Power-Take-Off Safety



WHAT'S AT STAKE?

It cannot be emphasized enough how dangerous a power-take-off (PTO) that has not been disengaged is. Attempting to repair, adjust or unplug equipment if the PTO is still operating is life threatening. The dangers of a rotating shaft are nothing to be complacent about.

WHAT'S THE DANGER?

To put it into perspective, a 540 PTO shaft travels upwards of two metres in under two seconds. That incredible speed could pull in loose-fitting clothing, shoelaces or hair and cause a fatal entanglement. Many people feel they do not have the time to shut the PTO down. What must be considered is that getting up close and having to maneuver around the PTO is inevitable. It is not worth the risk of getting caught up in the shaft.

EXAMPLE

A young worker just finished raking the hay and had pulled up near the barn. The tractor did not have a PTO master shield installed. Without disengaging the PTO, the girl stepped down from the tractor and her loose, long-sleeved shirt got caught, entangling her arm. She died at the scene.

HOW TO PROTECT YOURSELF

Develop a knowledge of proper shielding for all machines attached with the PTO:

- Master shield of the tractor protects the worker from getting caught up in both the stub shaft and front universal joint of the attached machine.
- There should also be a shield on the stub shaft on the driven machine.
- Tubular shields offer a complete enclosure of the attached machine's power shaft. They rotate on bearings that stop the shield from spinning in case of contact.
- Cones cover the universal joints at each end of the power shaft.

The following points are a PTO safety checklist that should be referenced each time you work with one.

- **After disengaging the PTO and turning the tractor's engine off, with the keys removed from the cabin**, do a thorough check of all the components of the shielding system. Look for damaged components and test for free movement of the

tubular shield on its bearings. Make a habit of inspecting all parts of the PTO and replace any part that is not in good condition.
- Adjust the tractor drawbar to the length recommended in your machine’s manual.
- **Always** keep the master shaft on.
- Do **not** step across a rotating PTO shaft. Be careful to walk around.
- Dress appropriately to avoid entanglement. Avoid wearing loose fitting clothes or footwear with long laces and keep long hair up and out of the way.

FINAL WORD

Respecting the power and understanding the dangers of PTO systems will save you. You must always check that all components are in good working order, all shields are in place and, most importantly, the engine to the tractor is shut off with the keys removed from the cabin.