

State Rating Charts Methodology

Background

A primary goal of the Federal Motor Carrier Safety Administration (FMCSA) is to reduce the number and severity of crashes involving large trucks and buses. The approach to accomplishing this task involves two separate efforts. The first are the regulatory efforts of the agency supported by the Federal Motor Carrier Safety Regulations (FMCSRs) in the Code of Federal Regulations. The range of regulatory activities includes safety measures such as commercial motor vehicle (CMV) roadside inspections, carrier compliance reviews, and commercial driver licensing. The second is the effort to collect and study data related to crashes involving trucks and buses as defined by the FMCSA crash reporting selection criteria. Crash data collection allows FMCSA to measure the effectiveness of implemented safety regulations and evaluate the regulatory and inspection processes as they correlate to crash causation. Additionally, FMCSA utilizes crash data to identify carriers that are potentially “unsafe” for application of enforcement measures.

Although the definitions and guidelines are less detailed when applied to crash investigation in comparison to those in the Code of Federal Regulations, difficulty remains in achieving consistency in crash reporting. This is because the application of those guidelines is done using different crash data collection tools and procedures in each state across the country. The information contained in this document is intended to help support FMCSA’s crash data improvement effort as a result of an analysis of state crash reports and police instruction manuals.

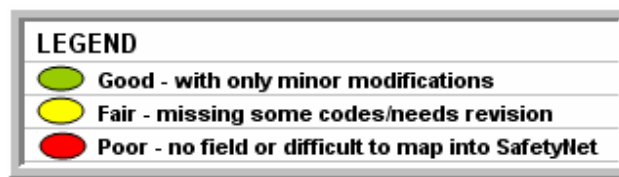
An analysis was performed on the police accident reports of every state in the country. It compared how well each report recorded the data necessary for entry into SAFETYNET, which is a database management system that allows entry, access, analysis, and reporting of data from driver/vehicle inspections, crashes, compliance reviews, assignments, and complaints. The specifics of the analysis were done on a very detailed level. Each data element and its attribute list collected in SAFETYNET was grouped according to priority of collection and entered into a comparison chart. The crash reports, truck and bus supplements, and instruction manuals were reviewed to determine if the data element was available directly or could be derived by mapping from multiple sources. The reports were then rated element by element down to the attribute level. The charted review also includes commentary and suggested resolutions.

The results of these evaluations are intended to provide assistance to states that are currently revising or planning to revise their police accident report. We recognize that the committee members assembled for crash report revisions may represent competing interests and that truck and bus crashes represent a smaller percentage of the overall crash population. However; truck and bus crashes do represent a significant traffic safety issue. A complete review of the evaluation process and methods follows.

State Comparison Chart

A standard comparison chart was developed to present the data collected during the analysis of state crash reports and police instruction manuals with FMCSA's SAFETYNET system. Each state's Police Accident Report (PAR), Supplemental Truck and Bus Report, and Police Instruction Manual were examined in detail to determine whether the data are obtainable as defined by FMCSA.

The Legend (see below) located on the top left-hand side of each page indicates the rating system used to evaluate the Selection Criteria, Crash Severity Data Elements and the SAFETYNET Elements. A green oval is used to indicate a rating of "Good – with only minor modifications". A yellow oval is used to indicate a rating of "Fair – missing some codes/needs revision". A red oval is used to indicate a rating of "Poor – no field or difficult to map into SAFETYNET".



The main body of the chart is organized into columns to display the evaluations. The left-most column (column 1) in the chart includes: the elements necessary for SAFETYNET Selection Criteria; the 26 data elements in the SAFETYNET Crash Module derived from state crash reports; and several potential new data elements and codes for future consideration, if available on a sufficient number of state crash reports. The potential "new elements" were not factored into the ratings. Columns 2 & 3 indicate if the truck and bus data were captured on the state's primary crash report or a supplemental report. Space is then provided for an initial rating and for a revised rating if revisions are made to a state's crash report or supplement. The Comment Section gives brief descriptions of the locations or fields on the related PAR elements, missing elements or codes, state definitions that differ from FMCSA definitions, and suggested revisions.

There is a footer area located on the bottom left-hand side of each page of the chart indicating the PAR/Supplement Date and Chart Completed date.

Rating System

The following criteria were used in rating the key and secondary elements on the state PAR/Supplements. The ratings are based on the National Governor's Association (NGA)/SAFETYNET data elements. In order to attain a rating of good (green), the field needed to provide the necessary data for SAFETYNET with only minor deviations or revisions. A rating of yellow was assigned if the field is missing some codes or needs revision. A rating of red was assigned if there is no field provided or if the field is difficult to map into SAFETYNET.

The numbering used in the section descriptions provided on the following pages matches the section numbers and sequence of the items identified in the first column of the rating chart.

FMCSA Selection Criteria

The Selection Criteria defines what crashes qualify and which vehicles must be reported for inclusion in SAFETYNET. This was viewed as vital in the comparison process.

The selection criteria must be written accurately on the report and/or instruction manual and include the following:

1. Truck Size

Any truck having a gross vehicle weight rating (GVWR) of more than 10,000 pounds or a gross combination weight rating (GCWR) over 10,000 pounds used on public highways.

A state received a rating of green if its definition of a truck was defined as above. A state received a rating of red if its PAR/Supplement did not include a truck definition or the definition was not defined as above. For Example, if the truck definition didn't take into account GCWR or the definition stated only 2 axles, 6 tires.

2. Bus Seating Capacity

Any motor vehicle designed to transport nine (9) or more people, including the driver's seat.

A state received a rating of green if its definition of a bus was defined as above. A state received a rating of yellow if the bus definition was not defined as above, but the definition also included "for compensation" and/or "not for compensation." A state received a rating of red if its PAR/Supplement did not include a bus definition or the definition was not defined as above.

3. Hazardous Materials

Any vehicle displaying a hazardous materials placard (regardless of weight).

4. Crash Severity (Fatality, Injury, Tow-away)

Injury Severity

The PAR/Supplement includes a field to record the injury severity of any person(s) injured in the crash, along with injury codes that indicate the extent of the injury.

Taken for Medical Treatment

The PAR/Supplement indicates whether the person(s) injured was taken to a medical facility and if so, which facility.

Transported to Medical Facility		
If the individual was transported from the crash site to a medical facility for treatment of injuries received in the crash:		
Source of Transport:		
1 – Not transported	3 – Police	5 – Unknown
2 – EMS	4 – Other	

Tow-away

The PAR/Supplement indicates whether a vehicle(s) was towed due to disabling damage. If the field only indicated the vehicle was "Towed Y/N" the rating of yellow was assigned because it was not apparent if the vehicle was towed due to disabling damage.

Disposition of Vehicle
1- Towed – due to damage
2- Towed – other reasons
3- Left at scene
4- Driven away
5- Unknown

The PAR/Supplement provides a field to indicate whether disabling damage occurred or “Disabling Damage” is listed as one of the damage codes (see below).

Extent of Damage
1 – None
2 – Minor Damage
3 – Functional Damage
4 – Disabling Damage
5 – Severe, vehicle totaled

5. Number of Fatalities and Injuries

Fatalities

There is a section on the PAR/Supplement to indicate the total number of fatalities that occurred in the accident.

Injuries

There is a section on the PAR/Supplement to indicate the total number of injuries that occurred in the accident.

Crash Data Elements:

6. Carrier Identification

The PAR/Supplement should provide an adequate space for the officer to record the US DOT Number and/or the MC/MX Number. A check box to indicate which number is being recorded is acceptable if there is only room to record one number, and specific instructions are given in their manual to record the US DOT number over the MC/MX Number. Also, there should be a separate field to record the Carrier’s Name and Address. The Carrier’s Name and Address fields should be separate from the Owner’s Name and Address fields (the vehicle owner may or may not be the Motor Carrier).

7. Commercial/Non-Commercial

The PAR/Supplement indicates whether the carrier was an Interstate, Intrastate, Not In Commerce-Government (trucks and buses) or Not In Commerce-Other Truck (over 10,000 lbs). This is a relatively new FMCSA data field.

8. Vehicle Configuration

The PAR/Supplement should include most of the vehicles listed under the SAFETYNET Data Element and include the proper bus codes, indicating the number of seats under the Vehicle Configuration and/or the Cargo Body Type fields. If we were unable to determine the number of seats and most of the other SAFETYNET codes were included, the field received a rating of yellow. The codes include: Bus (seats 9-15 people, including driver) and Bus (seats more than 15, including driver). Also taken into consideration was if non-mutually exclusive attributes selections were included in this element’s selections.

9. Cargo Body Type

The PAR/Supplement should include most of the vehicles listed under the SAFETYNET Data Element and include the proper bus codes, indicating the number of seats under the Cargo Body Type and/or the Vehicle Configuration fields. If we were unable to determine the number of seats and most of the other SAFETYNET codes were included, the field received a rating of yellow. The codes include: Bus (seats 9-15 people, including driver) and Bus (seats more than 15, including driver). Also taken into consideration was if non-mutually exclusive attributes selections were included in this element’s selections (i.e., school bus, motor coach, etc.)

10. Hazardous Materials Involvement

The PAR/Supplement should include a Hazardous Materials section that provides an area to record whether or not the vehicle was placarded for Hazardous Materials. There should be a place to record the Hazardous Material Number or Name, Class Number, and indicate whether Hazardous Materials were released. If any of these selections were missing, the state received a rating of yellow.

11. Gross Vehicle Weight Rating

The PAR/Supplement should include an area to record the Gross Vehicle Weight Rating (GVWR) and/or Gross Combined Weight Rating (GCWR), or provide the information in a weight-range list. SAFETYNET utilizes a weight-range list to record this information. The categories are as follows: 10,000 lbs. or less, From 10,001 through 26,000 lbs., and Greater than 26,000 lbs. Both formats are acceptable for a rating of green.

12. Sequence of Events

Under the Sequence of Events field there should be an area to record at least four (4) events per vehicle recorded, in the order the events occurred. These codes at a minimum should match or be able to be compressed to match to the SAFETYNET codes. For example, if a state provided detailed codes in the area of collisions with fixed objects where SAFETYNET has only one code, the state was not penalized. If the report/supplement is missing some codes and has at least four (4) events per vehicle, in the order they occurred, the field received a rating of yellow. If the report/supplement does not provide a section to record the sequence of events, the field received a rating of red.

13. Reporting Agency

Badge Number

There is a field provided on the PAR/Supplement to record the agency responsible for investigating and reporting the crash and a place to record the officer's badge number.

14. State Report Number

There is a pre-printed number on the PAR/Supplement forms or a field provided to record the State Report Number.

15. Crash Date

The PAR/Supplement provides a field to record the date the crash occurred.

16. Time of Crash

The PAR/Supplement provides a field to record the time the crash occurred.

17. Crash Location Details

The PAR/Supplement provides a section to record the Street/Highway, City Name, State, and County Code in which the crash occurred. If there was not a place to record the state, the field was still given a rating of green. If any of the other locations were missing, the field received a rating of yellow.

18. Total Number of Vehicles Involved in the Crash

There is a place on the PAR/Supplement to record the number of vehicles involved in the crash.

19. Truck/Bus Driver's ID

The PAR/Supplement provides a section to record the driver's name, date of birth, license class, driver's license number, and license state. If license class is missing from the report, then the overall rating for this field is yellow, even if all of the other information is included.

20. Truck/Bus ID

There is a section on the PAR/Supplement to record the Vehicle Identification Number (VIN), License Plate Number, and License State. If any information was missing from this field, the state received a rating of yellow.

21. Trafficway

The state received a rating of green if the PAR/Supplement instructed its officers to record the number of lanes, whether the lanes were divided, and if divided, what type of median was present. It could also receive a rating of green if the codes were in accordance with the SAFETYNET codes. If any of these codes were missing, the state received a rating of yellow.

22. Access Control

If the PAR/Supplement includes codes for "Full, Partial and No Access Control," the state received a rating of green. If the PAR/Supplement includes codes for "Full" and "No Access Control" and includes an "Other" code, the state also received a rating of green. "Partial Access" can be recorded under the "Other" code. If "Full Access" and "No Access Control" is listed but "Other" is omitted, the state received a rating of yellow.

23. Weather Condition

The field includes most of the codes listed under the SAFETYNET Data Element. If the majority of the codes applicable to the state were listed, the state received a rating of green.

24. Road Surface Condition

The field includes most of the codes listed under the SAFETYNET Data Element. If the majority of the codes applicable to the state were listed, the state received a rating of green.

25. Light Condition

If the field included most of the codes listed under the SAFETYNET Data Element, the state received a rating of green.

26. Citation Issued

The PAR/Supplement includes a section for the officer to record whether a citation was issued.

27. Bus Use

This is a possible new element to be added to SAFETYNET. This element indicates the specific use of the bus, along with the appropriate definitions for each. Since this is a possible new element, this field was not rated.

0 - Not a Bus – Less than 9 seats, including the driver and personal-use vans with 9 or more seats, including the driver

1 - School - Any public or private school or district, or contracted carrier operation on behalf of the entity, providing transportation for K-12 pupils

2 - Transit - An entity providing passenger transportation over fixed, scheduled routes, within primarily urban geographical areas

3 - Intercity- A company providing for-hire, long-distance passenger transportation between cities over fixed routes with regular schedules

4 - Charter - A company providing transportation on a for-hire basis, usually round-trip service for a tour group or outing

5 - Other - All bus operations not included in the previous categories. These include private companies providing transportation services for their own employees, non-governmental organizations (such as churches and non-profit groups), non-educational units of government (such as departments of corrections), and private individuals.

28. At the Time of the Crash, THIS Vehicle was:

This is a possible new element to be added to SAFETYNET. This element indicates whether the vehicle was Operating on a Trafficway open to the public (In-Transport) or Parked on or off the Trafficway. Since this is possible new element, this field was not rated.

NGA/SAFETYNET Definitions/Elements	State		State		Initial	Revised
	PAR		Supplement			
	YES	NO	YES	NO	Rating	Rating
<i>28. At the Time of the Crash, THIS Vehicle was:</i>						
<i>Operating on a Trafficway open to the public (In-Transport)</i>		X	X			
<i>Parked on or off the Trafficway</i>		X	X			