

Stability and handling hazards of driving trucks and trailers with live loads

A worker, employed as a mechanic, was driving a tanker truck carrying a live load of bulk liquid on a public roadway. As the worker descended a hill, the truck rolled onto its side and crashed into a power pole. The worker was taken to hospital and later died.

It's important for employers to provide workers with information, orientation, and training specific to live loads if they will be transporting such loads, even for short distances.

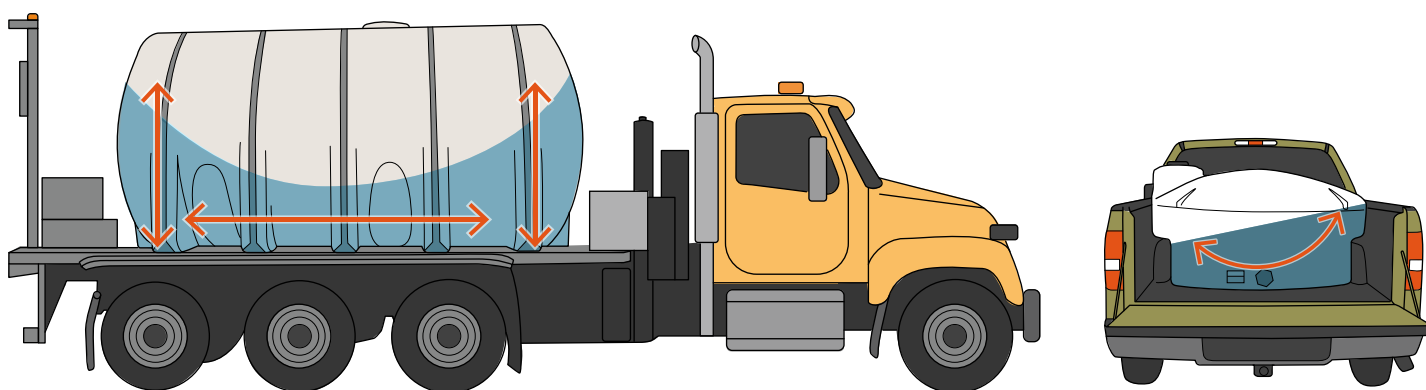
What is a live load?

A live load is one in which a tank contains a liquid, such as water, brine, oil, or milk. Live loads are found in many industries, including road maintenance, oil and gas, transportation services, manufacturing, and agriculture. A variety of vehicles carry live loads, including large commercial vehicles (e.g., tanker trucks) and smaller vehicles that carry bulk containers on cargo beds or trailers.

Whenever there's a live load, there are additional driving hazards that need to be considered. For example, the load can affect the vehicle's handling and stability.

With conventional loads, the weight of the load is applied downward onto the wheels and axles of the truck or trailer.

With live loads, the weight of the load and the centre of gravity can move from side to side and forward and backward as the truck moves.



The arrows indicate how the weight of a live load and its centre of gravity can shift. Liquid sloshing around in the tank can have a significant effect on the vehicle's handling and stability.

This weight transfer creates an energy that can affect a worker's ability to steer, brake, handle, and control the stability of the vehicle while it's in motion.

Safe work practices

Employers are responsible for ensuring the health and safety of their workers. This includes making sure that workers who transport live loads receive information, orientation, and training to address the additional driving hazards. It's also important to provide ongoing supervision to make sure workers follow their instruction and training.

Employers are also responsible for managing risks associated with transporting live loads. Risk assessments will help identify and determine the types of risk controls that are needed to keep workers safe. Visit our [Managing risk](#) webpage to learn more.

Training topics

Training topics should include the following:

- How live loads can affect a vehicle's stability and handling
- Where to find load capacity information on each vehicle
- How to determine the weight of a load to make sure it doesn't exceed the gross vehicle weight specified by the manufacturer

Assessing competency

There should be a procedure in place for assessing a worker's competency to transport live loads. It's not enough just to be licensed and trained — the worker should also be experienced with the vehicle being used and familiar with the potential hazards of live loads.

Right to refuse unsafe work

Workers who think their training has been inadequate need to be able to report their concerns to a supervisor with the authority to make necessary changes.

Workers have the right and responsibility to refuse unsafe work. Workers must not carry out any task that they have reasonable cause to believe may create a hazard to the health and safety of any person.

Regulatory requirements

In the *Workers Compensation Act*, refer to [Section 21, General duties of employers](#).

In the Occupational Health and Safety Regulation, refer to the following sections:

- [Section 3.12, Procedure for refusal](#) — describes steps to take when a worker refuses unsafe work
- [Section 4.10, Authorization](#) — describes authorization requirements for operating machinery and equipment

To learn more about the basics of workplace health and safety, visit worksafebc.com/create-manage.