



MICHIGAN STATE UNIVERSITY: Prevention of work-related injuries & illnesses through research & investigation

WORK-RELATED DEATHS AND INJURIES FROM SKID STEER LOADERS

Skid steer loaders are small, rigid framed machines with lift arms that can accept a wide variety of attachments to assist in labor intensive tasks. Examples of attachments include buckets, forks, augers, snow blowers and blades, stump grinders and dumping hoppers. Skid steer loaders can be equipped with wheels or tracks and have “zero turn” capability meaning they can turn around within their own length. Their maneuverability and versatility of uses make them useful in a wide variety of industries including agriculture, landscaping and horticulture, demolition, and construction. In Michigan, 32 workers have died from skid steer loader related injuries from 2001-2021. From 2015-2021, there were another 99 non-fatal traumatic injuries including amputations, crushing injuries, and skull fractures requiring emergency department care or hospitalization. People have been crushed between the protective cage and an attachment; injured while driving or being struck by a skid steer loader; struck or crushed by an attachment or item being moved, lifted, or transported by the skid steer loader; caught or crushed by the skid steer loader while performing maintenance tasks; or injured falling off while operating the skid steer loader.



Skid steer loader with bucket attachment

EXAMPLES OF WORK-RELATED FATALITIES FROM SKID STEER LOADERS IN MICHIGAN

- A farmer in his 60s was using his skid steer to clean manure from stalls. He leaned his head outside of the cab through the unguarded window opening to check a tire. The bucket was in the raised position. While he was leaning outside of the cab, he activated the left foot pedal, causing the bucket to lower quickly crushing his head between the frame and the lift arm.
- A landscaper in his 20s was clearing an area of small trees and stumps. He reached into the cab, lowered the safety bar, and began to operate the controls to lower the bucket. As the bucket lowered, he was unable to remove himself from beneath the raised arms of the skid steer and he was crushed between the skid steer loader’s arms and frame.
- A landscaping company owner in his 50s was trying to re-stake a large spruce tree that had fallen over. He used the bucket on his skid steer to help. He was standing on the ground beside his cab and leaned into the cab and accidentally activated the bucket controls. His head was crushed between the bucket lifting arms and the cab.
- A farmer in his 50s was loading wood into his outdoor wood burner. He used the bucket to carry a log to the wood burner. He had previously bypassed the skid steer’s safety lap bar. He died when he was pinned between the cab and bucket.
- A laborer in his teens was using a skid steer to remove fence paneling. While removing the panels, one of the panels became entangled in chicken wire. The laborer attempted to untangle the chicken wire from the fence paneling while remaining partially inside the cab. As he raised the bucket, he became pinched in between the mast and cab.
- A handyman in his 50s was using his skid steer with bucket attachment to move soil. The full bucket of soil caused the skid steer to tip forward, ejecting him from the seat, placing him between the bucket and the cab frame. The impact of the bucket hitting the ground caused the skid steer to stall causing the bucket to fall and pin him against the frame.

PREVENTING DEATHS AND INJURIES FROM SKID STEER LOADERS

- Skid steer loader owners/operators should ensure that all safety devices and physical safeguards on equipment are in place and operating.
- Skid steer loader owners should implement inspection programs to ensure that equipment is maintained according to the manufacturers recommendations and is free of defects that affect safe operation prior to use and during routine operation.
- Skid steer loader owners should ensure that all relevant manuals, such as an owner's and/or operator's manual are available on the loader in a weather-proof container or a secured plastic bag for the operator to consult for safe operating procedures, and service/maintenance of the loader.
- Operators of skid steer loaders (whether owned by their employer or rented temporarily) should be trained in and follow the manufacturer's recommended procedures to safely operate, service, maintain, and exit the skid steer loader. The skid steer loader should only be operated when the operator is fully seated inside the cab.
- Employers should ensure that skid steer loader operators follow the procedures for which they have been trained, including prohibiting them from working underneath raised lift arms if an approved lift arm support is not available.
- Employers and operators should instruct co-workers and any other persons in the area of operation they should never approach operating equipment until they make eye contact with the operator and the operator discontinues operation.
- Operators should not allow any passengers to ride on equipment unless designed by equipment manufacturer to allow riders.
- Operators should know both the operating capacity of their skid steer loader as well as any limitations of the attachments they may use.
- Operators should lower the bucket (or other attachments) to the lowest position possible during all transport trips and extended forward travel to increase operator visibility.
- Operators should always use their seat belt or other restraint system (if not equipped, contact the manufacturer for a replacement or retrofit kit).
- Employers should develop, implement, and enforce a comprehensive prevention program that includes, but is not limited to, training in hazard recognition and avoidance.



Skid steer loader with misaligned lights

DID YOU KNOW?

- A skid steer loader may also be called a *compact track loader* or *tracked skid steer* depending on whether the equipment has wheels or tracks. The need for a wheeled or tracked skid steer may vary depending on the type of terrain and environment it will be used in.
- The skid steer gets its name from the fact that the wheels (or track) hold a fixed alignment to the machine. The wheels on the left side and the wheels on the right side are mechanically linked together and can be operated at different speeds. Steering is achieved increasing or decreasing the speed or one set of wheels and "skidding" the other set across the ground.
- Operator retraining is required when the operator: has been involved in a crash, near-miss, or evaluation stemming from unsafe operation; operates a new machine; or when a condition in the workplace changes that could affect safe operation of the machine.

Resources

- OSHA Skid Steer Loader Safety Booklet [Skid Steer Loader Safety for the Landscaping and Horticultural Services Industry](#)
- MIOSHA Construction Safety Standard [Part 13. Mobile Equipment](#)
- NIOSH Alert DHHS Publication Number 2011-128 [Preventing Injuries and Deaths from Skid-Steer Loaders](#)
- Skid Steer Safety. (2012) Farm and Ranch eXtension in Safety and Health (FReSH) Community of Practice. Retrieved from <http://www.extension.org/pages/64425/skid-steer-safety>.
- Bobcat Skid-Steer & Compact Track Loader Safety Video <https://www.bobcat.com/na/en/parts-service/safety-training/videos/loaders-safety>