

# ARTSA

*Australian Road Transport Suppliers Association*

Martin Toomey, Chairman  
Dr. Peter Hart ARTSA Executive Board

IRTENZ

Rotorua 21<sup>st</sup> August 2019



# Agenda

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- *ARTSA – A need for change in a crowded space*
- *ARTSA DATA*
  - *Fleet Make up - Truck and Trailer*
  - *PBS Snap Shot*
- *ARTSA INSTITUTE*
  - *Aftermarket Replacement Parts guidelines*
  - *Truck Fire Causation*
  - *Modernisation of Australian Fleet – Metrics of the current Australian fleet*
  - *Near Misses – a heat map of safety incidents*
- *Other topics of shared interest*
  - *Brake calculator*
  - *ARTSA Training*
  - *ADR38-05*
  - *Future Policy focus*

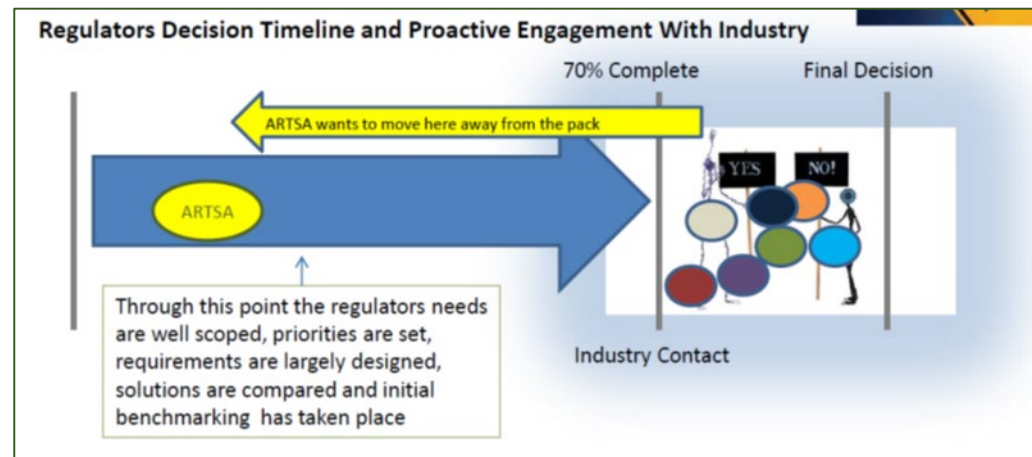


# Transport Industry Associations

- **Issues:**
- Traditionally transport industry associations are only engaged in the policy debate once the regulations are well scoped out.
- The regulators view us as a un-unified, non-consensus group of bodies in a very crowded association space.
- **Our Approach**
- • We want to be visionary -
  - ..to shape rather than respond
  - ..to explore ways in which evolution in our sector can be better understood and explained
  - ..to provide information, to educate, to influence
  - ..to equip our members with narrative
  - ...And engage with communities



Disruption is the new normal!



# A New Direction For ARTSA



## ARTSA 2019

### MEMBER SERVICES

#### Purpose:

- Keep members informed.
- Develop relationships
- Advocate for change

#### Activities:

- ✓ General meetings
- ✓ Technical Working Groups
- ✓ Representations
- ✓ Change Proposals
- ✓ Conferences
- ✓ Industry training
- ✓ Social functions
- ✓ Social media

#### Structure:

- Organised by Executive Officer
- Overseen by Executive
- Each Executive Member to have some role in a technical working group.

#### Budget:

Circa \$150k

Income from subscriptions and profits

### ARTSA DATA

#### Purpose:

- Use data to inform the membership and government about trends.

#### Scope:

- ✓ NEVDIS Data
- ✓ RVCS Approvals data
- ✓ PBS data
- ✓ Licenced driver data
- ✓ Freight task data ???

#### Activities:

- Commercial reports
- ARTSA DATA Day
- Reports to government on an ad hoc basis
- Public articles

#### Structure:

- Run by Perkins Group on a profit share agreement.

#### Budget:

Circa \$150k from services

### ARTSA INSTITUTE

#### Purpose:

- Train the next generation of industry leaders
- Add value to ARTSA DATA

#### Activities:

- The Institute runs three major review projects for groups to work on. Members are invited to help select the projects.
- Three annual group projects (10 participants).
- Working sessions are organised with the ARTSA Life Members Group
- Results are presented to an annual conference / dinner.
- Reports are made available to ARTSA members.

Subscription fee \$4k each participant.

Run by Institute Manager

Budget \$100k from subscriptions

### ARTSA Life Members Group

#### Purpose:

- Keep experienced people engaged with the industry.
- Put experienced people in touch with developing leaders.

#### Activities:

- -Informal lunches
- Working group meetings with Institute people

Run by Executive Officer

Budget: provided by ARTSA \$10k.





AUSTRALIAN ROAD TRANSPORT  
SUPPLIERS ASSOCIATION

*Leaders in heavy vehicle information*

**ARTSA DATA**

# ARTSA Data

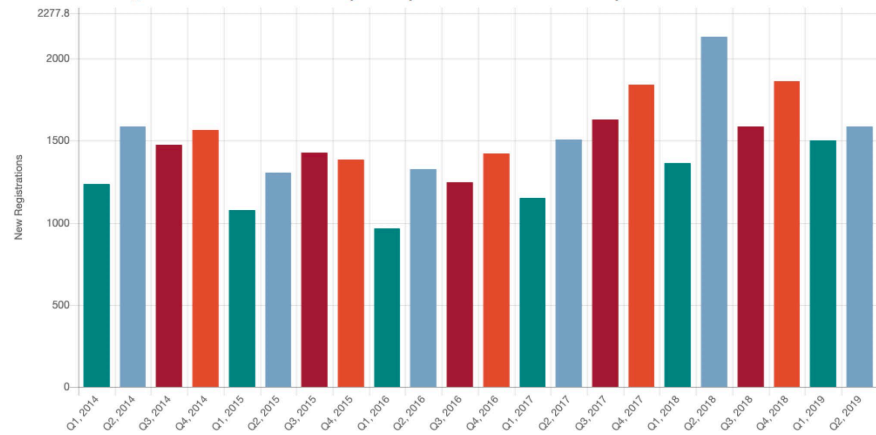
August 2019

*Leaders in heavy vehicle information*

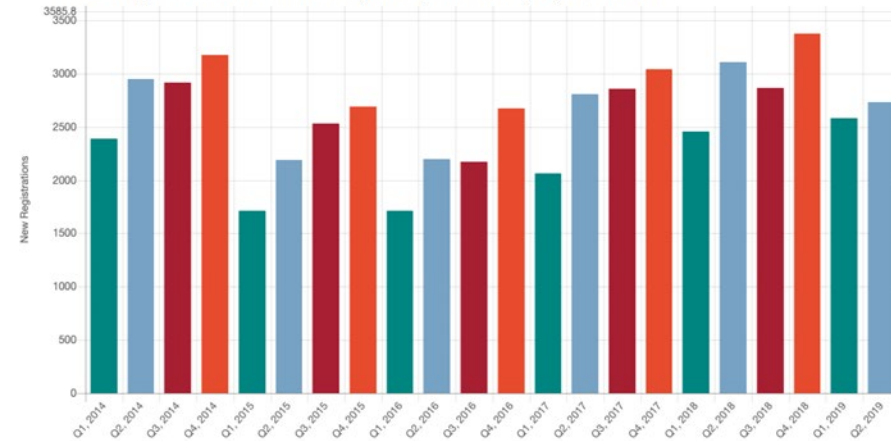
- Australia has a National VIN Register
- ~ 1.5M vehicle records
- In 2014 ARTSA convinced government to give up a redacted version of the HV database
- 22 Quarterly reports since that time
- Free quarterly update on ARTSA site
  - Downloaded over 800 times
  - Reserve Bank, ABS, Productivity Commission, all corners of globe...
- Annual Data Day
  - 17<sup>th</sup> September 20129 at LSV in Port Melbourne
- Collaboration with NHVR and TCA and others
- Detailed data is available for a fee

*Leaders in heavy vehicle information*

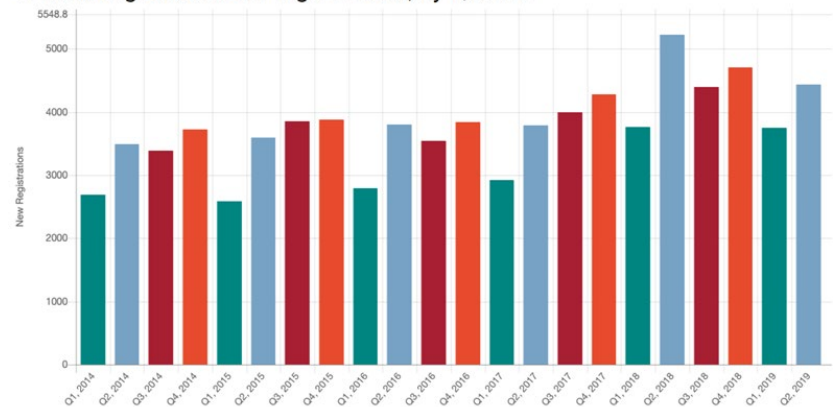
3. New Registrations of Heavy Duty Prime Movers, by Quarter



3. New Registrations of Heavy Duty Trailers, by Quarter



3. New Registrations of Rigid Trucks, by Quarter

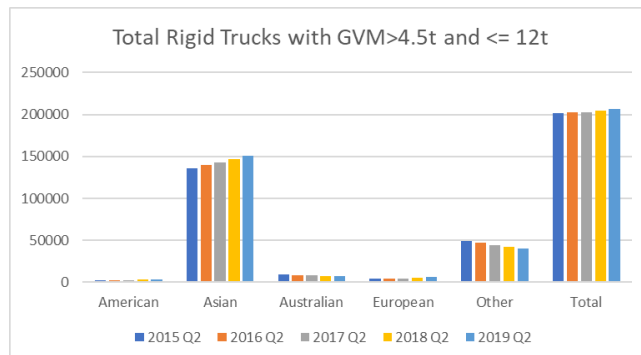
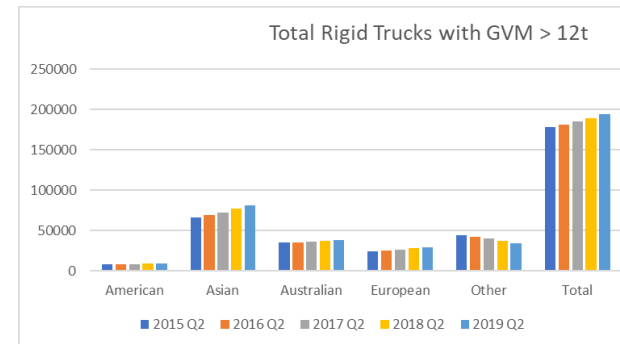
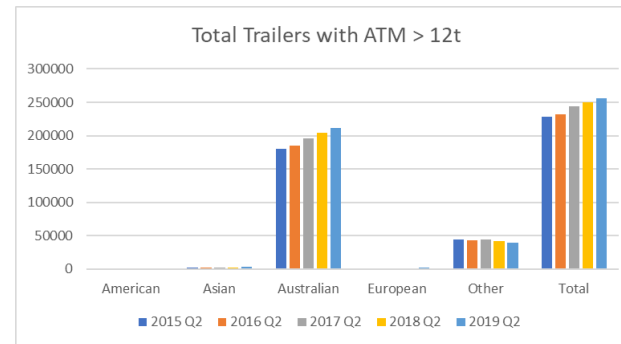
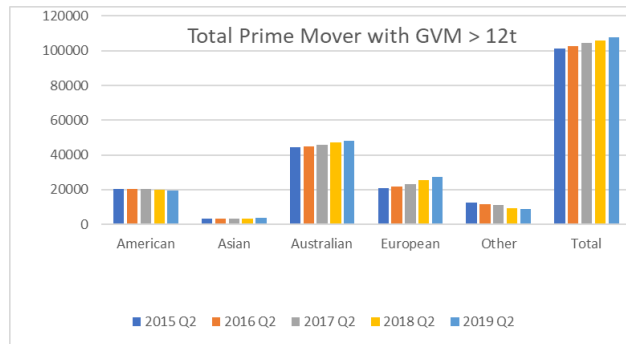


There are close to 1 million registered medium and heavy vehicles on Australian roads. These are made up of:

- Prime movers – approx. 107,000 vehicles
- Trailers – approx. 260,000 vehicles
- Special purpose vehicle (tractors, non-freight carry vehicles) – approx. 148,000 vehicles
- Buses – approx. 29,000 vehicles
- Rigid vehicles – approx. 400,000 vehicles

*Leaders in heavy vehicle information*

## Australian Park Split According To Country Of Origin



- 110K prime movers, 200k Rigid and 250K trailers
- Asian and European brands are dominating the rigid market in all segments
- Prime Mover GMV >12t - Consolidated Australian and American brands are holding ground but under significant threat from European
- Australian Trailer OEM's are dominant and adjusting products for overseas markets and combating importers



Leaders in heavy vehicle information

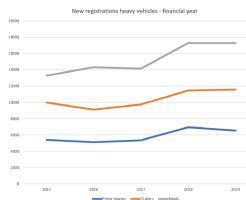
## ARTSA Data products



**ARTSA Data**  
**Market report – June quarter (Q2) 2019**  
**Steady going on the heavy vehicle front**

A year ago we reported an annual growth in new registrations of 23% across heavy vehicles compared with the previous year. Growth in new registrations was very strong for 2017/18. It was an exceptional and record setting year for new registrations in all categories.

The results for financial year 2018/19 show a small decline in total new registrations when compared to the last, record setting financial year. Rigid truck and trailers managed a very small (less than 1%) growth in the new registrations compared with the previous year, but heavy prime mover new registrations slid backwards 6% compared with the previous year. Given that the previous year was a record with 35,700 new heavy vehicle registrations, 2018/19 has come very close to equally that total with 35,400 units newly registered. So, it seems to be steady going with new registrations remaining at or close to the record-breaking levels of 2017/18. The graph below shows the history of total new annual registrations for prime movers, trailers and rigid since 2015.

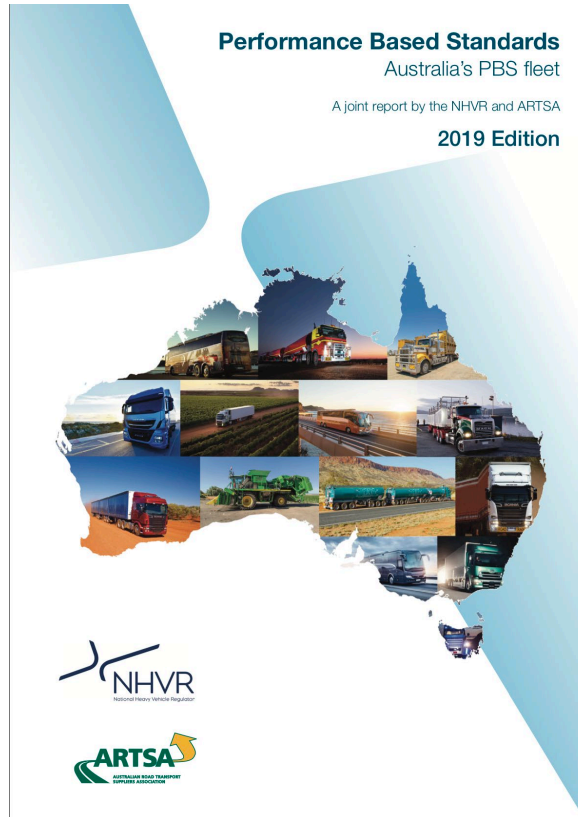




The lead indicator for new registrations (called the "never registered VIN index") is still rising for prime movers. The significance of this trend remains to be seen. Trailer numbers in the never registered VIN index are steady.

This report is available on [www.artsa.com.au](http://www.artsa.com.au) and remains copyright to the Australian Road Transport Suppliers Association Inc (ARTSA). Data from this report can be used and quoted for industry analysis but its source must be attributed to ARTSA.

**Performance Based Standards**  
Australia's PBS fleet

A joint report by the NHVR and ARTSA  
**2019 Edition**


**Performance-Based Standards Freight Task Analysis**

A joint analysis by Transport Certification Australia and the Australian Road Transport Suppliers Association

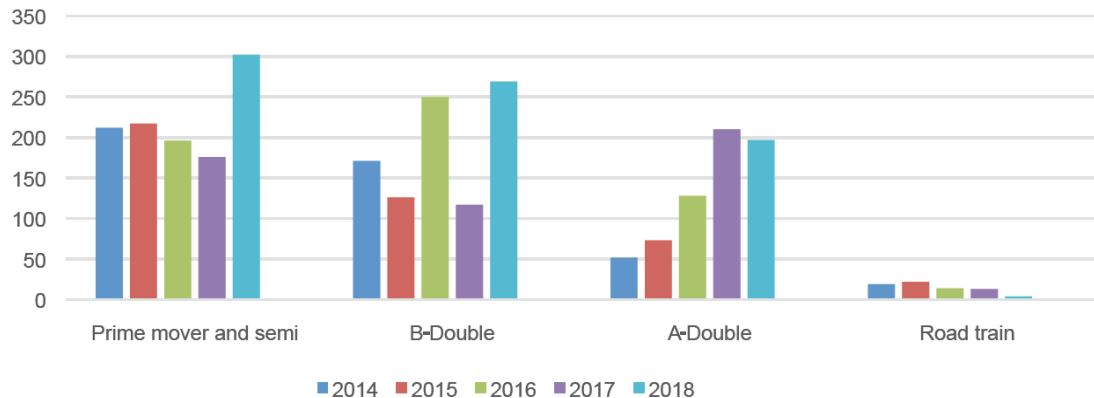


# PBS Snap Shot

- Around 18,000 approvals for PBS trucks, trailers and buses
- Over 9000 approved combinations involving 80 OEM's
- Truck and Dog approvals becoming more prevalent
- New 4 axle dogs trailer market is 90% PBS
- PBS vehicles are safer, cleaner and more productive



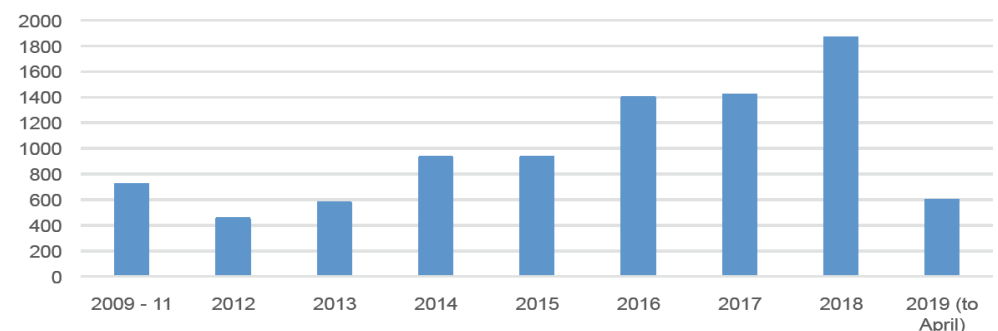
### PBS Prime mover and trailer combinations



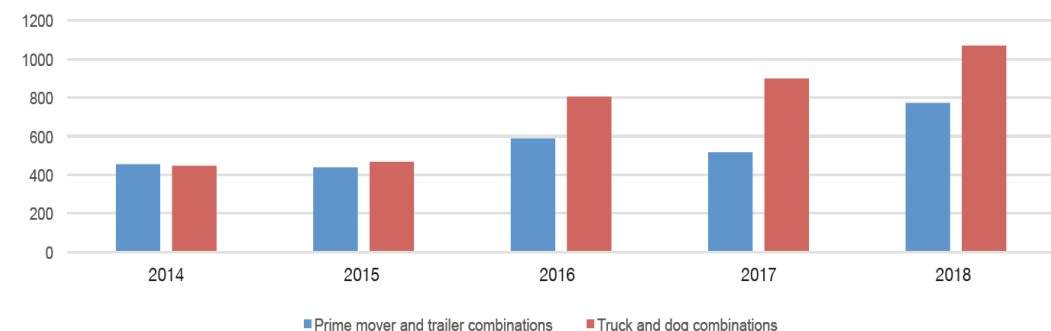
	MEDIAN AGE, years
PBS fleet	4.0
Heavy Prime Movers	10.9
Heavy trailers	12.2
Heavy rigid	13.7



### Total PBS combination approvals by year



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



# ARTSA Institute projects

Commissioned by ARTSA to undertake research and report on:

## 1. Brake Calculator Project

1. Develop and market an online tool to assist with brake calculations

## 2. Metrics of the current heavy vehicle fleet

1. Comparisons with fleets worldwide
2. Technology uptake
3. Policy implications and recommendations

## 3. Truck Fire Prevention Strategy

- Truck fire causation
- Trailer fire causation
- Provide guidance material for operators, standards, safety and policy organization

## 4. A Guide For Heavy Vehicle Replacement Parts

- Establish a supplier recognition system
- Establish a parts recognition system
- Publish a guide for consumers

## 5. Near Miss Project – Telematics Big Data Analyses

- Establish a geographical heat map of near misses
- Identify high risk areas and suggested opportunities for mitigation



# ARTSA's Safety Projects – Supported by NHVR

- **Brake Calculator Project**

Brake Calculator

Features Support

Create New Model



Primer Mover with Semi Trailer



[Semi Trailer Only](#)



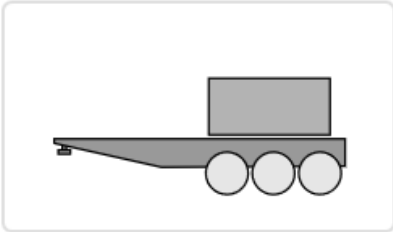
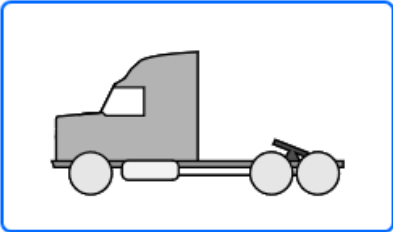
B-double



Rigid Truck and Dog Trailer



# ARTSA's Safety Projects – Brake Calculator



Prime Mover   Front Brakes   Rear Brakes   Tyres   Trailer Coupling

Generic 3 Axle Prime Mover [Change Model](#)

## Update Details

Height of Centre of Mass(m): 1

King Pin Height(m): 1.5

King Pin Location(m): 5.5

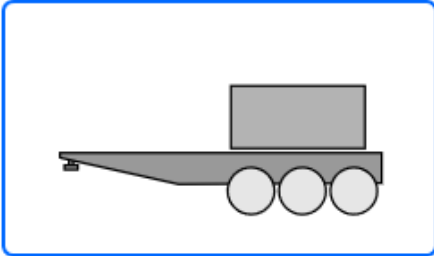
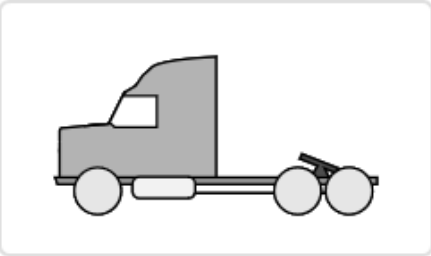
Wheel Base(m): 6

Fare Tare Group Weight(t): 4

Rear Tare Group Weight(t): 3




# ARTSA's Safety Projects – Brake Calculator



Semi Trailer   Brakes   Tyres   Load

Generic 3 Axle Semi Trailer [Change Model](#)

## Update Details

Height of Centre of Mass(m): 0.5 

Trailer Length(m): 8.53 

Tare Group Weight(t): 5.5 

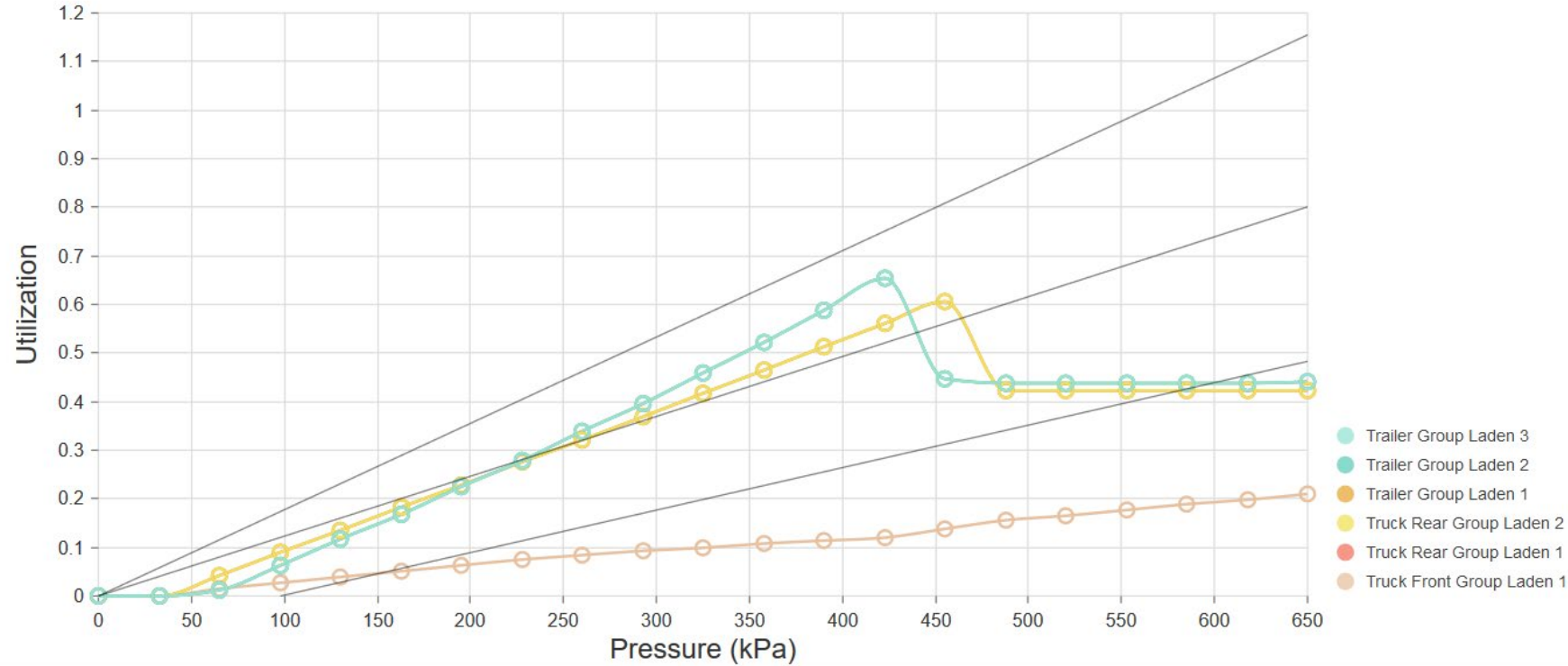
Unladen Weight(t): 6 

Axle Count: 3 



# ARTSA's Safety Projects – Brake Calculator

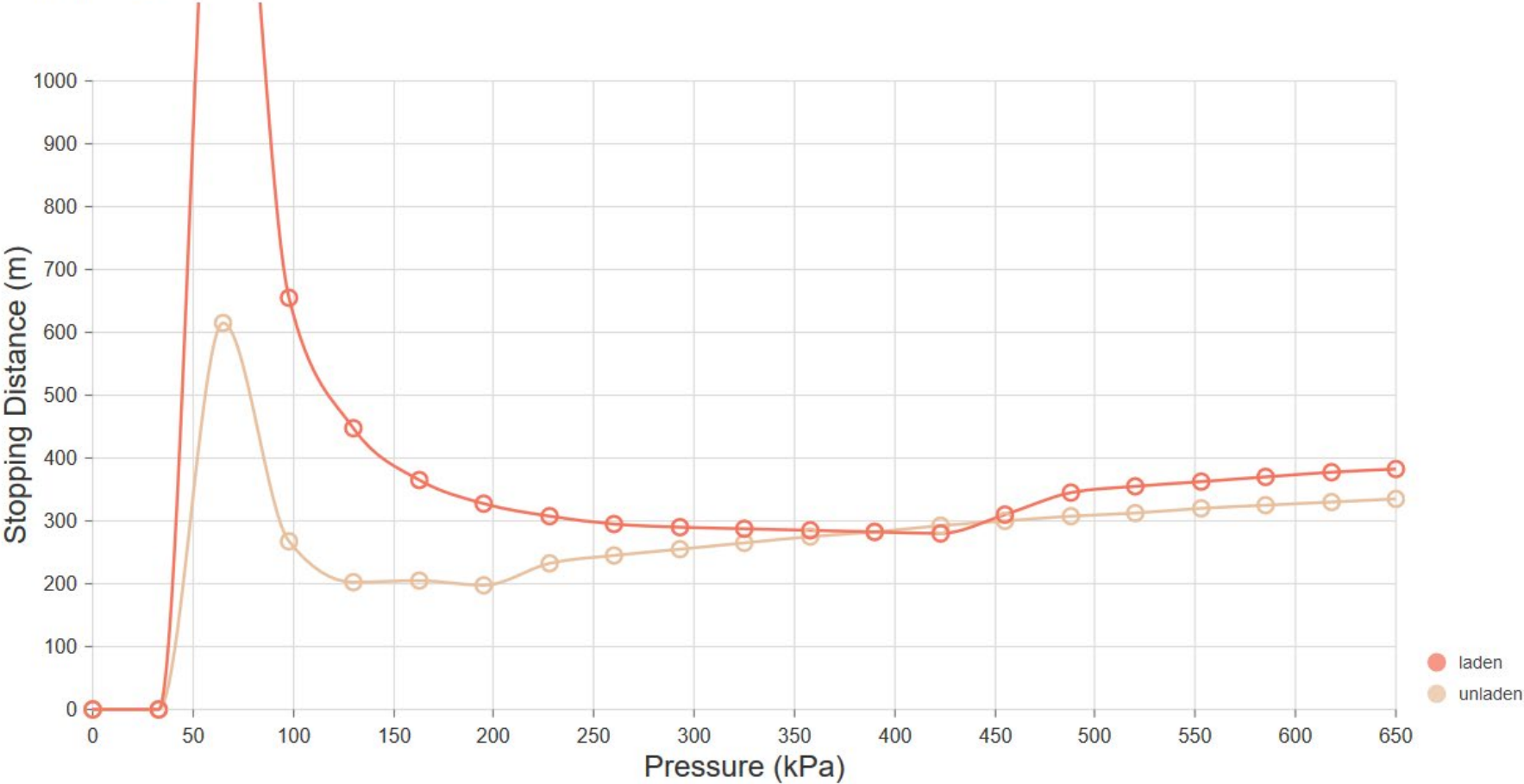
## Unladen Axle Utilization





# ARTSA's Safety Projects – Brake Calculator

## Stopping Distance





- **Industry Guide for HV Fire Reduction**

- 1 NHVR 'Roundtable' meeting on Heavy Vehicle Fires – February 2019
- 2 NHVR Safety Initiative – Development of a national HV 'Fires Guide'
  - ARTSA Fires Conference held in Sydney last week



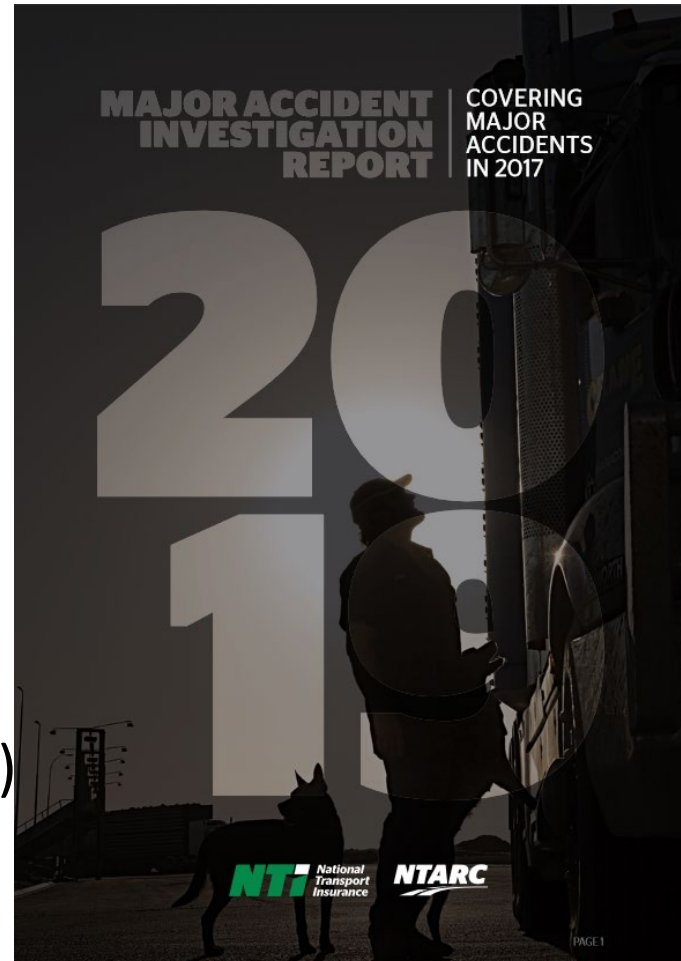
# ARTSA's Safety Projects – Fires Guide

- **Industry Guide for HV Fire Reduction**

NTI Insurance publishes  
a biennial review of large losses  
(>\$A50k)

<https://www.nti.com.au/news-resources/research/latest-report>

- 756 large loss claims
- 1 in 400 HVs will have a large-loss claim
- 1 in 5000 HVs will have a fire claim (~ 9%)



# ARTSA's Safety Projects – Fires Guide

- **Industry Guide for HV Fire Reduction**
  - NTI Insurance's summary of fire classifications

<b>PROPORTION OF NTI LARGE-LOSS CLAIMS</b>	<b>8%</b>								
<b>SUB-CLASSIFICATION</b>		<b>ENGINE / CABIN FIRES (ELECTRICAL)</b>	<b>ENGINE / CABIN FIRES (MECHANICAL)</b>	<b>WHEEL END FIRE (TYRE)</b>	<b>WHEEL END FIRE (DRAGGING BRAKE)</b>	<b>WHEEL END FIRE (UNKNOWN CAUSE)</b>	<b>WHEEL END FIRE (BEARING FAILURE)</b>	<b>TRAILER FRIDGE MOTOR FIRE</b>	<b>TRAILER LOAD CAUGHT FIRE</b>
<b>BREAKDOWN OF FIRE CAUSES</b>		<b>32%</b>	<b>25%</b>	<b>10%</b>	<b>10%</b>	<b>8%</b>	<b>5%</b>	<b>3%</b>	<b>7%</b>



# ARTSA's Safety Projects – Fires Guide

CONFERENCE - 15TH AUGUST, ROYAL RANDWICK, SYDNEY



## Heavy Vehicle Fires – Causes and prevention

A recognised project under the NHVR's *Heavy Vehicle Safety Initiatives* program

[artsa.com.au/conferences](https://artsa.com.au/conferences)



Engine compartment fire – Adelaide Hills



# ARTSA's Safety Projects – Supported by NHVR

CONFERENCE – 15TH AUGUST, ROYAL RANDWICK, SYDNEY



## Heavy Vehicle Fires – Causes and prevention

A recognised project under the NHVR's *Heavy Vehicle Safety Initiatives* program

[artsa.com.au/conferences](https://artsa.com.au/conferences)

### My ordering of the most common causes of fires on trucks:

1. Arcs on the starter (or battery cables), alternator, cabin and trailer supply cable.
2. Fuel line rubs or failures that result in leaks / sprays of fuel onto the exhaust.
3. Lubrication/hydraulic oil line failures near to the exhaust.
4. Turbo charger oil seal failures.
5. Flammable material resting against the turbo charger or the exhaust.
6. Electrical failures from hot terminals causing insulation to burn.
7. After-market fuse problems.
8. Overloaded minor electrical cables and hot relays.



# ARTSA's Safety Projects – Supported by NHVR

CONFERENCE - 15TH AUGUST, ROYAL RANDWICK, SYDNEY



## Heavy Vehicle Fires – Causes and prevention

A recognised project under the NHVR's *Heavy Vehicle Safety Initiatives* program

[artsa.com.au/conferences](https://artsa.com.au/conferences)

### The most common causes of fires on trailers are:

1. Wheel bearing failures (or seal failures) that result in dragging (drum) brakes.
2. Dragging brakes due to damage to the pneumatic spring brake system.
3. Tyres catching fire because they are flat or poorly inflated or rubbing on hard mudguard surfaces.
4. Friction rubs on mezzanine support brackets.



# ARTSA's Safety Projects – Replacement Parts Code

## ARTSA – Automotive Replacement Parts Code of Practice September 2007

The ARTSA **Replacement Parts Code of Practice** is applicable to automotive parts that could be used on new or in-service motor vehicles. It specifies quality and safety requirements that suppliers of these parts should comply with.

There is general agreement within ARTSA that quality controls are needed for replacement parts that affect the safety or compliance status of motor vehicles.

To achieve this ARTSA has developed this **Code of Practice** to provide guidance to suppliers and to consumers about actions that they should take to meet the goal of providing good quality replacement parts. If the practices that are in the following pages are followed, suppliers can be confident that the safety and legal compliance status of a vehicle is maintained when a replacement part is used.

Additionally, it is intended that the **Code** will provide vehicle operators





# ARTSA's Safety Projects – Replacement Parts Code

Modification or Replacement	Legal Requirement	Good Replacement Practice	Allowable Replacement Practice	Further Information
<b>Braking Systems</b>				
Replacment of a brake actuator	The brake performance on the vehicle should be the same as for OEM gear because the brake system is certified.	Install the OEM part or install a part of the same nominal size that is used on an OEM installation	Refer to ATA Code of Practice Actuators 2015	VSB 6 Code G4, ADR 35/0*
Relining brake shoes				
Relining disc brakes				
Substitution of a brake drum				
Substitution of a disc brake rotor				
Replacment of a brake air tank				
Replacement of an air compressor				
Repair of brake airlines				
Substitution of air valves in the foundation brake system	The brake performance on the vehicle should be the same as for OEM gear. Obtain the valve characteristics and check.	Install the OEM part		VSB 6 Code G4, ADR 35/0*
Addition of a park brake interlock				
	New single vehicles should meet the performance levels shown in Table 1 of the ADR 35 (motor vehicles) and for trailers 0.45g - see Clause 16.3 of ADR 38. <a href="https://www.legislation.gov.au/Details/F2018L00664">https://www.legislation.gov.au/Details/F2018L00664</a> <a href="https://www.legislation.gov.au/Details/F2018L00692">https://www.legislation.gov.au/Details/F2018L00692</a> The on-			



# ARTSA's Safety Projects – Replacement Parts Code

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- **ARTSA Training & Information**

3-day training course planned for Melbourne – November 2019

- Day 1      Certification of Heavy Vehicles
- Day 2      Engineering Design and Practice for Heavy Vehicles
- Day 3      Modifications Principles and Practices



# ARTSA's Safety Projects – Replacement Parts Code

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- **ARTSA Training & Information**
- ARTSA Articles are available at:  
<http://www.artsa.com.au/articles>



# ARTSA's Safety Projects – ARTSA ARTICLES

## 2019

April Electric vehicles for Australia

February Steering Basics

## 2018

December The State of the heavy vehicle supply industry in graphs

November Couplings, turntables and d-values

October Unfinished safety business with Vehicle Stability Control

September Chassis fatigue and factors of safety

August The greenhouse gas challenge and opportunity

July We need a solution to the PBS tyre problem

June Heavy-duty tow trucks

May Oil, grease and wheel seals

April Welcome and unwelcome brake applications

March The National Baseline Roadworthiness Survey and its implications

February Workplace Health & Safety rules with heavy vehicles  
The Effect of VSB6 On Ball Couplings

## 2017

December Does age matter? ARTSA's analysis of the heavy vehicle fleet

November Trucks Must Use Low Gear

October Weld Quality

September How Australia reformed its heavy-vehicle access rules



Thank You

