

Reassessing Safety Performance

FMCSA Wants to 'Touch' More Fleets With New Analysis

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With the rollout of the Comprehensive Safety Analysis, aka CSA 2010, the long arm of the law will grow a bit longer in an attempt to reach more truckers. The Federal Motor Carrier Safety Administration's implementation schedule is slipping into 2011, and that gives industry a bit more time than originally planned to get ready for a completely redesigned safety enforcement methodology.

But there is no point in fleets' putting off preparation, industry safety experts said. Even though some details are likely to be modified, the overall principles and functions of CSA will stay the same:

Each trucking operation's safety standing will rise or fall with changes in its monthly CSA scores.

Scores will be updated routinely in seven safety performance categories, called BASICs — as in golf, the lower the score, the better — and each carrier will be ranked with other fleets that have similar exposure to risk of accidents.

And for the first time, under this new regimen, drivers will be held directly accountable for their safety performances through continuously updated scores. However, drivers will not receive safety fitness ratings, as motor carriers do.

Every recorded violation, citation and warning — even the most trivial or inaccurate — will count in calculating safety scores.

Good, clean inspections will have a positive balance.

The goal, in the words of FMCSA, is to reduce the number of truck-involved crashes, injuries and fatalities by identifying and correcting specific safety problems before they contribute to a crash.

This requires a more efficient deployment of enforcement resources, which up to now have been concentrated on a relatively small number of labor-intensive, time-consuming safety audits at carrier facilities.

The bottom line: Enforcement authorities want to interact with a much greater number

of trucking operations to nip safety problems in the bud.

John Hill, a former FMCSA administrator and one of the architects of CSA, said that under the existing SafeStat system, federal or state investigators examine only 1% or 2% of commercial truck and bus operations in a year.

"You're really not getting out there and evaluating safety performance," he said. "You're being very reactive in terms of how you go after" the bad actors.

FMCSA currently interacts with 16,000 to 17,000 carrier entities each year. Officials said that number is expected to grow exponentially under CSA.

The new approach homes in on the causes of safety faults, drawing on a wider range of data than used by SafeStat. All roadside inspections — including moving violations, warnings and other non-out-of-service events — will figure in the scoring.

And the higher a score, the more likely it will be noticed.

"If you get any type of interaction with an agency, you are [going to show up] on the radar screen," said Stephen Keppler, interim executive director of the Commercial Vehicle Safety



Good, clean roadside inspections should result in better safety scores under the Comprehensive Safety Analysis, says FMCSA.

TT File Photo

Alliance. CVSA represents state officials charged with overseeing trucking safety on the road.

“That’s one of the big benefits of CSA 2010: the ability to ‘touch’ more carriers,” Kepler said.

Moving Targets, Fluid Details

This publication is designed to help truck operators sift through the far-reaching changes in regulatory oversight headed their way.

The sheer scope of the new safety regimen all but guarantees there will be a certain amount of misunderstanding by carriers and shippers. Rumor and myth have attached themselves to CSA.

“Part of the confusion stems from the fact that CSA 2010 is an evolving operational model,” said Dave Kraft, senior manager of government affairs for Qualcomm Inc., a vendor of onboard fleet communication systems. “Although there’s been a tremendous amount of work done, there are still some gray areas that haven’t been finalized or haven’t been as effectively communicated as they could have been.”

The grayness of key sections is extending the rollout of CSA — and the “2010” tag needs a new calendar.

FMCSA had aimed for state-by-state rollout from September through December 2010. CSA is now operational in nine test states, but intervention programs will not be ready in the 41 other states until as late as spring or summer 2011, FMCSA said in early April.

The agency also has put off posting carrier scores online until Nov. 30, when they will be made available to carriers and the public simultaneously. These scores will be based on SafeStat reports until CSA data starts to flow in.

In the meantime, FMCSA is “likely to tweak” numerous details in the plan, such as the severity weighting that will affect the scoring of individual violations, said Rob Abbott, American Trucking Associations’ vice president of safety policy.

Scoring Formula

CSA is built around new techniques for quantifying on-the-road safety performance. Scoring will be determined by the

Safety Measurement Systems (SMS) — one for carriers and one for drivers — which assigns weights to each carrier and driver violation in each BASIC category.

A more recent violation counts more heavily than an older one; and a more severe violation scores higher than a lesser violation.

To derive a score, the sum of all the weight values for all the violations in a given BASIC is divided by the number of fleet power units or the number of vehicle or driver inspections in that category, depending on the BASIC.

This yields a percentile ranking of all the members in each peer group.

SMS “normalizes” the ranking process by using the number of driver inspections as the denominator in driver-condition BASICs. Vehicle inspections normalize vehicle-related BASICs.

In other words, driver inspections figure in the scoring arithmetic for the Fatigued Driving (hours of service) and Driver Fitness categories, while the number of vehicle inspections is the denominator of the Vehicle Maintenance and Cargo-Related measures.

A distinction is made for behaviors that may trigger a roadside inspection. For this reason, Unsafe Driving, Controlled Substances/Alcohol, and Crash Indicator are divided by carrier size (average number of power units).

Your percentile is your score. That is, a 22 percentile ranking is the same as saying your score is 22.

For example, a 22 indicates that you are considered safer than 78% of the carriers or drivers in your peer group for that particular BASIC.

Each BASIC generates a separate score. And a clean inspection has the effect of reducing a score.

This dynamic scoring — fresh numbers from a new month’s worth of state data uploads should capture any changes of performance — is a way of monitoring whether safety problems are improving or worsening.

A deficiency in any BASIC likely will trigger some sort of intervention by FMCSA. A score of 90 or higher is considered

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BEHAVIOR ANALYSIS AND SAFETY IMPROVEMENT CATEGORIES (BASIC)

UNSAFE DRIVING — speeding, reckless driving, improper lane change, inattention

FATIGUED DRIVING — hours-of-service, logbook violations

DRIVER FITNESS — missing CDL, medical qualification

ALCOHOL, DRUGS — impairment by alcohol, illegal drugs, prescription and over-the-counter medications

VEHICLE MAINTENANCE — failure to make repairs: brakes, lights, other mechanical defects

CARGO SECUREMENT — shifting, spilled, dropped cargo; size-weight violations; unsafe hazmat handling

CRASH HISTORY — frequency, severity of DOT-defined crashes

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seriously deficient. Serious deficiencies in more than one category could result in the launch of an immediate investigation.

Otherwise, intervention generally will follow progressive steps, starting with a warning notice.

During CSA's early development, FMCSA held a series of listening sessions with truckers, and one point of industry consensus was that SafeStat's only investigative tool, the comprehensive review, was too "reactive and punitive," according to minutes of those sessions.

Trucking managers said they would like to see FMCSA support carriers in fixing inadequacies before imposing penalties.

Agency-carrier cooperation and a measure of guidance in correcting unsafe behavior is a leading feature of CSA.

Many carriers will get an initial warning that FMCSA has noticed its safety shortcomings, and an opportunity to set things right. Direct intervention would follow if that doesn't work.

CSA investigators will seek to evaluate why safety problems are occurring, recommend remedies and encourage corrective

Carrier Measurement Summary

CARRIER INFORMATION			
DOT ID	Carrier Operations	Carrier Legal Name	Carrier MA Status
Carrier Address	Mailing Address	Telephone Fax	Email
Number of Fleet Units	22	Number of Drivers	23
MM Carriers	No	Passenger Carriers	No
MM Carriers	No	Non-Entry Carrier	Yes
FMCSA Review Date	FMCSA Review Type	Safety Rating	Date of Last MCS-150 Update
TahStat Category	0	Accident SEV	41.03
Driver SEV	19.92	Safety Management SEV	17.43
CSA 2008 INTERVENTION ACTIVITY			
Number of activities			
CRASH ACTIVITY (within 3 years)			
Total Crashes	3	Total Crashes with Injuries or Fatalities	1
Total Fatalities	0	Total IM Fatalities	0
INSPECTION ACTIVITY (within 3 years)			
Driver Inspections	134	VI Inspections	47
MM Inspections	0		
CARRIER SAFETY MEASUREMENT			
BASIC	Measure	Percentile	Intervention resulting in violation of BASIC
1. Unsafe Driving	1,104	85.3	39
2. Fatigued Driver	3.48	80.1	46
3. Driver Fitness	2.72	85.3	39
4. Controlled Substances and Alcohol	146	Percentile	0
5. Vehicle Maintenance	4.08	40.1	39
6. Weight and Loading Carrier Exceeds	1.30	59.7	19
INDICATOR			
7. Quick Indicator	0.42	89.3	3

** The percentile is shaded in yellow when the [intervention threshold](#) is exceeded, red when the percentile is greater than or equal to 95% (except for Controlled Substances and Alcohol and Crash Indicator), otherwise there is no shading.

The prototype scorecard for carriers includes SafeStat evaluation areas and BASIC scores. Intervention thresholds are highlighted.

The Basics of BASIC

The CSA database maintains carrier history of two years and driver history of three years.

- ❖ **Violation** is weighted for severity and time since event.
- ❖ **Warning** is treated as violations by the system.
- ❖ **Weighting** accounts for the level of crash risk inherent in a violation.
- ❖ **Severity weight** rates violations from 1 (least severe) to 10 (most severe).
- ❖ **Time weight** places greater emphasis on recent violations: 3 = past 12 months; 2 = between 12 and 24 months; 1 = 24 to 36 months.
- ❖ **Percentile ranking** is determined by comparing BASIC measurements of the carrier to the measurements of its peer group. This is your score; 100 indicates worst performance.
- ❖ **Deficiency status** is a percentile ranking of 72 or higher (67 for hazmats) in Unsafe Driving, Fatigued Driving, Crash BASICs; 77 (67 hazmats) in Driver Fitness, Alcohol/Drugs, Vehicle Maintenance, Cargo BASICs.

actions. When that doesn't produce desired results, FMCSA may invoke penalties, including carrier shutdown.

In severe cases, FMCSA has the option of going directly to more severe intervention.

There are specific scoring thresholds that trigger direct action by FMCSA. The details are explained in the following sections of this publication.

A Certain Amount of Anxiety

The fact that sweeping change is about to drop on the industry is creating anxiety in some quarters. Mike England believes "there are so many carriers that are so far out of compliance this [will be] a long uphill fight" for them. England is president of DOT Compliance, a consulting subsidiary of refrigerated carrier C.R. England, Salt Lake City.

Even a fleet that consistently wins top safety awards is aware that CSA poses challenges.

Steve Gordon, chief operating officer of Gordon Trucking, Pacific, Wash., which hauls regionally for big names such as General Mills, Wal-Mart, Procter & Gamble and Home Depot, said, "We'll have to focus more diligently on a broader range of issues than ever before."

He pointed to non-OOS violations that currently don't have as much of an effect on carrier safety departments or drivers as

Peer Groups

- ❖ CSA predicates exposure to crash risk on the number of power units on the road.
- ❖ Peer groups are pools of carriers of similar fleet size (a single crash has a much greater effect on a small fleet than on a large fleet).
- ❖ Each carrier will be assigned to one of five peer groups, by number of power units:
 - Five or fewer
 - Six to 15
 - 16 to 50
 - 51 to 500
 - 501 or more.
- ❖ Driver peer group is the entire population of CDL holders.

out-of-service items. Under CSA, overweight tickets, speeding tickets, lower-level log infractions and small maintenance issues will count against a carrier's score and could lead to intervention from FMCSA.

"If I were a carrier with an ISS score in the 90s, I'd be awfully nervous right now," Gordon said.

Under SafeStat, a carrier's Inspection Selection System score

pops up on roadside inspectors' computer screens. The higher the ISS, the greater the likelihood it will trigger the stop-here-for-inspection red light. (CSA will feed a new scoring methodology, but it won't replace the ISS for roadside inspections.)

Clearly, CSA is a data-driven safety scoring system. Experts throughout the industry emphasize that fleets need to closely monitor the data flowing into its government files.

Carriers will have access to their measurement BASICs scores, as well as the state inspection reports and violations that went into those results.

Managers can use this information to chart fleet and driver improvement courses. Managers also should check the data for accuracy, and seek redress of erroneous entries through FMCSA's DataQs system, at <https://dataqs.fmcsa.dot.gov/login.asp>.

Speaking of incorrect information, among misconceptions clinging to CSA is that drivers will get safety ratings.

That is false, several FMCSA and American Trucking Associations officials told TRANSPORT TOPICS. It would take an act of Congress to do that, and the agency has no plan to pursue it.

Also false is the myth that violation severity weights will count as points in the driver's personal motor vehicle record. That is not so, FMCSA officials said.

The facts of CSA are outlined and myths debunked in FMCSA's answers to frequently asked questions. Go online to <http://csa2010.fmcsa.dot.gov> and click the FAQ pulldown menu.

Transport Topics staff reporters and contract writers contributed to this report.

OLD SAFESTAT SYSTEM

- ❖ Emphasizes out-of-service violations
- ❖ History of violations, crashes raises flag
- ❖ Flagged carriers are prioritized for compliance review (CR)
- ❖ CR involves intensive on-site records audit
- ❖ CR results in safety rating update
- ❖ Ratings quickly outdated
- ❖ Only 2% of carriers reviewed annually
- ❖ Drivers may be able to elude detection
- ❖ Unsafe carriers may not receive CR

NEW COMPREHENSIVE SAFETY ANALYSIS

- ❖ Emphasizes on-road performance
- ❖ Holds both carriers and drivers responsible for safety
- ❖ Replaces SafeStat evaluation with quantifiable measurement of safety "behavior"
- ❖ Attempts to identify causes of unsafe behavior
- ❖ Focuses intervention on specific problems
- ❖ Establishes progressive steps to correct, penalize unsafe behavior
- ❖ Counts all safety-related violations, tickets, warnings, in addition to crashes, out-of-service violations
- ❖ Weights violations according to severity, recency
- ❖ Updates carrier scores monthly
- ❖ Provides driver violation details
- ❖ Identifies problem drivers across multiple employers
- ❖ Provides direct action against problem drivers
- ❖ Will regularly update new carrier safety ratings in future
- ❖ Does not rate driver safety fitness