



Maine Farm Safety Program

by Dawna L. Cyr, farm safety project assistant, and Steven B. Johnson, Ph.D., Extension crops specialist

Tractor Safety

Tractors have contributed immeasurably to farm productivity and helped make it possible for farmers to feed themselves and many others. But to continue doing so, a farmer must operate tractors safely.

Before Using a Tractor

Know the tractor and how to use it safely. Review the safety precautions in the operator's manual regularly. Observe and follow the instructions contained on decals attached to tractors.

Check the equipment before starting. Set the wheel treads as wide as practical and properly inflate the tires. Make sure guarding is in place and working. Repair hydraulic leaks and tighten loose fittings. Equalize the brakes so that the tractor will not pull to one side. Have properly charged fire extinguishers of the right type and size on tractors

and other self-propelled equipment. Make sure all drivers are competent and wear their seat belts if the tractors are equipped with ROPS (roll-over protective structures). Make sure there is clear visibility from all sides and all lights are visible and working.

Install safety equipment on tractors. Outfit each tractor with a fire extinguisher and first aid kit. Securely fasten these items to the tractor.

Tractor Safety

- **Maintain a “no seat, no rider” policy.**
- **Remove the key, set the brakes, lock the transmission and lower implements before leaving the tractor.**
- **Make sure there are slow moving vehicle emblems on all tractors.**
- **All tractor operators should receive safety training.**

Keep safety signs clean and free from obstructing material. Replace damaged or missing safety signs with new ones.

Never jump from a moving tractor or turn your back on the tractor with its engine running. If the tractor starts to run over you, you may not be able to stop it.

Starting the Tractor

After having made a check of the tractor, fastening the seat belt and adjusting the mirrors, you are ready to start the tractor. Make sure there is nothing in the tractor's intended path. Start the tractor and begin work.

If a vehicle needs to be jump-started, there is something wrong. Correct the malfunction as soon as possible to avoid loss of time and unsafe conditions.

When jump-starting a tractor, be sure to hook the positive terminal to positive and the negative terminal to another part of the tractor. An operator should be properly located on the tractor when starting it. Never bypass-start a tractor.

No Riders Policy

Do not allow riders, particularly children. There is no safe place for anyone else either on the tractor itself or on any of its implements. Teach children to drive only when they have developed the maturity, size and strength to handle a tractor safely. There are tractor safety programs for youth (14 years and older) and inexperienced operators in Maine. Call your county Extension office or

vocational agriculture program for information.

Training New Operators

Train new and inexperienced operators. Have them review the operator's manual before operating the tractor. Teach the new operator to recognize hazards and know how to avoid them. Point out special hazards on the farm. Do not let them drive on public roads without a driver's license.

Have the new tractor operator practice, without equipment attached, in a level field or a large, level yard. The trainer should start the tractor, demonstrating the procedure for the new operator. The trainer should drive the tractor around the yard, showing the student how each of the controls operate. The trainer should then walk near the tractor as the student drives it. The trainer can give instructions as the student drives.

After the new operator has learned to operate the tractor alone in a level area, the next step is to attach and operate the equipment. The new operator should gradually work into the more complex jobs of tractor operation.

Keeping the Tractor Chemical-Free

Before entering the cab, remove personal protection equipment (PPE) worn while handling and mixing chemicals. If the cab is a type that will not protect a person during product application, it may be best to continue wearing PPE.

These are other suggestions to keep the tractor cab chemical free:

- Remove contaminated soil and debris from shoes or boots before entering the cab.
- Keep the floor clean by sweeping or vacuuming.
- Wipe down the cab headliner or inside cowling.
- Clean the tractor exterior to reduce the exposure to chemicals.
- Never grasp the steering wheel while wearing gloves that were worn during handling or mixing chemicals.
- Clean the control knobs and steering wheel regularly with a grease cutting agent or solution.

Refueling

Use caution when refueling tractors. There is always a risk of fire and explosion. Never refuel the tractor while the engine is running or hot. Always refuel the tractor outside. Static electricity, a spark from the ignition system or a hot exhaust could cause the fuel to ignite. Grounding out the tractor with a ground wire or by dropping mounted equipment so it touches the ground can reduce static electricity.

Carbon Monoxide

Never start or work on a running engine in a closed shed or garage. One of the exhaust by-products is carbon monoxide. It is colorless, odorless, and can be deadly.

Overturns

Tractors can overturn very easily. Fit all tractors with ROPS (roll-over protective structures). Raised objects, operating with a front end loader, and operating on a steep incline, are just a few of the possible causes for overturns. Avoid operating near ditches, embankments and holes. Stay off steep slopes and reduce speed when turning, crossing slopes, and on rough, slick or muddy surfaces. If you must turn on a slope, turn downhill. Drive straight down even the gentlest slope, not diagonally across it. Never coast. Shift to the lowest gear to prevent freewheeling and excessive braking. Take extra care on slopes when carrying heavy, high, swaying or unstable loads.

Hitches

Hitch towed loads only to the drawbar and at the manufacturer's recommended height. When using the three-point hitch, add front weights, as necessary, to maintain stability and prevent steering problems. Use the proper clips and pins. Keep your hitches low and always keep the hitch on the draw bar. This can help prevent a tractor flipping over backwards. Be sure no loose chains are dangling either from the drawbar or the implement. They can catch on a stump or rock and pull your tractor over backwards.

Install safety equipment on tractors. Outfit each tractor with a fire extinguisher and first aid kit.

Tow ropes or cables that store energy by stretching under load can generate special hazards. Making a running start to move a heavy stationary load can stress a nylon tow rope or steel cable to the breaking point. Connectors can fail and be slung toward the towing tractor with fatal consequences.

Inappropriate Uses

Never use a tractor for a task it is not designed for. Tractors are implement carriers, transport units and remote power sources. Tractors are not recreation vehicles, tow trucks or vehicles to run errands. Never use a tractor for joy riding or herding cattle.

Finishing

When done working for the day, park farm machinery in a safe place. Disengage the PTO, lower equipment to the ground, turn off the engine, put the transmission into neutral or park, set the brakes and remove the key. Never leave the vehicle in gear.

Shutting off Diesel Tractors

Shutting off diesel tractors requires more than turning the key. Follow the four steps listed below.

1. Look for a red knob on the right or left side of the dashboard. It may be located near the key. "Pull to stop"

may be printed on it. Pull it towards you as far as it will go. If there is no knob, go to step 2.

2. Look for a thin rod that looks like an extra turn signal lever behind and to the right of the steering wheel. This is the throttle. Push the rod up in a counter clockwise direction as far as possible. The engine will slow down and may shut off. If the engine does not stop, go to step 3. If you do not find this rod, go to step 4.
3. Further movement of the throttle is needed to stop the engine. Pull out on the rod as if you were trying to make it longer. If it does not move a few inches, push in on the rod. If this is unsuccessful, pull the rod toward you. After you have completed whichever motion is successful, hold the rod at that length and move it up in a counter clockwise direction. The engine will stop.
4. Look for a lever with a black knob or T-shaped end sticking out of a slot. This may be the throttle. It may be on the right side of the dashboard near the steering wheel or to the right of the driver's seat. If the lever is on the dash, push it down to the very bottom of the slot. If the throttle is to the right of the seat, push it to the rear as far as it will go. The tractor engine will shut off.

This Maine Farm Safety fact sheet is part of an educational fact sheet series produced by University of Maine Cooperative Extension. For more information on farm safety, contact your county Extension office.

For the most current Extension publications, see our online catalog at www.umext.maine.edu

A Member of the University of Maine System

Published and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, by the University of Maine Cooperative Extension, the Land Grant University of the state of Maine and the U.S. Department of Agriculture cooperating. Cooperative Extension and other agencies of the U.S.D.A. provide equal opportunities in programs and employment. 3/02