PBS combinations fitted with quad-axle groups

This document provides information on PBS combinations fitted with quad-axle groups.

What is a quad-axle group?
A quad axle group means a group of four axles in which the horizontal distance between the centre-lines of the end axles is between 3.2 and 4.9 metres.

Quad-axle group masses
Quad-axle groups have the following masses under General Mass Limits (GML):

<table>
<thead>
<tr>
<th>Quad-axle group description</th>
<th>Mass limit (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad-axle group fitted with single tyres with section widths of less than 375mm</td>
<td>15.0</td>
</tr>
<tr>
<td>Quad-axle group fitted with single tyres with section widths of at least 375mm or dual tyres</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Concessional Mass Limits (CML) and Higher Mass Limits (HML) DO NOT apply to quad-axle groups.

Quad-axle group mass exception limits
The Heavy Vehicle (Mass, Dimension and Loading) National Regulation allows quad-axle group to operate at masses higher than 20 and up to 27 tonnes if:

(a) all axles in the quad axle group are fitted with dual tyres; and
(b) PBS vehicle approval is in force for the vehicle that permits a mass of up to 27t on the quad axle group; and
(c) the vehicle complies with PBS Standards and with the conditions of the PBS vehicle approval.

PBS Operating Conditions

PBS quad-axle operating conditions
Quad-axle Mass Limits (QML) requirements for the operation with mass exceeding 20t on the quad-axle group:
- the quad-axle group must be fitted with a road-friendly suspension system that is certified for tri-axle groups in accordance with the requirements of VSB 11; and
- all axles in the quad-axle group must be fitted with dual tyres; and
- A National Heavy Vehicle Accreditation Scheme (NHVAS) - Mass Management accreditation of the vehicle must be in force for the operator of the vehicle.

Quad-axle mass exception limits (QML)
PBS vehicle approvals previously issued with CML and HML masses are now replaced with QML1 and QML2 respectively.

For example, a mass table for a PBS quad-axle semi-trailer combination is shown below:

<table>
<thead>
<tr>
<th>Axle Group</th>
<th>GML</th>
<th>QML 1</th>
<th>QML 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steer (t)</td>
<td>6.5*</td>
<td>6.5*</td>
<td>6.5*</td>
</tr>
<tr>
<td>Drive (t)</td>
<td>16.5</td>
<td>17.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Semi-Trailer (t)</td>
<td>20.0</td>
<td>21.0</td>
<td>27.0</td>
</tr>
</tbody>
</table>

* Complying steer axle

Tier 3 bridge assessment
A Tier 3 bridge assessment is required when operating above 21t on the quad-axle group.

Quad-axle semi-trailer combinations
A quad-axle semi-trailer combination with a quad-axle group mass that does not exceed 20 tonnes is eligible for General Access; provided it complies dimensionally with the Heavy Vehicle (Mass, Dimension and Loading) National Regulation – Length 19 m, Width 2.5 m, Height 4.3 m and Mass 42.5 tonnes).