



SKID CONTROL/RECOVERY, JACKKNIFING & OTHER EMERGENCIES

WHY?

Our goal is to provide you with the knowledge to safely recover, then maneuver through a lot of emergency situations. Unfortunately, even the best drivers find themselves in situations where knowledge of how to react can make the difference between life and death for you, or those around you.

THE CAUSES OF SKIDDING AND JACKKNIFING

The Four Overs: over-steering, over-braking, over-accelerating and over-speeding. Avoid doing any of the four overs to avoid a skid that could lead to a jackknife situation.

Front Wheel Skids: front wheel skids are caused by speeding. Additional causes could be lack of tread on your front tires, or cargo that hasn't been loaded with enough weight distributed on the front axle.

Drive Wheel Skid: when the rear wheels lose traction from excessive braking or acceleration. Is most common and usually caused by accelerating on icy or snowy roads.

Rear Wheel Braking Skid: the rear drive-wheels lock, they will slide sideways, they can push the tractor sideways causing a jackknife situation.

Tractor and Trailer go into a Skid: when your tractor and trailer go into a skid and the trailer swings out and stops to form 90 degrees with each other - jackknifed. You are at risk of a rollover.

BRINGING THE CMV TO A STOP ON SLIPPERY SURFACES

Remember this equation: perception distance + reaction distance + braking distance = total stopping distance

Perception distance: distance rig travels, time your eyes see a hazard, until your brain recognizes it.

The average perception time for an alert driver is: 1 ¼ seconds when traveling at 55 mph or 142 feet.

Evasive Steering Tips: Do not apply the brakes when you are turning, your wheels could lock. Do not turn sharply, turn as little as possible to clear what is in your way. Be prepared to counter steer if necessary.

Reaction Distance: The distance you travel before you hit the brakes. The average driver reaction time after spotting a hazard, and braking is ¾ of a second to 1 second. Traveling at 55 mph this would amount to 61 feet.

Braking Distance: Is the distance your rig will travel in ideal conditions while you are braking. At 55mph on a dry roadway, with good brakes, it can take about 216 feet.

Stopping Distance: the total stopping distance equals the total minimum distance your rig has traveled in ideal conditions. The includes perception distance, reaction distance and braking distance until you come to a complete stop. At 55 mph, your rig will travel a minimum of 419 feet.

Speed: Speed can impact your stopping distance. The faster you drive, the greater the impact or striking power of your rig. Doubling your speed from 20 to 40 mph makes your impact 4 times greater.

Weight: Weight can impact your stopping distance. The heavier your load, the more work for your brakes to stop it. When you are traveling with an empty rig, you will have less traction, and it will take a greater distance to stop.

Team Safe Trucking's mission is to reduce accidents through enhanced driver training and effective fleet management and to recruit new, safety-focused drivers to deliver a sustainable and profitable supply chain.



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BRINGING THE CMV TO A STOP ON SLIPPERY SURFACES CONT.

Traction: To steer and brake effectively, you need traction. Traction is the friction between your tires and the road. Unsure about the traction you will have, you need to double your stopping distance.

Longer Braking Distance: Extreme caution on wet surfaces! Be aware of the following – longer braking distance, harder to turn, may go into a skid and know that a wet road can double your stopping distance.

Travel Slower: When you suspect the roads are slippery. Wet roads – reduce speed by 1/3. Packed snow – reduce speed by ½. Icy conditions – reduce your speed to a crawl.

Release the Accelerator: Starting to slip? Release the accelerator. Push in the clutch. This will slow you down and allow the wheels to turn!

Always be aware of your surroundings and adjust your speed accordingly.

PROPER TECHNIQUES FOR RESPONDING TO CMV EMERGENCIES

Evasive Steering: may be the proper decision in an emergency that will work to save your life, or the lives of others. Stopping is not always the answer when facing an emergency on the road.

Oncoming Vehicles in your lane of travel: if an oncoming driver has entered your lane move to your right as soon as possible. Once he/she realizes what has happened their natural reaction is going to be to return to their lane.

Blocking your path: After checking your mirrors move to an empty lane, if the shoulder is clear, go there. If you are blocked on both sides, move to the right. Better to force someone into the breakdown lane or shoulder, than into oncoming traffic.

Emergency Situation: the option of driving off the road is the best one to take when facing a potential collision.

A successful off-road recovery: maintain steering control, avoid braking while turning, minimize turning your wheels, keep your course as straight as possible, keep one set of wheels on the pavement for traction, when possible, stay on the side of the road until you come to a complete stop.

Encountering an obstacle when driving off the road: Allow your rig to slow down as much as possible before returning to the road. Turning the steering wheel sharply gives you the power to decide the point at which you return to the pavement. This maneuver will also allow you to counter-steer if need be. If you attempt to return gradually, there is a higher chance you could lose control of your rig.

Emergency Braking: stab braking is hitting your brakes fully, then releasing your brake pedal when the wheels lock. When the wheels start to roll again reapply the brakes, then release once again. Controlled braking, you are applying just enough steady pressure as you can without locking your wheels. Once you know your rig, you will learn how much pressure your brakes will take before the point of lock-up.

Braking Failure: Knowing the proper response for brake failure is a professional driver's responsibility. Well maintained brakes will keep you from finding yourself in this situation, but if you do, the following is how you should handle the emergency brake failure. What you can do – downshifting, utilize the parking brake, do not do on a downgrade, keep an eye out for an escape route or turn uphill. Downgrades – look for an escape ramp – search for an open field, side road, that has less of a steep grade or a hill.

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PROPER TECHNIQUES FOR RESPONDING TO CMV EMERGENCIES CONT.

Tire Blowouts: four steps 1. To overcome drag, you should accelerate 2. Grip the steering wheel tightly for if it's your front tire that's blown, it can jerk the wheel right out of your hands 3. Unless you are about to hit something, never hit the brake. Do not use your brake until you have slowed down. 4. Once you have come to a complete stop, exit your rig to conduct a complete walk around to assess your situation.

Rollovers: prevent them – avoid quick maneuvers when driving, maintain control of your load when turning and on straight roads, know where the high-risk areas are in your trip, remember driving is a fulltime job! So, always remain alert. Control your speed and maintain proper cushions at all times.

Hydroplaning: Release the accelerator and push in the clutch – never hit the brakes, it may cause you to skid and jackknife – just push in the clutch, keep tire pressure up, and make sure you have adequate tread.

UNSAFE ACTS

What are unsafe acts?: Operating a CMV while under the influence of drugs or alcohol, using your CMV in connection with any drug related felony, using your CMV in connection with any felony, leaving the scene of an accident, killing someone, repeated serious traffic violations.

Jamming the brakes: Never jam your brakes! Jamming your brakes could cause you to go into a skid and potentially jackknife. If you are driving a rig with anti-lock brakes, follow the directions in your owner's manual.

Name: _____

Date: _____

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