



Training Circular

Volume 16 Issue 12

Risk Management Issues

December 2016



Struck By or Against, Caught In or Between, Forklift and Tractor Safety



Struck By or Against. Being struck by an object is one of the leading causes of injuries. Struck by hazards are categorized by: flying objects, swinging objects, or rolling objects.

Workers are most often struck by:

- Heavy equipment and vehicles, like trucks and cranes.
- Falling or flying objects, like tools and flying particles.
- Concrete or masonry walls that are being constructed.

How to Protect yourself from being struck by hazards:

- Ensuring all hand tools are maintained in good condition.
- All tools equipped with guards shall have guards in place.
- Only trained and authorized employees are allowed to operate power tools .
- Compressed air can be used with no more the 30 PSI.
- All stacked materials shall be secured to prevent sliding, falling, or collapsing. Secure all materials and tools when working at elevated heights.
- Proper head, eye, face, and hand protection shall be worn.

Struck by a Vehicle. Wear a seat belt! Seat belts save lives, both on the roadways and on construction sites. (Note: Do not wear one if the vehicle is only designed for standing up or if it

has no rollover protective structure, like a roller used on paving jobs.)

Make sure that all vehicles are inspected before each shift – everything should be in good working condition, including the brakes, before you begin work. Use your parking brake when the vehicle is not in use, and chock the wheels if you are parked on an incline. And never lift or load more than the vehicle can hold.

If you are driving a vehicle in reverse and you cannot see behind you, be sure to have a reverse alarm that people can hear, and have another worker signal to you that all is safe. Ensure that no one is in the way when you are using lifting and dumping devices. Get out and look for people and hazards.

Do not drive vehicles in areas that are not safely constructed or maintained. When using lifting or dumping devices, make sure to clear all personnel and lower or block all blades.

Caught In or Between Hazards. Caught in or between hazards are categorized by: cave-ins, being pulled into or caught in machinery and equipment or being compressed or crushed between rolling, sliding or shifting objects.

- Use machinery that is properly guarded.
- Use methods to ensure that machinery is properly guarded.
- Use methods to ensure that machinery is sufficiently supported, secured or otherwise made safe.
- Protect yourself from being pinned

between equipment, materials, or other objects.

- Protect yourself on excavation sites.
- Never walk under suspended loads. Always make contact with equipment operators before walking in front of, behind, or around equipment.
- Motorized equipment shall be equipped with an operating back up alarm.
- Do not forget to lock out and tag out before clearing a jam, repairing, or servicing a machine or vehicle.

Vehicles, powered doors, and forklifts can pose a crush hazard unless they have been blocked or tagged out.

Never place your body under or between powered equipment unless it is de-energized. Immediately report and replace equipment that is not working properly.

Moving Doors. A door is another moving object that often strikes people. Most people know what it feels like to approach a door, perhaps with arms full, and have the door open suddenly from the other side.



Some have learned the hard way that if windowless doors open toward you, it is best to approach them with caution. Never stand in front of such a door for an extended period of time.

If you must work in such an area, prop the door open and secure it, or place a sign on the opposite side of the door. It goes without saying that you should not use a ladder where a door opens toward it unless you can be sure, by locking the door or propping it open, that the door will not be opened. Of course, out of consideration for those on the other side, you should not push a door open rapidly or forcefully. When approaching double doors, follow signs indicating which door to use.



Forklift Safety. All forklift operators must be trained and certified. Equipment must be inspected, and all safe operating procedures must be followed. Drive slowly, and do not travel with elevated loads. Make sure all signal alarms work, and watch for hazardous conditions (involving both workers and objects). Be sure to wear your seatbelt.

Mounting and Dismounting:

- Hazards:
- Hitting your head on the overhead cage.
- Slipping in wet conditions

Requirements and Recommended Practices:

- Be sure your hands are clean and

dry to prevent slipping when grabbing handholds.

- Check your shoes for grease before entering the vehicle.
- Grasp handhold and get a good grip. Never grab the steering wheel because it could cause you to lose balance if it moves.
- Always be careful with your footing when mounting and dismounting.
- Pull or lower your body carefully into or out of cab. Do not jump.

Speed Control Hazards :

- Tip over caused by driving too fast.
- Collision with pedestrians and obstacles caused by inattention and not being able to stop in time.

Requirements and Recommended Practices:

- Be aware of the travel conditions along your planned route.
- Under all travel conditions the vehicle must operate at a speed that will permit it to be brought to a stop in a safe manner.
- The driver must slow down for wet and slippery floors.
- The driver must look in the direction of, and keep a clear view of, the path or travel.
- The driver must slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load behind them.
- While negotiating turns, speed shall be reduced to a safe level by turning the steering wheel in a smooth, sweeping motion.
- Grades shall be ascended or descended slowly,
- When ascending or descending grades in excess of 10 percent, loaded vehicle shall be driven with the load upgrade.
- Running over loose objects on the roadway surface shall be avoided.

Potential Hazards of Traveling on Inclines:

- Tip over
- Falling load

Requirements and Recommended Practices:

- Drive loaded trucks forward going up a ramp with the load upgrade and drive in reverse going down a ramp with the load upgrade.
- Always drive unloaded vehicles with the forks downgrade.
- Never turn a forklift on a grade.

Tractor Safety. A tractor is essential to a farm's operation. It is used in nearly every task throughout the day. But if used improperly, tractors can be the most dangerous piece of equipment on the farm. In fact, the primary source of most agricultural-related deaths is the tractor. The common tractor activities that result in deaths are rollovers, transporting equipment on roadways, and repairing or cleaning the equipment.

Top Tractor Tips:

- Wear your seatbelt
- Know your tractor
- Never start in a closed area
- Use roll-over protection structures and wear a seatbelt
- Never allow passengers.
- Never leave a tractor engine running.
- Take your time and use common sense
- Avoid loose-fitting or torn clothing while working with equipment.

Read Operating Manual. We often rely on repair methods taught to us by our parents and grandparents without actually reading operation manuals ourselves. It is important for anyone operating tractors or heavy equipment, like bulldozers and skid steers, to be familiar with the safety mechanisms before using the vehicle.

Wear Appropriate Attire. Loose-fitting clothes is easily caught in the moving parts or controls of tractors and other equipment. Be sure to wear fitted pants, tuck in any loose shirt tails, and avoid wearing scarves when working on or around machinery. It is also important to protect your feet by investing in sturdy work shoes or boots with non-skid soles and steel toe caps. Heavy work gloves are also useful, as are safety goggles or sunglasses with tempered lenses.

Mount and Dismount Tractor Safely. Many tractor related injuries occur as a result of falling while mounting or dismounting the steps of the tractor. The steps on the tractor should be used the same as the steps of a ladder; either two hands and one foot or one hand and two feet should be in contact with the steps at all times. Be sure your pant cuffs or boot loops are clear of the clutch pedal when you move forward off the platform to prevent tripping or falling off the tractor.

Wear Your Seatbelt. It is important to always wear your seat belt when operating tractors and other equipment. Do not carry extra riders, unless your tractor is equipped with a buddy seat. To keep all riders safe, there should only be as many passengers on the tractor as there are seatbelts.

Check for Clearance. Before moving the tractor, you should be sure the area is clean. An unseen child or adult in the vicinity of the tractor is at risk of being run over. You should always drive tractors and other machinery at a safe speed, especially near populated areas and on roads or areas of rough terrain. It is a good idea to keep the brake pedals locked together for simultaneous braking of the rear wheels in these areas.



Prevent Rollovers! Rollovers account for a large majority of tractor deaths!

Rearward Rollover— Tractors can easily tip to the rear when the rear wheels cannot rotate enough to move the machine forward. A rearward tractor rollover can happen in less than a second, less than the reaction time of the average driver.

Rearward tractor rollovers can be prevented by:

- Releasing the clutch only when the rear wheels CAN rotate forward.
- Avoiding driving on steep hillsides
- Backing the tractor up steep hills
- Changing tractor speed gradually by applying power smoothly
- Properly stabilizing the tractor for the work to be done
- Hitching loads to the drawbar correctly

Sideway Rollovers— The wider the tractor, the more stable the machine. Keep the center of gravity low and safely centered.

Sideway rollovers can be prevented by:

- Properly stabilizing the tractor
- Avoid turning at excessive speeds
- Avoid driving too close to the edge of roadside ditches or slopes.

- Using a tractor equipped with Roll Over Protection.

Roll-over protection are operator compartment structures (usually cabs or frames) on the tractor. Roll-over protection and proper seat belt use can eliminate nearly all deaths caused by tractor and lawn mower overturns.

Attaching Implements. Agricultural workers can easily be crushed between a tractor and the equipment being attached. You should not enter the area between the tractor and the implement until the tractor is stopped, shifted into neutral and the brakes applied. You should also step out of the area if adjustments have to be made between the tractor and the implement.

Sharing the Road. Sometimes farm vehicles must operate on public roads to move between farms and fields. Although farm equipment is legally allowed on public roads, it is important to be extremely cautious, courteous, and attentive to other motorists and their passengers. Tractors and heavy machinery are much larger than the average automobile; it is important for farmers to keep the safety of others as their top priority. Before travelling on public roadways, conduct a pre-ride inspection on the tractor and any implements you may be towing. Make sure you have plenty of fuel and all lights and signals work properly. Adjust all mirrors, and have a slow-moving vehicle (SMV) emblem on display if you are travelling at 25 mph or less.

On the roadway, make sure your hazard lights are on and your SMH emblem can easily be seen by other motorists. Be aware of any traffic build up behind you on busy roadways; check your mirrors constantly to be aware of your surroundings.

Maintenance and Repairs. Check *Being observant*

hydraulic oil, engine oil and fluid levels, radiator coolant level, brakes, and brake fluid, tire pressure, and fan belts. Make sure implements are secure and properly connected. Check carefully for hydraulic leaks. Clean tractor of trash, mud, oil, grease and if equipped with a cab, clean the glass. Make sure to check the tire pressure and be sure all control lights and covers are in place.

Paying Attention to Your Surroundings. People can be safety hazards if they do not watch where they are going.

While walking, do not get so engrossed in a conversation that you do not notice threats to your safety that are right in front of you. When approaching a corner or intersection in a hallway, walk in the center of the hallway instead of next to the wall where you cannot see or be seen by those traveling in other directions.

Perhaps the employees in your work area can reduce the chances of bumping into each other by agreeing to walk only on the right sides of hallways. Think about how this type of accident can be avoided; the next person you bump into could be carrying hot coffee or sharp objects.

There is a possibility of bumping into or being bumped into by a cart of some kind. You may not be injured, but who wants to take chances? If you happen to be moving a cart, especially a large one that you cannot see over or around, do not push it, pull it. Never push a cart; it is too easy to accidentally push a cart into someone when you can not see where you're going.

There are several ways to prevent head injuries. One of these ways is to be observant.

- Watch for low hanging pipes, electrical conduit, and other objects that can be bumped by a person's head.
- Be especially cautious in tight places such as crawl spaces.
- Ensure area is well lit to see these hazards.
- Low hanging objects should be clearly marked. (Usually by yellow tape with the word "caution" in black printed on the tape.)
- When bending over, ensure that your head path is clear as well as when you are raising back up. Most people hit their head on an object when they are bending over and/or raising back up from a bending position.

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Training Circular
TDCJ Risk Management Department
Volume 16 Issue 12

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The Training Circular, a publication of the Texas Department of Criminal Justice Risk Management Department, is published monthly in an effort to promote and enhance risk management awareness on issues relating to TDCJ employees. Design and layout of the Training Circular is preformed by Thomas Warren, Risk Management. Comments, suggestions and safety related items are welcome. Send suggestions to:

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