



# Church safety solutions

August 2007

## Special points of interest

Church vehicles –  
Driver and passenger  
safety

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## Inside this issue

Automobiles – driver and  
passenger safety . . . .1

15-passenger vans –  
reducing the risk of  
rollover accidents . . . .1

Tire inflation  
basics . . . . .6

Sample vehicle inspection  
pre-trip log . . . . .7

Lessons of loss –  
Real life examples . . .8

**Next month!**  
September – Church  
building/property  
maintenance

## Automobiles – driver and passenger safety

Whether or not a church owns, leases or rents vehicles for church-sponsored events, it is still important for church leadership to develop a set of policies governing the use of these vehicles or personal vehicles when transporting anyone on behalf of the church. In the following article, we will discuss content that should be included in church policy to help protect the driver and passengers from harm.

### Driver selection

Church drivers can be divided into two camps, those paid and those that volunteer their vehicles and driving ability. Regardless of paid or volunteer service, both driver types should be able to show evidence of a valid driver's

*(Continued on page 2)*



## 15-passenger vans – reducing the risk of rollover accidents

Fifteen-passenger vans are widely used by many religious institutions to transport congregation members to and from church, while others use these vans for day trips and other outings. Often, the drivers of these vans are volunteers with little experience handling the characteristics of a larger vehicle, particularly the higher center of gravity. In this article we will review the differences between the handling characteristics of a fifteen-passenger van

to that of a common passenger vehicle. We will also discuss precautions churches can take to help ensure drivers are knowledgeable and practice before transporting passengers.

**15-passenger vans have a higher center of gravity, increasing the risk of rollover**

Research conducted by the National Highway Traffic Safety Administration (NHTSA) reveals

*(Continued on page 4)*

# Automobiles – driver and passenger safety *(continued)*

license and retain a minimum level of insurance coverage. Motor vehicle record (MVRs) checks are also a way of screening drivers.

## Prohibited actions of drivers

- Drivers must not operate a vehicle at any time when his/her ability to do so is impaired by alcohol, illegal drugs, prescribed or over-the counter medication, illness, fatigue or injury.
- Drivers of church vehicles should not pick up or transport hitchhikers or other unauthorized passengers.
- Drivers of church vehicles should not use any radar detector, laser detector or similar device.
- Drivers of church vehicles must not transport any hazardous materials.

## Disqualification to operate a church vehicle

Drivers should not be allowed to drive on behalf of the church when the driver has:

- A suspended license or revocation of driving privileges
- A driving record listing serious moving violations that include driving while impaired/intoxicated, reckless driving including road rage, leaving the scene of an accident and speeding that is equal to or greater than 15 mph over the posted speed
- Multiple minor violations listed on a MVR

## Maintenance and inspection of vehicles

Drivers should be required by the church to ensure the vehicle is well maintained and safe to operate. To ensure the vehicle is safe to operate, churches should require drivers to

conduct routine vehicle inspections. Such inspections should be documented using a vehicle inspection form and include:

- Current certificate of insurance, state vehicle inspection and registration
- General condition of the upholstery, body, paint, decals and windows
- Fluid levels and scheduled changes (oil level, brake fluid, transmission fluid, window washer fluid and cooling system fluid)
- Check engine lights or other dashboard failure alerts
- Oil or grease leaks in, around or under the vehicle
- Belts and hoses (cracks, swells, wear and tear)
- Tires (inflation and tread wear)
- Wheels, rims and fasteners
- Lights, reflectors and mirrors
- Wipers and washers, A/C, heater, defrosters
- Brakes (service, parking, emergency)
- Horn, seatbelts, turn signals, emergency flashers

Should the driver of the vehicle observe a deficiency, church policy should require the defect to be repaired before the vehicle is operated. Vehicle repairs should only be completed by qualified mechanics through a reputable dealer or service repair center identified by the church leadership. Likewise, drivers using their personal vehicles should also ensure that vehicle is in good condition.

## Accident scene investigation and reporting

The following section provides suggested accident scene investigation and reporting. Drivers should take the following actions when there are injuries to persons and/or damage to other vehicles or property. In essence, do no do



Drivers should be required by the church to ensure the vehicle is well maintained and safe to operate.

## Automobiles – driver and passenger safety *(continued)*

further harm by placing yourself, passengers or other parties in harms way on an open road by protecting the scene of the accident, avoiding obstructing traffic or creating a greater hazard. Drivers should call 911 or \*999 using mobile phones and then assist those in need of first-aid treatment.

Activate the vehicle's emergency flashers and, if equipped, place emergency reflectors, flares, lanterns or flags. Assist those in need of first-aid treatment after protecting the scene of the accident. Stop immediately and determine the extent of the damage to your vehicle. If safe to do so, keep all passengers within the vehicle.

### Notify church leadership and police

Immediately following the accident, contact the police or emergency services and your church leadership to report the facts of the incident. When gathering information, exchange insurance and other information from the other party involved, but don't talk about what happened. Obtain witness information including names, telephone numbers and license plate numbers. If possible, and safe to do so, take photographs of the accident scene and damages incurred to both vehicles. Take a series of close-up and wide-angle shots to provide investigators as complete a depiction of the scene as possible. Do not make any statements (other than to police, church officials and insurance representatives). Do not admit fault or sign anything. You may feel compelled to check on the other people, but do not talk about what you think happened until the police arrive on-scene. If a witness talks to you, that is fine but do not volunteer information about the facts of the accident.



## 15-passenger vans – reducing the risk of rollover accidents *(continued)*

that the risk of a rollover accident increases remarkably when 10 or more people ride in a 15-passenger van. Because passengers are seated, the weight is distributed higher in the van, which raises the vehicle's center of gravity, making the vehicle more susceptible to a rollover. Additionally, the attachment of a roof rack carrying luggage and equipment also raises the center of gravity and increases the possibility of a rollover. As such, in order to counter the higher center of gravity, churches should consider limiting the number of passengers carried and carrying luggage inside the passenger compartment, avoiding the use of a roof rack entirely.

### When do most rollover accidents occur?

NHTSA research has found that more than 90 percent of single vehicle rollovers occur after a driver has lost control of the vehicle and has run off the road. There are several different causes for these rollovers:

- The driver of the van overcompensates during an emergency maneuver and is caught off guard by the shifting weight of the van. The overcorrection in steering may force the van into a skid or slide off the road surface.
- The driver of the van is fatigued or otherwise impaired resulting in poor reaction time and judgment. A tired driver can fall asleep and lose control.
- The driver strikes a ditch or embankment or the vehicle is tripped by an object or runs onto soft soil.
- The driver is driving too fast for conditions.

Perhaps the most important message is that vans roll over when the driver loses control and the van leaves the roadway. If a driver takes precautions, making them less likely to take emergency actions and lose control, they reduce the risk of rollovers.



15-passenger vans have a higher center of gravity, increasing the risk of rollover

# 15-passenger vans – reducing the risk of rollover accidents *(continued)*

## How to protect passengers

In the past ten years, 80 percent of people killed in rollover crashes in 15-passenger vans were not wearing seatbelts. Passengers that wear seatbelts dramatically reduce their risk of being killed or seriously injured in a rollover accident. Even though the law requires passengers and drivers to wear seatbelts, churches that operate 15-passenger vans should not assume passengers will follow this rule. Many individuals believe the size of the vehicle will protect them in an accident or rollover crash. Churches should consider establishing a written seatbelt-use policy enforced by the driver.

## Experience and practice makes a difference

We have mentioned that there are substantial differences in the handling characteristics of a 15-passenger van from other passenger vehicles. Churches that operate 15-passenger vans should allow drivers time to develop skills during short duration trips with few or no passengers. Selecting one or two experienced drivers to drive the van on a regular basis is even more preferable as experience in maneuvering the van provides for a greater understanding of the handling characteristics and limitations of the vehicle.

## Tips for preventing rollover accidents

Most rollover accidents involve only the single vehicle, which also makes them preventable. Listed below are a few tips to reduce the risk of a rollover accident:

- Use experienced drivers familiar with the handling characteristics of the vehicle.
- Drive the speed limit.
- Ensure driver reactions are optimal to maintain control of the vehicle by being rested and alert.
- Never drive under the influence of alcohol.
- Never drive under the influence of drugs, including prescription medications that could cause impairment.
- Don't use cell phones while driving. If you need to use the phone, find an exit and a safe place to park before making your call.
- Reduce speeds if the roads are wet or icy.
- Don't drive in someone's blind spot and allow yourself an escape route surrounding the vehicle on all four sides.
- Give yourself ample following distance from the vehicle in front of you. The weight of a 15-passenger van dramatically increases the stopping distance required by the vehicle. If you have space to make a controlled stop, you will avoid steering maneuvers that could cause the van to roll over.
- Drive cautiously on rural roads. Reduce speeds and be particularly cautious on curved rural roads to avoid running off the road.
- Know what to do if your wheels drop off the roadway or pavement – gradually reduce speed and steer back onto the roadway when it is safe to do so. Several van rollovers have occurred when the driver over-corrected and then lost control of the vehicle.
- Make sure your tires are properly inflated and the tread is not worn down. Worn tires can cause your van to slide sideways on wet or slippery pavement. Improper inflation can cause handling problems and can lead to catastrophic tire failures, such as blowouts. Therefore, check tire pressure and tread wear at least once a month, especially before longer travel distances.
- When possible, limit the number of passengers to less than 15. When a 15-passenger van is not full, passengers should sit in seats that are in front of the rear axle.
- Never allow more than 15 people to ride in a 15-passenger van.
- Ensure all mirrors are clean and adjusted for the driver.
- Conduct and document a pre-trip vehicle inspection to ensure all mechanicals, lights and flashers are in working order and tires are properly inflated.

# Tire inflation basics

## Under-inflated tires can increase the risk of rollover



Unless you frequently check the inflation pressure of your tires, it may be difficult to determine when a tire is under-inflated. The air in rubber tires escapes much like the air in a rubber balloon. Over time, and depending on the condition of the tires, air can escape.

Changes in outdoor temperature can also affect the rate of air loss in a tire. Hot weather increases the rate of air loss. During cooler seasons, a tire can lose one or two pounds of air per month. Under-inflation not only increases the risk of rollover accidents, it is also the leading cause of tire failure. Here are tire inflation tips:

- Always refer to your vehicle manufacturer's manual for tire inflation requirements.

- Check tire inflation using a tire gauge when the tires have not been driven more than a mile. Tire pressure will increase as tires warm up due to driving road friction and provide an incorrect reading. Don't rely on a visual inspection to accurately determine the tire pressure.
- If the closest service station is over one mile, first measure and record the cold inflation pressure of each tire. Record tire pressures using a vehicle inspection record so that once you reach the service station, you will be able to again measure the inflation pressure of each tire and inflate the warm tire to the required inflation requirements plus the difference between the first and second reading.

In this example, the manufacturer's cold inflation requires a tire pressure of 35 psi

|   |  |
|---|--|
| <p>Front left</p>    | <p>Front right</p>  |
| <p>Cold = 35 psi</p>  | <p>Cold = 35 psi</p>   |
| <p>Warm = 37 psi</p>  | <p>Warm = 37 psi</p>   |
| <p>No action needed</p>   | <p>No action needed</p>  |
| <p>Left rear</p>   | <p>Right rear</p>   |
| <p>Cold = 28 psi</p>  | <p>Cold = 35 psi</p>   |
| <p>Warm = 30 psi</p>  | <p>Warm = 37 psi</p>   |
| <p>Add 5 lbs. to bring the warm tire to the required 35 psi + 2 lbs. to compensate for the difference between the warm and cold tire pressure readings.</p> | <p>No action needed</p>  |

- Do not assume your tires are over-inflated when the tires are warm or hot and reduce air pressure. It is normal for pressures to build up after driving.
- Check all of the vehicle's tires, including the spare tire, at least once a month and before every long trip.

## Sample vehicle inspection pre-trip inspection log for 15-passenger vans

|                                  |  |                         |  |
|----------------------------------|--|-------------------------|--|
| Inspection date                  |  | Driver/inspector's name |  |
| Vehicle ID                       |  | Odometer reading        |  |
| Make                             |  | Model                   |  |
| Number of seats including driver |  | Number of seat belts    |  |
| Number of passengers this trip   |  | Destination             |  |

| Vehicle equipment   |                     |  | Satisfactory | Unsatisfactory |
|---|---------------------|--|--------------|----------------|
| No check engine lights or other dashboard failure alerts  |                     |  |              |                |
| Brakes are functional, no sounds or evidence of wear  |                     |  |              |                |
| Seat belts are available for both the passenger and driver seats  |                     |  |              |                |
| Seat belts are clean and in good condition for each person, i.e., no frayed fabric, buckles fasten securely   |                     |  |              |                |
| Horn sounds   |                     |  |              |                |
| Doors/locks   |                     |  |              |                |
| Headlights/tail lights  |                     |  |              |                |
| Brake lights  |                     |  |              |                |
| Turn signals  |                     |  |              |                |
| Emergency flashers  |                     |  |              |                |
| Windows/windshield  |                     |  |              |                |
| Windshield wipers   |                     |  |              |                |
| Belts and hoses (no cracks, swells, wear and tear)  |                     |  |              |                |
| Mirrors are clean, adjustable and in good condition   |                     |  |              |                |
| A/C, heater, defrosters   |                     |  |              |                |
| Tire pressure   | Depth gauge reading | Indicate the p.s.i. using a tire gauge | Satisfactory | Unsatisfactory |
| Front left  |                     | p.s.i.                                 |              |                |
| Front right   |                     | p.s.i.                                 |              |                |
| Rear left   |                     | p.s.i.                                 |              |                |
| Rear right  |                     | p.s.i.                                 |              |                |
| Spare   |                     | p.s.i.                                 |              |                |
| <ul style="list-style-type: none"> <li>Always refer to your vehicle manufacturer's manual for tire inflation requirements.</li> <li>Check tire inflation using a tire gauge when the tires have not been driven more than a mile. Tire pressure will increase as tires warm up due to driving road friction.</li> <li>If the closest service station is over one mile, first measure and record the cold inflation pressure of each tire. Record tire pressures so that once you reach the service station, you will be able to again measure the inflation pressure of each tire and inflate the warm tire to the required inflation requirements plus the difference between the first and second reading.</li> </ul> |                     |  |              |                |
| Fluid levels - Fluid levels indicate full   |                     |  | Satisfactory | Unsatisfactory |
| Oil level indicates full on dipstick  |                     |  |              |                |
| Cooling system is full  |                     |  |              |                |
| Brake fluid   |                     |  |              |                |
| Transmission fluid  |                     |  |              |                |
| Windshield wiper fluid  |                     |  |              |                |
| Other   |                     |  |              |                |
| Current certificate of insurance, state vehicle inspection and registration   |                     |  |              |                |
| Jack stand and tire iron  |                     |  |              |                |
| Emergency kit, i.e., road flares, first-aid supplies, water, cell phone, tire inflation gauge, tire depth   |                     |  |              |                |
| Accident investigation kit (pens, pencils, accident report, disposable camera, emergency phone numbers)   |                     |  |              |                |

Should the driver of the vehicle observe a deficiency, church policy should require the defect to be repaired. Vehicle repairs should only be completed by qualified mechanics through a reputable dealer or service repair center identified by the church leadership.

Comments:

# Lessons of loss

The following lessons of loss have been recreated from real events. Certain details were changed to protect the anonymity of those involved.

## Driver fatigue contributed to 15-passenger van rollover

A small church group was traveling to a gathering of fellow churches, which would require a long drive across several state lines. The driving was to be completed by three separate drivers trading positions as each became tired. The lay pastor was taking his turn at the wheel and, although rested from driving, he was still physically tired. An hour after taking the wheel, the driver fell asleep at the wheel. Moments prior to the crash, the driver woke up and overcorrected the steering, causing their 15-passenger van to leave the highway and overturn several times.

The right front tire of the vehicle ruptured as the vehicle left the highway, but this was not the cause of the accident. Mechanical failure was ruled out by an accident reconstruction expert and mechanic. Additionally, there were no other marks suggesting the vehicle was sideswiped or contacted by another vehicle.

Injuries were sustained by nearly all passengers, two of which were placed in critical care. Several days later, one of the passengers died at the hospital from a blood clot apparently brought on from injuries sustained during the accident. The second critically injured passenger required many hours of surgery due to the severity of injuries sustained. It appears this passenger was ejected from the van during the crash and was possibly not wearing a seatbelt.

Trying to push the limits of time and driver rest resulted in a disastrous event having a devastating affect on many lives. Churches should

plan their trips so drivers will have adequate rest by limiting the driving and stopping for the night as opposed to driving straight through.

## Inexperienced driver loses control of vehicle

An inexperienced driver of a 15-passenger van lost control of the vehicle. The driver alleges that the vehicle jumped the curb, drove through a backyard wooden fence, hit two trees and injured an elderly homeowner before coming to a stop in the front yard.

The driver alleges the vehicle suddenly went out of control and the brakes failed when he attempted to stop. The police indicated that the driver presented a series of conflicting statements, concluding the incident happened so quickly that he was uncertain of exactly what happened and possibly blacked out. It was determined by a mechanic that there was no mechanical defect with the vehicle.

While the driver and passengers of the vehicle were unharmed, the homeowner sustained multiple injuries including a fractured leg and a rotator cuff shoulder injury.

Churches that operate 15-passenger vans should allow drivers time to gain experience in an area where little harm can occur, including the church parking lot. Churches should consider allowing the new driver to have an experienced driver conduct a ride-along so that a critique of skills can be communicated concerning the handling characteristics and limitations of the vehicle.



## References

Zurich Driving to Success (pamphlet) A1-14490-B (03/05) 05-0673

<http://www.nhtsa.dot.gov/>

<http://www.nhtsa.dot.gov/Cars/problems/studies/15PassVans/15passvan.html>

Tire Care and Safety Guide

<https://www.rma.org/getfile.cfm?ID=391&type=publication>

If you have any questions or if you would like to receive electronic copies of any of the referenced materials above, please write to us via e-mail at:

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