

## Axle Weighing and Errors

### Things to remember about axle weighing:

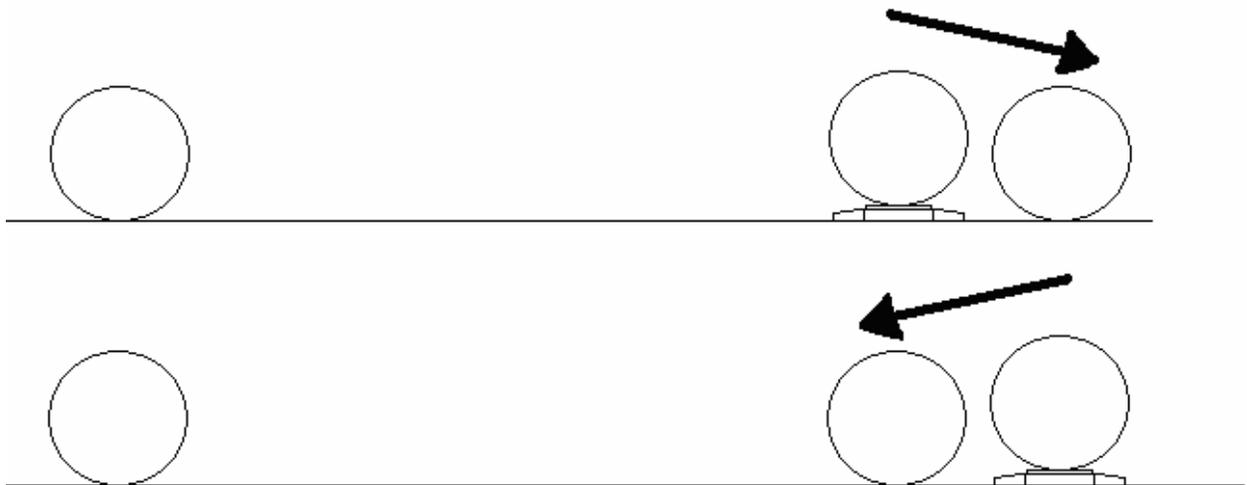
- Axle weighing can be a cost effective method of “check weighing”.
- It is impossible to get “legal for trade” type accuracy when axle weighing with any product.
- Under certain circumstances axle weighing can produce excellent results, but time, care and thought will also be required to achieve this.
- When a scale manufacturer states a level of accuracy (or percentage of error) for a scale, any error is based strictly on the load currently supported by the scale. It does not apply directly to the accumulated weights from a number of loads that had been applied.
- There are many “external” factors that can have an affect on axle weighing results. Here are just a few of those to consider:
  - 1- The foundation that the scales are placed on (hard and flat or soft, spongy or uneven?).
  - 2- The gradient of the site (how much of a slope is there to the site in all directions?).
  - 3- The type of commodity carried by the vehicle (solid or liquid?).
  - 4- Tire pressure? When using weigh pads to weigh a set of dual tires it is imperative that the inside tires do not come in contact the foundation.

### Important note about vehicle suspension:

Tandem and triple axle combinations are designed to share the load evenly between all axles within the same axle group. Vehicle suspension, in a

compensating arrangement, can therefore cause very real problems for axle weighing.

The transfer of weight from one axle to another during the weighing process can happen, but to what degree and effect this will have on weighing results is not predictable. The example below illustrates what could happen when weighing a tandem axle truck. The arrows show the direction of the weight transfer.



Even under ideal circumstances axle weighing is not an exact science. There are however some steps that can be taken to minimize errors.

- 1-If at all possible do all weighing on a hard, clean and level surface.
- 2-When weighing an axle combination/group (tandem or tri-axle) always attempt to have all the axles of that group at the same height throughout the weighing process.

A relatively inexpensive way to do this is to construct “dummy” pads, (of the same height as the weigh pad), that can be placed on either side of the Weigh Pads.



Canadian Manufacturer of Quality Weighing Systems

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