

Required Crash Protection Attributes for Various Bus Typesⁱ

Type of Bus	Crashworthiness ⁱⁱ (Joint Strength and Roof Rollover)	High Backed Padded Seats ⁱⁱⁱ	Minimum Seat Spacing ^{iv}	Seat Belts
Large school bus GVWR > 10,000 lbs	Yes*	Yes*	Yes*	No
Small school bus GVWR ≤ 10,000 lbs	Yes*	Yes*	No	Yes*
Motor coach	Yes**	Yes**	No	No
Specialty bus ^v	No	Varies	No	No
15-passenger van	No	No	No	Yes*

(*Federal Standard)

(**Industry Standard)

In addition to the federal bus safety rules listed above, 15-passenger vans are exempt from a number of federal safety standards that apply to multipurpose passenger vehicles that are similar in weight, such as vans and larger SUVs.^{vi} Fifteen-passenger vans do not have to comply with a number of key crash protection safety standards that protect the occupants of automobiles and multipurpose passenger vehicles:^{vii}

- **FMVSS 201: Occupant Protection in Interior Impact** (15-passenger vans exempted from upper interior head protection). This standard specifies requirements to afford impact protection for occupants.^{viii}
- **FMVSS 202: Head Restraints** (15-passenger vans exempted from placing head restraints in rear seating positions). This standard specifies requirements for head restraints to reduce the frequency and severity of neck injury in rear-end and other collisions.^{ix}
- **FMVSS 206: Door Locks and Door Retention Components.** 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.^x
- **FMVSS 214: Side Impact Protection** (15-passenger vans exempted from dynamic test). 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.^{xi}
- **FMVSS 216: Roof Crush Resistance.** 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 accidents.^{xii}

- 49 CFR 575.105: **Rollover Warning Label.** This section requires manufacturers of utility vehicles to alert the drivers of those vehicles that they have a higher possibility of rollover than other vehicle types and to advise them of steps that can be taken to reduce the possibility of rollover and/or to reduce the likelihood of injury in a rollover.^{xiii}

However, 15-passenger vans are required to have safety belts installed, as are automobiles, multipurpose passenger vehicles and small school buses. Larger school buses and motor coaches are not subject to this requirement.^{xiv}

ⁱ National Transportation Safety Board, Highway Special Investigation Report, *Pupil Transportation in Vehicles Not Meeting Federal School Bus Standards*, June 8, 1999, NTSB/SIR-00/02 at 9.

ⁱⁱ These are required by the following federal standards: FMVSS 220: School Bus Rollover Protection. 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, *see* 49 CFR § 571.220; FMVSS 221: School Bus Body Joint Strength. 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, *See* 49 CFR § 571.221.

ⁱⁱⁱ FMVSS 222: School Bus Seating and Crash Protection. 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, *See* 49 CFR § 571.222.

^{iv} *See id.*

^v *Specialty bus* is the industry term for the small buses that are commonly used as shuttle or tour buses. No Federal standard provides definition for a specialty bus or motor coach. *Id.* at 2.

^{vi} *See* Appendix A: “Applicability of FMVSS to Multipurpose Passenger Vehicles (MPVs), 15-Passenger Vans (15-P), Small School Buses (SSB) and Large School Buses (LSB).”

^{vii} “Multipurpose Passenger Vehicle (MPV) means a motor vehicle with motive power, except a low-speed vehicle or 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.” *See* 49 CFR § 571.3.

^{viii} *See* 49 CFR § 571.201.

^{ix} *See* 49 CFR § 571.202.

^x *See* 49 CFR § 571.206.

^{xi} *See* 49 CFR § 571.214.

^{xii} *See* 49 CFR § 571.216.

^{xiii} *See* 49 CFR § 575.105.

^{xiv} But even this apparent safety advantage may not be as significant as it may appear, as the NTSB stated in its 1989 study *Crashworthiness of Small Poststandard School Buses*, “Unrestrained passengers on a school bus are less likely to be ejected than occupants of passenger cars because they are not seated next to a door, windows are usually partitioned, seatbacks are usually closer and higher, and passengers are farther from the windshield.” NTSB/SS-89/02.