ROLLOVER PREVENTION

Emergency vehicle rollovers are costly. There is a human cost, including fatalities and serious injuries to occupants, and a financial cost including vehicle damage, loss of use of the vehicle, and the public perception of your ESO.

All emergency vehicles are susceptible to rollovers, but tankers (tenders), pumper tankers, aerials, and ambulances are particularly vulnerable because of their high center of gravity.

While the impacts and risks of these incidents cannot be overstated, it's just as important to note that emergency vehicle rollovers are largely preventable.

That's why it's crucial for ESOs to develop and enforce standard operating and training guidelines. VFIS suggests following these best practices, which include, but are not limited to:

Roads

Not all roads are created the same, for example consider the differences between interstate highways and rural roads.

- Interstate highways often have wide lanes and paved shoulders that are level with the edge of the roadway.
- Rural roads may have a high crown to promote drainage and may have dirt shoulders that are lower than the road surface or have no shoulder at all. A vehicle traveling on a road with a high crown will not only tend to move the vehicle toward the shoulder but will also tilt the vehicle and move the center of gravity toward the edge of the road. Rural roads may have narrower lanes, meaning that a larger vehicle will have a smaller margin for error before wheels leave the pavement. Should the vehicle leave the pavement there is a good chance that it will be dropping onto a soft shoulder or into a drainage ditch.

Driver Familiarity with the Road and Weather Conditions

The less familiar a driver is with the

road and the worse the weather, the slower the vehicle should be operated.

Administrative Controls

- Require seat belt usage by everyone in the vehicle.
- Driver training for all operators and training specific to vehicles susceptible to rollovers.
- Emergency response guidelines, including consideration of having vehicles that are susceptible to rollovers respond in a non-emergency mode.

Speed

Excessive relative speed is a contributing factor in most rollover incidents and can be defined as a vehicle traveling too fast for road conditions. Excessive relative speed may greatly reduce the driver's ability to control the vehicle on a curve or when making evasive steering moves. Reducing speed will increase the driver's ability to keep the vehicle under control during a wide range of circumstances. Reducing speed decreases the likelihood that evasive steering will be needed, further reducing the likelihood of weight shift/transfer.

Driver Responsibilities

To help regain control of a vehicle that drops off the road surface, the driver should:

- Take their foot off the accelerator and allow the vehicle to slow down gradually.
- Use soft application of the brakes, natural deceleration, and downshifting to bring the vehicle to a safe speed or complete stop.
- Under soft shoulder conditions, feather the accelerator as needed to help maintain control of the vehicle slowing.
- Once the vehicle has been stopped or been brought down to a safe speed, gently steer the vehicle back onto the road surface using a lower gear and/or feathered acceleration to assist in overcoming the surface drop off or soft shoulder.

Summary

When an emergency vehicle rolls over responding to a call or during a patient transport no one wins. It creates another emergency and does nothing to help address the initial call for assistance.

Keep in mind that excessive relative speed is a contributing factor in most rollover incidents,, meaning we can prevent most vehicle rollovers by simply slowing down.

Remember:

Excessive speed (for conditions) greatly reduces the driver's ability to control the vehicle on a curve or when making evasive steering moves. Reducing speed increases the driver's ability to keep the vehicle under control during a wider range of circumstances and decreases the likelihood that evasive steering will be needed, further reducing weight (especially water) shifting and helping the driver maintain control.