

# Trucker

The Guide To Trucks, Equipment and Maintenance

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# Cover Story: CSA - Compliance starts in the shop

April 02, 2014

by [David Cullen](#), Contributing editor

## ***Strong safety scores rest with a strong maintenance program***



Shop talk—the best kind, anyway—has always revolved as much around safe operations as vehicle uptime and cost control. But since the Federal Motor Carrier Safety Administration (FMCSA) rolled out its Compliance, Safety, Accountability (CSA) program, fleet owners have had to absolutely ensure that their maintenance personnel are walking the walk and not just talking the talk.

That's because sharp eyes at work in the shop are crucial to limiting the impact that negative roadside inspections of trucks can inflict on a motor carrier—and its drivers. CSA's Safety Measurement System (SMS) scores both carriers and drivers on their safety performance and that determines whether or not an FMCSA intervention is warranted for a fleet and whether or not a driver will ultimately continue to be employed behind the wheel.

It should be noted that while FMCSA can initiate interventions against a poor-scoring driver—up to and including fining the driver—the agency cannot at this time pull the driver's CDL. What especially worries drivers about all this is that those violations found to be ones the driver was responsible for or could have prevented will be assigned to the driver's record as well as the carrier's. This information then stays on the driver's record, even if he or she changes jobs.

### **UNDERSTANDING THE NUMBERS**

The SMS score is driven by on-the-road performance as measured by a set of seven Behavior Analysis & Safety Improvement Categories (BASICS) via roadside inspections by law-enforcement agents. Logically enough, it's the Vehicle Maintenance BASIC that can be most directly influenced by shop personnel adhering to strict maintenance procedures in addition to thorough pre- and post-trip inspections of trucks by drivers. Violations related to the maintenance BASIC will adversely affect a carrier's SMS results for 24 months.

What's more, since CSA was first implemented in 2010, violations scored under the Vehicle Maintenance BASIC have comprised the lion's share of all violations cited. According to research by service provider Vigillo, 70 to 75% of points assigned can be attributed to maintenance or unsafe driving violations.

Because of CSA, it is riskier than ever to delay or defer maintenance and any resulting needed repairs. On top of that, reports from the field indicate that most drivers are fully aware of the potential for



maintenance-related violations ding their CSA scores and potentially taking away their ability to earn a living as a trucker. That valid concern can lead to drivers refusing to “limp trucks home” lest they get pulled over and cited. What’s more, a driver cannot be faulted for leaving a carrier that he or she thinks is putting their CSA standing at risk by not having a thorough preventive maintenance (PM) program that ensures the truck will be found compliant out on the road.

As it happens, problems with lighting cause the most violations by far—accounting for more than half of the recorded total. And that’s due to just one specific violation, #393.3, “inoperable required lamp.” Add in everything else related, such as non-working turn signals, and the number of violations climbs yet higher.

According to FMCSA’s own Analysis & Information website ([ai.fmcsa.dot.gov](http://ai.fmcsa.dot.gov)), the top five nationwide violations for U.S.-based trucks in fiscal 2013 were:

- Operating a vehicle not having the required operable lamps
- Clamp/roto-chamber type brake(s) out of adjustment
- Tire tread depth of less than 2/32nd of an inch
- No/defective lighting devices/reflective devices
- Operating a vehicle without periodic inspection

### **SHINING LIGHTS ON THE PROBLEM**

A review of posted FMCSA data on top violations by state for U.S.-based trucks in fiscal 2013 reveals that in 37 states plus the District of Columbia, the top violation is inoperable required lamps.

In 16 states, operating a truck without a periodic inspection is either the number one or, usually, the number two violation.

For 12 states, “clamp/roto-chamber type brake(s) out of adjustment” is the top violation and in one state (Connecticut), it is “failing to secure brake hose/tubing against mechanical damage.”

In nine states, the top violation after lamps relates to whether or not fire extinguishers are present, discharged and secured. And in three states, it’s running on tires with tread depth of less than 2/32 of an inch.

Al Cohn, director of new market development & engineering support for tire-inflation system manufacturer PSI, advises that FMCSA has assigned severity numbers to maintenance violations that for tires are either an “8” or a “3”.

Tire violations that carry the “8” severity rating include:

- Flat tire or fabric exposed
- Ply or belt material exposed
- Tread and/or sidewall separation
- Flat tire and/or audible air leak
- Cut exposing ply and/or belt material
- Steer tire tread depth less than 4/32nds
- Drive, trailer, dollie tire tread depth of less than 2/32nds

As Cohn sees it, conducting a walk-around vehicle inspection that includes tires should make it easy to spot these high-severity violations. He stresses that, CSA aside, tires with cuts and exposed steel or fabric should not be running on trucks in the first place.

What’s more, he contends to correctly determine if a tire is “flat,” its pressure must be measured with a calibrated tire-inflation gauge.

## **LOADED CONCERNS**

Tire violations that carry the “3” severity rating include:

- Tire underinflated based on load
- Weight exceeds tire load limit
- Regrooved tire on the steer axle

Cohn points out that while regrooved tires are primarily used on buses and not trucks, exceeding load capacity is “never suggested for tires and is clearly illegal.” And he observes that on the “3” list, the violation that “can and probably will” hurt many fleet scores is under-inflation.

Yet, far and away, it is lighting failures that will most likely trip a fleet up out on the road. The glaring issue with having even just one light out is not that it generates an avoidable violation, but that it can open the truck up to a full-blown roadside inspection.

Mark Blackford, national fleet manager for lighting supplier Grote, notes that “not counting headlights, [in 2013, as of 10/18/13] lighting accounted for 647,125 inspections, resulting in 865,304 violations. Because we don’t know the exact number of six- or four-point violations that resulted, we can only estimate the number of points assessed. But that number is well into the millions of points.”

All those points aside, he contends that such visible violations provide an opportunity for law enforcement to conduct more intense roadside inspections that could uncover yet other violations.

“Lighting infractions are by far the easiest problems to spot,” stresses Blackford. “Once the rig is pulled over, the procedure is to check the entire trailer and cab for any other infractions...resulting in keeping the rig on the side of the road for more than just a few hours—and for the assessment of a significant number of CSA points.”

Keeping every sort of maintenance-related scoring ding in check is primarily the responsibility of the maintenance department, aided, of course, by the input of drivers.

Certainly, training drivers on how to conduct effective pre-trip and post-trip inspections—including properly recording vehicle defects in their mandatory Driver Vehicle Inspection Reports (DVIRs)—should pay off handsomely in terms of putting more eyes on the equipment before it hits the road.

## **DRIVER ASSIST**

In a report on maintenance and CSA, lighting and electrical systems supplier Phillips Industries says that carriers must ensure their drivers know that “any vehicle malfunction or maintenance problem must be addressed proactively to prevent crashes. A driver needs to notify maintenance staff about any defects found during an inspection as soon as possible, whether through the daily inspection report or some other means.”

As minor issues that can be fixed by a driver on the road arise, Phillips suggests that fleets outfit drivers with these often necessary items:

- Extra lights
- Pocket continuity testers for plugs and sockets
- Plug and socket brush
- Extra 7-way socket and 7-way plug
- Hose holder and hose separators
- Extra tender spring
- Handful of dielectric grease packets
- Two universal gladhands and extra gladhand seals

- Cable ties
- Wire stripper and crimping tool
- Conspicuity tape
- Emergency tire inflator
- Emergency hose repair kits
- Basic tool kit
- Flashlight (with an extra set of batteries)

“Keeping these suggested items on hand will offer a temporary solution to problems that can arise while on the road and away from maintenance personnel,” Phillips advises. “In addition, they will help to avoid downtime and the costly expense of possibly having to call for help.”

A list of Top 10 CSA violations—which, not surprisingly, puts “not having the required operable lamps” first—is distributed to all techs at service-and-repair vendor W.W. Williams. The Cleveland-based member of WheelTime, a network of over 200 locations providing truck repair service in the U.S. and Canada, distributes the list as a handy visible reminder of what items should never be overlooked during a CMV inspection.

Bob Merrill, director of field operations support for W.W. Williams, says that with the advent of CSA, the firm began “inspecting every single truck that comes through any of our 19 truck-repair shops to catch those things that could ring up a CSA violation and to advise the customer of what we’ve found before the vehicle heads out again.

“This is part of the ongoing conversations we have with customers about the importance of staying ahead of potential violations that will assign points against them and their drivers at a roadside inspection,” he continues. “Of course, we can only advise them to make a repair and they have to weigh the cost of repairing a small item then and there versus risking a CSA violation.”

As Merrill sees it, the advent of CSA has made it “key to keep drivers in the maintenance and repair loop” both to protect their scores and to put an extra set of eyes on potential problem areas. “Drivers have developed a very different attitude about maintenance since the scoring began,” he notes.

Lighting, brakes out of adjustment and tire violations are among the easiest to catch during a shop inspection, Merrill points out. “Also, we keep a sharp eye on fluids as any leaks could trigger an inspection. Law enforcement tends to zero in first on what is visible or easy to check in the first place.”

Merrill contends that if a roadside inspector “sees a glaring safety violation, they will most likely go deeper on that vehicle. On the other hand, generally speaking, if they can see right off that a truck is well maintained, they will more than likely move onto the next truck out there.”

## TRUCK-BY-TRUCK INSPECTIONS



To avoid CSA violations, Merrill urges establishing a formal inspection process for each truck—regardless of whether it is maintained in-house or by a vendor.

“It’s all about getting a new set of eyes on the truck each time it can be looked at,” he explains. “It’s amazing how many times a fleet or trucker will think they are in compliance until a thorough inspection reveals a potential violation.

“In some cases, all of a sudden the customer realizes they have to spend a lot to get into compliance right then and there when they could have done so through the controlled cost of scheduled maintenance procedures,” remarks Merrill.

“On top of reducing CSA risk exposure,” he adds, “fixing it in the shop will always be less expensive than repairing it on the side of the road or via mobile service.”

John Wisdom, director of Connect, which markets Paccar Parts’ CMMS (Computerized Maintenance Management System) web-based software solution that is sold to fleets via Kenworth and Peterbilt dealers, says that “better PM scheduling” is the first line of defense against CSA violations.

“PM systems need to be set up properly with all equipment recorded so nothing can be missed,” he stresses. “For anything that does get missed, it’s smart to make use of service reminders that can be emailed or appear in pop-up windows, such as with our system. The idea is to make it as hard as possible to ignore anything that is overdue. A fleet would also want to make sure they incorporate anything written up on a mandatory driver vehicle inspection report.”

Mark Elstad, Connect’s customer systems program manager, recommends that fleets be sure to track redundant repair issues and set alerts for these as well. “By doing that,” he points out, “the fleet can easily check into such CSA issues as poor lifetime performance of a given light bulb or type of lighting system spec’d. It’s also crucial to identify all work done outside the shop to ensure that anything that should be moved from the ‘as needed’ category to become part of a scheduled PM.”

Fred Fakkema spent 25 years with the Washington State Patrol that included a stint as commander of its Commercial Vehicle Enforcement division. In 2010, he joined Zonar Systems, provider of a GPS fleet tracking software and verified electronic vehicle-inspection system aimed at both cost control and CSA compliance, as vice president of product management & compliance.

“CSA compliance starts with maintenance and, when you get down to it, it’s really about the pre- and post-trip inspections,” advises Fakkema. “The most common CSA violations, including lights, brakes out of adjustment and tire issues, can all be addressed in advance if a proper pre-trip inspection is performed.

### **‘LOW-HANGING FRUIT’**

“The easiest thing for law enforcement agents to spot are lights out and tires in poor condition,” he continues. “But, again, if the fleet does its pre-trips correctly, that will mitigate most potential CSA

violations.

“Along with protecting a fleet’s compliance score, a good 15 minutes spent on a pre-trip can save hours at the weigh station,” Fakkema emphasizes.

“And bear in mind that law enforcement inspectors are like anyone else. They first go after the low-hanging fruit. So, they will likely let pass a ‘clean’ vehicle. Being on top of everything, including the little items, really matters in getting through a roadside inspection site.”

All in all, the experts agree. If proper vehicle inspections are performed and all issues that arise are tackled as quickly as possible, being cited for maintenance-related violations under CSA should not pose an undue risk for fleets and their drivers alike.

### Top 20 vehicle violations nationwide U.S.-based trucks only, fiscal 2013

Violation Description	Violation Code	# of Inspections	# of Violations	% of Total Violations
1 Operating vehicle not having the required operable lamps	393.9	303,011	439,187	13.19%
2 Clamp/roto-chamber type brake(s) out of adjustment	393.47E	110,724	177,987	5.34%
3 Tire — Tread depth less than 2/32nd of an inch	393.75C	125,857	169,601	5.09%
4 No/defective lighting devices/reflective devices/projected	393.11	125,545	167,027	5.01%
5 Operating a CMV without periodic inspection	396.17C	116,345	145,464	4.37%
6 No/discharged/unsecured fire extinguisher	393.95A	137,527	138,286	4.15%
7 Inspection/repair and maintenance parts and accessories	396.3A1	102,387	129,711	3.89%
8 Failing to secure brake hose/tubing against mechanical damage	393.45B2	73,838	92,727	2.78%
9 Oil and/or grease leak	396.5B	83,904	92,145	2.77%
10 Inoperative turn signal	393.9TS	75,782	88,746	2.66%
11 Automatic brake adjuster CMV manufactured on or after 10/20/1994 — Air Brake	393.53B	78,771	84,755	2.54%
12 Stop lamp violations	393.25F	64,930	71,497	2.15%
13 Windshield wipers inoperative/defective	393.7B	62,264	63,844	1.92%
14 Brakes (general)	396.3A1B	53,189	63,064	1.89%
15 Inoperative/defective brakes	393.48A	43,505	61,087	1.83%
16 No/insufficient warning devices	393.95F	60,075	60,152	1.81%
17 Damaged or discolored windshield	393.60C	50,970	51,093	1.53%
18 Inoperative head lamps	393.9H	49,516	50,672	1.52%
19 Inoperative tail lamp	393.9T	42,376	45,359	1.36%
20 Brake connections with leaks/constrictions	393.45D	36,526	39,414	1.18%

Statistical analysis provided by Avery Wise, contributing editor.