

# Tractor Safety

The most common types of tractor accidents include rollovers, caught by moving parts, run overs, and collisions. These accidents can cause great loss in property damage, injury, and even a life.

## **Rollovers:**

Avoid rollovers by recognizing dangerous situations and taking action to avoid them.

- Stay away from steep ditches & drop-offs. A good rule of thumb is to stay the same distance away from the edge, as the ditch is deep.
- Inspect the area for holes & wash outs.
- Avoid driving across the side of a hill. When you must operate on a slope, keep the heavy end of the tractor facing uphill. With no attachments, a tractor's heavy end is the rear. When operating with a front attachment, drive forward up a hill.
- Don't overload the tractor or attachments. Check the capacity label or data plate for maximum load limit. Don't go over that limit or the tractor may become unstable and roll over.
- Carry loads as low to the ground as possible.
- Always hitch to the drawbar, anything higher than this point may cause the tractor to tip backward during operation. Consult your owner's manual for proper counter weight usage.
- Avoid popping the clutch.
- Apply brakes evenly when on pavement or other such hard surfaces.
- Go slow when making turns, especially with a loader bucket. This extra weight will cause a shift in the center of gravity, making rollovers even more likely.

Rollover protection systems (ROPS) will not prevent rollover accidents; however, it will help protect you if a rollover accident occurs. When operating a tractor with ROPS always use your seat belt. If you do not wear your seat belt, ROPS cannot not protect you from being crushed in a rollover accident.

Should a rollover occur:

- Never try to jump out.
- Firmly grip the steering wheel; keep arms inside; do not grab the ROP.
- Plant feet firmly against floorboard.
- Ride it out until tractor completely stops.

### **Being Caught by Moving Parts:**

One of the most dangerous power transfer devices on a tractor is the power take off (PTO).

- Follow safe shutdown procedures and wait for all moving parts to stop, before dismounting the tractor.
- Keep all parts of the PTO system shielded and guarded. Repair or replace these guards immediately when they become damaged.
- Periodically check driveline guards by spinning or rotating them to make sure they haven't become stuck to the shaft.

**CAUTION:** *This should only be done with the engine off.*

- Never step over a rotating PTO shaft.
- Make sure the PTO speed matches the implement's recommended speed.
- Never wear loose fitting clothing near a rotating PTO. Make sure shoe laces are tied and secure long hair.

### **Runovers:**

Coworkers, maintenance personnel and other bystanders can be seriously injured or killed if safe operating procedures are not followed.

- Check around the tractor before starting or moving.
- Keep bystanders and coworkers at a safe distance while you operate the tractor.
- If an attachment or implement is blocking your view, shut down and walk around the tractor to make sure no one is in the area.
- Never let anyone stand between the tractor and an attachment or implement. They could be run over by the tractor or crushed between the tractor and attachment or implement.
- If a coworker is helping you guide the tractor, make sure they are far enough, out of the way to not be run over.

Anyone who is not in the driver's seat of the tractor is in danger of falling and being run over. Human reaction time is too slow for a driver to react if a passenger falls off the tractor.

- Never allow extra riders on a tractor.
- Do not allow anyone to ride or stand on the draw bar, axle housing, side links of a three-point hitch, rear wheel fenders or attachments.
- Do not allow passengers on the operator's lap.
- Use only approved passenger attachments.

## Collisions:

Be aware of obstacles - When operating a tractor without a cab, you can be crushed or thrown out of the driver's seat if you hit an obstacle or rough surface.

- Always wear your safety belt.
- Check the work area before you begin. Note all potential obstacles: low hanging tree branches, rocks, pipes and low hanging wires.
- Make sure you have adequate clearance through narrow passages, doorways and other openings.
- Maintain a clear line of sight. Keep the windows and mirrors clean and in good repair.
- Keep attachments low to the ground so you can see over them.
- Use a guide to direct your path when an attachment or implement blocks your view.

Avoid driving on public roadways when possible, but if you must follow these tips for safe travel.

- Obey all traffic laws and signs.
- Avoid driving the tractor on public roads during rush hours, at night, or during conditions of poor visibility.
- Always be aware of what is going on around you. Remember, a tractor is difficult to maneuver, so you will not be able react quickly to avoid an accident.
- Maintain a safe following distance. Because of the size and weight of the tractor, it will take you more space to stop than a normal passenger vehicle.
- Allow faster traffic to go around you when possible.
- Display an SMV (Slow Moving Vehicle) emblem on the rear to identify the tractor as a vehicle that travels 25 mph or less. When towing equipment, the SMV emblem should be visible on the back of the equipment too.
- Ensure tractors equipped with flashers are working properly and turned on.
- Never allow your vehicle or load to extend into oncoming traffic lanes. If the road is so narrow that this cannot be avoided, always have an escort vehicle to warn or stop oncoming traffic.
- Have an escort vehicle whenever possible to warn other motorists, especially when moving over-width loads or traveling on narrow, winding roads or roads with heavy traffic.

Additional safety precautions to be aware of ...

### **Safe shutdown procedures:**

- Bring the tractor to a complete stop and park on a level surface.
- Lower all attached equipment to the ground.
- Move controls to neutral, lock controls (if so equipped) and set the parking brake.
- Make sure the PTO (power take off ) is disengaged or off .
- Allow the tractor to idle down before turning off the engine.
- Remove the key.
- Wait for all moving parts to stop.
- Unbuckle your safety belt and exit by backing down the steps with both hands on the grab bars.
- Block hydraulic equipment, as necessary.
- Block the wheels of the tractor and/or attached equipment, if parked on an incline.

### **Hitching and Unhitching Attachments and Implements**

- Hitch towed loads to the drawbar only.
- Never raise, lower or otherwise alter the drawbar. Hitching higher than the drawbar can cause a rear rollover.
- Refer to the operator's manual for instructions on hitching attachments or implements with hydraulics, a 3-point hitch or PTO shaft.
- Ensure all safety guards are in place and undamaged.
- Unhitch attachments and implements on level ground only.
- Keep others out of the area between the tractor and the attachment or implement; they could be easily crushed or caught in the equipment's moving parts.

### **High Pressure Hydraulics**

- Be aware that a hydraulics system can fail without warning. Never stand or work under equipment that has been raised unless it is supported by an approved lift support device. Check the tractor and equipment operator's manuals for information on approved support devices.
- Repair or replace damaged hydraulic hoses and fittings.
- Keep the ends of the hoses and connections free of dirt and dust.
- Never use your hand to check hydraulic hoses for leaks. When you suspect a leak, have a qualified person check for leaks.
- Check for heat before disconnecting hydraulic hoses.

Sources: <http://nasdonline.org/1919/d001874/tractor-safety.html>