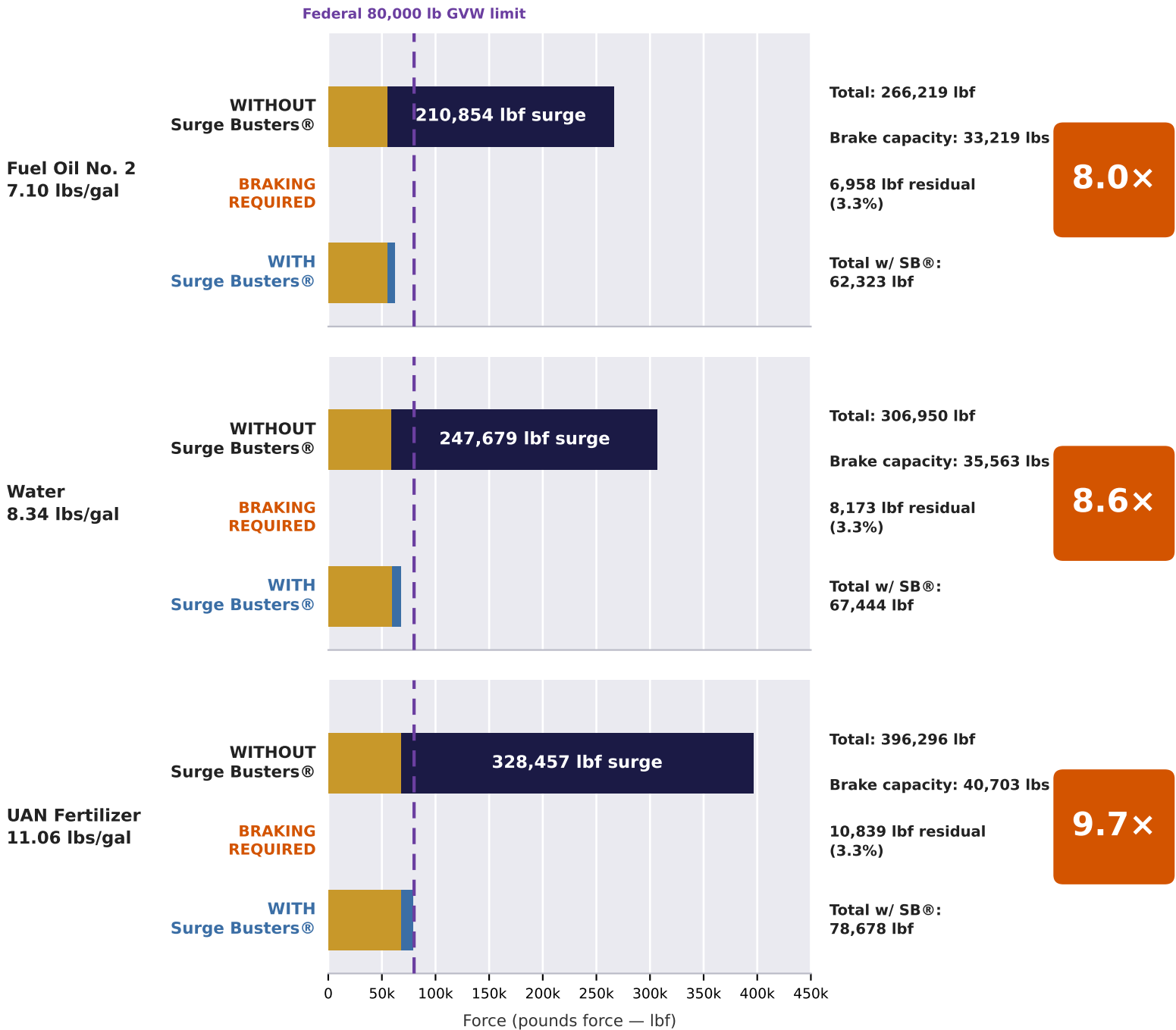


Truck Brakes Were Made to Stop 80,000 lbs.

How About 266,000 to 396,000?

Emergency braking force analysis · 6,000-gallon tank at 52.5% fill (worst-case surge) · Budwig, University of Idaho, 2004



Vehicle: 5-axle tractor-trailer · 6,000-gallon liquid tank · 33,000 lb tare weight · 52.5% fill level (worst-case surge)

Braking force shown is limited by tire-to-road friction on dry pavement (0.60 CoF), and decreases as the load decreases.

Actually, the brakes can generate more force than the tires can transfer to the road.

On wet pavement (CoF ≈ 0.30-0.40), available braking force drops 33-50%.

While surge force remains unchanged, poor braking conditions cause the multipliers shown to roughly double.

IF THE TANK IS LARGER THAN 6,000 GALLONS, THESE NUMBERS BECOME MUCH WORSE.

Source: Budwig, R.S. Surge Force Modeling Report. Dept. of Mechanical Engineering, University of Idaho, 2004. Physics confirmed by 10 institutions.

Liquid Surge Control, LLC · surgebusters.us · liquidsurgecontrol.com · 866.787.4360