

Safety Guide for Agricultural Implement Drivelines

The following information came from the

Agricultural Driveline Manufacturers Association.

Please visit **www.admausa.com** for more information.

Danger!

Operating machinery can be very dangerous. It is YOUR responsibility to use good safety practices.

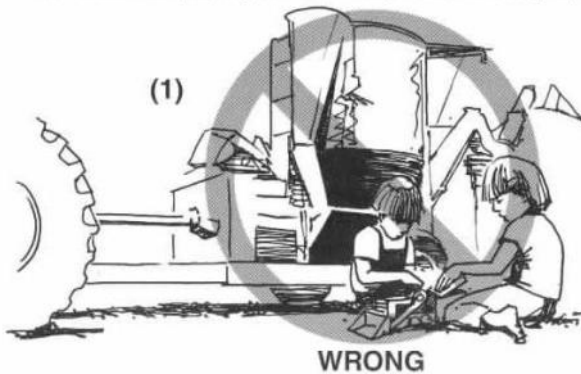
You have too much to lose

The area between the tractor and the PTO-driven implement is a DANGER zone. This can be one of the most dangerous places on your farm—for you every member of your family and employees.

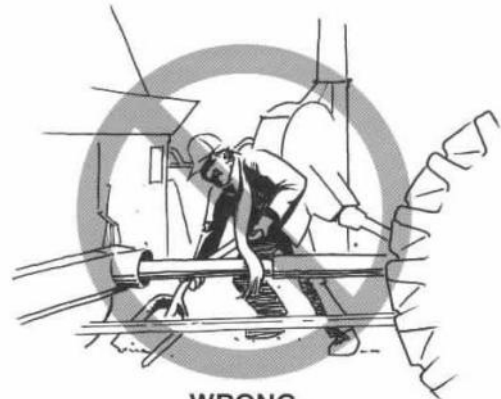
We know that almost every driveline accident happens during the day and near the barnyard.

Certain operating conditions are particularly dangerous:

- If your equipment is missing guards or shields...
- If you are not paying attention...
- If children are playing near where you are working... (1)



(2)



- If you are operating a stationary piece of equipment...
- If you are wearing loose-fitting clothes... (2)
- If you are tired or in a hurry to get finished...

Do you know that most driveline accidents happen when drivelines are operated without shields or guards or they are improperly maintained?

The function of PTO driveline and shielding

What is the function of a PTO driveline and shielding system?

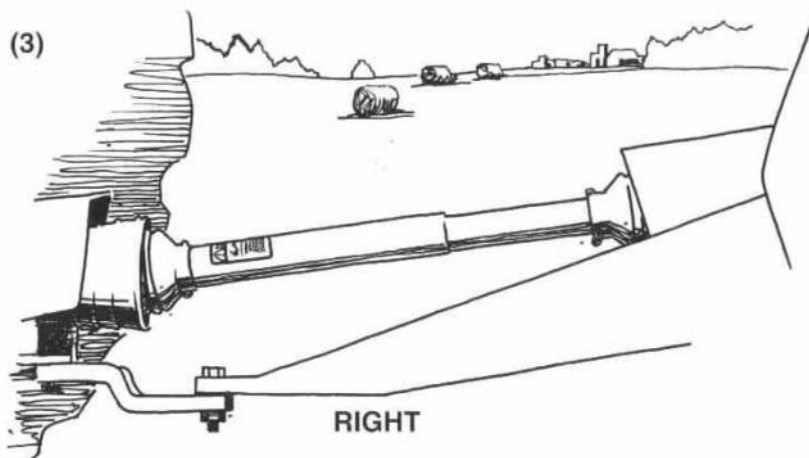
The PTO driveline transmits power from the tractor to the implement. It must be able to operate safely across a wide range of performance demands and different environmental conditions. The driveline shielding system can help you ensure your own personal safety and the

safety of others. The purpose of the driveline shielding system is to help prevent inadvertent contact and entanglement in the driveline.

The total shielding system includes the tractor master shield, driveline guards, and implement shield.

Because you and others are around drivelines, the purpose of this booklet is to help you use drivelines carefully and thoughtfully and to remind you to:

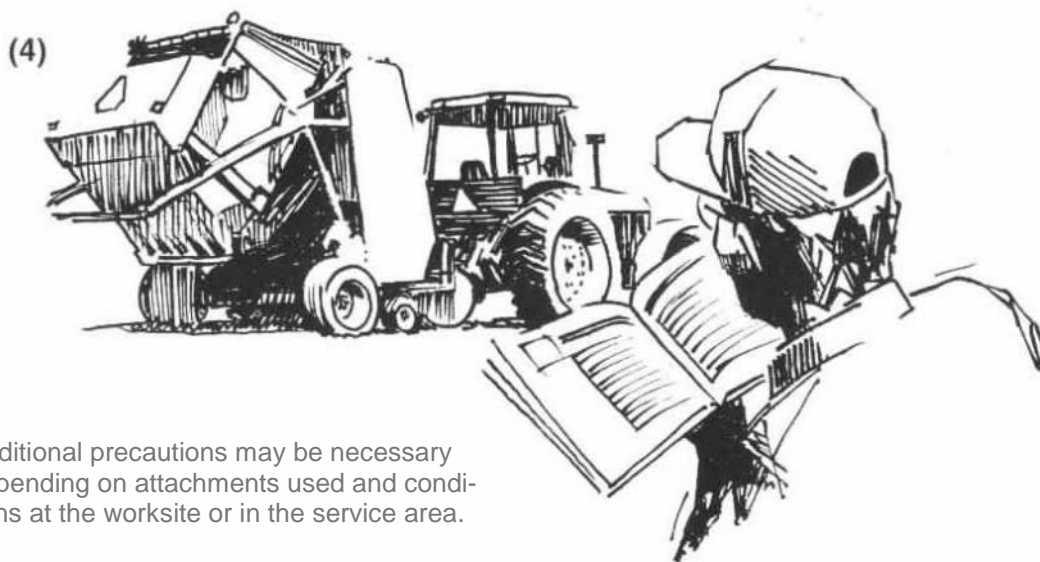
keep all guards and shields in place. The tractor master shield and implement shield must be installed to work with the driveline guard and provide the intended coverage. (3)



The operator's manual

The manufacturer has no direct control over machine application, operation, inspection, lubrication, or maintenance:

- Read the manual! (4)
- Understand the contents!
- Heed all safety messages in the operator's manual and safety signs on machines.

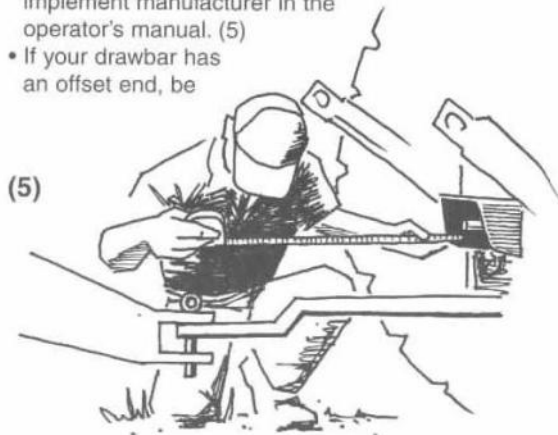


Additional precautions may be necessary depending on attachments used and conditions at the worksite or in the service area.

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Pre-operation requirements

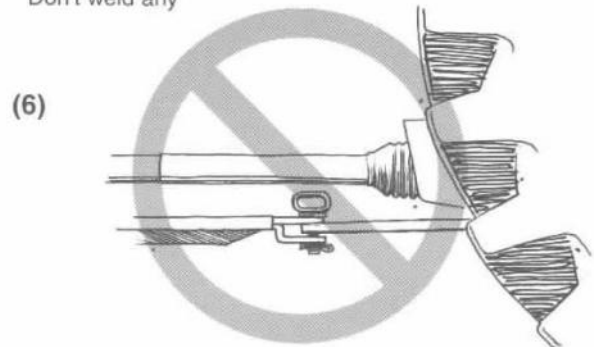
- Be sure to disengage the PTO shaft and turn off the tractor before making any inspections or working around the PTO driveline.
- Follow the manufacturer's recommendation for attaching the implement to the tractor. Make sure the distance from the tractor PTO shaft to the hole in the drawbar is the distance recommended by the implement manufacturer in the operator's manual. (5)
- If your drawbar has an offset end, be



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sure it is in the down position so it won't interfere with the driveline guard when you are using PTO-driven equipment. Make sure your three-point hitch and drawbar are correctly positioned so neither interferes with the driveline. Lock the three-point hitch when you are not using it.

- Use a drawbar hitch pin with a low head. When the hitch pin or other parts of the drawbar connection are too close to the driveline, field operation on uneven or terraced terrain will often result in guard damage. (6)
Don't weld any



WRONG

protruding device onto the head of your hitch pin. Be especially careful to remove clevis straps mounted on top of the drawbar.

- The driveline must be attached securely to the tractor and the implement. If a set screw or bolt is the recommended means for attachment, make sure it is the correct length and follow the original manufacturer's recommendations. Don't attach drivelines with bolts or pins which are longer than recommended. They can not only catch loose clothing, boot-laces or a pant cuff, but, while spinning rapidly, they can cause serious bodily injury.
- The driveline shielding system is one of the most important components for your safety and the safety of others. Make sure all guards are in good repair and in place prior to hooking up your driveline. This will greatly reduce the risk of an accident, serious injury, or even death.

(7)

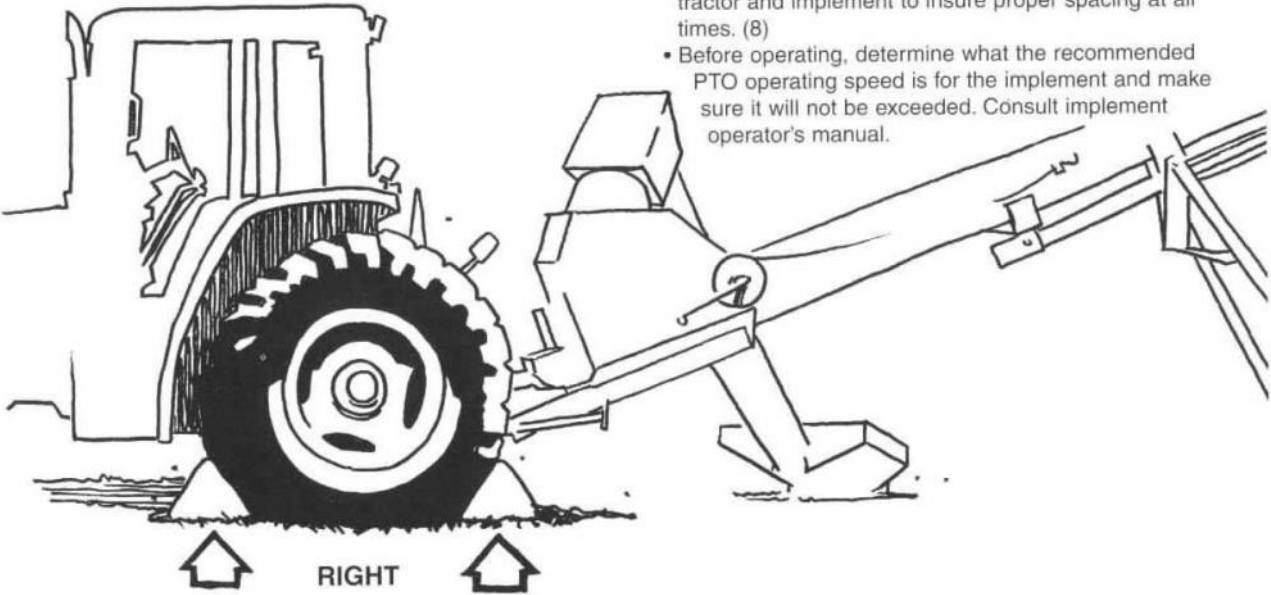


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- Make sure the driveline guard can rotate independent of the shaft a full rotation and can telescope freely. (7)
- If the driveline has been provided with a retaining chain, make sure the chain is in place and has been properly connected to the tractor or the implement attachment point.
- Make sure that any shear pins are correctly installed and that the proper replacement pins are readily available. Check any other overload devices to ensure they are operable and have been serviced according to the manufacturer's instructions.

Pre-operation requirements

(8)

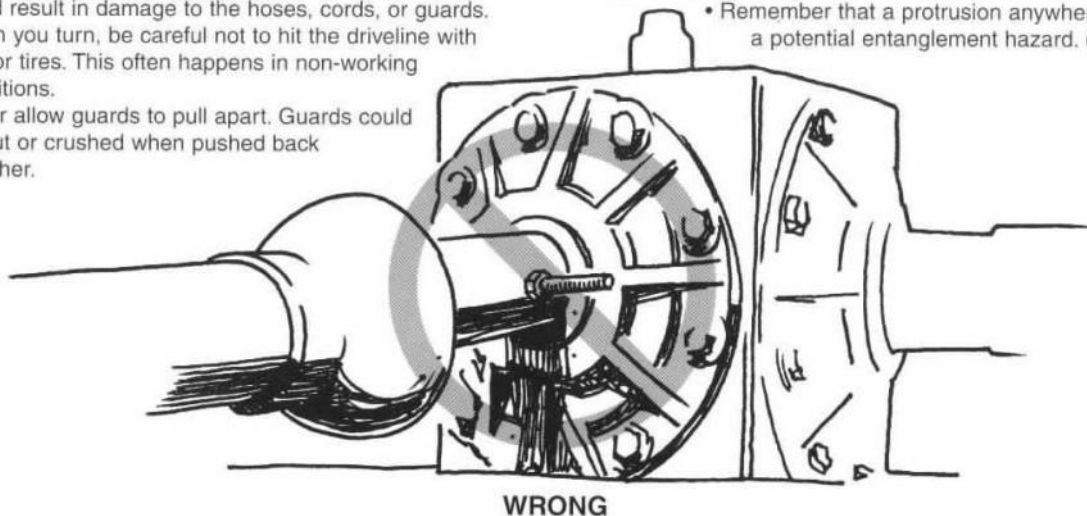


- For stationary equipment which is not attached to the tractor, proper spacing must be maintained. After setting the tractor brake, block the wheels on both the tractor and implement to insure proper spacing at all times. (8)
- Before operating, determine what the recommended PTO operating speed is for the implement and make sure it will not be exceeded. Consult implement operator's manual.

Operating recommendations and precautions

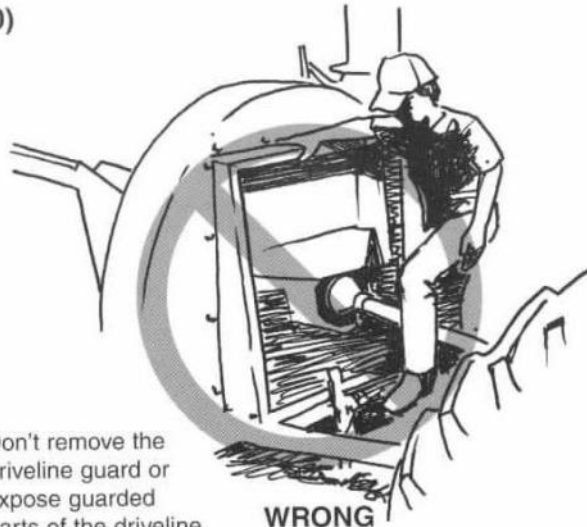
- Be certain only a properly trained and physically able person will operate the machinery.
- Wear close fitting clothes and keep long hair tied back or under a hat.
- Don't allow any hydraulic hoses, electric cords, ropes, or other items to drape over the driveline guard. This could result in damage to the hoses, cords, or guards.
- When you turn, be careful not to hit the driveline with tractor tires. This often happens in non-working conditions.
- Never allow guards to pull apart. Guards could be cut or crushed when pushed back together.
- Be certain to disengage PTO shaft and to turn off the tractor before making any operational maintenance inspections or repairs. Keep clear of the machine until all parts have stopped moving.
- Don't remove the tractor master shield or the implement shield and continue to operate.
- Remember that a protrusion anywhere is a potential entanglement hazard. (9)

(9)



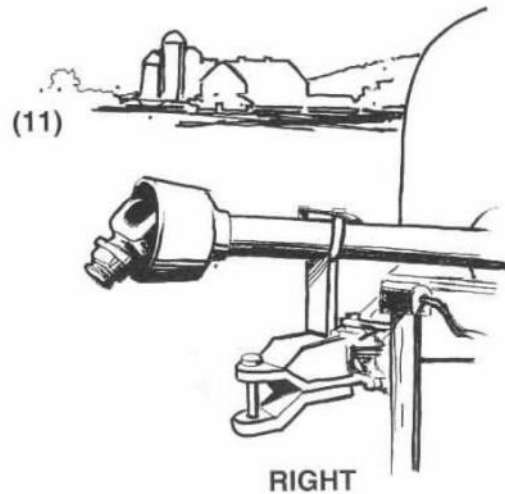
Operating recommendations and precautions

(10)



- Don't remove the driveline guard or expose guarded parts of the driveline by cutting or enlarging the grease access holes.
- Be aware of special precautions for stationary equipment. Avoid contact with drivelines in this close working environment. Do not step on or over a driveline. (10)

- Never operate an implement with driveline guards in a damaged condition.
- To transport the machinery, follow the implement manufacturer's recommendation for storing the driveline. If no provision for storage is available, make sure the driveline is properly secured to prevent damage to the guarding system during transport. (11)

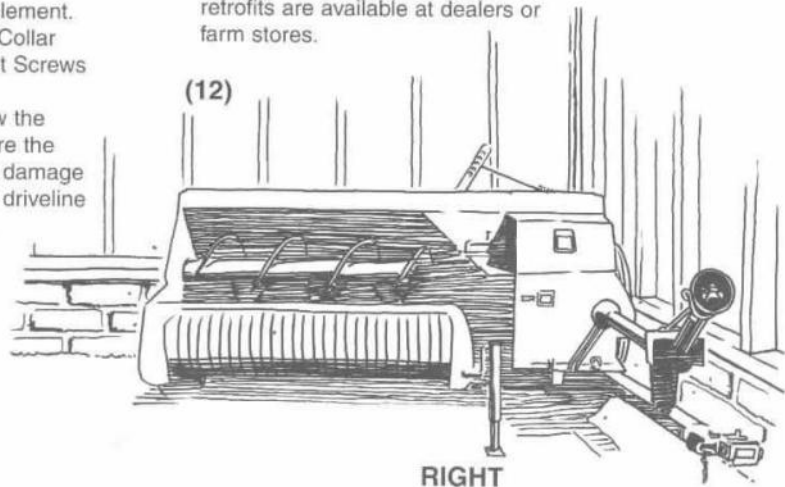


Maintenance

Driveline & Shielding System

- Inspect driveline shielding system including tractor master shield, driveline guard, and implement shield. If the driveline guard does not rotate free from the shaft, is damaged, or the safety signs are missing or illegible, parts must be repaired or replaced. Perform maintenance per operator manuals. Check connection means for securing tractor to implement.
- Check Quick Disconnect Pin, Slide, or Twist Collar attachment yoke. Check Clamp Bolts and Set Screws for proper torque.
- Store your equipment inside and do not allow the driveline to rest on the ground. (12) Make sure the driveline is stored in a manner which will not damage guards. Rust and mud may interfere with the driveline locking device or you could unknowingly run over it with the tractor or other farm equipment.

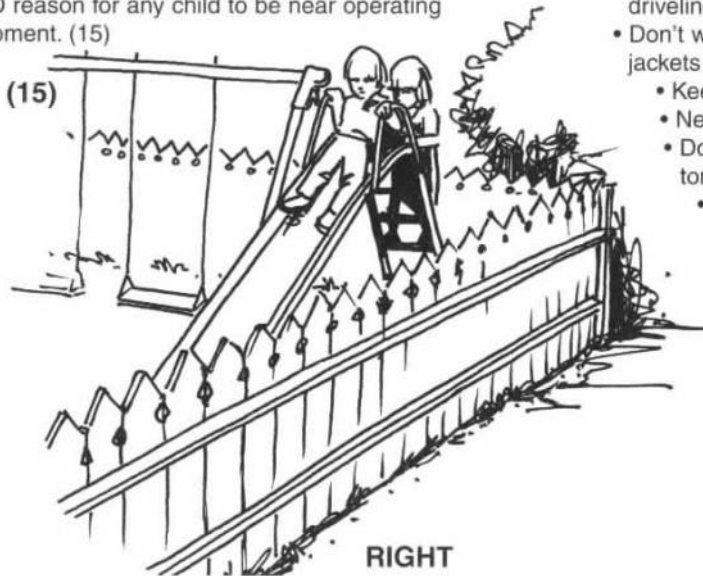
- To replace driveline guards and safety signs, go to your farm equipment dealer. Brand name original equipment replacement parts are recommended. If they cannot supply the guarding or safety signs needed, contact the equipment manufacturer. If the manufacturer is not able to supply the guarding, retrofits are available at dealers or farm stores.



IMPORTANT!

Remember, Safety First

- Exercise extreme caution when operating machinery.
- Stay at least your height away from a rotating driveline.
- Never operate equipment without proper guarding.
- You have an obligation to keep children away. There is NO reason for any child to be near operating equipment. (15)



- If the elderly are assisting with farmwork, their physical limitations need to be recognized and accommodated.
- It only takes a moment for a shoelace, a pants cuff, or even a strand of hair to become entangled in a driveline.
- Don't wear loose fitting clothes, windbreakers, or jackets with long drawstrings.
 - Keep long hair tucked securely under a hat.
 - Never step across any driveline.
 - Don't use the tractor drawbar or the implement tongue as a step.
 - Never use the driveline as a step.
 - Slippery conditions increase your risk of injury.
 - Fatigue is a warning you should never ignore.
 - Heed all safety warnings in the operator's manual and on safety signs.

The “ADMA’s mission is to promote increased safety awareness in regard to design, operation, and maintenance of agricultural drivelines.”

Newton Crouch Inc. urges consumers to use all equipment in the manner for which it was designed, to follow all safety precautions and maintain your equipment so that it may be operated safely.