



# CLOCS—A Safety Forum

**Best Practice in Innovation and Safety**

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# AUSTRALIA'S HEAVY VEHICLE INDUSTRY

- The NHVR is Australia's dedicated regulator for all heavy vehicles.
- We administer the Heavy Vehicle National Law (HVNL) for all heavy vehicles over 4.5 tonnes gross vehicle mass or aggregate trailer mass, including buses.
- Australia's road freight task is growing almost **twice as fast** as its population.
- As of December 2024, there were approximately **1,078,700** registered heavy vehicle units.



*All data sourced from [Bureau of Infrastructure and Transport Research Economics](#)*

# CONSTRUCTION VEHICLES



- Data collected through BAU / Operations and the National Roadworthiness Survey indicate that vehicles used in the construction sector are at a higher risk of mechanical non-compliance than other industry participants.
- Highest areas of non-compliance are **mechanical condition** and **load restraint**.
- The NHVR also considers the sector to be at a higher risk of **mass non-compliance** due to the variable mass of the loads they carry and the loading of these vehicles in off-road environments.

# NATIONAL ROADWORTHINESS SURVEY 2024

- The National Roadworthiness Survey provides a **health check** of Australia's heavy vehicle fleet.
- The information from the survey allows us to determine where the NHVR and industry are **making improvements**, or where more focus is needed.
- The **2024** survey was the third iteration, with previous surveys in **2016** and **2021**.
- The survey is used to collect **essential data** to drive future safety initiatives.



# NRS 2024 – THE RESULTS



- **9000+** detailed mechanical inspections conducted with **14,000+** individual units inspected
- All states and Territories participated including **WA and the NT.**
- All vehicle results remain **well below the 2016** survey results
- The highest incident of non-conformity still occurs in **rigid trucks.**
- The incidence of non-conformity has **remained stable** across most vehicle types since 2021 with small increases in bus/coach and plant/SPV.
- In 2024, there were 104 vehicle units grounded, including 51 powered units and 53 trailers.

# NRS 2024 – THE RESULTS

- **Top areas of non-conformance for all vehicles** included:
  - Brakes
  - Lights and reflectors
  - Structure and body
  - Engine, driveline and exhaust
  - Steering and suspension
- **Top areas of non-conformance for rigid trucks** included:
  - Lights and reflectors
  - Brakes
  - Structure and body
- **Brakes were highest** in regional areas.
- Non-conformity did not differ greatly between rigid trucks inspected in their state of registration and those inspected interstate (40% and 36%, respectively).



# TARGETED OPERATIONS

- **NHVR** has undertaken national compliance operations since the 2016 **NRS** highlighted risks within these vehicle types.
- Since that time operations have seen a consistent compliance rate within the construction industry with the areas of interest remaining static.
- **Mechanical non-compliance** remains the highest safety risk identified across all the operations to date.
- Defective component types **remain consistent** with NRS results.
- Highest rates of non-compliance (43%) occurred in **Tipplers** intercepted during previous compliance operations.

COMPLIANCE OPERATION	INTERCEPTS	NCR	Most Common Defect Components
PRECISION	4,612	30%	Ancillary Equipment/ Brakes
SQUIRE	1,203	44%	Body & Structure Lights
MYSTIC	1,965	34%	Body & Structure

# OPERATION SAPPHIRE – THE WHY

- **Operation Sapphire** is a coordinated multi-jurisdictional compliance response to identified **safety risks** with heavy vehicle vehicles operating within the construction industry.
- Developed based on compliance operation results and recent NRS data.
- **Locations** were selected based on activity and information provided by industry on potential areas of risk.
- The joint NHVR and Police operation focused on:
  - Mechanical safety
  - Mass/ Dimension/ Loading
  - Permits
- Police agencies are supportive of the **national initiative**.



# LOOKING FORWARD



- **NHVR** continues to monitor the correlation between vehicle and rate of non-conformity.
- Recent analysis has identified an increased rate of heavy vehicle crashes as a result of coupling failure.
- **Brake defects** remain a concern particularly in regionally inspected vehicles.
- An intelligence probe relating to permits is currently being undertaken to validate an identified risk.

# CLOCS-A

- The NHVR has supported the development of the CLOCS-A scheme through:
  - provision of grant funding as part of **the Heavy Vehicle Safety Initiatives (HVSIs) program**
  - participation in working groups during development.
- Due to where they are used, construction vehicles have a number of inherent safety risks that must be addressed.
- CLOCS-A offers an industry-led approach that **recognises the roles all parties in construction programs** have in improving road safety from those planning projects through to the boots on the ground at sites and the vehicles delivering the projects.



# CLOCS-A

Bronze Membership Requirements



The Minimum Mandatory Standard for all heavy vehicles complying with CLOCS-A technical requirements. Measures and technologies that are relatively low cost and easy to implement.

- No long deflection on intermodal trailer - City and Urban Projects only
- No regular air intake, exhaust or other forward flow - City and Urban Projects only
- No large inappropriate buffers - City and Urban Projects only
- No inappropriate conditions
- No overly large doors or loading/unloading points or other obstructions that may reduce the driver's field of view
- No excessive protrusions or vehicle falling
- No inappropriate placement of off-road equipment, accessories that restrict the driver's field of view



# CLOCS-A

- CLOCS-A offers a non-regulatory approach that:
  - Promotes shared responsibility for safety
  - Supports standardisation across projects and jurisdictions
  - Assists operators of various sizes to effectively invest in safety equipment
  - Supports vehicle mobility between projects

# THANK YOU

For more information:

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