

# Blocking of Raised Dump Boxes

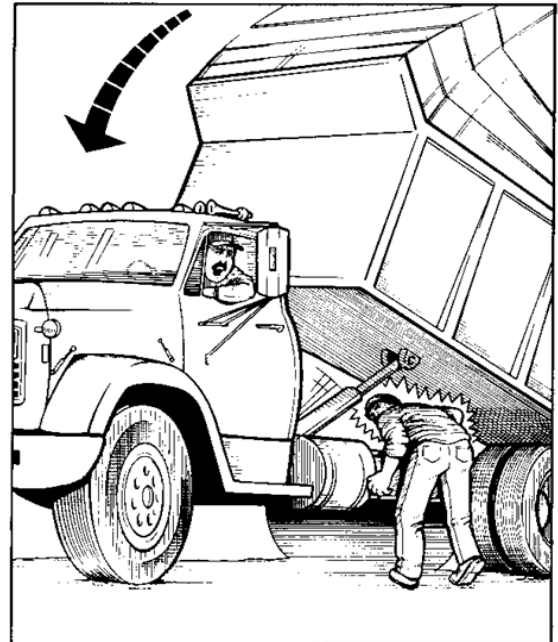
## Potential hazard:

It is extremely dangerous for anyone to enter the space between a raised dump box and truck chassis without proper control measures in place. Hydraulic and mechanical failure or human error (hitting the controls by mistake, etc.) can cause the dump box to drop unexpectedly, leading to serious injury or death.

The most common reason for a worker to be under a raised box is for repair or maintenance work.

## How to control the hazard:

To control the hazards associated with raised dump boxes, employers must use **engineering controls**, and develop and implement **safe work procedures**.

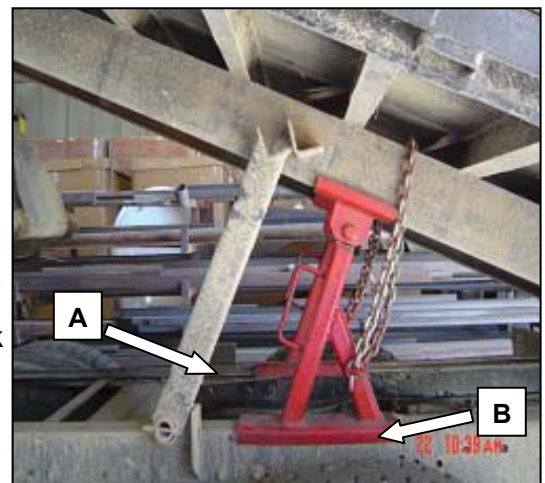


## Engineering Controls

Employers must ensure that raised dump boxes are **securely blocked and unable to move** before any work is done between the box and the chassis.

Methods for mechanical blocking may vary depending on the hoist and truck types. The manufacturer of the equipment should always be consulted to ensure that the intended blocking method will provide the support needed to keep the box raised while work is being performed underneath.

- Braces (also known as “body props”) are the preferred method for blocking a raised dump box. These props, provided by the truck manufacturer, are permanently attached to the box subframe. The props pivot and rest on the truck frame when the box is raised. Body props are non-adjustable and will support the dump body at one position only.
- Pin locks, provided by the manufacturer, must be used to secure the truck box in a raised position. Pin locks are also used to secure the body prop when not in use.
- To work on certain parts of the truck, it may be necessary to have the box raised higher or lower than the height set by the manufacturer’s body props. In this case, the employer should contact the original equipment manufacturer to find out if they can provide an alternative body prop or other suitable method to block the dump truck box at a height allowing safe access for the work to be done.
- Refer to manufacturer specifications for load testing requirements (weight) for custom braces used to block the box at alternate heights.
- The employer must ensure the controls cannot possibly cause a tip over of the motor vehicle.
- The equipment must be isolated from the energy source and made inactive.



This picture shows both the original manufactured body props (A) and a custom manufactured brace (B). The custom braces have handles which allow the worker to place the braces under the dump box without putting their body under the dump box.

(see next page)

## SAFE Work Manitoba contact information:

Winnipeg: 204-957-SAFE (7233)  
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Publications and resources available at: [safemanitoba.com](http://safemanitoba.com)



### Engineering Controls (cont'd)

- Ensure all cables and controls are appropriately covered to help prevent inadvertent operation of the hoist while workers are under the raised dump box.

### Safe Work Procedures

In addition to using proper blocking methods, safe work procedures must be developed and put in place to maintain, service or repair trucks with hydraulic dump boxes. These procedures must provide information to workers on how to recognize hazards and how to avoid unsafe conditions while working around raised dump boxes. Employers must ensure workers are trained in these procedures.

For example, your safe work procedures should include points similar to the following:

- Even after securing the box and installing covers on cables and controls, work should be carried out from below the truck chassis whenever possible.
- **Placement of the body or limbs between the chassis and box subframe should be avoided unless it is absolutely necessary. Also, be sure proper blocking methods are in place before entering this area (between chassis and box subframe).**

### **Note on the installation and use of hydraulic cylinders on truck boxes:**

When installing hydraulic cylinders, there are times when the cylinder must be extended to enable it to be attached on a truck box. Manufacturers of hydraulic cylinders design and certify them for use with hydraulic fluids only.

**Air is not to be used** in the cylinder to suspend a load or retract the cylinder due to the unpredictability and compressibility of air. When compressed air is used in a hydraulic cylinder, the movement may be erratic due to the properties of the air. Hydraulic fluid is a non-compressible fluid designed to extend and retract the cylinder in a smooth, controlled manner.

When a truck mounted hydraulic system is not able to provide hydraulic fluid to the truck box hydraulic cylinder, alternate methods and equipment, other than compressed air, may be used to extend and retract the hydraulic cylinder. Before using an alternate method and equipment, conduct a job hazard analysis to identify any hazards. Next, create safe work procedures (based on the job hazard analysis) and put them in place.

After safe work procedures have been developed, ensure that workers are trained on these procedures in a way that ensures they understand and are able to apply the training provided to safely extend and retract the hydraulic cylinder.

#### **Reference to legal requirements under workplace safety and health legislation:**

- Safe Work Procedures: Manitoba Regulation 217/2006 – Part 2
- Powered Mobile Equipment: Manitoba Regulation 217/2006 – Part 22

**Additional workplace safety and health information available at: [safemanitoba.com](http://safemanitoba.com)**

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