

June, 2015

Edited by Bruce Hulberg

Forklift Safety: Newsletter

Forklift Stability: The Basics

*Forklift Safety Rule One: Don't hurt anyone.
Forklift Safety Rule Two: Don't tip over.*



Safety and Rescue Training
for high-hazard work activities

**Confined Space
Fall Protection
Excavation
Forklift**

Forklift Train the Trainer Schedule

June 30 - Boardman
October 6 - Eugene
November 3 - Salem

Register online at:

www.d2000safety.com

or email:

bhulberg@d2000safety.com

Have a forklift safety story or photo to share?

Please send it to Bruce at:

bhulberg@d2000safety.com

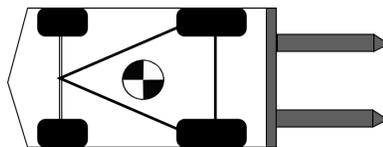
We will not publish company or individual's names. You can also contact Bruce to be added to our newsletter email.

Our programs reflect:

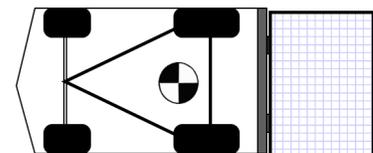
ANSI/ASSE Z490.1-2009 *Criteria for Accepted Practices in Safety, Health, and Environmental Training*

If we are going to achieve rule number two, we need to know that forklift stability is determined by many factors including the design of the forklift, the load, the operating surface, and the operator's skills.

Operators need to know that most forklifts have a three-point suspension which results in a stability triangle, and it's the operator's job to keep the center of gravity (CG) within this triangle. But the CG is constantly changing as the forklift and the load are moved, raised and lowered. The closer the center of gravity gets to the edge of the triangle the more likely the unit is to tip, especially in the case of a sudden turn or deceleration.



Unloaded Forklift

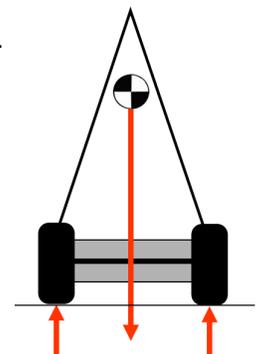


Loaded Forklift

Many untrained operators assume that they can drive faster without a load, but look at the location of the CG with unloaded forks. It is much closer to the sides of the triangle compared with the unloaded location. On the other hand a loaded forklift is more likely to tip forward with the CG now closer to the front axle.

Things get a little more complicated when we look at the triangle in three dimensions. Now we have a pyramid. Operators need to understand that the higher you raise the load, the closer the CG comes to the edge of the pyramid and the forklift loses stability. Making a turn or braking sharply with a raised load is a dangerous and expensive way to learn about the stability pyramid.

This is why competent operators lower their load before maneuvering. And when they stack, they don't raise the load until they are directly in front of the stacking location.



Understanding the factors that can cause tip overs is a basic requirement for all operators if we hope to achieve *Forklift Safety Rule 2*.

