

Crashes and Related Fatalities to Occupants of 15-Passenger Vans - Calendar Year 2016

May 2018

Background

In the early 1970's a variety of schools, colleges, universities, church groups, day care centers and other similar organizations expressed a desire for large, low cost passenger vans. Chrysler Corporation responded to this emerging market opportunity by introducing the Dodge Maxi Wagon as an affordable 15-passenger van. Unfortunately, instead of designing a vehicle from the ground up for this intended service, they took the basic chassis from their cargo/utility van, that was already in production, lengthened the body, while keeping the same wheel base, and added seating to accommodate 15 occupants. This resulted in an overhang of over five and a half feet past the rear axle. This approach allowed them to get to the market quickly and economically. The vans proved to be immensely popular.



- Dodge Maxi 15-passenger van -

By 1979 Ford joined in by introducing their 15-passenger van. It also was simply a "retro-fit" to their existing cargo/utility van. Rather than designing a completely new vehicle, Ford used the base model Econoline van and added roughly 20 inches to accommodate seating for 15 occupants.



- Ford Econoline 15-passenger van -

General Motors entered the 15-passenger market much later. Around 1990 they expanded their 12-passenger van to 15-passengers. Although GM did lengthen the vehicle's wheel base, they did little else to modify the design.



- Chevrolet Express 15-passenger van -

Over the years, the basic design of these vehicles changed very little. In fact, changes that were made were principally cosmetic.

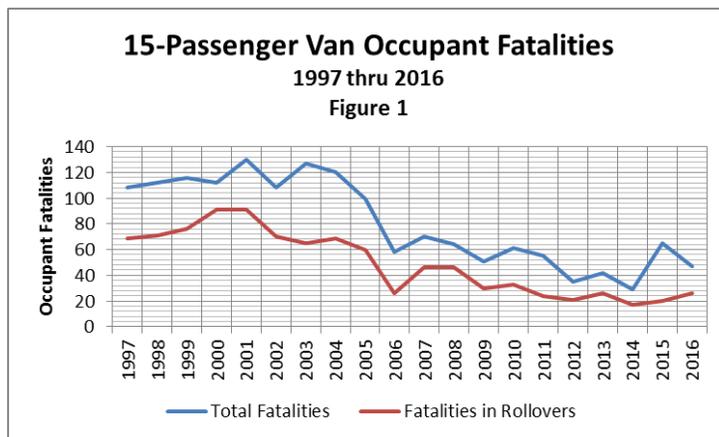
From the very beginning the manufacturers knew that these vehicles had a very high center of gravity with a high percent of the total vehicles weight being carried on the rear tires. This causes the vehicle to be prone to "fishtailing" and rollover. Indeed, as the vehicles are loaded to capacity, the center of gravity moves upward and rearward making the vehicle increasingly difficult to handle and keep under control. This propensity for loss of control and rollover coupled with the general lack of crash worthiness and safety features gave these vehicles the reputation of being one of the most dangerous, if not the most dangerous passenger vehicle on the road. Unfortunately most of the general public was unaware of this until tragedy struck home.

Prior to the early 2000's, the vans fell into a bit of a "regulatory vacuum". At that time, they were above the gross weight and occupant capacity of most all the federal passenger vehicle safety regulations, yet they were below the limit of being required to meet federal safety regulations for buses. Thus, unbeknownst to the general public buying and riding in these vehicles, the establishment

of safety features and design, crash worthiness, testing, reporting, etc. fell to the discretion of the manufacturer. This was not addressed by the U.S. Department of Transportation's highway agency (NHTSA) for almost 30 years. Around 2001, after many horrific, gruesome crashes and mounting public pressure, NHTSA began addressing the problems with the vans and began expanding federal safety standards to include 15-passenger vans.

They began issuing safety alerts in 2001 and in the years since, expanded many existing federal motor vehicle safety standards to include 15-passenger vans and added additional federal motor vehicle safety standards. These included ...

- Inclusion of 15-passenger vans in NHTSA's New Car Assessment Program (NCAP), including the associated testing.
- Requirement to have lap and shoulder belts in all seating positions.
- Upgraded door locks and door retention components (FMVSS No. 206).
- Side impact protection (FMVSS No. 214).
- Tire pressure monitoring systems (FMVSS No. 138).
- Electronic stability control (FMVSS No. 126).



All these were phased in for 15-passenger vans starting around 2004 and were fully implemented by around model year (MY) 2006. But, by then there were approximately 500,000 of these vans in use, most lacking the new safety improvements.

As a result of the “safety alerts”, the various safety upgrades and general public awareness, the annual fatalities in crashes involving these vans began to drop (See Fig 1). They went from a high of 130 in 2001 to

58 in 2006 ... a dramatic drop in occupant fatalities. Since 2006 the annual decline in fatalities has been less dramatic. In fact, since 2012 there has been little to no drop in the average number of fatalities.

Two additional new federal motor vehicle safety standards (FMVSS 216 – Improved Roof Crush Resistance and FMVSS 226 – Ejection Mitigation) were established and scheduled to go into effect for passenger vehicles including 15-passenger vans. They were to be implemented in 15-passenger vans in September 2016 and September 2017 respectively. To date, NHTSA has not confirmed that these two new standards have actually been incorporated in new 15-passenger vans manufactured after the mandated implementation dates.

Chrysler discontinued production of its versions of the vans in 2002. Ford discontinued production of the Econoline 15-passenger van in 2014 and began production of their “Transit” passenger van with optional 15 passenger seating. GM continues to manufacture their versions of the vans.

As of July 1, 2015 there were about 648,000 15-passenger vans registered. Approximately 63% of these were Ford Econo Club E-350 vans¹.

¹ As reported on the Insurance Institute for Highway Safety web site – June 2017

Summary²

In 2016 there were 72 15-passenger vans involved in fatal crashes. These crashes involved a total of 142 vehicles, including the 72 15-passenger vans. A total of 89 people were killed in these crashes; 47 were 15-passenger van occupants, 29 were occupants in other involved vehicles and 13 were non-occupants (pedestrians/bicyclists). Those occupants of 15-passenger vans that were killed ranged in age from 4 to 83 years old, 28 were male and 19 were female.

FARS 2014-2016 Comparison				
Table 1				
Fatal 15-Passenger Van Crashes				
	2016	2015	2014	
Total No. of Vans	72	87	59	
Total Van Occpt. Deaths	47	65	29	
Total Single Vehicle Crashes	27	32	21	
Total Single Vehicle Occpt. Deaths	23	37	11	
Total Rollover Crashes	20	23	14	
Total Rollover Occpt. Deaths	26	28	17	
Total Sing. Veh. Rollover Crashes	10	14	4	
Total Sing. Veh. Rollover Occpt. Deaths	15	20	7	

Table 1 lists the number of crashes by type and related occupant fatalities from 2014 through 2016.

Discussion

15-passenger vans are somewhat unique as a passenger vehicle. They are frequently used by churches, community organizations, universities, government agencies, etc. Some are used for a variety of shuttle services including transportation of migrant workers. Most are not used daily as personal vehicles as are cars, light trucks and SUVs.

Although nothing can be done about the design, instability and the crash resistance of 15-passenger vans on the road today, the number of crashes and fatalities can be reduced by implementing safer practices by those that operate and ride in these vans. Education on safe operating practices for those that operate or ride in these vans and then diligent attention to those safety practices are needed. Many 15-passenger van crashes and fatalities can be traced to one or more of the following:

- Lack of seatbelt/restraint use
- Vehicle age and lack of related safety features
- Driver training, skills, experience, impairment, and/or distraction
- Loading/overloading of the vehicle
- Tire safety

The importance of each of these areas is described below.

Lack of seatbelt/restraint Use³

- Overall, only approximately 54% of all the occupants of 15-passenger vans in fatal crashes in 2016 were seat belted/restrained. Table 2 shows the percent restrained by seating position for

² The 2016 crash and fatality data in the report has been extracted from 2016 FARS as posted by NHTSA in October 2017. Data prior to 2016 was extracted from prior FARS data as posted by NHTSA unless otherwise noted.

³ In the following restraint usage percentages, unknown/unreported restraint use has been proportionally distributed between restrained and unrestrained counts.

calendar years 2014 through 2016. In 2016, approximately 25% of those occupants that were not restrained in fatal 15-passenger van crashes were killed while approximately 8% of those occupants that were restrained died in the crash.

- As shown in Table 2, in 2016 approximately 77% of the drivers in fatal 15-passenger van crashes were restrained while approximately 71% of the front seat passengers and only approximately 42% of the rear seating passengers were restrained.

FARS 2014-2016 Comparison					
Table 2					
Fatal 15-Passenger Van Crashes					
Percent of Occupants Restrained					
		2016	2015	2014	
Drivers		77%	90%	87%	
Front Seat Passengers		71%	77%	82%	
Rear Seat Passengers		42%	41%	55%	
Total		54%	57%	66%	

- Of those occupants of 15-passenger vans killed in 2016, approximately 72% were not restrained.
- In fatal 15-passenger van rollover crashes in 2016, approximately 36% of those occupants that were not restrained were ejected and of those, 63% were killed.
- Many people apparently feel as though they are on a “bus” when they get into a 15-passenger van. For years actual buses have had to meet structural standards expressly intended to protect occupants in crashes. These include specifications for the joint strength of body panels, roof rollover bars and closely spaced, high backed padded seating. Most buses must also have steel side beams and thick sheets of steel on both sides of the frame. Unfortunately, 15-passenger vans lack many of these features.
- Occupants in 15-passenger vans seem to feel secure and safe due to the size of the vehicle, much like they would in an actual “bus”. A key difference is many people who would normally “buckle-up” in their family sedan or SUV, tend not to when riding in a 15-passenger van. Seat belts are provided in these vehicles for a reason. They are to be used by all riding in the van.
- Nationally, seatbelt usage in passenger vehicles in 2016 was 90.1%⁴ while seatbelt usage in 15-passenger vans involved in fatal crashes in 2016 was approximately 54%. Had all the occupants of 15-passenger vans in fatal crashes been restrained, an estimated 20 to 25 lives might have been saved.
- Looking at the percent restrained, by seating position, in Table 2 indicates that there has been little change in the percent restrained from 2014 through 2016. This seems to show a complacency by those that operate and/or ride in these vans. The lack of restraint usage and related fatality rate is considered unacceptable and must be improved.
- Despite all the other safety issues, increasing seat belt use is still the single most effective thing that can easily be done to save lives and reduce injuries on America’s highways. Seat belts are without a doubt the most effective safety devices in vehicles today.⁵

⁴ NHTSA Traffic Safety Facts – Research Note – No DOT HS 812 456 - “2016 Fatal Motor Vehicle Crashes: Overview - issued October 2017.

⁵ Taken from an Arizona Dept. of Public Safety article of Seat Belt Safety posted in March 2017.

Vehicle Age and Related Safety Features

- 15-passenger vans older than model year 2006 lack many of the safety features of newer vans such as electronic stability control, tire pressure monitoring, lap/shoulder belts in all seating positions, improved side impact protection, upgraded door locks and door retention devices, etc.
- In 2016, over 65% of the vans involved in fatal crashes and over 80% of all the 15-passenger van occupant fatalities occurred with vans that were older than model year 2006.
- In fatal crashes, nearly 20% of the van occupants in vans older than model year 2006 were killed while less than 10% of the van occupants in vans model year 2006 and newer were killed. If only the newer vans had been on the road 15 to 20 lives might have been spared.
- For the years 2007 through 2016 there have been 267 15-passenger vans, model year 2005 and older, involved in fatal single vehicle crashes. 123 of these vans, or approximately 46%, rolled over. During the same period of time there were 61 15-passenger vans, model year 2006 and newer, involved in fatal single vehicle crashes. 9 of these vans, or approximately 15%, of these vans rolled over. This indicates that 15-passenger vans model year 2006 and newer are significantly less prone to rollover in single vehicle crashes.
- For fatal 15-passenger van crashes in 2016, over 25% of the van occupants were killed when the van rolled over while approximately 10% of the occupants were killed when the van did not roll over.
- Had all 15-passenger vans used for extended trips in 2016 been model year 2006 or newer there would have, no doubt, been fewer 15-passenger van crashes and related deaths.

Driver Training, Skills, Experience, Impairment and/or Distraction

- 15-passenger vans are larger than most other passenger vehicles, and an inexperienced driver may have difficulty negotiating corners, backing up or performing other maneuvers.
- A 15-passenger van is substantially longer and wider than a car, thus it:
 - ✓ Requires more space and additional reliance on the side-view mirrors for changing lanes.
 - ✓ Does not respond as well to abrupt steering maneuvers, such as might occur with a blowout or dropping off the edge of the pavement.
 - ✓ Requires additional braking time/distance.
- The incident rate of fatal single vehicle crashes with no occupant fatalities may be indicative of the lack of driver skills, training, experience impairment and/or distraction. In 2016 there were 11 fatal 15-passenger van single vehicle crashes with no occupant fatalities. 12 pedestrians were killed in these crashes.
- During 2016 American Center for Van and Tire Safety collected news articles and accident reports on 15-passenger van crashes. This was done by way of a variety of “Google Alerts”. In

all, information was gathered on 15 fatal 15-passenger van crashes. These accounted for 22 occupant fatalities or approximately 47% of all 15-passenger van occupant fatalities for 2016. In 10 or 67% of these crashes the driver/van carried the primary responsibility for the crash.

In addition, from the 2016 FARS “distraction” (DISTRACT) data file and the “impairment” (DRIMPAIR) data file it’s recorded that 16 or 22% of all the 15-passenger van drivers involved in fatal accidents in 2016 were either distracted or impaired.

There were many reasons for this; the driver fell asleep, the driver was distracted by one of the occupants, the van went off the edge of the pavement, the driver overcompensated and lost control, the driver was impaired with drugs or alcohol, the driver was driving too fast for conditions (such as snow covered or icy roads), a tire failed causing the van to go out of control, the driver was on a cell phone or texting, etc. The importance of driver training and attention to driving cannot be over emphasized.

Loading/overloading the Vehicle

- For the years 2007 through 2016 there have been at least 23 fatal 15-passenger van crashes where there were more than 15 occupants in the van. Approximately 70% of these vans rolled over and 54 of the van occupants were killed.
- In 2016 there was one 15-passenger van with more than 15 occupants involved in a fatal crash. The crash took place June 18 at 12:30 AM in Virginia on I-95. It was a 1998 Dodge van carrying 15 passengers plus the driver. The van’s occupants were immigrants from Guatemala and Mexico who had been harvesting blueberries in North Carolina. They were on their way to New Jersey to harvest more blueberries. The van was headed north when it ran off the left side of the road. It then veered back across two lanes and rammed a Toyota Camry. The van continued off the road to the right. The driver then overcorrected to the left and the van overturned five or six times. Six passengers in the van were ejected and killed including a mother and her 5 year old son.  – June 18, 2016 – Virginia - Only the driver and front seat passenger were wearing seatbelts. According to State Police, driver fatigue was likely a factor.
- According to a NTSB Safety Report, “data show that the rollover rate for fully loaded 15-passenger vans is about three times the rollover rate of vans with fewer than 5 passengers.” “Fully loading or nearly loading a 15-passenger van causes the center of gravity to move rearward and upward, which increases the vehicle’s rollover propensity and could increase the potential for driver loss of control in emergency maneuvers.”⁶ Overloading a 15-passenger van exacerbates these issues.
- Overloading the van can also cause overloading of the tires on the van which can lead to catastrophic tire failure.

⁶ National Transportation Safety Board Safety Report – “Evaluation of the Rollover Propensity of 15-passenger Vans” dated October 15, 2002.

- Every year it seems there are one or more crashes of 15-passenger vans where the van is “overloaded” with occupants. Such overloading causes the vehicle to be much more prone to rollover, decreases vehicle stability and safe handling response. In addition, it leaves those in excess of 15 occupants without seatbelts. It is imperative that there should be a simple rule, occupancy of more than 15 people should never be allowed in any circumstances.

Tire Safety

- Many of the 15-passenger vans registered in the US are owned by churches and other community groups and organizations. As such, they may not be used on a daily basis. In a 2008 study of 15-passenger vans in Knoxville TN, it was found that the median annual mileage of the vans identified in the study was approximately 6,500 miles per year⁷. With such low annual mileage tires don’t experience a great deal of tread wear. In fact, 37% of the vans identified in that study had tires that were more than 6 years old while nearly 17% of the vans had tires that were more than 10 years old. The age of the tire is often overlooked if it appears in “good” shape however this can be a deadly mistake.
- Since many of the vans are owned by various organizations, they may not get the same degree of attention as a vehicle owned by an individual. Tire condition, inflation pressure, age, recall status, etc. may go unnoticed.
- In 2016 (as in 2015) there were two 15-passenger vans involved in fatal crashes that had tires as a “factor” in the crash. 3 occupants were killed in these crashes. The number of 15-passenger van fatal crashes where tires were a factor has been significantly less in 2015 and 2016 than in previous years. Hopefully this trend will continue!
- For the sake of clarification, tire safety is a much broader issue than just with 15-passenger vans. Tire related vehicle crashes can occur when a tire unexpectedly blows out, explodes, loses its tread or similarly fails. Such a failure can have a variety of causes including the following⁸:
 1. Improper tire size and/or load rating for the vehicle.
 2. Inadequate tread depth due to excessive or uneven wear.
 3. Over/under inflation pressure.
 4. Damage from various road hazards and/or debris.
 5. Tire manufacturing and/or design defects.
 6. Overloaded vehicle.
 7. Deterioration of the tire due to “aging”.

As such, tire safety is not just critically important to 15-passenger van safety, but is critically important to the safety of all passenger vehicles.

Recommendations

This report is intended to reinforce the fact that 15-passenger vans continue to be one of the most dangerous passenger vehicle on the road today, especially when loaded to their design capacity or

⁷ American Center for Van and Tire Study – “Preliminary Study of 15-passenger Van Mileage and Tire Age in Knoxville, Tennessee” – issued April, 2008.

⁸ See “Passenger Vehicle Tire Related Crashes and Occupant Fatalities – Calendar Year 2011” a paper by American Center for Van and Tire Safety for more info on subject.

beyond. When accidents do occur with these vehicles, they are frequently horrific in nature due to the high number of occupants and the all too frequent catastrophic damage to the vehicle.

As mentioned earlier in this report, since 2012 there has been little to no drop in the annual average number of fatalities in 15-passenger vans.

Indeed, Table 1A shows that the various categories of van crashes and fatalities for 2016 were at or near the past 5 year average. This indicates complacency on the part of the motoring public and the

FARS 2012-2016 Comparison							
Table 1A							
Fatal 15-Passenger Van Crashes							
	5 Yr. Avg	2016	2015	2014	2013	2012	
Total No. of Vans	72	72	87	59	68	72	
Total Van Occpt. Deaths	44	47	65	29	42	36	
Total Single Vehicle Crashes	27	27	32	21	24	31	
Total Single Vehicle Occpt. Deaths	23	23	37	11	27	18	
Total Rollover Crashes	18	20	23	14	17	16	
Total Rollover Occpt. Deaths	24	26	28	17	26	21	
Total Sing. Veh. Rollover Crashes	10	10	14	4	11	9	
Total Sing. Veh. Rollover Occpt. Deaths	15	15	20	7	23	12	

various highway safety agencies and organizations. To be clear, there were 47 occupants of 15-passenger vans killed in fatal crashes in 2016. They were young, old, men, women, husbands, wives, parents, grandparents, children, etc. All were loved by someone and are now dearly missed by their survivors. 47 people being killed in 15-passenger vans is not an acceptable number!!

There now needs to be renewed efforts to reduce the annual number of fatalities!!

A renewed public awareness campaign is needed!!

As a result, American Center for Van and Tire Safety recommends that ways and means be identified and implemented to carry out the following:

1. To National Highway Traffic Safety Administration (NHTSA):

- Issue a Consumer Advisory (similar to the one issued by NHTSA on May 28, 2015) reminding drivers of safety practices when driving or riding in 15-passenger vans.
 - i) Stress the absolute need to use seat belts whenever the van is in motion.
 - ii) Discourage use of vans older than MY 2006 ... especially for trips.
 - iii) Stress to never overload the van with more than 15 occupants.
 - iv) Point out the need for driver training. Stress the dangers of driver distraction and/or fatigue.
 - v) Include tips on tire safety including checking the tire pressure, tread depth, any visible damage and age. Also, researching to determine if the tires have been recalled.
- Periodically test 15-passenger vans as a part of the “5-star safety ratings” NCAP program. Testing to include front impact, side impact, rollover and overall vehicle safety. In addition, static testing to establish SSF with driver only and with a full 15 passenger load.

Only limited testing has been done on the Ford Transit 15-passenger vans. To date, two models have been tested with only the driver. At least static testing needs to be done with each of the Ford Transit 15-passenger vans (low roof, medium roof, high roof and high roof extended) with driver only and with a full 15 passenger load to determine SSF and estimated rollover propensity.

- Strongly consider developing a new safety standard for all passenger vehicles, including 15-passenger vans that would require occupant/seatbelt sensors/indicators for all seating positions including the rear seats.

In a January 2013 NHTSA publication (DOT HS 811 697) “Occupant Restraint Use in 2011”, front seat belt usage was listed at 84% while rear seat belt usage was listed at 74%. According to an August 2017 IIHS news release the observed 2015 nationwide seat belt usage rate was 89% for drivers and front seat passengers and 75% for rear-seat occupants. Now, as mentioned earlier NHTSA has reported front seat belt usage at 90% for 2016. Notice the front seat usage has increased from approximately 84% in 2011 to 90% in 2016 while back seat usage has stayed relatively constant at 74-75%. Rear seat belt usage in 15-passenger vans is even far worse at around 40-50%. This should be considered unacceptable and steps should be taken to improve belt usage in rear seats.

- Implement the tire related mandates of the 2015 Fixing America’s Surface Transportation Act or “FAST Act”. Specifically, Subtitle C – Miscellaneous Provisions – Part III – “Tire Efficiency, Safety, And Registration Act of 2015”.

Section 24333 – directing rulemaking to require independent tire dealers and/or distributors to maintain certain records of tire purchasers that can be used for recall purposes.

Section 24334 – directing that a study and report be done in to electronic tire identification.

Section 24335 – directing the establishment of a publicly available tire recall database, searchable by TIN.

- Confirm the implementation of FMVSS 216 (Roof Crush Resistance) and FMVSS 226 (Ejection Mitigation) in 15-passenger vans (up to 10,000 lbs) and when they were actually incorporated in the vans.

2. To Governors Highway Safety Association (GHSA) - Recommend the following to every State:

- Enact, modify and/or amend seat belt/restraint laws as needed to make them “primary” laws and to include 15-passenger vans, covering all ages in all seating positions, including rear seating.
- Enact, modify and/or amend laws banning the use of all hand held cell phones and texting by all drivers.
- Encourage states to enact laws banning the sale of unsafe used tires.
- Enact a requirement for a “driver’s license endorsement” to operate a 15-passenger van similar to the type of endorsement required in many states to operate a motorcycle. It should include, but not be limited to, seat belt usage, emergency maneuvers, distracted and/or impaired driving.

- Revise their Driver’s Handbooks to include a section on tires. It should be written to make drivers aware of the dangers of under/over inflated tires, over age tires, inadequate tread depth, improper size and/or inadequate load rating. It should also include instructions on determining the age of a tire and provide the information that they should always have the newest, best condition tires mounted on the rear axle.
- In all States that still have passenger vehicle inspections; expand their inspections to be more thorough on tires. In addition to tire pressure, general overall visible condition and wear, including tread depth, the inspection should include proper size and load rating, per the specific vehicle specifications and tire age. It should lie in the hands of the inspector to advise the customer to replace any tire that is six or more years old, and rejecting any tire ten or more years old, regardless of tread depth. All tires also need to be checked for recall. If any have been recalled, the inspector needs to advise the customer accordingly. The spare needs to be included in the inspection

3. To Passenger Vehicle Insurance Companies:

- Send safety alerts/reminders and 15-passenger van safety guidelines (such as those attached to this paper) annually to all policy holders with 15-passenger vans.

4. To Tire Companies, Tire Dealerships, Automotive Service/Repair Garages:

- Expand the tire safety inspection procedures to include size, load rating, and age in addition to proper pressure, adequate tread depth and general condition. Advise the customer and strongly recommend replacement when the tire size and/or load rating is inadequate for the vehicle. Advise the customer and recommend replacement of any tire 6 or more years old. Strongly urge replacement of any tire 10 or more years old. Advise the customer of any tire that has been recalled by the manufacturer so that proper action can be taken. All this should be required of the tire service representative.
- Improve the new tire registration and recall procedure so that a much higher percentage of recalled tires are actually returned, inspected and replaced as needed. The most recent reported average return rate of recalled tires is less than 20%.^{9,10}
- Educate/train all tire dealership and tire service facility personnel to always mount any new/replacement passenger vehicle tires so that the complete Tire Identification Number (TIN) is visible on the outward sidewall. This will allow the vehicle owner to easily read the entire TIN.
- Educate/train all tire dealership and tire service facility personnel to always recommend that the newest, best condition tires on the rear axle.

⁹ See American Center for Van and Tire Safety report – “Tire Recalls ... A Glimpse into How the System is Working” – issued December 2013.

¹⁰ See NTSB Special Investigation Report – “Selected Issues in Passenger Vehicle Tire Safety” – page 19 – issued 10/27/15.

5. To National Transportation Safety Board (NTSB):

- Continue to monitor and report on 15-passenger van crashes as warranted by severity and/or uniqueness.
- Follow up with NHTSA on the NTSB recommendation H-15-033 dealing with the level of risk associated with tire aging since the implementation of FMVSS Nos. 138 and 139. Strive for universally accepted guidelines.

6. To all owners, operators and users of 15-passenger vans:

- Do not use Dodge 15-passenger vans, nor any van without 3-point restraints in all seating positions, for any extended trips, or even short trips, involving high speed interstate and/or similar highway travel. These vans should be used for nothing more than local shuttle and delivery on local residential streets and rural roads. The risk of a tragic accident with Dodge 15-passenger vans at interstate/highway speeds for any extended distance is simply too high¹¹.
- If your van is older than model year 2006, strongly consider using it for nothing more than local shuttle and delivery on local residential streets and rural roads. If longer trips are needed consider renting a new 15-passenger van for the trip, especially if the trip includes interstate travel. **It is incredibly important to recall that in 2016, approximately 80% of all 15-passenger van occupant fatalities were in vans older than model year 2006.**
- Be absolutely certain that all drivers are trained and experienced prior to entrusting them with the lives of the passengers.
- Get a copy of our 15-passenger van safety guidelines into the hands of every 15-passenger van owner/operator/user. A copy is attached to this report. Be certain the tires are per the recommendation ... and always, always stress to all that operate and ride in these vans that **“the van doesn’t move until all occupants have their seat belts properly fastened !”**

Addendum – The Ford Transit Passenger Van

Ford discontinued production of the Econoline 15-passenger van in 2014 and began production of their “Transit” passenger van with MY 2015. The van was modeled after Ford’s European Transit van. It’s available in a regular wheelbase (129.9 in.) and a long wheelbase (147.6 in.). The regular wheelbase models are available in 8 and 10 passenger models – low and medium roof. The long wheelbase is available in a low roof, medium roof, high roof and high roof extended. The low, medium and high roof models come standard with 12 passenger seating. 15 passenger seating is available as an option. The long wheelbase extended model comes standard with 15 passenger seating. Compared to the Econoline van, the Transit



- Ford Transit passenger van -

¹¹ American Center for Van and Tire Safety – “A Comparison of 15-Passenger Vans – The Dangers of the Dodge 15-Passenger Van” – issued November 2009 (revised June 2011).

has a longer wheelbase, slightly wider track, and what appears to be better weight distribution.

Unfortunately, the Transit van VIN does not identify options. The VIN does identify long wheelbase low, medium and high roof and long wheelbase extended, but not seating options. Thus, in FARS, one cannot determine if the long wheelbase low, medium or high roof models are 12 or 15 passenger vans since the VIN is the only means of identification. As a result, Transit van crashes in 2016 have not been included in any of the above data in this report.

For the record, there were six Transit 12/15-passenger vans in fatal crashes in 2016. Four were long wheelbase low roof and two were long wheelbase medium roof models. In total, two van occupants were killed. None of the vans rolled over. There was only one single vehicle crash. It involved a pedestrian being struck and killed.

American Center for Van and Tire Safety

May 2018

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15-Passenger Van Safety Guidelines

1. When a 15-passenger van is not full, passengers are to sit in seats that are in front of the rear axle.
2. Never allow more than 15 people to ride in a 15-passenger van.
3. Require all passengers and the driver to wear proper safety restraints (seat belts - preferably 3-point lap/shoulder belts) any time the van is in motion. Inspect seat belts regularly ... replace any missing, broken or damaged belts and/or buckles.
4. Inspect the tires, including the spare ... determine the date of manufacture of each tire from the DOT code (may only be on the inboard sidewall). The DOT code will end with either 3 numbers or 4 numbers ... if three numbers, the tire was manufactured in the 90's. the last number is the year and the first two are the week in that year ... example "168" would be the 16th week of 1998. If four numbers, the tire was manufactured in 2000 or later ... the first two numbers are the week and the last two numbers are the year ... example "2303" would be the 23rd week of 2003.
5. Replace all tires that are more than six years old (including the spare). It is critical to remember that low mileage doesn't mean tires are safe. Tires deteriorate with time whether they are used or not ... And, unfortunately, dangerously deteriorated tires cannot always be detected by visual inspection alone. When buying new tires be sure to get the date of manufacture of each tire. If they are more than a year old, do not buy them. Remember they have a six year life from the date of manufacture not from the date they are installed on your van.
6. Check to see if the tires have been recalled by the manufacturer. For a variety of reasons recall notices from the tire manufacturers are not always received by the owner of the vehicle. Check the tires for recall at least every 6 months, and whenever the vehicle is at a service facility for tire service such as rotation and/or balancing. If any are found to have been recalled, immediately take the vehicle to a local tire dealership for the brand of tire involved.
7. Be sure all tires are the proper size and load rating for the van. Recommended tire size and load rating should be in the owner's manual.
8. Inspect the tires before each use. Examine tires for uneven wear, cracks, and other damage. Replace any damaged tires ... Also, check the tread depth ... place a penny into a tread groove ... if part of Lincoln's head is covered by the tread, you're driving with an adequate amount of tread ... if you can see all of his head (tread of less than 2/32") replace the tire.
9. Check tire pressure before each use. Beware ! ... required front and back tire pressures may be very different and are likely higher than required for car tires ... typically van tires must be inflated to 50 lbs. for the front tires and 80 lbs. in the rear tires. The manufacturer's recommended pressure is usually provided on the driver's doorsill or in the owner's manual.
10. Always be certain the newest, best condition tires are on the rear axle. A failure of a tire on the rear axle can be much more difficult to control and can frequently results in a rollover.
11. Do not overload the van. See the owner's manual for maximum allowable total weight of passengers and cargo.
12. Do not strap any cargo onto the roof or back of the van.
13. Do not tow anything behind the van.
14. Be certain the driver has a valid driver's license for the state where they reside (a commercial driver's license is preferred). Be aware that van drivers need additional training since these vans handle differently than other vehicles, especially when fully loaded. Allow no one under the age of 21 to drive the van. Select one or two drivers to drive the van on a regular basis. Insist that a new driver get experience driving the van alone before driving with others in the van. Remember a 15-passenger van is substantially longer and wider than a car, thus it ...
 - Requires more space and additional reliance on the side-view mirrors for changing lanes.

- Does not respond as well to abrupt steering maneuvers ... such as might occur with a blowout or dropping off the edge of the pavement.
 - Requires additional braking time.
15. Limit drive time to 8 hours per driver per 24 hours. Ban driving from midnight to 6 a.m. ... the van is dangerous enough without fatigue and poor visibility.
 16. Be absolutely certain the driver is not under the influence of alcohol or drugs.
 17. The driver is to be well rested and attentive to driving. Prohibit use of a cell phone by the driver while the van is in motion. Limit conversation with other passengers.
 18. Drive at a safe speed based on driving conditions ... never more than the speed limit ... and with a maximum of 60 mph regardless of the conditions and speed limit. Always slow down if the roads are wet or icy.
 19. Keep the gas tank as full as practically possible. A full tank of gas lowers the center of gravity and reduces the risk of rollover.
 20. Do not stow cargo in the van any higher than the bench level of the seats.
 21. If your van is older than model year 2006, strongly consider using it for nothing more than local shuttle and delivery on local residential streets and rural roads. If longer trips are needed consider renting a new 15-passenger van for the trip ... especially if the trip includes interstate travel ...
15-passenger vans older than model year 2006 lack many of the safety features of newer vans such as electronic stability control, tire pressure monitoring, lap/shoulder belts in all seating positions, improved side impact protection, upgraded door locks and door retention devices, etc.

American Center for Van and Tire Safety

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