

# TerranearPMC Safety Share

## Week of June 15, 2015 – Rollover Accidents

While Memorial Day marks the unofficial beginning of summer, schools are still in session so family trips to National sites and parks do not begin until about now. That means we can expect to see America's roadways carrying families in campers, minivans, trucks and SUVs throughout the country, heading for the famous tourist destinations including historical sites or just looking to find that special place for some R&R.

OK, I don't want to put a damper on summer fun, but driving on our Nations' Highways can be dangerous. After all, it is not uncommon when traveling from destination to destination that there is a desire to just get to where we want to be; and when driving for hours and even hundreds of miles, we can find ourselves moving at excessive speeds. In addition, there are many stretches of land where the scenery doesn't change while the road continues on a straight and narrow path. This can make for a very tedious and boring time. Such driving does require practicing caution, good sense and a lot of patience. These are times that can hypnotize drivers, placing them into a trance and even falling asleep at the wheel. This is where some serious accidents can happen. And many times, these are single-vehicle accidents which result in a rollover; most likely due to the driver making a sudden miscalculation due to a reduced alertness.

By far the deadliest risk facing SUV, minivan, and truck occupants is a rollover accident. According to the National Highway Traffic Safety Administration (NHTSA), more than 280,000 rollover accidents are reported each year, claiming more than 10,000 lives. In 2003, 35.7 percent of fatal SUV crashes resulted in a rollover. That same year just 15.8% of fatal passenger car accidents resulted in a rollover. What this statistic points out is the fact that SUVs are much more likely to rollover in a serious accident. Compounding the issue is that SUVs often carry heavy loads (luggage, boats and other items typically brought along for family fun) which make them even more top-heavy and thus are more likely to be involved in rollover accidents.

Rollover accidents are directly related to a vehicle's stability in turns, whereby stability is influenced by the relationship between the center of gravity and the track width (distance between the left and right wheels). A high center of gravity and narrow track can make a vehicle unstable in fast turns or sharp changes of direction; increasing the odds that it will tip over once it begins to skid sideways. The problem is most pronounced in 4-wheel-drive pickup trucks and sport-utility vehicles, which have a higher ground clearance for off-road driving.

While OSHA has certain regulations for controlling rollover accidents in occupational settings which require rollover protective structures (ROPS), cars and trucks, used for personal use are not subject to a federal rollover standard; even though pressure for such a requirement has been building.

To help predict which vehicles might have a greater likelihood to overturn in single-vehicle accidents, starting in 2001, NHTSA introduced a rollover rating system. Reported on a five-star system, the rollover ratings are based on an engineering analysis of each vehicle's center of gravity and the width between the front tires. The results are compared with police accident



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reports for confirmation. In its rating system, five stars equals a rollover risk of less than 10 percent, while one star indicates a greater than 40 percent rollover risk.

The NHTSA has a website where anyone can research a vehicle's rollover performance based on the 5-Star rating system. The site can be found at <http://www.safercar.gov/Safety+Ratings>: Unfortunately, at this time, not every vehicle has been rated. For example the Hyundai Sonata is shown to have an excellent rating; however there is no information about the Hyundai Santa Fe. But go ahead and plug in your vehicle's information (make, model and year) and see how your car, SUV, minivan, etc., rates.

While a vehicle may or may not have a good rollover rating based on the NHTSA 5-Star program, human error seems to be a significant contributing factor. Below are a few tips from the NHTSA that can help reduce the risk of rollovers and therefore, help us to have a great summer with lots of wonderful times.

- Many rollovers occur when drivers overcorrect their steering as a panic reaction to an emergency—or even to a wheel going off the pavement's edge. At highway speeds, overcorrecting or excessive steering can cause the driver to lose control, which can force the vehicle to slide sideways and roll over.
- If your vehicle leaves the roadway, gradually reduce speed. Then, when it's safe to do so, ease the vehicle back onto the roadway.
- Rollovers are more likely to occur on rural roads and highways—particularly undivided, two-way roads or divided roads with no barriers. When a vehicle goes off a rural road, the vehicle can overturn when it strikes a ditch or embankment, or is tripped by soft soil. Nearly **75%** of all rollover crashes **occur in rural areas**, so practice caution when driving on rural roads.
- Improperly inflated and worn tires can be especially dangerous because they inhibit your ability to maintain vehicle control, the most important factor in reducing the chance of rollover. Worn tires may cause the vehicle to slide sideways on wet or slippery pavement, sliding the vehicle off the road and increasing its risk of rolling over. Improper inflation can accelerate tire wear, and can even lead to tire failure. It is important to maintain your tires properly, and replace them when necessary.
- Consult your vehicle's owner's manual to determine the maximum safe load for your vehicle, as well as proper load distribution. If you're using a roof rack, pay special attention to the manufacturer's instructions and weight limits. Any load placed on the roof will be above the vehicle's center of gravity, and will increase the vehicle's likelihood of rolling over.

**The one thing that doesn't abide by majority rule is a person's conscience**

Harper Lee, *To Kill a Mockingbird*

