a brake test as prescribed in this part. This includes mail trains and passenger equipment being moved without passengers on board being moved by a passenger railroad. FRA would consider these cars to be either in revenue service or available to carry passengers.

Paragraph (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.

If a train is used in service on any given day regardless of time utilized it must receive a class one brake test, this test can be performed before the service begins or upon completion of service.

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

The class one brake test must be performed by a QMP qualified for that particular test the test may utilize a non QMP to manipulate the brake valves during the performance of the test.

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

Brake pipe leakage may not exceed 5 pounds per square inch per minute but does not need to be tested unless the leak affects the operation of the train brakes.

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Paragraph 238.313(g)(14). If the equipment is provided with a brake indicator, the brake indicator operates as intended; and

Most passenger cars and MU's are equipped with indicator lights, some with multiple indicators located on each side of the equipment, only one set of these indicators per side of car must work to be in compliance.

238.315 Class IA brake test.

Paragraph (a)(3)(iii). The train has not been disconnected from a source of compressed air for more than four hours since the performance of the Class I brake test; and

Minimum pressure of ground compressed air to be considered sufficient is 60 psi.

Paragraph (b). A commuter or short-distance intercity passenger train that provides continuing late night service that began prior to midnight may complete its daily operating cycle after midnight without performing another Class I or Class IA brake test. A Class I or Class IA brake test shall be performed on such a train before it starts a new daily operating cycle.

Some commuter systems operate service beyond midnight and the requirement to perform a Class IA prior to the first morning departure was written to insure proper brake functions on trains that are not operated through the night. Inspectors should use good judgment when determining if a train requires a Class IA brake test prior to the first morning departure. The trains that operate throughout the night may only lay up for short periods of time, an hour or two, and requiring a test before the first morning departure may not be required.

Paragraph (e). Except as provided in § 238.15(b), a railroad shall not use or haul a passenger train in passenger service from a location where a Class IA brake test has been performed, or was required by this part to have been performed, with less than 100 percent operative brakes.

238.315(f) Class IA Brake Test:

The Class IA brake test does not require trains equipped with electro-pneumatic brakes to have the electro-pneumatic feature tested, this is only required at the Class 1 test. If the electro-pneumatic feature is defective and is cut out it is not considered defective until the Class 1 is performed and the equipment may be continued in service.

Paragraph (f)(1). Brake pipe leakage does not exceed 5 pounds per square inch per minute if brake pipe leakage will affect service performance;

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Brake pipe leakage may not exceed 5 pounds per square inch per minute but does not need to be tested unless the leak affects the operation of the train brakes.

Paragraph (f)(3). On MU equipment, the emergency brake application and the deadman pedal or other emergency control devices function as intended;

Railroads are not required to physically test the dead man or other emergency control devices during the Class IA or II brake test with the exception of electric MU equipment that utilizes an electric signal to communicate a service application and utilizes only a pneumatic signal for an emergency application, must have the emergency application tested to determine the control device functions as intended. Railroads are required to test the dead man or other emergency control devices during the Class IA brake test.

238.317 Class II brake test.

The Class II brake test does not require trains equipped with electro-pneumatic brakes to have the electro-pneumatic feature tested, this is only required at the Class I test. If the electro-pneumatic feature is defective and is cut out it is not considered defective until the Class I is performed and the equipment may be continued in service.

Paragraph (a)(5). When an operator first takes charge of the train, except for face-to-face relief.

Face to face relief would include QMP, or other persons participating in the class I brake test, to crew member as well as crew to crew.

Paragraph (d)(1). The brakes on the rear unit of the train apply and release in response to a signal from the engineer's brake valve or controller of the leading or controlling unit, or a gauge or similar device located at the rear of the train or in the cab of the rear unit indicates that brake pipe pressure changes are properly communicated at the rear of the train;

If the railroad places a device at the rear of the train that provides a visual indication of changes in brake pipe pressure and this indication can be viewed from the front of the train it fulfills the requirement to test.

Paragraph (d)(2). On MU equipment, the emergency brake application and deadman pedal or other emergency control devices function as intended; and

Railroads are not required to physically test the dead man or other emergency control devices during the Class IA or II brake test with the exception of electric MU equipment that utilizes an electric signal to communicate a service application and utilizes only a

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pneumatic signal for an emergency application, must have the emergency application tested to determine the control device functions as intended. Railroads are required to test the dead man or other emergency control devices during the Class 1A brake test.

238.503 Inspection, testing, and maintenance requirements

Paragraph (d)(3) states that "trains that miss a scheduled Class I brake test of mechanical inspection due to a delay en route may proceed to the point where the Class I or mechanical inspection was scheduled to be performed."

Inspectors need to be very careful in how this provision is applied. In FRA's view a "delay en route" can only occur between terminus points. Boston and Washington would be considered "terminus points" since at those locations the trains lay-up and are given new train symbols. FRA believes this approach is consistent with the rules intent. Thus, if an Accela train is delayed en route it may proceed to either Washington or Boston but may not be turned if it can not complete a return trip within the provided time frame.