

Integration of Euro VI Vehicles into the Performance Based Standards (PBS) Scheme

Purpose

This information sheet provides guidance on the integration of Euro VI vehicles within the Performance Based Standards (PBS) scheme. It outlines the process for obtaining PBS approval for a Euro VI vehicle.

What are Euro VI vehicles?

The Australian Government has introduced a new emissions standard for new heavy vehicles; Australian Design Rule (ADR) 80/04, which aligns with the European Euro VI standard. This has resulted in heavier Euro VI (ADR 80/04) vehicles than equivalent Euro V (ADR 80/03) and earlier models. The increased mass is due to the required additional advanced emission systems.

In response, the Heavy Vehicle (Mass, Dimension and Loading) Regulation (MDL) has been amended to increase mass limits for Euro VI heavy vehicles.

For details on vehicle eligibility and mass limits for Euro VI vehicles please refer to [ADR 80/04 \(Euro VI\) emissions mass limits increase - Information sheet](#).

PBS mass limits for Euro VI vehicles

Euro VI vehicles approved through the PBS scheme are entitled to the same mass increases as prescriptive vehicles, provided a design assessment has been conducted at the increased masses and the vehicle is demonstrated to pass the PBS standards.

The mass transfer provision—which allows a 0.5-tonne transfer between the steer and drive axle groups—is also available to PBS vehicles, provided it has been accounted for in the approved design.

Summary of mass limits applicable to Euro VI vehicles:

- Euro VI vehicle (complying steer axle) - 7t
- Euro VI vehicle (single steer axle) - 6.5t
- Euro VI vehicle (twinsteer) - 11.5t

Refer to [Appendix A](#) for sample mass tables for PBS combinations with Euro VI vehicles.

Refer to [Appendix B](#) for a list of operating conditions applicable to PBS combinations with Euro VI vehicles.

Integration of Euro VI vehicles into PBS

Obtaining PBS approval for a Euro VI vehicle is a three-step process:

Step 1: Obtain or amend an existing Design Approval to enable the increased Euro VI mass limits.

Step 2: Certify your vehicle against the updated Design Approval and obtain a PBS Vehicle Approval.

Step 3: Arrange access to the road network in accordance with the updated Vehicle Approval.

Step 1: PBS Design Approval

For PBS combinations, the use of a Euro VI vehicle does not automatically permit access to increased mass limits.

To utilise these limits under an existing Design Approval, the design must be re-assessed at the higher masses, and the Design Approval must be updated to include the Euro VI option.

Pre-Advised (PA) Designs

The *Heavy Vehicle National Law* requires that applications for PBS Design Approval be submitted to the PBS Review Panel (the Panel) for review and advice. To streamline this process and reduce approval timeframes, the National Heavy Vehicle Regulator (NHVR) and the Panel have established a 'Pre-Advised' (PA) process. This allows the NHVR to process certain design applications without referring them to the Panel.

Design modifications for the inclusion of Euro VI vehicles have been Pre-Advised by the Panel and thus can be processed directly by the

NHVR, without submission to the Panel. This improves turnaround times and minimises delays when processing DA applications.

To arrange for a Design Approval modification, please speak to an accredited [PBS Assessor](#). Where possible it is recommended that you approach the same PBS Assessor who originally assessed the design. The Assessor information can be found on the front page of your PBS Design Approval document.

Step 2: PBS Vehicle Approval

Once the Design Approval (DA) is updated—or a new DA is obtained—your Euro VI vehicle must be certified by an authorised [PBS Certifier](#), who will lodge a PBS Vehicle Approval (VA) application with the NHVR on your behalf.

The NHVR will then issue a new VA that reflects the updated Euro VI mass limits.

VA number change

Note that if modifying current or adding new Euro VI vehicles to an existing VA, a new VA number will be issued due to increase in mass.

6.5t/11.0t Steer Mass Option

All Euro VI combinations will be provided with two mass table options by default on their VA:

- Increased Euro VI masses (single steer – 7t or twinsteer - 11.5t); and
- Another with standard masses (single steer – 6.5t or twinsteer - 11.0t).

Operators may select either mass limit option when applying for access. The standard 6.5 or 11-tonne option ensures the vehicle remains eligible for operation under applicable access notices.

Step 3: Access

If modifying an existing PBS Vehicle Approval (VA), due to mass increase for Euro VI vehicles, a new PBS VA number will be issued. This will require reapplying for any existing access permits that were associated with the original VA.

Operators may request to have Euro VI vehicles added to an existing VA without a mass increase. In this case, there will be no increase in masses

allowing the existing VA number to be preserved for access purposes. If mass transfer is approved in the corresponding Design Approval, it may still be applied, and the VA number will still be preserved.

Changes to twinsteer axle spacing

When adding vehicles to an existing VA, a change in the axle spacing footprint compared to vehicles originally listed on the VA will trigger the issue of a new VA number, resulting in the need to reapply for access permits.

However, a Euro VI twinsteer vehicle can be added without a change to the VA number if the steer axle spacing differs by no more than 500 mm and no mass increase has occurred.

Access permit

Key messages for operators when applying for access:

- A new access permit application will be required if the VA number changes. Access permit applications cannot be amended; a new application must be submitted.
- A new permit container and permit number will be generated for the updated VA number.
- When reapplying for access, operators must clearly specify the combinations and mass options listed on the VA for which access is being requested.
- Operators are encouraged to reapply only for the specific routes required for Euro VI vehicle combinations, rather than the entire existing permit.
- The standard 28-day Road Manager consent timeframe applies.

Euro VI prime movers in PBS road trains

Under the MDL, Euro VI prime movers are currently excluded from use in road train combinations. However, within the PBS scheme, Euro VI vehicles may be approved for use in A-double or other road train configurations under Section 8 of the Heavy Vehicle (General) National Regulation – ‘non-compliance with the PBS Pavement Vertical Loading Standard’.

A Section 8 exemption is required due to the Euro VI steer axle mass of 7.0/11.5 tonnes exceeding the

prescribed limit of 6.5/11.0 tonnes. If granted, the following additional exemption will be listed on your PBS Design and Vehicle Approvals:

- 'Approval under Section 8 of HV(Gen)NR Noncompliance - Pavement Vertical Loading (A1) - 7.0t or 11.5t steer axle mass for Euro VI complying prime movers used in Road Trains.'

Pre-Advised (PA) Designs

Design applications for Road Train combinations with a Section 8 exemption for Euro VI steer axle mass have been Pre-Advised by the Panel and may be processed by the NHVR directly without referral to the Panel, reducing application processing time.

Access notices

Updating a Vehicle Approval to include increased Euro VI vehicle masses may also impact the ability to operate under Notice due to the increase to the axle mass and GCM limits. Affected national notices include:

- *National Class 2 Performance Based Standards (High Productivity) Authorisation Notice*
- *National Class 2 PBS Level 1 & 2A Truck and Dog Trailer Authorisation Notice 2024 (No.2)*
- *National Class 2 Performance Based Standards (Tier 1) Authorisation Notice*

The affected state notices include:

- *Queensland Class 2 Performance Based Standards A-Double (Toowoomba to Port of Brisbane) Authorisation Notice*

In many cases, the increased Euro VI vehicle masses will put vehicles above the allowable limits stated in these notices and result in ineligibility to operate on the associated networks.

Additionally, PBS road train combinations (i.e., A-Doubles) containing a Euro VI prime mover approved under Section 8 do not currently qualify for operation under the following Notice:

National Class 2 Performance Based Standards (High Productivity) Authorisation Notice or the National Class 2 Performance Based Standards (Tier 1) Authorisation Notice.

Removing barriers for Euro VI vehicles

The NHVR strongly supports the adoption of Euro VI vehicles within the PBS scheme. Incorporating Euro VI vehicles will contribute to reduced heavy vehicle emissions, improved air quality and health outcomes, and provide access to the latest vehicle technologies for transport operators.

As part of this commitment, the NHVR will continue to work with stakeholders to identify opportunities to remove barriers to the adoption of Euro VI vehicles. Specifically, the NHVR will:

- Lead and provide technical input into the development of a framework under which a design re-assessment would not be required for the addition of Euro VI vehicles to existing designs.
- Prioritise the review and update of relevant notices to ensure PBS combinations containing Euro VI vehicles are eligible to operate under those notices.
- Work with road managers to obtain access pre-approvals for cases where Euro VI vehicles are added to an existing Vehicle Approval resulting in a mass increase, so that road manager consent is not required and the access permit can be administratively processed and reissued by the NHVR.

Contact and feedback

This information sheet was produced by the PBS Review Team. For any queries or feedback, please contact PBSReview@nhvr.gov.au.

Appendix A: Euro VI mass table examples

Sample mass table: 3-axle truck 4-axle dog

Table 1: PBS approval at Level 2 with NO mass transfer:

If your Euro VI vehicle is approved without the mass transfer allowance, the mass table will simply show the increased Euro VI mass limit on the steer axle at 7.0 tonnes.

Table 1
Truck 1 and Trailer 1

Mass Limits	Level 2		Axle Group Masses	Level 2		
				GML	CML	HML
GML (t)	56.5		Steer (t)	7.0	7.0	7.0
CML (t)	58.0		Drive (t)	16.5	17.0	17.0
HML (t)	58.0		Trailer Front (t)	16.5	17.0	17.0
Bridge Assessment	Tier 1		Trailer Rear (t)	16.5	17.0	17.0

Table 2: 6.5t option is also provided:

In addition to the 7.0-tonne Euro VI steer axle option, the same combination will also be provided with a standard 6.5-tonne steer axle option. At these masses, the combination remains eligible for access under all current applicable notices. Note that the gross combination mass (GCM) values for the 6.5-tonne option are adjusted accordingly and reduced by 0.5 tonnes.

Table 2
Truck 1 and Trailer 1

Mass Limits	Level 2		Axle Group Masses	Level 2		
				GML	CML	HML
GML (t)	56.0		Steer (t)	6.5	6.5	6.5
CML (t)	57.5		Drive (t)	16.5	17.0	17.0
HML (t)	57.5		Trailer Front (t)	16.5	17.0	17.0
Bridge Assessment	Tier 1		Trailer Rear (t)	16.5	17.0	17.0

Table 3: PBS approval at Level 2 WITH mass transfer:

If your Euro VI vehicle is approved with the mass transfer allowance:

- The steer axle mass limit of 7.0 tonnes applies.
- An asterisk (*) will appear next to the steer and drive axle mass limits to indicate that a combined mass limit applies. A corresponding note is provided at the bottom of the mass table to explain the application of the mass transfer.
- A combined mass limit across axle groups 1 and 2 is included. While a 0.5-tonne transfer is permitted between the steer and drive axle groups, the total mass across both groups must not exceed the sum of their individual limits.

Table 3
Truck 1 and Trailer 1

Mass Limits	Level 2	Axle Group Masses	Level 2		
			GML	CML	HML
GML (t)	56.5	Steer (t)	7.0*	7.0*	7.0*
CML (t)	58.0	Drive (t)	16.5*	17.0*	17.0*
HML (t)	58.0	Trailer Front (t)	16.5	17.0	17.0
Bridge Assessment	Tier 1	Trailer Rear (t)	16.5	17.0	17.0
The mass across axle groups is limited to -					
Axle Groups		GML	CML	HML	
1 to 2 (Euro VI)		23.50	24.00	24.00	
*Euro VI Mass Transfer Allowance: The mass of the Drive axle may be increased by up to 0.5t provided there is a corresponding decrease in the mass on the vehicle's steer axle.					

Appendix B: Euro VI operating conditions

The following list of operating conditions are related to Euro VI vehicles:

If the mass transfer is applicable for the Euro VI hauling unit:

- *The mass on the drive axle of an eligible vehicle may be increased by up to 0.5t if there is a corresponding decrease in the mass on vehicle's steer axle group.*

If the mass transfer is NOT applicable for the Euro VI hauling unit:

- *Mass transfer granted by Euro VI is not applicable and the drive axle loads must not exceed the limits specified in the associated mass table(s).*

Euro VI 6.5t (single steer axle) mass eligibility:

- Euro VI single steer axle requirements:
 - *an engine that complies with the engine emission standards of Australian Design Rule (ADR) 80/04 or a later version of ADR 80.*

Euro VI 7.0t (complying steer axle) mass eligibility:

- Euro VI complying steer axle requirements:
 - *an engine that complies with the engine emission standards of Australian Design Rule (ADR) 80/04 or a later version of ADR 80; and*
 - *a front underrun protection device (FUPD) that complies with UN ECE Regulation 93 or ADR 84; and*
 - *a cabin that complies with UN ECE Regulation 29; and*
 - *tyres with section widths of at least 315mm.*

Euro VI 11.5t (twinsteer) mass eligibility:

- Euro VI twinsteer axle requirements:
 - *an engine that complies with the engine emission standards of Australian Design Rule (ADR) 80/04 or a later version of ADR 80; and*
 - *a load-sharing suspension system for the axle group; and*
 - *tyres with section widths of at least 275mm.*