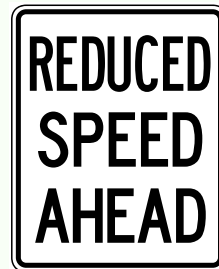


# Rollover Prevention Tips

Ready-mix vehicles, mixers, are highly susceptible to rollovers due to their high center of gravity and shifting loads. The below tips for drivers will help to prevent rollovers.

## Speed Management

- Slow Down: Excessive speed, especially on turns or uneven ground, is a top cause of rollovers.
- Loaded Trucks Require Slower Speeds: Reduce speed below posted limits when fully loaded
- Adjust for Conditions: Adapt speeds for wet weather, winter weather gravel roads, uneven terrain, and visibility.
- Sharp or Sudden Maneuvers: Abrupt steering actions can destabilize the vehicle, particularly when the drum is fully loaded. Use smooth and deliberate movements.
- Increase following distance.
- Uneven or Soft Terrain: Operating on unstable ground can cause the truck to tilt, leading to rollovers. Always assess ground conditions before driving off paved roads.
- Freeway Ramps: Freeway ramps present a serious risk of rollover. Mixer truck speed should be 10 mph lower than the posted speed limit. Ramps with less pitch have a higher risk of rollover, especially if the pitch is opposite the direction of the turn.



## Dynamic Load Characteristics

- Concrete within the mixer drum remains in a fluid state during transport, causing the load to shift continuously. Factors influencing this dynamic load include:
  - Drum Rotation Speed: Incorrect rotation speeds can lead to uneven distribution of concrete, affecting stability.
  - Slump of Concrete: Variations in concrete consistency can alter the load's behavior, impacting the truck's stability.
  - Start/Stop Movements: Frequent changes in speed can cause the concrete to surge within the drum, shifting the center of gravity unexpectedly.

**When you find yourself in trouble,  
STOP and GET HELP!**

**CALCIMA**  
California Construction and Industrial Materials Association



# Rollover Prevention Tips

## Safe Driving Practices

- Stay Focused: Eliminate distractions to maintain full awareness and quick reaction time.
- High or low slump loads: Wet loads increase surge, dry loads moves center of gravity higher.
- Maintain Distance: Keep adequate space between vehicles to allow for safe stops.
- Monitor Blind Spots: Use mirrors and check surroundings when turning or changing lanes.
- Identify Escape Routes: Always leave yourself an out in case of sudden stops or obstacles.
  - Rear Axle Tracking Path: When making turns, watch your inside rear dual tires. The slower you travel, the more the rear dual tires will track inside your steering tires.

## Equipment Inspection

- Inspect Regularly: Brakes, suspension, steering, and safety systems must be checked frequently.
- Check Tire Pressure: Maintain optimal inflation levels to support vehicle stability.

## Site and Route Safety

- Plan Ahead: Evaluate the safest route to the site, avoiding hazards when possible.
- Coordinate on Site: Maintain clear communication with job site personnel to ensure everyone is aware of moving equipment and potential dangers.
- Jobsite Roadways: Dirt has often been moved on new construction sites. The ground is not always solid. Only drive where there are wheel tracks from equipment.
- Trenches: As a rule of thumb, always stay as far away from the trench as the trench is deep. In loose, sandy soil, increase the distance you travel from the trench twice the distance from the edge as the trench is deep.
- Metal Plates or Rumble Plates
  - Examine the metal or rumble plates used to cover excavations or trenches to ensure they are properly sized (both thickness and dimensions) to support the weight of a mixer truck.
  - Make the plates have the proper overlap of the edge of the trench.
  - Visually inspect for type of material under the plates (soft or solid).
  - Check the alignment of the plates for gaps
  - Are the plates secured from movement?

Weather conditions (wet, muddy, icy, etc.) will affect the traction, especially on sloping ground.

**When in doubt – Check it out! You are empowered to stop the job until it is safe.**

**Always wear your seat belt.**