



AUGUST 2010 CHANGES TO THE CSA 2010 METHODOLOGY

Overview

On August 9, 2010, FMCSA unveiled a number of long-awaited changes to the CSA 2010 Methodology. Many of these changes addressed concerns that ATA had raised on behalf of its members.

Of particular significance, the agency adjusted the exposure measures in the *Unsafe Driving BASIC* and *Crash Indicator* to factor in vehicle miles of travel (VMT). The previous methodology used only fleet size (power unit count) as the measure of exposure. Under the new system, the formula will multiply the fleet size by a utilization factor based on fleet type (combination or straight truck) and average mileage per truck. Fleets comprised primarily of combination trucks (70% or more) will get additional exposure/utilization “credit” when their average mileage is between 80,000 and 200,000 miles per truck. Fleets primarily operating straight trucks (more than 30%) will get additional exposure/utilization credit when their average mileage is between 20,000 and 200,000 miles per truck.

FMCSA also modified a number of severity weights, removed a number of paperwork violations and otherwise minor violations from consideration, and made distinctions for more minor speeding violations (e.g., 1 – 5 mph over the limit). Most notably, the agency removed size and weight violations from consideration in the methodology.

In addition, FMCSA adjusted the thresholds at or above which an agency intervention is triggered. Finally, FMCSA modified the Safety Event Groups (formerly Peer Groups) in the *Unsafe Driving BASIC*, the *Crash Indicator* and the *Controlled Substances/Alcohol BASIC* to be more equitable to carriers that have increased exposure to inspections.

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Details

I. Changes to the Unsafe Driving BASIC and Crash Indicator

- Use of mileage to measure exposure
- Changes to Safety Event Groups (formerly Peer Groups)

Use of Mileage to Measure Exposure

The new methodology now incorporates carrier mileage as a measure of exposure for purposes of calculating measures in the *Unsafe Driving BASIC* and *Crash Indicator*. Previously, the methodology only used a count of each carrier's power units as a measure of exposure. While the revised system also uses power units, it adjusts the formula for carriers with greater asset utilization (more miles per vehicle).

Also, the system now distinguishes between carriers that primarily operate combination vehicles from those that primarily operate straight trucks. Here's how it works.

Carriers' measures in the crash indicator are now determined by taking the total number of crashes (time and severity weighted) and dividing them by a denominator which is the sum of the carrier's number of trucks¹ multiplied by a "utilization factor."

$$\frac{\text{Total Time And Severity Weighted Crashes}}{\text{Average Number of Power Units} \times \text{Utilization Factor}}$$

Here's how to determine your utilization factor:

1. *Determine your average mileage per power unit.*
Divide your total fleet mileage by your number of power units. For instance, if you have 5 trucks and operated 600,000 miles annually, your mileage per truck would be 120,000 miles (600,000 / 5 = 120,000)
2. *Determine your appropriate industry segment.*
Combination truck segment – Fleets comprised primarily (70% or more) of combination units
Straight truck segment – Fleets comprised primarily (more than 30%) of single unit vehicles (straight trucks).
3. *Calculate your fleet's utilization factor.*
Use the proper formula for your respective segment, as explained below.

For Combination Segment Carriers

If your average mileage per power unit is 80,000 miles or less, then your utilization factor is a "1." In other words, the denominator in calculating your *Crash Indicator* measure will simply be your power unit count.

¹ Average number of power units is determined by taking the sum of current count, plus the count 6 months prior, plus the count 18 months prior, and dividing the sum by 3.

If your average mileage per power unit is between 80,000 and 160,000 then you must calculate your utilization as follows.

First, take your average mileage per power unit and subtract 80,000 (e.g., 120,000 – 80,000 = 40,000).

Second, divide the resulting figure (in the example above, 40,000 miles) by 80,000 (40,000 divided by 80,000 = .5)

Multiply the resulting figure by 0.6 (.5 x .6 = .3).

Add the resulting figure to “1” to determine your utilization factor. In this instance the factor would be 1.3.

So in this example of a carrier with 5 trucks each averaging 120,000 miles, the carrier’s denominator in the *Crash Indicator* would be 6.5 (5 trucks times a utilization factor of 1.3).

As you will see from the table below, carriers with mileage between 160,000 and 200,000 miles automatically have a utilization factor of 1.6. Carriers over 200,000 miles per truck have a utilization factor of “1,” presumably because such mileage per unit is considered unrealistic/questionable and the default utilization factor (1) is applied.

Average mileage (VMT) per Power Unit	Utilization Factor
< 80,000	1
80,000 – 160,000	1+ 0.6 [(VMT per power unit-80,000) /80,000]
160,000 – 200,000	1.6
> 200,000	1
No recent VMT information	1

Note: If DOT does not have recent mileage data from your MC-150 or MC-151 form, your fleet is automatically assigned a utilization factor of 1.

For Straight Truck Segment Carriers

If your average mileage per power unit is less than 20,000, then your utilization factor is a “1.” In other words, the denominator in calculating your *Crash Indicator* measure will simply be your power unit count.

If your average mileage per power unit is between 20,000 and 60,000 (e.g., 40,000 per truck) then you must calculate your utilization as follows:

Take your average mileage per power unit and divide it by 20,000 (e.g., 40,000/20,000 = 2).

The resulting figure is your utilization factor. In this instance the factor would be 2.

So in this example of a carrier with 5 trucks each averaging 40,000 miles, the carrier’s denominator in the *Crash Indicator* would be 10 (5 trucks times a utilization factor of 2).

As you will see from the table below, carriers with mileage between 60,000 and 200,000 miles automatically have a utilization factor of 3. Carriers over 200,000 miles per truck have a utilization factor of “1,” presumably because such mileage per unit is considered unrealistic/questionable and the default utilization factor (1) is applied.

Average mileage (VMT) per Power Unit	Utilization Factor
< 20,000	1
20,000 – 60,000	VMT per power unit /20,000
60,000 – 200,000	3
> 200,000	1
No recent VMT information	1

Note: If DOT does not have mileage data from your MC-150 or MC-151 form, your fleet is automatically assigned a utilization factor of 1.

Changes to Safety Event Groups (formerly peer groups)

FMCSA also made changes to the groupings used for comparing like carriers - now called *Safety Event Groups* (formerly *Peer Groups*). Previously, carriers were compared against carriers of like size based on power unit counts (e.g., 1 – 5 trucks). Now carriers are compared against others with similar exposure based on the number of crashes (in the *Crash Indicator*) and the number of inspections with unsafe driving violations in the *Unsafe Driving BASIC*. The new Safety Event Groups are as follows:

Unsafe Driving BASIC		
Safety Event Group	Combo Segment: Number of Inspections with Unsafe Driving Violation	Straight Truck Segment: Number of Inspections with Unsafe Driving Violation
1	3-8	3-4
2	9-21	5-8
3	22-57	9-18
4	58-149	19-49
5	150+	50+

Crash Indicator		
Safety Event Group	Combo Segment: Number of Crashes	Straight Truck Segment: Number of Crashes
1	2-3	2
2	4-6	3-4
3	7-16	5-8
4	17-45	9-26
5	46+	27+

II. *Changes to the Controlled Substances/Alcohol BASIC*

- Changes to exposure measurement

FMCSA also made changes to the exposure measurement for the *Controlled Substances/Alcohol BASIC*. Previously, each carrier's exposure was determined using its count of power units. Now, the agency uses the number of inspections resulting in a Controlled Substances/Alcohol Violation.

Safety Event Group Category	Number of Inspections with Controlled Substance/Alcohol Violations
1	1
2	2
3	3
4	4+

III. *Changes to the Intervention Thresholds*

- New thresholds for carrier intervention

FMCSA made changes to the threshold levels at which interventions are triggered. Here are the latest thresholds, based on carrier type.

BASIC	General	HM	Passenger
Unsafe Driving	≥ 65%	≥ 60%	≥ 50%
Fatigued Driving (Hours-of-Service)	65%	60%	50%
Driver Fitness	80%	75%	65%
Controlled Substances and Alcohol	80%	75%	65%
Vehicle Maintenance	80%	75%	65%
Cargo Related	80%	75%	65%
Crash Indicator	65%	60%	50%

IV. *Changes to Violation Severity Weights*

FMCSA adjusted the severity weights assigned to a number of violations, removed some violations, and added others. Here is a summary of the most significant changes. A complete inventory of the changes is available in the members-only section of the ATA website.

Cargo Related and Driver Fitness BASIC Issues

- FMCSA made a number of changes to the *Cargo Related and Driver Fitness* BASICs including the removal of a large number of violations.
- The agency also substantially increased the weights for a number of violations, especially with respect to Hazardous Materials regulations and CDL violations.

- Most notably, FMCSA removed size and weight violations from the table, meaning they will not be used to calculate carriers' *Cargo Related* BASIC scores.

Speeding

- The new methodology provides distinctions for levels of speeding violations; the previous methodology assigned a weight of “5” to all speeding violations. The revised severity weights are as follows:

<i>Violation</i>	<i>Severity Weight</i>
Speeding 1- 5 mph	1
Speeding 6 -10 mph	4
Speeding 11-15 mph	7
Speeding 15 or more	10

- This change was intended to address the disproportionate issuance of warnings for minor speeding violations in certain states.

Removal of Violations

- FMCSA removed dozens of violations from consideration. Most of these violations were ones that bore little or no relationship to crashes (i.e. low severity weight)
- Of particular significance is that FMCSA removed most log form and manner violations from consideration in the methodology.

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