



SAFE USE OF MACHINERY AND WORK EQUIPMENT

1. Legal requirements and risk assessment

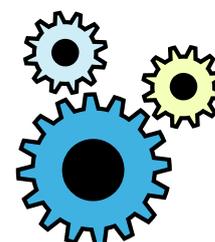
It is a requirement of the Provision and Use of Work Equipment Regulations 1998 (PUWER) that employers ensure that all work equipment is suitable for the intended use, safe to use and maintained in a safe condition, and in certain circumstances, regularly inspected to ensure this remains the case.

Other regulations relating to lifting equipment, pressure systems, electricity, manual handling, noise, radiation and work with hazardous substances (COSHH) may also apply to specific work equipment.

Under the Management of Health and Safety at Work Regulations 1999, a risk assessment must be carried out of all work activities; this includes the use of work equipment. The assessment must identify hazards and assess the level of risk, to the operator and others, associated with use and maintenance of the equipment. The purpose of this is to identify what control measures, (such as safety guards, safe systems of work, personal protective equipment, training and warning signs) are required to minimise health and safety risks and ensure the equipment meets legal requirements. Heads of School/Directorate are responsible for ensuring risk assessments are carried out. Further guidance is contained in *University Safety Guide 4 (revised) – Health and Safety Risk Assessment* available from the health and safety website www.extra.reading.ac.uk/safety (go to R in the A to Z index) or from Health & Safety Services (tel. 8888).

2. General rules for the safe use of machinery and work equipment

- Effective measures must be taken to prevent contact with dangerous parts of machinery (e.g. by providing fixed guards or guards which if opened, automatically cause the machine to stop). Preference should always be given to safety devices which control risk at source, such as guards, rather than just providing personal protective equipment to operators.
- Machinery should never be operated unless the appropriate covers and safety guards are in place and must be operated in accordance with the manufacturer's instructions.
- Staff and students must not use equipment unless they have been authorised to do so and have been instructed in its safe use, including the purpose of any safety devices provided; what personal protective equipment should be worn, and how to stop the machine in the event of an emergency. Suitable emergency stops should be provided, which are clearly visible and easily accessible.
- Appropriate personal protective equipment (PPE) must be worn during machinery operation, if this is identified in the risk assessment as a necessary control measure. Suitable PPE must therefore be readily available. PPE must be well maintained and stored in a clean, dry place.
- Where a risk of entanglement exists (e.g. with rotating machinery), operators of machinery must not wear loose clothing or gloves and must tie long hair back.
- Machinery and the surrounding area must be kept clean, tidy and free from obstructions.
- All machinery must be stopped before making adjustments, clearing blockages by hand, undertaking maintenance or lubrication - especially if it is necessary to remove guards for these tasks. Guards must then be replaced and properly adjusted.
- Before bringing any new equipment into service for the first time, it must be inspected and where necessary tested by a competent person, to ensure it is safe to operate. A risk assessment must be carried out prior to use.
- High risk work, such as operating machinery, should not be conducted outside normal working hours unless there is another responsible person within calling distance. Out of hours procedures should be considered as part of the risk assessment, which may conclude that certain tasks should only be done in the presence of another person or during normal working hours.



- All accidents, work-related ill health and near misses associated with use of work equipment must be recorded in the local Accident Book, and where appropriate, reported to Health & Safety Services.
- All machinery must be regularly maintained.
- All work equipment should be regularly inspected to ensure it remains in a safe condition; the frequency of such inspections will depend on the risks involved. A record of inspection findings and remedial action should be kept. There are some particularly high risks pieces of equipment for which there is specific legal requirement for inspection and / or testing. The statutory examination requirements for the most commonly encountered equipment are listed below. This is not an exhaustive list and other work equipment (such as portable ladders) should also be regularly inspected.

3. New work equipment

- Any new work equipment purchased must be safe to use and must conform to EC standards and have the appropriate CE marking (where there are product safety standards that apply to that type of equipment). The CE mark certifies that the equipment meets Essential Health and Safety Requirements. Equipment that pre-dates the regulations and most manually powered tools and items such as ladders are not covered by such regulations so do not require a CE mark (but must still be supplied in a safe condition). Manufacturer's written instructions must be obtained, (by law these must highlight any health and safety issues associated with the equipment).
- Second-hand machinery should not be purchased unless it complies with current health and safety legislation and is safe to use and provided will all necessary safety devices and manufacturer's instructions.

Further guidance is available from Health & Safety Services. Free guidance leaflets on work equipment, particularly that used in engineering and woodworking workshops, can be downloaded from the Health and Safety Executive (HSE) website www.hse.gov.uk.

4. Statutory examination requirements for commonly encountered work equipment

Area to be checked	Person / Contractor responsible for check	Interval
Portable Electrical Appliances	Competent Electrical Contractor or in-house trained PAT tester	As specified in Safety Guide 12
Dust Extraction Equipment / Local Exhaust Ventilation	Competent Person	14 months
Lifting equipment (<i>e.g. fork lift trucks, fore end loader, cranes, mechanical hoist, lifting block, tail lift, vehicle lifting tables</i>)	To be regularly tested by a Competent Person or insurance company approved engineering surveyor	12 months
Lifting accessories (<i>chains, slings, hooks, lifting attachments</i>) or equipment used for lifting people (<i>e.g. access platforms, passenger lifts, harness with lanyard</i>)	To be regularly tested by a Competent Person or insurance company approved engineering surveyor	6 months
Pressure systems (vessels greater than 250 bar litre) e.g. air receivers, laboratory compressed gas systems.	Competent Person or insurance company approved engineering surveyor	As specified by the WSE*
Autoclaves	Competent Person or insurance company approved engineering surveyor	As specified by the WSE*
Gas cylinders	Competent Person	As specified
Hot water boilers (operating at more than 100°C), Steam boilers.	Competent Person or insurance company approved engineering surveyor	As specified by the WSE*
Steam Cleaner	Competent Person	12 months
Large refrigeration plant - maximum operating power exceeding 25 kW	Competent Person or insurance company approved engineering surveyor	As specified by the WSE*
Gas fired equipment	CORGI registered gas fitter	12 months

Competent person = someone with sufficient knowledge, skill and experience to conduct the examination, identify defects and suggest appropriate remedial action.

*WSE = written scheme of examination, drawn up by the competent person (usually an Insurance Company Engineer Surveyor)