Caravan Inspections… Basic *Pre-Holiday, or Anytime!*

"Target Zero" **(Caravan Accidents)**

The *Caravan Council of Australia* is encouraging all 'vanners to conduct a *Pre-Holiday Caravan Inspection*.

The attached *Check-List* covers the *basic* items that should be properly inspected and serviced to best-ensure safe and happy travelling.

- Ensure that your 'van or camper-trailer is fully legal and compliant.
- Ensure that your 'van or camper-trailer is in a good and safe condition.
- Ensure that your *tow-vehicle* is in a good and safe condition.
- Ensure that no *Ratings* of your 'van or camper-trailer - *or* your tow-vehicle - are ever exceeded.

If you are *not* technically qualified and experienced, you should have an accredited mechanic or caravan specialist inspect the vehicle, and make any necessary adjustments or replacements.

Gas and Electrical 230-volt ac inspections and servicing must *only* be conducted by licensed gas-fitters and electricians.

If you have any questions at all about the safety of your caravan or camper-trailer, always obtain professional advice from a recognised expert in the particular field.

Please feel free to pass on a copy of the *Inspection Check-list* to other 'vanners.

Informative technical documents are available on the *CCA* web-site home-page under "Technical Articles". In addition, other technical articles - including the valuable 4-Part "Buyer-Assist" - are available under the other buttons. Everything available on the *CCA* web-site is free and no-obligation.

Caravan Council of Australia

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We want *everyone* in Australia who tows a caravan or camper-trailer to have it inspected before they take to the road, to best-ensure it is legal and as safe as possible…

Drive for *Recreation*…not for *Wreck-creation*!

A lovely caravan, a great way to have a vacation… but it *must* be properly checked, and kept in a good and safe condition

Vitally Important!

Both the caravan (or camper-trailer) *and* the tow-vehicle must be legal/compliant and in a safe condition.

They must fully comply with all applicable *ADR's* (Australian Design Rules) and *Australian Standards*.

If there have been any modifications to either the tow-vehicle, or the 'van/trailer, the compliance *may* now be invalid.

If you are *not* mechanically knowledgeable and experienced, you should have an *accredited* automotive engineer or mechanic conduct the inspection and make any necessary replacements or adjustments.

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It is important to understand *Ratings & Masses* to ensure that no *Ratings* are ever exceeded.

It is *highly* recommended that you obtain a *certified* weigh-bridge certificate, stating both the *Tare Mass*, and the empty *Ball-Loading*.

Measured Tare Mass: …… kg Ball-Loading at the Tare Mass condition: …… kg

It is also recommended that you obtain a weigh-bridge certificate of the Total Mass, and the Ball-Loading when the 'van is *fully loaded*. The correct Ball-Loading is *critical* regarding proper handling and stability.

If you have *any* questions regarding compliance and safety, consult a caravan specialist for advice.

Legal Load-Carrying Capacity (LLCC) = Aggregate Trailer Mass (ATM) Rating – Tare Mass

- Is the Caravan Compliant & Legal??? YES / NO
- Is the Caravan / Tow-Vehicle *Combination* Compliant & Legal??? YES / NO
- Is the Caravan in Good Condition??? YES / NO
- Is the Tow-Vehicle in Good Condition??? YES / NO

Braking System: For over-ride brakes, is the sliding mechanism in the coupling in good condition and lubricated to provide consistent and smooth braking? YES / NO

For all vehicles over 2,000 kg GTM Rating, is an in-car electronic brake controller fitted? YES / NO
For all vehicles over 2,000 kg GTM Rating, is an approved break-away system fitted? YES / NO

Tyres: The tyres are probably the most important parts of the caravan - and tow-vehicle – regarding safety, ride and handling. Tyres must be correctly sized to suit the loadings they will be subjected to. Tyre Size: …… Are the Speed & Load Ratings OK? YES / NO

What is the recommended tyre pressure for when the 'van is fully-loaded? ……. kPa
Carefully inspect *all* tyres to ensure the *entire* treads & side-walls are in good condition: YES / NO
Are all wheels in good condition? YES / NO
Are all wheel-nuts tightened, by a torque-wrench, to the correct torque? YES / NO Nm: ……
It is suggested that pencil (or water-proof felt pen) marks be drawn on each wheel-nut, with mating marks on the wheel, so that a quick glance will show if the nut has started to become loose.

Electrical Wiring & Lamps: Is the lamps wiring correct, and in good condition? YES / NO
Are the tow-vehicle socket and the caravan plug - and the break-away switch assembly - in good condition: YES / NO
Do all lamps work correctly and are in good condition? YES / NO

Coupling Assembly & Safety Chains: Are the Safety Chains correctly stamped (every fourth Link)? e.g. 4177-25 or 4177-35 YES / NO
Are the safety chains securely welded to the A-Frame? YES / NO
Are they of a suitable length (to allow full uninhibited steering, but prevent the A-frame from contacting the road), and for *2* chains, are they "crossed-over" when attached to the tow-vehicle? YES / NO
Are the D-Shackles made of steel, and do they have a stamped Load Rating (kg)? YES / NO

50 mm Ball & Coupling: Are the ball and coupling *both* 50 mm diameter? YES / NO
(Note: Some couplings may be of a larger imperial (inches) size.)
Does the coupling have the manufacturer's name, AS 4177, and the Load Rating marked (kg)? YES / NO
Is the coupling in good condition, and firmly secured? YES / NO

Vital attachment… Approved Coupling & Safety Chains

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Is the ball nut tightened to the prescribed torque, and fitted with a lock-washer/nut? YES / NO

Is there is an Approval Certificate for the LPG installation? YES / NO

Is there is an Approval Certificate for the 230-volt ac electrical system? YES / NO
Is the Residual Current Device (RCD) operating correctly? YES / NO

Is the chassis free of damage, cracks (structural members and welds), and rust? YES / NO
Is the under-side free from damage, timber rotting, and unprotected wiring and tubing/hoses? YES / NO

Are the wheel hubs, bearings, stub axles, cap and seals clean and in good condition? YES / NO
Are the bearings correctly grease-packed, correctly tensioned, and secured with split pins? YES / NO

Are all springs and suspension components in sound condition? YES / NO
Are all pins, bushes, hangers and shackles in good condition and lubricated as required? YES / NO

Tow-Vehicle Inspection: It is *highly* recommended that you have a qualified mechanic inspect all of the safety-related items on the tow-vehicle, as would be done for a *Road-Worthiness* inspection. Is the Tow-Bar properly secured, and in sound condition? YES / NO

Connect the Combination: Are the two vehicles level (in a side view)? YES / NO
Are the safety-chains, shackles, and coupling working properly? YES / NO
Test-drive the vehicle combination at reasonable speeds on various road surfaces, to ensure the handling and stability seem OK: YES / NO
Are the brakes in good condition, and provide straight-line stopping on a hard stop? YES / NO

Personal Protection: Do you have - and in working condition - the following? YES / NO

- Fire extinguisher, Smoke-detector, CO [carbon monoxide] -detector, First Aid kit. YES / NO
- Do you have suitable insurance for the caravan and tow-vehicle? YES / NO
- Ensure that *everyone* in the caravan reads and understands *all* safety notices, and knows what to do in an emergency.

Disclaimer: This information is *not* to be deemed to be legal advice. It is supplied in good faith and is believed to be correct. However, no liability whatsoever is accepted from the use or reliance of this, or other information available on the *CCA* web-site.

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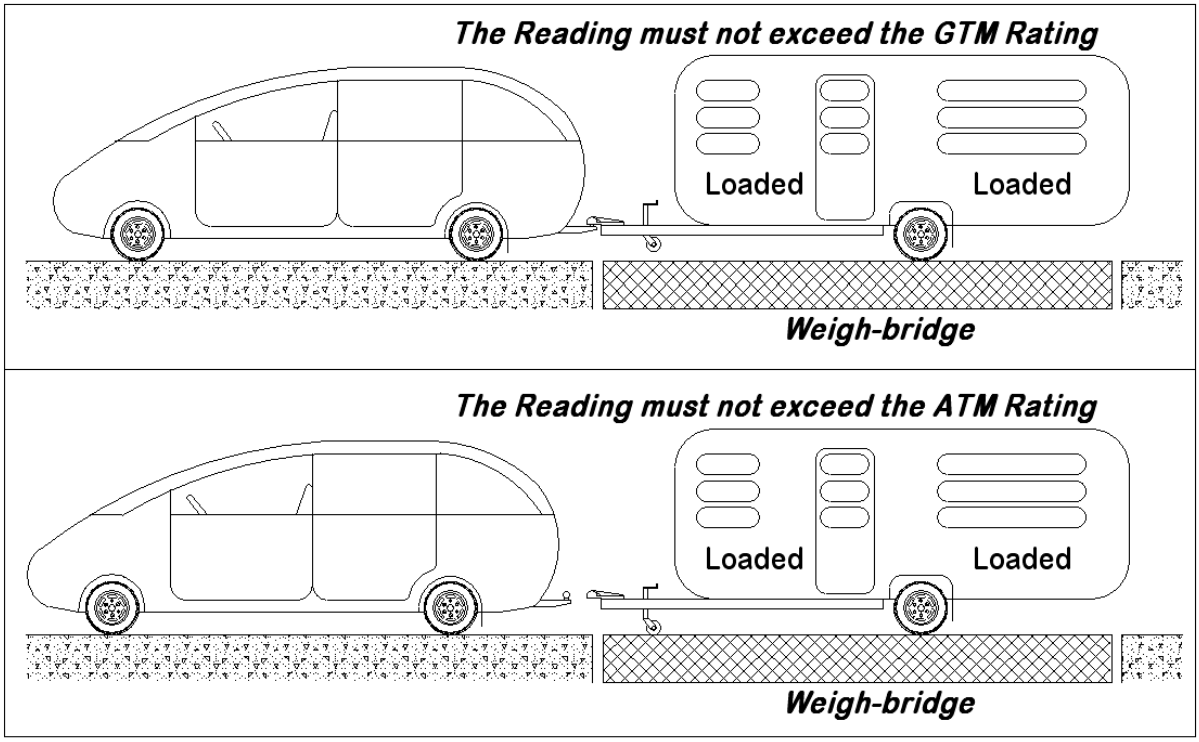
Caravan Ratings & Masses

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

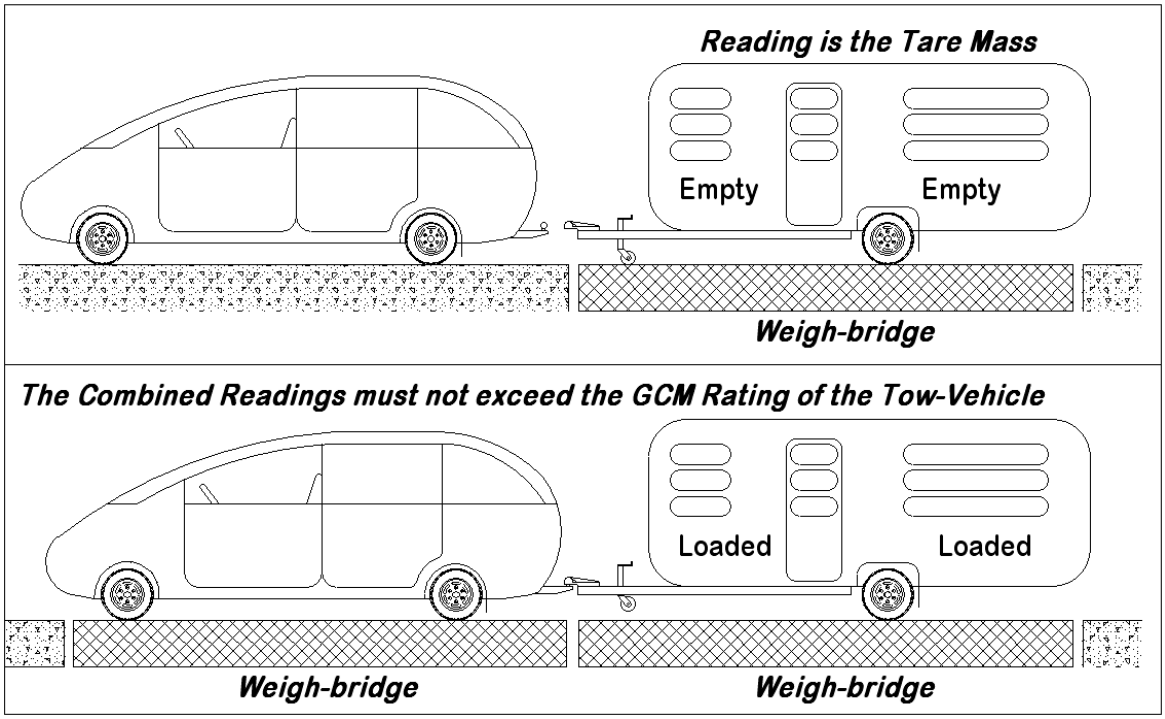
The Tare Mass and Ball-Loading are *Actual Masses*… that must be *measured*

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 *Purchase 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



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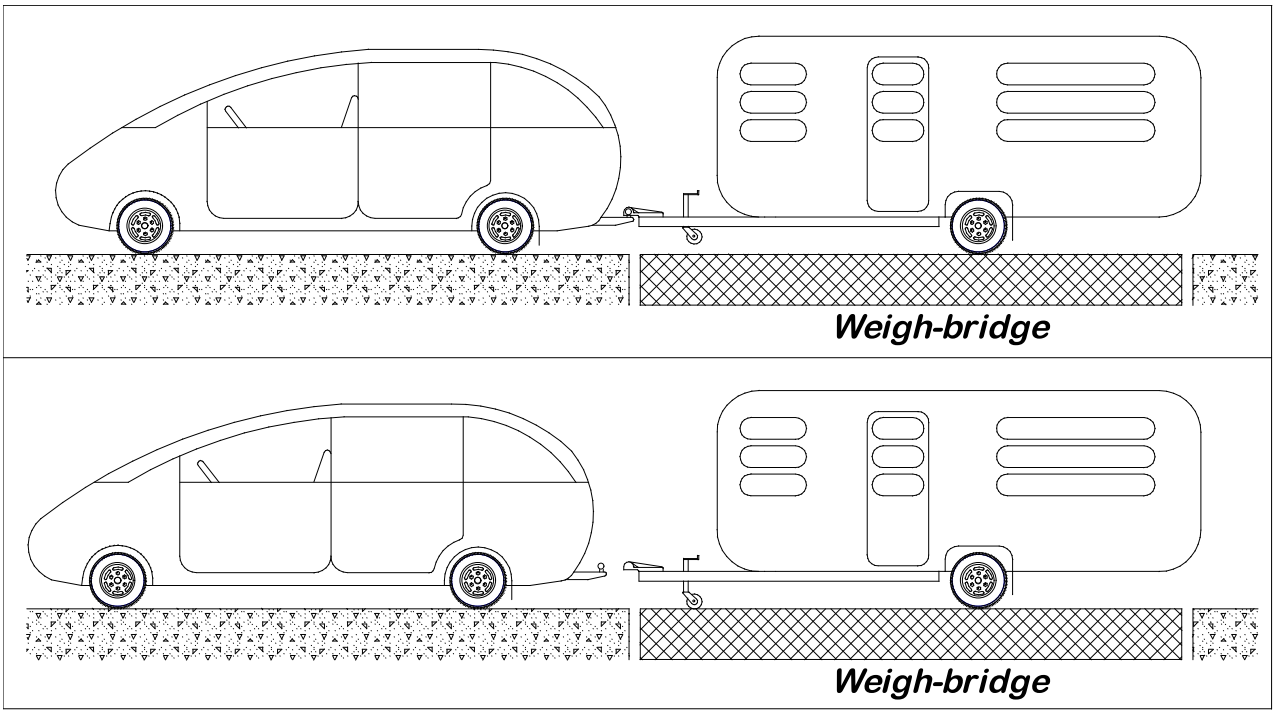
Legal Load-Carrying Capacity = ATM Rating – Tare Mass



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**

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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)

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