

Avery Weigh-Tronix

WEIGHBRIDGE CLEANING

An Owner's Guide

An owner's guide to weighbridge cleaning and
maintenance





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Weighbridges are precision weighing instruments designed to meet stringent Weights and Measures regulations. They operate in arduous conditions and require regular cleaning and maintenance to ensure weight accuracy and reliability. The weighbridge cleaning guide from Avery Weigh-Tronix explains good practice weighbridge maintenance procedures which should be considered as part of your ownership and chosen preventative maintenance supplier(s).

Why do I need to clean my bridge regularly?

Weighbridges provide an accurate way to capture weight data which can help to protect against human error and to mitigate fraud. However, over time, mud, dirt and slurry can build up under and around the weighbridge. This build-up can happen more quickly depending on the industry your bridge is serving. For example, Mining and aggregate industries would find their bridge requires cleaning more regularly than a weighbridge in a warehousing facility.

An accumulation of dirt, debris, water or slurry, may have a detrimental effect on the integrity of the weighbridge. In the short term, this will manifest itself in inaccurate weighing (loss of profit, overloaded lorries, contravention of the Weights & Measures Act). In the long term, it will lead to early failure of the load cells or Weigh Bars® and result in non-availability of the weighbridge.



How often should I clean my weighbridge?

Weighbridge maintenance should be comprised of daily, weekly and monthly routines which are the responsibility of both the weighbridge owner and the preventative maintenance supplier(s). For weighbridges which are located in particularly harsh environments, professional cleaning services may be required to restore the bridge to its original form. The optimum time to schedule a weighbridge clean is Spring or Autumn. In Spring your weighbridge can be cleaned to remove the mud, dirt and debris build up that will have occurred over winter. In Autumn you can prepare your bridge for the harsh conditions of winter by clearing away dirt and debris which may solidify in the cold temperatures around the load cells and cause weighing inaccuracies.



Before cleaning



After cleaning

Daily Routines:

Pit Mounted:

If you have a pit-mounted installation and suspect that it may have been affected by a build-up of debris or water, inspect the pit following established health and safety regulations regarding working in confined spaces.* Take corrective action before starting weighing operation (if flooded arrange for pit to be pumped out).

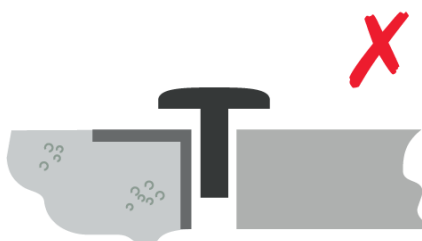
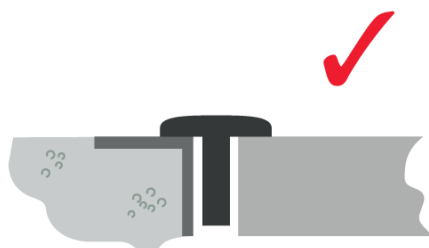
Surface Mounted:

On surface-mounted weighbridges, carry out a visual inspection to make sure that there are no obstructions

beneath the platform. There should always be clearance between the superstructure and the ground, with no debris fouling the load cell assemblies.

'T' Section Placement:

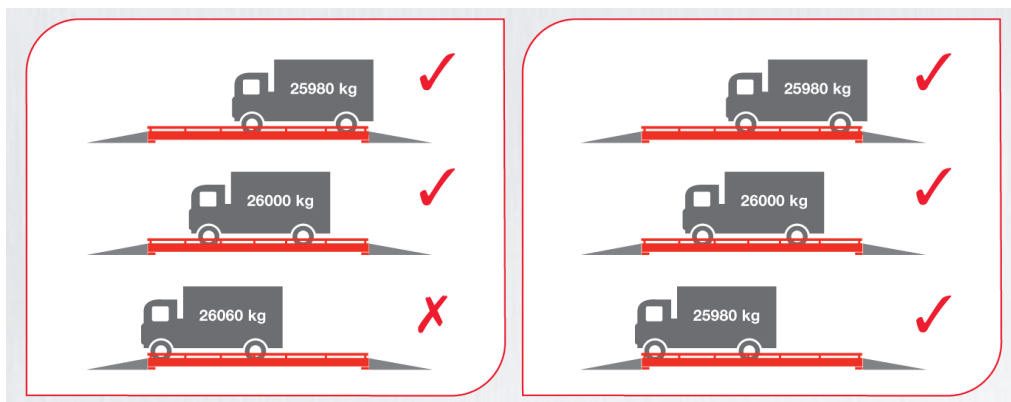
Some weighbridges have a 'T' section rubber fitted on pit-mounted installations. Ensure it is located correctly to prevent ingress of debris and that there is no build-up of surface material which is likely to affect the weighing accuracy.



Weekly Routines:

On surface mounted weighbridges, check for build-up of debris around the load cell assemblies and remove any unwanted material, taking care not to cause any damage to the load cell cables.

Carry out a weight check (end-middle-end test) using a loaded vehicle. Compare the weight of the vehicle when weighed at each end of the weighbridge and in the centre platform position. Note the readings at each point. If discrepancies in excess of ± 2 indicated divisions are found, they should be reported.



Check that any pit drainage system and/or automatic pumps are working correctly. Should any water or debris interfere with the weighbridge superstructure, it will affect accuracy and could result in the weighbridge being rejected by a Trading Standards Officer.

Monthly Routines:

In addition to the weekly routine it is advised to:

1. Check leading edges of foundations for any sign of damage to the side frames and the end frames.
2. Check for any excessive movement of the platform and report any significant changes since the last inspection. Check the pit for any build-up of debris. Carry out an 'end-middle-end' test as in the weekly checklist and note the readings obtained.
3. Next, jet-wash the weighbridge to remove any loose debris and any build-up of material beneath it avoiding direct contact with load cells/Weigh Bars®.
4. Rebalance (zero) the weighbridge and repeat the 'end-middle-end' test, noting the readings. Finally, compare the results of the two sets of tests and report any discrepancies found.

Professional Weighbridge Cleaning Services:

In environments where mud and slurry build up is common it is advisable that you have your weighbridge cleaned professionally. Professional weighbridge cleaning companies use specialist equipment and have highly trained staff who will clean a bridge safely without damaging the component parts. Your site conditions will dictate the frequency of this type of service which can be completed out of hours to reduce weighbridge downtime.

Seek expert advice:

When dealing with such a critical piece of kit, make sure you seek advice from the experts. Do not allow unqualified personnel to carry out cleaning or maintenance work on the weighbridge. This type of work can have a direct effect on the metrological characteristics of the weighbridge and can impact the Weights and Measures Regulations of your installation. Ensure you speak to a specialist weighbridge cleaning supplier who understands the intricacies of a weighbridge and has the correct equipment to clean the bridge safely and without damage.



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