

3. Advice on loading

3.1 General

3.1.1 The advice in this Section is only intended to provide general guidelines as to how different types of vehicles may be loaded. It obviously cannot include for every eventuality, and it must be for the operator and driver to ensure that any load is properly secured and the load is carried in accordance with any relevant regulations.

3.1.2 The carriage of any Dangerous Goods, conforming to or regulated by the Dangerous Goods Ordinance, Cap 295, is a specialist subject outside the scope of this code, and therefore advice on the loading of such material other than in very general terms is not included.

3.1.3 It is extremely important that loads are properly secured and that the securing equipment, fixings, and method of applying lashings are adequate for the particular load. In this respect the method whereby a lashing is passed around and underneath the body of the vehicle and then over the load is not entirely satisfactory as the lashing is not actually secured to the vehicle, and because of this, damage to the chassis frame or other parts of the vehicle can occur; also any forward restraint is only provided by friction which may be inadequate to restrain the load during heavy braking. If this method is used one lashing alone is certainly not sufficient, and for any long sections at least four must be used, but preferably an alternative means of restraint whereby lashings are secured to anchorage points should be used. Where possible, all restraint tensioners should be arranged on the nearside of the vehicle, so that adjustment to them need not take place in exposed positions in the centre of the road. When not in use, all restraints should be stored safely, so as not to present a danger to other road users, including pedestrians.

3.1.4 The proper security of a load on a vehicle is particularly important where the vehicle's loading platform is equipped with any form of roller loading device. Apart from the fact that this device must be firmly fixed to the vehicle platform, it must also be ensured that during transit the load cannot move across the rollers, and reliance on the side or tail or head boards to prevent this is not sufficient. Ideally the rollers themselves should be capable of being locked so that they cannot rotate, however even if this can be achieved this alone will not be enough as

the smooth surface of the rollers will considerably reduce the friction between the load and the platform. Therefore additional restraint generally in the form of lashings will be required to prevent the load or any part of it from sliding over the locked rollers. Where rollers cannot be locked then further restraint over that described above, possibly incorporating baulking, will be necessary so that the load or any part of it does not move. Care will also be required when the goods are being unloaded to ensure that when the restraints are released and the rollers unlocked, the load or any part of it can be prevented from inadvertently moving. In this latter respect unloading goods when the vehicle is parked on a gradient should be avoided wherever possible.

3.1.5 Where roof racks are used for the storage of equipment, such equipment must be properly secured such that it cannot fall or be swept off.

3.1.6 If the vehicle has a crane, grab or similar attached for loading goods on and off it, it should be ensured before any loading or unloading takes place that the equipment is functioning properly. In particular if the clamp or similar equipment has been changed or added to the crane, then it must be tested before use to see that the supply pressures to the new clamp are properly adjusted.

3.1.7 When loading or unloading goods using the crane or grab attached to the vehicle, loads should not be left suspended from the crane or grab for long periods, and when in this position should never be left unattended.

3.1.8 All types of machinery and vehicles, including motorcycles, when transported, (whether new or used, whole or in parts), which have any fuel in any tank, body or component, must be drained of all fuel and flammable vapour to the utmost extent prior to loading and fuel containing parts securely and tightly sealed to prevent the escape of any residual fuel or flammable vapour. Batteries of such machinery and vehicles should be disconnected before loading. Such loads should be properly and securely fastened in an upright position so as to avoid impact between loads which may cause sparks and possible explosion. It should be noted that the risk of explosion of such loads will remain and such loads should not, therefore, be loaded into any sealed container or truck body. All such loads should, instead, be carried in 'open' and well ventilated transport.

3.2 General Freight

3.2.1 The loading and proper security of general freight loads can be difficult because of differences in size, shape and nature of such loads.

3.2.2 Vehicles having head boards, tail boards, side boards, or van bodies will offer some restraint to the movement of the load, but additional load restraining devices will be necessary: -

- i) if there is any risk that the load may break through walls, side board or tail board of the vehicle, or
- ii) if the load is higher than the head board, side board or tail board of the vehicle.

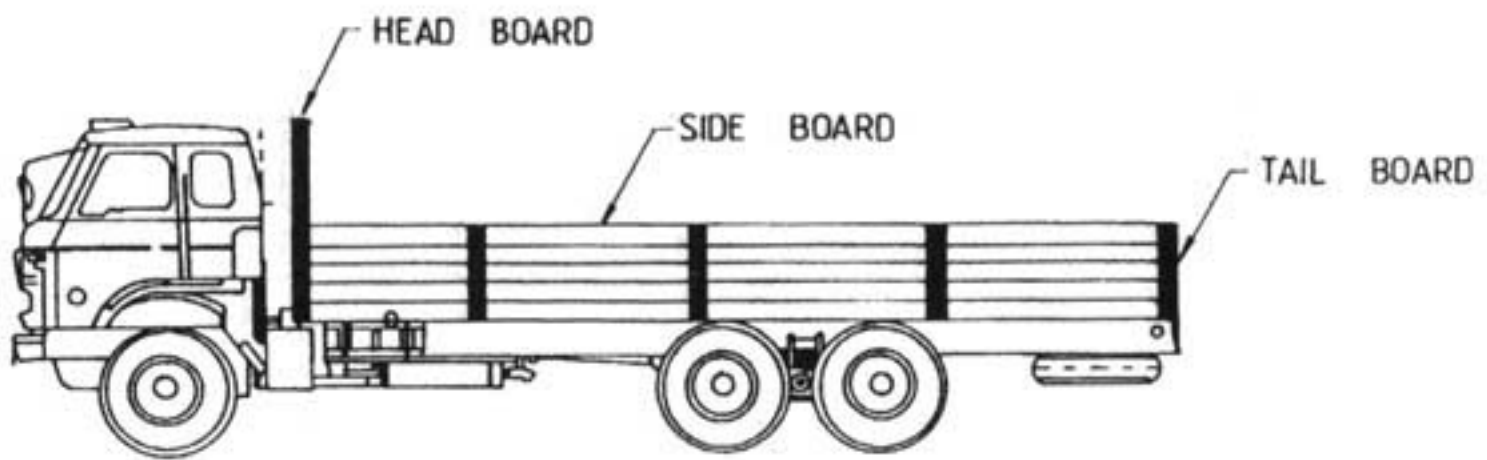
3.2.3 On platform vehicles, that is those vehicles without side or tail boards, some form of load restraining device will always be necessary if general freight is carried, as illustrated in Diagram 3.2.1.

3.2.4 As with all types of loads it is essential that general freight loads are distributed so that: -

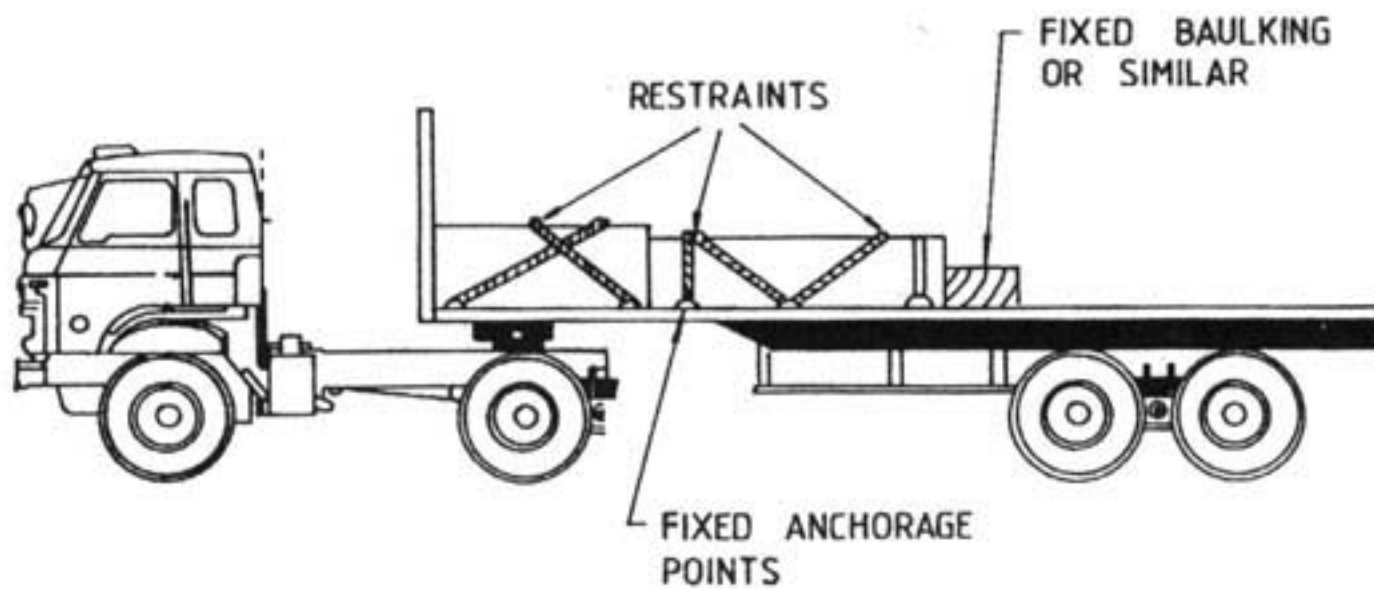
- i) the permitted gross vehicle weights and axle weights of the vehicle are not exceeded, and
- ii) the load is stable under all conditions, e.g. when the vehicle brake accelerates or turns.

3.2.5 For mixed loads the following is advised: -

- i) as shown in Diagram 3.2.2, heavy articles should be placed at the bottom and to the rear whilst light crushable boxes or similar should be located at the top and to the front;
- ii) where the load is composed of different sized containers, small items should be placed centrally and the larger items should form the outer walls of the loads, as also illustrated in Diagram 3.2.2;
- iii) irregular shaped items, if it is not possible to place them centrally, should be located in the upper part of the load and secured properly by suitable restraints;



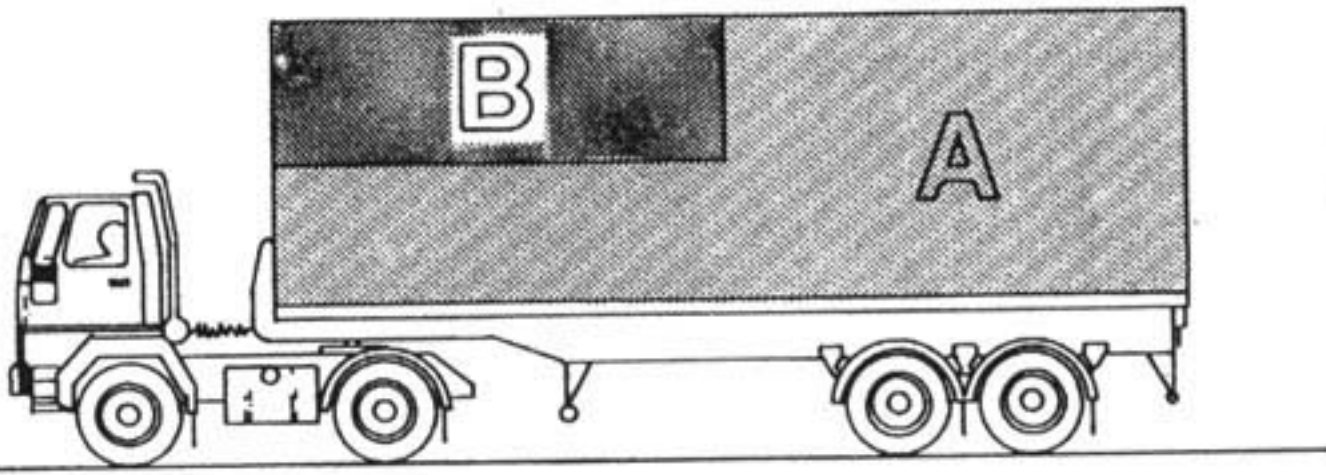
WHERE GENERAL FREIGHT LOADS EXCEED THE HEIGHT OF ANY HEAD BOARD, SIDE BOARD OR TAIL BOARD, LOAD RESTRAINING DEVICES WILL BE NECESSARY



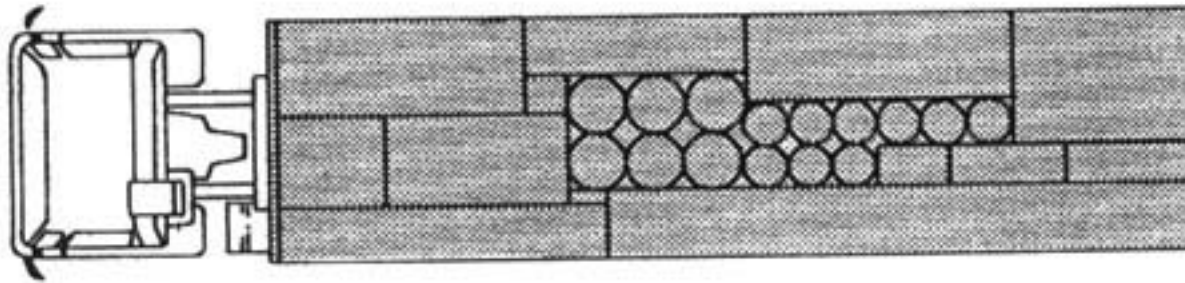
GENERAL FREIGHT CARRIED ON ANY PLATFORM TYPE VEHICLES MUST HAVE LOAD RESTRAINING DEVICES

TRANSPORTING GENERAL FREIGHT

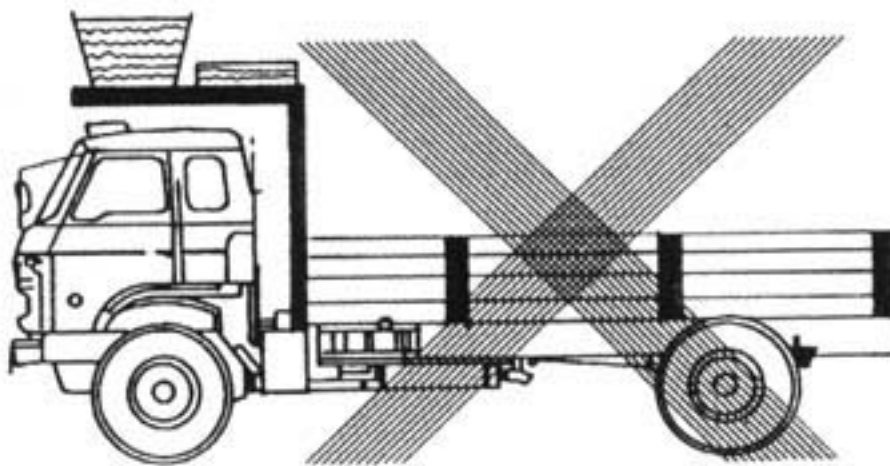
DIAGRAM 3.2.1



MIXED LOADS - LIGHTER CRUSHABLE ITEMS TO THE TOP AND AT THE FRONT, 'B'. HEAVY ARTICLES TO THE BOTTOM AND REAR, 'A'.



MIXED LOADS - SMALL CONTAINERS IN CENTRE, LARGER CONTAINERS AROUND THE OUTSIDE.



NOT ACCEPTABLE

LOOSE BASKETS SHOULD NOT BE CARRIED ON CAB ROOF

TRANSPORTING MIXED LOADS
(ARRANGEMENT OF LOADS)

DIAGRAM 3.2.2

iv) the load must be packed tightly before applying restraints, and the restraints must be suitable for the type of mixed items being carried. Longitudinal lashings must be adequate for the total of the load, and it should be ensured that no part of the load can move forward separately;

v) any baskets or similar transporting equipment, or spare covers, should be properly secured to the vehicle, preferably in their own enclosed compartment. Loose baskets or similar should not be carried on the cab roof, as shown in Diagram 3.2.2, where they are in danger of being swept off;

vi) even if the load does not protrude above the side or tail boards, it is essential to cover the load with sheeting, as shown in Diagram 3.2.3, in order to prevent spillage, and as a protection for the load;

vii) as illustrated in Diagram 3.2.4, vehicles transporting palletised drink crates should preferably have sliding partitions, or at least adequate covers and restraints;

viii) the tail board when in the raised position must not be used to support any load or any part of a load; in the lowered position the tail board should not be used to support any individual load; and in the case of a load extending beyond the rear of a vehicle, the tailboard should be lowered and secured so that the load only rests on the rear of the vehicle platform, however the lowered tailboard must not obscure any brake, rear or indicator lights, or reflectors, and if it does, the tailboard will need to be removed;

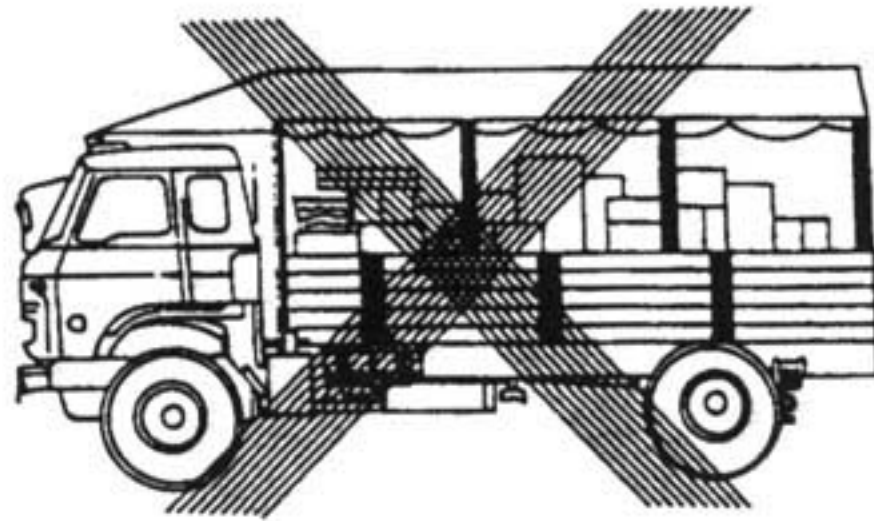
ix) where several sheets are required to cover a load, the sheets should be laid from the rear to the front, so that the overlapping portions face rearwards, thus preventing penetration by wind or driving rain.

3.2.6 Subject to any other advice in the following sub-paragraphs, rolls, drums, or cylindrical items should normally be loaded with their axis across the vehicle in order that any rolling tendency will be to the front or rear, and chocks and lashings should be used to ensure the stability of individual items and the rolls, drums or cylindrical items should be generally loaded in accordance with the following: -

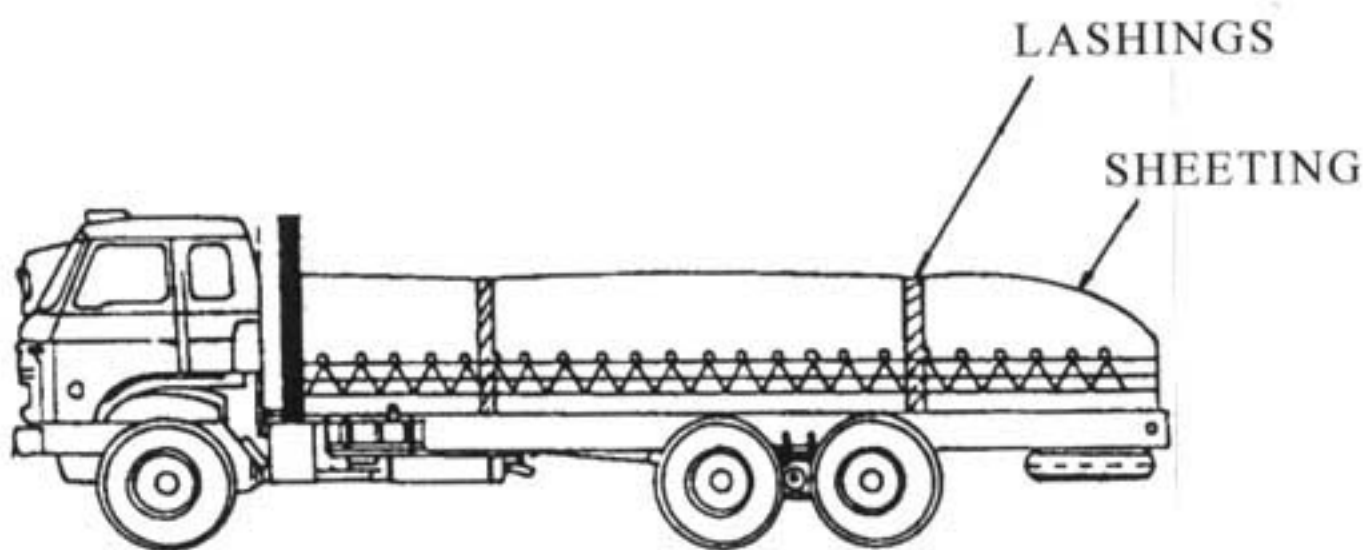
i) As shown in Diagram 3.2.5, rolls loaded with their axis across the vehicle should have: -

a) the bottom layer loaded first and secured by chocks;

NOT ACCEPTABLE



MIXED LOADS – THIS ILLUSTRATES LAODING WHICH IS NOT ACCEPTABLE AS ROOF SUPPORTS ARE NOT SUFFICIENT ON THEIR OWN AS RESTRAINT DEVICES, AND LASHINGS OR SIMILAR MUST BE PROVIDED TO PREVENT ANY PART OF THE LOAD FROM FALLING OFF



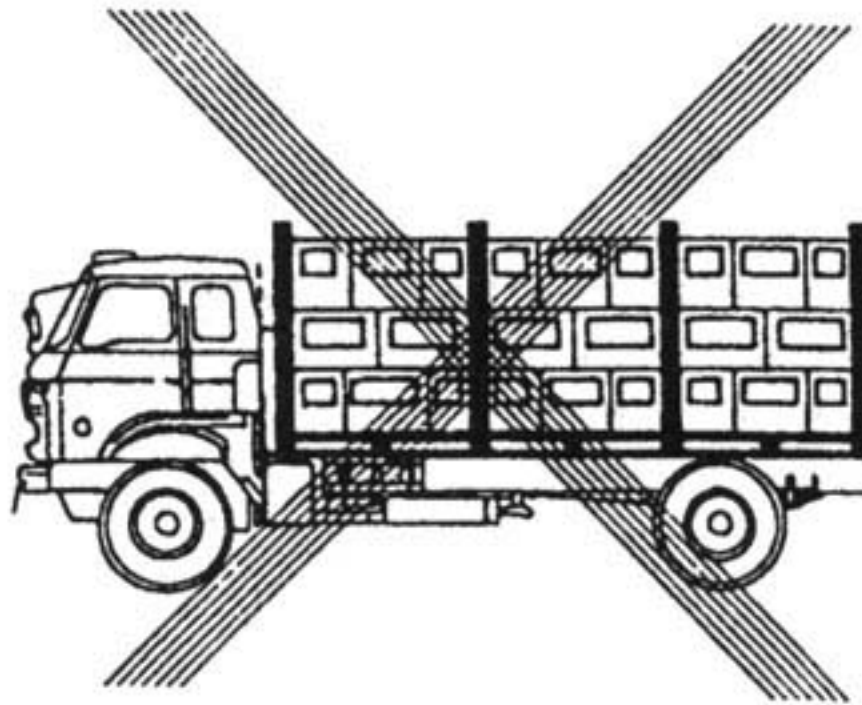
MIXED LOADS – SHOULD ALWAYS BE COVERED BY SUITABLE MEANS TO PREVENT SPILLAGE AND PROVIDE PROTECTION FOR LOAD

TRANSPORTING MIXED LOADS

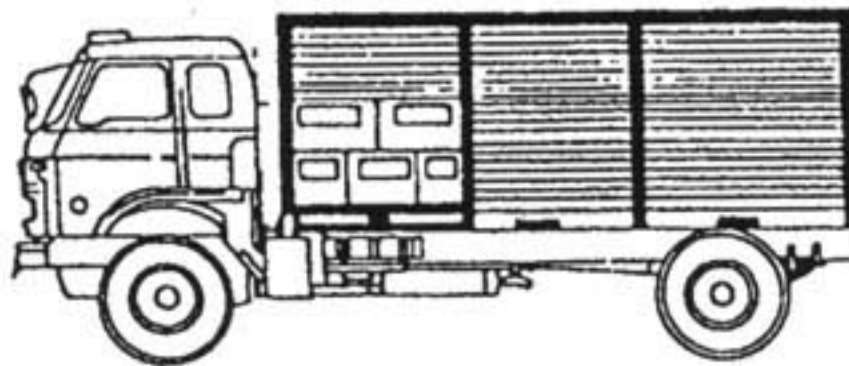
(PROVISION OF ADEQUATE RESTRAINT)

DIAGRAM 3.2.3

NOT ACCEPTABLE



PALLETISED DRINK CRATES BUT VEHICLE HAS INSUFFICIENT SIDE RESTRAINT TO PREVENT ANY LOOSE CRATES FROM FALLING OFF THE VEHICLE.



SLIDING PARTITION COVERS OR LASHINGS ENSURE ANY LOOSE CRATES ARE SECURELY RESTRAINED WITHIN THE VEHICLE WHEN BEING TRANSPORTED

TRANSPORTING CRATES

(PROVISION OF ADEQUATE RESTRAINT)

DIAGRAM 3.2.4

b) the second layer started with the roll nearest the vehicle cab being loaded first and a “between layers lashing” pulled over this roll and the remaining bottom layer rolls, but the lashing should not be tensioned at this stage;

c) the remaining rolls for the second layer loaded, and a “top lashing” pulled over the whole load, and this and the “between layers lashing”, tensioned and secured to the rear of the vehicle;

d) finally the whole load covered with sheeting to assist lateral restraint and to provide weather protection.

“Between layers lashing” however may be omitted: -

a) when the load is formed from metal or concrete pipes, since the weight and abrasive nature of the load would damage the lashings, and

b) if the lashings are likely to damage the load because of the weight of the top layer of the load pressing the lashing onto the bottom layer.

In both cases however additional chocks and “top lashings” should be used to compensate for the lack of the “between layers lashing”.

ii) Where the length of a cylinder is less than twice its diameter, it is preferable that such cylinders should be placed on end, subject to this not being contrary to any manufacturer’s advice on the carriage of such cylinders, nor adversely affecting the safe carriage of the cylinders. In the latter case, for example if the placing of a large cable reel on end meant that it projected beyond the sides of the vehicle it would generally be preferable not to do this providing the reel could be adequately lashed and checked to prevent movement, and the maximum height of 4.6 m is not exceeded.

iii) If the length of a cylinder is greater than twice the diameter but less than the width of the vehicle, then, unless they have been designed to stand vertically, or are drums or similar as described in (iv), the cylinders forming the load should be positioned to roll forwards. Each row must contact the one in front and the rear ones must be checked to prevent rolling backwards or forwards.