

Caravan Towing - (Before You Hit The Road) Test - *Answers*

Legal & Technical Items - Terminology; Ratings & Masses

1: What do the following abbreviations mean:

ATM: (c) Aggregate Trailer Mass

GTM: (b) Gross Trailer Mass

(Tow vehicle) **GVM:** (a) Gross Vehicle Mass

(Tow vehicle) **GCM:** (c) Gross Combination Mass

2: Are the above items "Actual Masses" or "Ratings": (c) Ratings

3: Are "Tare Mass" & "Ball-loading "actual masses" or "Ratings": (c) Actual Masses

4: The definition of "**Tare Mass**" for a Caravan & Camper/Tent-Trailer is:

(a) The actual mass of the empty caravan with all OEM equipment and options fitted - as specified on the **Sales Contract** - as it leaves the **Supplier**, with empty water tanks and empty LPG cylinders, and without any luggage or personal effects. This is measured with the jockey-wheel and tyres on the weigh-bridge.

5: What do each of the elements of a tyre designation mean:

LT - P 225 / 85 R 16 90 Q

LT: (b) Light Truck

P: (c) Passenger (car)

225: (c) Section Width (mm)

85: (b) Profile Ratio (%)

R: (a) Radial Construction

16: (b) Rim Diameter ("

90: (b) Load Rating

Q: (a) Speed Rating

6: What is the standard size for a ball-coupling: (a) 50 mm

7: What does *ADR* stand for: (c) **Australian Design Rule**

8: What does *AS* stand for: (a) **Australian Standard**

- 9: Does the *Tyre & Rim Association* Manual give:
- (c) The correct tyre / rim combinations, and the recommended inflation pressures for all tyre sizes, to suit the load carried by the tyre
- 10: Are *Ball-couplings* suitable for off-road operation: (b) No
- 11: *Brakes* are required on caravans: (c) If the **GTM Rating** is above 750 kg
- 12: *Break-away* brakes are required: (b) If the **GTM Rating** is above 2,000 kg
- 13: **ABS** (on tow-vehicle) stands for: (c) Anti-lock Braking System
- 14: If ABS is fitted to the tow-vehicle, will it also automatically work on the caravan: (a) No
- 15: The **Ball-loading** at any time: (c) Should be *around* 10% of the caravan/trailer mass (if not otherwise advised by the manufacturer, in writing)
- 16: If the Ball-loading is too **LIGHT**: (b) The caravan/trailer will most likely develop a *most dangerous* sway (snaking) situation
- 17: If the Ball-loading is too **HEAVY**: (c) Handling, steering and safety will be dangerously impaired, and the tow-bar may fail
- 18: *Heavy* items should be stored in the caravan: (c) As close as possible to the axle(s)
- 19: If the caravan tyre pressures are too **LOW**: (b) The vehicle will sway and wallow, and the outer edges of the tread will wear out
- 20: If the caravan tyre pressures are too **HIGH**: (a) The vehicle will skip and bounce, and the centre of the tread will wear out
- 21: The caravan allowable/legal Pay-load (Load-carrying capacity) is:
- (b) **ATM Rating – (minus) Tare Mass**
- 22: The left-side and right-side brakes should be: (a) Regularly checked for wear, and adjusted evenly
- 23: The caravan lamps (Position / Stop / Turn-Signal / End Outline / Side Marker):
(c) Should be checked for correct operation before setting off on a trip
- 24: When towing a caravan, added or extended mirrors: (b) Must be used so as to obtain a clear field-of-view along each side of the vehicle
- 25: When towing a caravan, the time and distance needed to accelerate from 60 – 80km/h (compared to just driving the tow-vehicle on its own) are: (b) *Appreciably* much longer
- 26: When towing a caravan/trailer, the time and distance needed to slow down from 80 60km/h (compared to just driving the tow-vehicle on its own) are: (c) *Appreciably* much longer
- 27: When towing a caravan/trailer around a curve, you should: (b) Slow down, because of the additional centrifugal force, and the risk of swaying

- 28: ***Doubling*** your speed - say from 40 - 80 km/h - will: (b) Increase the kinetic-energy – and braking distance - by a factor of 4 (four)
- 29: If you see a B-Double approaching (from the front or rear), you should:
(c) Slow down a little, and firmly hold the steering wheel in case a “sway” starts
- 30: If the caravan/trailer starts to “sway” or “snake”, you should:
(c) *Don't* panic and *don't* make any sudden/severe manoeuvres, but gently slow down, ensuring that you keep steering in the direction that you need to.

It is recommended that you participate in a professional driver-training course for Towing.

In addition, it is recommended that you study respected DVD's or books on Towing Safety.

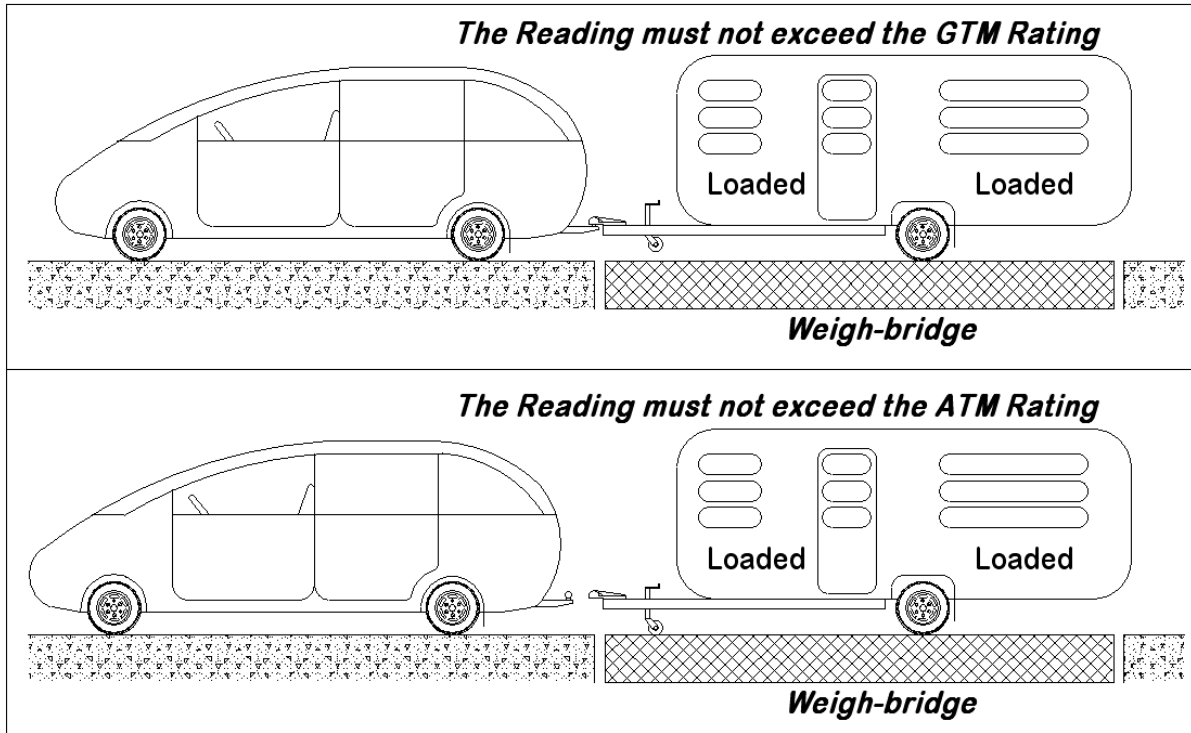
Remember: You are driving for Recreation... *not* Wreck-Creation!!!

Caravan Ratings & Masses

The GTM & ATM are Ratings... allocated by the *Manufacturer*

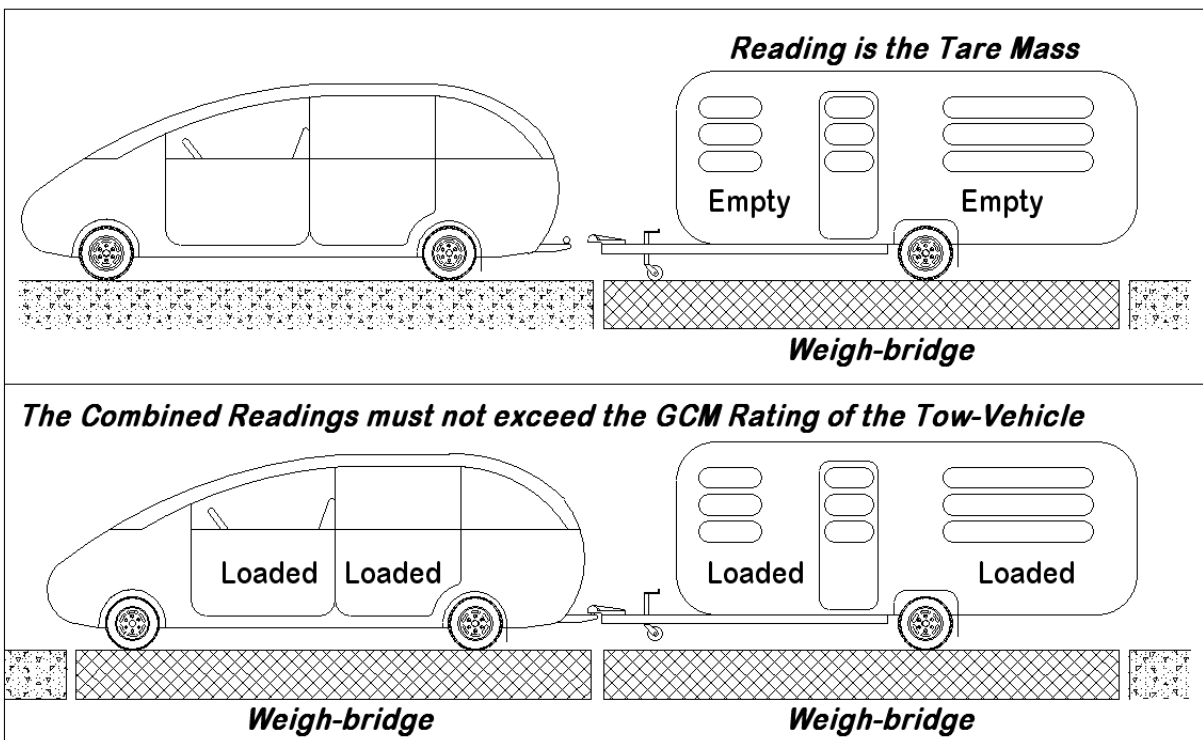
The Tare Mass and Ball-Loading are Actual Masses... that must be measured

The *Tare Mass* is the *actual measured mass* of the vehicle as it leaves the Supplier.
 The vehicle is fitted with *everything* that was stated on the *Sales Contract*.
 The vehicle is empty. The gas cylinder(s) and the water tank(s) must be empty.

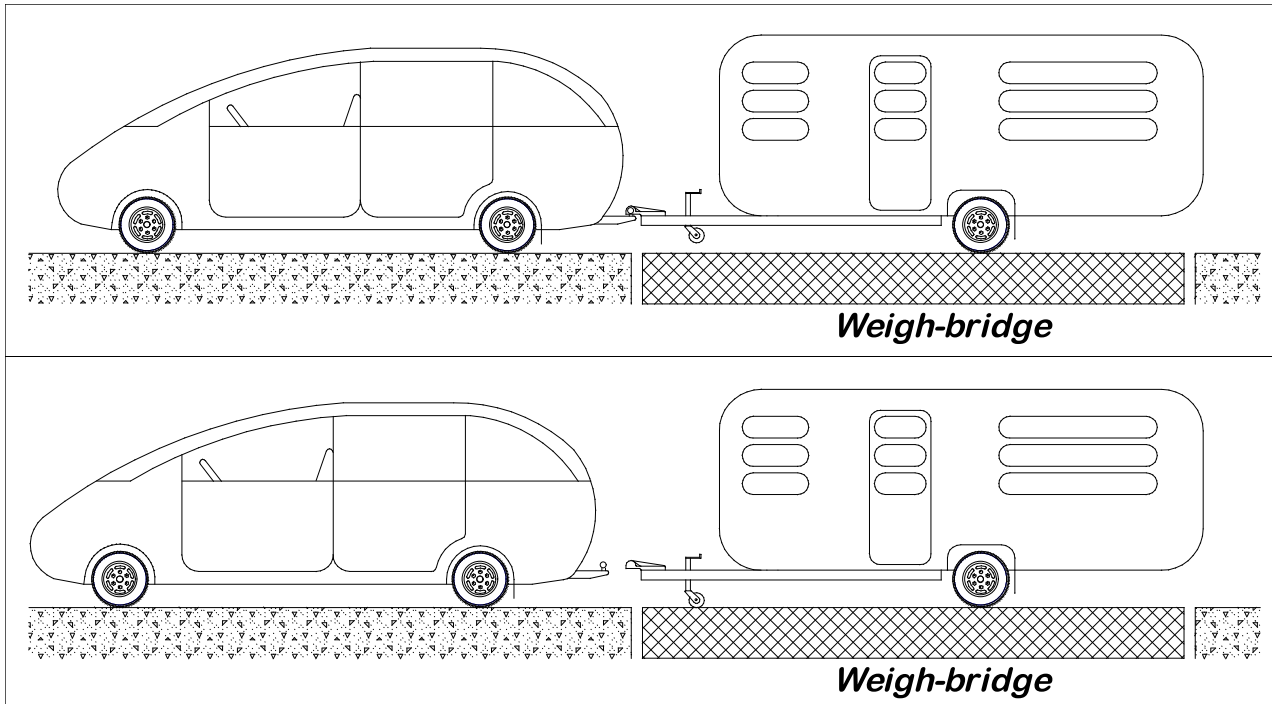


Drawing 1 shows measuring the “**Axle-Loading**” Must not exceed the **GTM** Rating

Drawing 2 shows measuring the “**All-Up Mass**” Must not exceed the **ATM** Rating



Legal Load-Carrying Capacity = ATM Rating – Tare Mass



The Ball-Loading is the *difference* between the two readings

ATM: Aggregate Trailer Mass (Rating)

GTM: Gross Trailer Mass (Rating)

The GTM Rating must *not* exceed the *lowest* of the “Axle-Group” Ratings.

The “Axle-Group” comprises the:

- **Wheels & Tyres**
- **Suspension Structure**
- **Springs**
- **Axles & Wheel-Bearings**

Tow-Vehicles:

- **GVM: Gross Vehicle Mass (Rating)**
- **GCM: Gross Combination Mass (Rating)**
- **RAC: Rear Axle Capacity (Rating)**
- **Maximum Permitted Towing Capacity: (Rating)**
- **Maximum Permitted Coupling Down-load Capacity: (Rating)**

Tow-Bar: Maximum Permitted Towing & Down-load Limits: (Ratings)