

## Training Module: Safe Use of the Power Take Off (PTO)

**Objective:** To become aware of the dangers of the PTO system, and to learn to use the system safely.

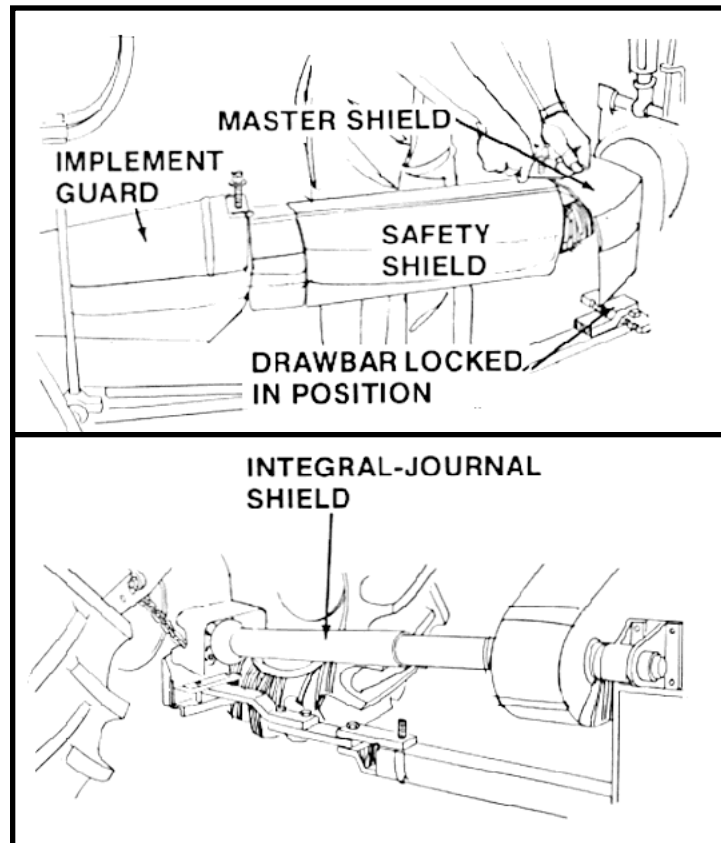
**Trainer's Note:** PTOs are used on farm and lawn equipment. Demonstrate how to properly hook up and unhook a PTO. Wear close-fitting clothing to reinforce the idea that loose clothing is dangerous. Discuss the importance of keeping protective shields in place. Ask workers for examples of possible accidents and preventive measures that should be taken.

### Background

Keep **safety shields** securely fastened on equipment. Safe operation of the PTO is not possible without these shields in place. A sudden slip or fall could throw a worker directly onto the unshielded rotation shaft. Also those who are unfamiliar with the equipment, may not recognize the danger of the power shaft.

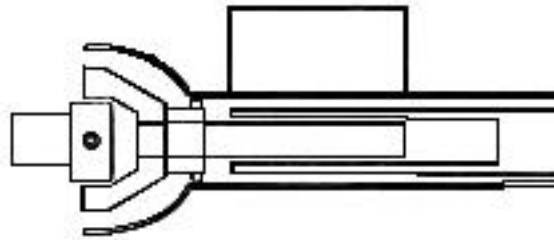
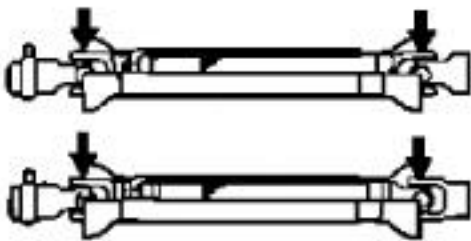
Wear **snug fitting clothes** when working around power shafts. Loose clothing can catch in or be wrapped around the power shaft. Do not step over an operating PTO. A sudden slip or a loose shoe string could cause the worker to become entangled in the PTO shaft. Long hair may also become entangled in a PTO shaft. Hair should be pulled back out of the way.

Most power shafts can be extended. These shafts are usually constructed with a square shaft inserted into a housing or casing. It is important that at least 5 1/2 inches of the sliding shaft remain in the housing when the power shaft is connected to the tractor. This reduces the possibility of the shafts separating while the tractor is in motion. If the shaft splits, the portion of the shaft connected to the tractor is free to whirl at high speeds, endangering the worker and tractor. If the shaft does separate, disengage the PTO immediately and stop the tractor. Use extreme caution when operating equipment with a separable PTO shaft. Never hook 540 rpm equipment to a 1000 rpm PTO or vice-versa.



## Review The Following Points

- Keep all PTO guards and shields in place, even when the PTO is not operating.
- Always disconnect the PTO when not in use.
- Never engage the PTO while the machine engine is shut off.
- Keep hands, feet, and clothing away from PTO.
- Keep hair away from the PTO.
- Never operate PTO shafts at extreme angles.
- Be sure that the PTO spinner shields rotate freely at all times. Always disengage all power and shut off tractor before servicing.



**True or False Answer Key**  
1. T, 2. F, 3. T, 4. T, 5. T

**True or False**

**Name** \_\_\_\_\_

1. Always disconnect the PTO when it is not in use.
2. Wear loose fitting clothing when working with PTO's.
3. Always keep the PTO safety shields on the machine.
4. Never hook 540 rpm equipment to a 1000 rpm PTO or vice-versa.
5. Never engage the PTO while the machine engine is shut-off.