

## ENHANCED CONTENT

 View [table of contents](#) for this page

## PART 396 - INSPECTION, REPAIR, AND MAINTENANCE

**Authority:** 49 U.S.C. 504, 31133, 31136, 31151, 31502; sec. 32934, Pub. L. 112-141, 126 Stat. 405, 830; sec. 5524, Pub. L. 114-94, 129 Stat. 1312, 1560; and 49 CFR 1.87.

**Source:** 44 FR 38526, July 2, 1979, unless otherwise noted.

## EDITORIAL NOTE

**Editorial Note:** Nomenclature changes to part 396 appear at 66 FR 49874, Oct. 1, 2001.

### § 396.1 Scope.

- (a) Every motor carrier, its officers, drivers, agents, representatives, and employees directly concerned with the inspection or maintenance of commercial motor vehicles must be knowledgeable of and comply with the rules of this part.
- (b) Every intermodal equipment provider, its officers, agents, representatives, and employees directly concerned with the inspection or maintenance of intermodal equipment interchanged or offered for interchange to motor carriers must be knowledgeable of and comply with the rules of this part.
- (c) This part does not apply to “covered farm vehicles,” as defined in 49 CFR 390.5, or to the drivers of such vehicles.
- (d) The rules in this part do not apply to “pipeline welding trucks” as defined in 49 CFR 390.38(b).

[73 FR 76823, Dec. 17, 2008, as amended at 78 FR 16195, Mar. 14, 2013; 81 FR 47722, July 22, 2016]

### § 396.3 Inspection, repair, and maintenance.

- (a) **General.** Every motor carrier and intermodal equipment provider must systematically inspect, repair, and maintain, or cause to be systematically inspected, repaired, and maintained, all motor vehicles and intermodal equipment subject to its control.
  - (1) Parts and accessories shall be in safe and proper operating condition at all times. These include those specified in [part 393 of this subchapter](#) and any additional parts and accessories which may affect safety of operation, including but not limited to, frame and frame assemblies, suspension systems, axles and attaching parts, wheels and rims, and steering systems.
  - (2) Pushout windows, emergency doors, and emergency door marking lights in buses shall be inspected at least every 90 days.
- (b) **Required records.** Motor carriers, except for a private motor carrier of passengers (nonbusiness), must maintain, or cause to be maintained, records for each motor vehicle they control for 30 consecutive days. Intermodal equipment providers must maintain or cause to be maintained,

records for each unit of intermodal equipment they tender or intend to tender to a motor carrier. These records must include:

- (1) An identification of the vehicle including company number, if so marked, make, serial number, year, and tire size. In addition, if the motor vehicle is not owned by the motor carrier, the record shall identify the name of the person furnishing the vehicle;
  - (2) A means to indicate the nature and due date of the various inspection and maintenance operations to be performed;
  - (3) A record of inspection, repairs, and maintenance indicating their date and nature; and
  - (4) A record of tests conducted on pushout windows, emergency doors, and emergency door marking lights on buses.
- (c) **Record retention.** The records required by this section shall be retained where the vehicle is either housed or maintained for a period of 1 year and for 6 months after the motor vehicle leaves the motor carrier's control.

[44 FR 38526, July 2, 1979, as amended at 48 FR 55868, Dec. 16, 1983; 53 FR 18058, May 19, 1988; 59 FR 8753, Feb. 23, 1994; 59 FR 60324, Nov. 23, 1994; 73 FR 75824, Dec. 17, 2008]

### § 396.5 Lubrication.

Every motor carrier shall ensure that each motor vehicle subject to its control is -

- (a) Properly lubricated; and
- (b) Free of oil and grease leaks.

### § 396.7 Unsafe operations forbidden.

- (a) **General.** A motor vehicle shall not be operated in such a condition as to likely cause an accident or a breakdown of the vehicle.
- (b) **Exemption.** Any motor vehicle discovered to be in an unsafe condition while being operated on the highway may be continued in operation only to the nearest place where repairs can safely be effected. Such operation shall be conducted only if it is less hazardous to the public than to permit the vehicle to remain on the highway.

### § 396.9 Inspection of motor vehicles and intermodal equipment in operation.

- (a) **Personnel authorized to perform inspections.** Every special agent of the FMCSA (as defined in appendix B to this subchapter) is authorized to enter upon and perform inspections of a motor carrier's vehicles in operation and intermodal equipment in operation.
- (b) **Prescribed inspection report.** The Driver Vehicle Examination Report shall be used to record results of motor vehicle inspections and results of intermodal equipment inspections conducted by authorized FMCSA personnel.
- (c) **Motor vehicles and intermodal equipment declared "out-of-service."**
  - (1) Authorized personnel shall declare and mark "out-of-service" any motor vehicle or intermodal equipment which by reason of its mechanical condition or loading would likely cause an accident or a breakdown. An "Out-of-Service Vehicle" sticker shall be used to mark

vehicles and intermodal equipment "out-of-service."

- (2) No motor carrier or intermodal equipment provider shall require or permit any person to operate nor shall any person operate any motor vehicle or intermodal equipment declared and marked "out-of-service" until all repairs required by the "out-of-service notice" have been satisfactorily completed. The term *operate* as used in this section shall include towing the vehicle or intermodal equipment, except that vehicles or intermodal equipment marked "out-of-service" may be towed away by means of a vehicle using a crane or hoist. A vehicle combination consisting of an emergency towing vehicle and an "out-of-service" vehicle shall not be operated unless such combination meets the performance requirements of this subchapter except for those conditions noted on the Driver Vehicle Examination Report.
- (3) No person shall remove the "Out-of-Service Vehicle" sticker from any motor vehicle or intermodal equipment prior to completion of all repairs required by the "out-of-service notice."

(d) ***Motor carrier or intermodal equipment provider disposition.***

- (1) The driver of any motor vehicle, including a motor vehicle transporting intermodal equipment, who receives an inspection report shall deliver a copy to both the motor carrier operating the vehicle and the intermodal equipment provider upon his/her arrival at the next terminal or facility. If the driver is not scheduled to arrive at a terminal or facility of the motor carrier operating the vehicle or at a facility of the intermodal equipment provider within 24 hours, the driver shall immediately mail, fax, or otherwise transmit the report to the motor carrier and intermodal equipment provider.
- (2) Motor carriers and intermodal equipment providers shall examine the report. Violations or defects noted thereon shall be corrected in accordance with [§ 396.11\(a\)\(3\)](#). Repairs of items of intermodal equipment placed out-of-service are also to be documented in the maintenance records for such equipment.
- (3) Within 15 days following the date of the inspection, the motor carrier or intermodal equipment provider shall -
  - (i) Certify that all violations noted have been corrected by completing the "Signature of Carrier/Intermodal Equipment Provider Official, Title, and Date Signed" portions of the form; and
  - (ii) Return the completed roadside inspection form to the issuing agency at the address indicated on the form and retain a copy at the motor carrier's principal place of business, at the intermodal equipment provider's principal place of business, or where the vehicle is housed for 12 months from the date of the inspection.

[73 FR 76824, Dec. 17, 2008, as amended at 75 FR 17252, Apr. 5, 2010; 77 FR 28451, May 14, 2012; 78 FR 58485, Sept. 24, 2013; 81 FR 47731, July 22, 2016]

## **§ 396.11 Driver vehicle inspection report(s).**

(a) ***Equipment provided by motor carrier.***

- (1) **Report required.** Every motor carrier shall require its drivers to report, and every driver shall prepare a report in writing at the completion of each day's work on each vehicle operated, except for intermodal equipment tendered by an intermodal equipment provider. The report shall cover at least the following parts and accessories:

- (i) Service brakes including trailer brake connections;
- (ii) Parking brake;
- (iii) Steering mechanism;
- (iv) Lighting devices and reflectors;
- (v) Tires;
- (vi) Horn;
- (vii) Windshield wipers;
- (viii) Rear vision mirrors;
- (ix) Coupling devices;
- (x) Wheels and rims;
- (xi) Emergency equipment.

(2) **Report content.**

- (i) The report must identify the vehicle and list any defect or deficiency discovered by or reported to the driver which would affect the safety of operation of the vehicle or result in its mechanical breakdown. If a driver operates more than one vehicle during the day, a report must be prepared for each vehicle operated. Drivers are not required to prepare a report if no defect or deficiency is discovered by or reported to the driver.
- (ii) The driver must sign the report. On two-driver operations, only one driver needs to sign the driver vehicle inspection report, provided both drivers agree as to the defects or deficiencies identified.

(3) **Corrective action.**

- (i) Prior to requiring or permitting a driver to operate a vehicle, every motor carrier or its agent shall repair any defect or deficiency listed on the driver vehicle inspection report which would be likely to affect the safety of operation of the vehicle.
- (ii) Every motor carrier or its agent shall certify on the driver vehicle inspection report which lists any defect or deficiency that the defect or deficiency has been repaired or that repair is unnecessary before the vehicle is operated again.

(4) **Retention period for reports.** Every motor carrier shall maintain the driver vehicle inspection report, the certification of repairs, and the certification of the driver's review for three months from the date the written report was prepared.

(5) **Exceptions.** The rules in this section shall not apply to a private motor carrier of passengers (nonbusiness), a driveaway-towaway operation, or any motor carrier operating only one commercial motor vehicle.

(b) **Equipment provided by intermodal equipment provider.**

- (1) **Report required.** Every intermodal equipment provider must have a process to receive driver reports of, and each driver or motor carrier transporting intermodal equipment must report to the intermodal equipment provider or its designated agent, any known damage, defects, or deficiencies in the intermodal equipment at the time the equipment is returned to the provider or the provider's designated agent. The report must include, at a minimum, the



following parts and accessories:

- (i) Brakes;
- (ii) Lighting devices, lamps, markers, and conspicuity marking material;
- (iii) Wheels, rims, lugs, tires;
- (iv) Air line connections, hoses, and couplers;
- (v) King pin upper coupling device;
- (vi) Rails or support frames;
- (vii) Tie down bolsters;
- (viii) Locking pins, clevises, clamps, or hooks;
- (ix) Sliders or sliding frame lock.

(2) **Report content.**

- (i) Name of the motor carrier responsible for the operation of the intermodal equipment at the time the damage, defects, or deficiencies were discovered by, or reported to, the driver.
- (ii) Motor carrier's USDOT number; intermodal equipment provider's USDOT number, and a unique identifying number for the item of intermodal equipment.
- (iii) Date and time the report was submitted.
- (iv) All damage, defects, or deficiencies of the intermodal equipment reported to the equipment provider and discovered by, or reported to, the motor carrier or its driver which would
  - (A) Affect the safety of operation of the intermodal equipment, or
  - (B) Result in its mechanical breakdown while transported on public roads.
- (v) The signature of the driver who prepared the report.

(3) **Corrective action.**

- (i) Prior to allowing or permitting a motor carrier to transport a piece of intermodal equipment for which a motor carrier or driver has submitted a report about damage, defects or deficiencies, each intermodal equipment provider or its agent must repair the reported damage, defects, or deficiencies that are likely to affect the safety of operation of the vehicle.
- (ii) Each intermodal equipment provider or its agent must certify on the original driver's report which lists any damage, defects, or deficiencies of the intermodal equipment that the reported damage, defects, or deficiencies have been repaired, or that repair is unnecessary, before the vehicle is operated again.

(4) **Retention period for reports.** Each intermodal equipment provider must maintain all documentation required by this section, including the driver report and the certification of repairs on all intermodal equipment, for a period of three months from the date that a motor carrier or its driver submits the report to the intermodal equipment provider or its agent.

77 FR 76824, Dec. 17, 2008, as amended at 74 FR 68709, Dec. 29, 2009; 77 FR 34852, June 12, 2012; 77 FR 59828, Oct. 1, 2012; 78 FR 58485, Sept. 24, 2013; 79 FR 75449, Dec. 18, 2014; 83 FR 16227, Apr. 16, 2018; 85 FR 50793, Aug. 18, 2020]

### § 396.12 Procedures for intermodal equipment providers to accept reports required by § 390.42(b) of this chapter.

- (a) **System for reports.** Each intermodal equipment provider must establish a system for motor carriers and drivers to report to it any damage, defects, or deficiencies of intermodal equipment discovered by, or reported to, the motor carrier or driver which would -
  - (1) Affect the safety of operation of the intermodal equipment, or
  - (2) Result in its mechanical breakdown while transported on public roads.
- (b) **Report content.** The system required by [paragraph \(a\)](#) of this section must include documentation of all of the following:
  - (1) Name of the motor carrier responsible for the operation of the intermodal equipment at the time the damage, defects, or deficiencies were discovered by, or reported to, the driver.
  - (2) Motor carrier's USDOT number; intermodal equipment provider's USDOT number, and a unique identifying number for the item of intermodal equipment.
  - (3) Date and time the report was submitted.
  - (4) All damage, defects, or deficiencies of the intermodal equipment must be reported to the equipment provider by the motor carrier or its driver. If no defect or deficiency in the intermodal equipment is discovered by or reported to the driver, no written report is required.
  - (5) The signature of the driver who prepared the report.
- (c) **Corrective action.**
  - (1) Prior to allowing or permitting a motor carrier to transport a piece of intermodal equipment for which a motor carrier or driver has submitted a report about damage, defects or deficiencies, each intermodal equipment provider or its agent must repair the reported damage, defects, or deficiencies that are likely to affect the safety of operation of the vehicle.
  - (2) Each intermodal equipment provider or its agent must certify on the original driver's report which lists any damage, defects, or deficiencies of the intermodal equipment that the reported damage, defects, or deficiencies have been repaired, or that repair is unnecessary, before the vehicle is operated again.
- (d) **Retention period for reports.** Each intermodal equipment provider must maintain all documentation required by this section, including the driver report and the certification of repairs on all intermodal equipment, for a period of three months from the date that a motor carrier or its driver submits the report to the intermodal equipment provider or its agent.

[73 FR 76824, Dec. 17, 2008, as amended at 74 FR 68709, Dec. 29, 2009; 77 FR 34852, June 12, 2012; 83 FR 16227, Apr. 16, 2018]

### § 396.13 Driver inspection.

Before driving a motor vehicle, the driver shall:

- (a) Be satisfied that the motor vehicle is in safe operating condition;
- (b) Review the last driver vehicle inspection report if required by § 396.11(a)(2)(i); and
- (c) Sign the report to acknowledge that the driver has reviewed it and that there is a certification that the required repairs have been performed. The signature requirement does not apply to listed defects on a towed unit which is no longer part of the vehicle combination.

[44 FR 76526, Dec. 27, 1979, as amended at 48 FR 55868, Dec. 16, 1983; 63 FR 33280, June 18, 1998; 85 FR 50793, Aug. 18, 2020]

### § 396.15 Driveaway-towaway operations and inspections.

- (a) **General.** Every motor carrier, with respect to motor vehicles engaged in driveaway-towaway operations, shall comply with the requirements of this part. Exception: Maintenance records required by § 396.3, the vehicle inspection report required by § 396.11, and the periodic inspection required by § 396.17 of this part shall not be required for any vehicle which is part of the shipment being delivered.
- (b) **Pre-trip inspection.** Before the beginning of any driveaway-towaway operation of motor vehicles in combination, the motor carrier shall make a careful inspection and test to ascertain that:
  - (1) The tow-bar or saddle-mount connections are properly secured to the towed and towing vehicle;
  - (2) They function adequately without cramping or binding of any of the parts; and
  - (3) The towed motor vehicle follows substantially in the path of the towing vehicle without whipping or swerving.
- (c) **Post-trip inspection.** Motor carriers shall maintain practices to ensure that following completion of any trip in driveaway-towaway operation of motor vehicles in combination, and before they are used again, the tow-bars and saddle-mounts are disassembled and inspected for worn, bent, cracked, broken, or missing parts. Before reuse, suitable repair or replacement shall be made of any defective parts and the devices shall be properly reassembled.

[44 FR 38526, July 2, 1979, as amended at 53 FR 49410, Dec. 7, 1988; 53 FR 49968, Dec. 12, 1988; 78 FR 58485, Sept. 24, 2013; 84 FR 51435, Sept. 30, 2019]

### § 396.17 Periodic inspection.

- (a) Every commercial motor vehicle must be inspected as required by this section. The inspection must include, at a minimum, the parts and accessories set forth in appendix A to this part. The term *commercial motor vehicle* includes each vehicle in a combination vehicle. For example, for a tractor semitrailer, full trailer combination, the tractor, semitrailer, and the full trailer (including the converter dolly if so equipped) must each be inspected.
- (b) Except as provided in § 396.23 and this paragraph, motor carriers must inspect or cause to be inspected all motor vehicles subject to their control. Intermodal equipment providers must inspect or cause to be inspected intermodal equipment that is interchanged or intended for interchange to motor carriers in intermodal transportation.
- (c) A motor carrier must not use a commercial motor vehicle, and an intermodal equipment provider must not tender equipment to a motor carrier for interchange, unless each component identified

must not tender equipment to a motor carrier for interchange, unless each component identified in appendix A to this part has passed an inspection in accordance with the terms of this section at least once during the preceding 12 months and documentation of such inspection is on the vehicle. The documentation may be:

- (1) The inspection report prepared in accordance with [§ 396.21\(a\)](#), or
  - (2) Other forms of documentation, based on the inspection report (e.g., sticker or decal), which contains the following information:
    - (i) The date of inspection;
    - (ii) Name and address of the motor carrier, intermodal equipment provider, or other entity where the inspection report is maintained;
    - (iii) Information uniquely identifying the vehicle inspected if not clearly marked on the motor vehicle; and
    - (iv) A certification that the vehicle has passed an inspection in accordance with [§ 396.17](#).
- (d) A motor carrier may perform the required annual inspection for vehicles under the carrier's control which are not subject to an inspection under [§ 396.23\(a\)\(1\)](#). An intermodal equipment provider may perform the required annual inspection for intermodal equipment interchanged or intended for interchange to motor carriers that are not subject to an inspection under [§ 396.23\(a\)\(1\)](#).
- (e) In lieu of the self-inspection provided for in [paragraph \(d\)](#) of this section, a motor carrier or intermodal equipment provider responsible for the inspection may choose to have a commercial garage, fleet leasing company, truck stop, or other similar commercial business perform the inspection as its agent, provided that business operates and maintains facilities appropriate for commercial vehicle inspections and it employs qualified inspectors, as required by [§ 396.19](#).
- (f) Vehicles passing periodic inspections performed under the auspices of any State government or equivalent jurisdiction in the Canadian Provinces, the Yukon Territory, and Mexico, meeting the minimum standards contained in appendix A to this part, will be considered to have met the requirements of an annual inspection for a period of 12 months commencing from the last day of the month in which the inspection was performed.
- (g) It is the responsibility of the motor carrier or intermodal equipment provider to ensure that all parts and accessories on commercial motor vehicles intended for use in interstate commerce for which they are responsible are maintained at, or promptly repaired to, the minimum standards set forth in appendix A to this part.
- (h) Failure to perform properly the annual inspection required by this section shall cause the motor carrier or intermodal equipment provider to be subject to the penalty provisions of [49 U.S.C. 521\(b\)](#).

[73 FR 76825, Dec. 17, 2008, as amended at [81 FR 47732](#), July 22, 2016; [83 FR 22881](#), May 17, 2018; [86 FR 57077](#), Oct. 14, 2021]

### **§ 396.19 Inspector qualifications.**

- (a) Motor carriers and intermodal equipment providers must ensure that individuals performing annual inspections under [§ 396.17\(d\)](#) or (e) are qualified as follows:
  - (1) Understand the inspection criteria set forth in part 393 and appendix A to this part and can



identify defective components;

- (2) Are knowledgeable of and have mastered the methods, procedures, tools and equipment used when performing an inspection; and
- (3) Are capable of performing an inspection by reason of experience, training, or both as follows:
  - (i) Successfully completed a Federal or State-sponsored training program or have a certificate from a State or Canadian Province that qualifies the individuals to perform commercial motor vehicle safety inspections, or
  - (ii) Have a combination of training or experience totaling at least 1 year. Such training or experience may consist of:
    - (A) Participation in a commercial motor vehicle manufacturer-sponsored training program or similar commercial training program designed to train students in commercial motor vehicle operation and maintenance;
    - (B) Experience as a mechanic or inspector in a motor carrier or intermodal equipment maintenance program;
    - (C) Experience as a mechanic or inspector in commercial motor vehicle maintenance at a commercial garage, fleet leasing company, or similar facility; or
    - (D) Experience as a commercial motor vehicle inspector for a State, Provincial or Federal government.
- (b) Motor carriers and intermodal equipment providers must retain evidence of that individual's qualifications under this section. They must retain this evidence for the period during which that individual is performing annual motor vehicle inspections for the motor carrier or intermodal equipment provider, and for one year thereafter. However, motor carriers and intermodal equipment providers do not have to maintain documentation of inspector qualifications for those inspections performed as part of a State periodic inspection program.

[73 FR 76825, Dec. 17, 2008, as amended at 81 FR 47732, July 22, 2016; 86 FR 57077, Oct. 14, 2021]

### **§ 396.21 Periodic inspection recordkeeping requirements.**

- (a) The qualified inspector performing the inspection shall prepare a report that:
  - (1) Identifies the individual performing the inspection;
  - (2) Identifies the motor carrier operating the vehicle or intermodal equipment provider intending to interchange the vehicle to a motor carrier;
  - (3) Identifies the date of the inspection;
  - (4) Identifies the vehicle inspected;
  - (5) Identifies the vehicle components inspected and describes the results of the inspection, including the identification of those components not meeting the minimum standards set forth in appendix A to this part; and
  - (6) Certifies the accuracy and completeness of the inspection as complying with all the requirements of this section.
- (b)

- (1) The original or a copy of the inspection report shall be retained by the motor carrier, intermodal equipment provider, or other entity that is responsible for the inspection for a period of fourteen months from the date of the inspection report. The original or a copy of the inspection report must be retained where the vehicle is either housed or maintained.
- (2) The original or a copy of the inspection report must be available for inspection upon demand of an authorized Federal, State or local official.
- (3) **Exception.** If the motor carrier operating the commercial motor vehicles did not perform the commercial motor vehicle's last annual inspection, or if an intermodal equipment provider did not itself perform the annual inspection on equipment intended for interchange to a motor carrier, the motor carrier or intermodal equipment provider is responsible for obtaining the original or a copy of the last annual inspection report upon demand of an authorized Federal, State, or local official.

[73 FR 76825, Dec. 17, 2008, as amended at 86 FR 57077, Oct. 14, 2021]

### § 396.23 Equivalent to periodic inspection.

- (a)
  - (1) If a commercial motor vehicle is subject to a mandatory inspection program that is determined by the Administrator to be as effective as § 396.17, the motor carrier or intermodal equipment provider must meet the requirement of § 396.17 through that inspection program. Commercial motor vehicle inspections may be conducted by government personnel, at commercial facilities authorized by a State government or equivalent jurisdiction in the Canadian Provinces, the Yukon Territory, or Mexico, or by the motor carrier or intermodal equipment provider itself under the auspices of a self-inspection program authorized by a State government or equivalent jurisdiction in the Canadian Provinces, the Yukon Territory, or Mexico.
  - (2) Should FMCSA determine that an inspection program, in whole or in part, is not as effective as § 396.17, the motor carrier or intermodal equipment provider must ensure that the periodic inspection required by § 396.17 is performed on all commercial motor vehicles under its control in a manner specified in § 396.17.
- (b) [Reserved]

[83 FR 22881, May 17, 2018]

### § 396.25 Qualifications of brake inspectors.

- (a) Motor carriers and intermodal equipment providers must ensure that all inspections, maintenance, repairs or service to the brakes of its commercial motor vehicles, are performed in compliance with the requirements of this section.
- (b) For purposes of this section, *brake inspector* means any employee of a motor carrier or intermodal equipment provider who is responsible for ensuring that all brake inspections, maintenance, service, or repairs to any commercial motor vehicle, subject to the motor carrier's or intermodal equipment provider's control, meet the applicable Federal standards.
- (c) No motor carrier or intermodal equipment provider may require or permit any employee who does not meet the minimum brake inspector qualifications of paragraph (d) of this section to be

does not meet the minimum brake inspector qualifications of [paragraph \(a\)](#) of this section to be responsible for the inspection, maintenance, service or repairs of any brakes on its commercial motor vehicles.

- (d) The motor carrier or intermodal equipment provider must ensure that each brake inspector is qualified as follows:
  - (1) Understands the brake service or inspection task to be accomplished and can perform that task; and
  - (2) Is knowledgeable of and has mastered the methods, procedures, tools and equipment used when performing an assigned brake service or inspection task; and
  - (3) Is capable of performing the assigned brake service or inspection by reason of experience, training, or both as follows:
    - (i) Has successfully completed an apprenticeship program sponsored by a State, a Canadian Province, a Federal agency or a labor union, or a training program approved by a State, Provincial or Federal agency, or has a certificate from a State or Canadian Province that qualifies the person to perform the assigned brake service or inspection task (including passage of Commercial Driver's License air brake tests in the case of a brake inspection); or
    - (ii) Has brake-related training or experience or a combination thereof totaling at least one year. Such training or experience may consist of:
      - (A) Participation in a training program sponsored by a brake or vehicle manufacturer or similar commercial training program designed to train students in brake maintenance or inspection similar to the assigned brake service or inspection tasks; or
      - (B) Experience performing brake maintenance or inspection similar to the assigned brake service or inspection task in a motor carrier or intermodal equipment provider maintenance program; or
      - (C) Experience performing brake maintenance or inspection similar to the assigned brake service or inspection task at a commercial garage, fleet leasing company, or similar facility.
- (e) No motor carrier or intermodal equipment provider may employ any person as a brake inspector unless the evidence of the inspector's qualifications, required under this section, is maintained by the motor carrier or intermodal equipment provider at its principal place of business, or at the location at which the brake inspector is employed. The evidence must be maintained for the period during which the brake inspector is employed in that capacity and for one year thereafter. However, motor carriers and intermodal equipment providers do not have to maintain evidence of qualifications to inspect air brake systems for such inspections performed by persons who have passed the air brake knowledge and skills test for a Commercial Driver's License.

[73 FR 76825, Dec. 17, 2008]

## **Appendix A to Part 396 - Minimum Periodic Inspection Standards**


A vehicle does not pass an inspection if it has one of the following defects or deficiencies:

### **1. Brake System.**

#### **a. Service brakes.**

- (1) Absence of braking action on any axle required to have brakes upon application of the service brakes (such as missing brakes or brake shoe(s) failing to move upon application of a wedge, S-cam, cam, or disc brake).
- (2) Missing or broken mechanical components including: shoes, lining, pads, springs, anchor pins, spiders, cam rollers, push-rods, and air chamber mounting bolts.
- (3) Loose brake components including air chambers, spiders, and cam shaft support brackets.
- (4) Audible air leak at brake chamber (Example-ruptured diaphragm, loose chamber clamp, etc.).
- (5) Readjustment limits.
  - (a) The maximum pushrod stroke must not be greater than the values given in the tables below and at § 393.47(e). Any brake stroke exceeding the readjustment limit will be rejected. Stroke must be measured with engine off and reservoir pressure of 80 to 90 psi with brakes fully applied.

#### Clamp-Type Brake Chambers

Expand  
Table  



Type	Outside diameter	Brake readjustment limit: standard stroke chamber	Brake readjustment limit: long stroke chamber
6	4 $\frac{1}{2}$ in. (114 mm)	1 $\frac{1}{4}$ in. (31.8 mm)	
9	5 $\frac{1}{4}$ in. (133 mm)	1 $\frac{3}{8}$ in. (34.9 mm)	
12	5 $\frac{11}{16}$ in. (145 mm)	1 $\frac{3}{8}$ in. (34.9 mm)	1 $\frac{3}{4}$ in. (44.5 mm).
16	6 $\frac{3}{8}$ in. (162 mm)	1 $\frac{3}{4}$ in. (44.5 mm)	2 in. (50.8 mm).
20	6 $\frac{25}{32}$ in. (172 mm)	1 $\frac{3}{4}$ in. (44.5 mm)	2 in. (50.8 mm). 2 $\frac{1}{2}$ in. (63.5 mm). <sup>1</sup>
24	7 $\frac{7}{32}$ in. (184 mm)	1 $\frac{3}{4}$ in. (44.5 mm)	2 in. (50.8 mm). 2 $\frac{1}{2}$ in. (63.5 mm). <sup>2</sup>
30	8 $\frac{3}{32}$ in. (206 mm)	2 in. (50.8 mm)	2 $\frac{1}{2}$ in. (63.5 mm).
36	9 in. (229 mm)	2 $\frac{1}{2}$ in. (63.5 mm)	

<sup>1</sup> For type 20 chambers with a 3-inch (76 mm) rated stroke.




<sup>2</sup> For type 24 chambers with a 3-inch (76 mm) rated stroke.

### Bendix DD-3 Brake Chambers

Expand  
Table  



Type	Outside diameter	Brake readjustment limit
30	8 <sup>1</sup> / <sub>8</sub> in. (206 mm)	2 <sup>1</sup> / <sub>4</sub> in. (57.2 mm).

### Bolt-Type Brake Chambers

Expand  
Table  


Type	Outside diameter	Brake readjustment limit
A	6 <sup>15</sup> / <sub>16</sub> in. (176 mm)	1 <sup>3</sup> / <sub>8</sub> in. (34.9 mm).
B	9 <sup>3</sup> / <sub>16</sub> in. (234 mm)	1 <sup>3</sup> / <sub>4</sub> in. (44.5mm).
C	8 <sup>1</sup> / <sub>16</sub> in. (205 mm)	1 <sup>3</sup> / <sub>4</sub> in. (44.5 mm).
D	5 <sup>1</sup> / <sub>4</sub> in. (133 mm)	1 <sup>1</sup> / <sub>4</sub> in. (31.8 mm).
E	6 <sup>3</sup> / <sub>16</sub> in. (157 mm)	1 <sup>3</sup> / <sub>8</sub> in. (34.9 mm).
F	11 in. (279 mm)	2 <sup>1</sup> / <sub>4</sub> in. (57.2 mm).
G	9 <sup>7</sup> / <sub>8</sub> in. (251 mm)	2 in. (50.8 mm).

### Rotochamber-Type Brake Chambers

Expand  
Table  


Type	Outside diameter	Brake readjustment limit
9	4 <sup>9</sup> / <sub>32</sub> in. (109 mm)	1 <sup>1</sup> / <sub>2</sub> in. (38.1 mm).
12	4 <sup>13</sup> / <sub>16</sub> in. (122 mm)	1 <sup>1</sup> / <sub>2</sub> in. (38.1 mm).
16	5 <sup>13</sup> / <sub>32</sub> in. (138 mm)	2 in. (50.8 mm).
20	5 <sup>15</sup> / <sub>16</sub> in. (151 mm)	2 in. (50.8 mm).
24	6 <sup>13</sup> / <sub>32</sub> in. (163 mm)	2 in. (50.8 mm).
30	7 <sup>1</sup> / <sub>16</sub> in. (180 mm)	2 <sup>1</sup> / <sub>4</sub> in. (57.2 mm).
36	7 <sup>5</sup> / <sub>8</sub> in. (194 mm)	2 <sup>3</sup> / <sub>4</sub> in. (69.9 mm).
50	8 <sup>7</sup> / <sub>8</sub> in. (226 mm)	3 in. (76.2 mm).

(b) For actuator types not listed in these tables, the pushrod stroke must not be greater than 80 percent of the rated stroke marked on the actuator by the actuator

manufacturer, or greater than the readjustment limit marked on the actuator by the actuator manufacturer.

(6) **Brake linings or pads.**

- (a) Lining or pad is not firmly attached to the shoe;
- (b) Saturated with oil, grease, or brake fluid; or
- (c) Non-steering axles: Lining with a thickness less than  $\frac{1}{4}$  inch at the shoe center for air drum brakes,  $\frac{1}{16}$  inch or less at the shoe center for hydraulic and electric drum brakes, and less than  $\frac{1}{8}$  inch for air disc brakes.
- (d) Steering axles: Lining with a thickness less than  $\frac{1}{4}$  inch at the shoe center for drum brakes, less than  $\frac{1}{8}$  inch for air disc brakes and  $\frac{1}{16}$  inch or less for hydraulic disc and electric brakes.

(7) **Missing brake on any axle required to have brakes.**

(8) **Mismatch across any power unit steering axle of:**

- (a) Air chamber sizes.
- (b) Slack adjuster length.

Wedge Brake Data - Movement of the scribe mark on the lining shall not exceed  $\frac{1}{16}$  inch.

b. **Parking Brake System.** No brakes on the vehicle or combination are applied upon actuation of the parking brake control, including driveline hand controlled parking brakes.

c. **Brake Drums or Rotors.**

- (1) With any external crack or cracks that open upon brake application (do not confuse short hairline heat check cracks with flexural cracks).
- (2) Any portion of the drum or rotor missing or in danger of falling away.

d. **Brake Hose.**

- (1) Hose with any damage extending through the outer reinforcement ply. (Rubber impregnated fabric cover is not a reinforcement ply). (Thermoplastic nylon may have braid reinforcement or color difference between cover and inner tube. Exposure of second color is cause for rejection.
- (2) Bulge or swelling when air pressure is applied.
- (3) Any audible leaks.
- (4) Two hoses improperly joined (such as a splice made by sliding the hose ends over a piece of tubing and clamping the hose to the tube).
- (5) Air hose cracked, broken or crimped.

e. **Brake Tubing.**

- (1) Any audible leak.
- (2) Tubing cracked, damaged by heat, broken or crimped.

f. **Low Pressure Warning Device** missing, inoperative, or does not operate at 55 psi and below, or  $\frac{1}{2}$  the governor cut-out pressure, whichever is less.

g. **Tractor Protection Valve.** Inoperable or missing tractor protection valve(s) on power unit.

h. **Air Compressor.**

- (1) Compressor drive belts in condition of impending or probable failure.
- (2) Loose compressor mounting bolts.
- (3) Cracked, broken or loose pulley.
- (4) Cracked or broken mounting brackets, braces or adapters.

i. **Electric Brakes.**

- (1) Absence of braking action on any wheel required to have brakes.
- (2) Missing or inoperable breakaway braking device.

j. **Hydraulic Brakes. (Including Power Assist Over Hydraulic and Engine Drive Hydraulic Booster).**

- (1) Master cylinder less than  $\frac{1}{4}$  full.
- (2) No pedal reserve with engine running except by pumping pedal.
- (3) Power assist unit fails to operate.
- (4) Seeping or swelling brake hose(s) under application of pressure.
- (5) Missing or inoperative check valve.
- (6) Has any visually observed leaking hydraulic fluid in the brake system.
- (7) Has hydraulic hose(s) abraded (chafed) through outer cover-to-fabric layer.
- (8) Fluid lines or connections leaking, restricted, crimped, cracked or broken.
- (9) Brake failure or low fluid warning light on and/or inoperative.

k. **Vacuum Systems.** Any vacuum system which:

- (1) Has insufficient vacuum reserve to permit one full brake application after engine is shut off.
- (2) Has vacuum hose(s) or line(s) restricted, abraded (chafed) through outer cover to cord ply, crimped, cracked, broken or has collapse of vacuum hose(s) when vacuum is applied.
- (3) Lacks an operative low-vacuum warning device as required.

l. **Antilock Brake System<sup>1 2 3</sup>**

- (1) Missing ABS malfunction indicator components (i.e., bulb, wiring, etc.).
- (2) ABS malfunction indicator that does not illuminate when power is first applied to the ABS controller (ECU) during initial power up.
- (3) ABS malfunction indicator that stays illuminated while power is continuously applied to the ABS controller (ECU).
- (4) ABS malfunction indicator lamp on a trailer or dolly does not cycle when electrical power is applied

- (a) only to the vehicle's constant ABS power circuit, or
  - (b) only to the vehicle's stop lamp circuit.
- (5) With its brakes released and its ignition switch in the normal run position, power unit does not provide continuous electrical power to the ABS on any air-braked vehicle it is equipped to tow.
- (6) Other missing or inoperative ABS components.

<sup>1</sup> Power units manufactured after March 1, 2001, have two ABS malfunction indicators, one for the power unit and one for the units that they tow. Both malfunction indicators are required to be fully functional.

<sup>2</sup> Air-braked vehicles: Subsections (1)-(6) of this section are applicable to tractors with air brakes built on or after March 1, 1997, and all other vehicles with air brakes built on or after March 1, 1998.

<sup>3</sup> Hydraulic-braked vehicles: Subsections (1)-(3) of this section are applicable to vehicles over 10,000 lbs. GVWR with hydraulic brakes built on or after September 1, 1999. Subsection (6) of this section is applicable to vehicles over 10,000 lbs. with hydraulic brakes built on or after March 1, 1999.

**m. Automatic Brake Adjusters**

- (1) Failure to maintain a brake within the brake stroke limit specified by the vehicle manufacturer.
- (2) Any automatic brake adjuster that has been replaced with a manual adjuster.
- (3) Damaged, loose, or missing components.
- (4) Any brake that is found to be out of adjustment on initial inspection must be evaluated to determine why the automatic brake adjuster is not functioning properly and the problem must be corrected in order for the vehicle to pass the inspection. It is not acceptable to manually adjust automatic brake adjusters without first correcting the underlying problem. For example, there may be other components within the braking system that are distressed or out of specification (*i.e.*, broken welds, loose mounting hardware, cracked brake drums, worn bushings, etc.) that would require immediate attention.

**2. Coupling devices.**

**a. Fifth Wheels.**

- (1) Mounting to frame.
  - (a) Any fasteners missing or ineffective.
  - (b) Any movement between mounting components.
  - (c) Any mounting angle iron cracked or broken.
- (2) Mounting plates and pivot brackets.
  - (a) Any fasteners missing or ineffective.
  - (b) Any welds or parent metal cracked.
  - (c) More than  $\frac{3}{8}$  inch horizontal movement between pivot bracket pin and bracket.



(d) Pivot bracket pin missing or not secured.

(3) Sliders.

(a) Any latching fasteners missing or ineffective.

(b) Any fore or aft stop missing or not securely attached.

(c) Movement more than  $\frac{3}{8}$  inch between slider bracket and slider base.

(d) Any slider component cracked in parent metal or weld.

(4) Lower coupler.

(a) Horizontal movement between the upper and lower fifth wheel halves exceeds  $\frac{1}{2}$  inch.

(b) Operating handle not in closed or locked position.

(c) Kingpin not properly engaged.

(d) Separation between upper and lower coupler allowing light to show through from side to side.

(e) Cracks in the fifth wheel plate.

**Exceptions:** Cracks in fifth wheel approach ramps and casting shrinkage cracks in the ribs of the body of a cast fifth wheel.

(f) Locking mechanism parts missing, broken, or deformed to the extent the kingpin is not securely held.

b. **Pintle Hooks.**

(1) Mounting to frame.

(a) Any missing or ineffective fasteners (a fastener is not considered missing if there is an empty hole in the device but no corresponding hole in the frame or vice versa).

(b) Mounting surface cracks extending from point of attachment (e.g., cracks in the frame at mounting bolt holes).

(c) Loose mounting.

(d) Frame cross member providing pintle hook attachment cracked.

(2) Integrity.

(a) Cracks anywhere in pintle hook assembly.

(b) Any welded repairs to the pintle hook.

(c) Any part of the horn section reduced by more than 20%.

(d) Latch insecure.

c. **Drawbar/Towbar Eye.**

(1) Mounting.

(a) Any cracks in attachment welds.

(b) Any missing or ineffective fasteners

(2) Any missing or ineffective fasteners.

(2) Integrity.

(a) Any cracks.

(b) Any part of the eye reduced by more than 20%.

d. **Drawbar/Towbar Tongue.**

(1) Slider (power or manual).

(a) Ineffective latching mechanism

(b) Missing or ineffective stop.

(c) Movement of more than  $\frac{1}{4}$  inch between slider and housing.

(d) Any leaking, air or hydraulic cylinders, hoses, or chambers (other than slight oil weeping normal with hydraulic seals).

(2) Integrity.

(a) Any cracks.

(b) Movement of  $\frac{1}{4}$  inch between subframe and drawbar at point of attachment.

e. **Safety Devices.**

(1) Safety devices missing.

(2) Unattached or incapable of secure attachment.

(3) Chains and hooks.

(a) Worn to the extent of a measurable reduction in link cross section.

(b) Improper repairs including welding, wire, small bolts, rope and tape.

(4) Cable.

(a) Kinked or broken cable strands.

(b) Improper clamps or clamping.

f. **Saddle-Mounts.**

(1) Method of attachment.

(a) Any missing or ineffective fasteners.

(b) Loose mountings.

(c) Any cracks or breaks in a stress or load bearing member.

(d) Horizontal movement between upper and lower saddle-mount halves exceeds  $\frac{1}{4}$  inch.

3. **Exhaust System.**

a. Any exhaust system determined to be leaking at a point forward of or directly below the driver/sleeper compartment.

b. A bus exhaust system leaking or discharging to the atmosphere:

(1) Gasoline powered - excess of 6 inches forward of the rearmost part of the bus.

(2) Other than gasoline powered - in excess of 15 inches forward of the rearmost part of the bus.

(3) Other than gasoline powered - forward of a door or window designed to be opened. (exception: Emergency exits).

c. No part of the exhaust system of any motor vehicle shall be so located as would be likely to result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the motor vehicle.

4. **Fuel System.**

a. A fuel system with a visible leak at any point.

b. A fuel tank filler cap missing.

c. A fuel tank not securely attached to the motor vehicle by reason of loose, broken or missing mounting bolts or brackets (some fuel tanks use springs or rubber bushings to permit movement).

5. **Lighting Devices.** All lighting devices and reflectors required by part 393 shall be operable.

6. **Safe Loading.**

a. Part(s) of vehicle or condition of loading such that the spare tire or any part of the load or dunnage can fall onto the roadway.

b. Protection Against Shifting Cargo - Any vehicle without a front-end structure or equivalent device as required.

c. Container securement devices on intermodal equipment - All devices used to secure an intermodal container to a chassis, including rails or support frames, tiedown bolsters, locking pins, clevises, clamps, and hooks that are cracked, broken, loose, or missing.

7. **Steering Mechanism.**

a. **Steering Wheel Free Play** (on vehicles equipped with power steering the engine must be running).

Expand  
Table

Steering wheel diameter	Manual steering system	Power steering system
16"	2"	4 <sup>1</sup> / <sub>2</sub> "
18"	2 <sup>1</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>4</sub> "
20"	2 <sup>1</sup> / <sub>2</sub> "	5 <sup>1</sup> / <sub>4</sub> "
22"	2 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "

b. **Steering Column.**

(1) Any absence or looseness of U-bolt(s) or positioning part(s).

(2) Worn, faulty or obviously repair welded universal joint(s).

(3) Steering wheel not properly secured.

c. **Front Axle Beam and All Steering Components Other Than Steering Column.**

- (1) Any crack(s).
- (2) Any obvious welded repair(s).

d. **Steering Gear Box.**

- (1) Any mounting bolt(s) loose or missing.
- (2) Any crack(s) in gear box or mounting brackets.

e. **Pitman Arm.** Any looseness of the pitman arm on the steering gear output shaft.

f. **Power Steering.** Auxiliary power assist cylinder loose.

g. **Ball and Socket Joints.**

- (1) Any movement under steering load of a stud nut.
- (2) Any motion, other than rotational, between any linkage member and its attachment point of more than  $\frac{1}{4}$  inch.

h. **Tie Rods and Drag Links.**

- (1) Loose clamp(s) or clamp bolt(s) on tie rods or drag links.
- (2) Any looseness in any threaded joint.

i. **Nuts.** Nut(s) loose or missing on tie rods, pitman arm, drag link, steering arm or tie rod arm.

j. **Steering System.** Any modification or other condition that interferes with free movement of any steering component.

8. **Suspension.**

a. Any U-bolt(s), spring hanger(s), or other axle positioning part(s) cracked, broken, loose or missing resulting in shifting of an axle from its normal position. (After a turn, lateral axle displacement is normal with some suspensions. Forward or rearward operation in a straight line will cause the axle to return to alignment).

b. **Spring Assembly.**

- (1) Any leaves in a leaf spring assembly broken or missing.
- (2) Any broken main leaf in a leaf spring assembly. (Includes assembly with more than one main spring).
- (3) Coil spring broken.
- (4) Rubber spring missing.
- (5) One or more leaves displaced in a manner that could result in contact with a tire, rim, brake drum or frame.
- (6) Broken torsion bar spring in a torsion bar suspension.
- (7) Deflated air suspension, i.e., system failure, leak, etc.

c. **Torque, Radius or Tracking Components.** Any part of a torque, radius or tracking component assembly or any part used for attaching the same to the vehicle frame or axle that is cracked, loose, broken or missing. (Does not apply to loose bushings in torque or track rods.)



9. **Frame.**

a. **Frame Members.**

- (1) Any cracked, broken, loose, or sagging frame member.
- (2) Any loose or missing fasteners including fasteners attaching functional component such as engine, transmission, steering gear, suspension, body parts, and fifth wheel.

b. **Tire and Wheel Clearance.** Any condition, including loading, that causes the body or frame to be in contact with a tire or any part of the wheel assemblies.

c.

- (1) **Adjustable Axle Assemblies (Sliding Subframes).** Adjustable axle assembly with locking pins missing or not engaged.

10. **Tires.**

a. Any tire on any steering axle of a power unit.

- (1) With less than  $\frac{4}{32}$  inch tread when measured at any point on a major tread groove.
- (2) Has body ply or belt material exposed through the tread or sidewall.
- (3) Has any tread or sidewall separation.
- (4) Has a cut where the ply or belt material is exposed.
- (5) Labeled "Not for Highway Use" or displaying other marking which would exclude use on steering axle.
- (6) A tube-type radial tire without radial tube stem markings. These markings include a red band around the tube stem, the word "radial" embossed in metal stems, or the word "radial" molded in rubber stems.
- (7) Mixing bias and radial tires on the same axle.
- (8) Tire flap protrudes through valve slot in rim and touches stem.
- (9) Regrooved tire except motor vehicles used solely in urban or suburban service (see exception in [§ 393.75\(e\)](#)).
- (10) Boot, blowout patch or other ply repair.
- (11) Weight carried exceeds tire load limit. This includes overloaded tire resulting from low air pressure.
- (12) Tire is flat or has noticeable (e.g., can be heard or felt) leak.
- (13) Any bus equipped with recapped or retreaded tire(s).
- (14) So mounted or inflated that it comes in contact with any part of the vehicle.

b. All tires other than those found on the steering axle of a power unit:

- (1) Weight carried exceeds tire load limit. This includes overloaded tire resulting from low air pressure.
- (2) Tire is flat or has noticeable (e.g., can be heard or felt) leak.
- (3) Has body ply or belt material exposed through the tread or sidewall.

- (4) Has any tread or sidewall separation.
- (5) Has a cut where ply or belt material is exposed.
- (6) So mounted or inflated that it comes in contact with any part of the vehicle. (This includes a tire that contacts its mate.)
- (7) Is marked "Not for highway use" or otherwise marked and having like meaning.
- (8) With less than  $\frac{2}{32}$  inch tread when measured at any point on a major tread groove.

c. Installation of speed-restricted tires unless specifically designated by motor carrier.

#### 11. **Wheels and Rims.**

- a. **Lock or Side Ring.** Bent, broken, cracked, improperly seated, sprung or mismatched ring(s).
- b. **Wheels and rims.** Cracked or broken or has elongated bolt holes.
- c. **Fasteners (both spoke and disc wheels).** Any loose, missing, broken, cracked, stripped or otherwise ineffective fasteners.

#### d. **Welds.**

- (1) Any cracks in welds attaching disc wheel disc to rim.
- (2) Any crack in welds attaching tubeless demountable rim to adapter.
- (3) Any welded repair on aluminum wheel(s) on a steering axle.
- (4) Any welded repair other than disc to rim attachment on steel disc wheel(s) mounted on the steering axle.

#### 12. **Windshield Glazing.** (Not including a 2 inch border at the top, a 1 inch border at each side and the area below the topmost portion of the steering wheel.) Any crack, discoloration or vision reducing matter except:

- (1) coloring or tinting applied at time of manufacture;
- (2) any crack not over  $\frac{1}{4}$  inch wide, if not intersected by any other crack;
- (3) any damaged area not more than  $\frac{3}{4}$  inch in diameter, if not closer than 3 inches to any other such damaged area;
- (4) labels, stickers, decalcomania, etc. (see § 393.60 for exceptions).

#### 13. **Windshield Wipers.** Any power unit that has an inoperative wiper, or missing or damaged parts that render it ineffective.

#### 14. **Motorcoach Seats**

- a. Any passenger seat that is not securely fastened to the vehicle structure.
- b. [Reserved]

#### 15. **Rear Impact Guard**

- a. Trailers and semitrailers with a GVWR of 4,536 kg (10,001 lbs.) or more, manufactured on or after January 26, 1998 (see exceptions in § 393.86(a)(1)).

- 1. Missing guard.
- 2. Guard is not securely attached to trailer, including broken or missing fasteners, any welds or

parent metal cracked, or other damage that compromises secure attachment of the guard.

3. Guard horizontal member does not extend to within 100 mm (4 inches) of each, or extends beyond either, side extremity of the vehicle.
  4. Guard horizontal member is more than 560 mm (22 inches) above the ground.
  5. Guard horizontal member is more than 305 mm (12 inches) forward of the rear extremity of the vehicle.
  6. Guard horizontal member does not have a cross sectional vertical height of at least 100 mm (4 inches) across its entire width.
    - b. Commercial motor vehicles manufactured after December 31, 1952 (except trailers and semitrailers manufactured on or after January 26, 1998) (see exceptions in [§ 393.86\(b\)\(1\)](#) and [§ 393.86\(b\)\(3\)](#)).
1. Missing guard.
  2. Guard is not securely attached to trailer by bolts, welding, or other comparable means.
  3. Guard horizontal member is more than 762 mm (30 inches) above the ground.
  4. Guard horizontal member does not extend to within 457 mm (18 inches) of each side extremity of the vehicle.
  5. Guard horizontal member is more than 610 mm (24 inches) forward of the rear extremity of the vehicle.

[[53 FR 49411](#), Dec. 7, 1988; [53 FR 49968](#), Dec. 12, 1988, as amended at [66 FR 49875](#), Oct. 1, 2001; [73 FR 76827](#), Dec. 17, 2008; [77 FR 46639](#), Aug. 8, 2012; [77 FR 59829](#), Oct. 1, 2012; [78 FR 58486](#), Sept. 24, 2013; [81 FR 47732](#), July 22, 2016; [81 FR 60634](#), Sept. 2, 2016. Redesignated and amended at [86 FR 57068](#), [57077](#), Oct. 14, 2021; [86 FR 62111](#), Nov. 9, 2021]

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- [Government Policy and OFR Procedures](#)
- [Developer Resources](#)

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