

PROVISION AND CARE OF WORK EQUIPMENT

7.1 Suitability of work equipment

7.1.1 All equipment provided for use by workers should comply with any relevant standards laid down by merchant shipping or general UK regulations. Any equipment not covered by regulations or type approvals should comply with the appropriate British Standard or its nearest international equivalent.

7.1.2 In addition all work equipment should be:-

- (a) suitable for the work to be carried out;
- (b) properly adapted for that purpose; and,
- (c) capable of being without any risks to the health or safety of any worker.

7.1.3 The term “work equipment” applies to any machinery, appliance, apparatus, tool or installation provided for use at work. The exception to this is any safety equipment or apparatus provided in compliance with SOLAS requirements, which is subject to other merchant shipping regulations.

7.1.4 In practice, work equipment supplied by the ship is generally the responsibility of the employer who supplies it. This is the position reflected in the Merchant Shipping and Fishing Vessels (Provision and Use of Work Equipment) Regulations 2006. It should be noted however that this obligation on the employer may be extended to other persons where the employer does not have responsibility for the operation of the ship. Where any work equipment is provided from ashore, responsibility for its safety will

rest with the supplier and it will also be subject to HSE's regulations.

7.2 Maintenance

7.2.1 All work equipment is to be maintained in efficient working order and in good repair in accordance with the manufacturer's instructions.

7.2.2 Maintenance should include regular inspections by a competent person as dealt with in paragraph 7.1. Where there is any suspicion that any work equipment is not working properly, or has been subjected to any treatment likely to cause damage, it should be taken out of service until it can be inspected and any necessary repairs or maintenance undertaken.

7.2.3 The decision on what maintenance work is required rests with the employer/ competent person however the following should normally form part of a maintenance routine:-

- (a) greasing of bearings etc should be thorough and frequent as bearings and other moving parts that are dry will impose additional loads that can lead to failure;
- (b) the condition of all ropes and chains should be checked regularly for wear, damage and corrosion and replaced as necessary;
- (c) regular function tests should be carried out on all controls, emergency stop controls, brakes, safety devices etc to ensure they are operating correctly. Such checks might usefully be carried out before the equipment is to be used.

7.2.4 Work equipment should as far as possible be constructed or adapted to permit maintenance operations to be carried out while the equipment is shut down. Where this is not possible

appropriate protective measures must be put in place to enable such maintenance operations to be carried out safely without exposing the person carrying out such maintenance, or any other person, to any risk to their health and safety. Such protective measures would include:-

- keeping exposure of the dangerous part to the minimum necessary;
- authorisation of the exposure by a responsible ship's officer or other responsible person;
- permitting only a competent person to carry out the operation;
- ensuring that any person working close to the machinery has enough clear space and adequate light while they are working;
- ensuring that any person operating or close to the machinery has adequate instruction in safe systems of work for that machinery, the dangers arising from its operation and the precautions to be taken; and
- the placing and display of a conspicuous warning notice on or close to the machinery.

7.2.5 Where any machinery has a maintenance log, the log must be kept up to date.

7.3 Inspection

7.3.1 Where the safety of work equipment depends on the installation conditions, it should be inspected by a competent person after initial installation, or after re-assembly at a new site or in a new location, and before being put into service for the first time, to ensure that it has been installed correctly, in accordance with any manufacturer's instructions, and is safe to use. In this context "inspection" means the carrying out of such visual or more rigorous inspection by a competent person and may include testing where this is considered appropriate.

7.3.2 Inspections should cover factors such as the standard of welding or

other fixing and materials used, together with the strength of any part of the ship to which it is attached and which supports it. Account should also be taken of any inspection requirements or guidance produced by the manufacturer. Work equipment should be re-inspected at regular intervals, not exceeding 5 years, or more frequently if recommended by the manufacturer, to ensure that no deterioration in its installation has occurred.

7.3.3 Structures should be examined frequently for corrosion, cracks, distortion or wear of bearings, securing points etc. Hollow structures, such as gantries or masts, should also be checked for trapped water inside them. If found the structure should be drained, suitably treated and then sealed to prevent further ingress of water.

7.3.4 Any work equipment exposed to conditions causing deterioration should be inspected by a competent person at suitable intervals and on each occasion that exceptional circumstances have occurred which may jeopardise the safety of the work equipment, to enable any necessary remedial action to be taken to ensure its continuing safety. In this context "exceptional circumstances" includes modification work, accidents, exposure to weather and prolonged periods of inactivity.

7.3.5 The results of all inspections are to be recorded and all such records are to be retained, readily available for inspection, until such time as a further inspection has been undertaken and recorded.

7.3.6 Where any ship's work equipment is to be used outside the ship, or work equipment from outside the ship is obtained for use on the ship, it must be accompanied by physical evidence that the

last inspection required to be carried out under the Merchant Shipping and Fishing Vessels (provision and Use of work equipment) Regulations 2006 has actually been carried out. In this context “used outside the ship” includes use on the quayside, dock or jetty or on board another ship; and/or operated by workers who are employed by another person.

7.3.7 Any work equipment used for lifting loads, including personnel, is also subject to the provisions of the Merchant Shipping and Fishing Vessels (Lifting Operations and Lifting Equipment) Regulations 2006, which set out specific requirements for the “inspection”, “testing” and “thorough examination” of such lifting equipment etc. This aspect is dealt with in detail in Chapter 21 of this Code.

7.4 Specific Risks

7.4.1 Where a specific risk to health or safety is identified in relation to a particular item of work equipment, its use and any repairs, modifications, or maintenance must only be carried out by persons who have been specifically designated to perform the particular task, and who are competent to do so, and who have been provided with appropriate training either as a result of the workers overall training for the position currently held, or provided by other qualified persons on board or ashore including the manufacturer of the equipment.

7.5 Information and Instructions

7.5.1 All workers who use work equipment, and any managers or supervisors, should have access to all necessary health and safety information and written instructions relating to the use of that equipment. These should be in an easily understood form and should include information and, where appropriate, written instructions on the conditions in which the work equipment may be used and its method of use; foreseeable abnormal situations and the action to be taken if such a situation occurs; and information on any conclusions drawn from previous

experience of using that work equipment.

7.5.2 Where any worker(s) likely to use an item of work equipment do not understand the language in which such information and instructions are provided, appropriate measures should be taken to ensure that the information/instructions are provided in a language that the worker(s) understands.

7.6 Training

7.6.1 All workers who use work equipment, or who supervise its use, should have received adequate training covering the method of use of the equipment, any risks which may arise from its use and any precautions to be taken.

7.6.2 Similarly workers specifically designated to carry out repairs, modifications, maintenance or servicing to work equipment, or who supervise such work, have received adequate training for that purpose where the use of that equipment may involve a specific health and safety risk to the person using it e.g. electrical equipment, mechanical cutting equipment.

7.6.3 In accordance with the International Safety Management (ISM) Code for Merchant Shipping, all such training is to be recorded and should indicate when full competence is achieved.

7.6.4 All instruction or information must be in a language that the workers receiving training understand, and should be communicated effectively.

7.7 Conformity with Community Requirements

7.7.1 All work equipment should conform to the appropriate European product standards, apart from equipment which pre-

dates any relevant standards. Annex 7.1 details the UK instruments which give effect to the relevant EC directives.

7.7.2 Work equipment which carries a **CE** marking is considered to comply with the provisions of a Community directive, provided that the **CE** marking is relevant for the purpose for which the equipment is to be used. In this context “**CE** marking” means a marking signifying compliance with the basic requirements of design and manufacture of, and the specifications and test methods applicable to, a piece of work equipment which have been adopted by the appropriate authorities in the European Economic Area. Reference to a **CE** marking also includes the marking for an alternative Standard which provides, in use, equivalent levels of safety, suitability and fitness for purpose.

7.8 Dangerous Parts of Work Equipment

7.8.1 Every dangerous or exposed working part of work equipment is to be provided with appropriate guards or protection devices. Such guards or protection devices are to be maintained and/or replaced as necessary and are to be kept in position when the relevant parts are in motion.

7.8.2 All guards or protection devices provided in accordance with the preceding paragraph should:-

- (a) be of substantial construction;
- (b) not give rise to any additional hazard;
- (c) not be easily removed;
- (d) be situated at a sufficient distance from the danger zone;
- (e) not restrict the view of the [operating cycle] [operation] of the equipment more than is necessary; and
- (f) be so constructed or adapted that they allow operations necessary to fit or replace parts and for the carrying out of maintenance work but restrict access only to the area where work is to be carried out and, where possible, without having to dismantle the guard or protection

device.

7.8.3 The reference in paragraph 7.8.2(d) to a “danger zone” means the zone within or around work equipment where the presence of a worker would expose him/her to a risk to his health or safety.

7.9 Electrical Equipment

7.9.1 All ship's electrical equipment and installations should be constructed, installed, operated and maintained in such a way that there is no electrical hazard to the ship or any person.

7.9.2 Isolation and Personal Protective Equipment appropriate to the ship's electrical installation should be carried, supplied and used as and when required for the carrying out of maintenance.

7.10 Protection against Specified Hazards

7.10.1 Where any worker using work equipment is, or could be, exposed to one or more of the hazards set out in paragraph 7.10.2, the employer shall ensure that any risk to his health and safety is either prevented by the provision of appropriate work equipment or protective devices, or, where that is not practicable, is adequately controlled by any appropriate means.

7.10.2 The hazards referred to in paragraph 7.10.1 are -

- (a) any article or substance falling or being ejected from work equipment;
- (b) rupture or disintegration of parts of work equipment;
- (c) work equipment catching fire or overheating;
- (d) the unintended or premature discharge of any article or of any gas, dust, liquid, vapour or other substance which, in each case, is produced, used or stored in the work equipment;

- (e) the unintended or premature explosion of the work equipment or any article or substance produced, used or stored in it;
- (f) work equipment being struck by lightning while being used.

7.11 High or Very Low temperatures

7.11.1 Where any equipment, parts of equipment or anything produced by, used by or stored in such equipment has the potential to burn or scald or cause any other injury to any worker by virtue of being at a high or low temperature, appropriate measures should be taken to prevent injury to any worker.

7.11.2 Appropriate measures includes the provision of Isolation and Personal Protective Equipment and ensuring it is worn.

7.12 Controls for Starting or Making a Significant Change in Operating Conditions

7.12.1 Where any work equipment could constitute a risk to the health or safety of workers, because it contains moving parts or is mobile, it must be fitted with one or more controls for the purposes of starting it and controlling any change in its speed, pressure or other operating conditions. Additionally it must only be possible to start the machine or change its speed, etc by operation of the relevant control.

7.12.2 The requirements in the preceding paragraph do not however apply to any automatic re-starting or other changes in the operating conditions which occur as a result of the normal operating cycle of any work equipment.

7.13 Stop Controls

7.13.1 In addition to the requirements of paragraph 7.12 where any work equipment could constitute a risk to health and safety, one or more readily accessible controls must be provided to either bring it to a stop or

otherwise render it safe. It is for the employer to decide the form such controls will take but they must be capable of bringing the equipment to a complete stop as well as switching off all sources of energy to, and from, the equipment.

7.13.2 Any stop control required by this regulation must override any control required by 7.12.

7.14 Emergency Stop Controls

7.14.1 In addition to the requirements of paragraph 7.13, where any work equipment could constitute a risk to health and safety one or more readily accessible emergency stop controls should be provided. Any emergency stop controls must override any controls required by paragraphs 7.12 and 7.13.

7.15 Controls

7.15.1 All operational controls for work equipment are to be clearly visible and identifiable, including the provision of appropriate marking where necessary. Unless there is no other option available, no control should be placed in a position where any worker operating it control is exposed to any risk to their health and safety.

7.15.2 Any worker operating the controls of any work equipment should be able to ensure from the control position that no other worker will be exposed to any risk to their health and safety as a result of the starting up or use of that equipment. Where such an arrangement is not reasonably practicable, appropriate systems of work must be introduced to ensure that no worker is exposed to any risk to his health and safety as a result of the starting up or use of the equipment. Such system of

work may include audible, visible or other suitable warning device, as required by paragraphs 7.20 or 7.21 to enable all workers affected, or likely to be affected, to be aware that the equipment is about to be started.

7.15.3 Measures must also be taken to ensure that any worker who is in a place where he would be exposed to a risk to his health and safety as a result of the starting or stopping of work equipment has sufficient time and suitable means to get out of the way prior to the starting or stopping of the equipment.

7.16 Control Systems

7.16.1 Any control systems for work equipment are to be safe and take account of any risks to health and safety, which might result from damage to, or breakdown of, that control system. In this context a control system cannot be considered safe unless-

- (a) its operation does not create any increased risk to health or safety;
- (b) any fault in, or damage to, any part of the control system or the loss of the power supply to it also does not result in additional or increased risk to health or safety;
- (c) it does not impede the operation of any stop control required by paragraphs 7.13 and 7.14 above.

7.17 Isolation from Sources of Energy

7.17.1 Where the risk assessment indicates the need for one, work equipment should be provided with a suitable system for isolating it from all its sources of energy. Any isolating system will not be considered suitable unless it is clearly identified and capable of being locked off and is indicated in the appropriate "Permit to Work".

7.17.2 Suitable measures must also be in place to ensure that re-connection of any energy source to work equipment does not expose the

worker using the equipment to any risk to his health or safety. Such measures must also be identified in the risk assessment and identified on the "Permit to Work".

7.18 Stability of Work Equipment

7.18.1 Where the safe use of any work equipment depends on its stability it should be stabilised by use of clamps or other appropriate method.

7.18.2 In deciding the most appropriate method for stabilising work equipment, the potential movement of a ship under all conditions should be taken into account.

7.19 Lighting

7.19.1 Suitable and sufficient lighting, appropriate for the work to be undertaken, is to be provided at any place where work equipment is used.

7.20 Markings

7.20.1 Where any health and/or safety markings are required to comply with the requirements of the Merchant Shipping and Fishing Vessels (Safety Signs and Signals) Regulations 2001 such markings which comply with Merchant Shipping Notice MSN 1763 and Chapter 28 of this Code are to be provided and applied to the equipment in such a way that they are clearly visible to any person using, or in the vicinity of that equipment.

7.21 Warnings

7.21.1 Where any work equipment is required to be fitted with warning signs, warning devices etc, their meaning should be clear and they should be easily seen or heard.

7.22 Carrying of Workers on Mobile Work Equipment

7.22.1 No worker is to be carried on any mobile work equipment unless it is designed for that purpose. In this context "designed for that purpose" includes being fitted out in such a way as to minimise risks to the safety of any worker, including any risks from wheels or tracks. Such equipment must also incorporate measures to prevent it rolling over or, where that is not possible, reduce the risks to health or safety of workers should it roll over whilst being used. Such measures could include-

- (a) stabilisation of the work equipment to prevent it rolling over; or
- (b) provision of a protection structure so that the work equipment cannot fall on its side; or
- (c) provisions of a structure giving sufficient clearance around the workers being carried if the work equipment can overturn further than that; or
- (d) any other device which is equally effective in providing protection for the workers being carried.

7.22.2 Where there would be a risk of any worker being carried by mobile work equipment being crushed by it, should it roll over, it should be fitted with a restraining system for him.

7.22.3 The provisions of this paragraph do not apply to a fork-lift truck having a structure described in sub-paragraphs 7.22.1 (b) or (c) above.

7.23 Overturning of Fork-Lift Trucks

7.23.1 Any fork lift truck to which sub-paragraph 7.22.3 applies and which carries a worker must be adapted or equipped to minimise the risk to health or safety from its overturning. In deciding what adaptations etc are required, account should be taken of the manner and conditions in which the fork-lift truck is being used.

7.23.2 Any worker operating a fork lift truck must have received, and

comply with, appropriate safety training including that relating to the individual type of fork lift truck.

7.24 Use of Mobile Work Equipment

7.24.1 Where mobile work equipment is to be used on board a ship:-

- (a) no ship's powered vehicle or powered mobile lifting appliance shall be driven in the course of a work activity except by a competent person who is authorised to do so;
- (b) where work equipment is moving around in a work area, appropriate traffic rules are drawn up and followed for the safety of workers and others;
- (c) subject to sub-paragraph (d), workers on foot are, so far as is reasonably practicable, prevented from coming within the area of operation of self-propelled work equipment;
- (d) where work cannot be done properly unless workers on foot are present, appropriate measures are in place to prevent them from being injured by the work equipment.

7.24.2 Workers should be carried on mobile work equipment only where safe facilities are provided for this purpose.

7.24.3 Where workers are required to work while being carried on mobile work equipment, the speed of the work equipment is adjusted as necessary for the safety of the workers.

7.24.4 Mobile work equipment fitted with a combustion engine is not to be used in working areas, unless sufficient quantities of air can be guaranteed, such that the operation of the combustion engine presents no risk to the health or safety of workers.

7.25 Self Propelled Work Equipment

7.25.1

Where any self-propelled work equipment could present a

hazard to health and safety while in motion -

- (a) it is fitted with a means (e.g. a key-operated switch) for preventing its being started by an unauthorised person;
- (b) where there is more than one item of rail-mounted work equipment in motion at the same time, it is fitted with appropriate facilities for minimising the consequences of a collision;
- (c) it is fitted with braking and stopping devices;
- (d) where safety constraints so require, there are emergency facilities operated by a readily accessible control or automatic system for braking and stopping it if the main device fails;
- (e) where the driver's direct field of vision is inadequate to ensure safety, there are adequate devices for improving his vision;
- (f) if used in the dark -
 - (i) it is to be fitted with lighting appropriate to the work to be carried out; and
 - (ii) is otherwise to be sufficiently safe for such use;
- (g) if it or anything carried or towed by it involves a risk from fire and is liable to injure workers, it should carry appropriate fire-fighting appliances, unless such appliances are kept sufficiently close to it.

7.26 Remote Controlled Self Propelled Work Equipment

7.26.1

Where any remote-controlled self-propelled equipment could endanger the safety of workers while it is in motion, it must be set up in such a way that it stops automatically once it leaves its control range.

Additionally where it could create a risk to safety from crushing or other impact, it should incorporate features to guard against such risk.

7.27 Drive Units and Power Take-off Shafts

7.27.1

Where the seizure of a drive unit or power take-off could present a risk to workers appropriate measures such as the provision of guards or

other protection devices referred to in paragraph 7.8.1 should be taken to prevent or minimise as far as possible the potential risks from such seizure.

7.27.2 Measures should also be taken by means of an appropriate safeguard, to prevent any drive shaft becoming soiled or damaged by training on the ground as any soiling or damage could result in seizure.

7.28 Duty of Workers

7.28.1 All workers should comply fully with all instructions or training they have been given in respect of their use of any work equipment or health and safety in general. No worker should operate any item of work equipment he is competent, and authorised, to do so.