Motor Vehicle Registry Information Bulletin

V33 - Innovative Vehicle Combinations

Introduction

The Department fosters the development and operation of innovative road train combinations in the Northern Territory (NT). These vehicles provide safe transport of goods with considerable productivity and efficiency advantages over base-line vehicle combinations and have operated satisfactorily under permits of exemption in the NT for a number of years.

The performance standards used in the NT since the mid 1990's to assess the current fleet of innovative vehicles have ensured that the on-road dynamic performance of a combination met or exceeded that of a range of existing complying base-line regulatory road train combinations.

The National Transport Commission (NTC) has developed a suite of Performance Based Standards (PBS) which are intended to provide a nationally consistent set of performance measures and an assessment process for PBS vehicle combinations operating in all States and Territories.

In view of the work undertaken by the NTC, the following NT innovative vehicle policy has been developed to facilitate the operation of innovative high productivity vehicles which may or may not comply with all PBS measures.

Policy

1. Multi Combination Vehicles made up of Complying Vehicles and Components which meet the National Standards

BAB and ABB Quad innovative vehicle combinations

These specific innovative vehicle combinations are approved (The Northern Territory Government Gazette No. 26, 29 June 2011) to operate within the NT without the requirement for a permit of exemption – refer **Appendix A.**

BAB and ABB Quads must still comply with all road train rating requirements.

Proposed new innovative vehicle combinations

All new proposed innovative vehicle combinations are required to:

1. be made up of complying vehicles that meet the national standards (Australian Design Rules and Australian Vehicle Standards Rules); and

2. exhibit better overall on-road dynamic performance than that of the base-line vehicle combination for the particular commodity carried.

Combinations containing vehicle components which have areas of minor dimensional non-compliance with the national standards may be considered for approval on a case-by-case basis. It must be demonstrated that any areas of non-compliance have no negative effect on the combination's on-road performance.

Existing and in-service innovative vehicle combinations

Existing approved combinations currently operating under permits of exemption in the NT may continue to operate subject to permit conditions, providing the combination's configuration remains unchanged and dynamic performance remains satisfactory.

Any proposed changes to an existing in-service combination must be approved by Transport Regulation and Compliance in Darwin. Any modifications or changes must not have a negative effect on the combination's dynamic performance. An additional dynamic performance report may be requested that reflects the changed combination. Additional on-road assessment and appraisal may also be required.

Approval may be granted for units within a permitted combination, including the prime mover, to be substituted for short term repair and maintenance purposes, provided the substituted units have equivalent performance characteristics, dimensions and the same or greater manufacturer's ratings.

All combinations must be maintained in a satisfactory condition as originally approved and may be subject to random in-service inspection and/or on-road appraisal.

Approval Process

Operators wishing to add to their current fleet of innovative vehicles, or wishing to obtain approval to operate a new combination must firstly submit a formal application to the Registrar of Motor Vehicles, via the Senior Engineering Officer

The application must contain a detailed drawing of the proposed combination, intended use, intended routes of travel, and any loading concessions sought. All applications will be assessed by the Department.

Please Note: - an Application Form (VS33) is attached to this bulletin to assist in this regard.

Once the preliminary assessment of an application has been completed, the operator will be notified in writing of the outcome. For combinations that are "endorsed to proceed", the operator will be required to supply a dynamic performance simulation report (computer analysis) that addresses current PBS performance measures including, but not necessarily limited to, those measures that are primarily associated with the high speed performance.

The simulation must also include a comparison with a high productivity (non-permit) base-line vehicle combination for the particular commodity carried.

All combinations must be made up of appropriately rated units and components for the proposed axle loadings and gross vehicle weights. All tow couplings must be appropriately rated for the particular combination.

Combinations will be required to undergo inspection and testing, which will be carried out by the Vehicle Standards and Compliance Branch in Darwin (by arrangement). This testing will include an on-road appraisal of the combination's dynamic performance.

Any combinations found to exhibit poor on-road performance will not be approved for operation in the NT.

Interstate registered and approved combinations must present proof of approval to operate in their home state (permit to operate) and must also comply with all the requirements detailed above including on-road appraisal.

2. Vehicles and Combinations which do not comply with the National Standards

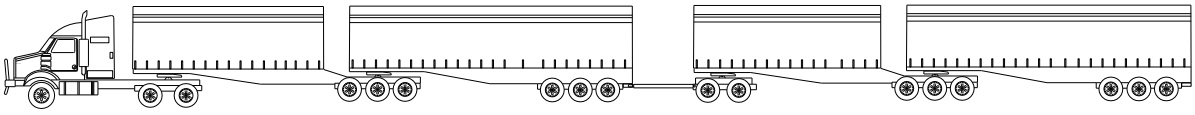
Operators wishing to gain approval for vehicles and combinations which have areas of non-compliance with Australian Design Rules and/or Australian Vehicle Standards Rules, may have the proposed vehicle assessed under the National Heavy Vehicle Regulator who administers the PBS Scheme.

A weblink to the National Heavy Vehicle Regulator is available at https://www.nhvr.gov.au/road-access/performance-based-standards

Historical information on the development of the scheme by the National Transport Commission is available at https://www.ntc.gov.au/archive/performance-based-standards/

Vehicles and combinations approved under the PBS scheme may operate in the NT under a permit of exemption subject to compliance with nationally agreed operating conditions.

Naming Convention for Innovative Vehicle Combinations used in the Northern Territory



BAB-Quad
B-double towing a dolly converter towing 2 semi trailers

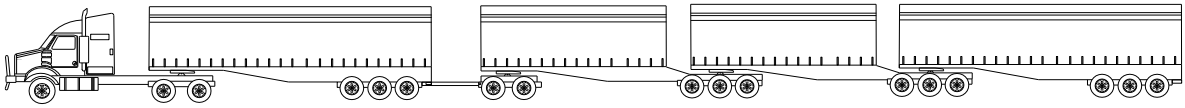
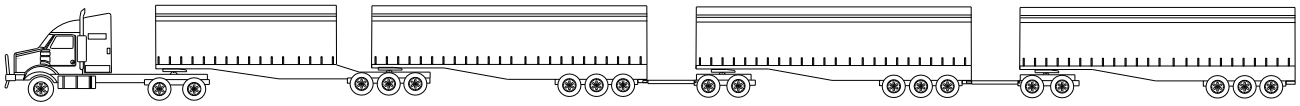
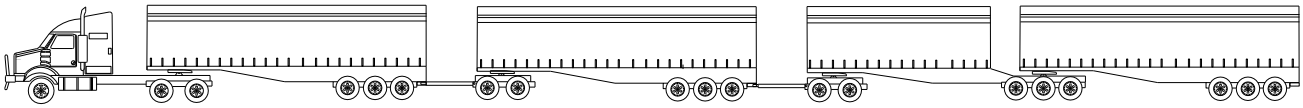


ABB-Quad
Articulated vehicle towing a dolly converter towing 3 semi trailers



BAA-Quad (permit required)
B-double towing a dolly converter towing a semi trailer towing a dolly converter towing a semi trailer



AAB-Quad (permit required)
Articulated vehicle towing a dolly converter towing a semi trailer towing a dolly converter towing 2 semi trailers

Note:

"**Quad**" refers to the number of trailers in the combination – not number of axles within an axle group

APPENDIX A

The Northern Territory Government Gazette No. G26, 29 June 2011

NORTHERN TERRITORY OF AUSTRALIA

Motor Vehicles Act

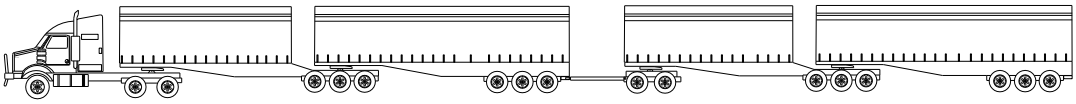
EXEMPTION FROM *MOTOR VEHICLES ACT* AND MOTOR VEHICLES (STANDARDS) REGULATIONS

I, PAUL NATHAN RAJAN, the Registrar of Motor Vehicles, in pursuance of section 59 (2) of the *Motor Vehicles Act*, and with reference to section 42 of the *Interpretation Act*, exempt a person to drive an articulated vehicle specified in the Schedule from the requirements of section 55 of the Act, provided –

(a) the other requirements under Part VA, the Standards and Schedule 4 of the Act are complied with; and

(b) the articulated vehicle does not attach more than three trailers in the combination.

Schedule



BAB-Quad

B-double towing a dolly converter towing 2 semi trailers

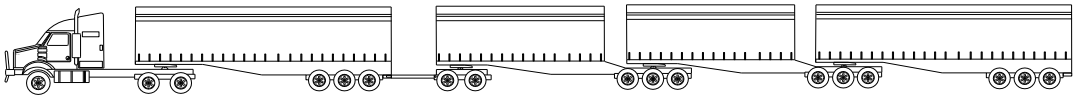


ABB-Quad

Articulated vehicle towing a dolly converter towing 3 semi trailers

Dated 16th June 2011

P.N. Rajan

Registrar of Motor Vehicles

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GPO Box 2520, DARWIN NT 0801
Phone: 1300 654 628
Fax: (08) 8924 7009
Email: vehiclestandards.mvr@nt.gov.au
Website: www.nt.gov.au

VS33

Application to Operate an Innovative Vehicle Combination in the NT

For guidance, refer to detailed information in "Information Bulletin V33 *Innovative Vehicle Combinations*"

Operators wishing to add to their current fleet of innovative vehicles, or wishing to obtain approval to operate a new combination must firstly submit a formal written application to the Registrar of Motor Vehicles. This form has been developed to capture the minimum information required and must be submitted along with a detailed drawing of the proposed combination.

Company Name

.....

Contact Person

.....

Postal Address

.....

.....

.....

Contact Details

Phone.....Fax.....

Mobile.....

Email.....

Proposed Commodity to be Carried

.....

.....

Proposed Route of Operation

.....

.....

Proposed Trip Frequency

.....

.....

Mass Concession Sought (if any)

.....

.....

Type of Combination (i.e. 2A+B, B+2A etc.) Refer Appendix 1 for example

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.....

Send Application

To Registrar of Motor Vehicles, via the Senior Engineering Officer

Email Vehiclestandards.mvr@nt.gov.au

Post **GPO Box 2520, DARWIN NT, 0801**

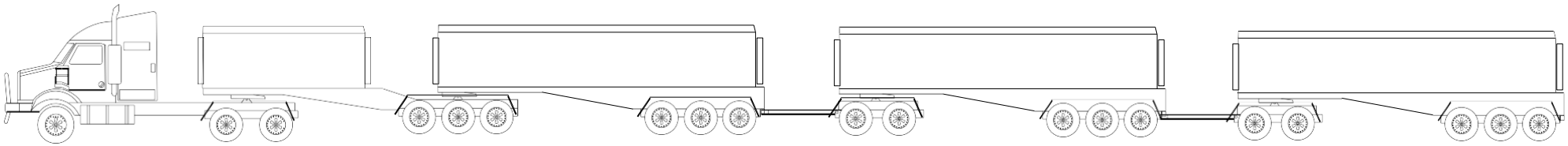
Please attach detailed drawing of proposed combination (refer **Appendix 2 & 3** for minimum example detail)

Privacy Statement

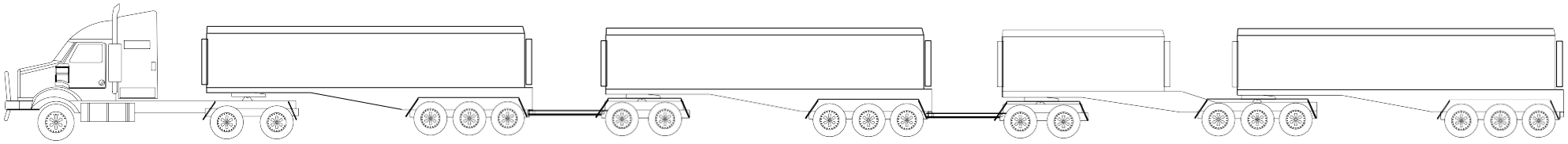
The Registrar of Motor Vehicles is required to collect information for Registrations, Licences and Permits under section 92 of the NT *Motor Vehicles Act*. The Registrar adheres to the Department's Privacy Statement and the *Information Act*.

Appendix 1
Innovative Road Train Combinations

BAA-Quad



AAB-Quad



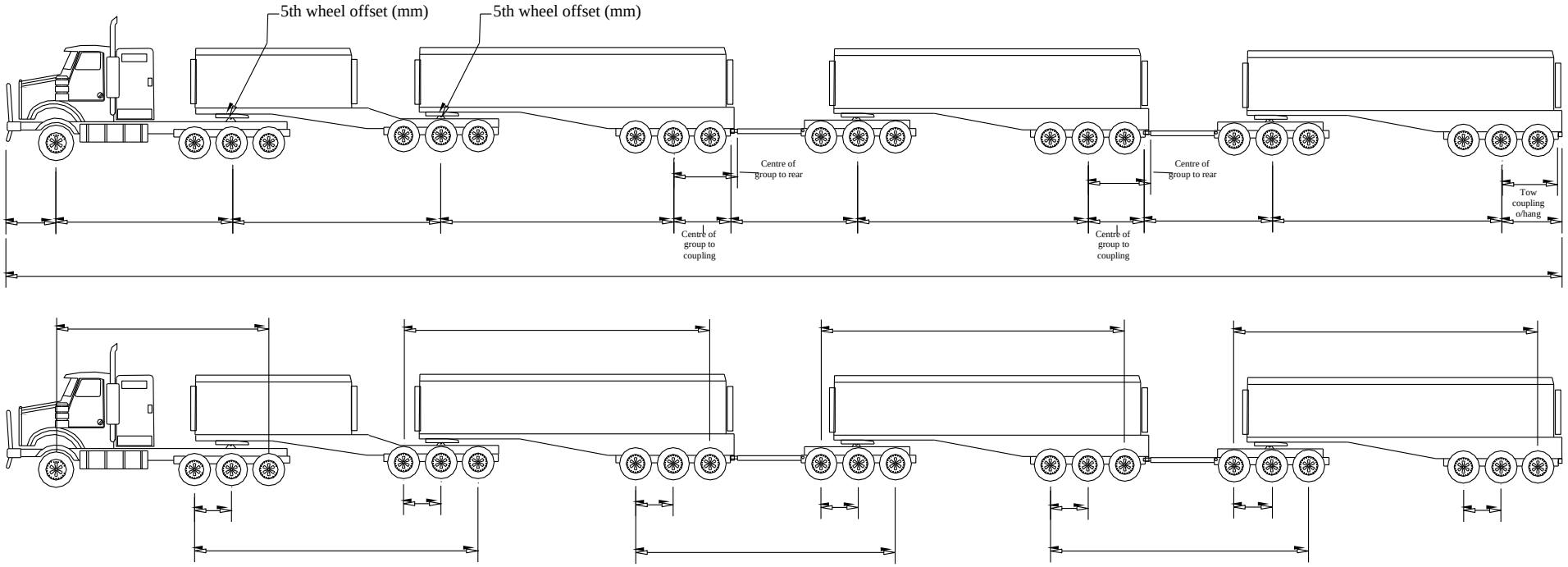
Note:

Above diagrams are for illustrative purposes only.

Tri-axle groups (drive/converter dolly) may be acceptable provided the vehicle combination has been modelled or otherwise approved in such configuration.

Appendix 2

Example drawing showing required minimum dimension detail (BAA-Quad)

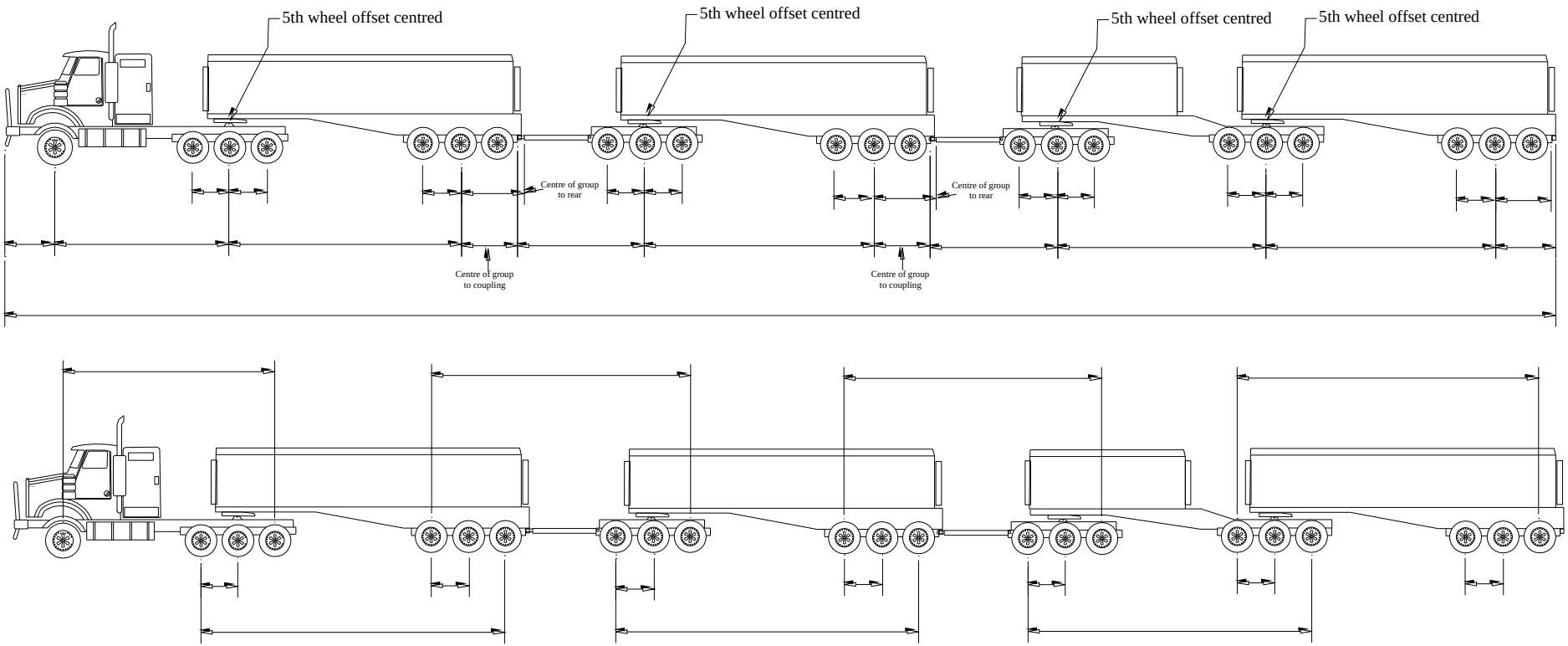


Please record the following:

- ☑ **All measurements (to the nearest 10mm i.e. 8.10m)**
- ☑ **All registration numbers of individual components on the application (i.e. prime mover, trailers, dollies)**
- ☑ **5th wheel offset - if applicable (offset is measured from the centre of the axle group to the centre of the 5th wheel jaws)**
- ☑ **Any wide single tyres and suspension type (i.e. air or steel) on applicable axle groups**

Appendix 3

Example drawing showing required minimum dimension detail (AAB-Quad)



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