

LEAFLET 9**LIFTING OPERATIONS AND LIFTING EQUIPMENT****CONTENTS****Para****LEAFLET FOR LINE MANAGERS**

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LEAFLET FOR LINE MANAGERS**INTRODUCTION**

1 The use of lifting equipment and lifting tackle (ranging from tower cranes and tail lifts on trucks to shackles and canvas lifting strops) is widespread in the MOD. The use of such equipment brings distinct benefits in terms of efficiency but it can also bring considerable risk to both the operators of the equipment and people who may be in the vicinity of lifting operations.

REGULATIONS

2 The majority of legislative requirements relating to the safe use of mechanical handling and lifting equipment are contained in the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER 1998) and its associated Approved Code of Practice and Guidance. Under most conditions in the MOD the use of more in-depth standards will be required. These can be found in the relevant Annex to this fact sheet. All are concerned with the main risks associated with the use of this type of equipment.

3 The legislation, applicable to mechanical handling and lifting equipment is both extensive and fragmented. The other major legal requirements are covered in the following publications:

- 3.1 The Health and Safety at Work etc Act 1974.
- 3.2 An Approved Code of Practice: 'Rider-operated lift trucks: operator training'.

- 3.3 The Workplace (Health, Safety and Welfare) Regulations 1992.
- 3.4 The Provision and Use of Work Equipment Regulations 1998.
- 3.5 The Management of Health and Safety at Work Regulations 1999.
- 3.6 The Supply of Machinery (Safety) Regulations 1992.

DEFINITIONS

- 4 Within the Regulations and within these instructions the following interpretation applies;

Lifting equipment

- 5 Lifting equipment means work equipment for lifting or lowering loads and includes its attachments used for anchoring, fixing or supporting it.

Accessory for lifting

- 6 Accessory for lifting means work equipment for attaching loads to machinery for lifting.

Lifting operation

- 7 Lifting operation means an operation concerned with the lifting or lowering of a load.

Load

- 8 Load includes a person.

Thorough examination

- 9 Thorough examination means a thorough examination by a competent person.

Inspection

- 10 Inspection means the inspection of lifting equipment where a risk assessment has identified risks to the operator or other workers, which would be addressed by regularly inspecting it.

Competent person

- 11 Competent person means a person with sufficient training and experience or knowledge and other qualities to enable him properly to assist in carrying out the measures, which the employer needs to take in order to comply with the relevant statutory provisions. In the case of competence to carry out a thorough inspection, the person shall have such appropriate practical and theoretical knowledge and experience of the lifting equipment to be thoroughly examined, to enable him to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the lifting equipment.

Work equipment

- 12 Work equipment means any machinery, appliance, apparatus, tool or installation for use at work.

DUTIES OF THE LINE MANAGER

- 13 It is the line manager's duty to ensure that:

- 13.1 The strength and stability of the lifting equipment continues to be adequate for the tasks that the equipment is intended to be used for.

- 13.2 Lifting equipment for lifting persons is such as to prevent a person using it from being injured.
- 13.3 Lifting equipment is positioned in such a way as to reduce the risk of the load striking a person or causing damage
- 13.4 Lifting equipment is marked to show its safe working load and where appropriate, its uses.
- 13.5 Lifting operations are properly planned by a competent person, supervised and carried out in a safe manner
- 13.6 Lifting equipment is thoroughly examined and inspected in accordance with the instructions detailed in the Annexes to this Leaflet. Annex A gives general guidance for equipment for which no MOD instruction exists

THOROUGH EXAMINATION

- 14 In general terms a thorough examination is required:
 - 14.1 Before lifting equipment is put into use for the first time.
 - 14.2 Where the safety of the lifting equipment is dependent on the installation conditions.
 - 14.3 Where lifting equipment is exposed to conditions causing deterioration.
 - 14.3.1 At least every 6 months for lifting equipment for lifting persons, or an accessory associated with lifting
 - 14.3.2 At least every 12 months for other lifting equipment
 - 14.3.3 After any significant change or dangerous occurrence

RECORDS

- 15 A written report is to be made of all thorough examinations and inspections, detailing in particular any defects found.
- 16 In the case of the thorough examination required by paragraph 14.1 above, reports are to be kept for periods not less than;
 - 16.1 Lifting Equipment - Until any use of the lifting equipment has ceased
 - 16.2 Accessories - For 2 years after the report is made.
- 17 In the case of the thorough examination required by paragraph 14.2 above, reports are to be kept until the lifting equipment ceases to be used in the place it was installed.
- 18 In the case of the thorough examination required by paragraph 14.3 above, reports are to be kept until the next thorough examination or for 2 years, whichever is later.
- 19 There is no legal requirement to use a particular form or to produce reports in a specified format. Where, however, the Annexes detail a specific examination form or register, then this is to be used. Alternatively, where no recommendations have been made, the following discretionary forms are available from HMSO.
 - 19.1 F2530 - Record of Thorough Examination
 - 19.2 F2531 - Record of Test, Test and Examination, or Test and Thorough Examination.

DETAILED INFORMATION

20 Many MOD Publications are available, giving guidance and direction on thorough examination and inspection. Details of these are contained in the following Annexes.

- 20.1 Annex A - Guidance for Line Managers (General Arrangements)
- 20.2 Annex B - Royal Navy Arrangements
- 20.3 Annex C - Army Arrangements
- 20.4 Annex D - Royal Air Force Arrangements
- 20.5 Annex E - Defence Estates Instructions
- 20.6 Annex F - NBSA Arrangements

LEAFLET 9 ANNEX A**LIFTING OPERATIONS AND LIFTING EQUIPMENT****GUIDANCE FOR LINE MANAGERS**

- 1 Lifting tackle must be of good construction, sound material and adequate strength.
- 2 Lifting tackle, Lifting beams and machinery must undergo a thorough examination by a competent person at no more than 6 or 12 monthly intervals dependent on type of equipment and use unless stated elsewhere by a design authority.
- 3 Only authorised tackle is to be used. Single-use or one-shot slings are to be discarded after use.
- 4 The safe working load (SWL) should be clearly marked on tackle or by another suitable means.
- 5 A competent person must make regular inspections on the condition of the equipment. In addition, Users should check for obvious damage before using equipment. Users must also be trained both in defect-spotting and safe use.
- 6 Damaged equipment must be taken out of use, marked accordingly and quarantined. The equipment is not to be used until made serviceable (and tested).
- 7 When loads are lifted, the tackle must be protected from sharp edges or sharp bends, which may kink the sling. Only stable loads should be moved.
- 8 Correct eyebolts are to be used with other lifting tackle. 'Dynamo' eyebolts must only be used for straight lifts. Spreader beams may need to be used.
- 9 Work operations must be assessed to ensure that the safe working load (SWL) of the tackle is not being exceeded.
- 10 On multi-leg slings, the safe working load (SWL) is reduced the further the legs of the sling are apart. Operators must be trained in their safe use.
- 11 Suitable storage facilities for slings and lifting tackle must be provided.
- 12 There must be a method of identifying individual pieces of lifting equipment.
- 13 Records of all lifting equipment, thorough examination and inspection, must be kept.

LEAFLET 9 ANNEX B

LIFTING OPERATIONS AND LIFTING EQUIPMENT

LIFTING EQUIPMENT SUPPORT - ROYAL NAVY

CONTACTS / ORGANISATIONS AND DOCUMENTATION

Ship's Support Agency (SSA) / MFFM1

1 Upperdeck Machinery and Lifting Equipment Section

- MFFM1A - 9355 85736
- MFFM1F - 9355 82655

Documents

- BR3027 - Manual of Safe Use, Examination and Testing of Lifting Plant
- NES 113 Series - Design specifications for Lifting Equipment
- BR's various - Lifting Equipment Handbooks
- Maintenance Management Schedules (MMS) various - Lifting
- Equipment Maintenance Schedules

HMS Sultan School of Marine Engineering

2 Additional Qualification, Lifting Equipment Examiner (ADLEE) Instructors

- ADLEE Instructor - 93843 2051

3 Additional Qualification, Slings Operations Supervisor (ADSLING) Instructors

- ADSLING Instructor - 93843 2051

Documents

- BR 6004 - Slinger's Handbook
- ADLEE Course Notes
- ADSLING Course Notes

Captain Fleet Maintenance (CFM)

4 CFM Portsmouth Lifting Plant Examination Unit (LPEU)

- LPEU Manager - 9380 23385

5 CFM Devonport - LPEU

- LPEU Manager - 9375 67498

6 HM Naval Base - Faslane Test House

- Test House Manager - 93255 6162

LEAFLET 9 ANNEX C**LIFTING OPERATIONS AND LIFTING EQUIPMENT****LIFTING EQUIPMENT PROCEDURES FOR THE ARMY**

1 All Army lifting operations must be carried out as laid down in the relevant documentation associated with the host equipment.

2 The following MOD Publications and documents detail the procedures for inspection and testing of Lifting Tackle and Lifting Equipment.

- MOD F2530 and F2531- Register of chains, ropes, lifting tackle and lifting machines.
- AESP 1670-A-010-013 - Aerial Equipment Policy.
- AESP 1 670-A-015-013 - Aerial Equipment Procedures.
- EMER Aircraft A 067 - Lifting tackle and associated equipment
- EMER Eng and Misc U 004 - Automatic safe load indicators as fitted to cranes
- EMER Eng and Misc U 439 - Truck industrial forklift
- EMER T&M A 028 Chapter 011 - Dye penetrant flaw detection
- EMER T&M A 028 Chapter 380 - General principles of quality assessment of mobile cranes
- EMER T & M A 028 Chap 157 - Inspection of recovery equipment
- EMER Workshops B 017 Chapters 1 to 6 - Ropes, lifting tackle, machines and associated equipment.
- AESP 1670-A-010-013 and AESP 1670-A-015-013 - Airborne slinging equipment.
- AP 100J-01 and AP 100K-01 - Testing, examination and repair of lifting tackle used in support of maintenance Ground Support Equipment.

3 The Army has a large quantity of equipment deployed abroad, which is often maintained by a locally employed workforce. In this situation it has been decreed by the Secretary of State for defence that when UK legislation is more rigorous than local regulations, UK criteria will apply. Where a host Nation's legislation is more stringent than UK requirements, the Army must abide by those regulations implemented by that Nation. The above publications detail the UK requirements only; units deployed outside the UK should take steps to ensure compliance with this requirement or with that of a host Nation if more stringent.

4 Whilst every attempt has been made to incorporate into this publication procedures for all equipment with a lifting capability, there will inevitably be some equipment, which is not covered by specific paragraphs of this Annex. In such circumstances, a competent person may decide upon the test and examination regime using the general guidelines and principals detailed in the Fact sheet. Alternatively, advice may be sought from the relevant Divisional or land focal point or Equipment Manager.

LEAFLET 9 ANNEX D

LIFTING OPERATIONS AND LIFTING EQUIPMENT

LIFTING EQUIPMENT PROCEDURES FOR THE ROYAL AIR FORCE

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LEAFLET 9 ANNEX E**LIFTING OPERATIONS AND LIFTING EQUIPMENT****DEFENCE ESTATES INSTRUCTIONS****DE SPECIFICATION 005 ISSUE 003**

1 This document is used for the undertaking of works services on the defence estate. It has been written to reflect modern practices and revised procedures and is aimed primarily at Property Managers, their Establishment Works Consultants (EWC) and their Works Service Managers (WSM). The following schedules contain details of tasks that the EWC's and WSM's are contracted to carry out, they include references to various aspects of lifting Equipment.

1.1 Schedule B (Inspections and Tests to be organised by the Establishment Works Consultant).

1.2 Schedule C (Maintenance Inspections, Planned Maintenance and Operation to be organised by Works Service Manager).

DE TECHNICAL BULLETINS

2 These are documents produced by DE, as a Technical Authority, which explain technical aspects and provide appropriate guidance.

DE SAFETY WARNING NOTICES

3 These documents produced by DE, giving warning and guidance, in response to incidents and occurrences that have been reported to DE. The source need not necessarily be from MOD.

DE TECHNICAL PUBLICATIONS INDEX

4 This booklet, which is produced annually by DE, has been compiled to alert MOD personnel, contractors and consultants to the range of publications, which relate to their activities. It is available from DE and HMSO (ISBN-0-11-772893-4).

LEAFLET 9 ANNEX F

LIFTING OPERATIONS AND LIFTING EQUIPMENT

WARSHIP SUPPORT AGENCY AND DEFENCE MUNITIONS

GENERAL

- 1 Design, support and policy requirements for lifting equipment - Defence Munitions Armament Engineering Handbooks, Volumes 1 and 2.
- 2 The supply of Material Handling Equipment - A277 Materiel Handling Equipment.
- 3 List of Standard Maintenance Routines - Munitions Engineering Documentation Status Report (MEDSR) Chapter 6.
- 4 General Instructions for Handling and Handling Equipment - BR1029(4).

EXPLOSIVES

- 5 Regulations for Armaments Handling and Handling Equipment for Naval Armament Items - BR1029(6) Chapter 6.
- 6 Design requirements for Armament Handling Lifting Appliances - Chief Environmental and Safety Officer (Navy) (CESO(N)) Publication Number 4.

NUCLEAR LIFTS

- 7 Definition of, and requirements for Nuclear Lifts - BR3018 Part 6.