

Proposed SMS Enhancements Key Terms Glossary

The Safety Measurement System (SMS) proposed enhancements key terms are intended to provide user-friendly definitions. They are not intended to, and do not, modify or replace applicable Federal Motor Carrier Safety Administration (FMCSA) regulations or substantive standards. They will be available in the preview Help Center.

Behavior Analysis and Safety Improvement Categories (BASICS): The seven data categories used by the SMS—Unsafe Driving, Crash Indicator, Hours-of-Service (HOS) Compliance, Vehicle Maintenance, Controlled Substances/Alcohol, Hazardous Materials (HM) Compliance, and Driver Fitness.

Behavior Analysis and Safety Improvement Category (BASIC) Status: Shows whether a motor carrier has any BASICS with a ⚠️ symbol. A carrier that has one or more BASICS with a ⚠️ symbol is prioritized for interventions or further monitoring. The symbol is present when a carrier is at or above the Intervention Threshold in a BASIC or has one or more Acute/Critical Violations in a BASIC.

Cargo Tank Carriers: Motor carriers with cargo tank inspections that comprise half or more of their total HM placardable vehicle inspections.

Cargo Tank Inspection: An inspection on a vehicle classified as MC 300 Series, DOT 400 Series, or Other on its inspection report. All other inspections are classified as non-cargo tank inspections.

Data Sufficiency Standards: Used by the SMS to ensure that there are enough inspections or crashes to produce meaningful measures of on-road safety performance for motor carriers. When a carrier's safety performance could potentially lead to an intervention, the SMS applies additional standards to ensure that there is enough poor performance data and/or a pattern of violations before enforcement action is taken.

High-Utilization Carriers: Motor carriers with increased on-road exposure, or Vehicle Miles Travelled (VMT) per average Power Unit (PU). The SMS accounts for these carriers by using the Utilization Factor to adjust PU values when calculating measures in the Unsafe Driving and Crash Indicator BASICS.

How does SMS relate to crashes? (Link): Presents two easy-to-read graphs on the BASICS with a ⚠️ symbol and their relationship to future crash rate based on updated results from FMCSA's SMS Effectiveness Test (ET) that reflect the proposed enhancements.

Inspection: Conducted at a fixed facility or roadside of carrier commercial motor vehicles (CMVs) and/or drivers to determine compliance with Federal safety regulations.

- **Hazardous Materials (HM) Placardable Vehicle Inspection:** An inspection conducted on a vehicle containing a placardable amount of HM. For more information on placardable HM, review the **Hazardous Materials Regulations**.

Intervention Thresholds: Indicate when motor carriers are prioritized for interventions if their BASIC percentiles are at or above these thresholds. Intervention Thresholds are organized by BASIC and are set based on a given BASIC's relationship to crash risk. A carrier is subject to one of the three Intervention Thresholds below based on its carrier type: general, passenger carrier, or placardable HM.

- **General Intervention Threshold:** Applies to most carriers, except for those meeting the passenger carrier or placardable HM criteria.
- **Passenger Carrier Threshold:** Applies to carriers that meet the following criteria:
 - For-hire carriers with 9–15 passenger capacity vehicles and private carriers with 16–plus passenger capacity vehicles;
 - Carriers with more than 1–8 passenger capacity vehicles and private carriers with more than 1–15 passenger capacity vehicles; or
 - Carriers with passenger vehicles representing more than 2% of their respective fleets.
- **Placardable Hazardous Materials (HM) Threshold:** Applies to carriers that meet the following criteria:
 - At least two HM placardable vehicle inspections within the past 24 months, with one inspection occurring within the past 12 months;
 - At least 5% of vehicle inspections as HM placardable vehicle inspections; or
 - HM Safety Permit condition.

Investigation: Conducted offsite or onsite to evaluate a motor carrier's safety performance and compliance problems.

Measure: Produced for a motor carrier in each BASIC based on violations or crashes, weighted by time and severity. The measure only considers individual performance based on 24 months of data, with a measure of 0 indicating best performance.

Motor Carrier Identification Report (MCS-150): Registration form required to apply for a U.S. DOT Number and must be updated at least every 24 months (49 CFR 390.15).

Non-Cargo Tank Carriers: Motor carriers with cargo tank inspections that comprise less than half of their total HM placardable vehicle inspections.

On-Road Performance: Performance by BASIC based on 24 months of inspection and crash data.

Operating While Out-of-Service (OOS) Violations: Violations that occur when a driver continues to operate after receiving an OOS Order without correcting the OOS condition. An example of an operating while OOS violation is driving after being declared OOS.

OOS Order: Order issued to a motor carrier, which requires the carrier to cease motor vehicle operations immediately.

Percentile: Calculated by the SMS based on the measure for each motor carrier with sufficient information to be compared against carriers with a similar number of safety events (inspections, inspections with violations, crashes). Percentiles are calculated on a 0–100 scale, with 100 indicating worst performance and 0 indicating best performance.

Power Units (PUs): The number of vehicles a motor carrier owns, trip-leases, or term-leases. The SMS uses PUs and VMT to calculate carrier measures in the Unsafe Driving and Crash Indicator BASICs.

Safety Event Group: Group of motor carriers with similar safety events (inspections, inspections with violations, crashes) in a BASIC. Safety event groups allow the SMS to account for differences in the carrier population and ensure similar carriers are held to the same standards.

Safety Measurement System (SMS): FMCSA's workload prioritization tool that categorizes motor carrier safety performance and compliance into seven BASICs. Used to identify and prioritize for interventions those carriers that pose the greatest safety risk, and monitor changes in safety and compliance. The SMS is not a safety rating.

Safety Measurement System (SMS) Effectiveness Test (ET): Model used to assess the SMS's ability to prioritize motor carriers with the greatest safety risk for interventions. The model simulates SMS results based on historical data by running SMS results for carriers for a date in the past and then observing the subsequent crash involvement, or future crash rates, of the carriers.

Utilization Factor: Accounts for the increased on-road exposure of high-utilization motor carriers by adjusting their average PU values when calculating measures in the Unsafe Driving and Crash Indicator BASICS. To learn more about how the SMS calculates and applies the Utilization Factor, review the **SMS Methodology document**.

Vehicle Miles Travelled (VMT): The total number of miles a motor carrier has driven in a 12-month period. The SMS uses PUs and VMT to calculate carrier measures in the Unsafe Driving and Crash Indicator BASICS.

Violations: Indicate noncompliance with the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. Recorded during inspections and investigations and are entered into the Motor Carrier Management Information System (MCMIS), which feeds into the SMS.

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