

PROVISION AND USE OF WORK EQUIPMENT REGULATIONS 1998

WORK EQUIPMENT ('WEq') means any machinery, appliance, apparatus, tool or installation (such as a series of machines connected together) for use at work. It embraces everything from a handtool to substantial manufacturing plant. (The regulations do not apply to any sea-going ship.)

OBLIGATIONS (Regulation 3): An employer's obligations extend to any person who has control of non-domestic premises as a place of work and to Weq provided for or used in connection with work by –

- his employees
- others using the premises (e.g. contractors).

The duty extends to the self employed as if they were their own employees.

SUITABILITY (Regulation 4): WEq shall be suitable (insofar as it affects H&S) for its intended use, having regard to:

- working conditions (e.g. damp)
- risks existing in the premises (e.g. confined spaces)
- risks posed by use of such WEq (e.g. cutters).

Employers shall ensure that WEq is used only for operations and under such conditions for which it is suitable (eg of the right capacity, grade).

MAINTENANCE (Regulation 5): WEq shall be maintained in an efficient state, in efficient working order and in good repair (insofar as it effects H&S), and any maintenance log shall be kept up to date.

NB There is no duty to create a maintenance log under these regulations, but it may exist to comply with other regulations (eg COSHH) and a record of maintenance is recommended for high risk equipment (eg power presses).

INSPECTION (Regulation 6): Where the safety of WEq depends on the installation conditions it shall be inspected – after installation and before being used for the first time after assembly at a new site or in a new location.

- A suitable inspection (including visual checks, functional checks and testing where appropriate) should be carried out, by a competent person, where the risk assessment has identified a significant risk from installation or use of Weq.
- WEq exposed to conditions causing deterioration which are likely to result in dangerous situations, shall be inspected (to ensure health and safety and detect and remedy any deterioration) –
- at suitable intervals each time that exceptional circumstances, liable to jeopardise its safety have occurred and the results recorded and kept until the next inspection.

Before WEq leaves an undertaking (or is used after being obtained from another undertaking), it shall be accompanied by physical evidence that the last inspection has been carried out.

SPECIFIC RISKS (Regulation 7): Where use of WEq poses a specific health or safety risk, then –

- its use shall be restricted to persons given the task
- repairs, modifications, maintenance or servicing shall be restricted to adequately trained designated persons.

Apply the 'hierarchy of control' to risks (e.g. where possible, first eliminate risks, then apply hardware controls (e.g. physical barriers/guarding), then software controls (e.g. systems of work and training) to minimise any remaining risks).

'Designated persons' include, for example, those who carry out setting, re-setting, or adjustment of a power press or install or adjust any guard or protection device on a power press.

INFORMATION AND INSTRUCTIONS (Regulation 8): Adequate H&S information and (where appropriate), written instructions shall be available to –

- persons using WEq
- persons supervising or managing the use of WEq and shall relate to –
- conditions in which it may be used (eg damp)
- methods in which it may be used
- action in emergency

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- work experience with the Weq (e.g. safe handling).

Information and instructions shall be comprehensible to those concerned.

TRAINING (Regulation 9): Persons who use, supervise or manage the use of WEq shall receive training which includes methods of use, risks, and related precautions.

CONFORMITY (Regulation 10): WEq shall conform with any essential requirements (e.g. for design and construction) which applied when produced, these being listed in the relevant EC product Directives.

DANGEROUS PARTS (Regulation 11): Measures shall be taken to prevent access to any dangerous part of machinery or rotating stock bar; or stop the movement of dangerous parts or stockbars before any part of a person enters a danger zone.

The measures shall consist of –

- **fixed guards** enclosing dangerous parts or
- **protective devices** or other guards (*eg interlock guards*) or
- **protection appliances** (*e.g. jigs, holders, push-sticks*). (in that order) to the extent that each is practicable, and information, instruction, training and supervision. Guards, protective devices and protection appliances shall –
 - be suitable for the purpose (eg afford good protection)
 - be of good construction
 - be properly maintained not themselves
 - not be a source of risk (eg trapping areas)
 - not be easily removed or disabled (guards and devices only)
 - be at sufficient distance from the danger zone (guards and devices only)
 - not unduly restrict viewing of the operations
 - allow limited access for maintenance, which should not involve their removal (guards and devices only).

SPECIFIED HAZARDS (Regulation 12): Measures shall be taken as should prevent or adequately control risk to the H&S of users from the following hazards –

- articles or substances falling or ejected from WEq (e.g. swarf)
- rupture or disintegration of parts (e.g. an abrasive wheel)
- equipment catching fire or overheating
- unintended or premature discharges or explosions (e.g. detonators).

The measures

- shall minimise the effects of the hazard and reduce its likelihood
- should not be dependent – on PPE, or on the provision of information instruction, training or supervision.

HIGH OR VERY LOW TEMPERATURE (Regulation 13): Persons shall be protected against burns, scalds or sears from WEq or its contents.

- **engineering:** *insulation, screening, temperature reduction*
- **organisation:** *signs, instructions, training*
- **protection:** *protective clothing.*

CONTROLS (Regulation 14-18): Where WEq is provided with –

- **starting controls** (or for restarting after stoppages)
- **operating controls** (e.g. for changing speed, pressure etc in a manner that could increase risk). it shall not be possible to perform these operations other than by deliberate action on the control provided (normal

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operation of an automatic device is exempt) (Regulation 14). WEq shall be provided where appropriate with one or more **stop**

- **controls** which –
 - bring it to a safe condition in a safe manner (eg a complete stop where necessary)
 - witch off sources of energy after stopping, if necessary
 - have priority over any starting or operating controls (Regulation 15).
 - WEq shall be provided where appropriate with one or more **emergency**
- **stop controls** unless unnecessary by virtue of –
 - the nature of the hazard, and
 - the time taken for the stop controls to bring the equipment to a complete stop. Emergency stop controls have priority over stop controls (Regulation 16).

NB Emergency stop controls are only relevant where they allow a more rapid response to an emergency than with stop controls alone. They are not relevant if an accident can happen very quickly (eg failure of the protection system on a guillotine) or where stop controls are equally effective (e.g. hydraulic press), and deceleration must not cause secondary hazards such as disintegration of the WEq.

Controls shall –

- be clearly visible, identifiable and marked where necessary
- not be positioned in a danger zone, except where necessary, and it should be possible to ensure, from the relevant control position, that no-one is in a danger zone created by operation of WEq controls (e.g. visually or by detection), or
 - systems of work should ensure that no-one is in a danger zone when WEq is about to start, or
 - there is an audible or visible warning when WEq is about to start. Persons in a danger zone shall have sufficient time and suitable means of avoiding risk caused by starting or stopping of WEq (Regulation 17).

Control systems should be safe, and chosen allowing for the failures, faults and constraints expected in planned use, such that –

- their operation does not create any increased risk
- any fault, damage or loss of supply cannot result in increased risk
- it does not impede the operation of any stop or emergency stop control (Regulation 18).

ISOLATION (Regulation 19): WEq shall be provided with means of isolation from its sources of energy which –

- are clearly identifiable and readily accessible
- do not pose a risk when re-connected.

NB The concern is both with the dangers of stored energy (hydraulic and pneumatic pressure) and with the risks of reconnection in adverse conditions (eg electricity supply to a damp or flammable atmosphere).

STABILITY (Regulation 20): WEq shall be stabilised by clamping or otherwise where necessary to ensure H&S.

LIGHTING (Regulation 21): Any place where a person uses WEq shall be suitably and sufficiently lit.

NB If the ambient lighting is not sufficient, then additional lighting should be provided on or in the WEq to reduce visual fatigue. Where access is necessary on an intermittent but regular basis (e.g. maintenance) permanent lighting should be provided. Lighting should be adequate for the task.

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MAINTENANCE OPERATIONS (Regulation 22): Measures shall be taken as should ensure WEq is so constructed and adapted that maintenance operations involving risk can be carried out

- with the WEq shut down, or
- without the person being exposed to risk, or
- with appropriate measures for the protection of any person at risk.

MARKINGS (Regulation 23): WEq shall be visibly marked with any markings necessary to H&S (eg identification, controls, contents). *For instance every power press, related guard and protection device, or closed tool, should be marked to enable them to be uniquely identified. Each power press should be clearly marked with the maximum specified flywheel speed and direction of rotation.*

WARNINGS (Regulation 24): WEq shall incorporate any warnings or warning devices appropriate to H&S, and these shall be unambiguous, easily perceived and easily understood.

MOBILE EQUIPMENT (Regulation 25-30) 'mobile work equipment' MWEq includes Eq which is self propelled (e.g. propelled by its own motor), towed or remote controlled and which may be moved on wheels, tracks, rollers or skids (e.g. fork lift trucks, trailers, and overhead cranes). This part (r25-30) applies to all new MWEq (provided for use after 5th December 98) and to existing mobile work equipment (used before 5th December 98) from 5 December 2002.

SUITABILITY (Regulation 25): No employee shall be carried by MWEq unless:

- it is suitable for carrying persons
- it includes features to minimise health and safety risks (e.g. from wheels or tracks).

Workers should be protected against falling out of the equipment, from unexpected movement and protected from falling objects (where there is a risk of the load or other objects falling on the operator or passengers).

ROLL OVER PROTECTION (Regulation 26-27): The risk to an employee riding on MWEq shall be minimised by –

- stabilising (e.g. with counterbalance weights),
- a structure which ensures that it does no more than fall on its side (e.g. Tip Over Protection Structure (TOPS)),
- a structure giving sufficient clearance to anyone if it overturns further than its side (Roll Over Protection Structure (ROPS)) or a device giving comparable protection,
- providing a suitable restraining system (where there is a risk of crushing by rolling over).

The above requirements do not apply –

- to fork lift trucks (FLT's) which already have TOPS or ROPS
- where they would increase the overall risk to safety
- where consequently, it would not be reasonably practicable to operate the MWEq
- where it would not be reasonably practicable for WEq, provided before 5th December 1998, to comply. FLT's with masts or ROPS (e.g. rough terrain telescopic handlers) should be fitted with a restraining system (e.g. seat belts) to prevent workers being crushed between any part of the truck and the ground should it overturn (Regulation 27). *For some older FLT's substantial modification may be necessary to allow seat belts to be fitted in which case the risks would need to be sufficiently high to justify modification.*

SELF-PROPELLED WORK EQUIPMENT (Regulation 28): Self-propelled WEq (which may involve risks in motion) shall have –

- facilities to prevent it being started by an unauthorised person
- where there is more than one item of rail-mounted work equipment in motion at the same time, appropriate facilities for minimising the consequences of a collision
- a device for braking and stopping
- emergency braking and stopping facilities, in the event of failure of the main facility, operated by readily accessible controls or automatic systems

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- adequate devices for improving the driver's field of vision (SFARP) where it is otherwise inadequate for safety (*e.g. mirrors, cctv*)
- appropriate lighting if provided for use at night or in dark places, and be sufficiently safe for such use
- fire fighting equipment (appropriate to the fire risk of anything carried or towed and ease of escape) unless such equipment is kept sufficiently close.

REMOTE CONTROL (Regulation 29): Where self-propelled MWEq is operated by remote control (and there is a risk to safety while in motion) it shall –

- stop automatically once it leaves its control range; and
- incorporate features (*e.g. flashing lights, alarms, hold-torun controls*) to guard against risks of crushing or impact, unless there are other appropriate devices (*e.g. photoelectric trip devices, or trip wires*).

DRIVE SHAFTS (Regulation 30): Where seizure of the drive shaft between mobile WEq and its accessories, or anything towed, is likely to involve a risk to safety –

- the equipment shall have a means of preventing seizure; or
- where the seizure cannot be avoided, every possible measure shall be taken to avoid adversely effecting employee safety. Where MWEq has a shaft for transmitting energy to other mobile equipment, and this could become soiled or damaged by contact with the ground while uncoupled, there shall be a system for guarding the shaft. (*This is particularly relevant to power takeoff shafts on agricultural tractors.*)

POWER PRESSES (Regulation 32-35) 'power press' (PP) means a press or press brake which is used for the working of metal by tools or for die proving, being power driven and embodying a flywheel or clutch (*except, those listed in Schedule 2*).

THOROUGH EXAMINATION (Regulation 32): After installation, or after assembly at a new site or in a new location, and before being used for the first time, a PP (or guard,** or protection device (PD)) shall be -

- thoroughly examined (*and tested*) by a competent person to ensure that it has been installed correctly (or, in the case of a guard or PD, is in position and effective) and is safe to operate and any defect shall be remedied.

NB. The part of a closed tool which acts as a fixed guard has to be thoroughly examined, on any PP in the premises, before use and any defects remedied (other guards or PDs have to be examined on the PP to which they relate. Closed tools are exempt from thorough examination).

The thorough examination and testing of every PP (*and its guards and PDs*) by a competent person shall take place:

- at least every 12 months (where it has fixed guards only); or
- at least every 6 months (in other cases); and
- each time that exceptional circumstances occur which are likely to jeopardise the safety of the PP (or its guards or PDs); and any 'defect' be remedied before the PP is used. PP thoroughly examined under the Power Presses Regulations 1965 shall be re-examined (under these requirements) before the date that the next examination would have been due. 'defect' means a defect notified (r34) following thorough examination, as being dangerous. *A 'thorough examination' and test of a PP, includes a detailed examination, supplemented by removal of parts necessary to determine the safety of the press and should always include those parts concerned with the actuation or control of the slide and ram. The 'competent person' carrying out a thorough examination and test of a power press, guard, protection device or closed tool, should have sufficient practical and theoretical knowledge and experience to detect defects or weaknesses and assess their importance in relation to the safe operation and use of the power press.*

INSPECTION OF GUARDS etc.(r33): A PP shall not be used after the setting, re-setting or adjustment of its tools, (except when trying out its tools or die proving) or after the fourth hour of a working period (during which the day's or night's work is done, or a shift) unless:

- every guard and PD has been inspected and tested while in position on the PP by a person who the employer has appointed in writing and who:

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- is competent or undergoing training for this purpose and acting under the immediate supervision of a person who is competent; and
- has signed a certificate.
- the guards and PDs have not been altered or disturbed in the course of the adjustment of its tools. (NB. This exception does not apply after the fourth hour of every working period, when the above inspection and test must always be carried out.)

Certificates shall:

- identify every guard and PD inspected and tested, and the PP on which it was positioned at the time of the inspection and test
- state the time of the inspection and test
- state that every guard and PD is in position and effective.

REPORTS (Regulation 34): The person making a 'thorough examination' shall:

- immediately notify the employer of any defect in a PP, guard or PD which, in his opinion, is or could become, dangerous
- as soon as practicable (*within 14 days*) write an authenticated report to the employer, containing the specified information (Schedule 3)
- where there is, in his opinion, a defect in a PP, guard or PD, which is, or could become dangerous, send a copy of the report as soon as practicable to the 'HSE'. A person making an 'inspection and test' shall immediately notify the
- employer of any defect in a PP, guard or PD which in his opinion, is, or could become, dangerous and give the reason for his opinion.

RECORDS (Regulation 35): Every thorough examination report (r34) shall be kept available for inspection for two years. A certificate of inspection and test (r33) shall be kept

- at or near the PP to which it relates until superseded by a later certificate; and
- after that, until six months since it was written.

EXEMPTIONS (Schedule 2): The following machines are exempted from the (PP) regulations:

- PP for working hot metal;
- PP not capable of a stroke greater than 6mm;
- guillotines;
- combination punching and shearing machines, turret punch presses or similar machines for punching shearing or cropping;
- machines, other than a press brake, for bending steel sections;
- straightening machines;
- upsetting machines;
- heading machines; - riveting machines;
- eyeletting machines;
- press-stud attaching machines;
- zip fastener bottom stop attaching machines;
- stapling machines;
- wire stitching machines;
- PP for compacting metal powders.

CONTENTS OF REPORTS (Schedule 3): Schedule 3 lists the information to be contained in a thorough examination report for a PP, guard or PD.

Example - name and address of employer; description of items; type of examination; conclusions for safe use or otherwise; identification of defects; any repair, renewal or alteration required or undertaken; the time by which defects could become dangerous; date of examination and report; details of the competent person.)