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Guidance to Documentation and Marking – Part 1 Manual Lifting Machines

Lifting Equipment Engineers Association

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Guide to Documentation and Marking – Part 1
Manual Lifting Machines

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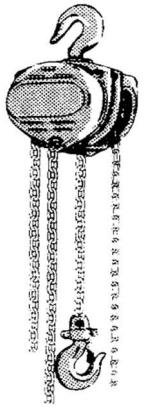
1.0 Introduction

This guide is aimed at LEEA Members, and manufacturers. It has been developed as a quick reference guide to ensure that lifting equipment is supplied with the correct documentation and marking as required by national legislative requirements, standards, and best practice guidance.

LEEA 059-1 is one of a series of guides related to documentation and marking of a range of generic forms of lifting equipment as listed below:

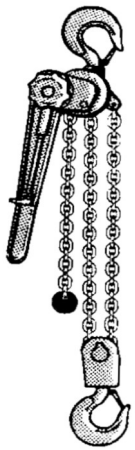
Part 1 – Manual Lifting Machines
Part 2 – Powered Lifting Machines
Part 3 – Crane Supporting Structures
Part 4 – Lifting Accessories, Non-fixed load lifting attachments.
Part 5 – Lifting Accessories, Slings
Part 6 – General accessories and Components for slings.

Item & Standard	*Required Information*
Hand Operated Chain Hoists A hand operated lifting machine capable of raising, lowering or suspending a load.  **Nationally recognized Standards** **LEEA COPSULE – Section 3**	**Documents to be supplied in accordance with the relevant legislation & relevant standards:** - **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)** - **Manufacturer's instructions for use. (Guidance LEEA 062)** - **Other conformity declarations as required by legislation.** **Note:** ***For the UK and EU markets a declaration of conformity is required by the legislation, please refer to LEEA 030.1e1 - 9 as applicable*** **Marking requirements** - **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets** - **The full business name and address of the manufacturer** - **Identification mark; if any** - **SWL (If different from the manufacturers rated capacity mark)** - **The series or type designation.** - **Size and grade of the load chain** - **Year of manufacture.** *Note if the manufacturer does not provide a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.* **Information Which Should Be Exchanged Between the User & the Designer or Supplier** As hoists are frequently used for miscellaneous lifting purposes, precise details of the load to be lifted are not always available. In these circumstances, only a general specification can be given, and this should include the following information: The maximum load to be lifted or SWL. Details of the application that may have a bearing on the load to be lifted, e.g., wind, hoisting out of water, etc. The maximum extended dimension.

	The maximum acceptable drawn up dimension (if headroom is important) The range of lift. The distance from the suspension level to the operating level. (This caters for the situation where the hand chain required is shorter than the load chain.) Whether the hoist is to be used at an angle to the vertical. The conditions of service and in particular any conditions which the user suspects might be hazardous, e.g. extremes of temperature, high probability of shock loading, uncertainty of weight of load. The type of suspension, i.e. hook suspended or trolley mounted. In the case of trolley mounted hoists, the information required for the trolley is given in the LEEA COPSULE section 8 - Travelling trolleys. With larger capacity hoists , the manufacturer may design the gear ratios such that more than one person is required to provide the operating effort. Where the availability of the manpower is likely to be a restriction, the purchaser should also specify the maximum acceptable effort.

Hand-operated Chain Lever Hoists

A lever operated lifting machine capable of raising, lowering, suspending or in some cases pulling a load.



Nationally recognized Standards

LEEA COPSULE – Section 4

Documents to be supplied in accordance with the relevant legislation & relevant standards:

- **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)**
- **Manufacturer's instructions for use. (Guidance LEEA 062)**
- **Other conformity declarations as required by legislation.**

Note: ***For the UK and EU markets a declaration of conformity is required by the legislation, please refer to LEEA 030.1e1 - 9 as applicable***

Marking requirements:

- **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets**
- **The full business name and address of the manufacturer**
- **Identification mark if any**
- **SWL (If different from the manufacturers rated capacity mark)**
- **The series or type designation.**
- **Size and grade of the load chain**
- **The direction of movement.**
- **Year of manufacture.**

Note if the manufacturer does not provide a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.

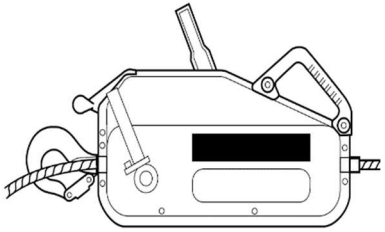
Information Which Should Be Exchanged Between the User & the Designer or Supplier

As chain lever hoists are frequently used for miscellaneous lifting purposes, precise details of the load to be lifted are not always available. In these circumstances, only a general specification can be given and this should include the following information:
Intended application e.g. lifting, tensioning or pulling.
The maximum load to be lifted or SWL.
Details of the application that may have a bearing on the load to be lifted, e.g. wind, hoisting out of water, etc.
The maximum extended dimension.
The maximum acceptable drawn up dimension if headroom is important.
The range of lift.
The type of chain required.

	The conditions of service and in particular any conditions which the user suspects might be hazardous, e.g. extremes of temperature, high probability of shock loading, uncertainty of weight of load.

Wire rope grip / pull lifting machine (Jaw winch).

An appliance capable of carrying out either lifting operations or pulling operations. Must only be used with a rope designed to be fitted to a specific lifting / pulling machine.



Nationally recognized Standards

LEEA COPSULE – Section 5

Documents to be supplied in accordance with the relevant legislation & relevant standards:

- **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)**
- **Manufacturer's instructions for use. (Guidance LEEA 062)**
- **Other conformity declarations as required by legislation.**

Marking requirements:

- **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets**
- **The full business name and address of the manufacturer**
- **Identification Mark, if any.** *(1)*
- **Application for which the machine is intended, i.e. lifting, pulling, people carrying.**
- **Safe working load (or loads if intended for more than one application).**
- **The series or type designation.**
- **The diameter and quality of rope required.** *(2)*
- **Direction of movement.** *(3)*
- **Year of manufacture.**

Note 1: Note if the manufacturer does not provide a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.

Note 2: wire ropes used with lifting and pulling machines are detachable, and providing the correct specification, i.e. diameter and construction, are interchangeable. The following information should therefore be marked on the ferrule or terminal fitting of the wire rope:

- **ID mark.**
- **Safe working load.**
- **The length of the rope.**

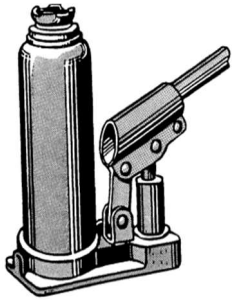
Note 3: Some older lifting and pulling machines may be found which do not include information on the direction of movement, and in such cases the recommendation is to add this information.

Information Which Should Be Exchanged Between the User & the Designer or Supplier

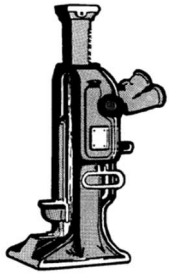
The following is the minimum information which should be exchanged between the user and the designer or supplier of a lifting and pulling machine:
Intended application, e.g., lifting, tensioning, pulling or people carrying.
Total maximum weight of the load to be lifted together with any other forces which may be superimposed on the load.
Frequency of use.

	Environmental considerations such as heat or corrosive atmospheres. Length of rope required. In the case of hydraulically operated machines, the available power supply

Jacks -
Mechanical
Designed and used for raising and lowering a load over a limited range. Mechanically operated.



Hydraulic
Designed and used for raising and lowering a load over a limited range. Mechanically operated.



Nationally recognized Standards

LEEA COPSULE - Section 13

Documents to be supplied in accordance with the relevant legislation & relevant standards:

- **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)**
- **Manufacturer's instructions for use. (Guidance LEEA 062)**
- **Other conformity declarations as required by legislation.**

Marking requirements.
In addition to the information required by the applicable legislation and standard being worked to the following information should be permanently and legibly marked on a suitable part of the jack:

- **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets**
- **The full business name and address of the manufacturer**
- **Capacity, i.e. maximum load to be lifted on the head and/or toe.**
- **Year of manufacture**
- **Identification Mark if any**

Note if the manufacturer does not provide a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.

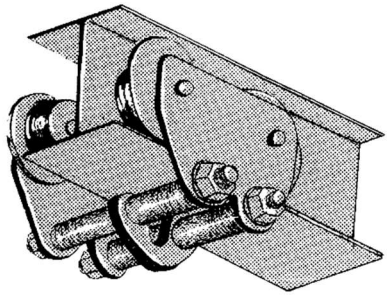
Information Which Should Be Exchanged Between the User & the Designer or Supplier
Jacks are readily available in a wide range of designs, sizes & capacities, some including special features making them suitable for certain applications. The exchange of information should therefore be as detailed as possible. As by their nature jacks are often moved from site to site & used to handle a wide variety of loads, precise details are not always available & in these cases only a general specification can be given. In many cases, the requirements will be basic & the information easily exchanged. In all other cases the following minimum information should be exchanged:

1. Capacity. Where possible, full details of the load to be lifted, including dimensions, weight & details of jacking points.
2. Type of jack, i.e. hydraulic, ratchet, screw or journal.
3. Details of working dimensions e.g. closed height, extended height, size of head of jack, height & size of toe etc.
4. Details of the intended use, including utilization & required accuracy of load placement. Where the jack is required for general purpose use, it may be necessary to impose limits on the use. The manufacturer's instructions should therefore be sought & their recommendations followed.
5. Environmental conditions, e.g. outdoor or indoor use, use in corrosive atmospheres, use in hazardous areas, use with dangerous loads etc.
6. Details of finish, including any special paint or protective finish.

	7. Any special features or optional fittings such as claw attachment, gauges etc. 8. Any other technical requirements. 9. Operational & maintenance instructions, including limitations of use.

Manual Travelling Girder Trolleys

Provide a means of moving a load suspended on a rolled steel structure in conjunction with either a hand or power operated lifting machine.



Nationally recognized Standards

LEEA COPSULE – Section 8

Documents to be supplied in accordance with the relevant legislation & relevant standards:

- **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)**
- **Manufacturer's instructions for use. (Guidance LEEA 062)**
- **Other conformity declarations as required by legislation.**

Marking requirements
In addition to the information required by the applicable legislation and standard being worked to the following information should be permanently and legibly marked on a suitable part of the

- **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets**
- **The full business name and address of the manufacturer**
- **Identification mark if any**

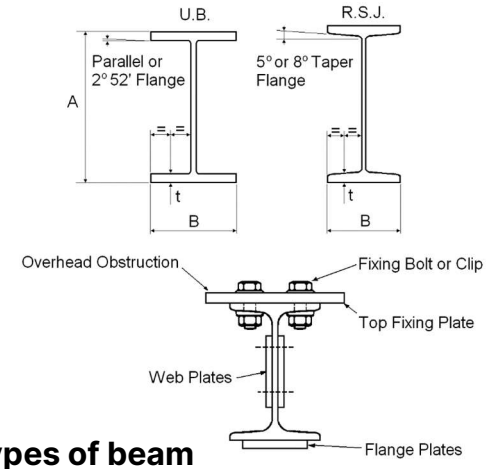
Note if manufacturer does not provide a unique identification mark, then the owner of the equipment will be responsible for ensuring that the equipment is marked with one.

- **SWL or rated capacity.**
- **Year of manufacture**
- **Indication as to whether it is suitable for hand or power operated lifting appliances.**
- **The width of the runway beam for which the trolley is designed or, in the case of an adjustable trolley, the range of widths.**
- **An indication as to whether it is suitable for hand or power operated lifting appliances.**

Information Which Should Be Exchanged Between the User & the Designer or Supplier
As girder trolleys are frequently used for miscellaneous lifting applications, precise details of the load to be carried are not always available. In these circumstances, only a general specification can be given and this should include the following:

1. Type of trolley required.
2. Details of the runway beam section to which the trolley is to be fitted. These details must be sufficient to fully identify the particular rolled steel section or in the case of a fabricated section, the various elements from which it is manufactured. In addition, details of fixing bolts, clips, splices etc are required to ensure that they will not foul the load bar, trolley wheels or anti-tilt device where fitted. (See figure 1)
3. Details of the supporting structure of the runway including clearance dimensions to other structures or items of plant to ensure that there will be no external obstruction to the operation of the trolley and lifting appliance.
4. The total maximum weight to be lifted.
5. The type (including whether manual or power operated) and class of use of lifting appliance to be used with the trolley.

6. Details of the load bar or suspension point of the trolley and the attachment point of the lifting appliance(s) to be fitted.
7. If a geared trolley is specified, then the suspension and operating levels are required so that the length of hand chain may be determined.
8. The minimum radius curve, if any, of the runway.
9. Environmental considerations such as extremes of temperature or corrosive atmospheres.
10. Indicate whether: parallel flange, taper flange, fabricated beam, etc. Also indicate end stops, joint plates etc.



- **Figure 1 Types of beam**

Note: As an example, a trolley may be described as follows:
250kg rated capacity:
Gear operated:
Four plain bearing wheels:
Rigid trolley:
Flange width 150mm parallel flange:
Suitable for use with hook suspended hand chain hoist.

APPENDIX 1

The following appendix has been developed as a guide to support the requirements of LEEA 059 (1 – 6)

Further information can be found within your national supply legislation.

Examples of this are:

- EU Machinery Directive 2006/42/EC (and national regulations that implement it)
- UK Supply of Machinery (Safety) Regulations 2008 (SOM(S)R 2008)
- UAE - Regulation IO – 11.0 Lifting Equipment Protocol
- Nigeria Factories Act 1987
- (Japan) Ordinance of the Ministry of Health, Labour and Welfare
- Canada Occupational Health and Safety Regulations - SOR/86-304 (in English and French)
- US Department of Labor - Occupational Safety and Health Administration (OHSA)
- Safe Work Australia Act 2008

It is emphasised that this guidance applies to legal requirements only. If the equipment or service provided is to a standard or other specification, additional documents or marking may be required. For each product type within the guidance these marking requirements have been specified.

Lifting equipment includes any manual or power operated lifting machine and any lifting accessory which can connect the load to the lifting machine or the lifting machine to its supporting structure.

The guiding principle for all documentation and marking is that they must be legible, complete, and accurate. Information which is untrue can result in prosecution. In particular, the traditional practice of ‘back-to-back’ documentation is unacceptable.

NEW EQUIPMENT

Manufacturers of lifting equipment, or other responsible persons with the duty of a manufacturer, must comply with applicable national supply legislation. The mandatory information to be contained in the documentation, instructions for use and the marking requirements are defined within the guidance for each product type.

Note: Some machinery and safety components are subject to special attestation procedures carried out by government recognised bodies. In general, such special procedures only apply to lifting equipment if it is to be used for lifting persons or for use in hazardous areas.

In many countries, employers, those responsible for the control of work equipment and self-employed persons, have duties under use of work equipment legislation. Fundamentally this means that employers are assumed to be responsible for ensuring that work equipment complies with any requirements relating to its design or construction, that it is regularly inspected, maintained, thoroughly examined and is selected and used correctly for the required task.

Following any inspection/examination, the competent person carrying out the task has a duty to make a legible, written report. A report of a thorough examination (also known as a report of thorough inspection or report of periodic inspection) is a report issued by the Competent Person giving the results of the thorough examination, which will detail the defects found or include a statement that the item is fit for continued use. Where the Competent Person has carried out a test as part of the inspection/examination, the report will also contain details of the test.
The information to be contained in this report can be found in the LEEA Report of Thorough Examination templates.

Note:
(1) The report of thorough examination must be retained as part of the lifting equipment records.
(2) In some cases, a reference to the test report appears as an appendix to the thorough examination.

The simplest solution

In most cases, the simplest way to comply with the legal requirements is for the manufacturer to issue the relevant Manufacturers Certificate or Statement of Conformity documentation where applicable and provide instructions for use. If the equipment is not supplied direct to the end user, those in the supply chain should pass on the original documents and not alter any markings. The end user should obtain and keep the original or copies of the original documents.

If an exemption applies, the equipment can be put into use. If, at the point of being put into use, the exemption no longer applies or if safety depends on the installation conditions, the employer should have it thoroughly examined by a competent person and obtain and keep the report of that examination. Provided the report states that it is safe to operate, the equipment can be put into use.

Problems and alternative solutions

(1) Your supplier has not provided the Manufacturers Certificate or Statement of Conformity
The equipment should be rejected until it is provided.

(2) The supplied documentation covers a bulk supply which you will sell on in smaller quantities
Provide a copy of the required documentation to your customer regardless of how small a quantity is supplied.

(3) Your supplier will sell direct to your customer, so you do not wish to reveal your source
The marking requirements of modern legislation for lifting appliances, include the name and address of the manufacturer. For lifting accessories, it includes identification of the manufacturer. You cannot therefore legally hide this information. If your supplier is not the manufacturer but has passed on the original documents, the simplest solution applies. If your supplier is the manufacturer, 'own brand' it as in (4) below.

(4) Equipment made by others but sold in your name
This is known as 'own branding'. **Legislation guidance is that if you appear to be the manufacturer you must accept all the obligations of a manufacturer including assembly of the technical file, a statement of conformity, marking and compliance with the essential safety requirements**. If you are not in possession of the technical file you must have a written mandate from the manufacturer that authorises you as their legal representative and details explicitly which legal obligations are entrusted to you. As a minimum you must be made responsible for compiling the technical file and making it available to the authorities if requested during market surveillance.

Note: The technical file need not be paper based, electronic records are acceptable and only an Enforcing Authority can expect to have sight of it following a substantiated request.

(5) Equipment assembled from several items or modified

The person assembling equipment is regarded as the manufacturer of the assembly. If items within the assembly have a statement of conformity or similar, that forms part of the technical file for the assembly. Similarly, anyone modifying equipment and/or changing its intended use is regarded as the real manufacturer. In both cases the obligations include assembly of the technical file, issuing of the statement of conformity or similar, marking and compliance with the essential requirements including provision of instructions.

(6) Equipment made by others which you are asked to test and certify
Be cautious about what you are being asked to do. Traditionally a certificate of test and examination was all that was required to take the equipment into service. Now it is only one ingredient of the technical file. **Test reports are not legal documents** that allow the equipment to be used. If you are testing it on behalf of the manufacturer as part of his verification process, then he should provide a test specification for you to work to after which you should simply report the results.

However, new and second-hand lifting equipment may have been purchased without any documentation, and customers will send such equipment or even homemade equipment, expecting you to test and certify it as safe to use. In general, equipment which may need to be conformity marked and have a statement of conformity or similar but has not, should be referred back to the manufacturer. If you go beyond simply testing, examining and reporting the results, you will be taking a risk.

If it is a test and examination of a new installation and safety depends upon the installation conditions, a Report of Thorough Examination or inspection report is also required. Check also that your customer has the relevant documentation from the manufacturer(s) and that the equipment has been installed in accordance with their instructions. If it is an assembly of items or includes a modified item, check who is responsible for the assembly or modification. See (5) above.

(7) Equipment supplied without instructions
Lifting equipment is to be accompanied by instructions for use. Therefore, as a general rule, the equipment should be rejected until such instructions are supplied. If it is general purpose equipment, without any characteristics particular to the design, then generic instructions are an acceptable alternative.

(8) Equipment supplied without Conformity marking
National Legislation of certain countries require that complete items of lifting equipment are to be conformity marked. They must also have the minimum marking required by the nationally approved standard that the equipment has been made to. Sub-assemblies and components

are not usually marked as such. Also, some items, such as shackles, may be made for non-lifting applications. If the item is supplied complete and is intended for lifting applications yet not marked, reject it.

(9) Equipment with a statement of incorporation
National Legislation of certain countries require a statement of incorporation or similar. This is a device to legally market machinery which can function but is not complete and may not be safe until assembly. It is a statement that the machinery is not to be used until incorporated into an assembly for which a statement of conformity is issued. If you buy and incorporate such machinery, you have the obligations of the manufacturer of the finished assembly.

IN-SERVICE EQUIPMENT
Generally, an employer has a legal duty to have any lifting equipment in their custody thoroughly examined or inspected. This may be at specified maximum periods, or in accordance with an examination scheme, or after any exceptional circumstances which are liable to jeopardise the safety of the equipment. Following any thorough examination/inspection, the person carrying this out, has a duty to make a report of the examination/inspection irrespective of whether or not the equipment is found to be safe to use.

The report must be made to the employer and any person from whom the equipment has been hired or leased. If the person making the examination is of the opinion that there is a defect involving an immediate or imminent risk of serious personal injury, he has a duty to send a copy of his report to the relevant enforcing authority. LEEA have produced example templates for this. Please contact LEEA for copies.

If you have any queries, please contact LEEA through technicaladvice@leeaint.com