

# NSW Farm Safety Advisory Program



## Safe Vehicle Recovery Tips

### **Thoroughly assess the situation.**

There are different degrees to how bogged a vehicle may be. The bogged vehicle may require just a little pull if it's just a slippery surface, however if the axles are buried and its frame is dragging on the ground you will need more towing power. Always anticipate potential sources of resistance.

### **Know the weight of the bogged equipment.**

It's always a good idea to know how much weight you are trying to pull. It's also important to determine whether the bogged vehicle will be "dead weight" (meaning it will not be able to assist with the extraction), or it will be able help with its own extraction.

### **Ensure the towing vehicle is large enough.**

Hooking onto a bogged vehicle that is twice the size of what you are using to pull it out may not be wise. The towing vehicle needs enough weight to get good traction or its wheels will just spin. For best results, consider using a vehicle at least the same size (or larger) as what you're trying to extract.

### **Ensure your straps, cables and chains are correctly rated.**

Read the instructions that comes with the recovery equipment. Make sure it has a tag or that you know its strength rating. Never use equipment if you can't determine its rating. The equipment may need to be rated 1 or 1.5 times the weight of the bogged equipment, depending on the resistance factors.

### **Keep the exhaust pipe clear.**

Always inspect the exhaust pipe of the stuck vehicle. Ensure the exhaust fumes are vented and not stuck in the mud or obstructed in any way. You don't want exhaust gases to build up inside the stuck vehicle.

### **Dig around the tyres if necessary.**

In extreme situations, you may need to remove dirt from the front and sides of wheels that are bogged. When the wheels are free, they may be able to help with the extraction process.

### **Keep a fire extinguisher handy.**

Be prepared for a possible fire when bogged equipment bottoms out. Hot engines or transmission housings on dry grass or stubble may be an issue. Broken fuel and oil lines can create a significant fire risk.

### **Unload to reduce weight of the bogged vehicle.**

The lighter the vehicle you are pulling, the easier it will move and the less force it will have against your towing vehicle. Unloading vehicles can also help prevent vehicles from getting top heavy if one side is down.

### **Consider disconnecting implements.**

If it can be done safely, consider separating the load from the bogged vehicle to help with the extraction.

### **Ensure the towing vehicle is as close as possible to the bogged vehicle.**

The shorter the attachment between the towing and bogged vehicle, the less chance it will cause injury if there is any flying debris. However, make sure the attachments are long enough so the towing vehicle is out of the mud hole and on solid ground.

### **Position the towing vehicle on higher ground where possible.**

If you can pull up (by getting the towing vehicle on higher ground than the bogged one), you will have more success. Instead of pulling straight, you want to pull up and forward. If the vehicles are level, you will encounter more resistance when you pull. If you can lift up even slightly while you pull forward, it will make the extraction process easier.

### **Pull in a straight line when possible.**

The best way to pull, if possible, is to pull forward and straight. Depending on the situation, it may be easier to pull the stuck vehicle backwards. Also, there may be better locations to hook a rope or chain to the rear of a vehicle. However, recovering a bogged vehicle from the back can cause serious damage.

### **Use only two attachment points.**

The two attachments points are to the towing vehicle and the bogged vehicle. It is not a good idea to use multiple straps, cables or chains together. The potential issue will be the shackles that connects the devices in the middle. The amount of force you generate could snap these shackles.

### **Ensure the attachment points will hold under pressure.**

It's always best to attach the recovery equipment to the vehicle's designated recovery points or its frame so as to not destroy the vehicles sump, steering mechanisms, or any other mechanical items. If you hook to a high center of gravity attachment (such as a three-point hitch), it may cause the towing vehicle to overturn. When you use a tractor to pull, always attach to the lower drawbar because that is where it is designed to have the most leverage and pulling strength.

### **Hook from the bottom.**

Make sure the tip of any hooks face up. If it breaks or comes off while pulling, it will fall toward the ground instead up through the air.

### **Attach shackles directly onto the equipment.**

You can mount a shackle directly onto the tractor or equipment, however, the strap, cable or chain needs to be on the pin, not on the side of the shackle.

### **Place something heavy on the strap, cable or chain.**

Place something on the strap, cable or chain such as a jacket, a floor mat, or another chain over them as dead weight. If the strap, cable or chain breaks, the extra weight hanging on it will force it toward the ground instead of up in the air.

## **Remove non-essential people from the area.**

Ensure people stand clear of both the vehicles and recovery equipment.

## **Provide clear instructions to the driver in the bogged equipment.**

Before attempting any extraction, make sure all members of the extraction team agree on signals (such as “Stop!”) first. Make sure everybody wears seatbelts. Let the driver of the bogged vehicle know that he or she should not move until the towing vehicle is in motion. Make sure to determine whether the towing driver will stop as soon as the stuck vehicle is clear, or will continue to pull the bogged vehicle to complete safety. Be ready to stop so you don't run into the pulling vehicle.

## **Use the lowest gear available.**

Always tow in low gear.

## **Pull straight ahead to maximise towing power.**

Towing is always best if the towing vehicle pulls straight ahead. When the towing vehicle is at an angle to the stuck equipment, there is increased stress.

## **Apply power slowly and smoothly.**

When you use a strap, cable or chain, always take the slack out before you push the throttle slowly and smoothly.

Source: [Purdue Extension](#)

## **Vehicle recovery safety alerts**

[https://worksafe.nt.gov.au/\\_data/assets/pdf\\_file/0007/899062/safety-alert-chain-recoil-causes-fatal-injuries.pdf](https://worksafe.nt.gov.au/_data/assets/pdf_file/0007/899062/safety-alert-chain-recoil-causes-fatal-injuries.pdf)

<https://www.aihs.org.au/news-and-publications/news/safety-alert-issued-after-chain-recoil-causes-fatal-injuries>

<https://www.commerce.wa.gov.au/publications/safety-alert-032019-second-fatal-incident-involving-bogged-vehicle>

[https://www.artc.com.au/uploads/Safety-Alert\\_2015-09-04\\_077.pdf](https://www.artc.com.au/uploads/Safety-Alert_2015-09-04_077.pdf)

## **4WD vehicle recovery advice**

<https://totaldriver.com.au/safety-in-4x4-and-off-road-recovery/>

Click [here](#) to contact a **NSW Farm Safety Advisor**.