

Standing and Operational Capacity of buses

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Introduction

Buses may carry standing passengers provided the requirements of Regulation 17 and Schedule 1 of the Passenger Transport Regulations 2000 are met. VEs are required to determine the standing capacity of buses in accordance with these Regulations when undertaking routine inspections.

Vehicle requirements

The Regulations state that a public passenger vehicle (bus) may carry standing passengers if:

- the aisle width is at least 380mm (if seats protrude into the aisle, the distance between seats is at least 380mm);
- the distance between the floor and the roof at each point where a passenger may stand upright is at least 1.7 metres;
- it has a holding device for each standing passenger (see over for guidelines on approved holding devices).

Standing Capacity

In addition to the vehicle requirements listed on the first page of this instruction, each standing passenger must have a minimum of 1,600cm² of unobstructed floor space.

Therefore, the standing capacity of a vehicle with the correct aisle width and head clearance is:

- the number of 1,600cm² standing spaces on the vehicle. or
- the number of approved holding devices.

Whichever is the lowest

To work out the number of 1,600cm² spaces on a vehicle you should use the following formula:

$$\frac{W \times L'}{1,600}$$
 W = width of aisle (or if seats protrude into the aisle, the width between seats) in centimetres.

 L' = length of aisle in centimetres from the back of the aisle to the point immediately behind where the driver sits (passengers are not allowed to stand beside or forward of the driver).

When calculating the standing capacity, the figure must be rounded down in all instances, e.g. if a bus has an aisle width of 38cm and length of 500cm the calculation is:

$$\frac{38 \times 500}{1600} = 11.875$$
. Therefore, the standing capacity is rounded down to 11.

1600

A holding device will not be deemed an approved holding device if it is:

- beside or forward of the driver; or
- in a door well; or
- in a position that obstructs the driver's vision to such an extent that it is unsafe.

Recording of standing capacity

VEs should record the standing capacity in the 'Vehicle details' of the Inspection Report.

Any changes to existing standing capacity needs to be highlighted by VEs to ensure these changes are picked up by the Transport Operator Accreditation Team.

Display of operational capacity

The Regulations require all public passenger vehicles to prominently display inside the vehicle both the operational seating capacity in terms of the number of adult seats available for passengers, and the operational standing capacity (if greater than zero) of the vehicle. For the purposes of this guideline, prominently means in letters at least 25 millimetres high and in clear contrast with the background, and located in such a position that it is clearly viewed by passengers entering the bus.

VEs should make operators aware that they have until the next inspection period to comply with the requirement to display the operational seating capacity and the operational standing capacity (if greater than zero).

The operational standing capacity of the vehicle is the same as its standing capacity.

Note: The Transport Commission may determine that the operational standing capacity of a prescribed vehicle used on a regular passenger transport service should, having regard to the length of the route and the normal operating speed and other relevant factors, be less than the vehicle's standing capacity.

The operational seating capacity of the vehicle is equal to its adult seating capacity, with the following qualifications:

- any 3 children being carried on that public passenger vehicle are to be counted as 2 passengers if none of those children has attained the age of 12 years, commonly referred to as the three to two rule. To be eligible for the 3 to 2 rule the seat must be a bench type seat that is not fitted with seat belts that has a flat base and back and must display a minimum of 3 lots of 275mm across the seat length. Alternatively the seat may be fitted with compliant seat belts, however the seat belts must be specifically designed to convert from 2 adult seating positions to 3 child seating positions.
- a child being carried on that public passenger vehicle need not be counted as a passenger if the child has not attained the age of 5 years and is being carried on the lap of another person.

Recording of seating capacity

VEs are to record the seating capacity both 'child seating' and 'adult seating' in the 'Vehicle details' of the Inspection Report.

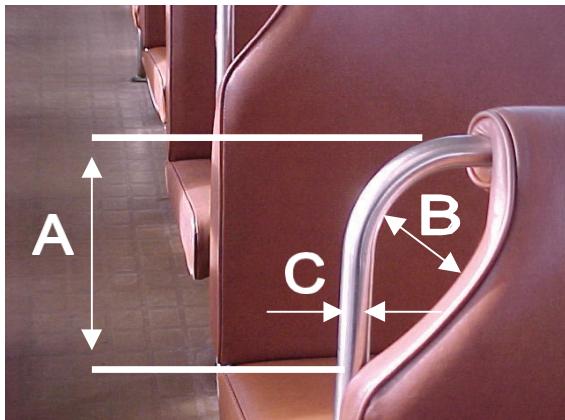
Any changes to existing standing capacity needs to be highlighted by VEs to ensure these changes are picked up by the Transport Operator Accreditation Team.

Approved holding devices for standing passengers:

In order to be an approved holding device for standing passengers, a holding device must meet the following requirements:

- The length must be at least 100mm ('A' in the example below)

- There must be a clearance of at least 30mm between the holding device and any adjacent surface ('B' in the example below)
- It must have a cross section ('C' in the example below) of not less than 20mm or more than 45mm except where one dimension is at least 25mm the minimum dimension must not be less than 15 mm
- Any contactable edge must have a radius of at least 3mm
- It must be easily accessible, secure, serviceable and able to hold the weight of an adult



The following photos are examples of holding devices for standing passengers that meet all the above requirements. Approved holding devices generally take the form of:

- corner handles (see example 1 and 5)
- top-of-seat handles (see examples 2 and 7)
- leather straps and plastic handles (see examples 3 and 4) and
- above-the-head rails (see example 6)

It should be noted that a holding device will not be considered an approved holding device in circumstances where the standing passenger is unable to access the device e.g. - an overhead rail/strap that cannot be reached by a short person would not be considered an approved device for that person and hence the driver should not allow that person to stand.

Example 1



Example 2



Example 3

NB: Drivers/operators should be made aware that these devices would not be acceptable if the standing passenger is too short to reach them e.g. - a school child.

Example 4

NB: Drivers/operators should be made aware that these devices would not be acceptable if the standing passenger is too short to reach them e.g. - a school child.

Example 5**Example 6**

NB: Drivers/operators should be made aware that this rail would not be acceptable if the standing passenger is too short to reach them e.g. - a school child.

Example 7

The following examples provide guidance as to what would not be deemed an acceptable holding device for standing passengers:

Example 8

These behind-the-seat handles are not acceptable.

They are designed primarily for seated passengers and are not easily accessible by standing passengers.

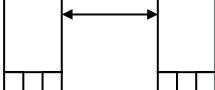
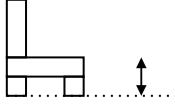
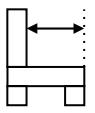
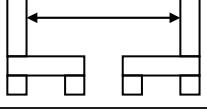
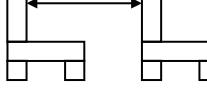
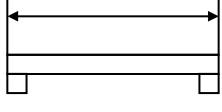
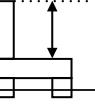
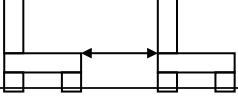
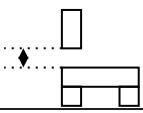
Example 9

This rail is not acceptable as any passenger standing in this position would be blocking the stair well and blocking the entry/exit of passengers from the second floor (this photo was taken on a double-decker bus).

If Vehicle Examiners come across a holding device that is not reflected by any of these examples, they should determine whether it is an approved holding device in accordance with these guidelines.

Contact AIS Compliance on 61663271 seeking advice.

Calculating Seating Capacity

WIDTH OF AISLE		AISLE WIDTH TO BE NOT LESS THAN 380MM. IF A SMALL BUS OR LARGE BUS CARRIES SEATED PASSENGERS ONLY. NOT TO BE LESS THAN 300MM
FROM FLOOR TO TOP OF CUSHION		NOT TO EXCEED 500MM IF FLOOR LEVEL IS INTERRUPTED BY A WHEELHOUSING ETC 300MM LEVEL FLOOR, NOT LESS THAN 400MM (LARGE BUS) 380MM (SMALL BUS)
WIDTH OF SEAT		TO BE LESS THAN 350MM – OR IF A SCHOOL COACH TO BE NOT LESS THAN 300MM
SPACE BETWEEN FACING SEATS		TO BE NOT LESS THAN 1200MM
WIDTH BETWEEN FRONT FACING SEATS		TO BE NOT LESS THAN 660MM – OR IF A SCHOOL BUS TO BE NOT LESS THAN 600MM
LENGTH OF SEAT		TO BE 400MM PER ADULT PASSENGER OR IF A SCHOOL COACH TO BE 275MM PER CHILD
HEIGHT OF BACK SEAT		TO BE NOT LESS THAN 380MM
FLOOR SPACE BETWEEN SEATS		TO BE NOT LESS THAN 200MM
TOP OF CUSHION TO BOTTOM OF BACK SEAT		TO BE NOT MORE THAN 75MM
ENTRANCES WIDTH		AN ENTRANCE SHALL BE NOT LESS THAN 550MM IN WIDTH

Calculation of Seating/Standing Capacity

Note: Assess each seat individually.

Allow one adult for each 400mm of seat length

ADULT SEATING CAPACITY

Excluding Driver)

Allow one child for each 275 mm of seat length

SCHOOL CHILDREN SEATING CAPACITY

STANDING CAPACITY