

More than 6,800 PBS combinations approved during the last 10 years



The Performance Based Standards (PBS) scheme is a world-leading program that allows Australia's heavy vehicle industry to match the right vehicles to the right tasks. The scheme gives industry the opportunity to innovate with vehicle design to improve productivity for a given freight task, achieve safer performance and make the least possible impacts on road infrastructure.

The PBS scheme has been administered by the NHVR since 2013. With the road freight task continuing to increase, the scheme is continuing to facilitate growth in the safest, most productive and efficient manner possible.

More information on PBS

For further questions about vehicle design and approvals, contact our PBS Team at pbs@nhvr.gov.au.

For questions about access and permits to operate your PBS vehicle on the road, visit www.nhvr.gov.au or call 1300 MYNHVR (1300 696 487).

www.nhvr.gov.au/pbs

© Copyright National Heavy Vehicle Regulator 2018, creativecommons.org/licenses/by-sa/3.0/au
Disclaimer: This information is only a guide and should not be relied upon as legal advice.
*Standard 1300 call charges apply. Please check with your phone provider.

Performance Based Standards scheme



How are PBS vehicles designed and built?

PBS vehicles are designed and built for a specific freight task, using the latest technologies and systems to perform their tasks as productively, safely and sustainably as possible, and to operate on networks that are appropriate for their level of performance.

PBS Level 1 vehicles have delivered almost \$1.5 billion in productivity benefits for the Australian economy

How are vehicles assessed and approved?

PBS designs are assessed by PBS Assessors and approved by the NHVR with the assistance of the PBS Review Panel. Vehicles are tested against 16 safety standards to ensure they can stop, turn and travel safely and four infrastructure standards to ensure the protection of the road system.

The NHVR has recently improved the design approval process to significantly reduce processing times for the most common vehicle combinations. The improvements allow some PBS designs to be 'pre-advised' by the Panel, meaning the NHVR can assess and issue a Design Approval without submitting the application to the Panel. It is estimated that 85 per cent of all PBS design applications will qualify for approval under the process, reducing the average processing time from four weeks to three business days.

Qualifying combinations for pre-advised approval

The following types of PBS combinations are eligible to access the pre-advised design approval process:

- Level 1, 3- or 4-axle truck and 3- or 4-axle dog combinations up to 20m long and 50.5t GCM
- Level 2, 3- or 4-axle truck and 3- or 4-axle dog combinations up to 20m long and 62t GCM
- Level 1, prime mover and tri or quad-axle semitrailer combinations up to 20m long and 50.5t GCM
- Level 1, B-doubles fitted with tandem or tri-axle groups up to 20m long and 50.5t GCM
- Level 2, B-doubles fitted with tandem or tri-axle groups up to 26m long and 68.5t GCM
- Level 2, A-doubles with single, tandem or tri-axle semitrailers and tandem or tri-axle dollies up to 30m long and 85t GCM
- Level 3, A-doubles up to 36.5m long and 95.5t GCM
- Level 2, 3- or 4-axle truck and 5- or 6-axle dog combinations up to 26m long and 73t GCM.

Note that your combination would still need to be assessed by an approved PBS Assessor and a Design Approval obtained from the NHVR.



What are the benefits?

The optimised design and greater efficiency of PBS vehicles means fewer trucks on the roads, less congestion and impact on infrastructure and on the environment, and better safety outcomes for all road users.



For industry

PBS vehicles are safer and more productive than conventional heavy vehicles. They are involved in 46 per cent less major crashes per kilometre travelled and provide productivity improvements between 15-30 per cent compared to conventional vehicles.



For Road Managers

Optimised vehicle design means less impact on road infrastructure resulting in reduced road maintenance costs for Road Managers

NHVR modelling shows that PBS combinations approved between 2014 and 2017 have saved more than 320 million truck kilometres travelled on Australian roads.



For the environment and community

More efficient and modern heavy vehicles means less trucks on our roads resulting in less fuel burned, less congestion, less exposure for crashes and safer roads for all users.



Why has the PBS scheme been successful in Australia?

The PBS scheme is all about stretching the boundaries of heavy vehicle design and innovation by testing what's possible and what's not. The NHVR believes that if a vehicle has been assessed against the strict PBS scheme safety and infrastructure standards and there is evidence that it passes all of them, it should be allowed to operate on the road, subject to road manager consent and individual route assessment if required. The PBS scheme offers an opportunity to unlock productivity gains without the loss of safety.

Productivity gains of up to 100% for some combinations of PBS vehicles

Case study: 28-pallet quad axle reefer

On behalf of Victoria's Thurwood Transport, MaxiTRANS brand, Maxi-CUBE, recently designed and manufactured a PBS approved, 20m, 28-pallet, quad-axle refrigerated trailer featuring a steer axle at the rear of the quad set. According to MaxiTRANS, the 28-pallet reefer is one of the most productive single trailers of its kind on Australian roads. With space for an extra six pallets over a standard refrigerated van's 22-pallet capacity, it provides Thurwood with a 27 per cent productivity increase. Based in Derrimut in the western suburbs of Melbourne, Thurwood Transport is using the reefer to transport fresh produce up and down the eastern seaboard.



Thinking of applying for the PBS scheme?

As a first step, you should consider what safety and productivity benefits you might achieve through the PBS scheme.

You should then consult with an approved PBS assessor regarding your design options. They will be able to advise you on the feasibility of your proposed vehicle design as well as the associated masses, bridge assessment and the level of PBS network compliance.

A list of approved PBS assessors can be found on our website www.nhvr.gov.au/pbs and a step-by-step PBS approval process can be found here www.nhvr.gov.au/road-access/performance-based-standards/pbs-approval-process