

IPAC-22 | Euro VI vehicles and PBS Design and Vehicle Approval applications

Audience: PBS Assessors and Certifiers

Effective Date: 18 July 2025

This IPAC provides details on how Euro VI vehicles are to be captured in PBS Design Approval (DA) and Vehicle Approvals (VA) applications.

For the purposes of this IPAC, Euro VI vehicle is the term used for a vehicle that meets the *Heavy Vehicle (Mass, Dimension and Loading) Regulation* (MDL) definition.

Background

This IPAC should be read in conjunction with the Information Sheet 'Integration of Euro VI Vehicles into the Performance Based Standards (PBS) Scheme', which provides a general overview and outlines the process for integrating Euro VI vehicles into the PBS scheme. To avoid duplication, where possible, content already covered in the Information Sheet has been omitted from this IPAC. It is important that Assessors and Certifiers refer to both documents together.

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 Design Approval

Addition of Euro VI option to an existing DA

For PBS combinations, the use of a Euro VI vehicle does not automatically allow access to the increased mass limits. To take advantage of the increased mass limits for an existing design, re-assessment of the combination(s) at the increased Euro VI mass limits is required.

The Panel has agreed that all design modifications seeking to add Euro VI option to an existing design, be approved via the Variation process without requiring submission to PRP. This allows NHVR to administratively process and issue a DA, reducing application processing time.

Pre-Advised specifications

The Panel has agreed to extend all existing Pre-Advised (PA) specifications to accommodate for Euro VI vehicles.

This includes PA A-double and B-triple combinations requiring a Section 8 exemption. For

more information, refer to section 'Euro VI Prime Movers in PBS Road Trains'.

DA Form updates

The Part A and Part B Design Approval application forms have been revised to accommodate for Euro VI vehicles.

Design Approval Application Form - Part A

The *Part A Form* has been revised and now includes the following for the Hauling Unit:

- Euro VI 'Yes/No' declaration.
- Euro VI Mass Transfer Allowance 'Yes/No' declaration – this must show 'Yes' for the resultant Design Approval to permit the allowance.
- Complying Steer Axle 'Yes/No' declaration.
- Updated Pre-Advised specifications.
- Now includes Safer Freight Vehicles.

Design Approval Application Form - Part B

The *Part B* has also been revised and now includes the following for the Hauling Unit:

- Euro VI mass increase eligibility in the Vehicle Physical Characteristics (A1) table. Separate rows have been added for each of the 3 Euro VI vehicle types.

Part A and Part B Design Approval application forms can be found on our [website](#).

Modification of existing DA - Part B

When modifying an existing DA, the existing Part B form must be updated by the Assessor to include the applicable Euro VI eligibility option.

Design Approval Assessment

Mass tables

Mass tables shown on the DA must reflect any increased total combination and axle group masses for Euro VI vehicles.

Axle group masses

The axle mass limits shown in the mass table must reflect the maximum legal mass limit for that axle group and **must exclude any mass transfer allowance**.

Example of correct axle mass limit application:

- Euro VI vehicle (complying steer axle) – 7.0t.
- Tandem drive axle – 16.5t GML and 17.0t CML/HML.

Axle group mass limits must exclude the Mass Transfer Allowance. Tandem drive axle mass cannot be listed as 17t at GML and 17.5t at CML/HML in the mass table as it exceeds the maximum allowable mass for that axle group.

Euro VI Mass Transfer Allowance

The Euro VI Mass Transfer Allowance must be considered in the PBS assessment. The PBS Assessor has the discretion to allow or prohibit the mass transfer.

Limiting mass transfer to a value less than 0.5t is not permitted.

Mass Transfer Eligibility

To be eligible for the mass transfer allowance, the vehicle must meet all requirements applicable to a Euro VI vehicle. For example, a Euro VI vehicle (complying steer axle) the operational mass on the steer axle may be capped below 7.0 tonnes, however, the tyres, axle, and suspension must all be rated for a minimum of 7.0 tonnes.

Mass Transfer to be shown in Mass Table

On the DA and VA, the application of a mass transfer is applied in a Mass Table via a mass limit across axle groups 1 and 2 as well as the following condition stated in the mass table:

'Euro VI Mass Transfer Allowance: The mass on the Drive axle group may be increased by up to 0.5t provided there is a corresponding decrease in the mass on the vehicle's steer axle.'

Prime Mover 1 and Trailer Set 1

Mass Limits	Level 2
GML (t)	70.2
CML (t)	72.2
HML (t)	78.2
Bridge Assessment	Tier 1

Axle Group Masses	Level 2		
	GML	CML	HML
Steer (t)	7.0*	7.0*	7.0*
Drive (t)	16.5*	17.0*	17.0*
Lead Trailer (t)	20.0	21.0	22.5
Dolly (t)	20.0	21.0	22.5
Rear Trailer (t)	20.0	21.0	22.5
The mass across axle groups is limited to -			
Axle Groups	GML	CML	HML
1 to 2 (Euro VI)*	23.50	24.00	24.00
1 to 4	60.85	62.85	66.35
2 to 4	52.65	54.65	58.15
2 to 5	63.70	65.70	71.70
3 to 5	54.30	56.30	61.80
*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.			

Figure 1: Example mass table for a Euro VI vehicle with mass transfer allowance.

6.5t/11.0t Steer Mass Option

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

- Increased Euro VI masses (complying steer axle – 7.0t, or twinsteer - 11.5t); and
- Another with standard masses (complying steer axle – 6.5t, or twinsteer - 11.0t).

Operators may select the mass limit when applying for access. The standard 6.5 or 11.0 tonne option ensures that the vehicle remains eligible for operation under applicable access notices.

The non-Euro VI option will be automatically included on the VA and does not need to be included on the DA. The DA application should only reflect the higher Euro VI mass option.

Bridge Loading (Tier 1)

The Tier 1 bridge formula assessment for combinations containing a Euro VI vehicle is to be conducted using the following steer mass:

- 6.0t for single steer axle;
- 11.0t for twinsteer.

Operating conditions

For list of operating conditions applicable to PBS Euro VI vehicles please refer to Information Sheet 'Integration of Euro VI Vehicles into the Performance Based Standards (PBS) Scheme'.

Euro VI prime movers in PBS road trains

Under prescriptive legislation, 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 road train configurations through an exemption under *Section 8* of the *Heavy Vehicle (General) National Regulation*, specifically for non-compliance with the PBS Pavement Vertical Loading Standard.

This exemption must be explicitly requested as part of the DA application.

Note: A 0.5-tonne Euro VI steer axle mass increase—for 7.1t option available under prescriptive legislation to hauling units of road trains fitted with tyres with a section width of at least 375 mm—is not permitted under the PBS scheme. That means that mass increase to 7.6t is not permitted under PBS.

Vehicle Certification and Vehicle Approvals

Euro VI vehicle cannot be added via ASO

A Euro VI vehicle at increased masses cannot be added to a VA via the ASO process. The associated DA must be modified to include Euro VI options. Once a DA has been modified, vehicles must be certified against the updated Part B.

For existing vehicles on a VA, re-certification is needed to confirm eligibility to operate at Euro VI vehicle masses. A fully completed Part B form is required when re-certifying existing vehicles.

Vehicle Certification – Certifier's Certificate

The [Certifier Certificate template](#) has been revised to accommodate for Euro VI options. The document now contains a 'Euro VI' column to identify whether hauling units comply with the requirements to be eligible for Euro VI vehicle mass limits.

When to use the '6.5t' column vs the new 'Euro VI' column in the updated Certifier's Certificate

- For Euro VI vehicles, enter 'Y' in the 'Euro VI' and '6.5t' columns.
- For non-Euro VI vehicle that is the 'standard' complying steer axle vehicle, enter 'Y' in the '6.5t' column.
- If neither column is selected, an information request will be sent to the submitting certifier. If the vehicle is neither Euro VI nor 'standard' complying steer axle – select 'N' in the '6.5t' column.

When updating a VA to reflect Euro VI vehicle mass limits, this new Certifier's Certificate Template must

be used. All data from the existing Certifier's Certificate must be included in the submitted Certificate, along with the additional Euro VI vehicle information.

Labels

If only some VINs listed under a primary label are Euro VI vehicles, sub-labels will need to be utilised to separate the Euro VI vehicles. This is necessary so that only Euro VI vehicle VINs are linked to mass table/s reflecting the increased Euro VI vehicle mass limits on the VA.

If hauling units are dimensionally identical but include a mix of Euro VI and non-Euro VI vehicles, these vehicles should be separated by use of a sub-label, as these vehicles have different mass limits and require separate mass tables.

For more information on labelling requirements please refer to [IPAC 8 'Vehicle Labelling Protocol for PBS Certifications'](#)

Euro VI Vehicle Component Ratings

All Euro VI vehicle definitions include requirements regarding appropriately rated tyres, axles and suspension to permit the increased steer axle group mass.

The MDL definitions for Euro VI vehicles include requirements regarding appropriately rated tyres, axles and suspension. These Euro VI options, require those components be rated to 7t:

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

As the regulation is written, vehicles must comply with these rating requirements even if the application of the mass transfer allowance would result in the steer axle group not operating up to these limits.

The difference between a Euro VI vehicle (single steer axle) and a Complying Steer Axle vehicle

The MDL definition for *Euro VI vehicle (single steer axle)* specifically excludes *complying steer axle vehicles*.

This means that the Mass Transfer provision applicable to Euro VI vehicles is not applicable to Complying Steer Axle vehicles at 6.5 tonnes.

Table 1 Steer axle mass limits by *complying steer axle vehicle* and *Euro VI vehicle* compliance.

		Complying Steer Axle Vehicle?	
		Yes	No
Is the hauling unit fitted with a Euro VI compliant engine?	Yes	7.0t Euro VI vehicle (complying steer axle)	6.5t Euro VI vehicle (single steer axle)
	No	6.5t	6.0t

Contact and feedback

This IPAC was produced by the PBS Review Team.
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