

NSW Road Train Modernisation Program

B-Triple & AB-Triple Operating Conditions

Application

- These operating conditions apply to:
 - **B-Triples**, which are a vehicle combinations consisting of a prime mover towing three semi-trailers connected by fifth wheel couplings (refer Diagram 1); and
 - **AB-Triples**, which are a vehicle combination consisting of a prime mover and semi-trailer combination connected, by a converter dolly (with no more than 3 axles), to two semi-trailers which are connected by a fifth wheel coupling (refer Diagram 2).

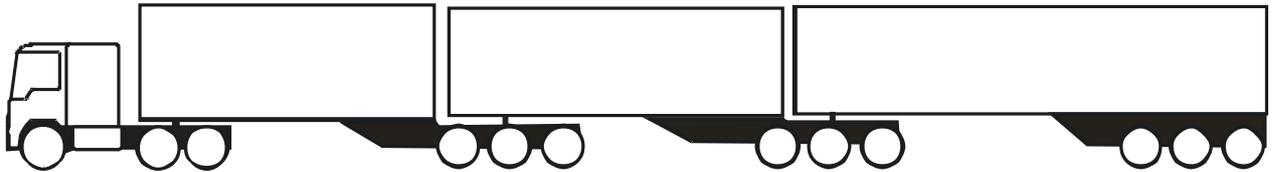


Diagram 1 - typical B-Triple

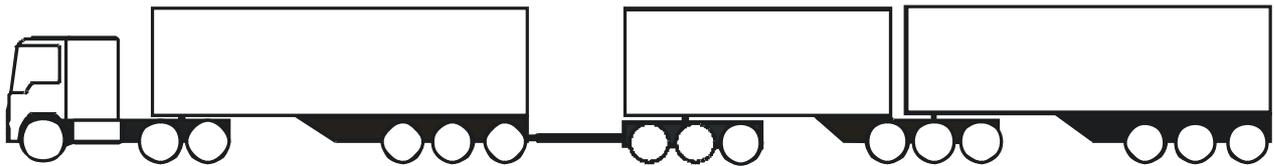


Diagram 2 – typical AB-Triple

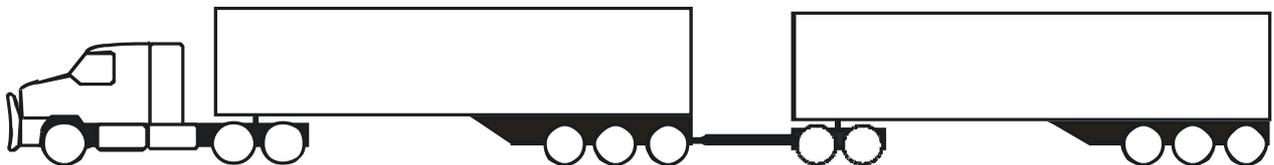


Diagram 3 – typical Road Train

Travel requirements

- A B-Triple or AB-Triple, complying with these operating requirements, may travel on Road Train routes approved by the RTA for B-Triple or AB-Triple travel.
- Any existing travel limitations applying to that Road Train route must be observed e.g. no travel during school bus hours on the Dubbo to Gilgandra section of the Newell Highway.

Certification

- The prime mover, and any trailer that is to be used as part of a B-Triple or AB-Triple, must be certified.
- The certification must be undertaken by a suitably qualified RTA Accredited Signatory and must specifically address the construction, dimension, mass and operational standards that are set out in these operating conditions and relevant Australian Design Rules (ADRs).
- A copy of the certification must be provided with the application for a permit.

Accreditation

The vehicle operator and the vehicle must be accredited under the National Heavy Vehicle Accreditation Scheme (NHVAS) Maintenance and Mass Management Accreditation modules, in accordance with the business rules of each module.

Maximum dimension limits

External dimensions

- A B-Triple or AB-Triple combination, when laden or unladen, must not be more than:
 - **36.5 metres long** (including bullbar and other after-market fittings);
 - **4.3 metres high or up to 4.6 metres high** if complying with the *4.6 Metre High Vehicle Route Notice 2008*, or
 - **2.5 metres wide.**

Internal dimensions

Kingpin-to-rear dimension

The distance from centreline of the king-pin of the first trailer to the rear of the combination must not exceed **31.6 metres**.

Drawbar

For an AB-Triple the draw bar length must be **more than 3 metres and no more than 5 metres**

Note:
B-Triples do not have draw bars

Maximum deck length - combinations transporting livestock

The maximum deck length for a B-Triple or AB-Triple transporting livestock is **28.2 metres**, which is defined as the total deck space for loading livestock, between external walls of the stock crates, excluding any provisions of pens.

Compliance with Australian Design Rule (ADR) 43 dimensions

- Each component vehicle of a B-Triple or AB-Triple must comply, in its own right, with the requirements of Third Edition Australian Design Rule (ADR) 43.
- A semi-trailer operated under the *Class 3 Semi-trailer Exemption Notice 2008*, cannot be operated as part of B-Triple or AB-Triple.

Maximum limits for axles and axle groups

- The maximum axle mass limits for a B-Triple or AB-Triple is the lesser of:
 - the mass limits in Table I; or
 - the manufacturer's mass ratings, or
 - the sum of the mass limits for the tyres fitted to the axles and axle groups.

Table 1 - Mass limits for single axles and axle groups

Description of single axle or axle group	General Mass Limit (tonnes)	Concessional Mass Limit (tonnes)	Higher Mass Limits (tonnes)
STEER AXLE			
Single steer axle Single steer axle	6.0*	6.0*	6.0*
NON-STEER AXLE GROUPS			
Single axles and single axle groups Single axle or single axle group fitted with four (4) tyres	9.0	9.0	9.0
Tandem axle groups Tandem axle group fitted with eight (8) tyres	16.5	17.0	17.0
Quad-axle groups Tri-axle group fitted with twelve (12) tyres.	20.0	21.0	22.5

* - 6.5 tonnes for a prime mover (with a GVM of 15 tonnes or more) complying with the Front Under-run Protection Systems (FUPS), Cabin Strength and ADR 80/01 standards.

Maximum gross mass limits

B-Triple

- The gross mass of a B-Triple must not exceed the lowest of:
 - 82.5 tonnes (GML), 84.5 tonnes (CML), 90.5 tonnes (HML)
 - the sum of the axle and axle groups mass
 - the sum of the manufacturers' mass limits for the prime mover (GVM) and the semi trailers (Gross Trailer Mass), or
 - the gross combination mass (GCM) limit specified by the prime mover manufacturer.

AB-Triple

- The gross mass limit for an AB-Triple must not exceed the lowest of:
 - 102.5 tonnes (GML), 104.5 tonnes (CML), 113 tonnes (HML)
 - the sum of the axle and axle groups mass
 - the sum of the manufacturers' mass limits for the prime mover (GVM) and the semi trailers (Gross Trailer Mass), or
 - the gross combination mass (GCM) limit specified by the prime mover manufacturer.

Mass limits relating to axle spacing

For any B-Triple or AB-Triple, the sum of the axle loads of the axles in any two adjacent axle groups (or of any single axle and the axles in an adjacent axle groups) must not exceed that calculated in accordance with the formula opposite.	$M = 3L + 12.5$ where "M" is the mass limit in tonnes, and "L" is the distance in metres
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Suspension requirements and tyre configuration

Road-friendly air suspension certified in accordance with Vehicle Standards Bulletin 11 and dual tyre axles (4 tyres per axle) must be fitted to all axle groups of B-Triple and AB-Triple trailers, except for the steer axle of the prime mover.

Compliance with standards

- All component vehicles of a B-Triple or AB-Triple combination must comply with the applicable requirements of Schedule 2 of the *Road Transport (Vehicle Registration) Regulation 2007*.

- The prime mover of the combination must comply with ADR 64 *“Heavy Goods Vehicles Designed for Use in Road Trains and B-Doubles”* and each trailer of the combination must comply with ADR63 *“Trailers Designed for Use in Road Trains”*.

Prime mover power requirements

- The minimum power required of a B-Triple or AB-Triple hauling unit must be capable, when operating at the manufacturer’s nominated Gross Combination Mass (GCM), of:
 - starting movement on a 12% gradient; and
 - capable of maintaining a constant speed of 70km/h on a 1% gradient.

Braking requirements

- The braking requirements in these operating requirements apply in addition to the braking system requirements that apply to all heavy vehicles.
- A prime mover used in a B-Triple or AB-Triple combination must have an anti-lock brake system that complies with Australian Design Rules 64.
- A semi-trailer, regardless of its date of manufacture, must have an anti-lock braking system that meets the requirements of ADR 38, if:
 - it is being used in a B-Triple or AB-Triple that includes a road tank vehicle, whether or not the semi-trailer is itself a road tank vehicle, and
 - the road tank vehicle carries dangerous goods.
- Otherwise, the B-Triple or AB-Triple combination must comply with the requirements of Section 5.5 *“Braking requirements for road train or component of road train”* of the *General Notice for the Operation of Road Trains 2005*.

Coupling Requirements

- A B-Triple or AB-Triple must have a minimum D-rating of 162kN for all kingpins, fifth wheel couplings, automatic pin couplings and 186kN for a drawbar-type coupling or drawbar eye (where applicable).
- A B-Triple or AB-Triple must comply with all other requirements set out in Section 5.6 *“Coupling requirements”* of the *General Notice for the Operation of Road Trains 2005*.

Spray suppression devices

- Spray suppression devices must be fitted to all axle groups and single axles of a B-Triple or AB-Triple.
- The spray suppression devices must be certified as complying with the requirements of British Standard AU 200 – 1984, Parts 1 and 2.

Speed limiting

A B-Triple or AB-Triple must comply with the speed limiting requirements of the Third Edition ADR 65 and must be speed limited so that it has a maximum road speed capability of 90 km/h.

Vehicle monitoring

A B-Triple or AB-Triple combination must be either pre-enrolled or fully enrolled in the Intelligent Access Program (IAP) and be in possession of a B-Triple, AB-Triple or an Intelligent Access Permit.

Tracking performance

When travelling in a straight line on a level, smooth surface, all units in a B-Triple or AB-Triple combination must track in the path of the hauling unit without shifting or swerving more than 100mm either side of the path of the hauling unit.

Warning and specific signs

- A sign displaying the words "LONG VEHICLE" must be attached to the front and rear of the B-Triple or AB-Triple combination and
 - must not be more than 1.8 metres and not less than 500mm above ground level; and
 - consist of a yellow reflectorised background not less than 1200mm long by 300mm wide with black letters not less than 180mm high.
- The sign may be in two parts, one part bearing the word "LONG" and the other part bearing the words "VEHICLE".
- A warning sign must have a black border.