

3.7 Containers

3.7.1 Containers used in the Territory are constructed to international (ISO 1496) standards, having a height ranging from 2.6 m(8'-6") to 2.9 m(9'-6").

3.7.2 Containers are generally constructed with specially designed corner castings which with the twist locks, as shown in Diagram 3.7.1, fitted to vehicles specially provided for the transport of containers, enable a very positive means of restraint to be obtained.

3.7.3 Twist locks should be inspected regularly for wear, damage and correct operation, and repairs as necessary should be made to any defective parts. A minimum of four twist locks should be provided for each container to be carried. If all four twist locks can be properly engaged and locked in position then no further means of restraint is necessary.

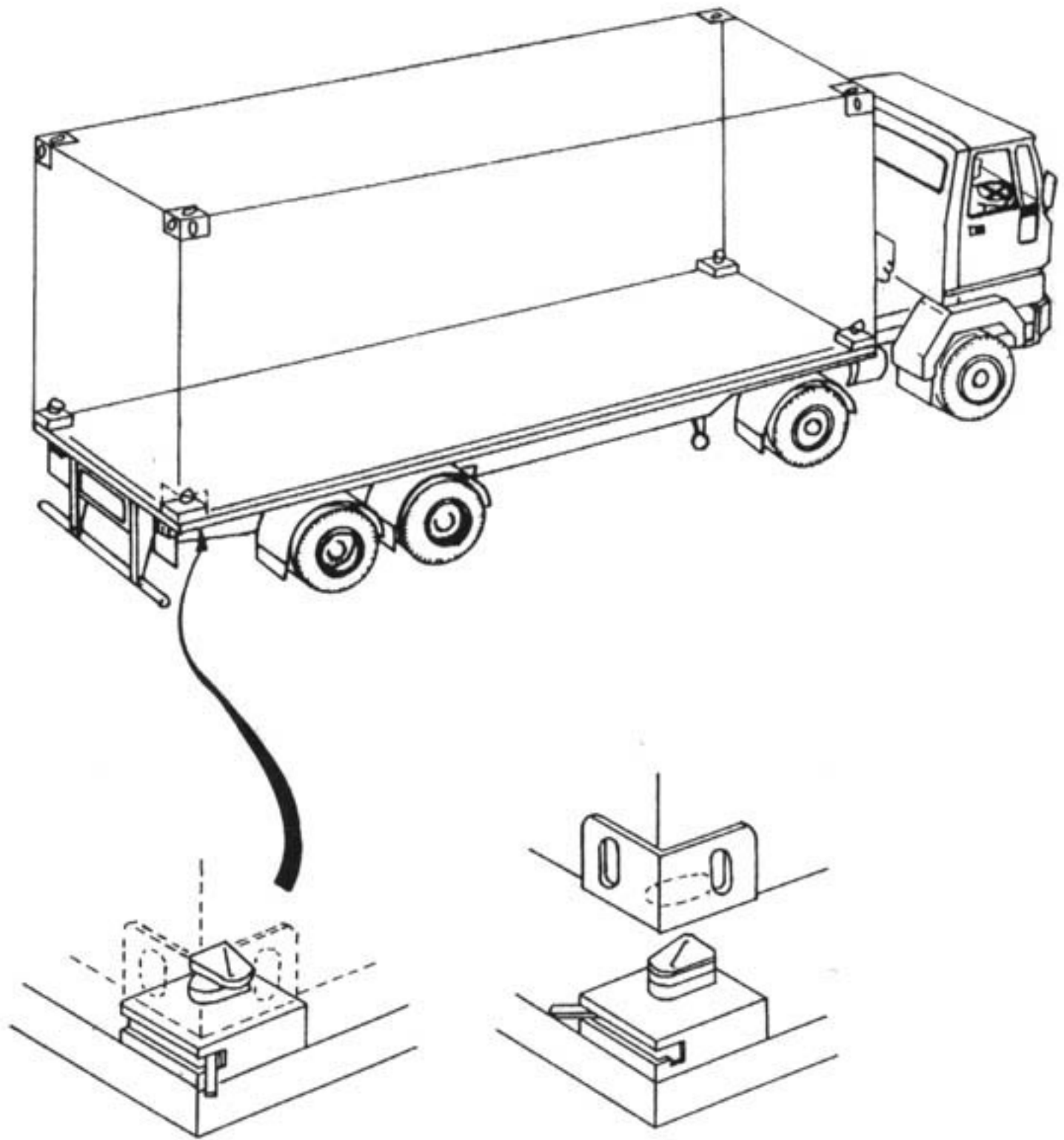
3.7.4 It is strongly recommended that containers are only transported on vehicles equipped with twist locks or similar devices. If however a container has to be transported on another type of vehicle then a retention system will be necessary to adequately secure the container to that vehicle. Similarly if any of the twist locks are not functioning properly then additional restraint will be necessary.

3.7.5 When a vehicle is not equipped with twist locks, then the requirements as mentioned in other parts of this section in respect of other types of loads will need to apply, and the following points are particularly relevant: -

i) Securing lashings around and beneath the body of the vehicle, whether the lashings are attached to special rings on the container or passed over the top of the container, is not an acceptable means of securing the container.

ii) Lashings should only be attached to those points on the container intended for that purpose or alternatively provided for lifting or mechanical handling, though fork lift facilities provided along the base of containers will not be suitable for this purpose.

iii) All attachment points on the container should be examined to ensure they are in sound condition.



TWIST LOCK SYSTEM
FOR RESTRAINING CONTAINERS

DIAGRAM 3.7.1.

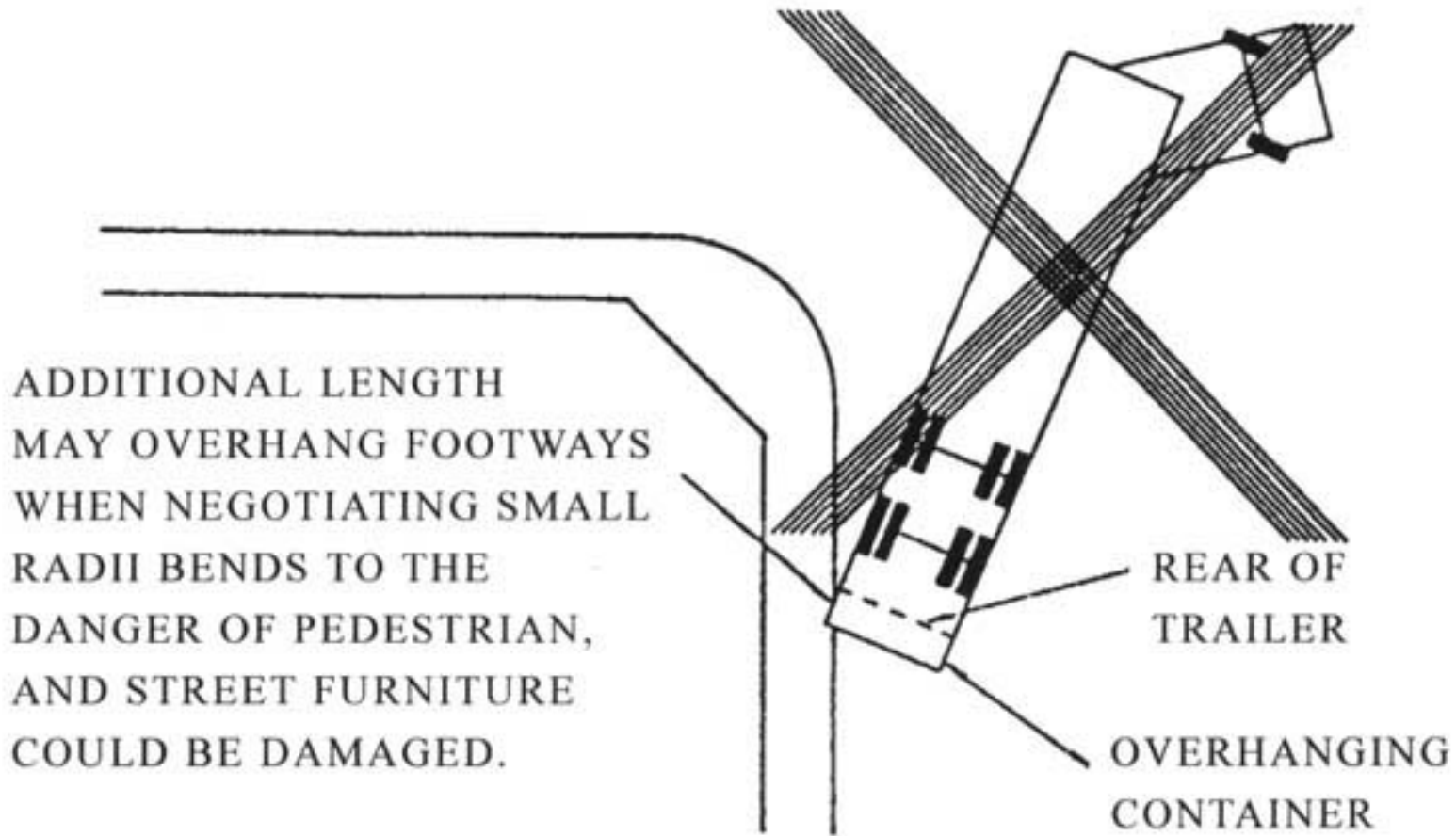
- iv) All the suitable available attachment points on the container should be used to secure it to the vehicle platform.
- v) Vehicle sides will not on their own provide sufficient restraint for a container, and therefore must not be relied upon for this purpose.
- vi) Any lashings should be attached to the vehicle by anchorage points specifically provided for that purpose.

3.7.6 Although the relevant legislation does allow a container to extend beyond the rear of a vehicle it is strongly recommended that containers should not be allowed to project beyond the sides or the rear of the vehicle loading platform because, as shown in Diagram 3.7.2: -

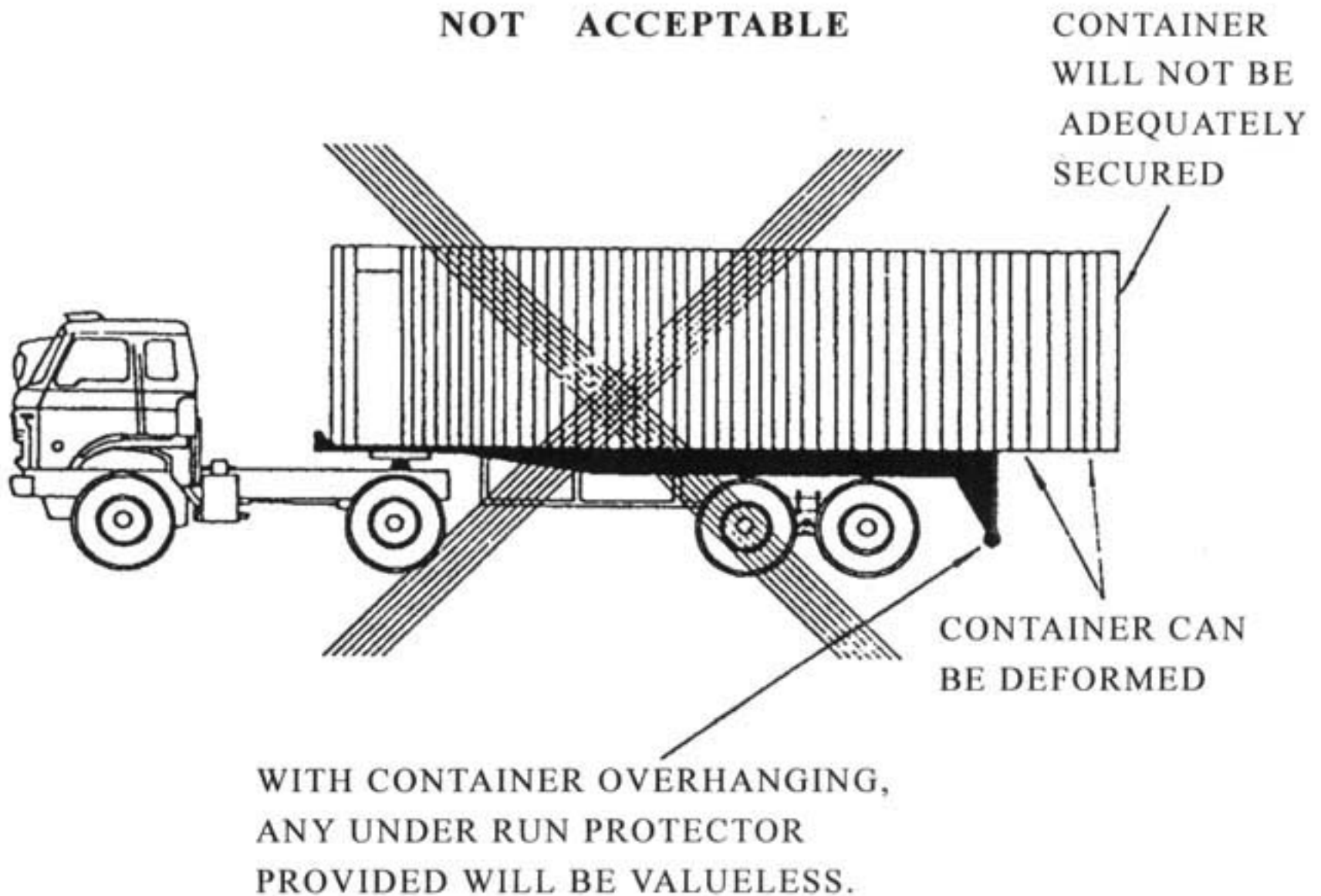
- i) permanent distortion of the container can occur,
- ii) the twist locks or similar devices will not function properly and even with additional lashing, the stability of the load will be at risk,
- iii) any under-run protectors provided at the rear or side of the vehicle will not be effective and the projecting container could seriously injure the passengers of any out-of-control car that runs under the container; and
- iv) with articulated vehicles any extension caused by the container extending over the rear will affect the manoeuvrability of the vehicle and increase the likelihood of the rear of the container, particularly when negotiating a small radius bend, extending over any adjacent footways to the obvious danger of pedestrians, or onto adjacent traffic lanes to the danger of vehicles in these lanes.

If 'forty-five foot' containers are carried on 'forty foot' trailers and overhang the trailer symmetrically at both ends, the additional twist locks fitted will overcome problems (i) and (ii) above, but problems (iii) and (iv) are still relevant. Additionally, it should be remembered that in accordance with the Road Traffic (Traffic Control) Regulations, any overhanging load should carry either a red flag or lights in the day and night respectively.

NOT ACCEPTABLE



NOT ACCEPTABLE



CONTAINERS SHOULD NOT OVERHAND TRAILER

DIAGRAM 3.7.2

3.7.7 The carriage of single 'twenty foot' containers on 'forty foot' trailers, as shown in Diagram 3.7.3, results in an uneven distribution of the load and is extremely dangerous. This practice should be discontinued.

3.7.8 Whilst the driver of the vehicle will have little control over the packing of a container, if it is apparent that the container has not been safely packed, the driver should refuse to transport it. Incorrectly packed containers can affect the stability of the vehicle with very serious consequences if this should cause the vehicle to overturn.

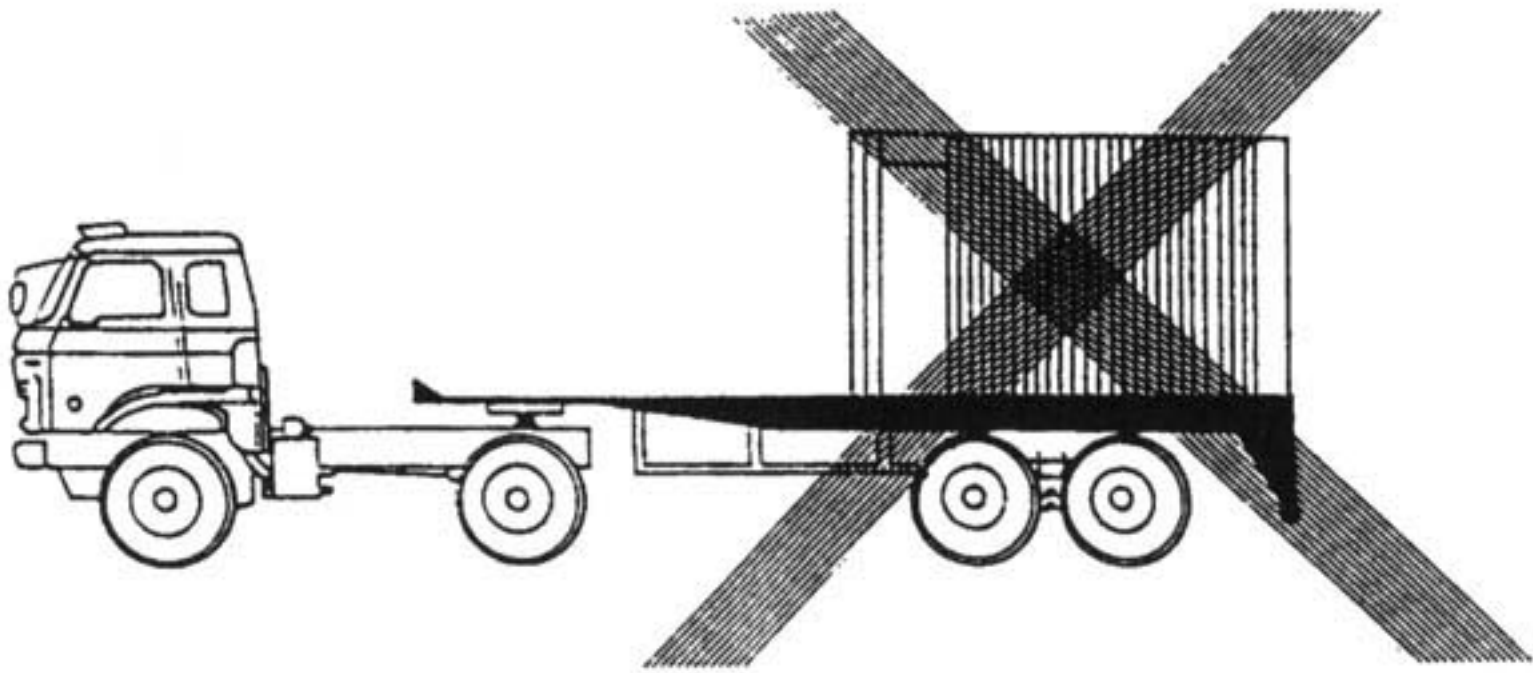
3.7.9 It is recognized that difficulties can be experienced in respect of the way containers imported from abroad have been packed, however no such difficulties should arise with containers packed in the Territory, where it is expected that every care will be taken to ensure the highest standards of safety are achieved.

3.7.10 It is not possible to provide guidance to cover every situation and in some cases specialist advice from manufacturers will need to be sought but the following paragraphs provide general information which if followed should allow most loads to be loaded to an adequate standard of safety. However it should be stressed that the advice in this section is concerned mainly with achieving a load which is stowed such that the stability of the container when being transported is not detrimentally affected. Matters such as control of temperature differences between the outer and inner container skins, or contamination as a result of residue from previous cargoes, or incompatible substances, or pest infestation, all of which will need to be taken into account are not dealt with as they are outside the scope of this code.

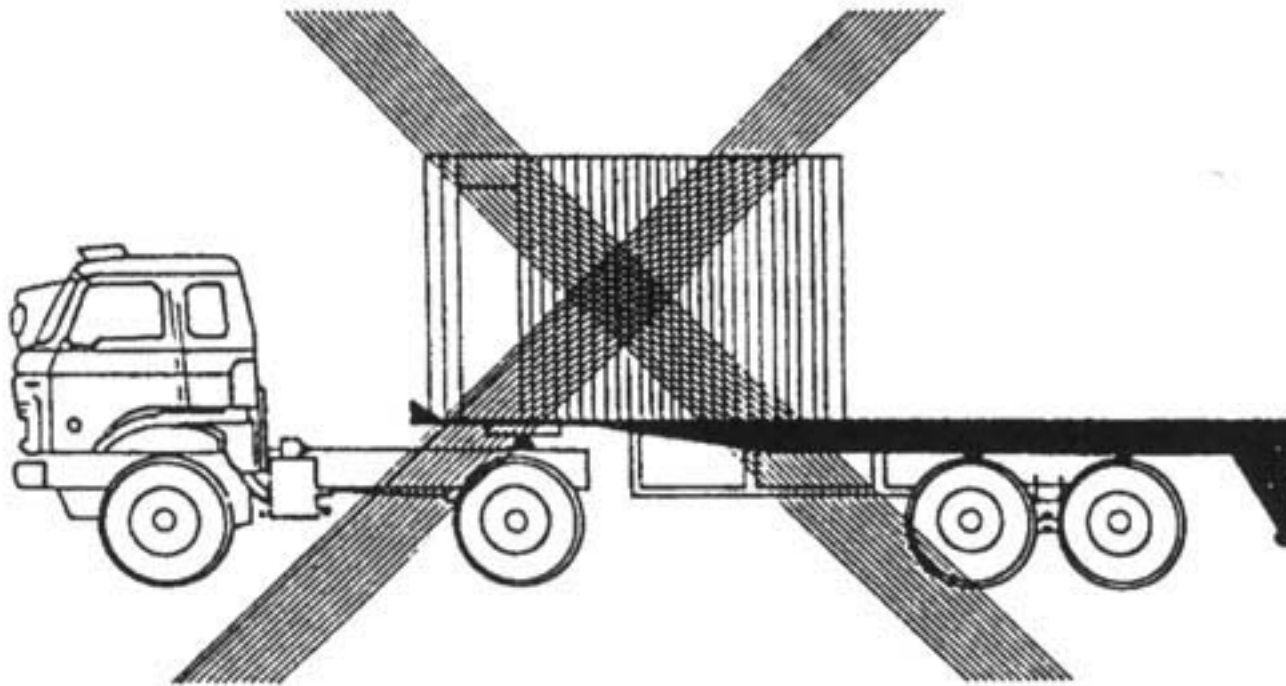
3.7.11 The aim when loading a container is to produce either a tight or a secured load. A tight load being one where individual items are packed hard against one another to prevent movement, and a secured load is one where the load or individual parts of it are secured by suitable lashings to anchorages within the container.

3.7.12 In order to achieve a tight or secured load, a loading plan should be prepared which takes into account the items being loaded, particularly with regard to their compatibility and the type and strength of any packages or packaging used.

NOT ACCEPTABLE



NOT ACCEPTABLE



THE CARRIAGE OF A 'TWENTY FOOT' CONTAINER ON A 'FORTY FOOT' TRAILER RESULTS IN UNEVEN DISTRIBUTION OF LOAD AND IS EXTREMELY DANGEROUS

CONTAINER AND TRAILER SIZES TO MATCH

DIAGRAM 3.7.3

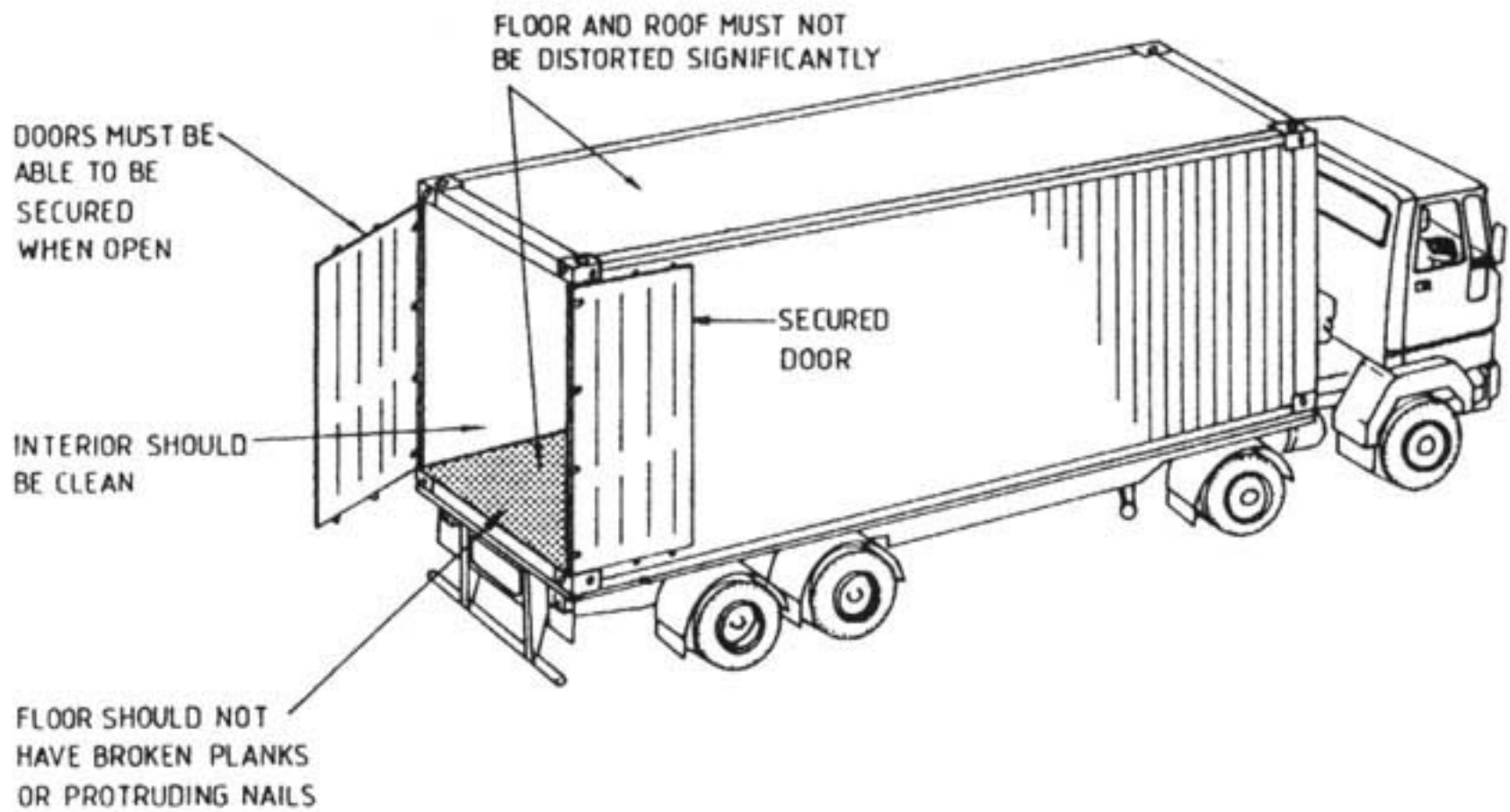
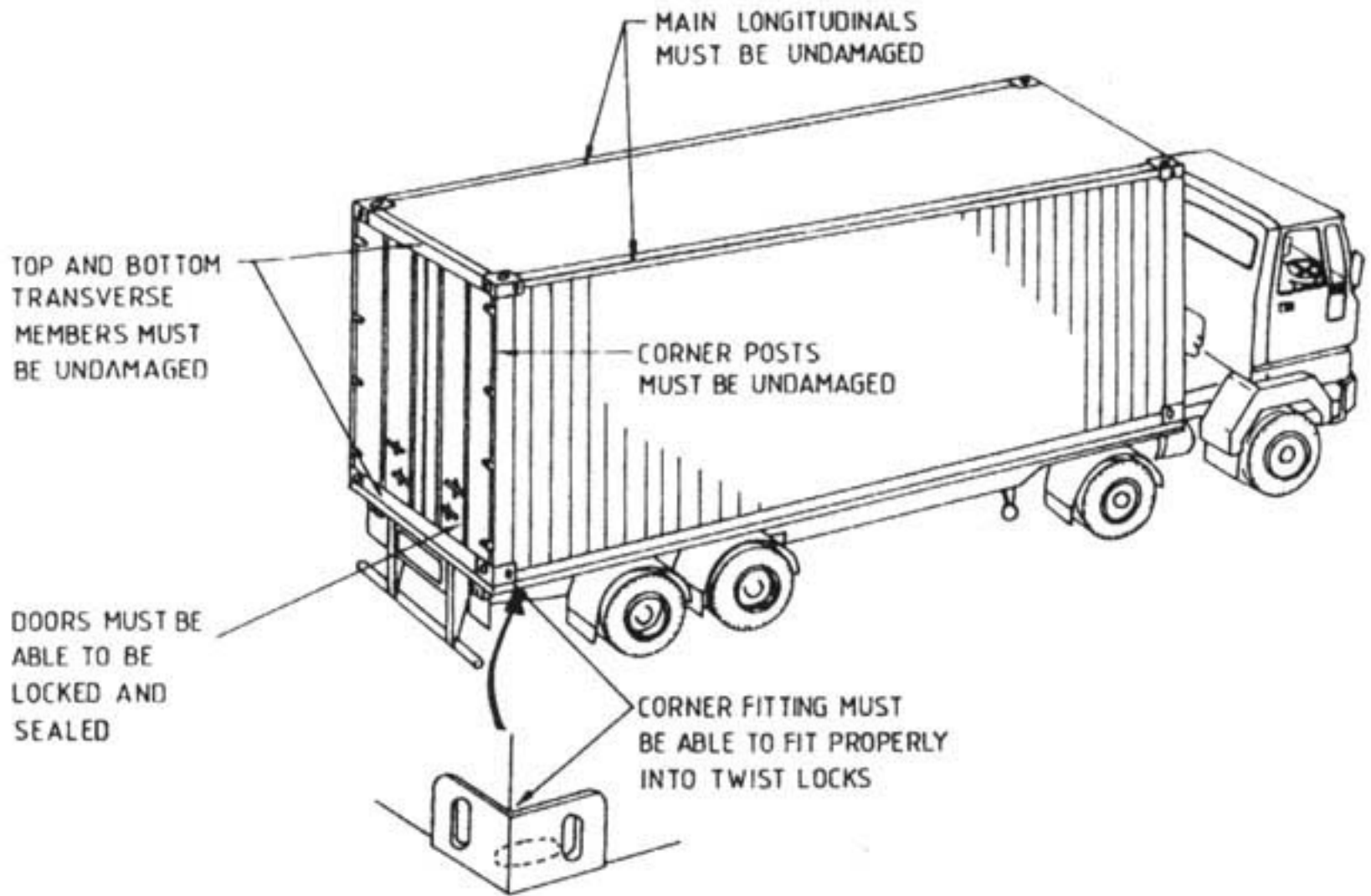
3.7.13 Loading plans will need to take account of the fact that containers are designed assuming the load to be evenly distributed over the entire floor area, but if uniform loading cannot be achieved, specialist advice will need to be obtained.

3.7.14 It is important that loading plans also consider the effects of unloading, and that efforts are made to avoid any problems arising with regard to this.

3.7.15 Prior to any loading of a container it is essential that the container is itself examined to see that it is safe to use, as shown in Diagram 3.7.4, with particular emphasis being placed on the following: -

- i) If there is any evidence that the container has been severely weakened because of damage to its main framework, that is the corner posts, corner fittings, main longitudinal, or the top end and bottom end transverse members which form the end frame, the container must not be used.
- ii) The walls, floor and roof of the container should be in good condition and not significantly distorted.
- iii) The doors of the container should be checked to see that they work properly and can be locked and sealed in the closed position and properly secured in the open position.
- iv) Internally the container should be free from major damage, without broken planks or protruding nails and should be clean and dry.
- v) Any cargo tie-down cleats or rings should be in good condition and properly anchored. In the situation that securing points are not adequate for the securing arrangements proposed, alternative arrangements should be decided with the supplier of the container, and additional fittings should not be added unless the supplier agrees.

3.7.16 The stability of the container when it is being loaded is extremely important and this has already been referred to previously in paragraph 2.3.7. The general advice given in Section 3.14 on the location of loading activities is particularly relevant to containers and should therefore be followed closely.



CONTAINER TO BE FREE FROM DEFECTS

DIAGRAM 3.7.4

3.7.17 When actually packing the load in the container, regard should be had to the following: -

i) The container should be adequately illuminated internally in order that loading activities can be carried out safely and efficiently.

ii) The total goods to be loaded must not exceed the permitted payload of the container, and of course must not cause the permitted gross vehicle weight of the vehicle transporting the container to be exceeded.

iii) The load should be evenly distributed across the floor area and in no case should more than 60% of the load be in less than half the length of the container.

iv) Heavy goods should not be packed on top of lighter goods, and the centre of gravity of the loaded container should be below the mid point of its height, and close to the mid length and mid width of the container.

v) As shown in Diagram 3.7.5 a tightly packed as opposed to a secured load can be achieved where goods and packages are of a regular shape and size by building individual items one against the other from one side wall to the other. Any minor voids that occur can generally be tolerated, but if there is any doubt, the voids should be filled with suitable material such as timber, folded corrugated board, hard board or high density foam. Cartons of a similar shape and size, but of a size which is not a convenient module for the container should be packed with one row starting from one side of the container and the next row starting from the other. Each successive layer is staggered in a similar way to obtain a tight load. With bagged cargo, a tight load can be achieved by alternating between layers with the bags lengthwise and layers with the bags crosswise.

vi) Where cargo is secured by lashings or netting these must be attached to the lashing points provided for this purpose, and it is essential to ensure that the lashing points are not overloaded.

vii) For heavy indivisible units it may be necessary to spread the weight over the container floor by using timber baulks or similar, as shown in Diagram 3.7.6. However the localized bearing pressures of the load spreading devices must be within the design capabilities of the container, and if there is any doubt on this, expert advice must be sought.