



Safety Services Guidance



Guidance on: The Provision and Use of Work Equipment Regulations 1998 (PUWER)

Key word(s): Work equipment. Use, maintenance and repair. Information,

instruction and supervision. Risk Assessment. Protective devices.

Guarding

Target audience: Heads of Schools, Faculties, Institutes and Directorates. Managers.

Workshop Supervisors. Principal Investigators

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Introduction

- 1. The Provision and Use of Work Equipment Regulations 1998 require employers to ensure that all equipment provided for use at work should not result in health and safety risks, regardless of its age, condition or origin.
- 2. The Health and Safety Executive define work equipment as:

'any machinery, appliance, apparatus, tool or installation for use at work (whether exclusively or not). This includes equipment which employees provide for their own use at work. The scope of work equipment is therefore extremely wide. The use of work equipment is also very widely interpreted and '...means any activity involving work equipment and includes starting, stopping, programming, setting, transporting, repairing, modifying, maintaining, servicing and cleaning'.

and applies to all areas of University activity including teaching and research, offices and recreational spaces

- 3. The University must to do all that is reasonably practical to ensure that this equipment is: -
 - suitable for the intended use
 - safe for use, maintained in a safe condition and in certain circumstances, inspected to ensure this remains the case
 - used only by people who have received adequate information, instruction and training
 - accompanied by suitable safety measures eg protective devices, markings and warnings

Responsibilities

- 4. Faculties, Institutes, Schools and Directorates will: -
 - consider the working conditions and risks in the workplace when selecting equipment
 - ensure that work equipment is suitable for its intended use
 - maintain and repair work equipment so it does not present a risk to health and safety
 - provide adequate information, instruction and training on when and how to use work equipment correctly

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- purchase only equipment in accordance with the requirements of the Supply of Machinery (Safety) Regulations 2008
- provide adequate protection from dangerous parts of machinery
- ensure maintenance operations are completed as recommended by the manufacturer and in a safe manner
- provide adequate protection to guard against specific hazards associated with work equipment
- ensure work equipment has appropriate controls and a suitable and easily accessible means of isolation
- ensure that work equipment is stable and that suitable and sufficient lighting is provided
- ensure that work equipment has appropriate clear, visible or audible warning devices, notices and marking
- 5. Heads of School / Directorate / Institute will ensure that:
 - the requirements of this guidance and other associated guidance are implemented and adhered to within their areas of responsibility
 - all equipment provided for use in areas under their control are safe and without risk to health and comply with the requirements of the relevant standard (s). In addition, ensure that equipment is repaired when faulty and maintained to the required standard
 - all risks arising from work equipment and its' use are sufficiently assessed and suitable control measures implemented
 - suitable information, instruction and training is provided for users of work equipment
 - users of work equipment are competent to carry work using this equipment
- 6. All users of work equipment must:
 - use the equipment in accordance with safe working practices, in adherence to any information, instruction or training received. Repair or maintenance to any work equipment must be carried out by suitably trained and competent personnel only.
- 7. Workshop Supervisors and Principal Investigators must:
 - ensure that any task undertaken which involves work equipment under their control is done in a safe manner, following safe working practices, being undertaken by competent personnel only.

Guidance

- 8. The guidance below will assist Schools / Faculties / Directorates / Institutes to implement the requirements of the Provision and Use of Work Equipment Regulations and the University's Health and Safety Policy.
- 9. Risks and Specific Risks

Many things can present a risk for example:

- using the wrong equipment for the task
- not fitting adequate guarding on machines
- inadequate controls or the wrong type of controls meaning the equipment cannot be operated safely
- equipment that is not properly maintained including maintenance of safety devices, controls etc
- not providing the right information, instruction and training for those using the equipment
- not maintaining work equipment or carrying out regular inspections or examination of equipment
- Not providing the personal protective equipment needed to use work equipment safely

10. Identifying the risks

When identifying the risks associated with work equipment the following will need to be considered: -

- the work which has to be done with the equipment during normal use and also during setting up, maintenance, breakdown and repair
- who will use the equipment, including inexperienced users, new starters, young people
- employers or users who may act foolishly or carelessly or who are likely to make a mistake
- whether guards or safety devices are poorly designed and inconvenient to use or are easily defeated
- the type of power supply / services required to operate the equipment

11. Ways to Reduce the Risk

- use the right equipment for the task
- ensure the machinery / work equipment is safe
- guard dangerous parts of machinery by: -

using a fixed guard whenever possible. If access is required to parts of the machine and the installation of a fixed guard is not possible, an interlocked guard should be considered. An interlocked guard will ensure that the machine cannot start before the guard is closed and will stop if the guard is opened while the machine is operating

using devices such as a photoelectric system or automatic guard, where appropriate ie for use on a guillotine

checking that guards are convenient to use and not easily defected otherwise it will need to be modified

ensuring the suitability of the material used to make the guard; this will depend on the type of work the equipment is being used for

ensuring the guards allow the machine to be cleaned and maintained safely

 where a guard cannot give full protection, the use of jigs, holders, push sticks should be considered

12. All guards and protection devices fitted to the equipment must: -

- be suitable for the purpose for which they are intended
- be of good construction, sound material and adequate strength
- be maintained in an efficient state, in efficient working order and in good repair
- not give rise to any increased risk to health and safety
- not be easily bypassed or disabled
- be situated at a sufficient distance from any danger zone.
- where necessary, not unduly restrict the view of the operator of the machinery
- be constructed so that they allow maintenance and repair to be safely carried out

13. Selection of Suitable Work Equipment

Work equipment must be selected which is suitable by design, construction or adaptation for its intended purpose. It is possible to eliminate or reduce many risks to the health and safety of people in the workplace through the selection of suitable work equipment for particular tasks and processes. This process should

be done in the form of a **risk assessment** and take into consideration such factors as: -

- Ergonomics
- How the equipment is to be used
- · What it is to be used for
- · Who will use the equipment

This applies also to situations where new equipment is being purchased.

Maintenance and Inspection

14. All work equipment used by Schools / Faculties / Institutes / Directorates must be maintained in an efficient state, in efficient working order and in good repair.

The frequency and complexity of maintenance should be determined by: -

- the complexity of the equipment
- the risks to health and safety caused by malfunction or failure
- the intensity of use
- the operating environment
- the variety of operations
- the recommendations given by the manufacturer
- 15. From this assessment a maintenance schedule for the equipment should be devised. It should be noted that although hand tools are simple in design and usually have few or no moving parts there is still a need to check and maintain them as necessary.
- 16. Many accidents occur during maintenance work. Controlling risks means following safe working practices and the following should be considered: -
 - where possible, carry out maintenance with the power to the equipment switched off and ideally disconnected or with the fuses locked off or keys removed, particularly where access to dangerous parts will be needed
 - isolate equipment and pipelines containing pressurised gas, steam or hazardous materials. Isolation valves should be locked off and the system depressurised where possible, particularly if access to dangerous parts will be needed

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- support parts of equipment which could fall
- allow moving equipment to come to a complete stop
- allow components which operate at high temperature to cool
- switch off engines of mobile equipment, put the gearbox in neutral, apply any brake and where necessary chock wheels
- to prevent fire and explosions, thoroughly clean vessels that have contained flammable solids, liquids, gases or dusts and check them before any hot work is carried out. In some cases, it will be necessary to fill them with water or inert gas before use. Even small amounts of flammable materials can give off enough vapour to create an explosive air mixture which could be ignited by a hand lamp or cutting / welding torch
- where maintenance work is carried out at height, confined spaces or other hazardous areas, ensure that a safe and secure means of access is provided which is suitable for the nature, duration and frequency of the task. Also, that all relevant 'permits to work' are complied with
- 17. Competent person should carry out inspections of work equipment at regular intervals to make sure the equipment is safe to operate. Frequency will be dependent on issues highlighted above for the maintenance of the equipment.
- 18. Records of inspections must be kept and the following items considered: -
 - ensure the guards and other safety devices are routinely checked and kept in working order. They should also be checked after any repair or modification
 - check the manufacturer's instructions to ensure maintenance is carried out where necessary and to the correct standards
 - routine daily and weekly checks may be necessary.
 - lifting equipment, pressure systems and power presses should be thoroughly examined by a competent person at regular intervals specified in law or according to a 'written scheme of examination' drawn up by a competent person.

Further Information

Safe Use of Work Equipment: Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and Guidance. <u>L22</u> (4th Edition) 2014, HSE Books, ISBN 0 7176 1626 6

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