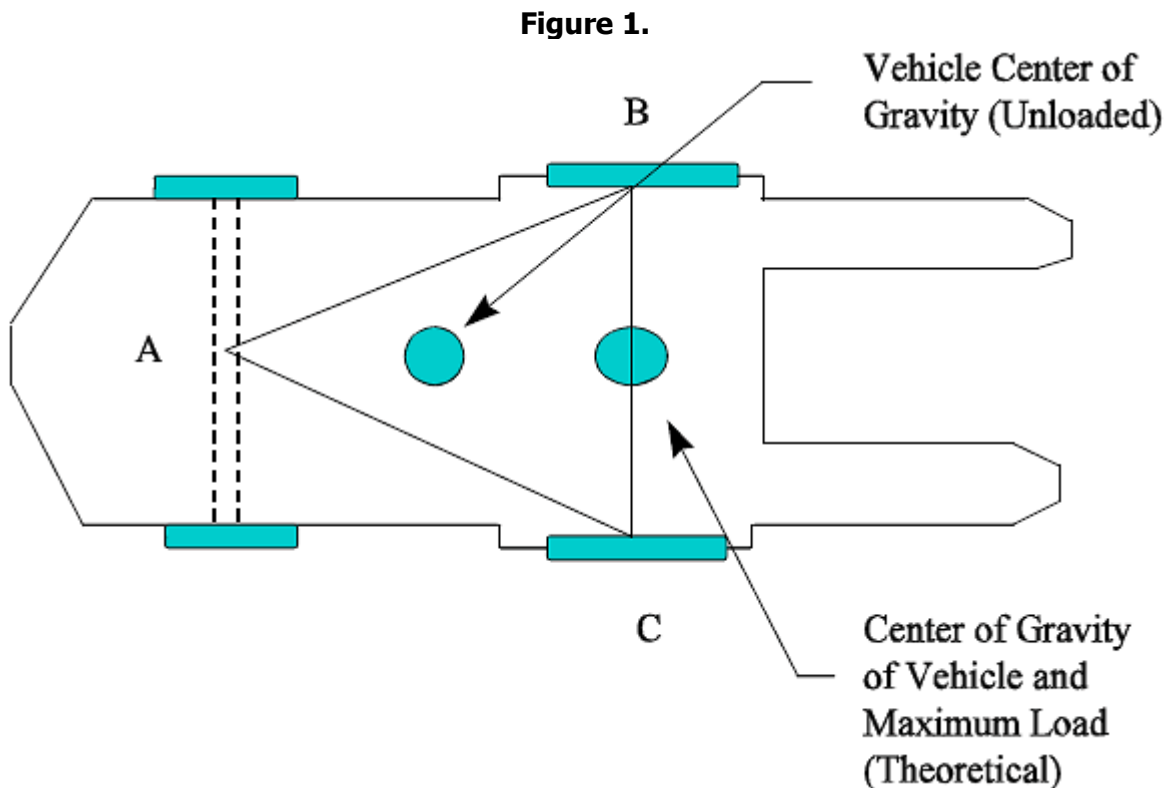


The Stability Triangle

Almost all counterbalanced powered industrial trucks have a three point suspension system, that is, the vehicle is supported at three points. The truck's steer axle is attached to the truck by a pivot pin in the axle's center. When the points are connected with imaginary lines, this three-point support forms a triangle called the stability triangle. **Figure 1 depicts the stability triangle.**

Figure 1.



Notes:

1. When the vehicle is loaded, the combined center of gravity (CG) shifts toward line B-C. Theoretically, the maximum load will result in the CG at the line B-C. In actual practice, the combined CG should never be at line B-C.
2. The addition of additional counterweight will cause the truck CG to shift toward point A and result in a truck that is less stable laterally.

When the vehicle's line of action, or load center, falls within the stability triangle, the vehicle is stable and will not tip over. However, when the vehicle's line of action or the vehicle/load combination falls outside the stability triangle, the vehicle is unstable and may tip over. **See Figure 2.**

Figure 2.

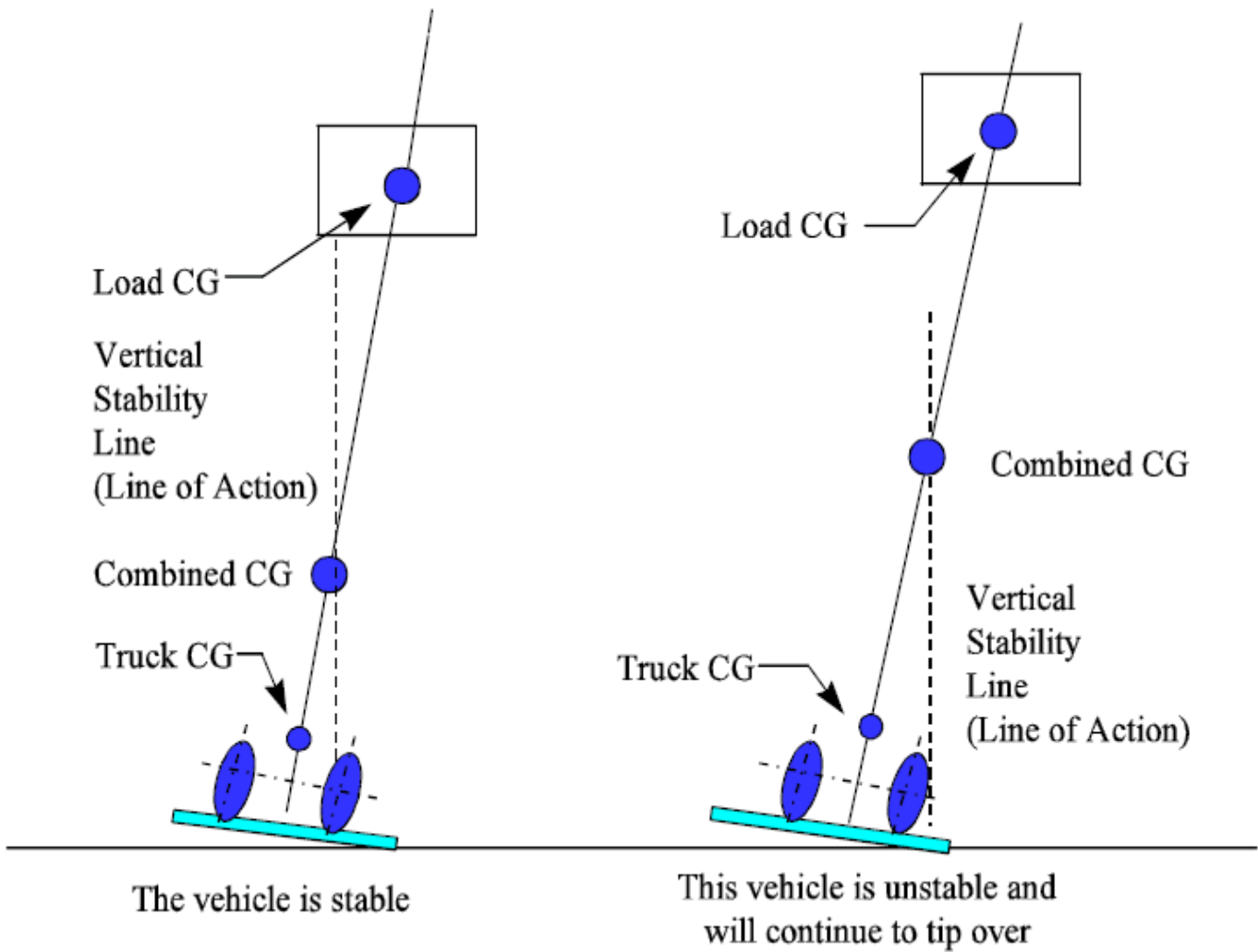


Figure 2.