Performance Based Standards (PBS)

# Design Approval Application Form

Part A

*Heavy Vehicle National Law* Section 22

*Heavy Vehicle (General) National Regulation* Section 4

V#app number#

*Note: Only PBS Assessors may submit this form*

**FOR OFFICE USE ONLY**

|  |  |
| --- | --- |
| **Assessor** | #assessor# |
| **Applicant** | #applicant# |
| **Vehicle** | #vehicle# |
| **Pre-Advised Design** | #preadvised# |
| **Received** | #date received# |
| **Processed** | #date processed# |

# APPLICATION AMENDMENT / VARIATION / CORRECTION SUMMARY

|  |  |  |
| --- | --- | --- |
| N | Brief Description | Date |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

NOTES:

* All amendments/variations/corrections from the previous version must be marked on the form with yellow highlighting or otherwise identified where this is not practical.
* Any specific route or bridge access requirements must be specified inAppendix 1**.**
* This application must be supported by detailed technical drawings which fully specify all dimensions necessary to define the vehicles, provided in Design Approval Application Form Part B.
* The drawings must include individual axle masses for GML, CML and HML/QML (as applicable) for each proposed access level.
* Also attach to the Part B a bridge assessment showing all extreme axle spacings, the relevant masses used in the analysis, and the relevant pass/fail for the proposed access levels.

# CONTACT DETAILS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Applicant | | | | |
| Entity name |  | ABN |  | |
| Company name |  | ACN *optional* |  | |
| ‘Trading As’ name | *This name will appear on the DA/VA* | | | |
| Physical address |  | | | |
| Postal address |  | | | |
| Contact person |  | | | |
| Email |  | | | |
| Phone |  | Mobile |  | |
| Certifier |  | Applicant type | | Choose an item. |
| Assessor | | | | |
| Company name |  | ABN |  | |
| ‘Trading As’ name |  | | | |
| Physical address |  | | | |
| Postal address |  | | | |
| Assessor |  | Accreditation N |  | |
| Email |  | | | |
| Phone |  | Mobile |  | |
| Assessor job number |  | | | |

APPLICATION SUMMARY

|  |  |
| --- | --- |
| Application Type | **Yes/No** |
| New | No |
| Variation | No |
| Amendment | No |

Refer to the link for information on determining if this application is considered an Amendment or Variation to an existing Design Approval - [Design Approval Modification Process Information Sheet](https://www.nhvr.gov.au/files/202008-1165-pbs-design-approval-modification-process.pdf).

*Note: Pre-Advised designs are not permitted to be modified in such a way that the combination(s) would not continue to qualify for the Pre-Advised design approval process.*

# VEHICLE DESCRIPTION

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vehicle Combination 1 | | | | | | | | | |
| Vehicle name | |  | | | | | | | |
| Load / Body description | |  | | | | | | | |
| Overall length x width x height (mm) | |  | | | | | | | |
| Prime Mover / Truck | | Euro VI | | | Yes/No | Safer Freight Vehicle (SFV) | | | Yes/No |
| Euro VI Mass Transfer Allowance | | | Yes/No | Complying Steer Axle | | | Yes/No |
| Access information | | Level \_ | | | | Level \_ | | | |
|  | | GML | CML/ QML | HML/ QML | | GML | CML/ QML | HML/ QML | |
| Mass limits | |  |  |  | |  |  |  | |
| Bridge | | Tier \_ | | | | Tier \_ | | | |
| Notes: |  | | | | | | | | |
| Vehicle Combination 2 | | | | | | | | | |
| Vehicle name | |  | | | | | | | |
| Load / Body description | |  | | | | | | | |
| Overall length x width x height (mm) | |  | | | | | | | |
| Prime Mover / Truck | | Euro VI | | | Yes/No | Safer Freight Vehicle (SFV) | | | Yes/No |
| Euro VI Mass Transfer Allowance | | | Yes/No | Complying Steer Axle | | | Yes/No |
| Access information | | Level \_ | | | | Level \_ | | | |
|  | | GML | CML/ QML | HML/ QML | | GML | CML/ QML | HML/ QML | |
| Mass limits | |  |  |  | |  |  |  | |
| Bridge | | Tier \_ | | | | Tier \_ | | | |
| Notes: |  | | | | | | | | |
| Vehicle Combination 3 | | | | | | | | | |
| Vehicle name | |  | | | | | | | |
| Load / Body description | |  | | | | | | | |
| Overall length x width x height (mm) | |  | | | | | | | |
| Prime Mover / Truck | | Euro VI | | | Yes/No | Safer Freight Vehicle (SFV) | | | Yes/No |
| Euro VI Mass Transfer Allowance | | | Yes/No | Complying Steer Axle | | | Yes/No |
| Access information | | Level \_ | | | | Level \_ | | | |
|  | | GML | CML/ QML | HML/ QML | | GML | CML/ QML | HML/ QML | |
| Mass limits | |  |  |  | |  |  |  | |
| Bridge | | Tier \_ | | | | Tier \_ | | | |
| Notes: |  | | | | | | | | |

# TECHNICAL RESULTS TABLE

Fill the table below by:

* providing the GCM and Access level(s) used for this assessment;
* entering the result of each individual Performance Standard in the table below; and
* indicating the performance level achieved (L1, L2, L3, L4; P for Pass or F for Fail).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Technical Results Table | | | | |
| **Performance Standard** | **Performance results** | | **Performance level**  **(L1 to L4; P for Pass or F for Fail)** | |
| <GCM>t - L<\_> | <GCM>t - L<\_> |
| **Safety Standards** | | | | |
| 1. Startability |  |  |  |  |
| 1. Gradeability: | | | | |
| 1. Maximum grade |  |  |  |  |
| 1. Speed on a 1% grade |  |  |  |  |
| 1. Acceleration capability |  |  |  |  |
| 1. Tracking Ability on a Straight Path |  |  |  |  |
| 1. Low-Speed Swept Path |  |  |  |  |
| 1. Frontal Swing: | | | | |
| 1. Maximum Frontal Swing |  |  |  |  |
| 1. Maximum of Difference |  |  |  |  |
| 1. Difference of Maxima |  |  |  |  |
| 1. Tail Swing |  |  |  |  |
| 1. Steer-Tyre Friction Demand |  |  |  |  |
| 1. Static Rollover Threshold (Worst) |  |  |  |  |
| Static Rollover Threshold of last unit |  |  |  |  |
| 1. Rearward Amplification |  |  |  |  |
| 1. High-Speed Transient Off-tracking |  |  |  |  |
| 1. Yaw Damping Coefficient |  |  |  |  |
| 1. Directional stability under braking |  |  |  |  |
| **Infrastructure Standards** | | | | |
| 1. Pavement Vertical Loading |  |  |  |  |
| 1. Pavement Horizontal Loading |  |  |  |  |
| 1. Tyre Contact Pressure Distribution |  |  |  |  |
| 1. Bridge Loading | Tier/s | Tier/s |  |  |
| Notes: | | | | |

# EXEMPTIONS

PBS vehicles are required to comply with the applicable provisions of the Australian Design Rules (ADRs), *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*, and *Heavy Vehicle (Vehicle Standards) National Regulation*. Exemption must be requested from one or more of these if there is a conflict with the vehicle’s design. Check the items below for which exemption/s will need to be sought:

|  |  |
| --- | --- |
| Australian Design Rules - Exemptions | **Yes/No** |
| Relevant clause in the latest compilation of ADR43 | |
| Rule 43, Clause 6.1.1 (Length – Motor vehicles) | No |
| Rule 43, Clause 6.2.1 (Length – Trailers) | No |
| Rule 43, Clause 6.1.2 (Rear overhang – Motor vehicles) | No |
| Rule 43, Clause 6.2.3 (Rear overhang – Trailers) | No |
| Rule 43, Clause 6.1.3 (Height – Motor vehicles) | No |
| Rule 43, Clause 6.2.4 (Height – Trailers) | No |
| Rule 43, Clause 6.1.5 (Width – Motor vehicles)\* | No |
| Rule 43, Clause 6.2.6 (Width – Trailers) | No |
| Rule 43, Clause 6.2.2 (Drawbar length – Trailers) | No |
| Rule 43, Clause 9.4 (Retractable axles) | No |
| Rule 62, Clause 5.2 (Tow coupling overhang) | No |
| Rule 63, Clause 5.1 (Tow coupling location) | No |

|  |  |
| --- | --- |
| Heavy Vehicle (Mass, Dimension and Loading) National Regulation - Authorisations | Yes/No |
| Schedule 6, Section 3 (Length – General) | No |
| Schedule 6, Section 4 (Length – Trailers) | No |
| Schedule 6, Section 5 (Length – Rear overhang) | No |
| Schedule 6, Section 6 (Length – Trailer drawbars) | No |
| Schedule 6, Section 7 (Width)\* | No |
| Schedule 6, Section 8 (Height) | No |
|  | |

|  |  |
| --- | --- |
| Heavy Vehicle (Vehicle Standards) National Regulation - Exemptions | **Yes/No** |
| Schedule 3, Section 29 (Attachment of couplings and drawbar eyes on road trains) | No |
| Schedule 3, Section 31 (Tow coupling overhang on road trains) | No |

\* Safer Freight Vehicles (SFV) up to 2.55m in width do not require MDL and ADR exemptions.

# ADDITIONAL EXEMPTIONS

The following table lists the additional exemptions that cannot be granted under the PBS Scheme listed in Section 28 of the *Heavy Vehicle (General) National Regulation*. Check the items below for which exemption/s will need to be sought:

|  |  |
| --- | --- |
| Australian Design Rules - Exemptions | **Yes/No** |
| Relevant clause in the latest compilation of ADR43 | |
| Rule 43, Clause 7 (Axle configuration) | No |
| Rule 43, Clause 9 (Retractable axles) | No |

|  |  |
| --- | --- |
| Heavy Vehicle (Vehicle Standards) National Regulation - Exemptions | **Yes/No** |
| Schedule 2, Clause 32(3) (Axle configuration – heavy trailer) | No |

If required additional exemptions are not listed above, please provide details below.

|  |
| --- |
| Additional Exemptions Details |
|  |

# PRE-ADVISED DESIGNS

The table below lists the type of vehicle combinations that may qualify for a Design Approval assessment under the pre-advised (PA) design approval process. Please indicate if the combination in the application qualifies as a PA design.

Refer to *Appendix 3* for more information regarding the specifications for PA designs, a summary of qualifying PA design specifications and the permitted exemptions allowed under the PBS scheme for PA combinations.

|  |  |
| --- | --- |
| **PA Combination** | **Yes/No** |
| PA Truck and 2-, 3- or 4-Axle Dog Trailer | No |
| PA Truck and 5- or 6-Axle Dog Trailer | No |
| PA Prime Mover and Semitrailer | No |
| PA B-Double | No |
| PA A-Double | No |
| PA B-Triple | No |

# DATA SOURCES AND ASSESSMENT METHOD

|  |  |
| --- | --- |
| Data Sources | |
| Mass properties |  |
| Dimensions |  |
| Suspension |  |
| Tyres |  |

|  |  |
| --- | --- |
| Assessment Method | |
| Identify the simulation software, simulation models, calculations and test methods used to assess each Performance Standard in accordance with the Standards and Vehicle Assessment Rules*.* | |
| Standards 1 to 3 |  |
| Standards 5, 7 to 14 |  |
| Standards 16 to 19 |  |
| Standard 20 |  |

# DECLARATION

|  |  |
| --- | --- |
| Assessor Declaration\* | |
| I hereby certify that the information required to complete this Application and information provided in this Design Approval Application Parts A and B and all supporting documents are complete and accurate. | |
| Name of Assessor |  |
| Date |  |
| Signature of Assessor |  |

|  |  |
| --- | --- |
| Applicant Declaration\* | |
| I hereby declare that all details provided in this application (Part A and Part B) are true and correct. | |
| Name of Applicant |  |
| Date |  |
| Signature of Applicant |  |

\* Giving false and misleading information is a serious offence (Section 702 of the *Heavy Vehicle National Law*). This applies to assessor and applicant alike. Penalties apply.

The NHVR is collecting your personal information to issue a PBS Design Approval under the *Heavy Vehicle National Law* (HVNL) and *Heavy Vehicle (General) National Regulation* (Regulations). We are authorised under the HVNL and Regulations to collect information required to decide this application. Where relevant, the NHVR may disclose your personal information to third parties, including members of the PBS Review Panel, law enforcement agencies and other stakeholders such as road managers and PBS certifiers. See the Privacy Policy ([nhvr.gov.au/law-policies/privacy](https://www.nhvr.gov.au/law-policies/privacy)) for how you may access your personal information, and how it may be used or disclosed.

# APPENDIX 1: TECHNICAL APPLICATION PROFILE

* Provide assessed worst case loading scenarios
* Note effects of unladen and partial loading conditions, as well as fluid slosh
* Specify maximum payload heights and payload types
* For fluid slosh
  + The number of compartments must be specified
  + The capacity of each compartment must be specified
  + The method on how the assessment was conducted must be clear e.g.
    - Minimum fill level assessed for each compartment
    - Maximum fill level assessed for each compartment
    - What were the fill level increments assessed between minimum and maximum to cover “all fill levels are acceptable”. A sensitivity study is required.
    - Are there any loading conditions that need to be avoided
      * If no proof is submitted, each compartment must be more than 90% full or less than 20% full. No other fill levels will be allowed
* Prescribe minimum condition(s) to ensure that there is sufficient mass on the drive axle(s)
* List operating conditions
* Requests and details for Section 8 and Section 9 exemptions
* Any other special conditions or requirements

# APPENDIX 2: SENSITIVITY STUDIES AND FIELD TESTS UNDERTAKEN (IF APPLICABLE)

# APPENDIX 3: PRE-ADVISED (PA) SPECIFICATIONS & DESIGNS

Exceeding the maximum length in the PBS Network Classifications Guidelines

* The overall length of a combination may exceed the prescribed maximum length for a PBS Level, as contained in the *PBS Network Classification Guidelines* found on the NHVR website.
* If a vehicle is assessed and approved an additional operating condition will be placed on the Design Approval (DA) and Vehicle Approval (VA) that access to road networks at the stated PBS Level will be subject to Road Manager consent.

Applications requesting exemptions under the *Heavy Vehicle (General) National Regulation*

* Any application requesting the exemptions listed below, are permitted in the PA Process.
  + Section 8 (Approval – noncompliance with infrastructure standard)
    - Pavement Vertical Loading
      * Noncompliance for a Euro VI vehicle (complying steer axle) or a Euro VI vehicle (twinsteer) in PA Road Train combinations at 7.0t or 11.5t on single steer axle and twinsteer axle group, respectively.
    - Pavement Horizontal Loading
      * Noncompliance for Level 2 A-Doubles with a combination mass of 85.5t for a complying steer axle vehicle at 6.5t on the steer axle.
      * Noncompliance for Level 2 A-Doubles with a combination mass of 86.1t for a prime mover fitted with tyres with section widths of at least 375mm at 7.1t on the steer axle.
      * Noncompliance for Level 2 A-Doubles with a combination mass of 85.5t for a Euro VI vehicle (single steer axle) at 6.5t on the steer axle.
      * Noncompliance for Level 2 A-Doubles with a combination mass of 86.0t for a Euro VI vehicle (complying steer axle) or a Euro VI vehicle (twinsteer) at 7.0t and 11.5t on the steer axle, respectively.
* Any application requesting one or more of the exemptions listed below, are excluded from the PA Process.
  + Section 8 (Approval – noncompliance with infrastructure standard)
  + Section 9 (Approval – noncompliance that poses no additional risk)

Steer Axles

* Single steer axles are limited to 6t, except for:
  + A complying steer axle vehicle - 6.5t
  + A prime mover forming part of a road train fitted with tyres with section widths of at least 375mm – 7.1t
  + A Euro VI vehicle (single steer axle) – 6.5t
  + A Euro VI vehicle (complying steer axle) – 7.0t
* Twinsteer axles are limited to 10t, except for:
  + A twinsteer axle group with a load-sharing suspension – 11.0t
  + A Euro VI vehicle (twinsteer) – 11.5t

Drive Axles

* A Euro VI vehicle mass transfer allowance is permitted if the prime mover is a Euro VI vehicle. Limiting mass transfer to less than 0.5t is not permitted.
* Single drive axle group
  + A PBS combination containing a single drive axle, must not exceed the maximum GCM in accordance with the PBS Pavement Horizontal Loading Requirements as follows:
    - PBS Level 1 – 35t
    - PBS Level 2 – 45t
    - PBS Level 3 – 45t
    - PBS Level 4 – 45t
* Tandem drive axle group
  + All driving axles in a drive axle group must distribute tractive forces, such that the maximum difference in tractive force between any two driving axles in the group is not greater than 10% of the total tractive force delivered by the drive axle group.
  + A PBS combination containing a tandem drive axle group, unless explicitly permitted, must not exceed the maximum GCM in accordance with the PBS Pavement Horizontal Loading Requirements, as follows:
    - PBS Level 1 – 70t
    - PBS Level 2 – 85t
    - PBS Level 3 – 110t
    - PBS Level 4 – 150t
* Tridem drive axle group
  + All driving axles in a drive axle group must distribute tractive forces, such that the maximum difference in tractive force between any two driving axles in the group is not greater than 10% of the total tractive force delivered by the drive axle group
  + A PBS combination containing a tridem drive axle group (one pusher axle and two driven axles or two driven axles and one lazy axle), unless explicitly permitted, must not exceed the maximum GCM in accordance with the PBS Pavement Horizontal Loading Requirements as follows:
    - PBS Level 1 – 70t
    - PBS Level 2 – 85t
    - PBS Level 3 – 110t
    - PBS Level 4 – 150t
* Tri-axle drive axle group
  + All driving axles in a drive axle group must distribute tractive forces, such that the maximum difference in tractive force between any two driving axles in the group is not greater than 10% of the total tractive force delivered by the drive axle group.

Other specifications:

* Dangerous Goods combinations are permitted under the PA process.
* Combinations requesting PBS Level 1 approval are limited to a maximum of 50t except for combinations containing:
  + A complying steer axle vehicle – 50.5t
  + A Euro VI vehicle (single steer axle) – 50.5t
  + A Euro VI vehicle (complying steer axle) – 51.0t
  + A Euro VI vehicle (twinsteer) – 51.0t
* Optional retractable axles are permitted.
* Optional steerable axles are permitted except on dog trailers.
* For tandem axle groups with an axle spacing of more than 2 metres, at least one axle must be steerable.
* For axle groups with three or more axles and a spread of greater than 3.2 metres, all axles beyond the 3.2 metre spread must be steerable.

# PA TRUCK AND 2, 3 OR 4-AXLE DOG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Truck | Trailer Front | | Trailer Rear | |
| Single steer | Single axle | | Single axle | |
| Twinsteer | Tandem-axle group | | Tandem-axle group | |
| Single-axle drive group |  | |  | |
| Tandem axle drive group |  | |  | |
| Tri-axle drive group |  | |  | |
|  | Level 1 | | Level 2 | |
| Maximum height (mm) | 4,300 | | 4,300 | |
| Maximum width (mm) | 2,500 | | 2,500 | |
| Maximum width SFV (mm) | 2,550 | | 2,550 | |
| Maximum mass (t) | 51.0 | | 68.0 | |
|  | GML | CML | | HML |
| Single steer axle (t) | 7.1 | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | 6.5/7.0\* | 6.5/7.0\* | | 6.5/7.0\* |
| Twinsteer axle group (t) | 11.0 | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | 11.5\* | 11.5\* | | 11.5\* |
| Single axle (t) | 9.0 | 9.0 | | 9.0 |
| Tandem axle group (t) | 16.5 | 17.0 | | 17.0 |
| Tri-axle group (t) | 20.0 | 21.0 | | 22.5 |
| Permitted Exemptions - ADR | | | | |
| Rule 43, Clause 6.2.2 (Drawbar length – Trailers) | | | | |
| Rule 43, Clause 9.4 (Retractable axles) | | | | |
| Permitted Exemptions - HV(MDL)NR | | | | |
| Schedule 6, Section 3 (Length – General) | | | | |
| Schedule 6, Section 6 (Length – Trailer drawbars) | | | | |

# PA TRUCK AND 5 OR 6-AXLE DOG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Truck | Trailer Front | | Trailer Rear | |
| Single steer | Tandem-axle group | | Tri-axle group | |
| Twinsteer | Tri-axle group | |  | |
| Single-axle drive group |  | |  | |
| Tandem axle drive group |  | |  | |
| Tri-axle drive group |  | |  | |
|  | Level 2 | | | |
| Maximum height (mm) | 4,300 | | | |
| Maximum width (mm) | 2,500 | | | |
| Maximum width SFV (mm) | 2,550 | | | |
| Maximum mass (t) | 79.0 | | | |
|  | GML | CML | | HML |
| Single steer axle (t) | 7.1 | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | 6.5/7.0 | 6.5/7.0 | | 6.5/7.0 |
| Twinsteer axle group (t) | 11.0 | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | 11.5 | 11.5 | | 11.5 |
| Single axle (t) | 9.0 | 9.0 | | 9.0 |
| Tandem axle group (t) | 16.5 | 17.0 | | 17.0 |
| Tri-axle group (t) | 20.0 | 21.0 | | 22.5 |
| Permitted Exemptions - ADR | | | | |
| Rule 43, Clause 6.2.2 (Drawbar length – Trailers) | | | | |
| Rule 43, Clause 9.4 (Retractable axles) | | | | |
| Permitted Exemptions - HV(MDL)NR | | | | |
| Schedule 6, Section 3 (Length – General) | | | | |
| Schedule 6, Section 6 (Length – Trailer drawbars) | | | | |

# PA PRIME MOVER AND SEMITRAILER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Prime Mover | Semitrailer | | | |
| Single steer | Single axle | | | |
| Twinsteer | Tandem-axle group | | | |
| Single-axle drive group | Tri-axle group | | | |
| Tandem axle drive group | Quad-axle group | | | |
| Tri-axle drive group |  | | | |
|  | Level 1 | | Level 2 | |
| Maximum height (mm) | 4,600 | | 4,600 | |
| Maximum height SFV (mm) | 4,300 | | 4,300 | |
| Maximum width (mm) | 2,500 | | 2,500 | |
| Maximum width SFV (mm) | 2,550 | | 2,550 | |
| Maximum mass (t) | 51.0 | | 61.0 | |
|  | GML | CML | | HML |
| Single steer axle (t) | 7.1 | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | 6.5/7.0 | 6.5/7.0 | | 6.5/7.0 |
| Twinsteer axle group (t) | 11.0 | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | 11.5 | 11.5 | | 11.5 |
| Single axle (t) | 9.0 | 9.0 | | 9.0 |
| Tandem axle group (t) | 16.5 | 17.0 | | 17.0 |
| Tri-axle group (t) | 20.0 | 21.0 | | 22.5 |
|  | GML | | QML | |
| Quad-axle (t) | 20.0 | | 27.0 | |
| Permitted Exemptions - ADR | | | | |
| Rule 43, Clause 6.2.1 (Length – Trailers) | | | | |
| Rule 43, Clause 6.2.3 (Rear overhang – Trailers) | | | | |
| Rule 43, Clause 6.2.4 (Height – Trailers) | | | | |
| Rule 43, Clause 9.4 (Retractable axles) | | | | |
| Permitted Exemptions - HV(MDL)NR | | | | |
| Schedule 6, Section 3 (Length – General) | | | | |
| Schedule 6, Section 4 (Length – Trailers) | | | | |
| Schedule 6, Section 5 (Length – Rear overhang) | | | | |
| Schedule 6, Section 8 (Height) | | | | |

# PA B-DOUBLE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Prime Mover | Semitrailer | | | |
| Single steer | Single axle | | | |
| Twinsteer | Tandem-axle group | | | |
| Single-axle drive group | Tri-axle group | | | |
| Tandem axle drive group | Quad-axle group | | | |
| Tri-axle drive group |  | | | |
|  | Level 1 | Level 2 | | Level 3 |
| Maximum height (mm) | 4,600 | 4,600 | | 4,600 |
| Maximum height SFV (mm) | 4,300 | 4,300 | | 4,300 |
| Maximum width (mm) | 2,500 | 2,500 | | 2,500 |
| Maximum width SFV (mm) | 2,550 | 2,550 | | 2,550 |
| Maximum mass (t) | 51.0 | 85.0 | | 88.0 |
|  | GML | CML | | HML |
| Single steer axle (t) | 7.1 | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | 6.5/7.0 | 6.5/7.0 | | 6.5/7.0 |
| Twinsteer axle group (t) | 11.0 | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | 11.5 | 11.5 | | 11.5 |
| Single axle (t) | 9.0 | 9.0 | | 9.0 |
| Tandem axle group (t) | 16.5 | 17.0 | | 17.0 |
| Tri-axle group (t) | 20.0 | 21.0 | | 22.5 |
|  | GML | | QML | |
| Quad-axle (t) | 20.0 | | 27.0 | |
| Permitted Exemptions - ADR | | | | |
| Rule 43, Clause 6.2.1 (Length – Trailers) | | | | |
| Rule 43, Clause 6.2.3 (Rear overhang – Trailers) | | | | |
| Rule 43, Clause 6.2.4 (Height – Trailers) | | | | |
| Rule 43, Clause 9.4 (Retractable axles) | | | | |
| Permitted Exemptions - HV(MDL)NR | | | | |
| Schedule 6, Section 3 (Length – General) | | | | |
| Schedule 6, Section 4 (Length – Trailers) | | | | |
| Schedule 6, Section 5 (Length – Rear overhang) | | | | |
| Schedule 6, Section 8 (Height) | | | | |

# PA A-DOUBLE

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Prime Mover | | | Semitrailer | | | Dolly | |
| Steer | Drive | |
| Single | Single-axle | | Single axle | | | Single axle | |
| Twin | Tandem axle | | Tandem-axle group | | | Tandem-axle group | |
|  | Tri-axle | | Tri-axle group | | | Tri-axle group | |
|  | | Level 1 | | | Level 2 | | Level 3 |
| Maximum height (mm) | | 4,600 | | | 4,600 | | 4,600 |
| Maximum height SFV (mm) | | 4,300 | | | 4,300 | | 4,300 |
| Maximum width (mm) | | 2,500 | | | 2,500 | | 2,500 |
| Maximum width SFV (mm) | | 2,550 | | | 2,550 | | 2,550 |
| Maximum mass (t) | | 51.0 | | | 86.1\* | | 101.5 |
|  | | GML | | | CML | | HML |
| Single steer axle (t) | | 7.1 | | | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | | 6.5/7.0\*\* | | | 6.5/7.0\*\* | | 6.5/7.0\*\* |
| Twinsteer axle group (t) | | 11.0 | | | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | | 11.5\*\* | | | 11.5\*\* | | 11.5\*\* |
| Single axle (t) | | 9.0 | | | 9.0 | | 9.0 |
| Tandem axle group (t) | | 16.5 | | | 17.0 | | 17.0 |
| Tri-axle group (t) | | 20.0 | | | 21.0 | | 22.5 |
| Permitted Exemptions - ADR | | | | | | | |
| Rule 43, Clause 6.2.1 (Length – Trailers) | | | | Rule 43, Clause 6.2.4 (Height – Trailers) | | | |
| Rule 43, Clause 6.2.2 (Drawbar length – Trailers) | | | | Rule 43, Clause 9.4 (Retractable axles) | | | |
| Rule 43, Clause 6.2.3 (Rear overhang – Trailers) | | | | Rule 63, Clause 5.1 (Tow coupling location) | | | |
| Permitted Exemptions - HV(MDL)NR | | | | | | | |
| Schedule 6, Section 3 (Length – General) | | | | | | | |
| Schedule 6, Section 4 (Length – Trailers) | | | | | | | |
| Schedule 6, Section 5 (Length – Rear overhang) | | | | | | | |
| Schedule 6, Section 6 (Length – Trailer drawbars) | | | | | | | |
| Schedule 6, Section 8 (Height) | | | | | | | |
| Permitted Exemptions - HV(VS)NR | | | | | | | |
| Schedule 3, Section 29 (Attachment of couplings and drawbar eyes on road trains) | | | | | | | |
| Schedule 3, Section 31 (Tow coupling overhang on road trains) | | | | | | | |
| Permitted Exemptions – Section 8 of HV(Gen)NR | | | | | | | |
| \*Pavement Horizontal Loading (A2) – more than 85.0t maximum combination mass at Level 2  \*\*Pavement Vertical Loading (A1) – 6.5t, 7.0t, or 11.5t steer axle mass for Euro VI prime movers used in Road Trains | | | | | | | |

# PA B-TRIPLE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Prime Mover | Semitrailer | | | |
| Single steer | Single axle | | | |
| Twinsteer | Tandem-axle group | | | |
| Single-axle drive group | Tri-axle group | | | |
| Tandem axle drive group | Quad-axle group | | | |
| Tri-axle drive group |  | | | |
|  | Level 2 | Level 3 | | Level 4 |
| Maximum height (mm) | 4,600 | 4,600 | | 4,600 |
| Maximum height SFV (mm) | 4,300 | 4,300 | | 4,300 |
| Maximum width (mm) | 2,500 | 2,500 | | 2,500 |
| Maximum width SFV (mm) | 2,550 | 2,550 | | 2,550 |
| Maximum mass (t) | 85.0 | 110.0 | | 115.0 |
|  | GML | CML | | HML |
| Single steer axle (t) | 7.1 | 7.1 | | 7.1 |
| Euro VI (single/complying steer axle) (t) | 6.5/7.0\* | 6.5/7.0\* | | 6.5/7.0\* |
| Twinsteer axle group (t) | 11.0 | 11.0 | | 11.0 |
| Euro VI (twinsteer) (t) | 11.5\* | 11.5\* | | 11.5\* |
| Single axle (t) | 9.0 | 9.0 | | 9.0 |
| Tandem axle group (t) | 16.5 | 17.0 | | 17.0 |
| Tri-axle group (t) | 20.0 | 21.0 | | 22.5 |
|  | GML | | QML | |
| Quad-axle (t) | 20.0 | | 27.0 | |
| Permitted Exemptions - ADR | | | | |
| Rule 43, Clause 6.2.1 (Length – Trailers) | | | | |
| Rule 43, Clause 6.2.3 (Rear overhang – Trailers) | | | | |
| Rule 43, Clause 6.2.4 (Height – Trailers) | | | | |
| Rule 43, Clause 9.4 (Retractable axles) | | | | |
| Permitted Exemptions - HV(MDL)NR | | | | |
| Schedule 6, Section 3 (Length – General) | | | | |
| Schedule 6, Section 4 (Length – Trailers) | | | | |
| Schedule 6, Section 5 (Length – Rear overhang) | | | | |
| Schedule 6, Section 8 (Height) | | | | |
| **Permitted Exemptions – Section 8 of HV(Gen)NR** | | | | |
| \*Pavement Vertical Loading (A1) – 6.5t, 7.0t, or 11.5t steer axle mass for Euro VI prime movers used in Road Trains | | | | |