

# Performance Based Standards

Australia's PBS fleet

A joint report by the NHVR and ARTSA

2019 Edition



# FOREWORD

This is the second report explaining the uptake of Performance Based Standards (PBS) vehicles in Australia. PBS is a major purchasing decision for heavy duty freight vehicle operators in this country, offering the potential to achieve greater safety and improved productivity through innovative and optimised vehicle design. PBS vehicles continue to grow in significance and have captured around 20% market share of the relevant heavy vehicle market.

In 2017 around 1 in 6 new heavy vehicles was PBS approved. For 2018 this has increased to around 1 in 5 relevant new heavy vehicles. It shows how Australia's heavy vehicle operators have increasingly embraced these new technologies and designs that are made possible under the PBS scheme.

The benefits of more PBS vehicles on the road are well recognised. According to the National Transport Commission (NTC), PBS vehicles are involved in 46 per cent fewer crashes than conventional vehicles. They are designed and built for a specific freight task, approved to operate on specific road networks and use the latest technologies and systems. Close to 9000 PBS combinations have been approved during the past 11 years.

To assist the heavy vehicle market to better understand the significance and benefits of PBS, ARTSA and the NHVR have prepared these statistics, matching data from the NHVR with the heavy vehicle data from the ARTSA Data collection, to present this report.

We thank Australia's heavy vehicle industry and its operators for their support of the PBS scheme and look forward to working together to make it even more successful in the future.

Signed



**Sal Petrocchio**

CEO

National Heavy Vehicle Regulator



Signed



**Martin Toomey**

Chair

Australian Road Transport Suppliers Association

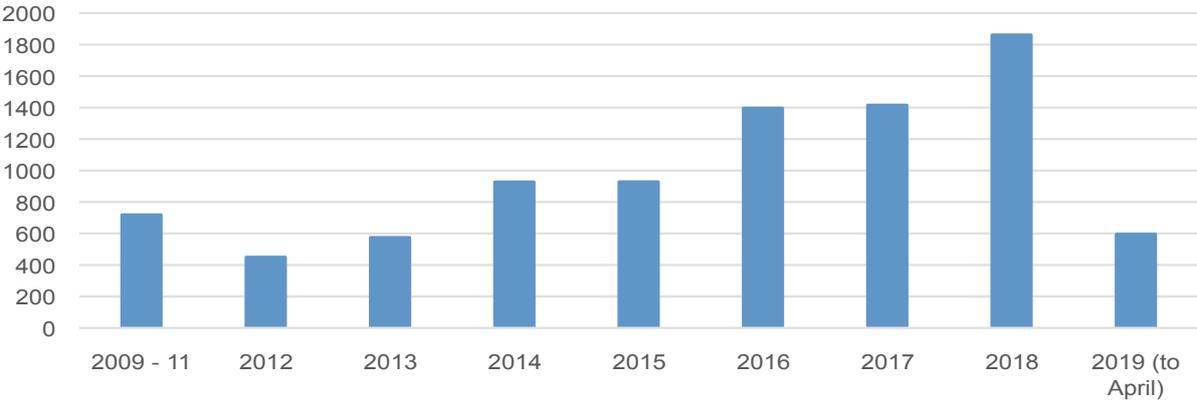


# PBS MARKET

There are around 18,000 approvals for PBS registered trucks, trailers and buses, which make up nearly 9000 PBS approved combinations. Around 60 trailer manufacturers and 20 truck manufacturers have provided PBS approved equipment since the inception of PBS.

Growth of PBS combinations has been strong since 2014 when the NHVR took over the administration of the PBS scheme. In 2018, there was close to 1900 new approvals for new PBS combinations. Over the last 5 years, the total number of PBS combination approvals have doubled, whereas the heavy vehicle market has only grown by 20% over the same period. PBS market share is clearly growing strongly.

**Total PBS combination approvals by year**

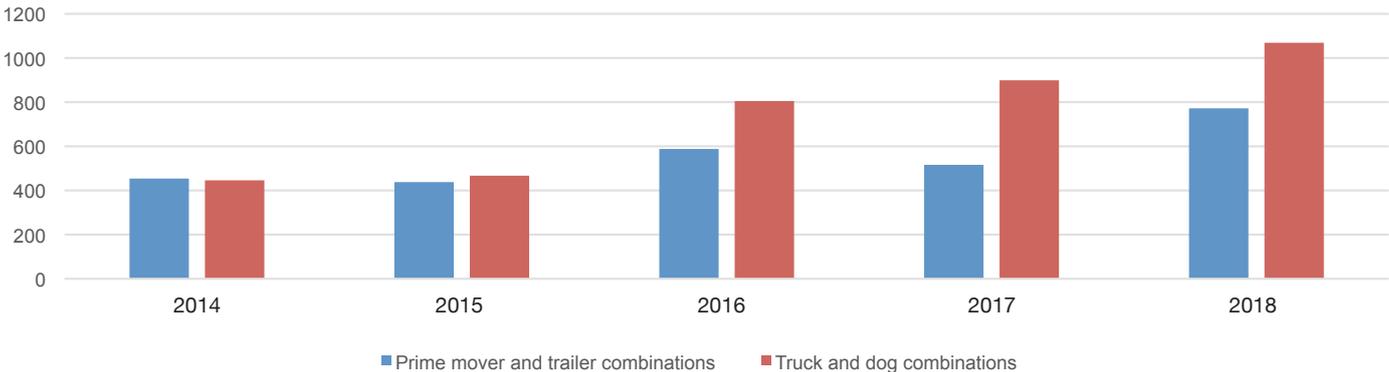


# PBS COMBINATIONS

The growth in new PBS combinations has doubled in the last 5 years from close to 1000 combinations per annum in 2014 to a new benchmark of close to 1900 new combinations in 2018. While this growth in PBS is impressive, its makeup has changed over the last 5 years. In 2014 approvals for truck and dog combinations were similar to those for prime mover and trailer combinations. By 2018 this had changed and truck and dog approvals are now far more prevalent than prime mover and trailer combinations.

There is a clear shift towards the use of PBS vehicles in the truck and dog market. Despite that very strong growth there is also continued growth in the PBS prime mover and trailer sector as well. Their numbers are around double that of 5 years ago. Buses are also starting to figure in PBS with 12 bus combinations approved in 2018.

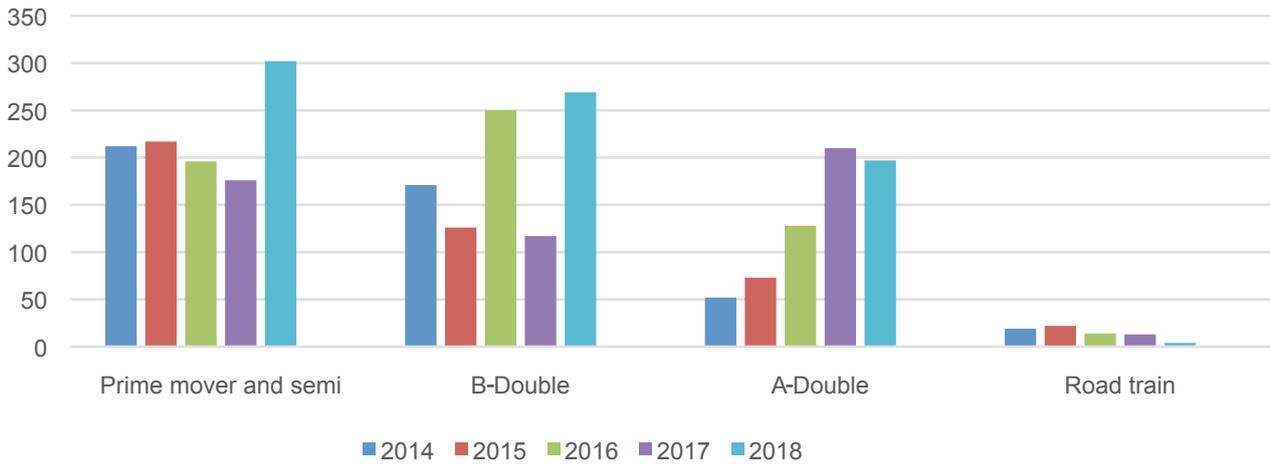
**PBS combinations for prime mover and truck and dogs**



# PRIME MOVER AND TRAILER MARKET

The breakdown of the prime mover and trailer segment is showing that prime movers and semi trailers as well as B-Doubles continue to dominate their PBS segment. A- Doubles are growing but are still behind the other more traditional combinations. Road trains are not figuring strongly.

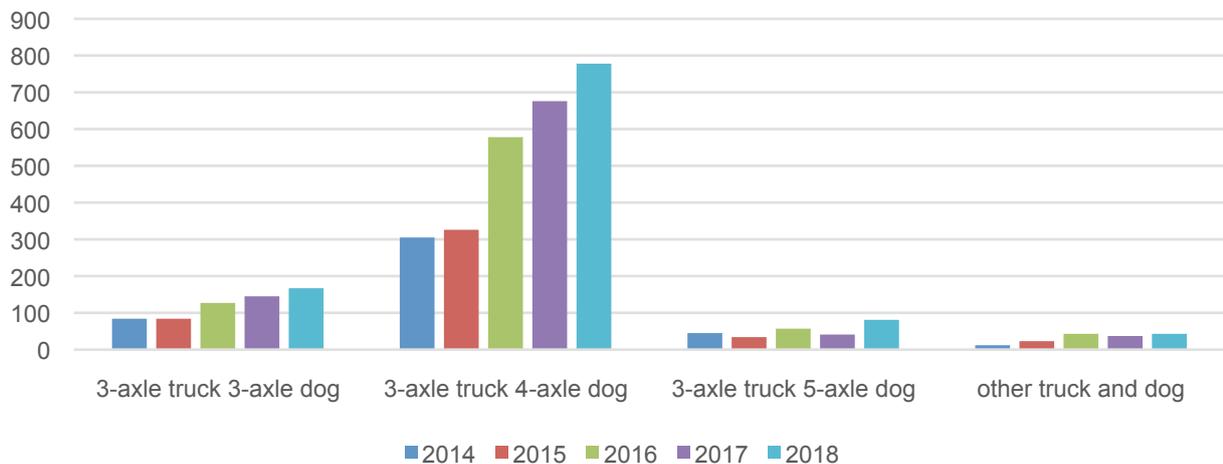
## PBS Prime mover and trailer combinations



# RIGID TRUCK AND DOG MARKET

The breakdown of the rigid truck and dog market clearly shows the strong preference for the 3-axle truck and 4-axle dog combination. In 2018 they made up 70% of this market segment.

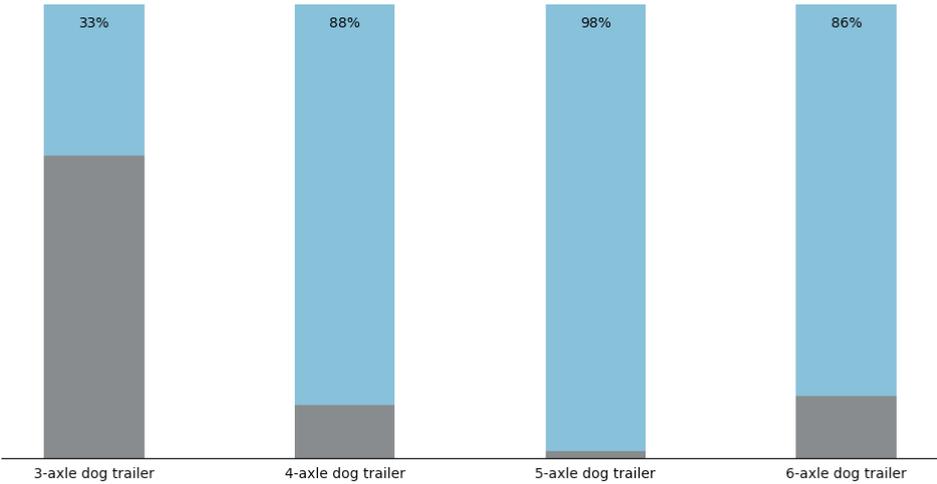
## PBS Truck and dog combinations



# PBS DOG TRAILERS

PBS continues to dominate the 4-axle and above dog trailer market with 80 to 90% market share in that segment. The percentage market share for each segment is shown in blue.

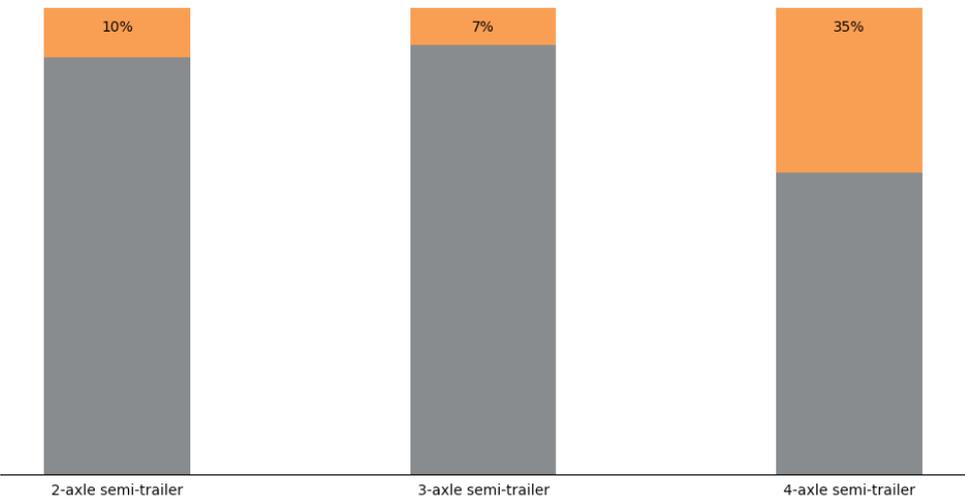
PBS Heavy Dog Trailers Manufactured 2018



# PBS SEMI TRAILERS

The semi trailer market for PBS is not as strong as the PBS dog trailer market, but still represents just over one-third of the total 4-axle semi trailer market in 2018. The percentage market share for each segment is shown in orange.

PBS Semi-Trailers Manufactured 2018



# AGE OF PBS FLEET

One of the major benefits of the PBS initiative has been to accelerate the renewal of the heavy vehicle fleet. The median age of the PBS fleet compared with the entire heavy vehicle fleet is:

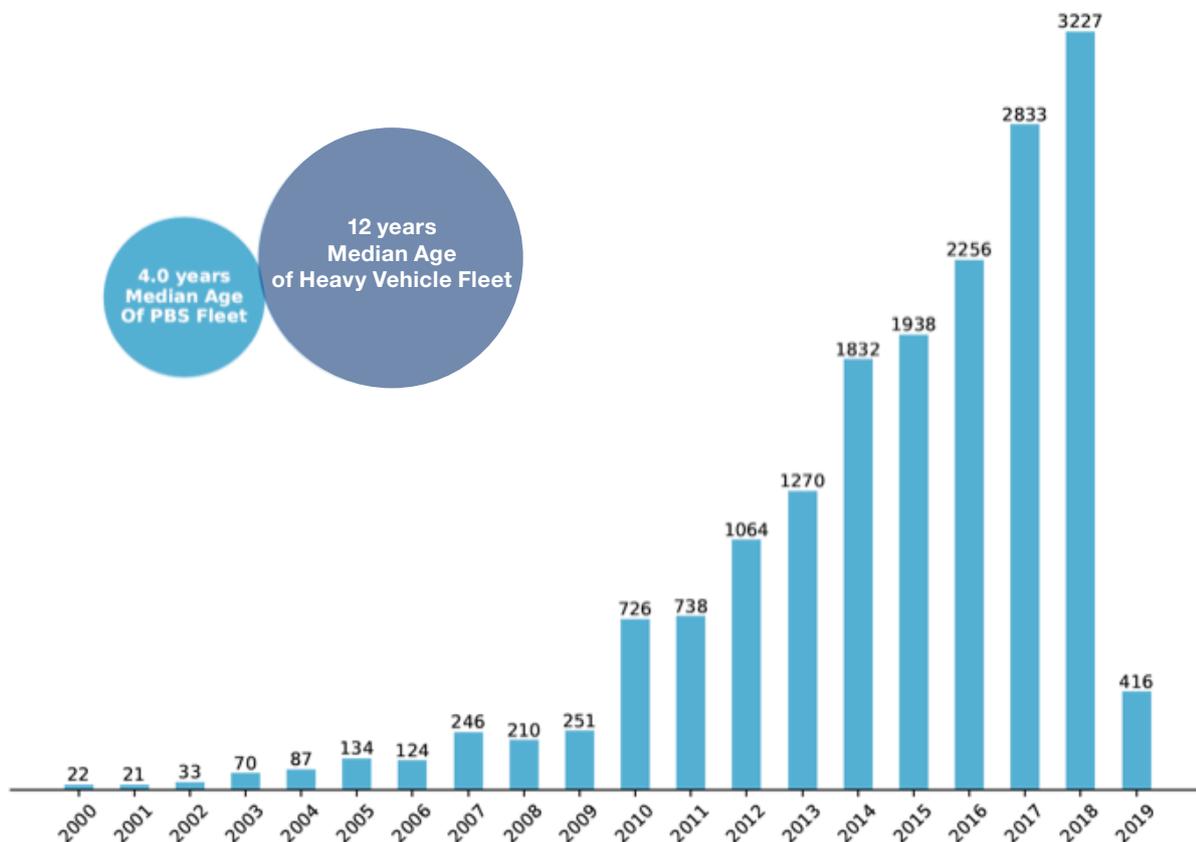
MEDIAN AGE, years

PBS fleet	4.0
Heavy Prime Movers	10.9
Heavy trailers	12.2
Heavy rigids	13.7

Newer equipment has the benefit of modern safety systems including better braking, stability control and many other features now common on new heavy vehicles. It is one of the significant benefits that PBS delivers as it accelerates the renewal of the heavy vehicle fleet.

Year of manufacture numbers refer to separate registrations rather than combinations. In total, some 18,000 separate PBS heavy vehicles have been registered since the PBS scheme commenced. They make up nearly 9000 PBS combinations.

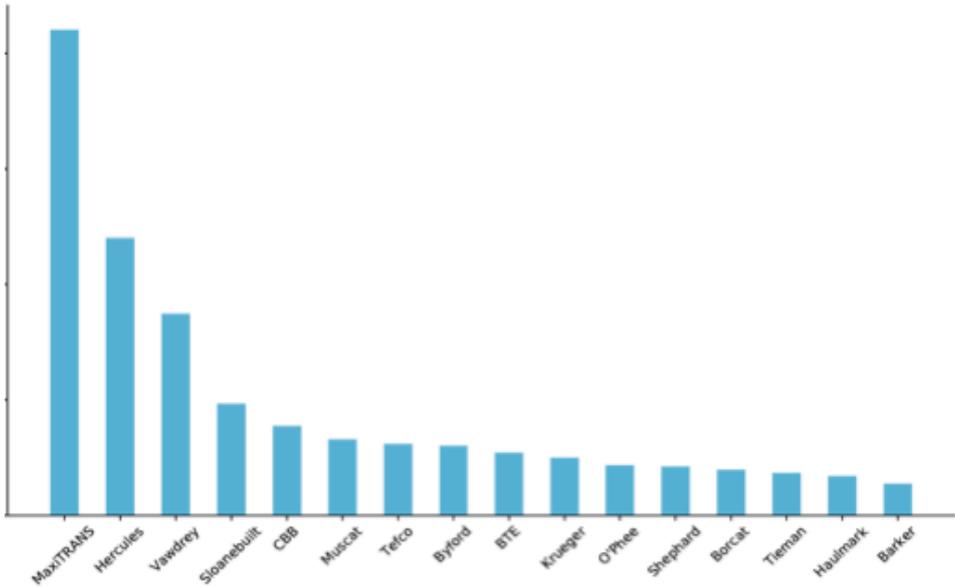
## Year of Manufacture PBS Fleet



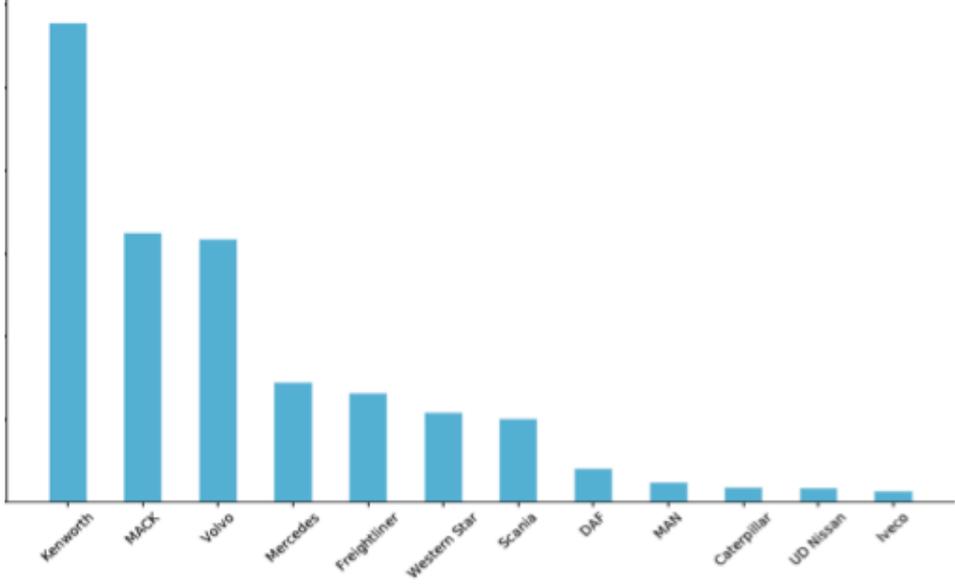
# LEADING PBS TRUCK AND TRAILER MANUFACTURERS

With around 18,000 PBS approved units (noting that a truck and dog is two separately registered units – the truck and the dog) on the road, there are around 80 companies that are involved in the PBS market. The lead manufacturers tend to mirror the leaders in the overall market, with the top 5 or 6 generally accounting for 70 to 80% of all PBS equipment. These leading suppliers have Australian-based manufacturing facilities.

## PBS Trailer Manufacturers



## PBS Truck Manufacturers



# PBS OVERVIEW

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.

PBS vehicles are designed to perform their tasks as productively, safely and sustainably as possible, and to operate on networks that are appropriate for their level of performance. The PBS scheme is all about stretching the boundaries of heavy vehicle design and innovation by testing what's possible and what's not.

ARTSA and the NHVR believe 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 National Transport Commission (NTC) implemented the current PBS scheme in 2007. Now nearly 12 years later, the scheme is delivering on the opportunity that was recognised back in 2007 to unlock productivity gains and improve safety outcomes. With the road freight task predicted to double from 2006 levels by 2030, PBS will be required to facilitate this growth in the safest, most productive and efficient manner possible.

## THE FUTURE

The success of the PBS scheme over the past decade is a clear statement of Australia's heavy vehicle industry's desire to innovate and be smarter. The PBS Scheme has given Australian regulators confidence that innovative vehicle configurations can be used safely on Australian roads.

ARTSA and the NHVR want to see further barriers removed that potentially limit this innovation to ensure future generations of PBS vehicles are safer, cleaner and even more productive. To achieve that goal, the current scheme framework needs to be continuously improved and hurdles to the use of PBS equipment need to be tackled to ensure Australia continues to lead the world in innovative regulation of heavy vehicles.

## MORE INFORMATION

Go to:

National Transport Commission

<https://www.ntc.gov.au>

National Heavy Vehicle Regulator

<https://www.nhvr.gov.au>

Australian Road Transport Suppliers Association

<http://www.artsa.com.au>

