NHVR
National Heavy Vehicle Regulator

4.6 metre high road trains carrying cotton bales

Information sheet – January 2017

Transporting cotton bales on road trains up to a height of 4.6 metres – vehicle performance

This document provides information on the road performance of road trains transporting cotton bales up to 4.6 metres in height.

NHVR's engineering assessment

The NVHR conducted a desktop engineering assessment using performance based standards (PBS) to compare 4.6 metre high road trains carrying cotton bales with similar existing combinations, such as livestock and car carriers, operating on road train type 1 networks.

The engineering analysis showed that the use of air bag suspensions and reduced deck height make the performance of the 4.6m high cotton combinations comparable to that of existing prescriptive combinations.

The 4.6 metre high road trains carrying cotton bales axle groups masses are not higher than existing combinations operating on road train routes.

Other considerations

Heavy vehicles transporting cylindrical cotton bales loaded up to 4.6 m high must be restrained in a way that is compliant with the National Load Restraint Performance Standards[1] .

Restricting load shift has a beneficial impact on the on-road performance of vehicles especially when the vehicle combination experiences sideways acceleration (turning).

Performance based standards (PBS)

PBS is an objective engineering assessment of a vehicle combination's on-road performance.

The engineering analysis covers five major areas:

Powertrain

This assessment covers the ability of the hauling unit ability to accelerate out of intersections and tow the combination without struggling.

Stability

This assessment covers the combination's stability under braking and roll over characteristics.

Trailer dynamic performance

This assessment covers the combination's trailer performance when performing high speed road manoeuvrers.

Vehicle manoeuvrability

This assessment covers the combination's ability to turn (swept path) and how much the "corners" of the combination stick out when turning.

Infrastructure

This assessment covers the impacts on infrastructure such as bridges culverts and pavements. The standards use GML and HML as mass limits.

For more information on PBS refer to the National Heavy Vehicle Regulator's site: https://www.nhvr.gov.au/road-access/performance-based-standards

More information

Refer to the "4.6 metre high road trains carry cotton bales" information sheet found at www.nhvr.gov.au

For more information:

Visit: www.nhvr.gov.au
Phone: 1300 MYNHVR* (1300 696 487)*
Email: info@nhvr.gov.au

*Standard 1300 call charges apply. Please check with your phone provider.
Please note: This fact sheet is only a guide and should not be relied upon as legal advice.

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[1] **The load restraint performance standards are listed in the Load Restraint Guide published by the National Transport Commission (www.ntc.gov.au)**