

Spot The Safety Violation: 10 Tips for Using Jacks Safely



What equipment should this worker be using to elevate this vehicle properly so he can safely work underneath it'



Mechanics aren't the only ones who do work on vehicles. Workers in other industries may need to repair or perform routine maintenance on cars, trucks or powered mobile equipment.

The difference between mechanics and these other workers is that mechanics will have and are likely to use the proper tools for elevating and securing vehicles so they can safely work underneath them. Other kinds of workers may not have such tools or know how to use them. As a result, they may simply use what tools or materials are available and wind up endangering themselves.

This picture shows a worker working under a car. But instead of elevating it using a jack, he's propped the vehicle up using several two-by-fours. However, if someone or something bumps into just one of these pieces of wood or knocks into the car itself, the precariously balanced vehicle could easily fall on and possibly crush to death the worker.

Bottom line: Always ensure that workers have the tools they need to do their jobs safely and are trained on how to use those tools.

TIPS FOR USING JACKS SAFELY

To ensure that workers safely use jacks when working on vehicles or equipment in your workplace, follow these safety tips:

1. Determine the weight of a vehicle or equipment before jacking it up and then choose jacks that can safely support that weight.

Example: According to a BC hazard alert, the front end of a semi-truck was jacked up and left supported by a pair of jack stands. The jack stands failed while a worker was underneath the truck. One side of the front end dropped onto

him, causing serious crushing injuries. An investigation found that none of the workers knew the weight of the truck's front end (6 tonnes), where to find that information or the rated capacity of the jack stands that were used (3 tonnes).

2. Check the manufacturer's instructions and the safety labels on the jacks themselves to confirm their capacity. Note that most jack stands must be used in pairs to achieve their rated capacity.

3. Follow the manufacturer's instructions for using jacks safely. If the instructions aren't available, contact the manufacturer or get written instructions from an engineer.

4. Ensure that jacks are assembled and used by qualified workers.

5. Visually inspect the jack before each use by checking for abnormal conditions such as cracked welds, leaks, and damaged, loose or missing parts. Don't use a jack that's damaged, worn or operates abnormally. Any sign of hydraulic fluid leakage is sufficient reason to remove the jack from use.

6. The jacks should be placed on solid, level ground. If the ground is soft, ensure the jack is supported by a block.

7. Ensure that the lifting end of the jack presses against a solid part of the load or is correctly fitted into the lifting points indicated in the jacking instructions, which may be found on vehicle or equipment decals or on the jack itself.

8. Check the lifting points and the lift adapters for damage or corrosion that may affect the support of the vehicle, and for wet, oily, or slick surfaces that may cause slippage.

9. Use axle stands, blocks or ramps to support the load securely once it's up. Don't use cinder blocks or concrete, which may crack under the weight.

Example: While a worker was changing a tire on a tractor, the jack failed. The tractor fell on the worker, injuring his spine and paralyzing him from the waist down. At the time, there were no blocks in place in case the jack failed. His employer pleaded guilty to not using blocking to protect workers and was fined \$22,000 [*R. v. T & L Den Brok Enterprises Inc.*, [2014] SKPC 97 (CanLII), April 29, 2014].

10. Once suspended, vehicles and equipment should be properly immobilized, blocked or secured against accidental movement. Otherwise, they could fall on workers underneath them.

Example: A grounds maintenance worker at a golf course removed the wheel of a fairway mower and placed the exposed axle on a jack stand so he could change a leaking hydraulic hose. The worker went under the mower to loosen the fitting, while a co-worker held the second part of the fitting with a wrench. When the worker tried to loosen the fitting, the mower fell off the jack stand and onto him, causing a serious injury. An investigation found that the mower wasn't properly secured against inadvertent movement before working on it. The wheels weren't chocked and two jack stands weren't used as required [WorkSafeBC Hazard Alert, Sept. 2013].