

March 1999

# Presentation on "Lifting Operations and Lifting Equipment Regulations 1998" by Chris Davies, HM Inspector, HSE Midlands Region.

Chris Davies started his presentation by reflecting on the development of the old legislation that had led up to the new LOLER and PUWER regulations. The deficiencies in the old legislation were that:-

- It was sector specific.
- Duties were on limited groups, such as occupiers.
- It did not cover all lifting equipment.
- Legislation was piecemeal, with differing requirements.
- It was inconsistent with the Machinery Directive.
- It was not risk based.

The LOLER regulations which came into force on 5<sup>th</sup> December 1998, remedied these shortcomings by:-

- Being applied to **all work activities**.
- Placing duties on **those persons in control**.
- Placing duties on **Employers**.
- Placing duties on **Self-employed**.

On the important subject of Risk Assessment, there is a strong link made to the basic requirement in the Management of Health and Safety at Work Regulations, with specific risks from:

- Load disintegrating, falling, or striking someone/something.
- Lifting equipment striking someone/something.
- Lifting Equipment falling/overturning.

The key definitions used to describe the range of items and work covered are:-

- **Lifting Equipment** Work Equipment for lifting or lowering loads, including attachments for anchoring, fixing or supporting the equipment.
- **Lifting Accessory** Work equipment for attaching loads to machinery for lifting.
- **Lifting Operations** An operation concerned with the lifting or lowering of a load.
- **Load** Includes a person or persons.

LOLER does **not** apply where:

- There is no vertical movement (Such as winching).
- Manual Handling.
- There is a low lifting risk (Such as on escalator).
- Fall arrest harnesses or similar components are involved.
- Refuse Vehicles which are self-hoisting.
- Tractor 3-Point Linkages

**Peter Evans of CGU Insurance** asked if anchorages for window cleaners came within scope and Chris Davies said "No - they are part of a fall-arrest system".

The LOLER covered the following extended range:-

- |                                  |   |
|----------------------------------|---|
| • Cranes                         | • Construction Hoists                   |
| • FLT Chains                     | • Passenger Lifts                       |
| • Goods Lifts                    | • Shackles                              |
| • Chain Slings                   | • Slings                                |
| • Hooks                          | • Gin wheels/Ropes                      |
| • Vehicle recovery equipment     | • Vehicle Inspection hoists - wire rope |
| • Mobile elevation work platform | • Lorry mounted loader                  |
| • Air Cargo Transfer Vehicle     | • Vehicle Tail Lift                     |
| • Eyebolts                       | • Climbing Ropes                        |
| • Dumb Waiter                    | • Bath hoist (Nursing Home)             |

The overall scope of LOLER is:-

- Initial Integrity of equipment.
- Planning of lifting operations.
- Safe operation of equipment.
- Continuing Integrity of equipment.

There was some doubt on the inclusion of 'Operations' in this list, as they were not in the original Directive.

In considering the LOLER in more detail, Chris said that Regulation 4 guidance gave a lot of help with the Strength and Stability of the equipment. It was also useful in dealing with the Accessories and Load attachments:-

- The Load itself.
- Lifting Lugs.
- Pallets.
- Skips.

However, banding, straps or wrapping were NOT acceptable as slings in any lifting operation!

Regulation 5 deals with the use of Lifting Equipment for lifting persons and the guidance describes a 'Carrier' as including:-

- A Passenger Lift Car.
- Site hoist Cages.
- Platforms on Mobile Elevating Work Platforms (MEWPs).
- A Basket hung from a crane.
- A Bosun's chair.
- A Window Cleaner's Cradle.
- Safety Harnesses used by a tree Surgeon (because it is also a hoist used to climb).

Importantly, Regulation 5 also includes some vital precautions to be observed for carrying persons:-

- Measures to prevent persons being crushed, trapped, struck or falling from the carrier when -
  - Using the carrier (including entering or leaving)
  - Carrying out activities from the carrier.
- Devices to prevent a carrier from falling (such as a second rope, independent from the main suspension rope).
- Trapped persons not to be exposed to danger and able to be freed.

Another important aspect of a safe lifting operation is the positioning and installation requirements specified in Regulation 6. Firstly reduce to as low as possible the risk

- Of the lifting equipment or load striking a person.
- From a load -
  - Drifting (Running/Slewing away)
  - Falling freely (Use check valves or safety catches)
- And ensure that it is otherwise safe (e.g. Collision avoidance)

Another obligation is to ensure that there are suitable devices to prevent persons from falling down shafts or hoistways by means of :-

- Suitable enclosure
- Substantial gates
- Interlocks
- Other effective means.

Regulation 7 is concerned with the Marking of Lifting Equipment with:-

- Safe Working Load (SWL)
  - Actual SWL, or
  - Colour Code.
- Where safety depends on configuration,
  - Indicator, plate or chart.

Where the lifting accessories are involved, marking is equally important and they should be marked:-

- To identify characteristics for safe use (e.g. chain angles SWL)
- Equipment used for lifting persons (e.g. maximum number of persons to be carried)
- Equipment **NOT** designed for persons which may be used in error e.g.



GOODS LIFT ONLY  
NO PASSENGERS  
SWL 1000 kg

Regulation 8 is NOT part of the Directive but, nevertheless, deals with a crucial aspect of safe lifting - Organising Lifting Operations by ensuring that they are:-

- Properly planned
- By a Competent Person
- Appropriately supervised
- Carried out in a safe manner.

This elaborates on other legislation such as PUWER and British Standards like BS 7121, Code of Practice for Safe Use of Cranes. Some important factors to consider are:-

- No Work to be done under suspended loads
- Continuing integrity of equipment to be ensured.
- Attaching and detaching loads.
- Proximity hazards (e.g. Electric Conductors or passing traffic)
- Completion of Pre-use checks
- Overloading
- Overturning
- Visibility

The final element of LOLER is the Continuing Integrity of lifting equipment, without which the rest of the requirements are useless. This is based on a safe system of Thorough Examination and Inspection, comprising:-

- Thorough Examination
  - Initially
  - After Installation
  - In Use
  - Exceptional circumstances
- Periodic Inspection

## - In Use

A Thorough Examination should be done **Initially**:-

- Before being put into service for the first time, .....for any defect unless
  - It has not been used before and an EC Declaration was made less than 12 months before (e.g.under SMR or Lifts Regs 1997)
  - Physical evidence if the equipment is obtained from another person.

**After Installation** it should be done, subject to Risk Assessment:-

- Where the Safety of the lifting equipment depends on the installation conditions:
  - After installation and before being taken into use.
  - After assembly and before being put into service in a new location
- to ensure that it is installed correctly and is safe to operate

**In Use**:-

- Lifting equipment is thoroughly examined if it exposed to conditions causing deterioration liable to result in dangerous situations.
  - ⇒ In the case of equipment for lifting persons or an accessory for lifting - at least every 6 months
  - ⇒ In the case of other lifting equipment, at least every 12 months, or
  - ⇒ In either case, in accordance with an **examination scheme**
  - ⇒each time that exceptional circumstances which are liable to jeopardise the safety of the lifting equipment have occurred; and
- if appropriate for the purpose, is inspected by a competent person at suitable intervals between thorough examinations.

Because of the importance of the **Examination Scheme** it needs to:-

- Be drawn up by a Competent Person
- Specify parts to be examined
- Specify intervals for test/examination.
- **Be capable of being produced as a written copy**
- Allow for different parts to be examined at different times.

The need for **Testing** is a matter for a Competent Person who will decide:-

- Whether a test is necessary

- The nature of the test (e.g. Proof Test, Load Test. NDT)

A **Competent Person** will have to possess appropriate practical and theoretical knowledge and experience of the equipment to enable him to detect defects or weaknesses and assess their importance in respect of continued safety in use. It is not normal for this to be done '**In House**'

In contrast, Inspections may be done, if appropriate, by an 'In House' employee. They should be done at suitable intervals to ensure that health and safety conditions are maintained and deterioration is detected and remedied in good time.

Any person making a thorough examination must notify the employer forthwith (usually before leaving the premises):-

- Any defect which is or could become a danger to persons
- A time scale for repair

He should also make a report, usually within 28 days:-

- To the employer
- To the person who has leased or hired the equipment.

If there is any existing or imminent risk of serious injury, a copy of the report must be sent to the enforcing authority (HSE if hired or leased).

Regulation 11 specifies the requirements for the keeping of records:-

- 11(1) - Keep EC Declarations until use ceases.
- 11(2) - Keep reports of thorough examinations of
  - ⇒ Lifting accessory - 2 years
  - ⇒ Installed machinery - until uses ceases at place of installation
  - ⇒ Other - until next report or 2 years (whichever is the later)
- 11(2)(b) - Inspection Record until next such record.

## *Members' Questions*

A member asked if the form F91, Records of Inspections, Examinations and Special Tests was obsolete and Chris Davies said that it was.

**Roy Bates** asked if the GS39, Training of Crane Drivers and Slings was still current as it was still used to give practical guidance. **Mike Haden** added that the HSE requirements were still relevant. (**Secretary's Note: This document is not in**

**the current HSE Price List and we understand it is out of print. We will approach HSE Books to enquire about an update).**

Roy Bates also enquired about lifting lugs on fixed equipment and Chris said that they should be tested.

**David Hughes** asked about the problem of leasing over a long term and mentioned monitoring of the serviceability of safety nets referred to at the last meeting. Chris Davies said that the responsibility was with the person using the equipment. **The Secretary** mentioned that the HSE had recently issued a free leaflet MISC156, Hiring and Leasing of Plant, on this subject.

**Vic Hutchinson of Keller Ground Engineering** asked if certificates were needed for all Accessories on sites remote from a main depot. Chris Davies said that there was some uncertainty about this. **The Secretary** offered the opinion that this would be a logistical nightmare for utilities working with mobile work teams in several temporary locations in the same day. The guidance in paragraph 358 seemed to support this view by allowing storage away from the point of use under some circumstances.

Another member asked if chair lifts on staircases were in the scope of LOLER and Chris confirmed that they were.

Peter Evans asked if there was any distinction between hydraulic and rope mechanisms and Chris said that there was not.

A member asked if lifting by ropes was within LOLER and Chris replied "No - because it is manual handling and the inspection of the rope was not within LOLER but covered by PUWER.

Peter Evans asked if records kept under Regulation 11 should be passed on to other employers if ownership changed and Chris confirmed this.

Roy Bates asked how to deal with situations where the size and type of load varied. Chris said that this was typical of 'Goods Inwards' situations where each person completed the job under supervised conditions in accordance with controlled operating procedures.

Asked about the inspection of Person Carriers for FLT's, Chris replied that this would be done by a competent person, say, from an insurance company.

The final question was about the treatment of Roller Shutter Doors and Chris replied that these were lifting themselves and were covered by PUWER not LOLER.

As there were no further questions, John Humpherson thanked Chris for his excellent presentation and asked the members to show their appreciation in the traditional way.