CDL Tanker Endorsement Cheat Sheet

Study Section 8 of the commercial driver handbook. Use the manual for your state to prepare for its tests.

Check rated tank capacity

The federal definition uses an individual rated capacity over 119 gallons and aggregate rated capacity of at least 1,000 gallons. It covers some temporarily attached tanks and specifies an exception for certain empty tanks. 49 CFR 383.5

Prepare for liquid surge

In a partly filled tank, liquid keeps moving as the truck slows. Interior baffles reduce fore-and-aft movement. Brake early and smoothly as you approach stops. California CDL Handbook, Section 8.2

Allow space for expansion

Use the required outage for the load. Outage is space left in the tank so cargo can expand as its temperature rises. California CDL Handbook, Section 8.2

Quick review

Cover the answers as you review, or take the interactive practice test.

1. What is liquid surge in a partially filled cargo tank, and when is it strongest?

Answer: The front-to-back sloshing wave of liquid during braking/accelerating, strongest in smooth-bore (unbaffled) tanks

When a tank is partially full, liquid surges forward during braking and crashes against the front bulkhead, pushing the vehicle forward even after the wheels stop. Unbaffled smooth-bore tanks experience the strongest surge. CDL Manual §8.2.2 — Liquid Surge

2. Why are smooth-bore tanks commonly used for liquid food such as milk?

Answer: A smooth interior makes the tank easier to clean and sanitize

Tank walls without internal baffles are easier to wash. Drivers of smooth-bore tanks need extra care because liquid can surge freely from front to back. CDL Manual §8.2.5, Unbaffled Tanks

3. Why do tanker vehicles have an exceptionally high risk of rolling over?

Answer: High center of gravity combined with side-to-side liquid shift in curves

Liquid weight sits high above the road and shifts toward the outside of every turn, pushing the center of gravity past the wheels and causing rollovers at surprisingly low speeds. CDL Manual §8.2.1 — High Center of Gravity