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Compliance, Safety, Accountability

Introduction to the Safety Measurement System Version 3.0.3

2015
What is CSA?

- CSA is the Federal Motor Carrier Safety Administration’s (FMCSA) enforcement and compliance program used to achieve the agency’s mission to reduce commercial motor vehicle crashes, fatalities, and injuries.
- CSA has not resulted in any new regulations.
- CSA was launched in December 2010.
CSA Operational Model
Three Major Components

**Measurement:** Safety Measurement System (SMS) CSA measures safety performance, using inspection and crash results to identify carriers whose behaviors could reasonably lead to crashes.

**Evaluation:** CSA helps FMCSA and its State Partners to correct high-risk behavior by contacting more carriers and drivers—with interventions tailored to their specific safety problem, as well as a new Safety Fitness Determination methodology.

**Intervention:** CSA covers the full spectrum of safety issues, from how data is collected, evaluated, and shared to how enforcement officials can intervene most effectively and efficiently to improve safety on our roads.
Safety Measurement System

Behavior Analysis Safety Improvement Categories (BASICs)

- Driver Fitness
- Vehicle Maintenance
- HOS Compliance
- Unsafe Driving
- Crash Indicator
- HM Compliance
- Controlled Substance / Alcohol
Methodology Overview

• Gather 24 months of on-road safety event data (i.e., inspections, crashes) to create a safety event history

• Place each carrier violation and/or crash into a BASIC

• Convert BASIC data into quantifiable measure/rate

• Develop a percentile rank for each BASIC based on each carrier BASIC measure
Safety Event Data

Safety event data attributed to 525,000 active carriers:

• 24 months of carrier on-road safety performance:
  – 6.3 Million inspections
  – 11.2 Million safety-based violations discovered
  – 255,000 crashes
BASIC Data

Safety Event Data Sorted by BASIC
- Unsafe Driving
- Hours-of-Service
- Driver Fitness
- Controlled Substances/Alcohol
- Vehicle Maintenance
- Hazardous Materials
- Crash
BASIC Measures

BASIC Data → Quantifiable Measures

Considerations:

• Time Weighting/Time Frame
• Severity Weighting
• Severity Weight Cap
• Violation Cap
• Segmentation
• Normalization

Safety Event Data → BASIC Data → BASIC Measures → Percentile
Unsafe Driving BASIC

- Operation of CMVs in a dangerous or careless manner

- Examples:
  - Speeding
  - Reckless driving
  - Improper lane change
HOS Compliance BASIC

• Operation of CMVs by drivers ill, fatigued, or in non-compliance with the hours-of-service (HOS) regulations

• Examples:
  • HOS
  • Form and Manner
  • Operating CMV while ill or fatigued (all Part 395)
Driver Fitness BASIC

• Operation of CMVs by drivers who are unfit to operate a CMV due to lack of training, experience, or medical qualifications

• Examples:
  • Failure to have valid and appropriate CDL
  • Medically unqualified to operate a CMV
Controlled Substances/Alcohol

BASIC

- Operation of a CMV while impaired due to alcohol, illegal drugs, and misuse of prescription medications or over-the-counter medications

- Examples:
  - Use or possession of controlled substances or alcohol
Vehicle Maintenance BASIC

- Operation of CMVs having improper or inadequate maintenance
- Examples:
  - Brakes
  - Lights
  - Other mechanical defects
  - Failure to make required repairs
  - Cargo Securement
Crash Indicator

- Histories or patterns of high crash involvement, including frequency and severity. Based on state-reported crash records.
HM Compliance BASIC

- Examples
  - Hazardous Materials Incidents
  - Hazardous Materials Shipping Papers
  - Hazardous Waste Manifest
  - Cargo Tank Violations
Algorithms and Modifiers

BASIC Measure = \[
\frac{\text{Total of time & severity weighted application violations/crashes}}{\text{Average PUs x Utilization Factor}}
\]

Average PU = \[
\frac{\text{PU Current} + \text{PU 6 Months} + \text{PU 18 Months}}{3}
\]

These two equations are used to calculate a carrier's Unsafe Driving BASIC score & Crash Indicator Assessment.
<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Crash Severity Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involves tow-away but no injury or fatality</td>
<td>1</td>
</tr>
<tr>
<td>Involves injury or fatality</td>
<td>2</td>
</tr>
<tr>
<td>Involves an HM release</td>
<td>Crash Severity Weight (from above) + 1</td>
</tr>
</tbody>
</table>
Algorithms and Modifiers Continued

BASIC Measure = \[
\frac{\text{Total of time & severity weighted application violations}}{\text{Total time weight of relevant inspections}}
\]

This equation is used to calculate the Driver Fitness BASIC, Controlled Substance/Alcohol BASIC, Vehicle Maintenance BASIC, and HM Compliance Basis.
Algorithms and Modifiers Continued

Violation within the last 6 months x 3

Violations more than 6 months and less than 12 months x 2

Violations more than 12 months and less than 24 months x 1
All safety events are assigned a time weight. The more recent the event the greater the impact on the carriers record. When events are in excess of two years they no longer are used to assess a carrier’s score.

Scores are checked and updated monthly by FMCSA.
Based on each BASIC measure, develop percentile rank indicating carrier’s BASIC performance

- Provides a relative assessment of performance
- Allows for prioritizing intervention resources by behavior
- Higher percentage = worse performance
Percentile
(Continued)

• Considerations:
  – Data Sufficiency Standards – define events/exposure necessary to generate a measure
  – Current Inspection and Crash Data – 12 or 24 months
  – Safety Event Grouping – compare measures of carriers with similar numbers of events
Carrier Access to DataQ
FMCSA Website

https://portal.fmcsa.dot.gov
Visit FMCSA's Protect Your Move website to learn red flags for spotting rogue movers.

Scroll down for FMCSA Portal
My DataQs: Carolyn Kay (FMCSA/State Agency User)

What would you like to do?

1. Add Requests
   Click the orange "Add a Request" button to request a review of FMCSA-issued data.
   or
   Advanced users who know the request type may click the grey "Start Advanced Form" button.

   Add a Request

2. Monitor Requests
   Monitor the status of your request in the List of Reviews Requested below. Select "Details" to view the full request and to add or delete information. The list defaults to showing only the requests matching the currently applied search criteria displayed above the List of Reviews Requested. You can modify the search criteria by clicking the Advanced Search link.
Add a Request - Step 1

What are you inquiring about?

Choose one of the event types you want to have reviewed.

Note: Many FMCSA systems are updated using a monthly snapshot of the Motor Carrier Management Information System (MCMIS). Data corrections made as a result of a DataQs request will be reflected in a subsequent update of the respective FMCSA system. Check the website of that FMCSA system to determine the latest update.

Roadside:
- Crash Event
- Inspections/Violations (including requesting a copy of a report)
- Warnings
- Citations

Non-Roadside:
- U.S. DOT Audit/Investigation (examples include: safety audits, compliance reviews and CSA Investigations)
- Registration/Insurance
- Household Goods Complaints

None of the above
- I don’t know

Caution

Company officials will be notified of any requests related to their U.S. DOT Number if they have a valid DataQs account. Read this related FAQ for more information.
Carrier Measurement: SMS Results

CRST EXPEDITED INC
U.S. DOT#: 53773
Address: 3930 16TH AVE SW
CEDAR RAPIDS, IA 52406
3131
39
Number of: 10,994

Safety Rating & OOS Rates
(As of 09/21/2015 updated daily from SAFER.)
SATISFACTORY
(Rating Date: 05/23/2014)
Out of Service Rates
Type: OOS % National Avg %
Vehicle: 15.6 20.7
Driver: 1.3 5.5
Hazmat: 3.7 4.5

Licensing and Insurance
(As of 09/21/2015 updated hourly from L&L)
Active For-Hire Authority
Type: Yes/No  MC#/MX#
Property: Yes MC-114273
Passenger: No
Household Goods: No
Broker: Yes MC-114273

BASIC Status (Enforcement View)
Behavior Analysis & Safety Improvement Categories (BASICS)
- UNSAFE DRIVING
- CRASH INDICATOR
- HOURS-OF-SERVICE COMPLIANCE
- VEHICLE MAINTENANCE
- CONTROLLED SUBSTANCES AND ALCOHOL
- HAZARDOUS MATERIALS COMPLIANCE
- DRIVER FITNESS
- INSURANCE AND OTHER
### On-Road Performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.64</td>
<td>64%</td>
</tr>
<tr>
<td>0.30</td>
<td>92%</td>
</tr>
<tr>
<td>0.09</td>
<td>23%</td>
</tr>
<tr>
<td>2.53</td>
<td>53%</td>
</tr>
<tr>
<td>0</td>
<td>36%</td>
</tr>
<tr>
<td>0.87</td>
<td>85%</td>
</tr>
<tr>
<td>0.06</td>
<td>63%</td>
</tr>
</tbody>
</table>

### Investigation Results

<table>
<thead>
<tr>
<th>No Serious Violations Discovered</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
<tr>
<td>No Serious Violations Discovered</td>
<td></td>
</tr>
</tbody>
</table>

Click to select a BASIC icon above to get details, or view your Complete SMS Profile.

⚠️ Denotes this carrier exceeds the FMCSA intervention threshold relative to its safety event grouping based upon roadside data and/or has been cited with one or more serious violations within the past 12 months during an investigation. Therefore, this carrier may be prioritized for an intervention action and roadside inspection.
Carrier BASIC Assessments (Alerts) are determined by two inputs:

- **SMS results**
  - Percentiles calculated based on on-road performance
  - BASIC is considered alert if percentile is above threshold

- **Serious Violations (CSA investigations and/or Compliance Reviews)**
  - Egregious non-compliance requiring immediate corrective action
  - Directly related to carrier’s management and/or operation
  - If serious violation is found, BASIC is considered to be in an alert status and displayed accordingly on a carrier’s record for 12 months
**Carrier Measurement: SMS Results**

**On-Road Performance**
Measure: 0.87  
Percentile: 85%

Scale 0 to 100; 0 indicates the best safety performance.
85% of motor carriers in the same safety event group have better on-road performance than this motor carrier.

**Investigation Results**
No Serious Violations Discovered

**Graph:**
This graph displays a carrier’s measure based on 24 months of on-road performance. Zero indicates the best performance. To see how the measure is calculated click here. To see how the measure relates to percentile click here. Expand for more information.

<table>
<thead>
<tr>
<th>Date</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAR 27 2015</td>
<td>1.03</td>
</tr>
<tr>
<td>APR 24</td>
<td>0.97</td>
</tr>
<tr>
<td>MAY 22</td>
<td>0.91</td>
</tr>
<tr>
<td>JUN 19</td>
<td>0.91</td>
</tr>
<tr>
<td>JUL 24</td>
<td>0.88</td>
</tr>
<tr>
<td>AUG 28</td>
<td>0.87</td>
</tr>
</tbody>
</table>

**Additional Information:**
- HM Compliance Violations: 67
- HM Placardable Vehicle Inspections: 370
- HM Compliance Serious Violations: 0
### VIOLATION SUMMARY

<table>
<thead>
<tr>
<th>Violations</th>
<th>Description</th>
<th># Violations</th>
<th># OOS Violations</th>
<th>Violation Severity Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>177.823A</td>
<td>No placards/markings when required</td>
<td>11</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>177.834(a)</td>
<td>Package not secure in vehicle</td>
<td>7</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>172.504A</td>
<td>Vehicle not placarded as required</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>172.602A</td>
<td>Emergency response information missing</td>
<td>5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.201A1</td>
<td>Hazardous Materials not distinguished from non-Hazardous Materials</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.201D</td>
<td>Emergency Response phone number not listed</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.202B</td>
<td>Basic description not in proper sequence</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.504B</td>
<td>Dangerous placard violation</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>172.202A1</td>
<td>Improper shipping name</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.502A1</td>
<td>Prohibited placarding</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>172.516C5</td>
<td>Placard not reading horizontally</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>172.600C</td>
<td>Emergency Response (ER) information not available</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>172.602B</td>
<td>Form and manner of emergency response information</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>177.817E</td>
<td>Shipping paper accessibility</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>171.2B</td>
<td>Failure to comply with the requirements for HM transportation (including labeling and handling)</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
Carrier & Public Access to Measures and Percentiles

• Carriers have access to full SMS results and BASIC measurements

• Public has access to SMS results and BASIC measurements except for percentile scores for the Crash Indicator and HM BASIC
How does a carrier improve their CSA score?

- Violation Free Inspections
- Unsafe Driving and Controlled Substances/Alcohol BASICs
  - No inspections with a violation in these BASICs in the last year
How does a carrier improve their CSA score? (Continued)

• Crash Indicator
  – No percentile assigned if no crashes in last year

• HOS, Driver Fitness and Vehicle Maintenance
  – No inspections with a violation in that BASIC within the past year; and most recent relevant inspection does not have a violation of that BASIC
Drivers – CSA and Pre-Employment Screening Program

- FMCSA does not “rate” drivers
- Motor carriers do not inherit any newly-hired driver’s past violations
- Pre-Employment Screening Program (PSP):
  - Is a Congressionally-mandated program
  - Provides perspective employer with driver inspection, crash, and violation history if driver signs release. No assessment or score provided with the data

* 3rd party vendors are aggregating PSP data for carriers and developing “CSA Driver scorecards” *
CSA and California
California Data scheme for CSA 2013
The California contact for completed vehicle and driver inspections

SafetyNet
The California contact for completed vehicle and driver inspections

- At CHP HQ

SafetyNet
Inspection Sources

- Scales
- Mobile Road Enforcement (MRE)
- Motor Carrier Specialist (MCS)

Commercial Vehicle Enforcement Facilities
MCS
(Terminal Inspections)
*Level 5 only
Reportable Collisions
Reportable Collisions = Fatality
Injury (transported)
Disabling damage
Hazardous Materials
SAFETynet

Reportable Collisions

SAFETYNET

MCS

MRE

All Inspection Data To SAFER

Inspection Data Downloaded

All Inspection and Crash Data Uploaded

FMCSA/MCMIS

SAFER

Scales
Disputing State of California Violations on Carrier Record
Who Reviews Challenges
California Highway Patrol's

- Commercial Vehicle Section
- SafetyNet Unit
Review Procedures

• Read all submitted information
• Research to verify
• Use various tools and resources
• Forward if appropriate (second opinion)
• Respond back through Data Q process
DataQ Challenges

- Inspection data from enforcement facilities
  - (Level 1-6)

*Whether ticket written or not*
• Challenges will only be accepted electronically through DataQ’s.
• Phone or handwritten inquiries will not be accepted.
TIMELINE

- SafetyNet receives challenge
- Acknowledge challenge within 10 working days upon becoming aware of the dispute
- SafetyNet may ask for additional supporting documentation

* If supporting documentation is not received within 14 days case will be closed and challenge denied.
TIMELINE

If the challenge involves a violation or citation

• Supporting documentation and reports will be forwarded to Commercial Vehicle Section
• Reviewing Officer will review supporting documentation and reports
• Reviewing Officer may do additional follow-up by contacting source of data
Officer’s Review

- Reviewing Officer will either deny or grant challenge
- Denied challenges will be reviewed by Reviewing Officers’ supervisor
- If supervisor confirms, challenge is denied
- Safety Net staff will notify the requestor electronically
THERE ARE NO FURTHER APPEALS.

FMCSA cannot change state data without state approval.
Recommended practices for filing DataQ requests

- Attach both a copy of the inspection/crash and supporting documentation

*Collision information may be reportable regardless of fault*
Challenges without supporting documentation will be denied
• File requests promptly

• Explain in detail the circumstances surrounding the violation and why they should be removed
• Take photographs at the time of the inspection

– Ensure photographs are time and date stamped
• Do not automatically assume when you see multiple violations for the same section that this is an example of “Stacking”
When an officer or inspector signs off a violation it indicates that a violation was corrected not that it did not exist.
Citations requiring a court appearance
Adjudicated Citations

Officers may issue a citation (i.e., ticket) associated with a violation noted in the roadside inspection. Such citations may subsequently be adjudicated in a due process system.
Adjudicated Citations
(Continued)

Citation Results for a Violation

Dismissed/Not guilty

Convicted of a different charge

Violation in SMS

SafetyNet Code 3 or Removal

SafetyNet Code 2 and not subject to OOS weight
For violations to be considered for removal or set to a lower severity weight in the SMS, drivers or carriers must submit certified documentation of the judicial proceeding results.
Questions???

Presentation by
Officer Caleb Howard
AISA Carolyn Kay
(916) 843-3400