

## Relevant Legislation

*Provision and Use of Work Equipment Regulations 1998 (PUWER 98)*

*Lifting Operations and Lifting Equipment Regulations 1998 (LOLER 98 – see section covering Lifting Equipment)*

The following Approved Codes of Practice and Guidance supplement the PUWER 98 Regulations:

- *Safe use of woodworking machinery*
- *Safe use of lifting equipment*
- *Safe use of power presses*
- *Rider operated lift trucks: Operator Training*

## General

The primary objective of the PUWER 98 Regulations is to ensure that work equipment does not result in health and safety risks, regardless of its age, condition or origin.

### **Managers are responsible for ensuring that:**

- All work equipment is suitable for the purpose for which it is used or provided and only used under appropriate conditions.
- Work equipment is properly maintained and, where maintenance logs are kept for high risk equipment, the log should be kept up to date.
- Work equipment is inspected if its safety is dependent upon the installation conditions or it is likely to be exposed to conditions that could cause deterioration, resulting in dangerous situations.
- People who use work equipment are given adequate information, instruction and training. This includes written and verbal instructions on the potential risks and precautions when using any type of work equipment.

Because of the general risk assessment requirement in the Management Regulations there is no specific regulation in PUWER 98 requiring risk assessment. However, it is implicit that risk assessments will be required for compliance with the requirements listed above. A suitable format for the risk assessment for work equipment is included and is available at the end of this section. When purchasing new equipment, this form should be completed prior to purchase.

## Suitability of Work Equipment

The selection of suitable work equipment for particular tasks and processes makes it possible to eliminate many risks in the workplace. The assessment should consider the safety of equipment in respect of:

- Its initial integrity – it should be installed and located in such a way as to reduce any risk to users and others, such as ensuring there is sufficient space between moving parts of machinery. All forms of energy and substances used or produced by equipment should be considered. For example, it may be necessary to provide additional ventilation in the workplace.
- The place where it will be used – some equipment may be unsuitable for the working environment in a particular location because of environmental risks, such as wet or flammable atmospheres and confined spaces.
- The purpose for which it will be used – in practice this means that equipment should be used in accordance with the manufacturer's specifications and instructions. Ergonomic risks, such as working heights and reach distances, should be considered.

### European Conformity Directives

Any work equipment which was first used after 31 December 1992 must comply with any conformity directive concerning the safety of the product in question. One such directive is the Supply of Machinery Regulations 1992. These regulations require that most machinery supplied in the UK must satisfy essential safety requirements and carry CE marking and other information. When buying machinery managers should check for CE marking and ask for a copy of the Declaration of Conformity. Further information on this subject is contained within the HSE publication INDG271 'Buying New Machinery'.

## Maintenance

It is important that work equipment does not deteriorate to the extent that it puts people at risk. The extent and complexity of maintenance can vary substantially from simple visual checks on basic equipment to a detailed programme of planned preventative maintenance for complex high-risk equipment.

The frequency at which maintenance activities are carried out should take into account the risk to health and safety posed by malfunction or failure. Factors that affect this likelihood could be the intensity of use or the operating environment. Maintenance should only be carried out by people who are competent to do the work.

## Maintenance Operations

It should be remembered that different maintenance techniques have different benefits.

- Planned preventative maintenance involves replacing parts and making adjustments at pre-set intervals so that risks do not occur as a result of deterioration or failure of equipment.
- Condition-based maintenance involves monitoring the condition of any safety critical parts and carrying out maintenance as necessary.
- Breakdown maintenance is only likely to be suitable in situations where failure is not likely to present a significant risk.

Work equipment should be constructed or adapted to ensure that maintenance operations involving a risk to health and safety can be carried out while work equipment is stopped. In situations where this is not possible, control measures must be in place to reduce risks. In such situations advice should be sought from the Health and Safety Team.

## Inspection

After installation or assembly at a new site, work equipment must be subject to a suitable inspection by a competent person. The inspection should include any necessary testing and ensure that the equipment is correctly installed and safe to operate. The installer would usually carry this out. It is essential that managers ensure a commissioning procedure is implemented.

If there is likelihood that the equipment could deteriorate resulting in dangerous situations, inspections should be carried out at suitable intervals. Inspection should also be carried out and each time exceptional circumstances are liable to jeopardise the safety of the equipment, such as overload, collision or major repair. The frequency of inspection should be determined by a risk assessment to establish the likely periods in which deterioration could present a significant risk. Any manufacturer's guidelines should always be considered. In practice, inspection intervals should be reviewed in light of experience.

The extent of the inspection should be proportionate to the risk posed by the equipment. The inspection should always include appropriate testing and checks of safety-related parts, such as limit switches, interlocks and protection devices. Records of such inspections should be retained. If the equipment is moved to another site, records must be transferred. Records should normally include the type and model of equipment, including identity marks, its normal location, the date and

name of the inspector, any faults and actions taken, the name of the person to whom faults were reported and the date and details of remedial actions.

Suitable action should be taken to ensure that any **defective equipment** is not used. In the case of powered equipment, this is likely to involve an isolation procedure. Other examples of suitable measures might include storing the equipment, which should be labelled as defective.

## Information, Instruction and Training

All users, supervisors and managers of work equipment must be provided with adequate health and safety information and, where appropriate, specified written instructions relating to the use of such equipment. This can include information provided by manufacturers or suppliers, such as machine manuals, warning labels, training manuals and instruction sheets. These companies are required to provide information to enable the correct installation, safe operation and maintenance of work equipment. Staff should ask or check that they are provided. It may be necessary to produce in-house instructions.

Adequate training covering particular work methods, any risks likely to arise and precautions to take must be provided. Training needs are likely to be greatest on recruitment. However, training may also be required if there are changes in the system of work or risks to which people are exposed, such as when new technology or equipment is introduced. Refresher training should also be provided, particularly for employees who use equipment infrequently. Special consideration should be given to the training and supervision of young persons to whom a greater duty of care is owed.

In general, it is necessary to evaluate the competence of employees to operate the full range of equipment they use and ensure the competence they need to manage and supervise the use of equipment. Training should be used to make up any shortfall in competence to ensure work is carried out with due regard to health and safety. Account should be taken of the circumstances in which the employee works, such as the degree of supervision. Training should take place within working hours.

## **Dangerous Parts of Machinery and Specified Hazards**

Managers should ensure that risk assessments are used to identify the hazards presented by machinery and that the nature, severity and likelihood of injuries are evaluated. This will help to determine whether the level of risk is acceptable or identify if risk reduction measures are needed.

### **Dangerous Parts of Machinery**

There is an absolute requirement to prevent access to dangerous parts of machinery. It is therefore essential that suitable risk reduction measures are employed to ensure this. The preventative measures listed below are ranked in the order that they should be implemented. The levels of protection are:

- Fixed enclosed guards.
- Other guards and protective devices, such as interlocked guards and pressure mats.
- Protection appliances, such as jigs.
- The provision of information, instruction, training and/or supervision.

### **Specific Hazards**

It is necessary to take steps to prevent exposure to certain specified hazards by means other than the provision of personal protective equipment or by providing information, instruction, training and supervision. These specified hazards are:

- Any article or substance falling or being ejected from equipment.
- Rupture or disintegration of equipment parts.
- Work equipment catching fire or overheating.
- Unintended or premature discharge of any article, gas, dust, liquid, vapour or substance which is in each case used or stored in the equipment.
- Unintended or premature explosion of the equipment or any article or substance produced, used or stored in it.

## High or Very Low Temperatures

It is also necessary to take steps to prevent the risk of injury from contact with hot or cold equipment, articles and substances. Again, engineering methods should also be applied in preference to personal protective equipment or organisational measures, such as warning signs.

## Equipment Stability

Risk assessments should also consider the stability of equipment. There are many types of work equipment that might fall over, collapse or overturn unless suitable precautions are taken. Most machines used in a fixed position should be bolted down or fixed securely. Ladders should be set at the correct angle and tied or footed. Some mobile equipment requires the use of stabilisers or outriggers during use to increase its stability. It is essential that this equipment is always used correctly within the limits of its stability. Where balancing or counterbalancing is used on portable equipment the stability of the equipment should be re-appraised each time it is repositioned.

## Lighting

Any place where a person uses work equipment should be suitably and sufficiently illuminated. The lighting should be adequate for the task at hand. Special lighting may be required if the task involves the perception of detail.

## Markings and Warnings

Wherever appropriate for reasons of health and safety, work equipment must be appropriately marked or incorporate warning signs, systems or devices. Many examples of such controls are required by specific legislation. Examples include visual or audible warnings, the marking of maximum safe working loads and signs informing users to wear personal protective equipment, such as goggles, while using the equipment in question.

## Control Systems

Control systems for work equipment must be appropriately located, used and correctly identified. Examples of control systems include start and stop controls and emergency stops.

It should only be possible to start equipment by using appropriate controls. It should not be possible to re-start the equipment simply by re-setting a protective device. Controls should also be designed and positioned so as to prevent inadvertent or accidental operation of the equipment.

When risk assessments identify the need for emergency stops they should be easily reached and actuated. Common types are mushroom-headed buttons, bars, levers, kick plates or pressure sensitive cables.

Where appropriate, equipment should also be provided with suitable means to isolate it from all forms of energy. This is to allow the equipment to be made safe under certain circumstances, such as when maintenance is carried out. The means of isolation should be clearly identifiable and readily accessible. For some equipment, it may be suitable simply to remove a plug. For other equipment, an isolating handle, switch or valve may need to be locked in the off or closed position to prevent unsafe reconnection.

## Mobile Work Equipment

A substantial part of the regulations deal with the suitability of mobile work equipment for carrying persons and the safety features of the equipment. It details requirements for speed adjustment, guards and barriers. There are new requirements to minimise the risk of equipment roll-over by fitting Falling Object Protective Structures (FOPS) and Roll-Over Protective Structures (ROPS).

The safety of self-propelled work equipment must also be guaranteed by ensuring that equipment cannot be started unintentionally, that it is fitted with devices to prevent crushing and that it stops safely when out of operator range.

All mobile work equipment must now comply with all of the new requirements.

There are some situations detailed in the guidance where it is not reasonably practicable to retrofit the new controls required, such as ROPS and restraining systems. If the risks associated with the use the equipment are high, it may be necessary to provide alternative equipment that complies fully.

It is likely that members of staff who have responsibilities for managing mobile work equipment will need to obtain specific guidance relating to the type of plant involved. Reference should be made to the free HSE Information Sheets which have been produced to cover various types of equipment. These are available from the HSE website [www.hse.gov.uk](http://www.hse.gov.uk).

## Selling Second-hand Equipment

When second hand work equipment is sold it legally assumes the status of being 'as new' and must comply with the requirements of the PUWER regulations. This is the case whether the equipment is intended for transfer between County Council establishments or if sold externally. The seller also assumes the status of the supplier in these circumstances and must therefore comply with the requirements of section 6 of the HSWA and the Consumer Protection Act. Establishments wishing to

sell surplus equipment must be wary of doing so and mindful of the duties they will take on board should they proceed.

## Directorate Specific Arrangements

### The purchase, Installation and Use of Work Equipment

In accordance with current legislation and Northumberland County Council's Corporate Health and Safety Policy Statement all Directorates within the County Council must devise and implement procedures to ensure the following objectives are achieved:

- All work equipment provided is suitable for its intended purpose.
- All work equipment is maintained and tested/inspected (as required) to prevent injury (records must be kept).
- All work equipment users are trained to operate equipment safely.

In order to achieve the above objectives the relevant (Executive) Director is responsible for ensuring suitable and sufficient arrangements are made to fulfil the requirements detailed below:

#### 1. Assign Responsibilities

Identify Managers who will take ownership of purchasing and, where appropriate, arranging for the installation and maintenance of new equipment. It is important that the Manager in question considers the implications involved when purchasing equipment, particularly where the equipment in question is being introduced to an area for the first time.

The resources, in terms of time and effort, assigned to completing the following actions must be commensurate with the hazards and risks produced by the equipment in question.

#### 2. Complete a Suitability Assessment

The responsible Manager must ensure the following **prior** to purchase:

An assessment of suitability must determine/identify:

- What is the need (namely, what is the equipment for)?
- Does a recognised standard (for example BS or EN) exist for such equipment?



- Does the identified equipment comply with this standard?
- Are there any special local circumstances to be considered, such as:
  - Is there sufficient electrical capacity available to operate the equipment? (Seek the advice of Property Services)
  - Spatial considerations (headroom etc)
  - Safe storage
  - Omission of heat fumes, gas or dust
  - Noise levels
  - Vibration
  - Odours
  - Required Lighting levels
  - PPE be requirements.

### 3. Training:

#### The following Issues must be considered:

- Will the equipment users require training, instruction?
- Who will provide the relevant training and instruction (what are the costs)?
- Will refresher training be required; if so how often?
- Is there a system for informing staff when refresher training is due?
- Is there a system to ensure new employees receive the relevant training?
- What format will training records take, who will retain them?

### 4. Maintenance/Inspection:

#### The following issues must also be considered:

- Is the equipment subject to statutory testing?
- If yes, has a contract been set up to undertake the testing at the required intervals? (Property Services offer such a service).
- Is a procedure in place to deal with equipment which fails under statutory testing?

Is a quarantine procedure available for hazardous equipment to be taken out of service?

## WORK EQUIPMENT CHECKLIST

Establishment/Base:	Specific location:	Date:
Activity or process undertaken:		
Description of work equipment used:		

	Checklist Items		Comments
<b>1.</b>	<b>WORK EQUIPMENT</b>		
1.1	Does the work equipment have a system of identification?	YES/NO	
1.2	Is the equipment CE marked?	YES/NO	
<b>2.</b>	<b>SUITABILITY</b>		
2.1	Can the equipment be used/operated safely where located?	YES/NO	
2.2	Is the equipment only used for the purpose it was intended?	YES/NO	
2.3	Is the environment conducive to safe use/operation?	YES/NO	
2.4	Is the use of the work equipment to be restricted to trained and authorised personnel?	YES/NO	
2.5	Is the equipment produced to appropriate British and/or European Standards?	YES/NO	
<b>3.</b>	<b>MAINTENANCE</b>		
3.1	Is there a planned maintenance programme?	YES/NO	
3.2	Is there a maintenance record sheet and is it up to date?	YES/NO	
3.3	Is the work equipment maintained in an	YES/NO	

	efficient state for health and safety purposes?		
3.4	Can <b>ALL</b> maintenance be carried out with the equipment shut down/isolated?	YES/NO	
3.5	If <b>NOT</b> , is a safe system of maintenance work laid down?	YES/NO	
<b>4.</b>	<b>INSTRUCTION AND TRAINING</b>		
4.1	Have the users of the work equipment been trained and informed about its safe operation?	YES/NO	
4.2	Have the users of the work equipment been informed of any risks arising from its use?	YES/NO	
4.3	Are there laid down instructions or operations manuals for the use of the equipment?	YES/NO	
4.4	Has all appropriate PPE been identified for the safe operation of the equipment?	YES/NO	
<b>5.</b>	<b>DANGEROUS PARTS OF MACHINERY</b>		
5.1	Are there effective measures in place to stop anyone approaching a moving part of a machine?	YES/NO	
5.2	Can any safeguard/interlock be easily bypassed or disabled?	YES/NO	
5.3	Are guard inspection programmes in place and documented?	YES/NO	
<b>6.</b>	<b>SPECIFIED HAZARDS</b>		
6.1	Are the hazards likely to arise from this equipment reduced to the lowest level reasonably practicable without the use of PPE?	YES/NO	

6.2	Have specified hazards been addressed and measures taken, for example, falling objects, articles being ejected, overheating, disintegration, noise, unintentional discharges of gas, vapour or dust?	YES/NO	
6.3	Have all parts of the equipment which could cause hot or cold burns or scalds been protected?	YES/NO	

<b>7.</b>	<b>CONTROLS</b>		
7.1	Are controls which will bring the equipment to a safe condition in a safe manner readily accessible?	YES/NO	
7.2	Are the emergency stop buttons marked and suitably positioned?	YES/NO	
7.3	Are all the controls clearly and legibly identified?	YES/NO	
7.4	Do all controls fail to safety?	YES/NO	
7.5	Can the equipment be readily isolated from all energy sources?	YES/NO	

<b>8.</b>	<b>STABILITY</b>		
8.1	Is the equipment secured to prevent movement?	YES/NO	

<b>9</b>	<b>LIGHTING</b>		
9.1	Is there adequate lighting to carry out all tasks?	YES/NO	

10.	WARNINGS		
10.1	Is the equipment fitted with appropriate warning notices or warning devices?	YES/NO	
10.2	Are all warnings clear and easily understood?	YES/NO	

ACTIONS/RECOMMENDATIONS	BY WHOM	DATE

**CHECKS MADE BY:**

**NAME:** ..... **SIGNATURE:** .....