

Introduction of Measurement Adjustments

INFORMATION UPDATE

Austrroads has reviewed its enforcement guidelines and replaced the former National Association of Australian State Road Authorities (NAASRA) 'administrative tolerance' used for heavy vehicle mass enforcement with a Measurement Adjustment based solely on weighing equipment accuracy and site characteristics.

Enforcement action may be taken when a vehicle's assessed mass exceeds the legal limit. The assessed mass is calculated by subtracting the measurement adjustment from the vehicle's mass as shown on the measuring equipment. There are three categories of measurement adjustment that are designed to take into account the variations in measuring equipment and site characteristics.

These categories are defined as:

Category 1 weighings are those at the best available sites, such as certified weighbridges operated by road authorities or sites designed and constructed for accurate, reliable use with portable scales.

Category 2 weighings are those at well set out temporary roadside sites using portable scales.

Category 3 weighings are those conducted under less favourable conditions than Category 1 or Category 2 weighing. In the interests of certainty, there are limits on the circumstances where heavy vehicles can be weighed even with a Category 3 weighing. The relevant adjustments are set out in the table below.

MEASUREMENT ADJUSTMENTS APPLICABLE TO EACH CATEGORY OF WEIGHING

Measurement Adjustments (MA) for each weighing step (all masses are in tonnes)

Axle Group	Measurement Adjustment (MA)		
	Category 1 weighing	Category 2 weighing	Category 3 weighing
Single axle with single tyres	0.3	0.3	0.4
Tandem axle with single tyres (or combination of single and dual tyres)	0.3	0.4	0.5
Single axle with dual tyres	0.4	0.4	0.5
Tandem axle with dual tyres	0.5	0.5	1.0
Triaxle	0.5	0.5	1.0
Gross mass	0.25 per weighing step	0.5 per weighing step	1.0 per weighing step

Enforcement officers determine which category of weighing applies to a given situation and apply the appropriate measurement adjustment to calculate the assessed mass.

The measurement adjustment is applied to each weighing step. For example each movement of the vehicle onto the measuring equipment that is needed to weigh the axles of the vehicle, would have the relevant measurement adjustment applied. The assessment of gross mass, or any sum of the axle mass, can therefore involve multiple measurement adjustments.

HOW DOES IT WORK?

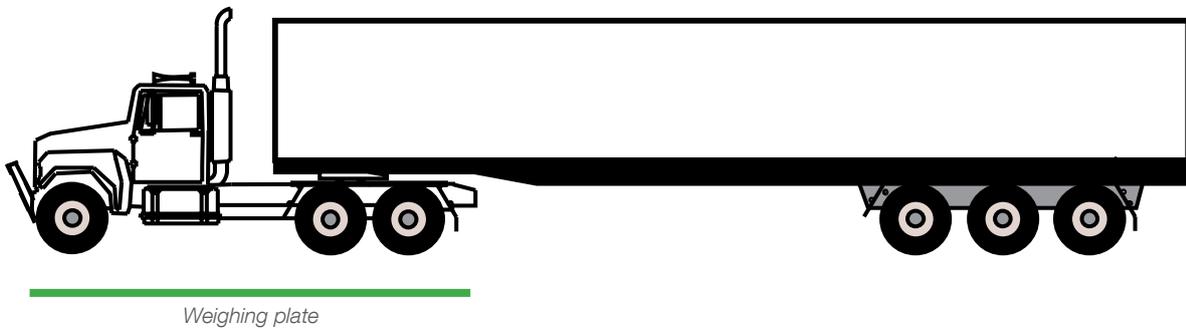
The deduction of the measurement adjustment takes into account the potential variations in the measured mass and gives 'legal certainty' to any detected breach. The variations can result from factors such as equipment characteristics, the weighing method, environmental factors and vehicle suspension effects. For example, when an axle is loaded so that it is exactly at the legal limit it is possible that the measured mass (as

indicated on the weighing device) will be slightly higher or slightly lower than the legal limit due to the variations inherent in the weighing process being used.

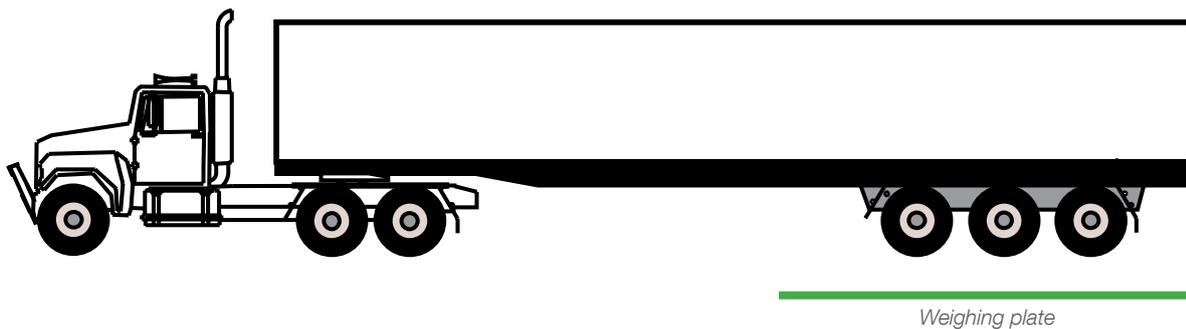
Example

On a 6m Category 1 weighbridge that has a single weighing plate, a typical semi trailer is weighed as indicated in the example below.

Step 1 weigh the prime mover



Step 2 weigh the triaxle group



In this example, the gross mass of a 6 axle semi trailer is measured in two steps on a 6 metre weighbridge. Because a weighbridge is a category 1 weighing site, and there are two steps involved in measuring the mass of the

vehicle, two measurement adjustments of 250kg each would apply. Therefore, the measurement adjustment for the gross weight of the vehicle is 500kg.

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