



CI-101B

Vehicle Safety and Standards **Circular to Industry**

Transportation of Fork Lifts on the Rear of Heavy Vehicles

Fork lifts carried on the rear of heavy vehicles are treated as a load as they are not permanently fixed to the vehicle. Therefore the 'fork lift load' must satisfy the normal requirements applicable to the carriage of loads in terms of dimensions, weight distribution and safe restraint.

Load security

Both the Road Traffic Code 2000 and the Road Traffic (Vehicles) Regulations 2014 require loads to be adequately restrained. The 'Load Restraint Guide' published jointly by the National Transport Commission and the Department of Infrastructure, Regional Development provides technical performance standards and advice on restraining loads.

The load restraints holding the fork lift in place must be capable of meeting the performance standards specified in the Load Restraint Guide. A summary of these requirements is attached as Appendix A.

Only fork lifts with sufficient rated lifting capacity to carry their own weight may be used. Similarly the fork lift tyres must be suitably rated.

Lighting and rear marking

If the size or location of the fork lift on the vehicle obstructs the lighting requirements of the host vehicle, then either of the following requirements must be satisfied:

- The fork lift must be equipped with a light bar (similar to that used in the boating industry) which satisfies the lighting requirements for the host vehicle according to its category and date of manufacture, or
- Providing the fork lift is equipped with adequate lighting including reflectors, the fork lift's lamps may be connected to the host vehicle and operated as if it was a light bar

The rear marking plates must not be obscured - otherwise rear marking plates must be fitted to the rearward face of the fork lift in its loaded position.

If the forklift in its loaded position obstructs the vehicle's number plate, the number plate must either be repositioned or located on the light bar.

Dimensions

Host vehicle dimensions

The carriage of the fork lift must not cause the host vehicle to exceed any of the maximum vehicle dimensions applicable to the type and category of the host vehicle in question.

The dimensions which must not be exceeded include:

- Overall width of 2.5m
- Maximum rear overhang applicable to the category of host vehicle
- Maximum length applicable to the category of host vehicle
- Maximum combination length of 19m.

Load dimensions (includes the fork lift)

Loads must not exceed 2.5m in width. Loads carried on narrow trailers may project up to 150mm from the edge of the vehicle providing the 2.5m width dimension is not exceeded.

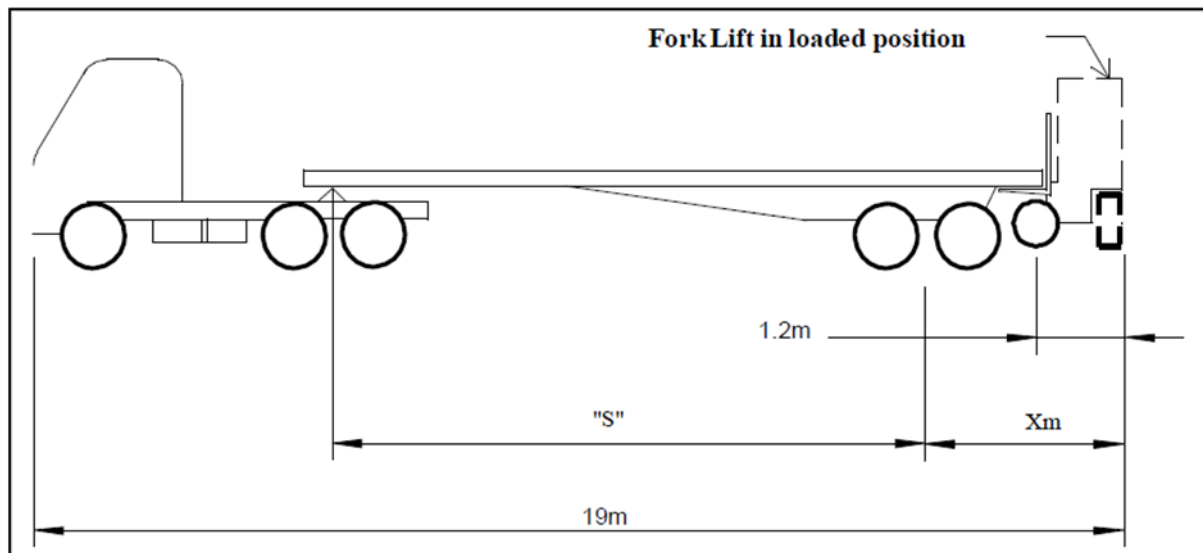
Rear overhanging loads cannot exceed 1.2m.

Loads with an overhang of 1.2m can only be carried if the allowable maximum dimensions of the host vehicle are not exceeded.

For example, a prime mover/semi-trailer combination may not carry a load with an overhang of 1.2m if it is longer than 17.8m in overall length.

Similarly, an 18m-combination length rig may carry a load with up to a 1m rear overhang.

Maximum dimensions for semi-trailer and fork lift



- $X =$ the lesser of 60 % of the 'S' dimension or 3.7m, and
- $S =$ a maximum of 9.5m.

Steering and handling characteristics

Notwithstanding the above requirements, fork lifts can only be carried on the rear of vehicles if it can be demonstrated that the carriage of the fork lift, on the otherwise empty vehicle, does not adversely affect the vehicle's steering and/or handling characteristics.

Related documents and links

- National Transport Commission (www.ntc.gov.au)
- Load Restraint Guide (available www.ntc.gov.au)
- *Road Traffic Code 2000* (available from www.legislation.wa.gov.au)
- *Road Traffic (Vehicles) Regulations 2014* (available from www.legislation.wa.gov.au)
- Department of Infrastructure, Regional Development and Cities (www.infrastructure.gov.au)

Correspondence and enquiries

For enquiries contact the Department on 13 11 56.

APPENDIX A

Performance Standards for Load Restraints

The following information has been sourced from the Load Restraint Guide.

This information enables the calculation of the strength required of the vehicle structures, attachments and load-securing equipment for any special application, or for general application to a range of loads.

Performance standards

Loads must be restrained to prevent unacceptable movement during all expected conditions of operation.

The load restraint system must satisfy the following requirements:

1. The load should not become dislodged from the vehicle.
2. The load should not move relative to the vehicle except for the following loads, which are effectively contained within the sides or the enclosure of the vehicle body.
 - a) Loads that are restrained from moving horizontally (limited vertical movement is permissible)
 - b) Very lightweight objects or loose bulk loads (limited horizontal and vertical movement is permissible)
 - c) Bulk liquids (limited liquid movement is permissible)

provided that, in all cases where movement occurs, the vehicle's stability and weight distribution cannot be adversely affected and the load cannot become dislodged from the vehicle.

To achieve the above, the load restraint system must be capable of withstanding the forces that would result if the laden vehicle were subjected to each of the following separately:

1. 0.8 'g' deceleration in a forward direction
2. 0.5 'g' deceleration in a rearward direction
3. 0.5 'g' acceleration in a lateral direction
4. 0.2 'g' acceleration relative to the load in a vertical direction.

Note: 'g' (the acceleration due to gravity) is equal to 9.81 metres/sec/sec for the purpose of these standards.