



National Class 2 B-double Operator's Guide

December 2022



Figure 1: An example of a B-double

Introduction

The *National Class 2 B-double Operator's Guide* (the Operator's Guide) outlines the requirements for operating a B-double in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria.

This guide also provides specific information on the requirements of operating B-doubles under the *National Class 2 B-double Authorisation (Notice) 2019*.

What is a B-double?

A B-double is defined in the *Heavy Vehicle National Law* (HVNL) as a "combination consisting of a prime mover towing two semitrailers, with the first semitrailer being attached directly to the prime mover by a fifth wheel coupling and the second semitrailer being mounted on the rear of the first semitrailer by a fifth wheel coupling on the first semitrailer."

The prime mover must be manufactured or modified to meet Australian Design Rule (ADR) 64. There are a number of ways that this can be confirmed, including:

- checking the Register of Approved Vehicles rav.infrastructure.gov.au using the vehicle identification number (VIN) for a 'B-double' rating
- checking the physical vehicle for either:
 - a manufacturer's plate (compliance plate) listing the words 'B-double', or
 - a modification plate (blue plate) stating modification code 'S9'. **Note:** This plate may or may not also show the words 'B-double'.

The trailers used in a B-double combination are not required to have a 'B-double rating' or to be fitted with a plate showing 'B-double'.

Note: Vehicles manufactured before 1 July 2021 will not appear on the Register of Approved Vehicles, and vehicles manufactured after this date may not be fitted with a manufacturer's plate.

What is a Class 2 B-double?

A B-double is a class 2 heavy vehicle if it complies with the following mass and dimension requirements prescribed in the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*.

Mass requirements

The total mass of a B-double operating at general mass limits (GML) must not exceed the lesser of:

- the manufacturer's mass limits
- or
- the sum of the mass limit for each axle group on the heavy vehicle as shown in Table 2 and
 - the axle spacing mass limits as outlined in Table 5.

Please note: these requirements are prescribed in Schedule 1 of the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*.

Concessional mass limits

A B-double may operate at concessional mass limits (CML) if the operator holds mass management accreditation for the B-double under the *National Heavy Vehicle Accreditation Scheme* (NHVAS).

More information on CML can be found at www.nhvr.gov.au/cml

Dimension requirements

Table 1 below outlines the maximum dimension requirements for a B-double. Please note, the length of a B-double is dependent on whether it operates at general or restricted access.

Table 1: Dimension requirements

Dimension	Limit (m)
Length	26
Height	4.3
Width	2.5

Axle group mass limits

The following table shows the maximum mass allowable on an axle or axle group.

Please note: the actual mass you can carry on an axle group will depend on whether the vehicle operates at general or restricted access and the relevant axle spacing mass limits table.

Table 2: Mass limits for single axles and axle groups at GML

Axle/s	Axle group/tyres	Axle/vehicle details	Mass limit (t)
	Single axle	Steer axle	6.0
	Single tyres	Non-steer axle, tyres less than 375mm	6.0
		Complying steer axle	6.5
		Non-steer axle, tyres 375mm to 449mm	6.7
		Non-steer axle, tyres at least 450mm	7.0
	Single axle Dual tyres	Fitted on a B-double	9.0
	Twin-steer axle group	Non-load-sharing suspension system	10.0
	Single tyres	Load-sharing suspension system	11.0
	Tandem axle group	Less than 375mm	11.0
	Single tyres	375mm to 449mm	13.3
		At least 450mm	14.0
	Tandem axle group Dual/single tyres	Single tyres on one axle and dual tyres on the other axle	13.0
	Tandem axle group Dual tyres	Fitted on a B-double	16.5
	Tri-axle group	Single tyres on all axles with section width less than 375mm, or single tyres on one or two axles and dual tyres on the other axle or axles	15.0
	Single tyres		
	Tri-axle group Dual tyres	A B-double with either single tyres with at least a 375mm section width, dual tyres on all axles or a combination of those tyres	20.0
	Quad-axle* Single tyres	tyres with section widths of less than 375mm tyres with section widths of at least 375mm or dual tyres	20.0

*Quad axles prohibited when operating on state-controlled roads in Queensland

Note: The Notice does not authorise the use of tri-drive prime movers. Operators with a tri-drive prime mover in their B-double combination require a permit to operate. The Notice does not authorise B-doubles fitted with a quad axle group to operate on Queensland state-controlled roads. This Notice authorises quad axle B-doubles to operate on other roads.

Complying steer axle

A B-double that is a **complying steer axle vehicle** can have an additional 0.5 tonnes on the steer axle. This applies to both general and restricted access B-doubles.

A B-double with a single steer axle is a complying steer axle vehicle if the vehicle has all of the following:

- an engine complying with the emission control requirements contained in ADR 80/01 (Euro IV engine) or a later version of ADR 80
- a front underrun protection device that complies with UN ECE Regulation No. 93 or ADR 84 – Front Underrun Impact Protection
- a cabin that complies with UN ECE Regulation No. 29
- appropriately rated tyres, axle and suspension to permit 6.5 tonnes on the steer axle
- a gross vehicle mass (GVM) of 15 tonnes or more.

Access to the road network

The *National Class 2 B-double Authorisation (Notice) 2019* authorises the use of class 2 B-doubles to have access to the road network. B-doubles have two types of access, either **general access** or **restricted access** under the Notice. This guide outlines the B-double requirements for each type of access.

The Notice is made under section 138 of the HVNL, which gives legal effect to this authorisation. The Notice is published in the Commonwealth Gazette and is also available on the NHVR's website.

Drivers do not need to carry a copy of the Notice or Operator's Guide when operating a B-double under the Notice.

Operators must ensure they comply with the 'Specified Road Manager Network Requirements' in Appendix 1 of this guide.

General access

For a B-double to have general access, the combination must meet the mass and length limits outlined in Table 3.

Table 3: General access mass and length limits

States and Territories	Mass (t) ¹	Length (m)
Australian Capital Territory	50	19
Queensland	50	19
New South Wales	50	19
South Australia	50	19
Tasmania	50	21 ²
Victoria	50	19

Note:

1. General access is granted up to 50 tonnes. A general access B-double may add an additional 0.5 tonnes on the steer if the prime mover is a complying steer axle vehicle. If eligible for CML, a general access B-double may operate up to 51.5 tonnes.
2. B-doubles operating in Tasmania have a general access length limit of 21 metres. The general access length limit is increased by 0.3 metres to 21.3 metres if the rear trailer of the B-double has a rear load restraining guard that complies with the [Forestry Safety Code \(Tasmania\) 2007](#).

Axle spacing mass limits

B-doubles that have general access must comply with the axle spacing mass limits specified in Table 4.

The spacing between axle groups determines the maximum allowable mass over those axle groups.

Figure 2 shows an example of the axle spacing requirements and mass limits for a 50 tonne general access B-double.

As shown in Figure 2, the sum of two adjacent axle groups is 29.5 tonnes and the distance between the outer most axles of those groups must be a minimum of 5.7 metres in accordance with Table 4. The same check applies to all axle groups (i.e. for a B-double with four axle groups there are six checks which all must comply with Table 4).

The spacing between axle groups determines the maximum allowable mass over those axle groups.

Table 4: General access axle spacing mass limits

Length of axle spacing (m)		Mass Limit (t)	Length of axle spacing (m)		Mass Limit (t)
At least	Less than		At least	Less than	
3.5	3.7	23	8.2	8.3	37
3.7	3.8	23.5	8.3	8.5	37.5
3.8	4	24	8.5	8.7	38
4	4.2	24.5	8.7	8.8	38.5
4.2	4.3	25	8.8	9	39
4.3	4.5	25.5	9	9.2	39.5
4.5	4.7	26	9.2	9.3	40
4.7	4.8	26.5	9.3	9.5	40.5
4.8	5	27	9.5	9.7	41
5	5.2	27.5	9.7	9.8	41.5
5.2	5.3	28	9.8	10	42
5.3	5.5	28.5	10	10.5	42.5
5.5	5.7	29	10.5	11	43
5.7	5.8	29.5	11	11.5	43.5
5.8	6	30	11.5	12	44
6	6.2	30.5	12	12.5	44.5
6.2	6.3	31	12.5	13	45
6.3	6.5	31.5	13	13.5	45.5
6.5	6.7	32	13.5	14	46
6.7	6.8	32.5	14	14.5	46.5
6.8	7	33	14.5	15	47
7	7.2	33.5	15	15.5	47.5
7.2	7.3	34	15.5	16	48
7.3	7.5	34.5	16	16.5	48.5
7.5	7.7	35	16.5	17	49
7.7	7.8	35.5	17	17.5	49.5
7.8	8	36	17.5	-	50
8	8.2	36.5			

Note:

The 0.5 tonnes for a complying steer axle vehicle is not included when determining the minimum axle spacing for a given mass.

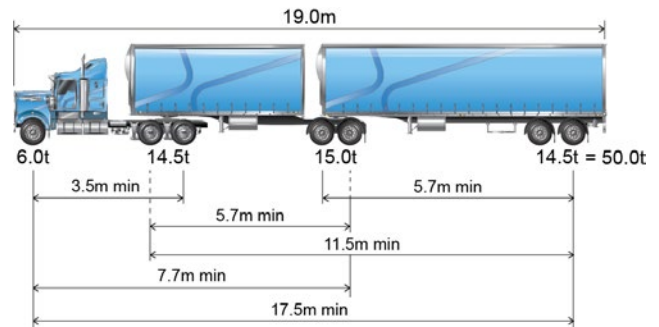


Figure 2: General access minimum axle spacing

Tri-tri B-doubles

A tri-tri B-double is a B-double with tri-axle groups on both trailers.

Tri-tri B-doubles with a total gross combination mass exceeding 52.5 tonnes must conform to the X-Y rule:

$$X - Y \leq 1.0 \quad Y - X \leq 1.3$$

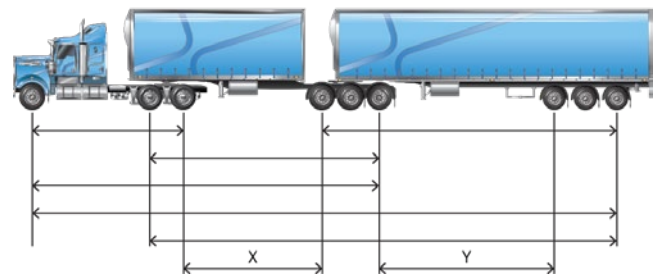


Figure 3: X-Y rule illustration

If distance X is greater than distance Y, the difference of these distances must not be more than 1m.

If distance Y is greater than distance X, the difference of these distances must not be more than 1.3m.

Restricted access

In addition to complying with the mass and dimension requirements, B-doubles with restricted access must comply with the axle spacing mass limits in Table 5. The spacing between axle groups determines the maximum allowable mass over those axle groups.

B-doubles that exceed the general access mass limit are classified as a restricted access B-double. These vehicles can operate up to 55.5 tonnes under GML (56.0 tonnes with a complying steer axle).

Figure 3 shows an example of the axle spacing requirements and mass limits for a 19 metre restricted access B-double (over 50 tonnes).

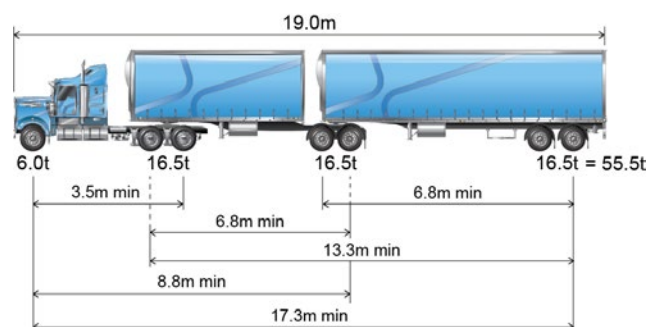


Figure 4: 19 metre restricted access B-double

Figure 4 shows an example of the axle spacing requirements and mass limits for a 26 metre B-double. This vehicle can operate up to 62.5 tonnes under GML (63.0 tonnes with a complying steer axle).

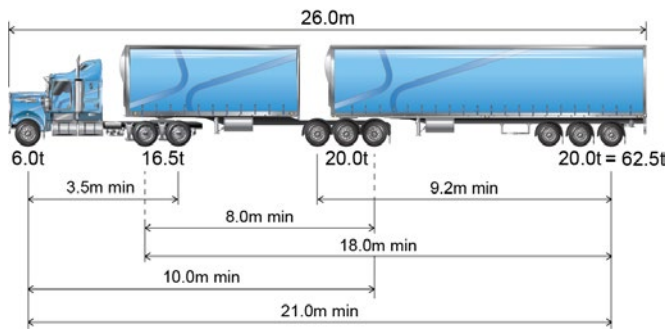


Figure 5: 26 metre restricted access B-double

The spacings between axle groups are controlled to limit the impact of trucks on bridges.

Note: The 0.5 tonnes for a complying steer axle vehicle is not included when determining the minimum axle spacing for a given mass.

Maximum length

A B-double may be up to 26 metres long if it meets the following requirements:

The distance from the front articulation point of the most forward semitrailer to the rear of the B-double is not more than 20.6 metres

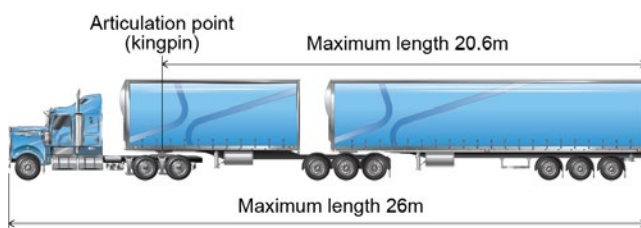


Figure 6: Dimension requirements for a 26 metre B-double

The prime mover in the B-double:

- is fitted with a front underrun protective device complying with Regulation No. 93 made under the UNECE Agreement or ADR 84 – Front Underrun Impact Protection
- for a prime mover manufactured after 31 December 2005 – is fitted with a cab complying with Regulation No. 29 made under the UNECE Agreement
- other than for a deck permitted under subsection (3A), does not have an area carrying, or built to carry, goods.

Note: Subsection (3A) is from the Heavy Vehicle (Mass, Dimension and Loading) National Regulation.

(3A) A prime mover in a B-double carrying, or designed to carry, vehicles may have a deck fitted over the top of the prime mover that is carrying, or built to carry, a vehicle.

Table 5: Restricted access axle spacing mass limits

Length of axle spacing (m)		Mass Limit (t)	Length of axle spacing (m)		Mass limit (t)
At least	Less than		At least	Less than	
0	2.5	15	9.8	10	42
2.5	3.7	23	10	10.2	42.5
3.7	3.8	23.5	10.2	10.3	43
3.8	4	24	10.3	10.5	43.5
4	4.2	24.5	10.5	10.7	44
4.2	4.3	25	10.7	10.8	44.5
4.3	4.5	25.5	10.8	11	45
4.5	4.7	26	11	11.2	45.5
4.7	4.8	26.5	11.2	11.3	46
4.8	5	27	11.3	11.7	46.5
5	5.2	27.5	11.7	12	47
5.2	5.3	28	12	12.3	47.5
5.3	5.5	28.5	12.3	12.7	48
5.5	5.7	29	12.7	13	48.5
5.7	5.8	29.5	13	13.3	49
5.8	6	30	13.3	13.7	49.5
6	6.2	30.5	13.7	14	50
6.2	6.3	31	14	14.3	50.5
6.3	6.5	31.5	14.3	14.7	51
6.5	6.7	32	14.7	15	51.5
6.7	6.8	32.5	15	15.3	52
6.8	7	33	15.3	15.7	52.5
7	7.2	33.5	15.7	16	53
7.2	7.3	34	16	16.3	53.5
7.3	7.5	34.5	16.3	16.7	54
7.5	7.7	35	16.7	17	54.5
7.7	7.8	35.5	17	17.3	55
7.8	8	36	17.3	17.7	55.5
8	8.2	36.5	17.7	18	56
8.2	8.3	37	18	18.3	56.5
8.3	8.5	37.5	18.3	18.7	57
8.5	8.7	38	18.7	19	57.5
8.7	8.8	38.5	19	19.3	58
8.8	9	39	19.3	19.7	58.5
9	9.2	39.5	19.7	20	59
9.2	9.3	40	20	20.3	59.5
9.3	9.5	40.5	20.3	20.7	60
9.5	9.7	41	20.7	21	60.5
9.7	9.8	41.5	21	-	62.5



Warning signs

B-doubles longer than 22 metres must display a long vehicle warning sign at its rear (see example below).

Figure 6: Example of a long vehicle sign



Warning sign requirements and specifications can be found in the Vehicle Standards Guide (VSG-19) at www.nhvr.gov.au/vsg

Stated areas and routes

A B-double may use stated areas or routes anytime unless specified as a travel condition on the relevant road network. The B-double networks for each state and territory are provided in the links below. If any part of your journey is not on an approved network, you will need to apply for a permit from the NHVR.

Operators must ensure they comply with the 'Specified Road Manager Network Requirements' in Appendix 1 of this guide.

Australian Capital Territory

<https://www.cityservices.act.gov.au/roads-and-paths/restricted-access-vehicle-networks>

Queensland

www.tmr.qld.gov.au/business-industry/Heavy-vehicles/Heavy-vehicle-route-maps-and-restrictions

New South Wales

www.rms.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html

South Australia

maps.sa.gov.au/ravnet/index.html

Tasmania

www.transport.tas.gov.au/vehicles_and_vehicle_inspections/heavy_vehicles/Heavy_vehicle_access

Victoria

www.vicroads.vic.gov.au/business-and-industry/heavy-vehicle-industry/heavy-vehicle-map-networks-in-victoria

Higher mass limits

A B-double may be eligible to operate at higher mass limits (HML). The requirements for HML can be found at www.nhvr.gov.au/hml

Complying with the Heavy Vehicle National Law

The operator of a heavy vehicle must ensure their vehicle complies with the ADRs and the HVNL. Using or permitting another person to use a defective heavy vehicle, or a heavy vehicle with unapproved modifications on a road is an offence.

Failure to comply with the conditions of the Notice may result in the driver and /or operator being liable for an offence.

Penalties can include infringement notices or prosecution. For more information, see the Compliance and Enforcement Bulletins at www.nhvr.gov.au/ce-bulletins

Chain of responsibility

Under the HVNL Chain of Responsibility (CoR) laws, everyone in the transport supply chain must take positive steps to prevent any breach of the mass, dimension and loading provisions.

For more information, on your CoR obligations see www.nhvr.gov.au/cor

For more information:

Visit: www.nhvr.gov.au

Email: info@nhvr.gov.au

Phone: 13 NHVR* (13 64 87)

*Standard 1300 call charges apply. Please check with your phone provider.

Disclaimer: This information is only a guide and should not be relied upon as legal advice.

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Appendix 1 Specified road manager network requirements

Non-participating road managers have not yet provided support for the Notice.

Access on local roads for non-participating road managers is **not approved** for any B-double combination under the Notice and operators will need to **apply for an NHVR permit**. Access to state roads on the approved nominated networks in these council areas is allowed under the Notice.

Table 1 Non-participating road managers

New South Wales
Ku-Ring-Gai Council
Queensland
Mornington Aboriginal Shire Council
Northern Peninsula Area Regional Aboriginal Council
Palm Island Aboriginal Council
Torres Strait Island Regional Aboriginal Council
South Australia
City of Victor Harbor
Corporation of the Town of Walkerville

Table 2 South Australian participating road manager conditions

South Australia																																			
City of Adelaide	General access is not permitted for 19m B-doubles. These combinations can only access roads on the South Australian 23m and 26m B-double Networks. Note: All other B-double combinations are as per the networks in the Notice.																																		
City of Playford																																			
The City of Unley	Hamilton Boulevard, Wayville is limited to 42.5t.																																		
Ceduna District Council	<p>A. Road condition – Ceduna District Council roads</p> <p>An eligible vehicle must not operate on unsealed roads for routes in an area that has received greater than 15mm of rain in the preceding 24 hours of the rain event.</p> <p>B. Speed restrictions – Ceduna District Council roads</p> <p>An eligible vehicle whether loaded or unloaded is restricted to the following speeds:</p> <ul style="list-style-type: none"> i. 80km/h on sealed Council maintained roads with speed limits posted above 80km/h; ii. 70km/h on unsealed Council maintained roads with speed limits posted above 60km/h; iii. 40km/h on all Council maintained roads with speed limits posted at 60km/h or lower. 																																		
Northern Areas Council	<p>The maximum speed limit on sealed local council roads is 80km/h, unless a traffic sign or road rule indicates a lesser speed limit</p> <p>The maximum speed limit on unsealed local council roads is 60km/h, unless a traffic sign or road rule indicates a lesser speed limit</p> <p>On unsealed roads, travel is suspended during periods of prolonged rain within the 24 hours period after the rainfall event or when the road's surface is holding pooled water.</p> <p>Note: When a prolonged rainfall event occurs, the restriction is applied to allow sufficient time for the road and road pavement to dry, preventing damage</p> <p>The following roads are approved for 19m B-doubles at 50t (50.5t for complying steer vehicle). All other local council roads within the Northern Areas Council boundary are restricted to 42.5t.</p> <p>Note: All other B-double combinations as per the networks in the Notice</p> <table border="1"> <thead> <tr> <th>Township</th><th>Road name</th><th>Starting location</th><th>Finish location</th></tr> </thead> <tbody> <tr> <td rowspan="9">Jamestown</td><td>Boundary Road</td><td>Eldena Road</td><td>Mannanarie Road</td></tr> <tr> <td>Wenhams Road</td><td>Appila Road</td><td>RM Williams Way</td></tr> <tr> <td>Reservoir Terrace</td><td>Eldena Road</td><td>Alexandra Terrace</td></tr> <tr> <td>George Street</td><td>Boundary Road</td><td>RM Williams Way</td></tr> <tr> <td>Murchland Drive</td><td>Humphris Terrace</td><td>RM Williams Way</td></tr> <tr> <td>Irvine Street</td><td>Racecourse Road</td><td>RM Williams Way</td></tr> <tr> <td>South Terrace</td><td>Williams Road</td><td>Brogan Road</td></tr> <tr> <td>Brogan Road</td><td>Miltowie Road</td><td>Wilkins Highway</td></tr> <tr> <td>Bute Street</td><td>RM Williams Way</td><td>Ayr Street</td></tr> </tbody> </table>			Township	Road name	Starting location	Finish location	Jamestown	Boundary Road	Eldena Road	Mannanarie Road	Wenhams Road	Appila Road	RM Williams Way	Reservoir Terrace	Eldena Road	Alexandra Terrace	George Street	Boundary Road	RM Williams Way	Murchland Drive	Humphris Terrace	RM Williams Way	Irvine Street	Racecourse Road	RM Williams Way	South Terrace	Williams Road	Brogan Road	Brogan Road	Miltowie Road	Wilkins Highway	Bute Street	RM Williams Way	Ayr Street
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	Brogan Road	Miltowie Road	Wilkins Highway																																
	Bute Street	RM Williams Way	Ayr Street																																

	Spalding	Trelyn Road	RM Williams Way	RM Williams Way
		Howley's Crossing Road	Brove Hill Road	Railway Terrace
		Main Street	RM Williams Way	Belalie East Road
		Belalie East Road	Main Street	Belalie North Road
	Laura	West Terrace	Stock Rte Road	End of road
		Hughes Street	Possum Park Road	Laura-Caltowie Road
		East Terrace	Hughes Street	North Terrace
		North Terrace	East Terrace	Garden Street
		Laura Caltowie Road	Hughes Street	Charles Street
		South Terrace	Main Road	Golden North
	Gladstone	Gladstone Street	Horrocks Highway	East Terrace
		East Terrace	Gladstone Street	Caltowie Road
		Cross Street	Main North Rd	Port Street
		Gladstone-Appila Road	Appila Road	Wilkins Highway
		Ward Street	Wilkins Highway	East Terrace
		Port Street	Horrocks Highway	Bondowie Street
		Bondowie Street	George Street	Caltowie-Georgetown Road
		West Terrace	Horrocks Highway	Viterra Entrance
		Huddleston Road	Edmund Terrace	Main North Road