

Ready for Inspection

Ensuring your weighbridge is NMO inspection-ready



More than a quarter of weighbridges have been found to be outside their legally allowable tolerances by the National Measurements Office (NMO). As a result, the year ahead will see the NMO focus its efforts and increase inspections in this area.

According to Mo Bott, product manager – service with Avery Weigh-Tronix, the easiest way to make sure that a weighbridge is ready for inspection and operating efficiently is to ensure regular housekeeping is carried out, supplemented by an effective service contract.

Weighbridges that are operating illegally and charging customers incorrectly are subject to fines and could, potentially, be losing revenue for the business. Ultimately, they could be shut down by Trading Standards, halting operations completely, which would have a detrimental effect on the profitability and reputation of an organization.

Such a significant statistic means that the

NMO will be conscious of weighbridge inaccuracy and will be focusing its inspections accordingly. The latest NMO report sets out a risk matrix that places weighbridges in the 'very likely' bracket for potential failure and as having 'very high' impact of risk.

Service and maintenance contracts

The current economic times have seen a reduction in the market uptake of weighbridge service packages from some suppliers, but this is counterproductive. It may be tempting to cut costs by reducing service cover on equipment, downgrading service supply or even risking a period without cover. However, these cost-cutting measures would be a false economy should a company be fined or shut down due to an out-of-tolerance weighbridge. Equally, an organization could be losing revenue or

charging customers unfairly depending on the direction of the weighbridge inaccuracy.

In industry, accuracy is extremely important and a service and maintenance contract helps maintain this premise. Correctly serviced equipment means that weighbridges are less likely to fail and give inaccurate readings. Such a contract can incorporate a calibration test conducted by an engineer to confirm that the weighbridge is producing the correct reading. Once a calibration inspection has been completed, the company is issued with a calibration certificate. Having a weighbridge provider carry out a regular examination of this kind gives peace of mind when trading, as well as during an inspection.

It is always best to work alongside a weighbridge provider to devise a service contract that best suits the particular needs of an organization. The kind of contract needed and the service frequency will be dependent upon a range of factors, ➤

including how the equipment is used, the frequency of use, the age of the equipment and the harshness of the environment that the weighbridge is operating within.

Good housekeeping

Having the right service and maintenance contract in place is essential, but there are other preventative steps that an operator can take to ensure that equipment remains reliable. The answer lies in housekeeping and good practice, with daily, weekly, monthly and twice-yearly tasks.

These simple tasks are important as the accumulation of dirt, debris, water or slurry will affect the integrity of the weighbridge. In the short term this will lead to inaccurate weighing, but if allowed to continue the load-cells or weigh bars will fail, making the weighbridge unusable.

On a daily basis, for example, it is best practice to visually inspect the platform to ensure that it is free from debris. Check that the side and end frames are not fouled, and then ensure that the digital display reads zero before a vehicle drives on to the platform.

Also, make sure that vehicles approach the platform slowly and avoid sudden braking, and for an accurate weight reading, ensure that all vehicle wheels are on the weighbridge.

For pit-mounted installations where T-section rubber is fitted, check that it is located properly and that any pit drainage system and/or automatic pumps are working correctly. For surface-mounted weighbridges, make sure there is clearance between the superstructure and the ground.

Weekly tasks involve carefully checking the load-cell assemblies for debris build-up, which should be removed carefully without damaging the load-cell cables. A weekly weigh check should also be carried out using a loaded vehicle. Compare the vehicle's weight when it is weighed at each end of the



weighbridge and in the centre of the platform (Fig.1). If discrepancies of ± 2 indicated divisions are found, this should be reported.

For a pit-mounted weighbridge, check the pit monthly for possible 'ponding' of water, debris build-up or other damage to the leading edge of foundations and the side and end frames of the platform. If the platform has moved excessively since the last inspection, it should be reported to the maintenance service provider.

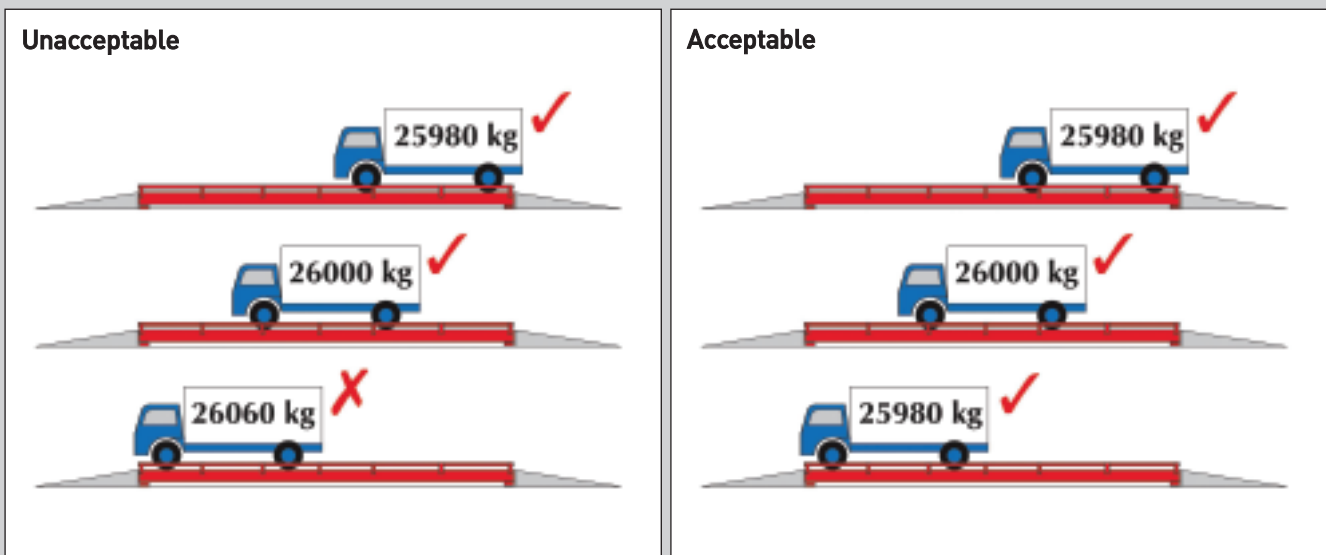
The end-middle-end test should also be repeated, as detailed in the weekly tasks, and the readings recorded. After this the weighbridge should be jet-washed to remove any loose debris and material from beneath the platform, taking care to avoid the load-cells or weighbars. After this it is important to rebalance or zero the weighbridge and repeat the end-middle-end test, noting the readings. Before and after results should be

compared and any discrepancies reported.

Finally, once every six months the weighbridge should be checked for any signs of structural damage. For example, the foundations should be inspected for any significant movement or cracks and any such signs reported to the maintenance service provider. For surface-mounted weighbridges, the load-cell cables should be visually checked and, again, any damage reported.

Electrical welding should never be carried out on the weighbridge structure without first consulting the service provider, as this can seriously damage the load-cells or weighbars. Also, if the weighbridge needs cleaning out, the fact that the waste can produce methane and other dangerous gases must be taken into account. For pit-mounted weighbridges, suitably certified gas detectors must be used in compliance

Fig. 1. In this example the weight is displayed in 20kg increments. At 25,980kg the weight is acceptable at -1 indicated division, but at 26,060kg at the front end of the platform it is unacceptable with +3 indicated divisions





with confined-space health and safety legislation, both before and during such work.

With proper care a weighbridge will give longer trouble-free operation between planned maintenance visits. But operators should not get carried away by 'DIY service'. No attempt should be made to carry out detailed repair or maintenance work, as this may affect the weighbridge's operation and contravene weights and measures regulations.

Maintaining accuracy

The NMO report has identified weighbridges

to be an area of concern following a survey that found 25.5% of weighbridges to be out of legal tolerance. Inspections will be more vigilant in this area so it is important that companies take note of the above steps to ensure that they are able to pass these inspections and avoid fines and/or the risk of being shut down.

More importantly, it makes good business sense to have an accurate weighbridge. Having accurate weight data is important to a company's operations. If weight data from the weighbridge are incorrect in the first instance, there will be a domino effect throughout the whole organization. For

example, reliable information is needed in order to collect landfill charges, to create invoices for goods purchased and to make informed changes and efficiency savings.

As Mo Bott concludes: 'Take heed of the NMO report, and ensure that your weighbridge is inspection-ready as well as operating efficiently for your business. Make sure that your company has a clear weighbridge housekeeping regime in place as well as a reliable service contract provider.'

For more information visit: www.averyweigh-tronix.com