

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

Audience: PBS Assessors and Certifiers
Effective Date: 16 March 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 reflects Heavy Vehicle National Law (HVNL) updates that are due to come into effect on 1 July 2026 and the NHVR's policy to administer and enforce the intention of these updates ahead of the changes that are coming into force.

Relevant information from the **Integration of Euro VI vehicles into the Performance Based Standards (PBS) Scheme Information Sheet** has been incorporated into this IPAC.

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 PBS Review Panel (PRP) 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. Assessors submitting applications which include Euro VI must utilise the latest version of the Part A and Part B forms.

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 allowance allowed on 'Steer/Drive/Either' axle group declaration.
- Complying Steer Axle 'Yes/No' declaration.
- Safer Freight Vehicles 'Yes/No' declaration.
- Updated Pre-Advised specifications.

Part A has been updated to allow the Assessor to specify, for Euro VI compliant vehicles, if the 500 kg mass transfer allowance has been assessed on the steer axle group, or the drive axle group or both. The Assessor must identify this within the Application Summary of the Part A form.

The assessor's selections will determine the format of the mass table on the DA:

Selection	Mass transfer	Steer/drive axle group mass*
500kg on steer only	No	7t/16.5t
500kg on drive only	No	6.5t/17t
500kg on either	Yes	6.5t/17t

*For illustrative purposes only using the Euro VI Complying Steer Axle Steer Mass and General Mass Limits

Design Approval Application Form - Part B

The *Part B Form* 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 Euro VI vehicle types.

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

Modification of existing DA

When modifying an existing DA which includes Euro IV vehicles, the latest set of applicable Part A and Part B forms must be used.

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

In general, axle group mass limits shown in the mass table must reflect the maximum legal mass limit for that axle group with the exception of the Euro IV mass transfer allowance (dealt with separately).

If the Design Approval has been assessed to allow for the Euro VI mass transfer allowance on the drive axle group, the additional mass must be shown on the drive axle group. If the Euro VI mass transfer allowance has been assessed as only applicable to the steer axle group, it should be shown on the steer axle group.

Previous presentation (example):

- Mass transfer allowance applicable on both steer and drive group.
- Euro VI (complying steer axle) vehicle – 7.0t.
- Tandem drive axle – 16.5t GML and 17.0t CML/HML.

New presentation (example):

- Mass transfer allowance applicable on both steer and drive group mass limits must exclude the Mass Transfer Allowance.
- Euro VI (complying steer axle) vehicle – 6.5t.
- Tandem drive axle – 17.0t GML and 17.5t CML/HML.

Euro VI Mass Transfer Allowance

The Euro VI Mass Transfer Allowance must be considered in the PBS assessment if it is to be allowed on the VA. The PBS Assessor has the discretion to allow or prohibit the mass transfer. However, the PBS Assessor may not stipulate a mass transfer allowance of less than 500 kg on either the steer or drive axle groups on the DA.

For vehicles with axle assembly ratings below the maximum allowable by the mass transfer, flexibility in loading will be enabled through the mass transfer condition, in which mass is shown on the drive axle group and can be transferred to the steer up to the lesser of 500 kg or the maximum steer axle group rating.

Mass Transfer Eligibility

The MDL will be updated to remove the specific component rating limits that applied to Euro VI vehicles. As an example, Euro VI vehicles (complying steer axle) will no longer be required to have components rated to 7 t to operate above 6.5 t on the steer axle. Vehicles must still comply with manufacturer's mass limits for components.

Euro IV 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 of the steer axle group may be increased by up to 0.5t provided:*

- there is a corresponding decrease in the mass on the vehicle's drive axle group.
- 315 mm tyres must be fitted to the steer axle when a single steer axle is loaded to above 6.5t.
- Manufacturer's mass limits for components are not exceeded.

Mass Limits	Level 2
GML (t)	57.35
CML (t)	59.35
HML (t)	60.85
Bridge Assessment	Tier 1

Axle Group Masses	Level 2		
	GML	CML	HML
Steer (t)	6.5*	6.5*	6.5*
Drive (t)	17.0*	17.5*	17.5*
Trailer Front (t)	16.5	17.0	17.0
Trailer Rear (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
2 to 4	50.35	52.35	53.85
3 to 4	33.85	35.35	36.85

*Euro VI Mass Transfer Allowance: The mass of the steer axle group may be increased by up to 0.5t provided:

- there is a corresponding decrease in the mass on the vehicle's drive axle group
- 315 mm tyres must be fitted to the steer axle when a single steer axle is loaded to above 6.5t
- Manufacturer's mass limits for components are not exceeded.

Figure 1: Example mass table for a Euro VI vehicle with Mass Transfer Allowance.

If the DA does not allow for the mass transfer allowance, the mass tables on the VA will reflect the masses in the DA, without the mass transfer condition.

6.5t/11.0t Steer Mass Option

The additional non-Euro VI option for mass tables that was provided on VAs previously will not be included in VAs issued after this IPAC commences if the Variant also includes Euro VI mass tables.

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 axle group mass:

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

Drive axle groups should be considered without the Euro VI mass transfer allowance.

Operating conditions

The below operating conditions will be added to Euro VI eligible DAs and VAs as required:

Euro VI (complying steer axle) mass eligibility:

- *Euro VI 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;*

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;*

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 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 options 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 masses 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 ‘Er VI’ column in the updated Certifier’s Certificate

- For Euro VI vehicles, enter ‘Y’ in the ‘Er 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'](#).

Updating existing VAs for previously restricted Euro VI vehicles

For existing VAs, which have the Euro VI mass transfer allowance shown on the steer axle and wish this to be shown on the drive axle group instead, the PBS Certifier may issue a modification request to the NHVR. The NHVR will update both:

- The mass tables on the VA.
- The VA number.

For existing VAs, which contain vehicles which were previously not utilising the Euro VI mass transfer allowance and wish to increase the masses on the mass tables on the VA, the PBS Certifier should resupply completed Part B forms and associated documents to NHVR as part of a VA modification request. PBS Certifiers must ensure that any applicable ASOs, PHMs, PMPs, or other associated documents are also updated to reflect the increased mass allowances.

The NHVR will then update both:

- The mass tables on the VA.
- The VA number.

Certifying vehicles against Euro VI DAs which do not conform with this IPAC

If certifying Euro VI vehicles using a DA that includes Euro VI mass allowances but does not conform to this IPAC, Certifiers should continue to identify the vehicle as Euro VI and as either a complying steer axle vehicle or a single steer axle vehicle. In generating the VA, NHVR will provide mass tables in line with this IPAC.

If a vehicle would otherwise be a Euro VI complying steer axle vehicle, but does not meet the steer axle rating requirements in the Part B form, Certifiers should:

- Select "Yes" to Euro VI complying steer axle

- Note that the vehicle does not meet the 7.0t/11.5t steer axle rating requirement.

Access Considerations

All VAs that are being updated with Euro VI mass tables will be given a new VA number, including:

- Updating a VA to contain Euro VI masses on existing PBS Vehicles.
- Updating a current Euro VI VA to reflect the new mass table format.
- Adding identical footprint units that are eligible for Euro VI when previous VA did not contain Euro VI Mass tables.

Operators must continue to comply with mass tables on any current VA they hold. All previously issued VAs are valid and can be used for access purposes.

If an operator wished to update their VA to reflect the updated mass table formats, a modify application from a PBS Certifier will be required.

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.

Contact and feedback

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

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