Vehicle Standards Guide 21 (VSG –21)

National roller brake testing procedure

This guide provides inspectors who operate at third party approved inspection stations (AIS) with information about the new National roller brake testing procedure (RBT procedure).

Background

A heavy vehicle’s ability to brake effectively and efficiently is critical to the safe operation of the vehicle on roads. Given the importance of a vehicle’s brakes, regulators, operators, drivers and the community have an interest in ensuring rigorous assurance processes are in place to verify brake performance.

Taking into account the location, time and safety limitations of the roadside or workshop, the National Heavy Vehicle Regulator (NHVR) and industry use various brake testing methods that provide an indication of brake performance. Testing methods include decelerometer testing, skid plate testing or roller brake testing (RBT). Collectively, these testing methods are referred to as in-service brake tests.

Roller brake testing, like all in-service brake tests, is intended as a screening tool to:

- verify that a vehicle’s braking system is functioning
- provide information that highlights potential issues relating to non-compliances and/or system performance.

This information can then be used to determine if inspection of specific brake components is needed.

New national RBT procedure

The NHVR’s aim in developing the RBT procedure is to ensure that all in-service brake tests of heavy vehicles are safe, fair and repeatable, enabling assessment of a vehicle’s brake system.

The NHVR has recently conducted a series of trials, in conjunction with NSW Roads and Maritime Services (RMS), Heavy Vehicle Industry Australia (HVIA) and the Australian Trucking Association (ATA) to gain better understanding of how real-world heavy vehicle brake performance relates to test results for roller brake machines. As a result of these trials, the NHVR has now developed a National procedure for in-service brake testing using an RBT machine. The new procedure is available here.

National RBT procedure rollout

The NHVR recognises that to test brake performance using an RBT in line with the new National RBT procedure, certain equipment and software updates are required. To address this requirement, the new RBT procedure will be rolled out in two stages.

Note: The RBT procedure only applies to inspectors who use an RBT machine as part of their vehicle inspections.

For inspectors who do not have an RBT machine, and instead conduct in-service brake tests by a stopping distance, decelerometer or skid plate test, there is no change to how these tests are conducted.

Stage 1

Stage one of the rollout will require RBT machines to be updated, where necessary, to provide both dynamic and static test results. Once stage one RBT machine updates have been completed, brake performance testing must be conducted in line with the Alternative phasing in (AP) procedure.

For RBT machines that do not display both test results, updates to the machine will be required. The NHVR has consulted with RBT machine manufacturers who have confirmed that the necessary updates will be made as part of the next scheduled maintenance and calibration inspection or will be remotely made by the RBT machine manufacturer. The necessary updates to RBT machines must be made by 31 January 2019.

Where an RBT machine already provides dynamic and static results, or following the necessary updates, RBT is to be conducted using the AP procedure.

Stage 2

Stage two of the new RBT procedure will require a more comprehensive software update to RBT machines. These updates will ensure that test results are reported correctly and will include a simplified pass/fail read-out ensuring that outcomes align the National Heavy Vehicle Inspection Manual (NHVIM).

The NHVR is currently working with RBT machine manufacturers to develop the necessary software updates and has not set a date for the completion of stage two of the rollout. More information will be provided once the software changes are finalised and an implementation schedule is set.

For more information:
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