

**MINI GUIDE  
to the  
FEDERAL  
MOTOR VEHICLE  
SAFETY STANDARDS  
and  
RELATED REGULATIONS  
(issued as of May 1, 2004)**



**Prepared by**

**School Bus Manufacturers  
Technical Council**

**May 2004**

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## FOREWORD

In order to reduce traffic accidents, and deaths and injuries resulting from traffic accidents, the National Traffic and Motor Vehicle Safety Act was enacted on September 9, 1966. The law directed the U.S. Secretary of Transportation to promulgate Federal Motor Vehicle Safety Standards (FMVSSs), to which manufacturers of motor vehicles and items of motor vehicle equipment must conform and certify compliance. The law has been codified as Chapter 301, Motor Vehicle Safety, in title 49, United States Code (“Chapter 301” in this Mini Guide).

Chapter 301 defines a FMVSS as a “minimum standard for motor vehicle performance, or motor vehicle equipment performance, which is practicable, which meets the need for motor vehicle safety, and which provides objective criteria.” The law further defines motor vehicle safety to mean the performance of motor vehicles or items of motor vehicle equipment in such a manner “that the public is protected against unreasonable risk of accidents occurring as a result of the design, construction, or performance of motor vehicles and is also protected against unreasonable risk of death or injury in the event accidents do occur.”

The Secretary of Transportation delegated the authority to promulgate FMVSSs to the National Highway Traffic Safety Administration (NHTSA), which promulgated the first FMVSSs in 1967 and made them effective for vehicles manufactured on or after January 1, 1968, for sale or use in the United States. NHTSA has promulgated many additional FMVSSs since then, has updated or amended nearly all of them, and has rescinded a few. The FMVSSs, along with other NHTSA regulations, are incorporated into Chapter 5 of title 49, Code of Federal Regulations (“CFR”).

This Mini Guide lists the FMVSSs in effect as of May 1, 2004, states the vehicles to which each FMVSS applies, and describes the purpose of each FMVSS. It also provides descriptions of other selected federal regulations and requirements.

The Mini Guide does not purport to include all provisions of federal law and regulations that pertain to the manufacture, sale, and/or use of motor vehicles or items of motor vehicle equipment. Rather, its intent is to make the reader aware that the FMVSSs and other regulations and requirements exist, and to encourage the users of the Mini Guide to investigate and comply with their respective responsibilities.

NHTSA has an Auto Safety Hotline to provide callers with auto safety information and to enable them to report safety problems with motor vehicles and items of motor vehicle equipment. The toll-free number is 1-888-327-4236. (Washington D.C. area residents may call 202-366-0123).

Additionally, NHTSA can be contacted on the Internet – [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov). NHTSA’s home page offers regulatory information, crash data, legal interpretation letters, safety recall information, transportation safety information, news releases, and more. There is a section on “School Buses.”

**The complete text of the FMVSSs can be viewed at:  
[www.access.gpo.gov/nara/cfr/cfr-table-search.html](http://www.access.gpo.gov/nara/cfr/cfr-table-search.html). Select “Retrieve CFR Sections by Citation.”  
Title = 49; Part = 571; and Section = the FMVSS number, e.g., 101, 102, etc.**

## THE PUBLIC LAW

The following is a synopsis of several important provisions contained in Chapter 301, as amended:

**Effective Date** - The Secretary of Transportation shall specify the effective date of a Federal Motor Vehicle Safety Standard (FMVSS) in the order prescribing the standard. A standard may not become effective before the 180th day after the standard is prescribed or later than one year after it is prescribed. However, the Secretary may prescribe a different effective date after finding, for good cause, that a different effective date is in the public interest and publishing the reasons for the finding.

**Preemption** - When a FMVSS is in effect, a State or political subdivision of a State may prescribe, or continue in effect, a standard applicable to the same aspect of performance of a motor vehicle or item of motor vehicle equipment only if the standard is identical to the FMVSS. However, the United States Government, a State, or political subdivision of a State may prescribe a standard for a motor vehicle or item of motor vehicle equipment obtained for its own use that imposes a higher performance requirement than that required by the FMVSS.

**Prohibitions** - A person may not manufacture for sale, sell, offer for sale, or introduce or deliver for introduction in interstate commerce, or import into the United States, any motor vehicle or item of motor vehicle equipment manufactured on or after the effective date of a FMVSS, unless the vehicle or equipment complies with the FMVSS and is covered by a certification of compliance.

**Certification of Compliance** - A manufacturer or distributor of a motor vehicle or item of motor vehicle equipment shall certify to the distributor or dealer that the vehicle or equipment complies with applicable FMVSSs. Certification of a vehicle must be shown by a label or tag permanently fixed to the vehicle. Certification of equipment may be shown by a label or tag on the equipment or on the outside of the container in which the equipment is delivered.

**Purchaser Records** - A manufacturer of a motor vehicle or tire (except a retreaded tire) shall cause to be maintained a record of the name and address of the first purchaser of each vehicle or tire it produces.

**Making Inoperative** - A manufacturer, distributor, dealer, or motor vehicle repair business may not knowingly make inoperative any part, device or element of design installed on or in a motor vehicle or item of motor vehicle equipment in compliance with an applicable FMVSS, unless there is reasonable cause to believe that the vehicle or equipment will not be used (except for testing or similar purpose during maintenance or repair) when the device or element is inoperative.

**Violations** - A person who violates any provisions or regulations prescribed under Chapter 301, is liable to the United States Government for a civil penalty of not more than \$5,000 for each violation, not to exceed \$15,000,000 for any related series of violations.

**Records and Reports** - The Secretary reasonably may require a manufacturer of a motor vehicle or item or motor vehicle equipment to keep records, and may require a manufacturer, distributor, or dealer to make reports, to enable the Secretary to decide whether the manufacturer, distributor, or dealer has complied or is complying with the provisions and regulations prescribed under Chapter 301.

**Safety Defects or Noncompliance** - A manufacturer of a motor vehicle or item of motor vehicle equipment shall notify the Secretary by certified mail, and the owners, purchasers, and dealers of the vehicle or equipment, if the manufacturer: (1) decides in good faith that the vehicle or equipment contains a safety-related defect; or (2) decides in good faith that the vehicle or equipment does not comply with an applicable FMVSS.

**Owner Notification of a Safety Recall** - A manufacturer must notify by first class mail each person registered under State law as the owner, and whose name and address is reasonably ascertainable by the manufacturer through State records or other available sources, or the most recent purchaser of the vehicle containing the safety-related defect or noncompliance. The notification must identify the safety problem and potential consequences, the means of remedying the defect or noncompliance, and when and where the vehicle or equipment can be taken for the remedy. In addition, the notification must mention that the remedy will be cost free (if the vehicle or equipment was first purchased less than 10 calendar years earlier, or the tires were first purchased less than 5 calendar years earlier) and the notification must provide the address and telephone number of the National Highway Traffic Safety Administration and its Auto Safety Hotline (1-888-327-4236).

**Selected Definitions**  
**(from the FMVSSs in 49 CFR Part 571,**  
**other NHTSA regulations in the CFR, or Chapter 301)**

**A-Pillar**

- means any pillar that is entirely forward of a transverse vertical plane passing through the seating reference point of the driver's seat. [FMVSS No. 201]

**Adjacent Seat**

- means a designated seating position located so that some portion of its occupant space is not more than 10 inches from an emergency exit, for a distance of at least 15 inches measured horizontally and parallel to the exit. [FMVSS No. 217]

**Administrator**

- means the Administrator of the National Highway Traffic Safety Administration. [Part 510.2]

**Air Brake System**

- means a system that uses air as a medium for transmitting pressure or force from the driver control to the service brake, including an air-over-hydraulic brake subsystem, but does not include a system that uses compressed air or vacuum only to assist the driver in applying muscular force to hydraulic or mechanical components. [FMVSS No. 121]

**Air-Over-Hydraulic Brake Subsystem**

- means a subsystem of an air brake system that uses compressed air to transmit force from the driver control to a hydraulic brake system to actuate the service brakes. [FMVSS No. 121]

**Antilock Brake System**

- means a portion of a service brake system that automatically controls the degree of rotational wheel slip during braking by:
  - (1) Sensing the rate of angular rotation of the wheels;
  - (2) Transmitting signals regarding the rate of wheel angular rotation to one or more controlling devices which interpret those signals and generate responsive controlling output signals; and
  - (3) Transmitting those controlling signals to one or more modulators which adjust brake actuating forces in response to those signals.[FMVSS No. 121]

**Automatic-locking Retractor**

- means a retractor incorporating adjustment hardware by means of a positive self-locking mechanism, which is capable when locked of withstanding restraint forces. [FMVSS No. 209]

**B-Pillar**

- means the forwardmost pillar on each side of the vehicle that is, in whole or part, rearward of a transverse vertical plane passing through the seating reference point of the driver's seat, unless there is only one pillar rearward of that plane and it is also a rearmost pillar. [FMVSS No. 201]

**Battery System Component**

- means any part of a battery module, interconnect, venting system, battery restraint device, and battery box or container which holds the individual battery modules. [FMVSS No. 305]

**Bias Ply Tire**

- means a pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tire. [FMVSS No. 109]

**Bi-fuel CNG Vehicle**

- means a vehicle equipped with two independent fuel systems, one of which is designed to supply compressed natural gas (CNG), and the other to supply a fuel other than CNG. [FMVSS No. 303]

**Body Component**

- means a part of a vehicle's body made from a single piece of homogeneous material, or from a single piece of composite material such as plywood. [FMVSS No. 221]

**Body Panel**

- means a body component used on the exterior or interior surface to enclose the bus' occupant space. [FMVSS No. 221]

**Body Panel Joint**

- means the area of contact or close proximity between the edges of a body panel and another body component, excluding spaces designed for ventilation or another functional purpose, and excluding doors, windows, and maintenance access panels. [FMVSS No. 221]

**Brake Backup System**

- means a portion of a service brake system, such as a pump, that automatically supplies energy in the event of a primary brake power source failure. [FMVSS No. 105]

**Brake Fluid**

- means a liquid designed for use in a motor vehicle hydraulic brake system in which it will contact elastomeric components made of styrene and butadiene rubber, ethylene and propylene rubber, polychloroprene brake hose inner tube stock or natural rubber. [FMVSS No. 116]

**Silicone Base Brake Fluid**

- means a brake fluid which consists of not less than 70 percent by weight of a diorgano polydimethylsiloxane. [FMVSS No. 116]

**Brake Hose**

- means a flexible conduit, other than a vacuum tubing connector, manufactured for use in a brake system to transmit or contain the fluid pressure of vacuum used to apply brake force to a vehicle's brakes. [FMVSS No. 106]

**Brake Hose Assembly**

- means a brake hose, with or without armor, equipped with end fittings for use in a brake system, but does not include an air or vacuum assembly prepared by the owner or operator of a used

vehicle, by his employee, or by a repair facility, for installation in that used vehicle.  
[FMVSS No. 106]

**Brake Power Assist Unit**

- means a device installed in a hydraulic brake system that reduces the operator effort required to actuate the system, and that if inoperative does not prevent the operator from braking the vehicle by a continued application of muscular force on the service brake control. [FMVSS No. 105]

**Brake Power Unit**

- means a device installed in a brake system that provides the energy required to actuate the brakes, either directly or indirectly through an auxiliary device, with the operator action consisting only of modulating the energy application level. [FMVSS No. 105]

**Bus**

- means a motor vehicle with motive power, except a trailer, designed for carrying more than 10 persons, including the driver. [Part 573.1]

**Bus Body**

- means the portion of a bus that encloses the bus' occupant space, exclusive of the bumpers, chassis frame, and any structure forward of the forwardmost point of the windshield mounting. [FMVSS No. 221]

**Cargo Lamp**

- means a lamp that is mounted on a multipurpose passenger vehicle, truck or bus for the purpose of providing illumination to load or unload cargo. [FMVSS No. 108]

**Chief Counsel**

- means the Chief Counsel of the National Highway Traffic Safety Administration. [Part 510.2]

**Child Restraint System**

- means any device, except Type I or Type II seat belts, designed for use in a motor vehicle or aircraft to restrain, seat, or position children who weigh 50 pounds or less. [FMVSS No. 213]

**Add-on Child Restraint System**

- means any portable child restraint system. [FMVSS No. 213]

**Backless Child Restraint System**

- means a child restraint, other than a belt-positioning seat, that consists of a seating platform that does not extend up to provide a cushion for the child's back or head and has a structural element designed to restrain forward motion of the child's torso in a forward impact. [FMVSS No. 213]

**Belt-Positioning Seat**

- means a child restraint system that positions a child on a vehicle seat to improve the fit of a vehicle Type 2 belt system on the child and that lacks any component, such as a belt system or structural element, designed to restrain forward movement of the child's torso in a forward impact. [FMVSS No. 213]

**Booster Seat**



- means either a backless child restraint system or a belt-positioning seat. [FMVSS No. 213]

**Built-in Child Restraint System**

- means a child restraint system that is designed to be an integral part of, and permanently installed in, a motor vehicle. [FMVSS No. 213]

**Car Bed**

- means a child restraint system designed to restrain or position a child in the supine or prone position on a continuous flat surface. [FMVSS No. 213]

**Factory-installed, Built-in Child Restraint System**

- means a built-in child restraint system that has been or will be permanently installed in a motor vehicle before that vehicle is certified as a completed or altered vehicle. [FMVSS No. 213]

**Rear-Facing Child Restraint System**

- means a child restraint, except a car bed, that positions the child to face in the direction opposite to the normal travel direction of travel of the motor vehicle. [FMVSS No. 213]

**Child Restraint Anchorage System**

- means a vehicle system that is designed for attaching a child restraint system to a vehicle at a particular designated seating position. [FMVSS No. 213]

**Child Restraint Anchorage**

- means any vehicle component, other than Type I or Type II seat belts, that is involved in transferring loads generated by the child restraint system to the vehicle. [FMVSS No. 213]

**Tether Anchorage**

- means a user-ready, permanently installed vehicle system that transfers loads from a tether strap through the tether hook to the vehicle structure and that accepts a tether hook. [FMVSS No. 225]

**Tether Strap**

- means a strap that is secured to the rigid structure of the seat back of a child restraint system, and is connected to a tether hook that transfers the load from that system to the tether anchorage. [FMVSS No. 225]

**Tether Hook**

- means a device used to attach a tether strap to a tether anchorage. [FMVSS No. 225]

**CNG Fuel Container**

- means a container designed to store CNG as motor fuel on board a motor vehicle. [FMVSS No. 303]

**Burst Pressure**

- means the highest internal pressure reached in a CNG fuel container during a burst test conducted at a temperature of 21E C (70E F). [FMVSS No. 304]

**Fill Pressure**

- means the internal pressure of a CNG fuel container attained at the time of filling. Fill pressure varies according to the gas temperature in the container, which is dependent on the charging parameters and the ambient conditions. [FMVSS No. 304]

**Full Wrapped**

- means applying the reinforcement of a filament or resin system over the entire liner, including the domes, of a CNG fuel cylinder. [FMVSS No. 304]

**High Pressure Portion of a Fuel System**

- means all the components from and including each CNG fuel container up to, but not including, the first pressure regulator. [FMVSS No. 303]

**Hoop Wrapped**

- means winding a filament in a substantially circumferential pattern over the cylindrical portion of the liner so that the filament does not transmit any significant stresses in a direction parallel to the CNG fuel cylinder's longitudinal axis. [FMVSS No. 304]

**Hydrostatic Pressure**

- means the internal pressure to which a CNG fuel container is taken during testing. [FMVSS No. 304]

**Service Pressure**

- means the internal settled pressure of a CNG fuel container at a uniform gas temperature of 21E C (70E F) with full gas content. It is the pressure for which the container has been constructed for use under normal conditions. [FMVSS No. 304]

**CNG Fuel System**

- means all components used to store or supply CNG to a vehicle's engine. [FMVSS No. 303]

**Curb Weight**

- means the weight of a motor vehicle with standard equipment; maximum capacity of fuel, oil, and coolant; and, if so equipped, air conditioning and additional weight of optional engine. Curb weight does not include the driver, passengers, or cargo. [Part 571.3]

**Daylight Opening**

- means the maximum unobstructed opening of an emergency exit when viewed from a direction perpendicular to the plane of the opening. [FMVSS No. 217]

**Dealer**

- means a person selling and distributing new motor vehicles or motor vehicle equipment primarily to purchasers that in good faith purchase the vehicles or equipment other than for resale. [Chapter 301]

**Dedicated CNG Vehicle**

- means a vehicle equipped with one fuel system and designed to operate on CNG. [FMVSS No. 303]

**Defect**

- includes any defect in performance, construction, a component, or material of a motor vehicle or motor vehicle equipment. [Chapter 301]

**Deputy Administrator**

- means the Deputy Administrator of the National Highway Traffic Safety Administration. [Part 510.2]

**Designated Seating Position**

- means any plan view location capable of accommodating a person at least as large as a 5<sup>th</sup> percentile adult female, if the overall seat configuration and design and vehicle design is such that the position is likely to be used as a seating position while the vehicle is in motion, except for auxiliary seating accommodations such as temporary or folding jump seats. Any bench or split-bench seat in a passenger car, truck or multipurpose passenger vehicle with a GVWR less than 10,000 pounds, having greater than 50 inches of hip room [measured in accordance with SAE Standard J1100(a)] shall have not less than three designated seating positions, unless the seat design or vehicle design precludes the center position from being used for seating. [Part 571.3]

**Distributor**

- means a person primarily selling and distributing motor vehicles or items of motor vehicle equipment for resale. [Chapter 301]

**Driver**

- means the occupant of a motor vehicle seated immediately behind the steering control system. [Part 571.3]

**Dual-fuel CNG Vehicle**

- means a vehicle which is fueled by two fuels simultaneously, one of which is CNG, and the other of which is a fuel other than CNG. [FMVSS No. 303]

**Effective Date**

- means the date on which a regulation or a standard takes effect, on or after which compliance is legally required.

**Electric Vehicle**

- means a motor vehicle that is powered by an electric motor drawing current from rechargeable storage batteries, fuel cells, or other portable sources of electrical current, and which may include a non-electrical source of power designed to charge batteries or components thereof. [FMVSS No. 105]

**Electrically-Actuated Service Brakes**

- means service brakes that utilize electrical energy to actuate the foundation brakes. [FMVSS No. 105]

**Emergency Brake**

- means a mechanism designed to stop a vehicle after a failure of the service brake system. [Part 571.3]

**Emergency-locking Retractor**

- means a retractor incorporating adjustment hardware by means of a locking mechanism that is activated by vehicle acceleration, webbing movement relative to the vehicle, or other automatic action during an emergency, and is capable when locked of withstanding restraint forces. [FMVSS No. 209]

**Final-Stage Manufacturer**

- means a person who performs such manufacturing operations on an incomplete vehicle that it becomes a completed vehicle. [Part 529.3]

**Forward Control Vehicle**

- means a configuration in which more than half of the engine length is rearward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length. [Part 571.3]

**Fuel Spillage**

- means the fall, flow or run of fuel from the vehicle, but does not include wetness resulting from capillary action. [FMVSS No. 301]

**Gross Axle Weight Rating (GAWR)**

- means the value specified by the vehicle manufacturer as the load-carrying capacity of a single axle system, as measured at the tire-ground interface. [Part 571.3]

**Gross Vehicle Weight Rating (GVWR)**

- means the value specified by the manufacturer as the loaded weight of a single vehicle, including driver, passengers, and cargo. [Part 571.3]

**H-Point**

- means the mechanically hinged hip point of a manikin which simulates the actual pivot center of the human torso and thigh, described in SAE Recommended Practice J826, "Manikins for Use in Defining Vehicle Seating Accommodations," November 1962. [Part 571.3]

**Head Protection Zone**

- means any contactable surface of the vehicle within any zone specified as follows: The head protection zones in a school bus are the spaces in front of each school bus passenger seat which are not occupied by bus sidewall, window, or door structure, and which, in relation to that seat and its seating reference point, are enclosed by the following planes;

(a) Horizontal planes 12" and 40" above the seating reference point;

(b) A vertical longitudinal plane tangent to the inboard (aisle side) edge of the seat;

(c) A vertical longitudinal plane 3.25" inboard of the outboard edge of the seat; and

(d) Vertical transverse planes through, and 30" forward of the seating reference point. [FMVSS No. 222]

**Head Restraint**

- means a device that limits rearward angular displacement of the occupant's head, relative to the occupant's torso line. [FMVSS No. 202]

**Hood**

- means any exterior movable body panel forward of the windshield that is used to cover an engine, luggage, storage or battery compartment. [FMVSS No. 113]

**Hydraulic Brake System**

- means a system that uses hydraulic fluid as a medium for transmitting force from a service brake control to the service brake, and that may incorporate a brake power assist unit, or a brake power unit. [FMVSS No. 105]

**Incomplete Vehicle Manufacturer**

- means a person who manufactures an incomplete vehicle by assembling components, none of which taken separately constitute an incomplete vehicle. [Part 529.3]

**Incomplete Vehicle**

- means an assemblage consisting, at a minimum, of frame and chassis structure, power train, steering system, suspension system, and braking system -- to the extent that those systems are to be part of the completed vehicle -- that requires further manufacturing operations, other than the addition of readily attachable components, such as mirrors or tire and rim assemblies, or minor finishing operations, such as painting, to become a completed vehicle. [Part 529.3]

**Interior Compartment Door**

- means any door in the interior of a vehicle installed by the manufacturer as a cover for storage space normally used for personal effects. [FMVSS No. 217]

**Intermediate Manufacturer**

- means a person, other than the incomplete vehicle manufacturer or the final-stage manufacturer, who performs manufacturing operations on an incomplete vehicle. [Part 529.3]

**Load Rating (Tire)**

- means the maximum load a tire is rated to carry for a given inflation pressure. [FMVSS No. 109]

**Longitudinal or Longitudinally**

- means parallel to the longitudinal centerline of the vehicle. [Part 571.3]

**Manufacturer**

- means a person manufacturing or assembling of motor vehicles or motor vehicle equipment, or importing motor vehicles or motor vehicle equipment for resale. [Chapter 301]

**Mirror****Convex Mirror**

- means a mirror having a curved reflective surface whose shape is the same as that of the exterior surface of a section of a sphere. [FMVSS No. 111]

**Effective Mirror Surface**

- means the portions of a mirror that reflect images, excluding the mirror rim or mounting brackets. [FMVSS No. 111]

**Unit Magnification Mirror**

- means a plane or flat mirror with a reflective surface through which the angular height and width of the image of an object is equal to the angular height and width of the object when viewed directly at the same distance except for flaws that do not exceed normal manufacturing tolerances. [FMVSS No. 111]

**Motor Vehicle Equipment**

- means:
  - (a) any system, part, or component of a motor vehicle as originally manufactured;
  - (b) any similar part or component manufactured or sold for replacement or improvement of a system, part, or component, or as an accessory or addition to a motor vehicle; or
  - (c) any device or an article or apparel (except medicine or eyeglasses prescribed by a licensed practitioner) that is not a system, part, or component of a motor vehicle and is manufactured, sold, delivered, offered, or intended to be used only to safeguard motor vehicles and highway users against risk of accident, injury, or death. [Chapter 301]

**Motor Vehicle Safety**

- means the performance of a motor vehicle or motor vehicle equipment in a way that protects the public against unreasonable risk of accidents occurring because of the design, construction, or performance of a motor vehicle, and against unreasonable risk of death or injury in an accident, and includes nonoperational safety of a motor vehicle. [Chapter 301]

**Multipurpose Passenger Vehicle**

- means a motor vehicle with motive power, except a trailer, designed to carry 10 persons or less, which is constructed either on a truck chassis or with special features for occasional off-road operation. [Part 571.3]

**Multifunction School Activity Bus**

- means a school bus whose purposes do not include transporting students to and from home or school bus stops. [Part 571.3]

**NHTSA**

- means the National Highway Traffic Safety Administration.

**Non-locking Retractor**

- means a retractor from which the webbing is extended to essentially its full length by a small external force, which provides no adjustment for assembly length, and which may or may not be capable of sustaining restraint forces at maximum webbing extension. [FMVSS No. 209]

**Occupant Seat**

- means a seat that provides at least one designated seating position. [FMVSS No. 207]

**Occupant Space**

- means the space directly above the seat and footwell, bounded vertically by the ceiling and horizontally by the normally positioned seat back, and the nearest obstruction of occupant motion in the direction the seat faces. [FMVSS No. 217]

### **Outboard Designated Seating Position**

- means a designated seating position where a longitudinal vertical plane tangent to the outboard side of the seat cushion is less than 12 inches from the innermost point on the inside surface of the vehicle at a height between the design H-point and the shoulder reference point, longitudinally between the front and rear edges of the seat cushion. [Part 571.3]

### **Overall Vehicle Width**

- means the nominal design dimension of the widest part of the vehicle, exclusive of signal lamps, marker lamps, outside rearview mirrors, flexible fender extensions, and mud flaps, determined with doors and windows closed and the wheels in the straight-ahead position. [Part 571.3]

### **Parking Brake**

- means a mechanism designed to prevent the movement of a stationary motor vehicle. [Part 571.3]

### **Parking Mechanism**

- means a component or subsystem of the drive train that locks the drive train when the transmission control is placed in a parking or other gear position and the ignition key is removed. [FMVSS No. 105]

### **Passenger Compartment**

- means space within the school bus interior that is between a vertical transverse plane located 30 inches (76 centimeters) in front of the forwardmost passenger seating reference point and a vertical transverse plane tangent to the rear interior wall of the bus at the vehicle centerline. [FMVSS No. 217]

### **Passive Restraint System**

- means a system meeting the occupant crash protection requirements that requires no action by vehicle occupants. [FMVSS No. 212]

### **Pelvic Restraint**

- means a seat belt assembly, or portion thereof, intended to restrain movement of the pelvis. [FMVSS No. 209]

### **Platform**

- means that portion of a platform lift on which the mobility aid or passenger rests while being raised or lowered. [FMVSS No. 403]

### **Platform Lift**

- means a level change device, including any integration of existing vehicle components, and excluding a ramp, used to assist persons with limited mobility in entering or leaving a motor vehicle. [FMVSS No. 403]

**Bridging Device**

- means that portion of a platform lift that provides a transitional surface between the platform surface and the surface of the vehicle floor within the platform threshold area. [FMVSS No. 403]

**Inner Roll Stop**

- means a device that is located at the edge of the platform that a passenger or mobility aid must transverse when entering or exiting the platform from the vehicle floor loading position and that is designed to retain mobility aids on the platform surface during the range of passenger operation. [FMVSS No. 403]

**Outer Barrier**

- means is a particular wheelchair retention device that is located on the edge of the platform, is traversed during ground level loading and unloading, and is designed to retain wheelchairs on the platform surface during the range of passenger operation. [FMVSS No. 403]

**Platform Surface**

- means the passenger-carrying surface of the lift platform. [FMVSS No. 403]

**Pneumatic Tire**

- means a mechanical device made of rubber, chemicals, fabric and steel or other materials, which, when mounted on automotive wheel, provides the traction and contains the gas or fluid that sustains the load. [FMVSS No. 109]

**Post and Roof Bow Panel Space**

- means the area between two adjacent post and roof bows of a bus. [FMVSS No. 217]

**Private Use Lift**

- means a platform lift certified to the requirements for private use lifts and the requirements in FMVSS No. 403 for all platform lifts. [FMVSS No. 403]

**Public Use Lift**

- means a platform lift certified to the requirements for public use lifts and the requirements in FMVSS No. 403 for all platform lifts. [FMVSS No. 403]

**Push-out Window**

- means a vehicle window designed to open outward, to provide for emergency egress. [FMVSS No. 217]

**Radial Ply Tire**

- means a pneumatic tire in which the ply cords which extend to the beads are laid at substantially 90 degrees to the centerline of the tread. [FMVSS No. 109]

**Replaceable Bulb Headlamp**

- means a headlamp comprising a bonded lens and reflector assembly and one or two replaceable headlamp light sources, except that certain headlamps may have a lens designed to be replaced. [FMVSS No. 108]



**Replaceable Light Source**

- means an assembly of a capsule, base and terminals that is designed to conform to the requirements of FMVSS No. 108. [FMVSS No. 108]

**Retractor**

- means a device for storing part or all of the webbing in a seat belt assembly. [FMVSS No. 209]

**Rim**

- means a metal support for a tire or a tire and tube assembly upon which the tire beads are seated. [FMVSS No.109]

**School Bus**

- means a bus that is sold, or introduced in interstate commerce, for purposes that include carrying pre-primary, primary, and secondary school students to and from school or related events, but does not include a bus designed and sold for operation as a common carrier in urban transportation. [Part 571.3]

**School Bus Passenger Seat**

- means a seat in a school bus, other than the driver's seat. [FMVSS No. 222]

**Seat Belt Anchorage**

- means any component, other than the webbing or straps, involved in transferring seat belt loads to the vehicle structure, including, but not limited to, the attachment hardware, seat frames, seat pedestals, the vehicle structure itself, and any part of the vehicle whose failure causes separation of the belt from the vehicle structure. [FMVSS No. 210]

**Seat Belt Assembly**

- means any strap, webbing, or similar device designed to secure a person in a motor vehicle in order to mitigate the results of any accident, including all necessary buckles and other fasteners, and all hardware designed for installing such seat belt assembly in a motor vehicle. [FMVSS No. 209]

**Type 1 Seat Belt Assembly**

- means a lap belt for pelvic restraint. [FMVSS No. 209]

**Type 2 Seat Belt Assembly**

- means a combination of pelvic and upper torso restraints. [FMVSS No. 209]

**Seating Reference Point**

- means the unique design H-point, as defined in SAE J1100 (June 1984), which:
  - (a) Establishes the rearmost normal design driving or riding position of each designated seating position, which includes consideration of all modes of adjustment -- horizontal, vertical, and tilt -- in a vehicle;
  - (b) Has X, Y, and Z coordinates, as defined in SAE J1100 (June 1984), established relative to the designed vehicle structure;

- (c) Simulates the position of the pivot center of the human torso and thigh; and
- (d) Is the reference point employed to position the two-dimensional drafting template with the 95th percentile leg described in SAE J826 (May 1987), or, if the drafting template with the 95th percentile leg cannot be positioned in the seating position, is located with the seat in its most rearward adjustment position. [Part 571.3]

**Service Brake System**

- means the primary brake system used for slowing and stopping a vehicle. [Part 571.3]

**Sliding Window**

- means a bus window designed to open by moving vertically or horizontally to provide emergency egress. [FMVSS No. 217]

**Split Service Brake System**

- means a brake system consisting of two or more subsystems actuated by a single control, designed so that a single failure in any subsystem does not impair the operation of any other subsystem. [FMVSS No. 105]

**Stop Signal Arm**

- means a device that can be extended outward from the side of a school bus to provide a signal to other motorists not to pass the bus because it has stopped to load or discharge passengers. [FMVSS No. 131]

**Stopping Distance**

- means the distance traveled by a vehicle from the start of the brake application to the point at which the vehicle stops. [FMVSS No. 121]

**Tandem Axle**

- means a group or set of two or more axles placed in close arrangement, one behind the other, with the centerlines of adjacent axles not more than 72 inches apart. [FMVSS No. 121]

**Telltale**

- means a display that indicates: the actuation of a device; a correct or defective functioning or condition; or a failure to function. [FMVSS No. 101]

**Truck**

- means a motor vehicle with motive power, except a trailer, designed primarily for the transportation of property or special purpose equipment. [Part 571.3]

**Truck Tractor**

- means a truck designed primarily for drawing other motor vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and the load so drawn. [Part 571.3]

**Trunk Compartment**

- means a space that:
  - (a) is intended to be used for carrying luggage;
  - (b) is wholly separated from the occupant compartment of a passenger car by a permanently attached partition or by a fixed or fold-down seat back and/or

- partition;
- (c) has a trunk lid; and
- (d) is large enough so that the 3-year-old dummy described in Subpart C of Part 572 can be placed inside the trunk compartment and, with the test dummy in the trunk compartment, the trunk lid can be closed and latched. [FMVSS No. 401]

**Trunk Lid**

- means a movable body panel that provides access from outside a passenger car to a trunk compartment. [FMVSS No. 401]

**Unloaded Vehicle Weight**

- means the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo, occupants, or accessories that are ordinarily removed from the vehicle when they are not in use. [Part 571.3]

**Upper Torso Restraint**

- means a portion of a seat belt assembly intended to restrain movement of the chest and shoulder regions. [FMVSS No. 209]

**Variable Proportioning Brake System**

- means a system that automatically adjusts the braking force at the axles to compensate for vehicle static axle loading and/or dynamic weight transfer between axles during deceleration. [FMVSS No. 105]

**Vehicle Identification Number**

- means a series of Arabic numbers and Roman letters which is assigned to a motor vehicle for identification purposes. [Part 565]

**Wheelchair**

- means a wheeled seat frame for the support and conveyance of a physically disabled person, comprised of at least a frame, seat, and wheels. [FMVSS No. 222]

**Wheelchair Occupant Restraint Anchorage**

- means the provision for transferring wheelchair occupant restraint system loads to the vehicle structure. [FMVSS No. 222]

**Wheelchair Retention Device**

- means a device designed to prevent wheelchairs from leaving the edge of the platform used for ground level loading and unloading during the range of passenger operation. [FMVSS No. 403]

**Wheelchair Sacrament Anchorage**

- means the provision for transferring wheelchair sacrament device loads to the vehicle structure. [FMVSS No. 222]

**Wheelchair Sacrament Device**

- means a strap, webbing, or other device used for securing a wheelchair to a motor vehicle, including all necessary buckles and other fasteners. [FMVSS No. 222]

## **SUMMARY DESCRIPTION AND PURPOSE OF ALL FEDERAL MOTOR VEHICLE SAFETY STANDARDS**

### **STANDARD NO. 101 “Controls and Displays” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies requirements for the location, identification, and illumination of motor vehicle controls and displays. Its purpose is to ensure the accessibility and visibility of motor vehicle controls and displays and to facilitate their selection under daylight and nighttime conditions, in order to reduce the safety hazards caused by the diversion of the driver's attention from the driving task, and by mistakes in selecting controls.

### **STANDARD NO. 102 “Transmission Shift Lever Sequence, Starter Interlock, and Transmission Braking Effect” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies the requirements for the transmission shift lever sequence, a starter interlock, and for a braking effect of automatic transmissions, to reduce the likelihood of shifting errors, starter engagement with vehicle in the “drive” position, and to provide supplemental braking at speeds below 25 miles per hour.

### **STANDARD NO. 103 “Windshield Defrosting and Defogging Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies requirements for windshield defrosting and defogging systems to ensure driver visibility under adverse weather conditions.

### **STANDARD NO. 104 “Windshield Wiping and Washing Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies requirements for windshield wiping and washing systems to ensure driver visibility under adverse weather conditions.

### **STANDARD NO. 105 “Hydraulic Brake Systems” - Applies to Passenger Cars, Multipurpose**

### **Passenger Vehicles, Trucks, and Buses Equipped with Hydraulic Service Brake Systems.**

This standard specifies requirements for hydraulic and electric service brake and associated parking brake systems. Its purpose is to ensure safe braking performance under normal and emergency conditions.

### **STANDARD NO. 106 “Brake Hoses” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, Trailers, and Motorcycles, and Hydraulic, Air and Vacuum Brake Hoses, Brake Hose Assemblies, and Brake Hose End Fittings.**

This standard specifies labeling and performance requirements for motor vehicle brake hoses, brake hose assemblies, and brake hose end fittings. Its purpose is to reduce brake system failure from pressure or vacuum loss due to hose or hose assembly rupture.

### **STANDARD NO. 108 “Lamps, Reflective Devices, and Associated Equipment” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, Trailers, and Motorcycles, and Lamps, Reflective Devices, and Associated Equipment for Replacement.**

This standard specifies requirements for original and replacement lamps, reflective devices, and associated equipment, to provide adequate illumination of the roadway and enhance conspicuity of motor vehicles on the public roads.

### **STANDARD NO. 109 “New Pneumatic Tires” - Applies to Passenger Cars.**

This standard specifies tire dimensions and laboratory test requirements for bead unseating resistance, strength, endurance, and high-speed performance; defines tire load ratings; and specifies labeling requirements for passenger car tires.

### **STANDARD NO. 110 “Tire Selection and Rims” - Applies to Passenger Cars.**

This standard specifies requirements for tire selection to prevent tire overloading.

### **STANDARD NO. 111 “Rearview Mirrors” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, School Buses, and Motorcycles.**

This standard specifies requirements for the performance and location of inside and outside rearview mirrors. Its purpose is to ensure that the driver has a clear and reasonably unobstructed view of areas around the vehicle.

### **STANDARD NO. 113 “Hood Latch System” - Applies Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies the requirements for providing a hood latch system(s).

### **STANDARD NO. 114 “Theft Protection” - Applies to Passenger Cars, Trucks, and Multipurpose Passenger Vehicles with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements for theft protection, to reduce the incidence of crashes resulting from unauthorized use of a motor vehicle and to reduce the incidence of crashes resulting from rollaway of parked vehicles.

**STANDARD NO. 116 “Motor Vehicle Brake Fluids” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, Trailers, Motorcycles, and All Fluid for Use in Hydraulic Brake Systems of Motor Vehicles.**

This standard specifies requirements for fluids for use in hydraulic brake systems of motor vehicles, containers for these fluids, and labeling of the containers. Its purpose is to reduce failures in the hydraulic braking systems of motor vehicles that may occur because of the manufacture or use of improper or contaminated brake fluid.

**STANDARD NO. 117 “Retreaded Pneumatic Tires” - Applies to Passenger Cars and Retreaded Tires.**

This standard specifies performance, labeling, and certification requirements for retreaded pneumatic passenger car tires. Its purpose is to require retreaded pneumatic passenger car tires to meet safety criteria similar to those for new pneumatic passenger car tires.

**STANDARD NO. 118 “Power-Operated Window, Partition, and Roof Panel Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, and Trucks with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements for power-operated window, partition, and roof panel systems to minimize the likelihood of death or injury from their accidental operation.

**STANDARD NO. 119 “New Pneumatic Tires for Vehicles Other Than Passenger Cars” - Applies to Multipurpose Passenger Vehicles, Trucks, Buses, Trailers, and Motorcycles.**

This standard establishes performance and marking requirements for tires. Its purpose is to provide safe operational performance levels for tires used on motor vehicles other than passenger cars, and to place sufficient information on the tires to permit their proper selection and use.

**STANDARD NO. 120 “Tire Selection and Rims for Motor Vehicles Other Than Passenger Cars” - Applies to Multipurpose Passenger Vehicles, Trucks, Buses, Trailers, Motorcycles, Rims for Use on Those Vehicles, and Non-pneumatic Spare Tire Assemblies for Use on Those Vehicles.**

This standard specifies tire and rim selection requirements and rim marking requirements. Its purpose is to provide safe operational performance by ensuring that vehicles to which it applies are equipped with tires of adequate size and load rating and with rims of appropriate size and type designation.

**STANDARD NO. 121 “Air Brake Systems” - Applies to Trucks, Buses, and Trailers Equipped with Air Brake Systems.**

This standard establishes performance and equipment requirements for braking systems on vehicles equipped with air brake systems. Its purpose is to ensure safe braking performance under normal and emergency conditions.

**STANDARD NO. 122 “Motorcycle Brake Systems” - Applies to Motorcycles.**

This standard specifies performance requirements for motorcycle brake systems. Its purpose is to ensure

safe motorcycle braking performance under normal and emergency conditions.

**STANDARD NO. 123 “Motorcycle Controls and Displays” - Applies to Motorcycles.**

This standard specifies requirements for the location, operation, identification, and illumination of motorcycle controls and displays, and requirements for motorcycle stands and footrests. Its purpose is to minimize accidents caused by operator error in responding to the motoring environment by standardizing certain motorcycle controls and displays.

**STANDARD NO. 124 “Accelerator Control Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard establishes requirements for the return of a vehicle's throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of severance or disconnection in the accelerator control system.

**STANDARD NO. 125 “Warning Devices” - Applies to Items of Motor Vehicle Equipment.**

This standard establishes requirements for devices, without self-contained energy sources, that are designed to be carried in buses and trucks with a GVWR greater than 10,000 pounds, and used to warn approaching traffic of the presence of a stopped vehicle, except for devices designed to be permanently affixed to the vehicle. Its purpose is to reduce rear end collisions between moving traffic and disabled vehicles.

**STANDARD NO. 129 - “New Non-Pneumatic Tires for Passenger Cars” - Applies to New Temporary Spare Non-Pneumatic Tires for Use on Passenger Cars.**

This standard specifies tire dimensions and laboratory test requirements for lateral strength, endurance, and high-speed performance; defines the tire load rating; and specifies labeling requirements for non-pneumatic spare tires.

**STANDARD NO. 131 “School Bus Pedestrian Safety Devices” - Applies to School Buses Other than Multifunction School Activity Buses.**

This standard establishes requirements for devices that can be installed on school buses to improve the safety of pedestrians in the vicinity of stopped school buses. Its purpose is to minimize the likelihood of vehicles passing a stopped school bus and striking pedestrians in the vicinity of the bus.

**STANDARD NO. 135 “Passenger Car Brake Systems” - Applies to Passenger Cars Manufactured On or After September 1, 2000.**

This standard specifies requirements for service brakes and associated parking brake systems, to ensure safe braking performance under normal and emergency driving conditions.

**STANDARD No. 138. “Tire Pressure Monitoring Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses that have a GVWR of 10,000 pounds or less, Except Vehicles with Dual Wheels on an Axle, Manufactured on or after Phase-in Dates Specified in the Standard.**

This standard specifies requirements for tire pressure monitoring systems to prevent significant under-inflation of tires and the resulting safety problems.

**STANDARD No. 139. “New Pneumatic Tires for Light Vehicles” - Applies to New Pneumatic Tires for Use on Motor Vehicles (Other than Motorcycles and Low-Speed Vehicles) that a GVWR 10,000 pounds or less.**

This standard specifies tire dimensions, test requirements, labeling requirements and defines tire load ratings.

**STANDARD NO. 201 “Occupant Protection in Interior Impact” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements to afford impact protection for occupants.

**STANDARD NO. 202 “Head Restraints” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements for head restraints to reduce the frequency and severity of neck injury in rear-end and other collisions.

**STANDARD NO. 203 “Impact Protection for the Driver from the Steering Control System” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements for steering control systems that will minimize chest, neck, and facial injuries to the driver as a result of impact.

**STANDARD NO. 204 “Steering Control Rearward Displacement” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements limiting the rearward displacement of the steering control into the passenger compartment, to reduce the likelihood of chest, neck, or head injury.

**STANDARD NO. 205 “Glazing Materials” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, Motorcycles, Slide-In Campers, Pickup Covers, and Glazing Materials Used in Motor Vehicles.**

This standard specifies requirements for glazing materials for use in motor vehicles and items of motor vehicle equipment. Its purpose is to reduce injuries resulting from impact into glazing surfaces, to ensure a necessary degree of transparency in motor vehicle windows for driver visibility, and to minimize the possibility of occupants being thrown through the vehicle windows in collisions.

**STANDARD NO. 206 “Door Locks and Door Retention Components” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, and Trucks.**

This standard specifies requirements for side door locks and side door retention components including latches, hinges, and other supporting means, to minimize the likelihood of occupants being thrown from the vehicle as a result of impact.

**STANDARD NO. 207 “Seating Systems” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard establishes requirements for seats, their attachment assemblies, and their installation to



minimize the possibility of their failure by forces acting on them as a result of vehicle impact.

**STANDARD NO. 208 “Occupant Crash Protection” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, Buses, Pressure Vessels, and Explosive Devices.**

This standard specifies performance requirements for the protection of vehicle occupants in crashes. Its purpose is to reduce the number of deaths of vehicle occupants, and the severity of injuries, by specifying vehicle crashworthiness requirements in terms of forces and accelerations measured on anthropomorphic dummies in test crashes, and by specifying equipment requirements for active and passive restraint systems.

**STANDARD NO. 209 “Seat Belt Assemblies” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies requirements for seat belt assemblies.

**STANDARD NO. 210 “Seat Belt Assembly Anchorages” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard establishes requirements for seat belt assembly anchorages to ensure their proper location for effective occupant restraint and to reduce the likelihood of their failure.

**STANDARD NO. 212 “Windshield Mounting” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard establishes windshield retention requirements for motor vehicles during crashes. Its purpose is to provide for retention of the vehicle’s windshield during a crash, thereby utilizing fully the penetration-resistance and injury-avoidance properties of the windshield glazing materials and preventing the ejection of occupants from the vehicle.

**STANDARD NO. 213 “Child Restraint Systems” - Applies to Items of Motor Vehicle Equipment.**

This standard specifies requirements for child restraint systems used in motor vehicles and aircraft. Its purpose is to reduce the number of children killed or injured in motor vehicle crashes and in aircraft.

**STANDARD NO. 214 “Side Impact Protection” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies performance requirements for protection of occupants in side impact crashes. Its purpose is to reduce the risk to vehicle occupants in side impact crashes by specifying vehicle crashworthiness requirements in terms of accelerations measured on anthropomorphic dummies in test crashes, by specifying strength requirements for side doors, and by other means.

**STANDARD NO. 216 “Roof Crush Resistance” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard establishes strength requirements for the passenger compartment roof. Its purpose is to reduce the crushing of the roof into the passenger compartment in rollover crashes.

**STANDARD NO. 217 “Bus Emergency Exits and Window Retention and Release” - Applies to Buses.**

This standard establishes requirements for the retention of windows other than windshields in buses, and establishes operating forces, opening dimensions, and markings for push-out bus windows and other emergency exits. Its purpose is to minimize the likelihood of occupants being thrown from the bus and to provide a means of readily accessible emergency egress.

**STANDARD NO. 218 “Motorcycle Helmets” - Applies to Items of Motor Vehicle Equipment.**

This standard establishes minimum performance requirements for motorcycle helmets. Its purpose is to reduce deaths and injuries resulting from head impacts to motorcyclists and other motor vehicle users.

**STANDARD NO. 219 “Windshield Zone Intrusion” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard specifies limits for the displacement into the windshield area of motor vehicle components during a crash. Its purpose is to reduce crash injuries and fatalities that result from occupants contacting vehicle components displaced near or through the windshield.

**STANDARD NO. 220 “School Bus Rollover Protection” - Applies to School Buses.**

This standard establishes performance requirements for school bus rollover protection. Its purpose is to reduce the number of deaths and the severity of injuries that result from failure of the school bus body structure to withstand forces encountered in rollover crashes.

**STANDARD NO. 221 “School Bus Body Joint Strength” - Applies to School Buses.**

This standard establishes requirements for the strength of the body panel joints in school bus bodies. Its purpose is to reduce deaths and injuries resulting from the structural collapse of school bus bodies during crashes.

**STANDARD NO. 222 “School Bus Passenger Seating and Crash Protection” - Applies to All School Buses.**

This standard establishes occupant protection requirements for school bus passenger seating and restraining barriers. Its purpose is to reduce the number of deaths and the severity of injuries that result from the impact of school bus occupants against structures within the vehicle during crashes and sudden driving maneuvers.

**STANDARD NO. 223 “Rear Impact Guards” - Applies to Rear Impact Guards for Trailers and Semitrailers Subject to FMVSS 224 Rear Impact Protection.**

This standard specifies requirements for rear impact guards for trailers and semitrailers. Its purpose is to reduce the number of deaths and injuries that occur when light duty vehicles collide with the rear end of trailers and semitrailers.

**STANDARD NO. 224 “Rear Impact Protection” - Applies to Trailers and Semitrailers with a GVWR of 10,000 Pounds or More.**

This standard establishes requirements for the installation of rear impact guards on trailers and semitrailers with a GVWR of 10,000 pounds or more.

**STANDARD NO. 225 “Child Restraint Anchorage Systems” - Applies to Passenger Cars, Trucks and Multipurpose Passenger Vehicles with a GVWR of 8,500 Pounds or Less, and Buses with a GVWR of 10,000 Pounds or Less.**

This standard establishes requirements for child restraint anchorage systems to ensure their proper location and strength for the effective securing of child restraints, to reduce the likelihood of anchorage systems’ failure, and to increase the likelihood that child restraints are properly secured.

**STANDARD NO. 301 “Fuel System Integrity” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses with a GVWR of 10,000 Pounds or Less, and School Buses with a GVWR of 10,000 Pounds or More, and Which Use Fuel with a Boiling Point Above 32 Degrees F.**

This standard specifies requirements for the integrity of motor vehicle fuel systems. Its purpose is to reduce fires that result from fuel spillage during and after motor vehicle crashes.

**STANDARD NO. 302 “Flammability of Interior Materials” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses.**

This standard specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles. Its purpose is to reduce deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes.

**STANDARD NO. 303 “Fuel System Integrity of Compressed Natural Gas Vehicles” - Applies to Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses that have a GVWR of 10,000 Pounds or Less and Use CNG as a Motor Fuel, and to School Buses Regardless of Weight that Use CNG as a Motor Fuel.**

This standard specifies requirements for the integrity of motor vehicle fuel systems using compressed natural gas (CNG), including the CNG fuel systems of bi-fuel, dedicated, and dual fuel CNG vehicles. Its purpose is to reduce deaths and injuries occurring from fires that result from fuel leakage during and after motor vehicle crashes.

**STANDARD NO. 304 “Compressed Natural Gas Fuel Container Integrity” - Applies to Containers Designed to Store CNG as Motor Fuel On-Board Any Motor Vehicle.**

This standard specifies requirements for the integrity of compressed natural gas (CNG) motor vehicle fuel containers. Its purpose is to reduce deaths and injuries occurring from fires that result from fuel leakage during and after motor vehicle crashes.

**STANDARD NO. 305 “Electric-Powered Vehicles: Electrolyte Spillage and Electrical Shock Protection. -- Applies to Electric Vehicles with a Propulsion Power Source Greater Than 48 Volts**

**and a GVWR of 10,000 Pounds or Less.**

This standard specifies requirements for limitation of electrolyte spillage, retention of propulsion batteries during a crash, and electrical isolation of the chassis from the high-voltage system. Its purpose is to reduce deaths and injuries during a crash which occur because of electrolyte spillage from propulsion batteries, intrusion of propulsion battery system components in the occupant compartment, and electrical shock.

**STANDARD NO. 401 “Internal Trunk Release” - Applies to Passenger Cars with a Trunk Compartment.**

This standard establishes the requirement for a trunk release mechanism that makes it possible for a person trapped inside the trunk compartment of a passenger car to escape from the compartment.

**STANDARD NO. 403 “Platform Lift Systems for Motor Vehicles” - Applies to Platform Lifts Designed to Carry Passengers Into and Out of Motor Vehicles.**

This standard specifies requirements for platform lifts used to assist persons with limited mobility in entering or leaving a motor vehicle.

**STANDARD NO. 404 “Platform Lift Installations in Motor Vehicles” - Applies to Motor Vehicles Equipped with a Platform Lift.**

This standard specifies the requirements for vehicles equipped with platform lifts used to assist persons with limited mobility in entering and leaving a motor vehicle.

**STANDARD NO. 500 “Low-Speed Vehicles” - Applies to 4-Wheeled Motor Vehicles that can Operate at Speeds of More Than 20 mph but not More Than 25 mph.**

This standard specifies requirements for low-speed vehicles. Its purpose is to ensure that low-speed vehicles operated on the public streets, roads, and highways are equipped with the minimum motor vehicle safety equipment appropriate for motor vehicle safety.

**SUMMARY DESCRIPTION OF SELECTED SECTIONS OF  
TITLE 49, CODE OF FEDERAL REGULATIONS**

### **Part 510 - Information Gathering Powers.**

This part defines the information gathering powers of NHTSA. The agency may use any of the following means to conduct investigations, inspections, or inquiries: (a) subpoenas; (b) hearings; (c) administrative depositions; (d) general or special orders; and (e) written requests.

### **Part 512 – Confidential Business Information**

This part establishes the procedure by which NHTSA will consider claims that information submitted to the agency, or which the agency obtains, is confidential business information, as described in the Freedom of Information Act.

### **Part 552 - Petitions for Rulemaking, Defect, and Noncompliance Orders.**

This part establishes procedures for the submission and disposition of petitions filed by interested parties to initiate rulemaking or to make a determination that a motor vehicle or item of motor vehicle equipment does not comply with an applicable FMVSS or contains a defect which relates to motor vehicle safety. The purpose of this part is to enable NHTSA to identify and respond on a timely basis to petitions for rulemaking or defect or noncompliance determinations, and to inform the public of the procedures that are followed in response to such petitions.

### **Part 553 - Rulemaking Procedures.**

This part prescribes the rulemaking procedures that apply to the issuance, amendment, and revocation of rules pursuant to Chapter 301, and other provisions of title 49, United States Code, that NHTSA administers.

### **Part 554 - Standards Enforcement and Defects Investigation.**

This part establishes procedures for enforcing FMVSSs and associated regulations, investigating possible safety-related defects, and making noncompliance and defect determinations. The purpose of this part is to inform interested persons of the procedures followed by NHTSA in such instances.

### **Part 555 - Temporary Exemption from Motor Vehicle Safety Standards.**

This part establishes requirements for temporary exemption of certain motor vehicles from compliance with one or more FMVSSs. The purpose of this part is to provide a means by which manufacturers of motor vehicles may obtain temporary exemptions from FMVSSs on the basis of substantial economic hardship, facilitation of the development of new motor vehicle safety or low-emission engine features, or existence of an equivalent overall level of motor vehicle safety.

### **Part 556 - Exemption for Inconsequential Defect or Noncompliance.**

This part sets forth procedures for exempting manufacturers of motor vehicles and replacement equipment from the notice and remedy requirements when a defect or noncompliance is determined to be inconsequential as it relates to motor vehicle safety. The purpose of this part is to enable manufacturers of motor vehicles and replacement equipment to petition NHTSA for exemption from the notification and

remedy requirements due to inconsequentiality of the defect or noncompliance as it relates to motor vehicle safety, and to give all interested persons an opportunity for presentation of data, views, and arguments on the issues of inconsequentiality.

#### **Part 557 - Petitions for Hearings on Notification and Remedy of Defects.**

This part establishes procedures for the submission and disposition of petitions filed by interested parties for hearings on the question of whether a manufacturer has reasonably met its obligation to notify owners, purchasers, and dealers of a safety-related defect or noncompliance with a FMVSS, or to remedy such defect or noncompliance. This part also establishes procedures for holding a hearing on these questions. The purpose of this part is to enable NHTSA to identify and respond on a timely basis to petitions for hearings on whether a manufacturer has reasonably met its obligation to notify or remedy, and to establish the procedures for such hearings.

#### **Part 565 - Vehicle Identification Number Requirements.**

This part specifies the format, content, and physical requirements for a vehicle identification number (VIN) system and its installation, to simplify vehicle identification information retrieval and to increase the accuracy and efficiency of vehicle recall campaigns.

#### **Part 566 - Manufacturer Identification.**

This part requires manufacturers of motor vehicles or items of motor vehicle equipment to which a FMVSS applies to submit to NHTSA identifying information and a description of the item(s) they produce. The purpose of this part is to facilitate the regulation of manufacturers and to aid in establishing a code numbering system for all regulated manufacturers.

#### **Part 567 - Certification.**

The purpose of this part is to specify the content, location of, and other requirements for the certification label or tag to be affixed to motor vehicles, and to provide consumers with information to assist them in determining which of the FMVSSs and Federal Theft Prevention Standards are applicable to the vehicle.

#### **Part 568 - Vehicles Manufactured in Two or More Stages.**

The purpose of this part is to prescribe the method by which manufacturers of vehicles manufactured in two or more stages shall ensure conformity of those vehicles with the FMVSSs and other regulations.

#### **Part 571 - Federal Motor Vehicle Safety Standards.**

This part contains the Federal Motor Vehicle Safety Standards for motor vehicles and items of motor vehicle equipment established under Chapter 301.

#### **Part 573 - Defect and Noncompliance Reports.**

This part specifies requirements for manufacturers to: (a) maintain lists of purchasers and owners notified of defective or noncomplying motor vehicles or items of motor vehicle equipment; (b) report defects in motor vehicles and items of motor vehicle equipment; (c) report noncompliance with FMVSSs; (d) provide quarterly reports on defect and noncompliance notification campaigns; and (e) provide copies of communications with distributors, dealers, and purchasers regarding defects and noncompliance. The purpose of this part is to: (a) inform NHTSA of defective and noncomplying motor vehicles and items of

motor vehicle equipment; (b) obtain information on the adequacy of manufacturers' defect and noncompliance notification campaigns, the corrective action, and owner response; and (c) compare the defect incidence rate among different groups of vehicles.

#### **Part 575 - Consumer Information Regulations.**

This part contains Federal Motor Vehicle Consumer Information Regulations on a variety of subjects, including vehicle stopping distance, truck-camper loading, uniform tire quality grading, and handling and maneuvering characteristics of utility vehicles.

#### **Part 576 - Record Retention.**

This part establishes requirements for the retention by motor vehicle manufacturers of complaints, reports, and other records concerning motor vehicle malfunctions that may be related to motor vehicle safety. The purpose of this part is to preserve records that are needed for the proper investigation, adjudication, or other disposition of possible defects related to motor vehicle safety and instances of nonconformity to FMVSSs and associated regulations.

#### **Part 577 - Defect and Noncompliance Notification.**

This part sets forth requirements for notification to owners of motor vehicles and replacement equipment about the possibility of a defect which relates to motor vehicle safety or a noncompliance with a FMVSS. The purpose of this part is to ensure that notifications of defects or noncompliance adequately inform and effectively motivate owners of potentially defective or noncomplying motor vehicles or items of replacement equipment to have such vehicles or equipment inspected and, where necessary, remedied as quickly as possible.

#### **Part 578 – Civil and Criminal Penalties**

This part specifies the civil penalties for violations of statutes administered by the National Highway Traffic Safety Administration, as adjusted for inflation. This part also sets forth the requirements regarding the reasonable time and the manner of correction for a person seeking safe harbor protection from criminal liability under 49 U.S.C. 30170(a). One purpose of this part is to preserve the remedial impact of civil penalties and to foster compliance with the law by specifying the civil penalties for statutory violations, as adjusted for inflation. The other purpose of this part is to set forth the requirements regarding the reasonable time and the manner of correction for a person seeking safe harbor protection from criminal liability under 49 U.S.C. 30170(a).

#### **Part 579 - Defect and Noncompliance Responsibility.**

This part sets forth the responsibilities of manufacturers for safety-related defects and noncompliances with FMVSSs in motor vehicles and items of motor vehicle equipment. The purpose of this part is to facilitate: (a) the notification of owners of defective and noncomplying motor vehicles and items of motor vehicle equipment; and (b) the remedy of defective and noncomplying vehicles and items of motor vehicle equipment, by equitably reapportioning the responsibility for safety-related defects and noncompliance with FMVSSs among manufacturers of motor vehicles and items of motor vehicle equipment.

### **Part 580 - Odometer Disclosure Requirements.**

This part prescribes rules requiring transferors and lessees of motor vehicles to make written disclosure to transferees and lessors respectively, concerning the odometer mileage and its accuracy. The purpose of this part is to provide purchasers of motor vehicles with odometer information to assist them in determining a vehicle's condition and value by making the disclosure of a vehicle's mileage a condition of title, and by requiring lessees to disclose to their lessors the vehicle's mileage at the time the lessors transfer the vehicle. In addition, the purpose of this part is to preserve records that are needed for the proper investigation of possible violations of the Motor Vehicle Information and Cost Savings Act and any subsequent prosecutorial, adjudicative, or other action.

### **Part 583 - Automobile Parts Content Labeling**

This part establishes requirements for the disclosure of information relating to the countries of origin of the equipment of new passenger motor vehicles. The purpose of this part is to aid potential purchasers in the selection of new passenger motor vehicles by providing them with information about the value of the U.S./Canadian and foreign parts content of each vehicle, the countries of origin of the engine and transmission, and the site of the vehicle's final assembly.

### **Part 586 – Fuel System Integrity Upgrade Phase-In Reporting Requirements.**

This part establishes requirements for manufacturers of passenger cars, multipurpose passenger vehicles, trucks, and buses with a gross vehicle weight rating of 10,000 pounds or less to submit a report, and maintain records related to the report, concerning the number of such vehicles that meet the upgraded requirements of FMVSS No. 301, “Fuel System Integrity.” The purpose of these requirements is to assist NHTSA in determining whether a manufacturer has complied with the upgraded requirements of FMVSS No. 301.

### **Part 588 – Child Restraint Systems Recordkeeping Requirements**

This part establishes requirements for manufacturers of child restraint systems to maintain lists of the names and addresses of child restraint owners. The purpose of this part is to aid manufacturers in contacting the owners of child restraints during notification campaigns conducted in accordance with 49 CFR Part 577, and to aid the National Highway Traffic Safety Administration in determining whether a manufacturer has met its recall responsibilities.

### **Part 590 – Tire Pressure Monitoring System Phase-In Reporting Requirements**

This part establishes requirements for manufacturers of passenger cars, multipurpose passenger vehicles, trucks, and buses with a gross vehicle weight rating of 4,536 kilograms (10,000 pounds) or less, except those vehicles with dual wheels on an axle, to submit a report, and maintain records related to the report, concerning the number of such vehicles that meet the requirements of Standard No.138, “Tire Pressure Monitoring Systems.”

### **Part 596 - Child Restraint Anchorage System Phase-In Reporting Requirements.**

This part establishes requirements for manufacturers of passenger cars, and for trucks and multipurpose passenger vehicles with a gross vehicle weight rating (GVWR) of 3,855 kilograms (8,500 pounds) or less,



and buses with a GVWR of 4,563 kg (10,000 pounds) or less, to submit a report, and maintain records related to the report, concerning the number of such vehicles that meet the requirements of Standard No. 225, "Child Restraint Anchorage Systems."

## **SELECTED REPORTS REQUIRED OF MANUFACTURERS BY NHTSA**

### **Who is a Manufacturer?**

Chapter 301 defines "manufacturer" to mean any person engaged in the manufacturing or assembling of motor vehicles or items of motor vehicle equipment, including any person importing motor vehicles or items of motor vehicle equipment for resale.

### **Vehicle Identification Number - Part 565**

Manufacturers shall submit to NHTSA the unique identifier for each make and type of vehicle it manufactures, at least 60 days before affixing the first VIN using the identifier. Information needed to decipher the characters contained in the VIN must be submitted to NHTSA at least 60 days prior to offering for sale the first vehicle identified by a VIN containing that information.

**Address:** Administrator, National Highway Traffic Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590  
Attn: VIN Coordinator

### **Manufacturer Identification Registration Report - Part 566**

Not later than 30 days after initiation of manufacture of a type of motor vehicle or item of motor vehicle equipment, a manufacturer must submit the following information:

- (a) Full name, address, and State of incorporation, if applicable; and
- (b) Description of each type of motor vehicle, and GVWR range, or item of motor vehicle equipment manufactured.

**Address:** Administrator, National Highway Traffic Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590

### **Defect Information Report - Part 573**

Each manufacturer shall furnish information to NHTSA for each defect in its motor vehicles or items of motor vehicle equipment that either the manufacturer or the NHTSA Administrator has determined is related to motor vehicle safety. The defect report must be filed not more than 5 working days after a defect has been determined to be safety related.

**Address:** Associate Administrator for Safety Assurance  
National Highway Traffic Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590

### **Quarterly Defect Report - Part 573**

Not more than 25 days after the close of each calendar quarter, and for 6 consecutive quarters, manufacturers shall submit to NHTSA information on the number of vehicles or items involved in the recall, the number inspected and repaired, the number inspected and determined not to need a repair, and the number of owners determined to be unreachable.

**Address:** Associate Administrator for Safety Assurance  
National Highway Traffic Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590

## **FEDERAL MOTOR CARRIER SAFETY REGULATIONS**

The Federal Motor Carrier Safety Administration (FMCSA) is a safety and regulatory organization responsible for a national program to ensure safe operation of commercial motor vehicles, including trucks and buses. FMCSA is part of the U.S. Department of Transportation. The agency administers the Federal Motor Carrier Safety Regulations (FMCSRs), as published in Chapter III of title 49, Code of Federal Regulations. FMCSRs prescribe safety and operational requirements for carriers operating in interstate commerce. The FMCSRs apply to the users of motor vehicles, rather than to manufacturers, distributors, or dealers. Federal and state regulatory personnel conduct on-site safety compliance reviews at the motor carriers' place of business to ensure compliance with the FMCSRs.

Through its Motor Carrier Assistance Program (MCSAP), the agency offers grants to States to enforce the safety regulations through roadside safety inspections. To be eligible for funding, States participating in the MCSAP must adopt federal safety regulations for intrastate operations.

In addition to vehicle safety regulations, FMCSA administers the national Commercial Driver's License program and the Federal hours of service requirements. It also establishes the medical fitness requirements for commercial motor vehicle operators.

Additional information may be obtained from:

Federal Motor Carrier Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590

[www.fmcsa.dot.gov](http://www.fmcsa.dot.gov)

## **CANADIAN MOTOR VEHICLE SAFETY STANDARDS**

Originally patterned after U.S. Federal Motor Vehicle Safety Standards, the Canadian safety regulations relate to the design and performance of passenger cars, multipurpose passenger vehicles, buses, trucks, trailers, minivans, motorcycles, and snowmobiles. The standards also limit motor vehicle exhaust emissions.

Canadian regulations require all motor vehicle manufacturers or distributors to apply the national safety mark to every classified vehicle produced after the effective date, accompanied by a label certifying compliance with all applicable Canadian Motor Vehicle Safety Standards.

Canada's Motor Vehicle Safety Standards first became effective on January 1, 1971. Additional standards have been added since that date, and have been updated and amended.

Additional information may be obtained from:

Transport Canada  
Tower C, Place de Ville  
330 Sparks Street  
Ottawa, Ontario

K1A 0N5

[www.tc.gc.ca](http://www.tc.gc.ca)

## **School Bus Manufacturers Technical Council**

### **Goals & Objectives**

The School Bus Manufacturers Technical Council (SBMTC), an organization within the National Association of State Directors of Pupil Transportation Services, was established in 1995. SBMTC operates and functions as the industry's technical advisor. The school transportation industry requires a method of technical communication, and SBMTC is the tool to accomplish this purpose. The council provides a forum in which council members can address technical and government-related issues concerning the manufacture and acceptability of school bus chassis and school bus bodies.

The goals and objectives for which SBMTC is organized are:

1. Encourage and promote safety in the design of school buses;
2. Assist the National Association of State Directors of Pupil Transportation Services through communication of design trends, historical data, and other information pertaining to the pupil transportation industry;
3. Communicate to member companies actions by the National Highway Traffic Safety Administration and other governmental agencies as they affect the school bus industry;

4. Keep open communications between school bus chassis and bus body manufacturers on technical issues;
5. Develop and issue appropriate "Position Papers;"
6. Assist the National Conference on School Transportation; and
7. Work jointly with other associations and societies to assist in the achievement of SBMTC goals and objectives.