

AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD

Comprising Commonwealth State and Territory Authorities

CIRCULAR NO. 38-2-3

TRAILER CONDITIONS FOR ROAD TESTS

TRAILER LOAD

1. Trailer road tests for Service Brake Effectiveness, Service Brake Fade Effectiveness, Emergency Brake System and Service Brake System Water Performance must be conducted with the trailer laden to Loaded Test Mass (LTM). For Parking Brake Effectiveness the trailer must have a longitudinal force applied to it which is equivalent to at least 0.18 times the Maximum Loaded Test Mass (MLTM), see paragraph 7.
2. Loaded Test Mass (LTM) is the mass of the trailer with each axle group loaded to its Group Gross Axle load Rating (GGALR). GGALR is the least of:
 - the sum of the Gross Axle Load Ratings (GALRs) of the foundation brake assemblies fitted to the axle group,
 - the Group Axle Load Limit from Table 1 in ADR 38,
 - the axle group load when the trailer is loaded to its Gross Trailer Mass Rating (GTMR).
3. For trailers which are intended to operate within the normal statutory load limits the Group Axle Load Limits in Table 1 in ADR 38 will usually be the limiting factor on GGALR. For Dog trailers the sum of the GGALRs will equal GTMR. For semi-trailers the GTMR will be selected on the basis of the Group Axle Load Limits for the prime mover as well as the trailer.
4. For trailers which are intended to operate in situations which allow group axle load limits in excess of Table 1, the GTMR would be selected for the maximum group loads allowed. The National Association of Australian State Road Authorities (NAASRA) issue guidelines for these situations. For these trailers GGALR is the least of:
 - the sum of the GALRs of the foundation brake assemblies fitted to the axle group,
 - the axle group load when the trailer is loaded to its GTMR.
5. Trailers with quad axle groups or rows of eight tyres are not covered in Table 1 of ADR 38. For these trailers GGALR is the least of:
 - the sum of the GALRs of the foundation brake assemblies fitted to the axle group,
 - the axle group load when the trailer is loaded to its GTMR.
6. When determining the axle group load at GTMR, it shall be assumed that the load is distributed approximately uniformly over the load bearing area as for Maximum Loaded Test Mass (MLTM) unless otherwise approved.

7. For parking brake tests performed on an incline, the trailer shall be laden such that the total mass of the laden trailer is at least that given by:

$$\text{Park brake test trailer mass (tonne)} = \frac{(18 \times \text{MLTM} + 1.5 \times \text{TVML})}{\text{Gradient}} - \text{TVMT}$$

- MLTM = Maximum Loaded Test Mass = GTMR (tonne).
TVML = Gross Laden Tow Vehicle Mass (tonne) as tested, if tow vehicle is connected during test.
TVMT = Tare Tow Vehicle Mass (tonne) if tow vehicle connected.
Gradient = unit vertical per unit horizontal distance (%) and must be at least 10%.

Where a drag test is used instead of an incline test the trailer can be loaded in any manner providing that the Total Trailer Axle Load as tested does not exceed the Total Trailer Axle load which would be obtained with the trailer laden to MLTM.

TYRE RADIUS

8. The static loaded tyre radius used for the road tests should be the value stated in the submission of evidence Form CB 38 - Annex A. That value is for a typical tyre suitable for the rim size to be fitted to the trailer in production.

CENTRE OF MASS HEIGHT

9. Dog Trailers should be tested with the height of the centre of mass of the laden trailer as stated in the submission of evidence Form CB38-Annex A. That height is for the trailer laden in a manner which is typical for that type of trailer.