

Riding Mower Operator Roll-Over Protection (ROP)

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Introduction

There are numerous reported injuries, including deaths, involving riding lawn mowers each year. The most common type of injury is when the machine is overturned and where the operator is crushed or pinned beneath it. Usually this type of injury takes place while improperly cutting on a slope.

Roll-Over Protective Structure, or more commonly called ROPS are bars, or a framed structure, such as a cab that is designed to protect operators in case of a rollover. ROPS are designed to be used with a seatbelt protecting the operator. ORFA members who operate riding grass maintenance equipment must be properly protected from the potential of roll-over incidents.

Safely Using ROPS

All operators must understand the risks of equipment roll overs and how ROPS are designed to assist in the event of an accident.

The following is offered as a general guideline:

- ROPS can either be standard or optional equipment.
- Do not operate any mower that was intended to be equipped with a ROPS without it being in place.
- Mowers with a ROPS should also be equipped with a seat belt that is used as per the manufacturers recommendations.
- Mowers should always have a functional operator presence control system that shuts off the blades when the operator dismounts the machine or rises out of the seat.
- Keep mowers in good working order, and inspect them periodically for an insecurely or incorrectly attached ROPS or seat belt.
- Mower operators should use a standard checklist to do a general inspection of the equipment before use.
- Competent operators should regularly inspect riding mowers for the necessary safety features and overall maintenance.

Personal Protective Equipment (PPE) Assessment

Although wide area mowers do not typically require protection such as a hardhat, it is recommended that a job hazard assessment be conducted for grounds and parks staff prior to selecting any other protective equipment. If, through the Hazard Analysis, it is determined that the operator could be shaken or bounced around in a mower with roll over protection, putting them at risk of being struck on the head, then the hardhat or other head protection is not unreasonable to require the use of this type of protection. The JHSC should determine the level of risk associated with potential hazards and injuries for each job task, evaluate the level of risk, and determine (if deemed necessary), the appropriate form of protective equipment to be worn, considering the nature of the work being carried out.

Safely Cutting on Slopes



The use of any Personal Protective Equipment (PPE) requires research to ensure that the right piece of equipment is selected for the intended task. Once selected, workers must have adequate training provided to ensure proper and safe use of the piece of equipment.

Remember:

- ✓ To always to make sure there is good traction.
- ✓ To exercise caution.
- ✓ To not operate on wet grass near or near drop-offs.
- ✓ When using an under or rear-mount mowers, mow down slopes rather than across.
- ✓ When using side-mount, offset, or sickle-bar mowers, mow across slopes with the mower on the uphill side.
- ✓ If you can not back up a hill, it's too steep and it should not be mowed with riding equipment.
- ✓ If you feel uncomfortable on a slope, don't mow it.

Worker Training

To meet the obligations of the Occupational Health and Safety Act employers must provide adequate training to ensure that each operator is competent to operate the mower safely. Training must be provided in a language and vocabulary that workers can understand. Training should cover topics on the safe operation of specific riding mowers and other equipment that workers will use.

Operator training topics should include:

- To read the equipment's owner's manual and watch all safety videos supplied with the equipment prior to operation.
- A review of all safety devices to ensure that ROPS, guards, seat belts, and shields are securely in place and properly used.
- The importance of surveying the terrain for hazards prior to mowing.
- Reading and understanding the operations, maintenance, limitations and warning sections of the equipment manual.
- Speed control, steering and maneuvering such as:
 - Decreasing speed when the mower is traveling down slopes or around sharp corners to prevent tipping.
 - Being alert when backing up or while operating in low-light conditions.
 - To not mow from side-to-side when operating mowers on unlevel or sloped ground, but to always mow slopes in the up-and-down direction.
- A review of stability and roll-over hazards associated with operating riding mowers on surfaces, terrain, or areas that could pose a risk.
- How to identify obstacles in the mowing path, such as large rocks, man-made hazards, such as signs and trash receptacles, tree stumps, soft or wet spots, and the areas where the use of riding mowers is prohibited.
- On the required personal protective equipment (PPE) to be used: hearing and head protection, safety glasses, work boots, etc. To avoid wearing jewelry and loosefitting clothing that can easily become entangled with moving parts.
- To never carry passengers. Riding mowers are one-person machines.

- To always start the mower from the driver's seat.
- To never start the machine while standing beside it.
- To always keep both feet on the machine while it is running.
- To never place the mower in motion until a worker is ready.
- To never mount or dismount a mower while it is running, as there may be enough space for an operator's toes to pass under the mower housing and be struck by the blade.
- To always perform proper shutdown procedures before dismounting.
- To never stop or start a riding mower suddenly when it is going uphill or downhill.
- To avoid all sudden starts, stops, or turns.

Conclusion

In today's safety, oriented work environment there is no reason for a roll over injury to occur. Awareness and proper training are key to operator safety.

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