

RISK MANAGEMENT BULLETIN

No. 108

March 22, 2007

Fifteen Passenger Van Loss Control Guidelines

Fifteen passenger vans make up about 0.25 percent of the passenger vehicle fleet in the United States. They are frequently used to transport school sports teams, van pools, church groups, and other groups. Although they are involved in a proportionate number of fatal accidents compared to their percentage in the fleet, they are involved in a higher number of single-vehicle accidents involving rollovers. Various factors have been associated with 15 passenger van rollovers, particularly occupancy level and vehicle speed. Because these vans are designed to carry no more than 15 passengers, LGIT is particularly concerned about occupancy level and resulting rollovers. Fully or nearly full loading a 15 passenger van causes the center of gravity to shift rearward and upward. This increases the vehicle's propensity to rollover, and could increase the potential for driver loss of control when engaging in emergency maneuvers.

The tests (details not included in the scope of this report) used to examine this propensity include measurement of:

- Static Stability Factors;
- Lateral Acceleration;
- Oversteer / Understeer Properties;
- Road Edge Recovery maneuvers;
- Center of Gravity; and
- Reverse Steer Maneuvers.

Several vehicle models are on the road. The make/models include:

- Chevrolet Express 3500;
- GMC Savanna G3500;
- Dodge Ram Van/Wagon B3500;
- Dodge Ram Wagon B350;
- Ford Econoline E350;
- Ford Club Wagon E350; and
- GMC Rally/Vandura G3500.

Founding Organizations



In light of the potential for personal injury, LGIT discourages the purchase and use of 15 passenger vans. If you have one or anticipate purchasing one, the following guidelines are recommended:

- Remove the last two rows of seats to limit passenger loads to eight.
- Do not carry cargo on the roof.
- Do not tow a trailer.
- Include a tire pressure measurement in each pre-trip inspection.
- Load forward seats first.
- Require all passengers and the driver to wear proper safety restraints.
- Limit drivers to those with training and experience in operating 15 passenger vans. A Commercial Driver's License may be desirable.
- Be mindful of weather conditions.
- Do not allow use of alcohol.
- Travel with headlights on, day or night.
- Require the driver to be properly rested, and speeds should be limited to the legal speed limit or slower, depending on conditions.
- Driver training should include safe recovery techniques to maintain control if wheels leave the roadway (in other words, understand the road edge recovery maneuver).
- Since this van is substantially longer and wider than a car, allow more space and rely on side view mirrors.
- Realize the need for additional braking time and distance.
- Keep the fuel tank full to lower the center of gravity.
- Equip the van with dual tandem rear tires.

Technological systems exist which may help control stability problems. As of this writing all are not currently available. However attempt to include:

Traction control;
Electronic stability control;
Tire pressure monitoring system;
Lane departure systems;
Antilock brakes; and/or
All Wheel Drive.

LGIT wishes to emphasize that these guidelines are presented as loss control tools, and should not be used as a substitute for engineering analysis or opinions. This is not a legal document, and therefore should not be considered or substituted for legal advice.

This bulletin is intended to be merely informational and is not intended to be used as the basis for any compliance with Federal, State or local laws, regulations or rules, nor is it intended to substitute for the advice of legal counsel.