

Inspection and Maintenance Requirements for Commercial Motor Vehicles



A maintenance file (electronic or paper) is required on each vehicle and trailer.

The Federal Motor Carrier Safety Regulations (FMCSR) specify minimum maintenance and inspection criteria for commercial motor vehicles under 49 CFR Part §396. These requirements serve as a minimum best practice for non-regulated vehicles as well. The following is a summary of the regulations and links to additional resources and sample forms. “Motor carrier” is defined as an organization subject to the regulations. “Commercial Motor Vehicle” or “Vehicle” includes power units, trailers and other equipment defined in the regulations.

Understanding of Regulations (§396.1)

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 §396. Best practice is to validate knowledge during hiring/orientation and cover any gaps with training. Annual refresher training is recommended for all staff.

Systematic Process for Inspection Repair and Maintenance (§396.3)

Motor carriers are required to have a systematic inspection, repair and maintenance process. While guidance is stipulated on some inspection requirements, the FMCSR do not define what a systematic program should entail. See Preventive Maintenance Checks and Services (PMCS) at the end of this document for an example of a systematic maintenance and inspection program.

Recordkeeping Requirements (§396.3)

Motor carriers must maintain the following information for every vehicle they have controlled for 30 days or more:

- Identifying information, including company number, make, serial number, year, and tire size.
- A schedule of inspections to be performed, including type and due date.
- Inspection, repair, and maintenance records ([sample form](#)).
- Records of tests conducted on buses with push-out windows, emergency doors, and marking lights ([sample form](#)).
- These records must be retained for one year at the location where the vehicle is garaged and maintained for six months after the vehicle leaves the carrier’s control (e.g., sale, trade-in, scrap).



Many violations identified by law enforcement should have been identified and addressed by the driver during pre- and post-trip inspections.

Roadside Inspection Reports (\$396.9)

Any driver who receives a roadside inspection report from law enforcement must deliver it to the motor carrier within 24 hours of receiving it. Vehicles that are placed out-of-service (OOS) cannot be moved until the violation(s) which caused them to be OOS are corrected.

Certification of Roadside Inspection Reports. An official of the motor carrier is to examine the roadside inspection report and ensure that any violations or defects noted on the report are corrected. Within 15 days after the inspection, the carrier must sign the completed roadside inspection report to certify that all violations have been corrected and then return it to the indicated address. A copy must be retained for 12 months from the date of inspection.

As a best practice, organizations should:

- Register to access the [FMCSA Portal](#) where they can view all their vehicle inspections and Vehicle Maintenance Safety Measurement System (SMS) score.
- Check weekly to ensure they are aware of all inspections.
- Investigate why violations have occurred and what can be done to prevent a reoccurrence.
- Hold maintenance personnel and drivers accountable for violations that should have been identified during required inspection and maintenance procedures.

[Click here for a guide](#) to reducing roadside violations and improving your Vehicle Maintenance SMS score.

Post-Trip Inspection Report (\$396.11)

Every motor carrier must require its drivers to prepare a driver vehicle inspection report (DVIR) at the end of each driving shift. A driver is responsible for preparing such a report for each vehicle driven.

- The report must list any condition that the driver either found or had reported to him/her that would affect safe operation or cause a breakdown.
- Drivers are not required to prepare a report if no defect or deficiency is discovered by or reported to the driver. However, it is considered a best practice as proof that it was conducted. A good inspection form also provides guidance to the driver on what to inspect.
- The FMCSA provides [this sample DVIR](#). An organization should customize it to meet their needs. Refer to §396.11(b) for additional inspection requirements for intermodal equipment.
- Before dispatching the vehicle again, a carrier shall ensure that a certification has been made that the defect or deficiency has been corrected or state those deficiencies that do not require immediate correction.
- Carriers must keep the original post-trip DVIR and the certification of repairs for at least three months from the date of preparation.

Pre-trip Driver Inspection (§396.13)

Before starting out (pre-trip), the driver must be satisfied that the motor vehicle is in safe operating condition. If the last DVIR notes any deficiencies, the driver must review and sign to acknowledge that necessary repairs have been completed, if required.

The Occupational Safety and Health Administration (OSHA) Construction Standard (29 CFR Part §1926.601(b)(14)) requires a similar pre-shift vehicle inspection.

En Route Driver Inspections (§392.9)

Drivers are required to inspect their cargo and securement devices after the first 50 miles. Thereafter they must re-examine at every change of duty status; after three hours; or after 150 miles while en-route, whichever comes first.

Periodic Inspection (§396.17)

Every commercial vehicle, including each segment of a combination vehicle (power unit and trailer) requires a periodic inspection that must be performed at least once every 12 months. They are often referred to as “annual inspections”.

Some states mandate periodic inspections be carried out by state staff or their designated representatives. Otherwise motor carriers may perform required annual inspections themselves or allow a third-party to conduct inspections, so long as the inspector meets the qualifications mandated in §396.19. Persons inspecting and maintaining brakes require additional qualifications. [See qualifications / checklist](#) for both.

At a minimum, inspections must include all items listed in the Minimum Periodic Inspection Standards - [§399 Appendix G](#). Click for the [FMCSA's sample form](#).

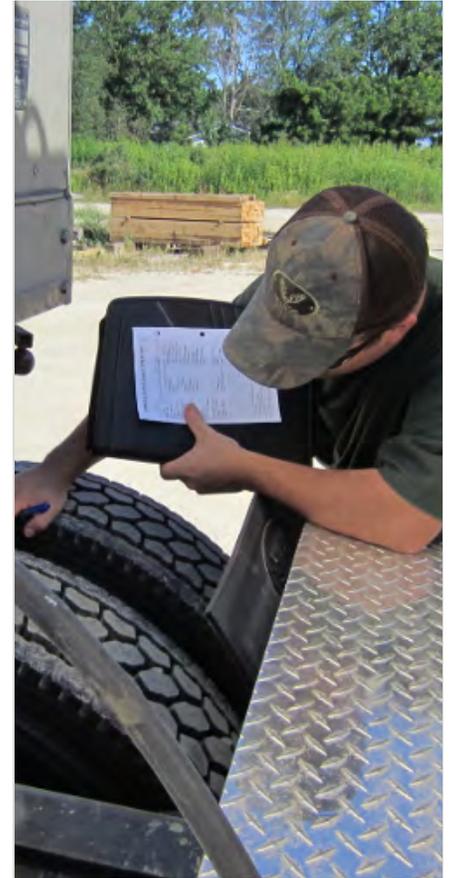
- The original or a copy of the periodic inspection report must be retained by the motor carrier for 14 months from the report date.
- Documentation (report, sticker, or decal) of the most recent periodic inspection must be kept on the vehicle. Decals are typically used with trailers as there is no place to house a paper copy.

Unsafe Operation Forbidden (§396.7)

Part §396.7 specifically forbids the operation of motor vehicles found (by inspection or operation) to be defective. A carrier shall not permit or require drivers to operate defective vehicles, and drivers may not drive such vehicles. These vehicles should be declared and marked as OOS.

Preventive Maintenance Checks and Services (PMCS)

Preventive maintenance checks and services (PMCS) is a process the military uses for systematic inspection and maintenance of equipment. PMCS works well for meeting the systematic inspection and maintenance requirements of §396. Through preventive maintenance schedules vehicles are inspected, repaired, and maintained in such a way that defects are prevented from surfacing in the first place, before a violation, breakdown or accident occurs.



Drivers should be trained how to complete a thorough post-trip inspection and document the results properly. Drivers need to verify repairs have been made prior to starting their next shift.



A systematic inspection and maintenance program minimizes on the road breakdowns.

The PMCS is composed of scheduled and standardized inspections and maintenance. This is sometimes referred to as the vehicles' scheduled service. PMCS services are commonly designated as A, B, C, D, etc. As you move down the alphabet from A to B and so on the PMCS service (and time required) increases in complexity.

A Service is also known as a "maintenance check-out" or "safety inspection" and generally consists of a safety check and lubrication as well as checks of key components such as brakes, lights, tire condition and inflation, and fluids. It also includes checking and adjusting high-wear components. The normal interval for "A" service is between 1,500 and 2,500 miles on light vehicles, and between 5,000 and 10,000 miles on medium- and heavy-duty vehicles

B Service normally includes all PMCS A items, and also includes an oil and filter change as well as more in-depth checks of the engine and driveline. The normal interval for "B" service is 3,000 to 5,000 for light-duty vehicles and 10,000 to 20,000 for medium- and heavy-duty vehicles. A PMCS B should also include a download of the ECM and action on any trouble codes or problems reported by the ECM.

C Service calls for both PMCS A and PMCS B service and more extensive service (i.e. alignment, scheduled component replacement, DOT annual inspection, and other scheduled engine and driveline component inspection or replacement). Normally, "C" services are scheduled annually. To make sure they are done in a timely manner, it is not unusual for motor carriers to schedule them at an 11-month interval.

D Service is either a scheduled rebuild or replacement of a major component (e.g., engine, transmission, axle) or a "special" service. Examples of "special service" are seasonal service (winterization or summarization) and scheduled upgrade services. Scheduling of D services varies by motor carrier.

Trailer inspections

TA-Service is scheduled every three months. This PMCS service includes an inspection and lubrication, including a check of (at a minimum) the lights, tires, brakes, coupling devices, safety equipment, and any other "systems" (refrigeration unit, sliding axles, etc.).

TB-Service is scheduled every six months. This PMCS service includes all the items of a TA and a more in-depth inspection, as well as additional maintenance (pulling off hubcaps to check grease condition, retorquing lugs, etc.).

TC-Service services are normally scheduled annually. These include all the inspection and maintenance included in a TA and TB service, along with more extensive maintenance such as an alignment or complete brake overhaul. Some carriers will also perform the periodic (annual) inspection required under §396.17 as part of the Type TC-Service.

Best Practice

- Maintenance and inspection software programs are a must for large fleets.
- The actual trigger point for inspections and maintenance should be according to the vehicle manufacturers' recommendations.
- Organizations should track their roadside violations and ensure frequent problem areas receive additional focus during inspections and maintenance.

Additional Resources:

- [FMCSA Motor Carrier Safety Planner, Chapter 5 Vehicle Requirements](#)
- [Federal Motor Carrier Safety Regulations](#)
- Tire Safety: [For Managers](#) [For Drivers](#)
- [Owner Operator Maintenance](#)

Note: there are additional requirements for intermodal containers and chassis and hauling hazardous materials which are beyond the scope of this publication.

Organizations should review their inspection and maintenance program at least annually. Utilize our [SMS BASICS - Vehicle Maintenance checklist](#) to compare your program to industry best practices.

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