

# Preparing your heavy vehicle for brake test

A best practice guide



GUIDE

# Breaking the braking myth

**Some people believe that a locked wheel means a good brake... This is not always the case.**

If a vehicle is only lightly loaded, the grip between tyre and the road (or the rollers on a roller brake tester (RBT)) will be low, and just a small brake force will cause the wheels to lock (stop turning). **No matter how much more the brakes are applied, the recorded brake force will not increase.**

If the imposed load is too little, the wheels will lock before the required efficiency is met. There are, however, two concessions that can be made by VOSA. These are **Front Wheel Lock Allowance (FWA)** and **passing on locks** (locks).

- ▶ Front wheel lock allowance takes into account the weight transfer to the front axle(s) that occurs when the vehicle is on the road.
- ▶ If more than half of the wheels on a system lock, then the vehicle will pass on locks, unless there is another reason for failure.

Neither condition should be relied upon during test preparations. If the wheels do not lock in the actual test, vehicles will have to meet the required efficiency.

Vehicles should be loaded when roller brake tested. When heavily loaded, the grip is good between the tyre and the rollers. As the wheels keep turning for longer, a higher brake force will be achieved. **Remember: A locking wheel does not necessarily mean a good brake!**

# If you have a brake tester

## Condition

- ▶ Keep your rollers clean, in good condition, and well gritted.
- ▶ Your brake tester should be serviced and calibrated regularly.

## Procedure

Wherever possible follow the VOSA brake test procedure. This includes centralising the vehicle at the start of test, ensuring full air pressure is available, and slowly applying the brakes. More guidance is available in the HGV inspection manual. Do not drive through oil, water or dirt before testing your brakes. These can reduce the grip of the tyre on the rollers, and may give different test results.

## For computer controlled RBTs

Make sure you have a current version of VOSA's DTp number database installed in your machine. The database is often updated to modify and add vehicles. With an out-of-date database, new vehicles might not be recognised. The test then requires the manual input of vehicle details, which may result in an incorrect FWA being used. If you find that DTp numbers are not being recognised, it may be time to update your database. Contact your equipment supplier for details on updating your database.

## For manual RBTs

Brake data cards are available from VOSA for each DTp number, and contain information about the vehicle and its braking requirements. These will help calculate brake performance. Ask in your local test station for details, or log on to: [www.dft.gov.uk/vosa](http://www.dft.gov.uk/vosa)

# If you do not have a brake tester

## Regular checks

You should check brake performance regularly as part of your maintenance procedures. It is also beneficial to test brakes as part of the vehicle's preparation for annual test.

## Where can my brakes be tested?

You can try:

- ▶ Franchised dealers
- ▶ Vehicle repairers
- ▶ VOSA

## VOSA voluntary brake testing

Voluntary brake testing is a service provided at VOSA test stations. For a small fee, VOSA will conduct a standard brake test, and this will highlight any areas for concern in the braking system(s).

# Other advice

## Secondary braking systems

Vehicles are fitted with a secondary brake, typically either through a split braking system, or a progressively applied hand control valve. Make sure you know which type your vehicle has, and if the other system can be used as an alternative.

# General advice

## Aim High!

Vehicles should meet minimum requirements, in all conditions, at all times. Vehicles should be regularly maintained, and you should be satisfied that the vehicle is always above the legal limits.

**Remember: A locking wheel does not necessarily mean a good brake!** It is important to be able to meet the efficiency requirements, as the wheels may not lock during the MOT.

## Load the vehicle

Add loading, where possible, whenever the vehicle is brake tested. This opens the load-sensing valve, where fitted, allowing higher pressure to the rear brakes. It gives higher braking efforts before wheel lock. By adding a load to the vehicle, you will get a more accurate brake performance result, based on the vehicle being laden in use.

## Steam cleaning

Steam clean the vehicle before conducting work on it. If steam cleaned on the way to test, it may affect the brake performance.

## Load-sensing valve (LSV)

Do not alter the load-sensing valve settings, unless consulting the vehicle's LSV plate. If the valve is not set correctly, it can lead to overbraking of the rear wheels, and a potential road safety hazard.

# Loading your vehicle

When loading a vehicle for brake tests, ensure that loads are correctly positioned close to the rear axles or over the fifth wheel.

For each axle, aim to apply at least 65% of the Design Axle Weight.

If possible, use consistent loads to add weight to the vehicle. This will help in positioning the loads correctly, and ensure consistency between tests.

See the VOSA leaflet “**Loading of vehicles to achieve a satisfactory brake test**” for more information.

## Pre MOT RBT Checklist:

- ▶ Has the vehicle been cleaned, before testing the brakes?
- ▶ Is the vehicle sufficiently loaded?
- ▶ Has the vehicle achieved good efficiency before the wheels locked?
- ▶ Has the vehicle been tested in automatic mode? If not, was the correct test conducted?

**Is everything all right?**

**You're now ready for the test!**

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