



COMMERCIAL FLEET TIRE DIGEST

*The authoritative guide to reducing commercial tire expenditures from
Pressure Systems International,
the manufacturer of the Meritor Tire Inflation System by PSI™*

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CSA 2010 & Your Tires

Download SMS
Method PDF
document at

[http://
csa2010.fmcsa.dot
.gov/about/
basics.aspx](http://csa2010.fmcsa.dot.gov/about/basics.aspx)
(click on SMS).

The new Comprehensive Safety Analysis (CSA) program managed by FMCSA (Federal Motor Carrier Safety Administration) is being rolled out in 2010 with full implementation now scheduled for sometime in 2011. This initiative is being implemented to improve the effectiveness of FMCSA's compliance and enforcement programs using data to identify high-risk carriers and drivers. Currently FMCSA uses SafeStat to measure carrier and driver performance. SafeStat will be replaced with the Safety Measurement System (SMS). The difference with SMS is that every inspection counts, not just the previous two years of roadside violations and crash data. At the heart of SMS is the Behavioral Analysis Safety Improvement Category (BASIC) scoring system. SMS assigns weights to each carrier and driver violation in each of the seven BASIC groups, which are: Unsafe driving, fatigued driving, driver fitness, drug and alcohol use, vehicle maintenance, load securement, and crash history.

For the vehicle maintenance BASIC category, there are seven specific areas of maintenance to be monitored:

- Lights not working
- Conspicuity marking inadequate
- Brakes
- Suspension
- Steering
- Tires
- Periodic Inspections

Violations are weighted based on the relationship to crash risk. In the case of tires, if the tread depth is below the legal limits, tires are damaged, tires are flat or underinflated, then the carrier would be penalized X number of points. The CSA 2010 scoring

system is quite complex. Events are severity weighted as follows:

1. Violations are ranked 1 - 10 plus 2 points are added for the "bad" stuff which includes driver fatigue/fitness, vehicle maintenance, and cargo loading issues. Accidents are scored 1 -3.
2. Events then are time weighted. 3 points for <6 months, 2 points for 6 - 12 months, and 1 point for >12 months.

So where do you find the severity ratings? In a document published by FMCSA called SMSMethod.PDF. You can download the ninety-five page publication at [http://
csa2010.fmcsa.dot.gov/about/basics.aspx](http://csa2010.fmcsa.dot.gov/about/basics.aspx) (click on SMS).

Tires have one of the higher severity ratings. It is an 8 (out of 10) when the tire is damaged or flat or the tread depth is below the legal tread depth limit. If the tire is found to be underinflated, it is given a severity level of 3.

Once you know the severity level, then you plug those values into several equations. In the case of an underinflated tire with a 3 severity rating you would calculate as follows:

- Add 3 (severity level) plus 2 (maintenance related) = 5 total severity rating (#1 above).
- Then multiply 5 times 3 (since it occurred in last 3 months) = 15 (#2 above)

A fleet rating is determined by doing similar calculations for all the BASICS. Then the total score is normalized and compared to other fleets within your peer group (based on number of power units). The higher the value (measured in percent) the more likely that your fleet will come under closer scrutiny.

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Q&A PSI ANSWERS YOUR QUESTIONS

Q. I keep reading that running tires with low inflation hurts fuel economy but would like to know by how much?

A. Rule of thumb is that for every 10% that a tire is underinflated equates to about 1% in poorer fuel economy....that assumes you are in a line haul service vocation.