Extracting Stuck Equipment Safely

Severe injuries and deaths could be prevented with a constant commitment to basic safety measures and situational awareness. It may take a few minutes of thought and preparation to prevent an accident, but it only takes a second for an accident to happen. Safety complacency can result in serious injury or death.

The goal of this document is to provide information that will help an equipment operator process how to safely and effectively extract a stuck tractor, implement or vehicle.

You might think that agricultural workers with many years of experience might have the lowest tractor-related fatality rates. Over the last 18 years, 48% of all tractor related fatalities were people over age 60. The point here is, years of experience does not always equate knowing how to do things safely, such as extracting stuck equipment.

Before you extract a stuck tractor, truck or implement, step back and think about what you are about to do. Do you have the right tools? Can you take the emotion, urgency and valor out of the equation? Let’s face it, getting stuck most generally signals you’ve done something wrong or made an error in judgment. Rectifying the situation immediately is top priority to save embarrassment not to mention to return to the day’s operation at hand. Taking charge with a cool head, understanding the situation, awareness of all the equipment you are using and all the conditions around you, will help you prevent an injury or death.

Every extraction situation is different and you need to assess each one differently. Survey each situation and analyze the problem before you or others try to remove a stuck vehicle. Think about the consequences of what could happen if something were to go wrong. Put valor aside and know when to order a wrecker or tow truck capable of handling the job if you deem it unsafe or beyond your current equipment.

Owners and operators need to understand the repercussions of unsafe practices. Short cuts can lead to expensive repairs, injuries that last a lifetime, or worse someone’s life. Not to mention the emotional stress associated by the responsible parties involved.

Considerations for Extraction

1. **Have a towing vehicle that is large enough**
   Use a vehicle that is equal to or larger than what you need to extract for the job.

2. **Ensure you have equipment that can handle the job**
   Examine the equipment used in the extraction process. Each tool must be properly rated and capable of handling the job. Chains, recovery straps, cables, ropes, hooks and connectors must be in good condition. Examine the integrity of each piece for weaknesses.

3. **Make sure attachment points will hold under pressure**
   When available, it’s best to attach to the vehicle’s tow hook or frame. Be careful when hooking underneath that the chain, strap, rope or cable will not destroy the oil pan, steering mechanisms, mechanical items or bumper.

4. **Operators only, no passengers**
   Remove nonessential people or bystanders. Only the operator of the towing vehicle and the operator of the stuck equipment are needed. Everyone else is nonessential. Keep bystanders at a minimum of 100 feet from area. Never near the front or back of the working area as flying debris will most likely go forward or backward.

5. **Make sure the towing vehicle has better traction and is on solid ground**
   Ideally, you want to position the towing vehicle on higher ground for a mechanical advantage. Pull in a straight line if possible. If you can lift up slightly, it may help to get the stuck vehicle’s wheels up out of the hole and onto solid ground.

6. **Apply power slowly and smoothly**
   If using chains, cables or tow ropes do not jerk them during the extraction process. They are not designed to handle jerks and can fail.
Extracting Stuck Equipment Safely (continued)

Common Mistakes That Can Lead to a Catastrophe While Extracting Stuck Equipment

1. **Eager to help a friend in need ASAP:** What starts out with good intentions can turn into an expensive and painful experience. We don't plan to get equipment stuck, however it happens. Often times operators react to the situation with a single-minded act to get the implement out as fast as possible. This mind-set has people grabbing the first available thing without thinking through what they are about to do. If they didn't plan to get stuck, they probably don't have the right equipment for the extraction. This isn't NASCAR, where speed counts in the pits. Take the necessary time to evaluate before you act. Well intentioned people can make poor decisions and take wrong actions fueled by trying to help someone out, especially one in a hurry.

2. **I've done this before; I know what I'm doing:** Every extraction is unique! Though you may have been involved in many similar extractions in the past, each extraction is worthy of assessing the situation thoroughly. Minor changes can make huge differences. There are many variables to be considered and stepping back to assess them takes priority over valor and urgency. Owners and operators need to understand the potential repercussions of unsafe practices or short cuts. How often have you heard someone say after a tragedy, he's probably done that a 1,000 times before. It only takes one time or one oversight to turn a simple procedure into a tragedy.

3. **We always use this chain:** When we pull out stuck equipment we tend to rely on past experiences. If the way we did something before worked, we'll often times do the same thing again. Very seldom do we inspect equipment after an extraction to evaluate it's condition. However, it's the best time to check for weakened links, pins, and hooks. Now is the time to determine if the last pull was the chain's last. After a pull, you'll have first hand knowledge as to whether the load was really too heavy for the chain or that in the process the chain got jerked hard and compromised it's integrity. Putting the chain back into service automatically leaves the door open for someone else to unknowingly use a weakened chain. It isn't just the condition of the chain or the size, it can also be how it was used. It's not uncommon for people to want to use a chain like a recovery strap by getting a running start and jerk the chain. Recovery straps do stretch and are a better choice when extracting equipment. Evaluating equipment condition after a pull also applies to cables, tow ropes and recovery straps.

4. **Tow trucks cost money, I'll get it out somehow:** People often times let pride get in the way of good judgment. It may seem, if they have to call a tow truck or wrecker they have failed! Not only do they have the cost of the wrecker, they also have to rely on someone else to bail them out, which is totally unacceptable. Today's equipment has gotten much larger as does the implement they pull or the load they carry. Using the same extraction equipment you used 10 to 20 years ago on today's larger equipment is a recipe for disaster. Assessing an extraction is paramount to determining how to proceed. Do you have a tow vehicle large enough? If so, do you have the right tools for the job? Is the recovery strap and clevis rated large enough to extract the stuck equipment? Is the attachment point strong enough to handle the load? To what degree are you stuck? If your assessment leaves you in doubt, call a professional wrecker service. They will be better equipped to perform the extraction safely. The cost of the wrecker can be a drop in the bucket as compared to having someone injured for life or killed. Please realize, that if the extraction breaks any equipment, the flying debris can be as lethal as a bullet from a gun.

**Practice Conscious Awareness:** Operating safely is all about being consciously aware of what's happening and anticipating the unexpected. Be aware of all equipment you are using and the conditions around you.

* Reference: Purdue Extension PPP-98, Extracting Stuck Equipment Safely