

Towing Calculator (freedomtoexplore.ca)

Truck Details (Fill in the Blanks)

Make/Model/Year: _____

Drive Type: _____

Cab Style/Body Configuration: _____

Engine: _____

Axle Ratio: _____

Towing Package: _____

GCWR: _____

GVWR: _____

Payload Capacity: _____

Curb Weight (Estimate as GVWR – Payload): _____

Occupants Weight: _____

Cargo in Truck (gear, equipment): _____

Trailer Details (Fill in the Blanks)

Trailer Name/Model: _____

UVW (Unloaded Vehicle Weight): _____

Maximum GVWR (Trailer): _____

Hitch Weight: _____

Calculations


1. **Truck Loaded Weight** = Curb Weight + Occupants Weight + Cargo in Truck
Must be \leq GVWR.
2. **Total Trailer Weight** = UVW + Additional Cargo
Must be \leq Maximum Trailer GVWR.
3. **Payload Check:**
 - Payload Used = Occupants Weight + Cargo in Truck + Hitch Weight
 - Safe Payload Limit = 90% of Payload Capacity
 - Payload Used must be \leq Safe Payload Limit.


4. GCWR Safety Check:

- Combined Weight = Truck Loaded Weight + Total Trailer Weight
- Safe GCWR Limit = 85% of Truck's GCWR
- Combined Weight must be \leq Safe GCWR Limit.

Results Checklist

- Is Truck Loaded Weight \leq Truck GVWR? ☐ Yes ☐ No
- Is Total Trailer Weight \leq Trailer GVWR? ☐ Yes ☐ No
- Is Payload Used \leq 90% of Truck's Payload Capacity? ☐ Yes ☐ No
- Is Combined Weight (GCWR) \leq 85% of Truck's GCWR? ☐ Yes ☐ No

 If all are "Yes," your setup is safe.

 If any are "No," adjust your occupants, cargo, or trailer, or consider a heavier-duty truck.

Important Notes

- **High Altitude and Mountain Towing:**
If traveling frequently at elevation with steep grades, apply the **Rule of 60:**
Keep your total loaded towing weight to **60% of your rated GCWR** for better engine performance and braking control.
- **Prefer Turbocharged Engines:**
In higher elevations, naturally aspirated engines can lose significant power. A turbocharged engine helps maintain performance.

Disclaimer

This calculator and guide are intended for informational purposes only and do not replace professional advice, official manufacturer specifications, or legal requirements. Always verify your vehicle's towing and payload capacities with the manufacturer and consult a qualified professional if you are unsure about your towing setup. Freedom to Explore is not responsible for any damages, losses, or accidents resulting from the use of this information.