Trailer Safety

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The goal of this project was to prevent a trailer from flipping easily by adding more stability to it. In that case, I hypothesized that if stabilizers were added the trailer would have less probability of flipping to its side with such ease. I conducted my experiment by lifting the trailer to its side with 8 window blinds and aiming wind at it with a leaf blower. As I did that 10 times, afterwards I added the stabilizers in between the wheels and the load and repeated the same process. The results showed that when the stabilizers weren't there the trailer flipped to its side, but with them it stayed in its place. To have more data of what the stabilizers did, I measured the difference in inclination; between when the trailer had the stabilizers and when it didn't. The results in the difference of inclination showed that the stabilizers gave the trailer six degrees of less inclination. All of this information put together gives a valuable observation of how the stabilizers added complication for the trailer’s high center of gravity to execute the fall of the trailer. The stabilizers also made friction against the wheels, and fought against gravity and the inertia of the wind that sought to flip the trailer. This experiment can save company’s money from wreckage cost, prevent victims of the crash to pay expensive medical bills, but most importantly decreasing the accidents that trailer drivers suffer, and making it more safe for them.

Awards Won: