

CENTER OF GRAVITY

TRACTORS

FIGURE 1

Unloaded Tractor

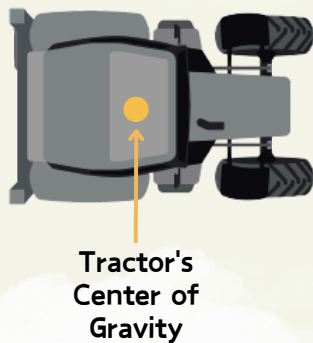


FIGURE 2

Tractor with Back Counterweight

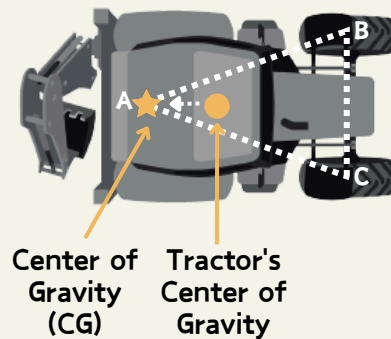
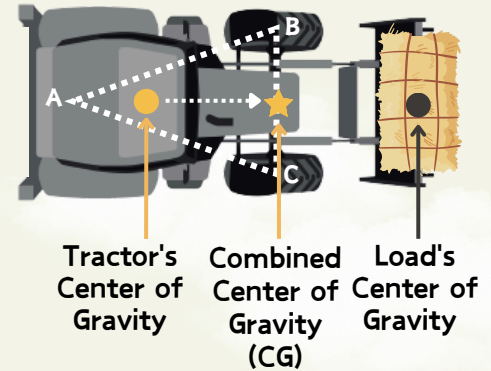


FIGURE 3

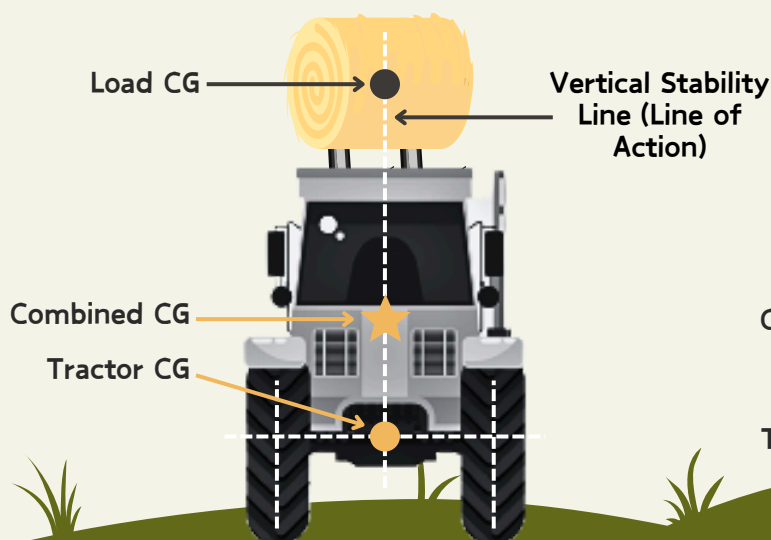
Tractor with Front Load



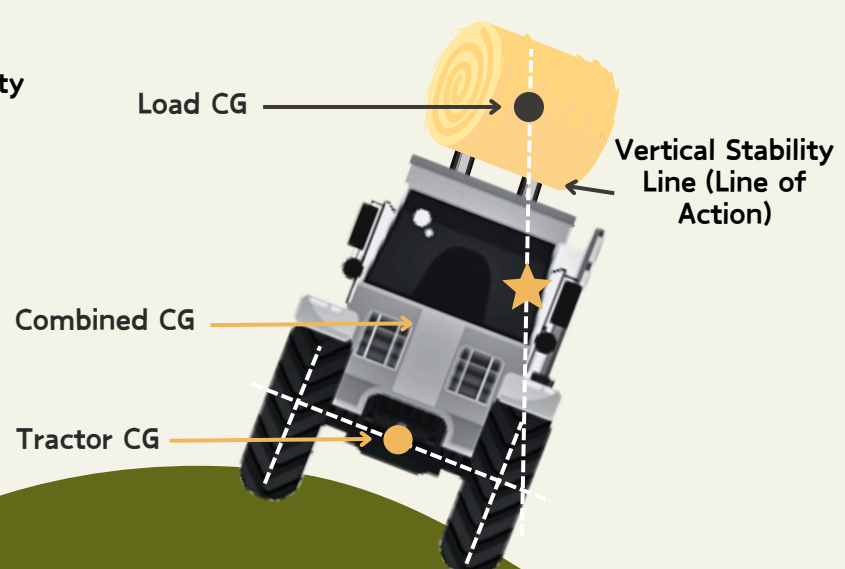
When the tractor is unloaded (**figure 1**), the tractor's CG is located between the front axel and the back axel, meaning the tractor is stable.

Additional counterweight (on the back) will cause the tractor's center of gravity (CG) to shift toward point A and result in a tractor that is less stable laterally (**figure 2**).

When the tractor (or vehicle) has a load in the front, the combined CG shifts toward the front axels (**figure 3**). In practice, the combined CG should NEVER be in front of the front axel (B-C line).



The vehicle is **stable**:
Combined CG is within the wheel base.



The vehicle is **unstable** and will continue to tip over:
Combined CG is **outside** wheel base.