

Heavy Vehicle Brakes Rule and its implementation



***The Heavy Vehicle Brakes Rule (HVBR) applies to all heavy vehicles.
>> Heavy vehicles are vehicles with a gross vehicle mass over 3500kg.***

HVBR Myth Busters

Myth: Under the HVBR RBM brake test my vehicle's service brakes are expected to pass a higher standard than previously.

Buster: No. The brake performance criteria has not altered. Your vehicle's service brakes have always needed to produce a brake efficiency of 0.5 g in all conditions of load. The only changes under HVBR testing are that the test is done in a semi-laden condition and there has been a relaxation in that no individual axle is permitted to produce a brake efficiency of less than 45% – however, overall the vehicle is still required to meet 0.5 g (see next article for information on relaxation of requirements).

Myth: Achieving 0.5 g (50%) brake efficiency is difficult and is unrealistic.

Buster: Manufacturers design the brake systems on heavy vehicles to achieve 70–80% brake efficiency. The required 50% is a minimum. If brakes are adequately maintained, this is easily achieved.

Myth: If my vehicle's brakes don't quite achieve 50% efficiency, I can achieve a pass by driving around the block and applying the brake to heat them up.

Buster: While this may have happened when your vehicle's brakes were being tested unladen, this is much less likely to occur with semi-laden testing. Some maintenance work will need to be carried out to improve the brake performance to achieve the minimum 50% requirement.

Myth: My vehicle's brakes only failed because they were tested cold.

Buster: The vehicle's brakes are required to meet the minimum 0.5 g (50%) efficiency at all times. If this cannot be achieved when the vehicle's brakes are cold (ie first trip each day the vehicle is used) the vehicle does not meet the required brake performance. Remember the manufacturer designs vehicles to achieve 70–80% efficiency through the heat range, and the minimum is 50%.

Myth: There is nothing operators can do to reduce CoF inspection times now semi-laden testing is required.

Buster: Operators can ensure they don't contribute to increased inspection times by attaching purpose built tie down points on their vehicles or ensuring chassis are decluttered to allow easy attachment of chassis clamps (see the September fact sheet for more information). Ensuring that brakes are adequately serviced increases the chance of passing the brake test, thereby reducing the need for rechecks and further delays at testing stations. Driving around the block to heat up the brakes will not achieve the effect you want other than to lengthen the time it takes to pass.

Myth: Purpose fitted tie down points need to be certified by an engineer.

Buster: If purpose fitted tie downs points are attached as per NZTA's published guidelines (in the September fact sheet) and they are mounted using existing holes, there is no need for these to be certified by an engineer. Certification is only required where there has been a modification to the chassis when fitting the tie-downs or other certified components.

Change to service brake imbalance

Following the introduction of the Heavy Vehicle Brakes Rule (HVBR), NZTA has been reviewing the new brake test regime with a view to further alignment with major international standards, including ECE 96/96 Roadworthiness Guidelines.

Historically, New Zealand has allowed a 20% brake force imbalance; this was appropriate for the previous unladen CoF testing regime and the country's fleet of older vehicles.

New Zealand has an historic problem with heavy vehicle brake safety, with many vehicles struggling to meet the legal stopping performance requirement. The new semi-laden test has been designed and implemented to bring safer braking standards for the fleet. The introduction of this test enables us to align with ECE 96/96 and allow 30% imbalance on all axles.

As of Monday 18th May 2009 the brake test is being changed as follows:

When the service brake is applied and the brake balance, at any time during the test, (after 4kN brake force is achieved), varies by more than 30% between wheels on a common axle, then the vehicle has failed.

- >> Brake imbalance is tested at the same time as the brake efficiency.
- >> Imbalance at brake forces below 400daN are ignored and not recorded.
- >> For a pass, service brake imbalance, throughout the range above 400daN, may be no more than 30% on any axle.

Any future alterations to ECE 96/96 Roadworthiness Guidelines may be reflected in the HVBR brake testing protocol.

Prepare for your CoF

To assist with vehicle tie-downs at CoF inspections, the NZTA recommends that tie-down points are fitted to your vehicle (see photo). For more information see the September 2008 factsheet. This will ensure your semi-laden brake test is as quick as possible at the testing station.



Look out for upcoming fact sheets, which will detail:

- >> Offsite locations
- >> TSL labels compulsory as of 1 August 2009
- >> OE Spec systems
- >> Maintenance tips

Missed something? The March fact sheet covered:

- >> New HVBR rollout dates for regions
- >> Test weights
- >> New CoF component fails codes
- >> TSL labels

Previous factsheets are available on www.landtransport.govt.nz/commercial/hvbr

To find out more...

For further information on the Heavy Vehicle Brakes Rule, visit

www.landtransport.govt.nz/commercial/hvbr
email: HVBR@nzta.govt.nz

Or visit your testing station web sites
www.vtnz.co.nz - www.aa.co.nz - www.vinz.co.nz

Or contact your representative
Bus and Coach Association (BCA)
Phone: 04 499 7334 - email: info@busandcoach.co.nz

Road Transport Forum (RTF)
Phone: 04 472 3877 - email: forum@rtfnz.co.nz