Correct as at 27th April 2026. It may be superseded at any time.

Extract taken from: Entry certification > Inspection and certification > Vehicle interior

7 Vehicle interior

7-1 Seats and seat anchorages

IMPORTANT: any parts that require removal or disassembly in order to carry out the inspection of seat anchorages must be removed. See **Vehicle structure – 3-3 Inspection specifications**

A vehicle whose seats or seat anchorages have been damaged beyond the limits specified in **Vehicle structure – 3-4 Threshold for requiring repair certification** must be certified by a specialist repair certifier before entry certification.

Reasons for rejection

Mandatory equipment

1. A vehicle does not comply with a requirement relating to mandatory equipment set out in:

- **VIRM: In-service certification, section 7-1, general vehicles**
- **VIRM: In-service certification, section 7-1, heavy vehicles**

See **Technical bulletin 14** for an explanation of the requirements relating to rotating seats.

Compliance with approved standards

2. A seat or seat anchorage that is required to comply with an approved seat and seat anchorage standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 7-1-1 at the time the vehicle was manufactured.

Condition, performance and modification

3. A seat or seat anchorage does not comply with a requirement relating to condition, performance or modification set out in:

- **VIRM: In-service certification, section 7-1, general vehicles**
- **VIRM: In-service certification, section 7-1, heavy vehicles**

Note 1

Vehicles that comply with approved frontal impact standards are not required to comply with approved seat and seat anchorage standards. For the avoidance of doubt, this does not apply to vehicles:

- that have been issued with a special interest vehicle permit or immigrant's vehicle permit for frontal impact
- vehicles with a gross vehicle mass over 2500kg
- vehicles over 20 years old that do not comply with a frontal impact standard.

Table 7-1-1. Approved seat and seat anchorage standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
17	74/408 81/577 96/37 2005/39	207	3	Technical standard for seats and seat anchorages Article 22

***** A seat or seat anchorage that is required to comply with an approved seat and seat anchorage standard must comply with at least one of the standards listed in the table.

Summary of legislation

Applicable legislation

- **Land Transport Rule: Seats and Seat Anchorages 2002**

Mandatory equipment

1. Vehicles must comply with the requirements relating to mandatory equipment set out in:

- **VIRM: In-service certification, section 7-1, general vehicles**
- **VIRM: In-service certification, section 7-1, heavy vehicles**

Compliance with approved standards

2. Seats and seat anchorages in the following vehicles must comply with one or more of the approved seat and seat anchorage standards in Table 7-1-1:

- vehicles of class MA, MB, MC and NA manufactured on or after 1 October 2002.

Condition, performance and modification

3. Seats and seat anchorages must comply with the requirements relating to condition, performance and modification set out in:

- **VIRM: In-service certification, section 7-1, general vehicles**
- **VIRM: In-service certification, section 7-1, heavy vehicles**

Page updated 7 January 2025 (see **details**)

7-2 PSV seating (light and heavy PSVs)

Note: an unmodified vehicle is not required to comply with Reasons for rejection 1–4 or Summary of legislation 1–3, of section 7-2 provided that it complies with either:

- **UN/ECE 36** *and* **UN/ECE 66**; **UN/ECE 107** *and* **UN/ECE 66**; **UN/ECE 52**; or **Directive 2001/85/EC**.

Reasons for rejection

Mandatory requirements

1. A seat dimension or spacing does not comply with the requirements of Table 7-2-1

2. A seat is able to be adjusted, by sliding it backwards, so it enchroaches into the required seat space or foot room.

3. On a PSV, the shoulder width of a passenger seat to the left of the driver's seat:

    a) encroaches to within 250mm of a longitudinal vertical plane through the centre of the steering wheel, or

    b) encroaches to within 500mm of the internal surface of the right-hand door, if any (Figure 7-2-1).

4. A vehicle part, such as the wheel housing, drive-shaft tunnel, or similar equipment, protrudes into the foot room area in a manner that is likely to hinder emergency evacuation of the PSV.

In addition to UN/ECE compliance:

5. On a PSV intended to carry wheelchairs, the height from floor to ceiling in positions where wheelchairs will be restrained is less than 1480mm.

6. On a PSV intended to carry wheelchairs, the wheelchair or wheelchair-occupant restraint anchor points are positioned within the foot room requirements of Table 7-2-1.

7. Energy-absorbing material is not fitted to:

    a) the top of an exposed partition less than 1.2m high in front of a seat, or

    b) the top of a seat (except for a dedicated handhold integrated into the seat frame or a seatbelt fastening point).

8. A handhold on a seat has a cross section smaller than 15 × 25mm.

9. A vehicle does not comply with the requirements relating to mandatory requirements or mandatory and permitted equipment set out in:

- **VIRM: In-service certification, section 7-2, light PSVs**
- **VIRM: In-service certification, section 7-2, heavy PSVs**

Condition and performance

10. A vehicle does not comply with a requirement relating to condition or performance set out in:

- **VIRM: In-service certification, section 7-2, light PSVs**
- **VIRM: In-service certification, section 7-2, heavy PSVs**

Table 7-2-1. Minimum seating dimensions and spacings (mm)

	Height above seats (Figure 7-2-2)	Shoulder-room width	Seat spacing	Foot room (Figure 7-2-9)
All PSVs except dedicated primary-school and intermediate-school buses				
9 seats or less	No requirement	No requirement	**For seats facing same direction:** 650 (Figure 7-2-4, Figure 7-2-5), or 660 (Figure 7-2-6), or 760 (Figure 7-2-7) **For seats facing each other:** 1300 (Figure 7-2-8) (1200 for outdoor-access vehicles) (Figure 7-2-8)	300 wide, and 300 deep (unless compliant with UN/ECE 107)
More than 9 seats	850 for driver's seat and any passenger seat located in-line with the driver's seat 900 all other seats	450 shoulder room (Figure 7-2-3)		
Dedicated primary-school and intermediate-school buses				
9 seats or less	No requirement	No requirement	**For seats facing same direction:** 600 (Figure 7-2-4, Figure 7-2-5, Figure 7-2-6, Figure 7-2-7) **For seats facing each other:** 1200 (Figure 7-2-8)	250 wide, and 250 deep (unless compliant with UN/ECE 107)
More than 9 seats	850 for driver's seat and any passenger seat located in-line with the driver's seat 900 all other seats	300 shoulder room2		

Figure 7-2-1. Driving position protection and encroachment limits

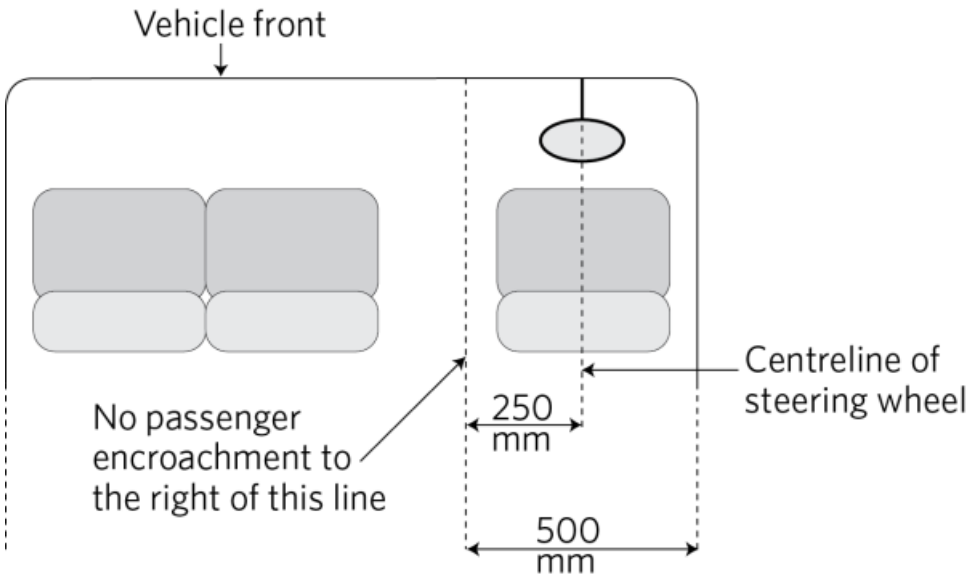
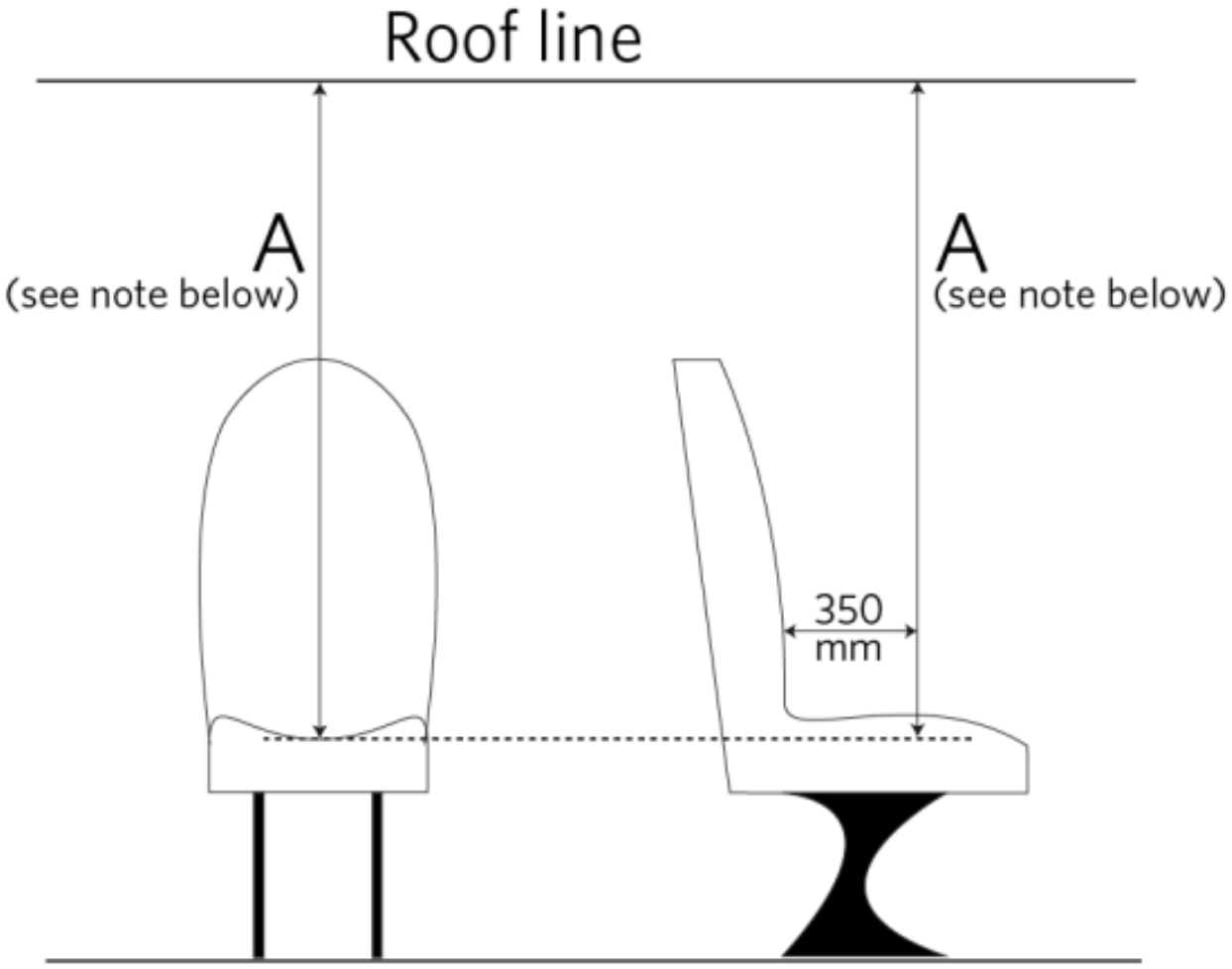


Figure 7-2-2. Vertical clearance



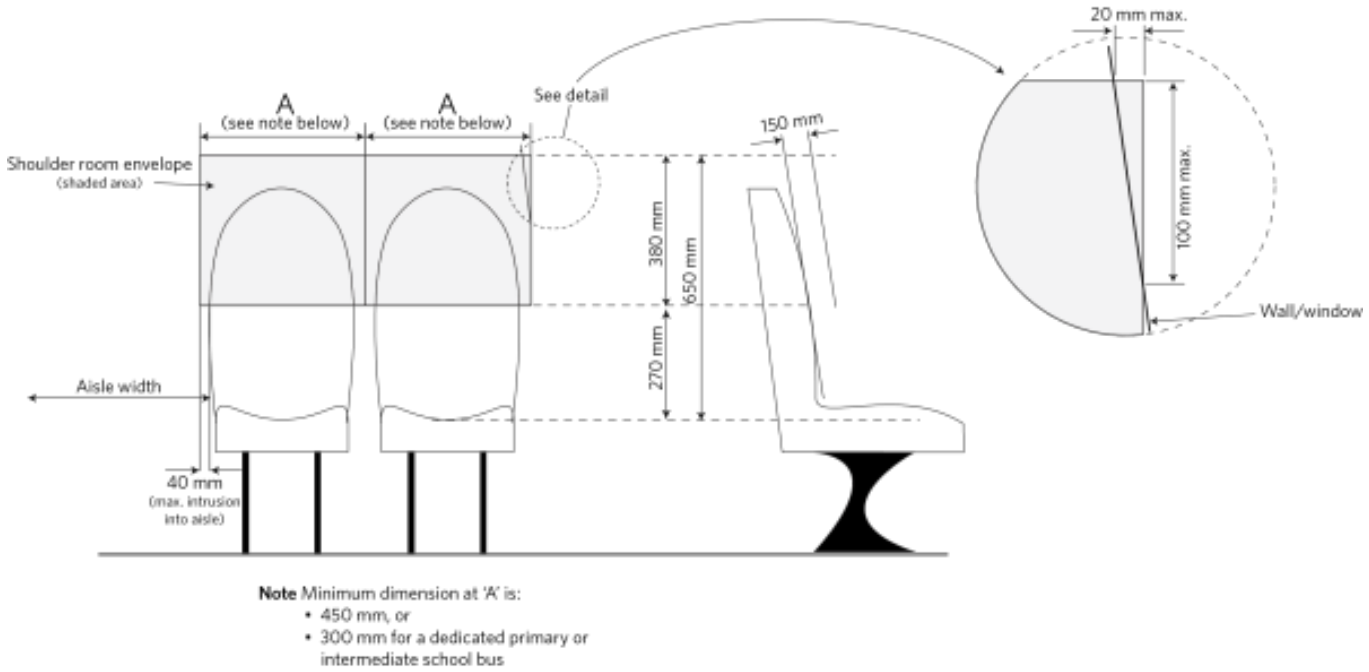
Note Height above seats 'A' is:

a) Driver's seats and front seats = 850 mm minimum

b) All other seats = 900 mm minimum

Height above seats is the vertical clearance above the seat cushion when measured 350mm in front of the backrest.

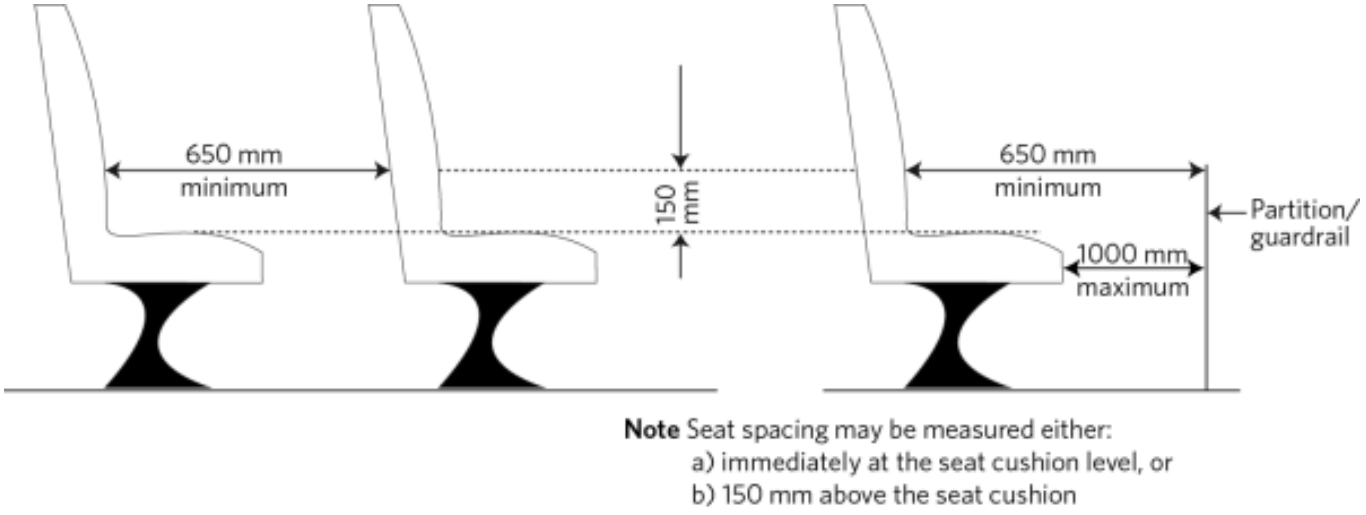
Figure 7-2-3. Shoulder room measurement



Shoulder room is measured 150mm in front of the backrest, above the seating surface, parallel to the seat width, at a height between 270mm and 650mm above the centre of the seat cushion. Shoulder room may encroach into the aisle provided that the encroachment is less than 40mm on each side of the aisle.

For seats next to the wall of the vehicle, the wall or window may encroach into the upper corner of the shoulder room if the encroachment is not larger than a triangular area which is 20mm wide at the upper edge and 100mm long at the side edge of the shoulder room.

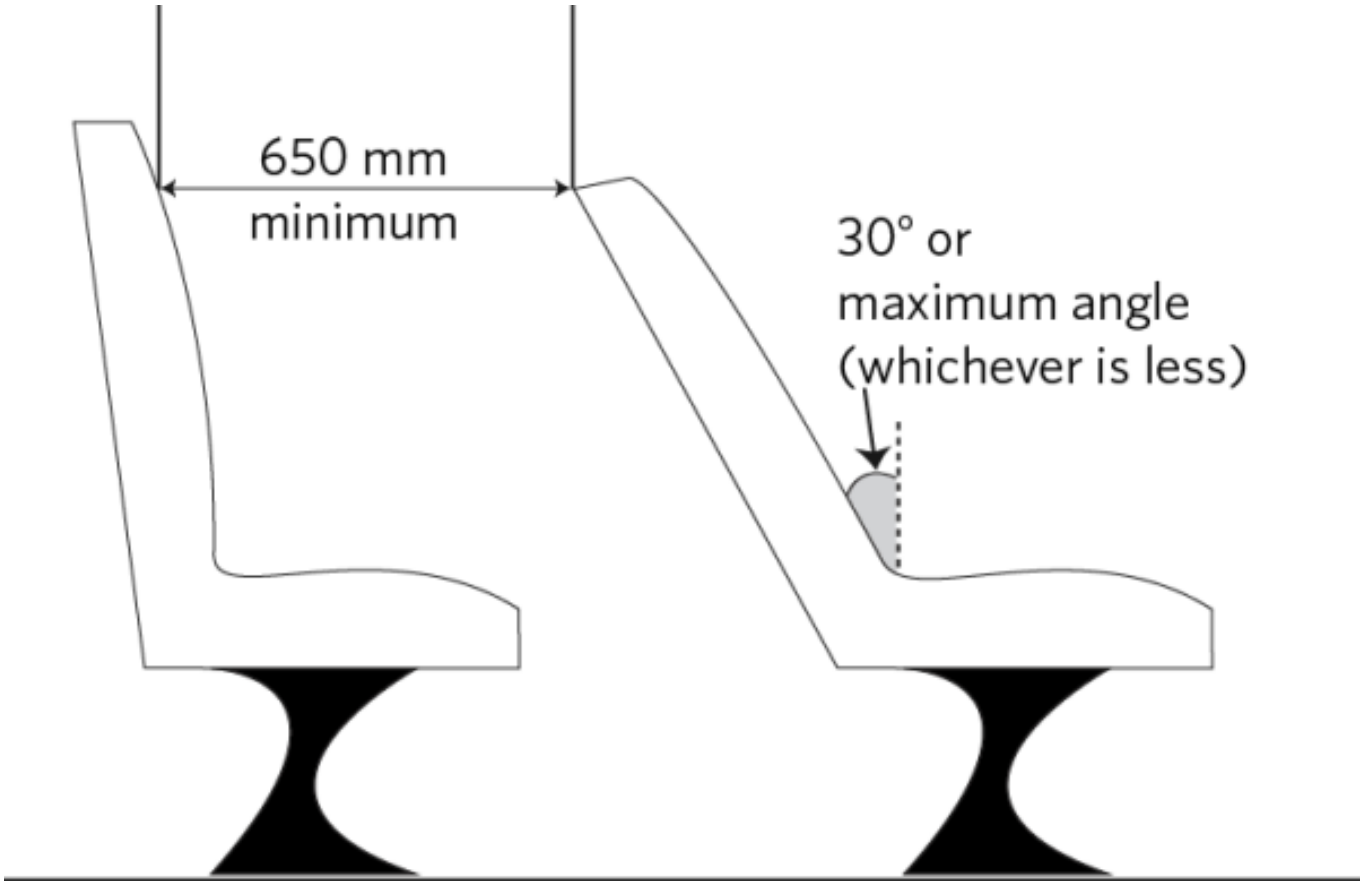
Figure 7-2-4. Seat spacing for non-reclinable or reclinable forward- or rearward-facing seats facing in the same direction (650mm)



For **non-reclinable forward-** or **rearward-facing seats** facing in the same direction, seat spacing of 650mm is measured horizontally, immediately above the seat cushion, or 150mm above the seat cushion, between:

- the backrest of the seat and the rear of the seat, if any, immediately in front of it, or
- the backrest of the seat and the rear surface of the partitioning or protecting device, if any, in front of the seat.

Figure 7-2-5. Reclinable seat spacing measurement (650mm)



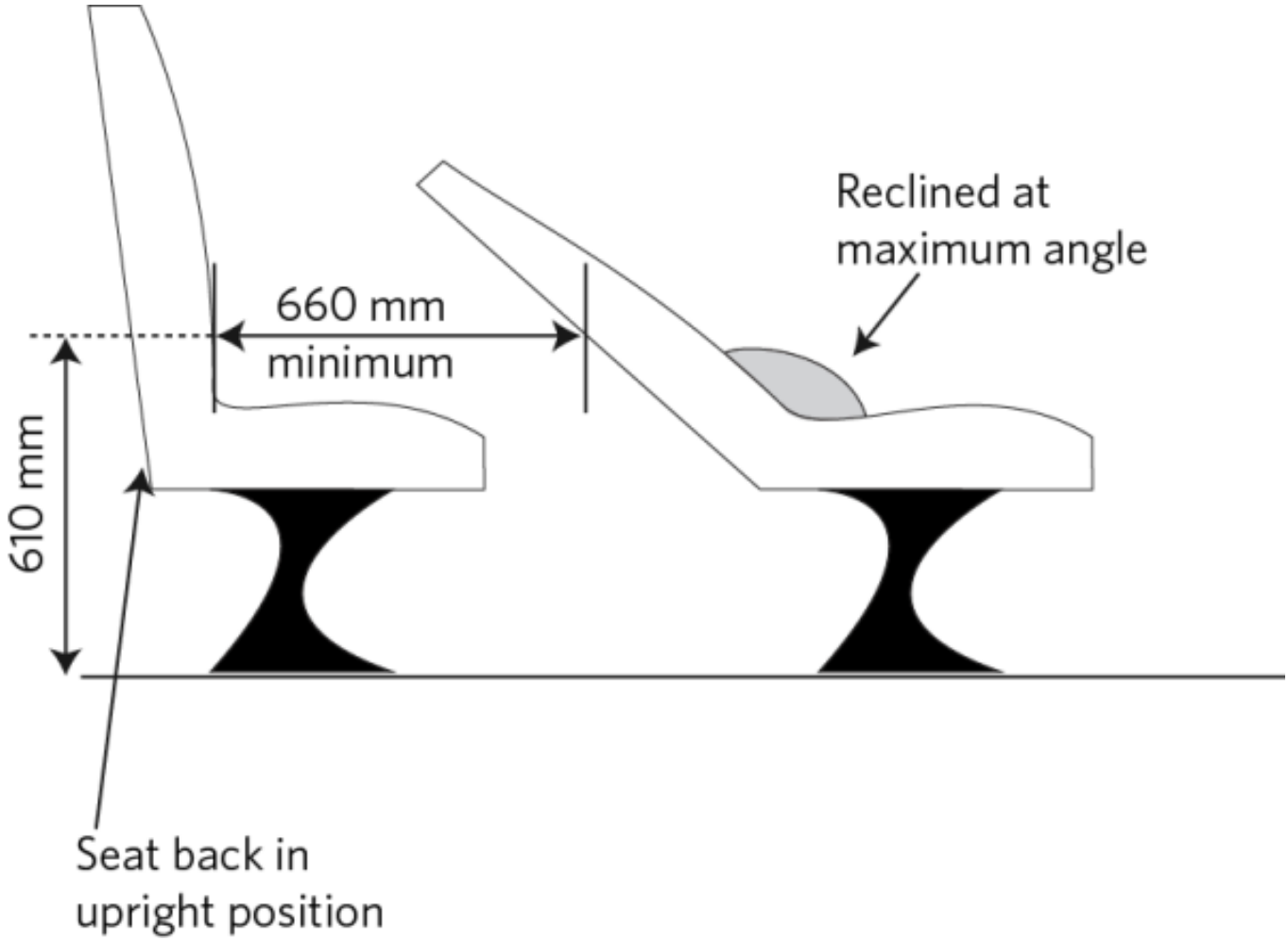
For **reclinable forward-** or **rearward-facing seats** which face in the same direction, the seat spacing of 650mm is measured either (Figure 7-2-4):

- with the seat in the upright position, and
- horizontally, immediately above the seat cushion, or 150mm above the seat cushion, and
- between the backrest of the seat and the rear surface of the partitioning or protecting device, if any, in front of the seat ,

OR

- with the rear seat in the upright position and the front seat reclined to its maximum angle or by 30 degrees from the vertical, whichever is the smaller angle, and
- horizontally at the height of the rearmost point of the front seat, and
- between the backrest of the rear seat and the rear of the front seat (Figure 7-2-5).

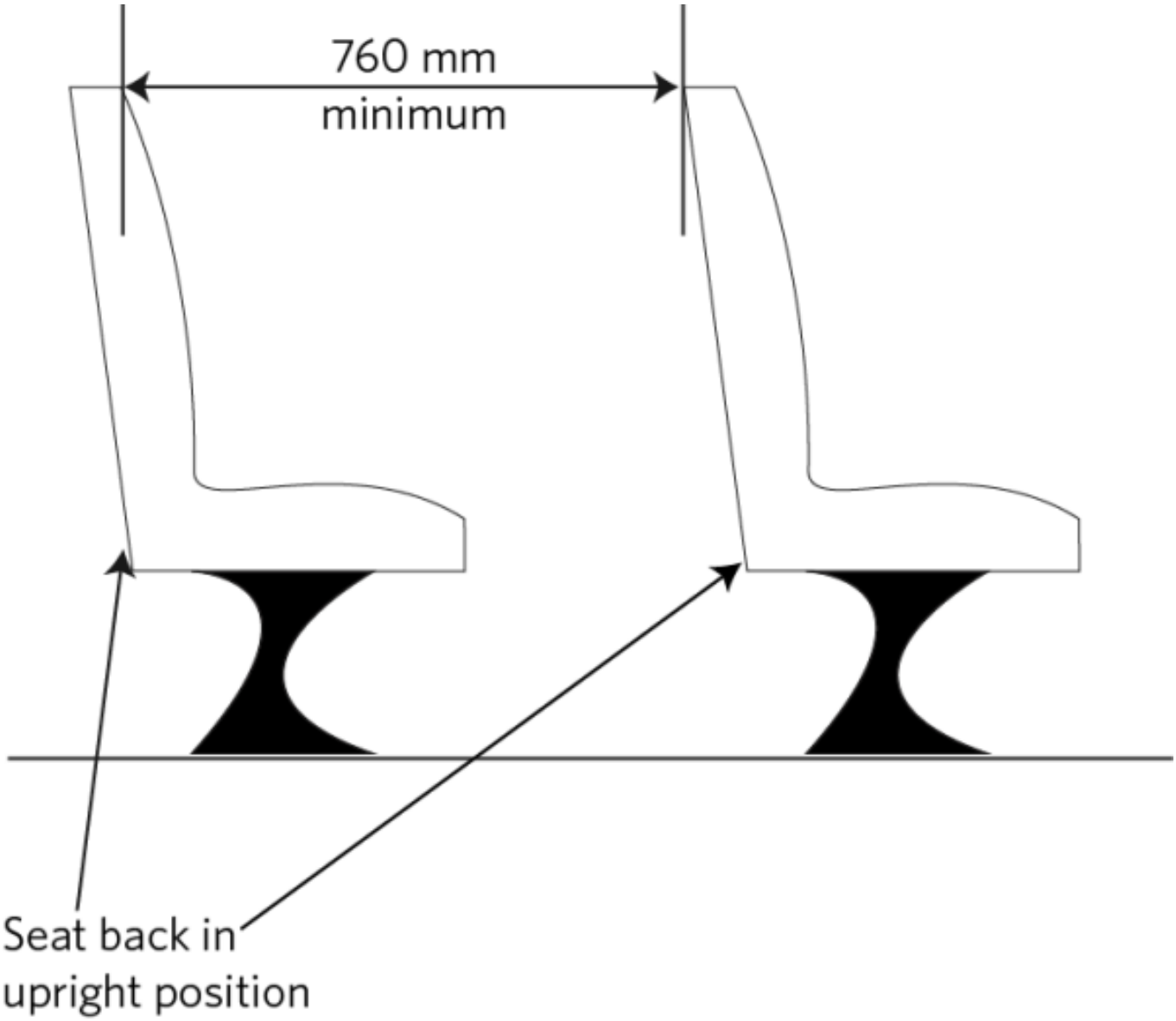
Figure 7-2-6. Reclinable seat spacing measurement (660mm)



For **reclinable forward-** or **rearward-facing seats** which face in the same direction, the seat spacing of 660mm is measured:

- horizontally, 610mm above the floor, and
- with the front seat reclined to the maximum angle and the rear seat in an upright position, and
- between the backrest of the rear seat and the rear of the front seat.

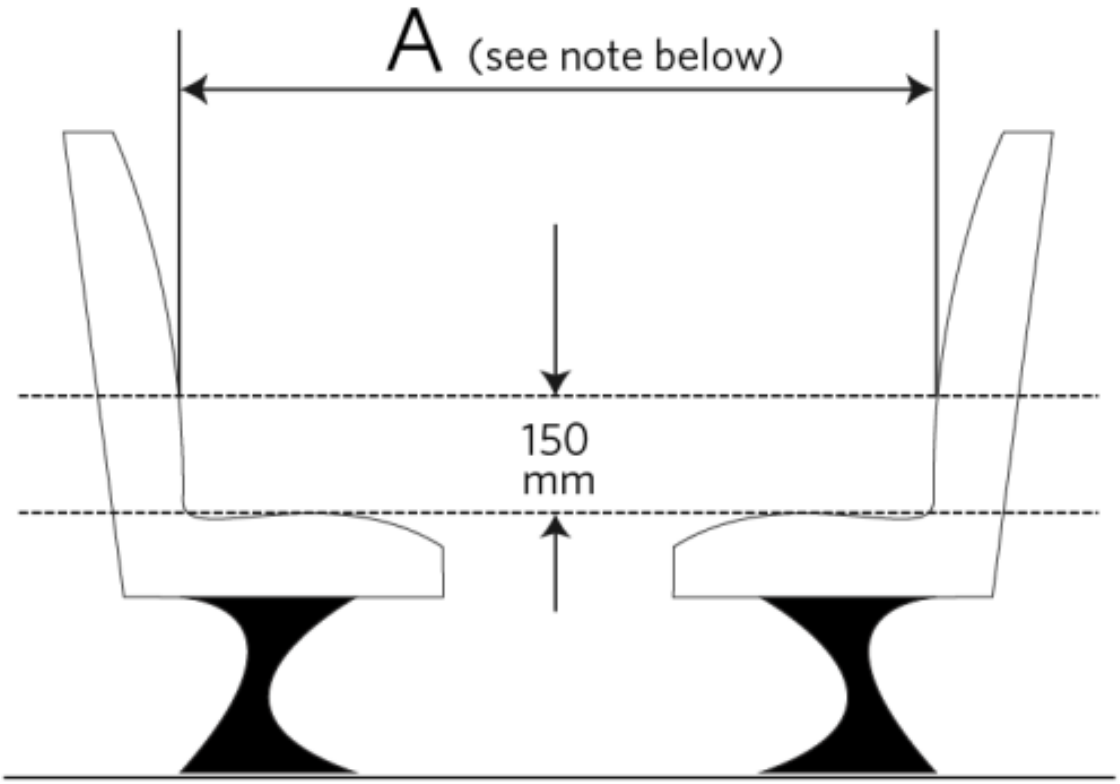
Figure 7-2-7. Reclinable seat spacing measurement (760mm)



For **reclinable forward-** or **rearward-facing seats** which face in the same direction, the seat spacing of 760mm is measured:

- with both the front seat and the rear seat backrests in an upright position, and
- horizontally at the height of the rearmost point of the front seat, and
- between the backrest of the rear seat and the rear of the front seat.

Figure 7-2-8. Seat spacing measurement (facing seats)



Note Minimum dimension of 'A' is:

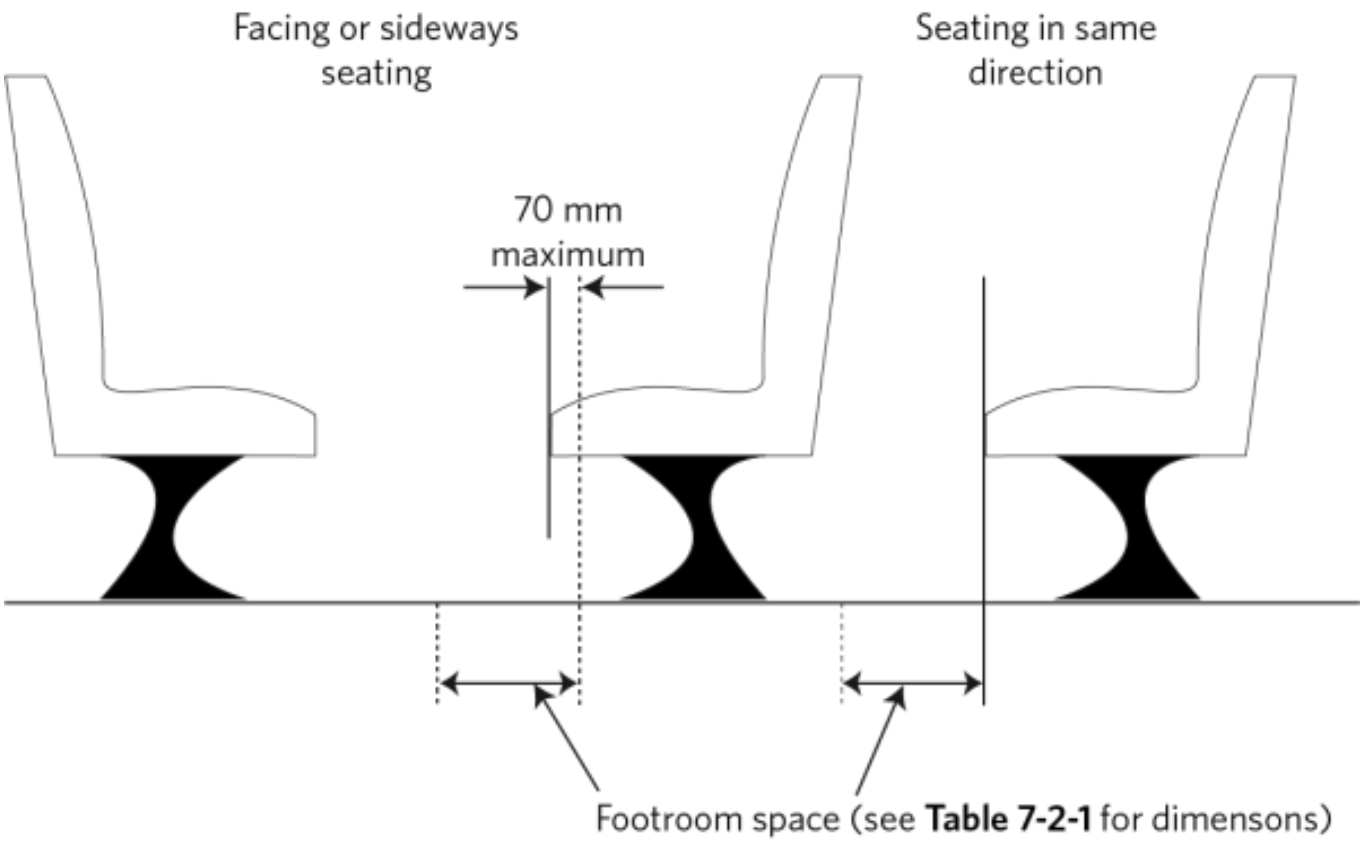
- 1300 mm, or
- 1200 mm for an outdoor access vehicle, or a dedicated primary or intermediate school bus

Seat spacing may be measured either:

- immediately at the seat cushion level, or
- 150 mm above the seat cushion

For **seats that face each other**, the seat spacing is measured horizontally, immediately above the seat cushion, or 150mm above the seat cushion, between the inside surfaces of the backrests.

Figure 7-2-9. Foot room measurement



For **seats facing in the same direction**, foot room is measured from a line on the floor, which is immediately below the front of the seat cushion. For seats facing each other, foot room is measured not more than 70mm behind the line immediately below the front of the seat cushion.

Summary of legislation

Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999

Mandatory requirements

1. Seat dimensions and spacings, measured with uncompressed seat padding, must comply with Table 7-2-1

2. If there are passenger seating positions to the left of the driver's seat, the seats and driving controls must be designed and located so that the shoulder width of the passenger seat does not encroach into the space required by the driver when driving. On a motor vehicle that entered service as a PSV on or after 1 September 1999 the space designed to be clear of encroachment must:

    a) extend at least 250mm to the left of a longitudinal plane through the centre of the steering wheel, and

    b) extend for a width of at least 500mm to the left of the internal surface of the right-hand door, if any, excluding the armrest.

3. If vehicle parts, such as the wheel housing, drive-shaft tunnel, or similar equipment, protrude into the foot room area, they must not encroach into the area in a manner that is likely to hinder emergency evacuation of the PSV.

In addition to UN/ECE compliance:

4. On a PSV intended to carry wheelchairs, the height from floor to ceiling in positions where wheelchairs will be restrained must be at least 1.48m.

5. Energy-absorbent material must be fitted to:

a) the tops of exposed partitions, which are less than 1.2m high, situated in front of seats, and

b) the tops of seats, except in a limited area:

i. at the upper corners of seat backs which are dedicated handholds and which are integrated parts of the seat frames, or

ii. to which the upper point of a lap-and diagonal seatbelt is fitted.

6. The minimum cross section dimension of handholds on seats may be 15mm if one other dimension is at least 25mm.

7. A vehicle must comply with the requirements relating to mandatory requirements, mandatory and permitted equipment set out in:

- **VIRM: In-service certification, section 7-2, light PSVs**
- **VIRM: In-service certification, section 7-2, heavy PSVs**.

Condition and performance

8. A vehicle must comply with the requirements relating to condition and performance set out in:

- **VIRM: In-service certification, section 7-2, light PSVs**
- **VIRM: In-service certification, section 7-2, heavy PSVs**.

Page amended **1 June 2019** (see **amendment details**).

7-3 Head restraints

Reasons for rejection

Compliance with approved standards

1. A head restraint that is required to comply with an approved head restraint standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 7-3-1 at the time the vehicle was manufactured or the head restraint was fitted.

Condition, performance and modification

2. A head restraint does not comply with a requirement relating to condition, performance or modification set out in the **VIRM: In-service certification, section 7-3**

Table 7-3-1. Approved head restraint standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
17 25	78/932 74/408 81/577 96/37 2005/39	202	22 3	Technical Standard for Head Restraints Article 22–4

***** A head restraint that is required to comply with an approved head restraint standard must comply with at least one of the standards listed in the table.

Summary of legislation

Applicable legislation

- **Land Transport Rule: Head Restraints 2001**

Compliance with approved standards

1. Head restraints in the following vehicles must comply with one or more of the approved head restraint standards in Table 7-3-1:

    - vehicles of class MA, MB, MC and MD1 manufactured on or after 1 March 1999.

Condition, performance and modification

2. Head restraints must comply with the requirements relating to condition, performance and modification set out in the **VIRM: In-service certification, section 7-3**

Page updated 7 January 2025 (see **details**)

7-4 PSV aisles (light PSVs)

Note: an unmodified vehicle is not required to comply with section 7-4 provided that it complies with either:

- **UN/ECE 36** *and* **UN/ECE 66**; **UN/ECE 107** and **UN/ECE 66**; **UN/ECE 52**; or **Directive 2001/85/EC**.

Reasons for rejection

Mandatory requirements

1. An aisle step:

a) is not permanently fixed, or

b) encroaches on required foot room or seating space in **section 7-2**, or

c) are arranged so that passengers leaving the vehicle step upward (unless the steps are over the engine cover and provide access from a central door to seating positions), or

d) from one step to the next is 250mm or more, or

e) from a sunken aisle to the seating area is 250mm or more, or

f) is less than 200mm deep from the front edge to the rise of the next step, or

g) width is less than the minimum aisle width in Table 7-4-2

2. Where steps are fitted over an engine cover to provide access from a central door to seating positions:

a) there are more than two steps, or

b) the combined step height is 400mm or more, or

c) the steps provide access to more than five seating positions.

3. An aisle has a gradient steeper than:

a) 1 in 8 where standing passengers are not permitted, or

b) 1 in 12.5 where standing passengers are permitted.

4. The aisle height is below the minimum specified in Table 7-4-1

5. The aisle width is less than the minimum specified in Table 7-4-2

6. On a PSV intended to carry wheelchairs, any wheelchair or wheelchair-occupant restraint anchor points are positioned within the aisle width requirements of Table 7-4-2

7. A handhold on an aisle step or an internal ramp has a cross section dimension:

a) smaller than 20mm, or

b) greater than 45mm.

8. A vehicle does not comply with the requirements relating to mandatory equipment set out in the **VIRM: In-service certification, section 7-4**

Condition and performance

9. A vehicle does not comply with a requirement relating to condition or performance set out in the **VIRM: In-service certification, section 7-4**

Note 1 Definition

An **aisle** is the area that provides unobstructed access throughout the passenger service vehicle from each doorway used for passenger entry and exit to the footroom of each passenger seating position and includes aisle steps and internal ramps.

Table 7-4-1. Minimum aisle height

<table>
<tr><td></td><td colspan="3">Minimum aisle height (mm)*</td></tr>
<tr><td>Standing passengers</td><td colspan="3">1830
1800 - if CoL allows only primary- and intermediate-school pupils to stand.</td></tr>
<tr><td>Stretch limousines</td><td colspan="3">Not less than the height of the doorway(s) servicing the aisle.</td></tr>
<tr><td colspan="4">Single-decked vehicle (excluding stretch limousines), no standing passengers</td></tr>
<tr><td>Aisle length (mm)</td><td>Up to 12 seats (including driver’s)</td><td>13 to 17 seats (including driver’s)</td><td>18 or more seats (including driver’s)</td></tr>
<tr><td>1900 or less</td><td rowspan="12">1200</td><td>1350</td><td rowspan="4">1500</td></tr>
<tr><td>1901–2000</td><td>1390</td></tr>
<tr><td>2001–2100</td><td>1430</td></tr>
<tr><td>2101–2200</td><td>1470</td></tr>
<tr><td>2201–2300</td><td colspan="2">1510</td></tr>
<tr><td>2301–2400</td><td colspan="2">1550</td></tr>
<tr><td>2401–2500</td><td colspan="2">1590</td></tr>
<tr><td>2501–2600</td><td colspan="2">1620</td></tr>
<tr><td>2601–2700</td><td colspan="2">1660</td></tr>
<tr><td>2701–2800</td><td colspan="2">1700</td></tr>
<tr><td>2801–2900</td><td colspan="2">1740</td></tr>
<tr><td>2901 and greater</td><td colspan="2">1780</td></tr>
</table>

	Minimum aisle height (mm)*		
Aisle length (mm)	**Up to 12 seats (including driver's)**	**13 to 17 seats (including driver's)**	**18 or more seats (including driver's)**
Double-decked vehicles	Lower deck 1740, upper deck 1720		

***** The minimum aisle height dimension in Table 7-4-1 (other than for standing passengers) must be applied to the entire aisle throughout the passenger compartment.

Table 7-4-2. Minimum aisle width

Passenger type	Minimum aisle width (mm)
No standing passengers	300
Standing passengers (adult or secondary school pupils)	380
Standing primary and intermediate school pupils only	300

Figure 7-4-1. Aisle length measurement – one doorway opening into aisle

The **aisle length** is the longest aisle in a compartment measured as follows:

a) if only one doorway opens into that aisle, measured from:

i) the front edge of the doorway to the front edge of the front seat serviced by that aisle, or

ii) the rear edge of the doorway to the front edge of the rearmost seat serviced by that aisle,

b) if more than one door opens into the aisle, measured from:

i) the front edge of the front doorway to the front edge of the front seat serviced by that aisle, or

ii) the rear edge of the rearmost doorway to the front edge of the rearmost seat serviced by that aisle, or

iii) the point halfway between the front edge of the rearmost doorway to the rear edge of the front doorway.

Summary of legislation

Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999

Mandatory requirements

1. Aisle steps must comply with the following requirements:

a) the steps must be permanently fixed and must not encroach on any required foot room or seating space (**section 7-2**), and

b) except for steps over the engine cover to provide access from a central door to seating positions, the steps must be arranged so that any passenger, upon exiting the PSV, steps only downwards, and

c) the rise from one step to the next or, in the case of a sunken aisle, the rise up to the seating area, must be less than 250mm, and

d) the depth of the step from the front edge to the rise of the next step must be at least 200mm, and

e) the width of the step must not be less than the minimum aisle width for that vehicle.

2. If steps are fitted over an engine cover to provide access from a central door to seating positions:

a) there must be less than three steps, and

b) the combined step height must be less than 400mm, and

c) the steps must not provide access to more than five seating positions.

3. The gradient of an aisle must not be steeper than:

a) 1 in 8 where standing passengers are not permitted, or

b) 1 in 12.5 where standing passengers are permitted.

4. The aisle height must be above or at the minimum specified in Table 7-4-1.

5. The aisle width must be above or at the minimum specified in Table 7-4-2.

6. The cross section dimension of handholds on aisle steps or an internal ramp in a vehicle which entered service as a PSV in New Zealnd on or after 1 August 2000 must have no dimension smaller than 20mm or greater than 45mm.

7. A vehicle must comply with the requirements relating to mandatory equipment set out in the **VIRM: In-service certification, section 7-4**

Performance

8. A vehicle must comply with the requirements relating to performance set out in the **VIRM: In-service certification, section 7-4**

Page amended **1 October 2012** (see **amendment details**).

7-4 PSV aisles (heavy PSVs)

Note: an unmodified vehicle is not required to comply with section 7-4 provided that it complies with either:

- **UN/ECE 36** *and* **UN/ECE 66**; **UN/ECE 107** and **UN/ECE 66**; **UN/ECE 52**; or **Directive 2001/85/EC**.

Reasons for rejection

Mandatory requirements

1. An aisle step:

a) is not permanently fixed, or

b) encroaches on required foot room or seating space in **section 7-2**, or

c) are arranged so that passengers leaving the vehicle step upward (unless the steps are over the engine cover and provide access from a central door to seating positions), or

d) from one step to the next is 250mm or more, or

e) from a sunken aisle to the seating area is 250mm or more, or

f) is less than 200mm deep from the front edge to the rise of the next step, or

g) width is less than the minimum aisle width in Table 7-4-3

2. Where steps are fitted over an engine cover to provide access from a central door to seating positions:

a) there are more than two steps, or

b) the combined step height is 400mm or more, or

c) the steps provide access to more than five seating positions.

3. An aisle has a gradient steeper than:

a) 1 in 8 where standing passengers are not permitted, or

b) 1 in 12.5 where standing passengers are permitted.

4. The aisle height is below the minimum specified in Table 7-4-2

5. The aisle width is less than the minimum specified in Table 7-4-3

6. On a PSV intended to carry wheelchairs, any wheelchair or wheelchair-occupant restraint anchor points are positioned within the aisle width requirements of Table 7-4-3

7. Handrails, handholds, or handgrips in a PSV with a CoL that allows standing passengers are:

a) insufficient for the number of passengers permitted to occupy the aisle, or

b) inappropriately located, or

c) do not allow for passengers of different heights.

8. A handhold on an aisle step or an internal ramp has a cross section dimension:

a) smaller than 20mm, or

b) greater than 45mm.

9. A vehicle does not comply with the requirements relating to mandatory equipment set out in the **VIRM: In-service certification, section 7-4**

Condition and performance

10. A vehicle does not comply with a requirement relating to condition or performance set out in the **VIRM: In-service certification, section 7-4**

Note 1

An **aisle** is the area that provides unobstructed access throughout the passenger service vehicle from each doorway used for passenger entry and exit to the footroom of each passenger seating position and includes aisle steps and internal ramps.

Table 7-4-2. Minimum aisle height

<table>
<tr><td colspan="4">Minimum aisle height (mm)*</td></tr>
<tr><td>Standing passengers</td><td colspan="3">1830
1800 - if CoL allows only primary- and intermediate-school pupils to stand.</td></tr>
<tr><td>Stretch limousines</td><td colspan="3">Not less than the height of the doorway(s) servicing the aisle.</td></tr>
<tr><td colspan="4">Single-decked vehicle (excluding stretch limousines), no standing passengers</td></tr>
<tr><td>Aisle length (mm)
(Figure 7-4-2)</td><td>Up to 12 seats
(including driver’s)</td><td>13 to 17 seats
(including driver’s)</td><td>18 or more seats
(including driver’s)</td></tr>
<tr><td>1900 or less</td><td rowspan="13">1200</td><td>1350</td><td rowspan="4">1500</td></tr>
<tr><td>1901–2000</td><td>1390</td></tr>
<tr><td>2001–2100</td><td>1430</td></tr>
<tr><td>2101–2200</td><td>1470</td></tr>
<tr><td>2201–2300</td><td colspan="2">1510</td></tr>
<tr><td>2301–2400</td><td colspan="2">1550</td></tr>
<tr><td>2401–2500</td><td colspan="2">1590</td></tr>
<tr><td>2501–2600</td><td colspan="2">1620</td></tr>
<tr><td>2601–2700</td><td colspan="2">1660</td></tr>
<tr><td>2701–2800</td><td colspan="2">1700</td></tr>
<tr><td>2801–2900</td><td colspan="2">1740</td></tr>
<tr><td>2901 and greater</td><td colspan="2">1780</td></tr>
</table>

Minimum aisle height (mm)*			
Aisle length (mm) (Figure 7-4-2)	**Up to 12 seats (including driver's)**	**13 to 17 seats (including driver's)**	**18 or more seats (including driver's)**
Double-decked vehicles	Lower deck 1740, upper deck 1720		

***** The minimum aisle height dimension in Table 7-4-2 (other than for standing passengers) must be applied to the entire aisle throughout the passenger compartment.

In the case where there are aisle step(s) in front of a seat at the rear of the aisle, foot room for that seat may be considered to extend to the edge of the rearmost riser leading to that seat or the front edge of the seat immediately in front of the rear seat, whichever is the lesser distance (see "Distance 'A'" in Figure 7-4-3)

While the height above the foot room does not have a minimum requirement, it must still allow easy access to the seating positions.

Table 7-4-3. Minimum aisle width

Passenger type	Minimum aisle width (mm)
No standing passengers	300
Standing passengers (adult or secondary school pupils)	380
Standing primary and intermediate school pupils only	300

Figure 7-4-2. Aisle length measurement

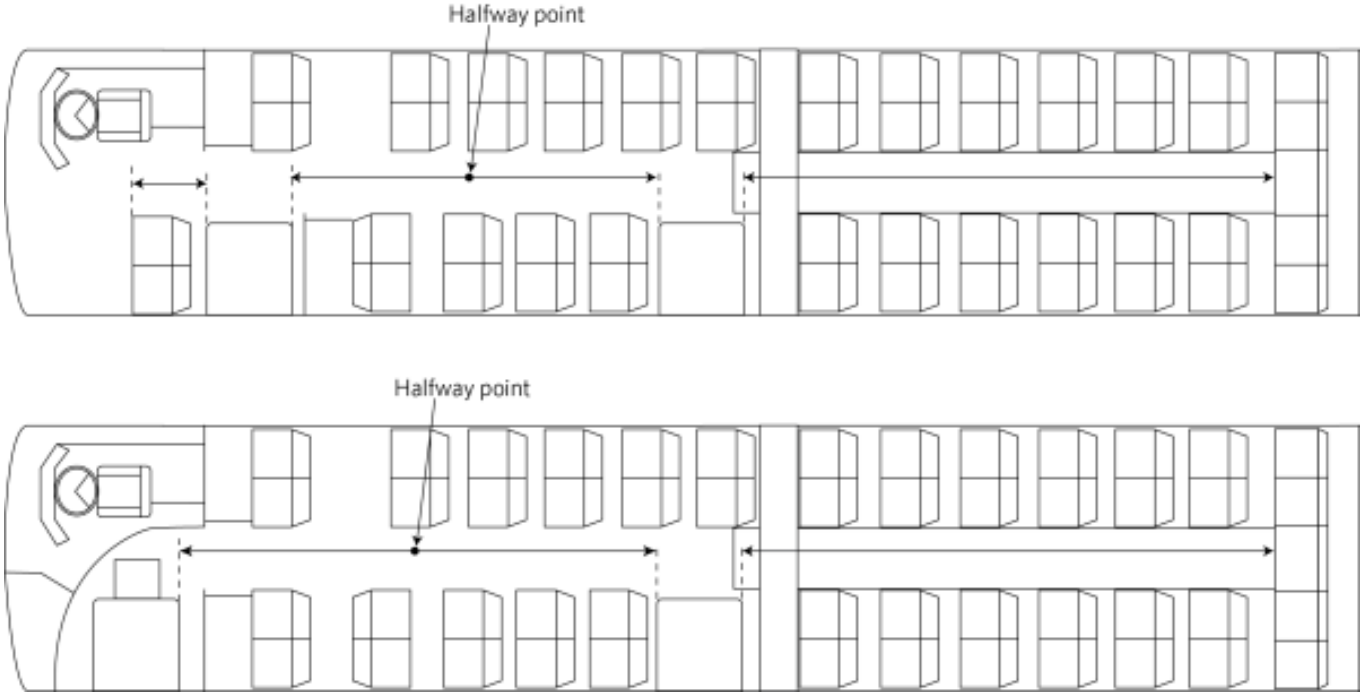
Aisle length measurement – one doorway opening into aisle

The **aisle length** is the longest aisle in a compartment measured as follows if **only one doorway**:

a) the front edge of the doorway to the front edge of the front seat serviced by that aisle, or

b) the rear edge of the doorway to the front edge of the rearmost seat serviced by that aisle (above).

Aisle length measurement – more than one doorway opening into aisle



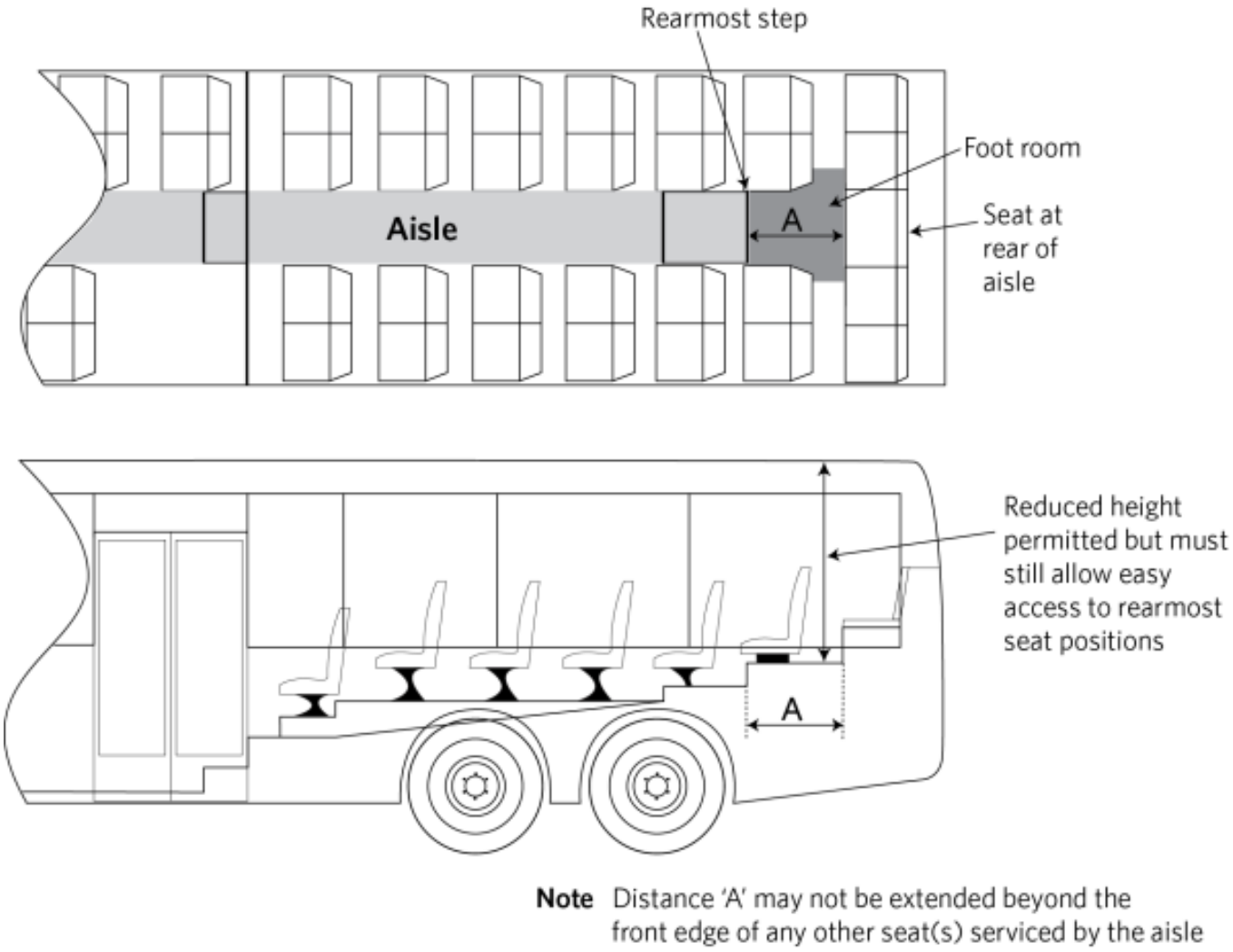
The **aisle length** is the longest aisle in a compartment measured as follows if **more than one door** opens into the aisle, measured from:

a) the front edge of the front doorway to the front edge of the front seat serviced by that aisle, or

b) the rear edge of the rearmost doorway to the front edge of the rearmost seat serviced by that aisle, or

c) the point halfway between the front edge of the rearmost doorway to the rear edge of the front doorway (above).

Figure 7-4-3. Foot room length with centre rear seat and aisle steps



Summary of legislation

Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999

Mandatory requirements

1. Aisle steps must comply with the following requirements:

a) the steps must be permanently fixed and must not encroach on any required foot room or seating space (**section 7-2**), and

b) except for steps over the engine cover to provide access from a central door to seating positions, the steps must be arranged so that any passenger, upon exiting the PSV, steps only downwards, and

c) the rise from one step to the next or, in the case of a sunken aisle, the rise up to the seating area, must be less than 250mm, and

d) the depth of the step from the front edge to the rise of the next step must be at least 200mm, and

e) the width of the step must not be less than the minimum aisle width for that vehicle.

2. If steps are fitted over an engine cover to provide access from a central door to seating positions:

a) there must be less than three steps, and

b) the combined step height must be less than 400mm, and

c) the steps must not provide access to more than five seating positions.

3. The gradient of an aisle must not be steeper than:

a) 1 in 8 where standing passengers are not permitted, or

b) 1 in 12.5 where standing passengers are permitted.

4. The aisle height must be above or at the minimum specified in Table 7-4-2

5. The aisle width must be above or at the minimum specified in Table 7-4-3

6. A PSV with a CoL that allows standing passengers must be fitted with handrails, handholds, or handgrips, whose number and location must be appropriate for the number of passengers permitted to occupy the aisle and for passengers of different heights.

7. The cross section dimension of handholds on aisle steps or an internal ramp in a vehicle which entered service as a PSV in New Zealand on or after 1 August 2000 must have no dimension smaller than 20mm or greater than 45mm.

8. A vehicle must comply with the requirements relating to mandatory equipment set out in the **VIRM: In-service certification, section 7-4**

Performance

9. A vehicle must comply with the requirements relating to performance set out in the **VIRM: In-service certification, section 7-4**

Page amended **1 October 2012** (see **amendment details**).

7-5 Seatbelts and seatbelt anchorages

IMPORTANT: Any parts that require removal or disassembly in order to carry out the inspection of seatbelt anchorages must be removed. See **Vehicle structure – 3-3 Inspection specifications**.

A vehicle whose structure has been damaged beyond the limits specified in **Vehicle structure – 3-4 Threshold for requiring repair certification** must be certified by a specialist repair certifier before entry certification.

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle does not comply with a requirement relating to mandatory or permitted equipment set out in:

- **VIRM: In-service certification, section 7-5, general vehicles**
  - Refer to **Technical bulletin 19**, which explains the requirements for an SSBELTSOK exemption
- **VIRM: In-service certification, section 7-5, heavy vehicles**
- **VIRM: In-service certification, section 7-5, heavy PSVs**
  - See **Technical bulletin 14** for an explanation of requirements for rotating seats.
  - For further information on replacement seatbelts, see **Technical bulletin 16**, which outlines requirements for replacement seatbelts, and/or **Technical bulletin 19**, which explains the requirements for an SSBELTSOK exemption
  - Where a vehicle is not fitted with the type of seatbelt required in the in-service VIRM and the vehicle does not have anchorages for the required type of seatbelt, refer to **Reference material 55**

2. A three-point seatbelt imported and distributed by BVL (Business Ventures Limited) and manufactured by Changzhou BWD, China or Jiang Su Jiu Jiu Traffic Facilities Co. Ltd. is installed (See Figure 7-5-2 for samples to help identify the seatbelt).

- See also the **Safety alert: Seatbelts imported by BVL (Business Ventures Limited)**

Compliance with approved standards

3. A seatbelt did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 7-5-1 or, if applicable, Table 7-5-2 at the time the seatbelt was manufactured.

4. A seatbelt anchorage that is required to comply with an approved seatbelt anchorage standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 7-5-3 at the time the vehicle was manufactured.

5. A retrofitted seatbelt anchorage that is required to comply with a requirement in List A, B or C of Table 7-5-5 did not comply, or cannot be demonstrated to have complied, with at least one of the requirements in the applicable list of Table 7-5-5 at the time the seatbelt anchorage was retrofitted.

Condition, performance and modification

6. A seatbelt or seatbelt anchorage does not comply with a requirement relating to condition, performance or modification set out in:

- **VIRM: In-service certification, section 7-5, general vehicles**
- **VIRM: In-service certification, section 7-5, heavy vehicles**
- **VIRM: In-service certification, section 7-5, heavy PSVs**

- **Technical bulletin 15** contains further information for Toyota Hiace seatbelt requirements.

Note 1

An original equipment seatbelt anchorage is an anchorage that was installed by the vehicle manufacturer at the time the vehicle was manufactured, and was fitted with a seatbelt by the vehicle manufacturer at the time the vehicle was manufactured.

Note 2

When inspecting Nissan Terrano and Mistral model vehicles, corrosion of the rear floorpan assembly may affect seatbelt anchorages. Refer to **Technical bulletin 10** for further information.

Note 3

For class MA vehicles built to FMVSS 209 that are frontal impact compliant, there is no requirement in the standard for original equipment seatbelts or for any genuine replacement seatbelts to be marked. The same also applies to the US equivalent of NA, MB and MC class vehicles built after 1983 to FMVSS 208 and to NB and NC class vehicles built to FMVSS 209.

Note 5

Technical bulletin 20 describes the inspection requirements for vehicles with OE-installed rear upper seatbelt anchorages, with retrofitted seatbelts.

Note 6

When checking the sensitivity of dual-sensitive seatbelts fitted to the rear seating positions, the inspector must check that both sensitivities are functioning correctly.

Note 7

Modifications that would be a reason for rejection include re-webbing seatbelts onto the retractor to replace a faded or damaged seatbelt.

Table 7-5-1. Approved seatbelt standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan	Others
16	77/541 81/576 82/319 90/628 96/36 2000/3 2005/40	209	4	TS for seatbelt assemblies JIS D4604 Article 22–3	NZS 5401 AS/NZS 2596 SABS 1080

* Seatbelts must comply with at least one of the standards listed in the table.

Table 7-5-2. Approved seatbelt standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan	Others
16	77/541 81/576 82/319 90/628 96/36 2000/3 2005/40	209	4	TS for seatbelt assemblies JIS D4604 Article 22–3	NZS 1662 NZS 5401 AS/NZS 2596 AS E35.1 AS E35.2 BS AU 160c SABS 1080

* Seatbelts must comply with at least one of the standards listed in the table.

Table 7-5-3. Approved OE seatbelt anchorage standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
14	76/115 81/575 82/318 90/629 96/38 2005/41	210	5	TS for seatbelt anchorages Article 22–3

* A seatbelt anchorage that is required to comply with an approved seatbelt anchorage standard must comply with at least one of the standards listed in the table.

Table 7-5-4. Approved standards for child restraints

UN-ECE Regulation no.	FMVSS	British Standard	Japan	Other
44	213[1]	3254 AU 185 AU 202	TS for child restraints[2] Article 22–5	AS/NZS 1754

[1] Must have been verified for compliance with that standard by an organisation specified by the NZTA in the New Zealand Gazette.

[2] Must be integrated with the rear seat of a motor vehicle.

See Figure 7-5-1 for the standard markings that may assist in determining compliance of seatbelts with approved standards.

Table 7-5-5. List of requirements for retrofitted seatbelt anchorages

List A	List B	List C
• MoT St 31391, except for Appendix YY • LTSA St 120395 (only for seatbelt anchorages for the fitting of seatbelts without retractors1 retrofitted in vehicles of models that have not been successfully type tested) • Low Volume Vehicle Code • HVS certification.	• LTSA St 91290 (only for seatbelt anchorages retrofitted on or after 1 January 1991 and before 31 March 1991 in vehicles first registered in New Zealand in the same period) • MoT St 31391, except for Appendix YY (only for seatbelt anchorages retrofitted in vehicles of models that have been type tested) • Appendix YY of MoT St 31391 (only for seatbelt anchorages retrofitted before 1 January 1997 in privately imported class MA, MB or MC vehicles of models that have not been type tested) • LTSA St 120395 (only for seatbelt anchorages for the fitting of seatbelts without retractors[1] retrofitted in vehicles manufactured before 1 January 1991 of models that have not been successfully type tested) • Low Volume Vehicle Code • HVS certification.	• UN-ECE Regulation No. 14 (as determined by a type test carried out by a facility approved by the NZTA) • Low Volume Vehicle Code • HVS certification.

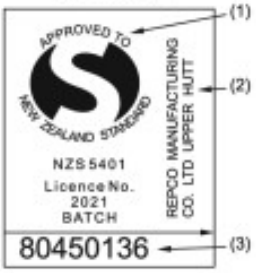
* A seatbelt anchorage that is required to comply with a requirement in List A, B or C must comply with at least one of the requirements in the applicable list (subject to any specified conditions).

[1] Seatbelts with retractors may be fitted also but only if the LTSA St 120395 anchorages are certified as appropriate for the seatbelts by an approved person or organisation.

Figure 7-5-1. Approved seatbelt standard markings

NEW ZEALAND STANDARDS

NZS 5401



(1) standards mark
(2) manufacturer
(3) date of manufacture code

EUROPEAN STANDARDS

Economic Commission for Europe ECE 16	European Economic Commission (EEC)
Arp 4m (1)	Arp 4m
E2 (2)	e 4
0417033 (3)	117033

Key to symbols
(1) Type of seatbelt for seating positions.
- (a) Where 3 point with dual sensitive emergency locking retractors are required, the labelling
  must display Ar4m
  may also include letters Z, e & p,
  must not include letters B, S or s.
- (b) Where 3 point seatbelts are required, the labelling
  must display the letter A,
  may include letters e, r, p, 4, s,
  must not include letters B or S.
- (c) Where 2 point lap seatbelts are required, the labelling
  must display the letter B,
  may include letters e, r, p, 4, m, s
  must not include letters A or S.

The main symbols to note are:
A = 3 point belt
B = lap belt
S = special type of belt, e.g., racing harness
Z = seatbelt forms part of a restraint system
s = single sensitive

(2) approving country
(3) approval number

AUSTRALIAN STANDARDS

AS 2596

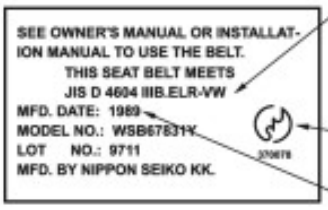
Current marking

Superseded marking

AS E35

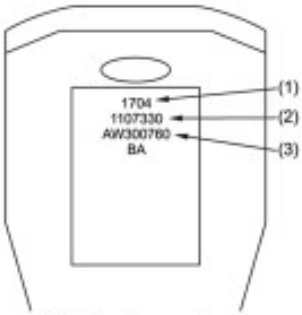
AS E35 was withdrawn in October 1991. Seatbelts manufactured after this date are not approved.

JAPANESE INDUSTRIAL STANDARD JIS D 4604



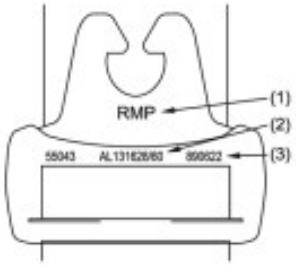
AUSTRALIAN DESIGN RULES

Buckle markings



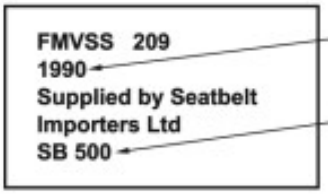
(1) date of manufacture
(2) belt part number
(3) identity code

Belt markings



(1) manufacturer
(2) belt part number
(3) date of manufacture

FEDERAL MOTOR VEHICLE SAFETY STANDARD. FMVSS 209



SOUTH AFRICAN STANDARD SABS 1080 –1983

Type of belt or required information to be included on the belt label restraint system:
- manufacturer's name, trade mark or mark
- means of identification for traceability purposes.

The use of either symbol is optional.

BRITISH STANDARD AU160c

Compliant seatbelts that are not required to have standard markings

- Seatbelts that comply with the Japanese Technical Standard for Seatbelt Assemblies are not

  required to have standards markings, provided the seatbelts are OE and the vehicle has Japanese type approval.
- Seatbelts in a fully Australian Design Rule (ADR) compliant vehicle are not required to have standards markings.

Figure 7-5-2. Identifying seatbelts by BVL (Business Ventures Limited) and manufactured by Changzhou BWD, China or Jiang Su Jiu Jiu Traffic Facilities Co. Ltd.

Summary of legislation

Applicable legislation

- Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002
- Land Transport Rule: Vehicle Equipment 2004

Mandatory and permitted equipment

1. Vehicles must comply with the requirements relating to mandatory and permitted equipment set out in:

- **VIRM: In-service certification, section 7-5, general vehicles**
- **VIRM: In-service certification, section 7-5, heavy vehicles**
- **VIRM: In-service certification, section 7-5, heavy PSVs**

Compliance with approved standards

2. The following seatbelts must comply with one or more of the standards in Table 7-5-1:

a) seatbelts required to be fitted in vehicles first registered in New Zealand between 1 January 1991 and 31 March 2002 and first registered outside New Zealand between 1 January 1961 and 31 March 2002

b) seatbelts required to be fitted in vehicles first registered in New Zealand from 1 April 2002 that were manufactured between 1 November 1979 and 30 September 2003

c) seatbelts required to be fitted in vehicles manufactured from 1 October 2003

d) seatbelts fitted in vehicles or seating positions that are not required to be fitted with seatbelts.

3. All seatbelts not listed in (2) above must comply with one or more of the standards in Table 7-5-2

4. The following original equipment seatbelt anchorages (Note 1) fitted with seatbelts must comply with one or more of the seatbelt anchorage standards in Table 7-5-3:

a) seatbelt anchorages in vehicles first registered in New Zealand between 1 January 1991 and 31 March 2002, and first registered outside New Zealand between 1 January 1991 and 31 March 2002

b) seatbelt anchorages in vehicles first registered in New Zealand from 1 April 2002 and manufactured between 1 November 1979 and 30 September 2003, and first registered outside New Zealand from 1 January 1991

c) seatbelt anchorages in vehicles manufactured from 1 October 2003.

5. Seatbelt anchorages retrofitted (Note 2) between 1 January 1991 and 31 March 2002 in the following vehicles must comply with one or more of the requirements in List A of Table 7-5-5:

- vehicles first registered in New Zealand before 1 January 1991 and first registered in any country between 1 November 1979 and 1 January 1991.

6. Seatbelt anchorages retrofitted (Note 2) before 1 April 2002 in the following vehicles must comply with one or more of the requirements in List B of Table 7-5-5:

a) vehicles first registered in New Zealand between 1 January 1991 and 31 March 2002 and first registered outside New Zealand between 1 January 1961 and 31 March 2002

b) vehicles first registered in New Zealand from 1 April 2002 and manufactured between 1 November 1979 and 30 September 2003.

7. Seatbelt anchorages retrofitted (Note 2) from 1 April 2002 must comply with one or more of the requirements in List C of Table 7-5-5

8. Child restraints permanently fitted to the rear seat of a vehicle must comply with one or more of the requirements in Table 7-5-4

Condition, performance and modification

9. Seatbelts and seatbelt anchorages must comply with the requirements relating to condition, performance and modification set out in:

- **VIRM: In-service certification, section 7-5, general vehicles**
- **VIRM: In-service certification, section 7-5, heavy vehicles**
- **VIRM: In-service certification, section 7-5, heavy PSVs**

Page amended **1 June 2019** (see **amendment details**).

7-6 Airbags

IMPORTANT A vehicle with an airbag in a condition beyond the threshold specified in **Vehicle structure – 3-4 Threshold for requiring repair certification** must be certified by a specialist repair certifier before entry certification.

Where required, an entry certifier must obtain a declaration from a recognised technician stating that any supplementary restraint system (SRS) is within safe tolerance of the manufacturer's specifications. See **Technical bulletin 29** for further information on SRS/ABS declaration requirements.

For requirements regarding the Takata Alpha airbag recall see **Technical bulletin 43: Takata airbag recall**

Vehicles must comply with the requirements relating to mandatory equipment, permitted equipment, condition, performance and modification set out in:

- **VIRM: In-service certification, section 7-6, general vehicles**
- **VIRM: In-service certification, section 7-6, heavy vehicles**

Other than the above, there are no additional requirements in respect of airbags for the inspection and certification of vehicles for entry into service.

7-7 Interior impact

> **IMPORTANT:** a vehicle with an airbag in a condition beyond the threshold specified in **Vehicle structure – 3-4 Threshold for requiring repair certification** must be certified by a specialist repair certifier before entry certification.

Reasons for rejection

Compliance with approved standards (Note 1)

1. A vehicle that is required to comply with approved interior impact standard(s) in respect of its interior fittings, controls and surface did not comply, or cannot be demonstrated to have complied, at the time of manufacture, with:

a) all of the interior impact standard(s) listed in at least one of the five columns in Table 7-7-1, or

b) at least one of the frontal impact standard(s) listed in **Table 3-2-1**

Condition, performance and modification

2. An interior fitting, control or surface does not comply with a requirement relating to condition, performance or modification set out in:

- **VIRM: In-service certification, section 7-7, light PSVs**

- VIRM: In-service certification, section 7-7, heavy PSVs

Note 1

Vehicles that comply with approved frontal impact standards are not required to comply with approved interior impact standards. For the avoidance of doubt, this does not apply to vehicles:

- that have been issued with a special interest vehicle permit or immigrant's vehicle permit for frontal impact
- vehicles with a gross vehicle mass over 2500kg
- vehicles over 20 years old that do not comply with a interior impact standard.

Table 7-7-1. Approved interior impact standards*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
21	74/60, 78/632 or 2000/4 and one of: 71/127 79/795 85/205 86/562 87/354 88/321 2003/97 2005/27	201	11 and 21 and 42 General Safety Requirements (section on external or internal protrusions)	TS for instrument panel impact absorption, and TS for sunvisor impact absorption, and Interpretation of the TS for sunvisor impact absorption, and TS for seatback impact absorption, and TS for impact reduction of inside rear-view mirrors Article 20

* The interior fittings, controls and surfaces of a vehicle that is required to comply with approved interior impact standard(s) must comply with all the standard(s) listed in at least one of the five columns.

Summary of legislation

Applicable legislation

- Land Transport Rule: Interior Impact 2001

Compliance with approved standards

1. The interior fittings, controls and surfaces in the passenger compartment of the following vehicles must comply with one or more of the approved interior impact standards in Table 7-7-1:

a) vehicles of class MA manufactured on or after 1 January 1992 (Note 1)

b) vehicles of class MB and MC manufactured on or after 1 March 1998 (Note 1)

Condition, performance and modification

2. Interior fittings, controls and surfaces must comply with the requirements relating to condition, performance and modification set out in:

- **VIRM: In-service certification, section 7-7, light PSVs**
- **VIRM: In-service certification, section 7-7, heavy PSVs**

Page amended **1 December 2016** (see **amendment details**).

7-8 PSV heating and ventilation (light and heavy PSVs)

Reasons for rejection

Mandatory requirements

1. Opening windows or roof hatches are the only means of ventilation and the minimum window opening provided is not at least 0.013m^2 for each occupant (Note 1)

2. Forced ventilation is the only means of ventilation and the system does not (Note 2):

a) incorporate at two independent power-driven fans of similar size and capacity, which together can deliver within two minutes an air volume of the passenger compartment, or

b) have fans wired in such a way that a power failure in one fan will not affect the other, or

c) by its design and construction minimise the risk of occupants being harmed by the system or its components.

3. A vehicle does not comply with the requirements relating to mandatory equipment set out in:

- **VIRM: In-service certification, section 7-8, light PSVs**
- **VIRM: In-service certification, section 7-8, heavy PSVs**

Condition and performance

4. A vehicle does not comply with a requirement relating to condition or performance set out in:

- **VIRM: In-service certification, section 7-8, light PSVs**
- **VIRM: In-service certification, section 7-8, heavy PSVs**

Note 1

The ventilation requirement must be calculated for the maximum number of occupants that the vehicle can carry.

Note 2

It can be generally accepted that an unmodified mass-produced vehicle will comply with requirements. If there is doubt, the vehicle inspector must obtain evidence that the vehicle does comply.

Summary of legislation

Applicable legislation

- **Land Transport Rule: Passenger Service Vehicles 1999**

Mandatory requirements

1. If opening windows or roof hatches are the only means of ventilation, the minimum window opening provided must be (Note 1):

    a) 0.013m^2 for each seating position, and 0.01m2 for each seated school child, for a vehicle which entered service as a PSV in New Zealand before 1 July 2000, or

    b) 0.013m^2 for each occupant for a vehicle which entered service as PSV in New Zealand on or after 1 July 2000.

2. If forced ventilation if the only means of ventilation, the system must:

    a) incorporate at two independent power-driven fans of similar size and capacity, which together can deliver within two minutes an air volume of the passenger compartment, and

    b) have fans wired in such a way that a power failure in one fan will not affect the other, and

    c) be designed and constructed to minimise the risk of occupants being harmed by the system or its components.

3. A vehicle must comply with the requirements relating to mandatory equipment set out in:

- **VIRM: In-service certification, section 7-8, light PSVs**
- **VIRM: In-service certification, section 7-8, heavy PSVs**

Condition and performance

4. A vehicle must comply with the requirements relating to condition and performance set out in:

- **VIRM: In-service certification, section 7-8, light PSVs**
- **VIRM: In-service certification, section 7-8, heavy PSVs**

7-9 PSV fire protection (light and heavy PSVs)

Vehicles must comply with the requirements relating to mandatory equipment, condition and performance set out in:

- **VIRM: In-service certification, section 7-9, light PSVs**
- **VIRM: In-service certification, section 7-9, heavy PSVs**

There are no additional requirements in respect of PSV fire protection for the inspection and certification of vehicles for entry into service.