



نظام الشارقة للسلامة والصحة المهنية
Occupational Safety & Health Sharjah

حكومة الشارقة
هيئة الوقاية والسلامة
Government of Sharjah
Prevention And Safety Authority



Code of Practice

Safe Work Equipment

OSHJ-Cop-13

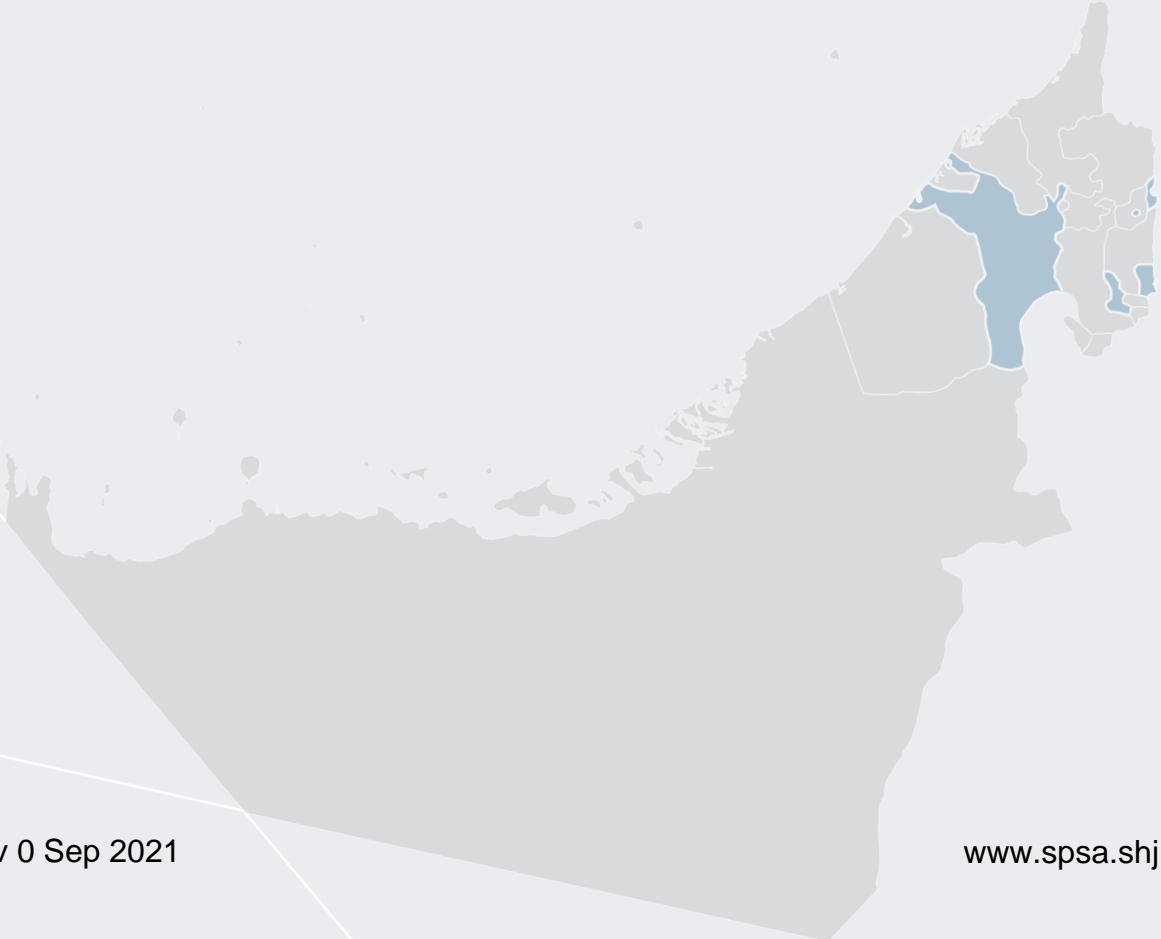




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1 Introduction

Work equipment is any machinery, appliance, apparatus, tool or installation for use at work. Providing employees with the correct and adequate work equipment is important, it allows them to perform their duties safely and efficiently.

The entity shall ensure that they manage the risks associated with work equipment through the selection, purchase, installation, inspection, maintenance of equipment and the information, instruction, supervision and training of employees.

2 Purpose and Scope

This Code of Practice (CoP) has been developed to provide information to entities to assist them in complying with the requirements of the Occupational Safety and Health System in Sharjah.

This Code of Practice (CoP) defines the minimum acceptable requirements of the Occupational Safety and Health System in Sharjah, and entities can apply practices higher than, but not lower than those mentioned in this document, as they demonstrate the lowest acceptable level of compliance in the Emirate of Sharjah.

3 Definitions and Abbreviations

| | |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entities: | Government Entities: Government departments, authorities or establishments and the like in the Emirate. Private Entities: Establishments, companies, enterprises and economic activities operating in the Emirate in general. |
| Risk: | Is the combination of likelihood of the hazard causing the loss and the severity of that loss (consequences). |
| Risk Management: | The forecasting and evaluation of risks together with the identification of procedures to avoid or minimise their impact. |
| Risk Assessment: | The systematic identification of workplace hazards and evaluation of the risks associated. This process takes existing control measures into account and identifies and recommends further control measures where required. |
| Hazard: | Anything that has the potential to cause harm or loss (injury, disease, ill-health, property damage etc). |
| Competence: | The combination of training, skills, experience and knowledge that a person has and their ability to apply all of them to perform their work. |
| Work Equipment: | Is any machinery, appliance, apparatus, tool or installation for use at work (whether exclusively or not). |
| Use of Work Equipment: | Means any activity involving work equipment and includes starting, stopping, programming, setting, transporting, repairing, modifying, maintaining, servicing and cleaning. |
| PPM: | Planned Preventative Maintenance. |



Manufacturer's Manual: The instructions, procedures and recommendations provided by the manufacturer to ensure the safe operation, maintenance and repair of the equipment.

4 Roles and Responsibilities

4.1 Entity Responsibilities

- Ensure work equipment is suitable for use, and for the purpose and conditions in which it is to be used;
- Ensure all foreseeable risks for employees using work equipment are identified;
- Ensure resources are available to implement identified control measures;
- Provide information, instruction, supervision and training to employees on the work equipment they are using;
- Ensure the employees are competent to use the work equipment;
- Ensure work equipment is maintained in a safe condition for use and as per the manufacturer's manual.

4.2 Employee Responsibilities

- Not endanger themselves or others;
- Follow precautionary control measures to ensure work activities associated with work equipment are performed safely and without risk to health;
- Cooperate with the entity and receive safety information, instruction, supervision and training;
- Visually inspect the equipment before use and report any activity or defect relating to the use of work equipment which they know is likely to endanger the safety of themselves or that of any other person.

5 Requirements

Work equipment can be any equipment which is used by employees at work - therefore the scope of work equipment is extremely wide ranging. It is not possible to list all work equipment that may be present in the workplace. Work equipment can include but not limited to: hammers, knives, ladders, machinery, drilling machines, power presses, circular saws, photocopiers, lifting equipment including lifts, industrial trucks such as forklift truck, tractors and motor vehicles.

The uses of equipment, include but not limited to: starting or stopping the equipment, repairing, modifying, maintaining, servicing, cleaning and transporting.

5.1 Risk Assessment

The entity shall assess the risks associated with work equipment and take all reasonably practicable precautions to ensure the safety and health of employees and others who could be affected by the work activities. The risk assessment shall take into consideration the following factors, including but not limited to:



- The work equipment provided for use in the workplace, taking into account hazards involved with; starting, stopping, programming, setting, transporting, modifying and cleaning;
- The selection, installation and maintenance such as repairing and servicing of work equipment;
- The protection of employees from moving parts such as guarding, ejected materials or substances;
- The segregation and restriction of access to work equipment with specific risks;
- Information, instruction, supervision and training;
- Provision of personal protective equipment;
- Emergency procedures and response.

Further information on risk assessment can be found in OSHJ-CoP-01: Risk Management and Control.

5.2 Equipment Purchase

Prior to purchasing equipment, the entity shall ensure that the equipment is inherently safe and appropriate for the intended use. The supplier of the equipment shall provide information on any risks and the control measures to reduce risks, including but not limited to:

- The control devices installed, such as start/stop switches perform their intended function;
- Guarding provided to prevent access to moving components;
- Noise and vibration levels of the equipment that risks the health of employees and where noise and vibration levels cannot be reduced to an acceptable level, information on how to control the effects of noise and vibration;
- Alarm warning systems;
- How any potential release of hazardous substances can be controlled.

5.3 Equipment Installation

The entity shall ensure the installation and the commissioning of equipment is carried out by a competent person. The competent person shall ensure:

- They install the equipment as per the manufacturer's manual;
- The equipment is tested and safe to use.

5.4 Use of Equipment

The entity shall provide information, instruction, supervision and training on how the equipment should be used, including but not limited to:

- Information on any risks that could not be eliminated through control measures;
- The safety features or devices fitted to the equipment and how to use them;



- Requirements for maintenance and repair;
- Requirements for special tools to use or maintain the equipment;
- Personal protective equipment required to be worn when operating the equipment;
- Emergency situations.

5.4.1 Work Equipment Hazards

- Entanglement - Injuries can be caused by entanglement of limbs hair, jewellery or clothing in rotating parts of equipment, such as drill chucks, flywheels, spindles and shafts;
- Drawing in or trapping - Injuries can be caused by drawing in, or in running nips. Traps are created between cogs or rollers, or where a moving belt or chain meets a roller or toothed wheel;
- Crushing - Where the body or a limb becomes trapped between moving, closing or passing motions of the machinery and another fixed object, such as a wall or fixed part of a machine;
- Shearing - Where the body or a limb is caught in a shearing/cutting motion by two or more parts moving past each other, such as scissors movement, or between one moving part and a fixed surface, such as guillotine movement;
- Impact - Injuries caused when the body is struck by moving parts of machinery. Traditional machinery posing a risk of impact injury includes milling machines and fly-wheel presses;
- Friction or abrasion - Contact with sharp or abrasive surfaces, normally operating at high speed, can result in burns from friction and abrasion injuries;
- Stabbing or puncture - Injuries caused by sharp objects puncturing the skin such as sewing machines, nail guns, drills;
- Cutting or severing - Injuries arising from contact with a cutting blade or sharp edge;
- Ejection of materials - Injuries caused by flying objects such as sparks, chips, molten metal or broken components being ejected from the machinery. High pressure fluid ejection is another potential cause of injury within this classification. A puncture of a hydraulic hose could cause a release of hydraulic fluid under high pressure.

5.4.2 Work Equipment Control Devices

Control devices deal with various aspects, the use of which have safety implications for work equipment. Control devices may be used to start or stop machines, control positioning, increase speed or pressure, including but not limited to:

- The function of the control device should be obvious to the operator, however if not clear, measures must be taken to minimise the risk of operators mistaking its purpose;
- The use of controls in a danger zone may be required for some equipment, the operation of a control device should not require the user to place themselves in danger;



- Controls should be positioned so that equipment operators are able to see from the control position that nobody is at risk of injury. A direct view is best; however, it is not always possible. Therefore, supplementing with mirrors or more sophisticated visual or sensing facilities may be necessary. Examples include TV monitors or pressure-sensitive mats. In addition, it may be necessary to provide audible and/or visible warnings that the machine is about to start;
- There should be no possibility that the control device could operate of its own accord, such as operating due to gravity, vibration or failure of a spring mechanism;
- To avoid operators being surprised by the sudden start-up of equipment, equipment should only be set in motion by a deliberate activation of a control device, such as two hand controls;
- All equipment must have a stop control where necessary which brings moving parts to a complete rest. The stopping action need not necessarily be instantaneous but the control of access to dangerous parts must take account of the time for equipment to come to rest. Once at rest, the equipment must not be able to be accidentally started;
- In some instances, equipment may also require an emergency stopping device, such as an emergency stop commonly known as a “kill switch” is a switch that is designed to be activated if the operator becomes incapacitated, such as through death, loss of consciousness, or being bodily removed from the control.

5.4.3 Work Equipment Guards

Controlling risks often means guarding the parts of machines and equipment that could cause injury. The entity should prevent access to the dangerous parts of work equipment. It may be necessary to use a combination of measures, including but not limited to:

- Using fixed guards that are secured with screws or nuts and bolts to enclose the dangerous parts, which need tools to remove them. Use the best material for these guards. As well as preventing such access, a guard may also be used to prevent harmful fluids, dust etc from escaping;
- Checking that guards are convenient to use and not easy to defeat;
- Where employees need regular access to parts of the machine and a fixed guard is not practical, use an interlocked guard for those parts. This 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. Trip systems such as photoelectric devices, pressure-sensitive mats or automatic guards may be used if other guards are not practicable;
- Ensuring the guards installed allow the machine to be cleaned and maintained safely;
- Where guards cannot give full protection, use jigs, holders, push sticks, etc if it is practicable to do so.

5.5 Inspection of Work Equipment

5.5.1 Initial Inspections

Work equipment can be permanently installed, such as boilers, printing presses or work equipment that can be moved requiring assembly each time, such as scaffolding. In either case, equipment shall be inspected by a competent person to ensure it has been correctly installed and is safe for operation prior to use.



5.5.2 Pre-user Inspection

Equipment should be visually inspected by the user prior to each use. Equipment users must be provided with information, instruction, supervision and training and in some instances formal training on how to undertake pre-user inspections.

5.5.3 Re-inspection

Work equipment can be subject to deterioration, which could include; corrosion, chemical attack, friction, impact damage etc. This can lead to machinery behaving unpredictably, structural failure, loss of containment of hazardous substances and failure to maintain adequate protection near dangerous parts, etc. Therefore, equipment should be inspected at different intervals following the initial inspection.

The inspection frequency should be based on how quickly the work equipment, or its parts, are likely to deteriorate and therefore give rise to unacceptable risk.

5.5.4 Formal Inspection and Testing

Some types of equipment such as cranes, are required to be thoroughly examined periodically by a competent person.

As regards to the frequency of inspections, the intervals between inspection will depend on:

- Legal requirements;
- Manufacturer's manual;
- The type of equipment;
- How often it is used;
- The environmental conditions that it is used in;
- Specific formal inspection requirements – details of which are listed in SPSA CoPs and Guidelines and manufacturer's manual.

The entity shall record and retain inspection and testing records.

5.5.5 Other Considerations for Inspections

- Making sure guards and other safety devices such as photoelectric systems, are routinely checked and kept in working order. They should also be checked after any repairs or modifications by a competent person;
- Check manufacturer's manual and guidance on maintenance to ensure that it is carried out where necessary and to the correct standard;
- Routine daily and weekly checks may be necessary, such as fluid levels, pressures, brake function, guards. An entity who contracts out hire equipment, particularly a long-term hire, will need to discuss with the company hiring the equipment what routine maintenance and inspection is needed and who will carry it out;
- Records of inspections and/or testing should be maintained. Evidence of the last inspection or test may be a detailed report for large items of equipment or for smaller items a label or tag, such as found on fire extinguishers.



5.6 Maintenance

Equipment maintenance is any process used to keep work equipment in reliable working order. It may include routine maintenance as well as corrective repair work.

The entity shall record and retain maintenance records.

5.6.1 Routine Maintenance or Planned Preventative Maintenance (PPM)

PPM is a scheduled maintenance plan, set out to ensure work equipment is maintained at regular intervals. This helps to minimise partial or complete failure, and thus minimise incidents and business interruption. Inspections detailed above are part of a PPM plan. The entity should ensure that a PPM plan is available for work equipment used by their employees and contractors.

Some work equipment may need a higher and more frequent level of maintenance than other equipment.

5.6.2 Corrective Repair Maintenance or Breakdown Maintenance

Corrective maintenance are maintenance tasks that are performed in order to rectify and repair faulty equipment. The purpose of corrective maintenance is to restore broken down equipment.

5.6.3 Risks Related to Maintenance

Maintenance operations often present a greater risk than normal operations as operators need to approach or access dangerous parts of equipment during maintenance work and the normal safeguards may not be effective. Therefore, the risk of maintenance activities must be assessed as per OSHJ-CoP-01: Risk Management and Control.

Controlling risks of equipment maintenance involves following safe working practices, including but not limited to:

- Only competent employees or third parties should undertake maintenance of work equipment;
- Where possible, carry out maintenance with the power to the equipment off and ideally disconnected or with the fuses or keys removed, particularly where access to dangerous parts will be needed;
- Isolate equipment and pipelines containing pressurised fluid, gas, steam or hazardous material;
- Support parts of equipment which could fall;
- Allow moving equipment/parts to stop;
- Allow components which operate at high temperatures to cool.

6 Training

Training shall be provided for existing as well as new or inexperienced employees, who need to have adequate knowledge to use and maintain work equipment safely.

The entity shall provide employees with training in languages and in a format that employees understand, including but not limited to:



- Specific information and instruction on how to operate equipment safely, such as using manufacturer's manual safety instructions and check they understand these instructions;
- How to avoid risks, such as checking that the drive is not engaged before starting an engine/machine;
- Understanding the work to be undertaken, the hazards and control measures;
- Use of personal protective equipment;
- Formal training for use on specific equipment.

Periodic refresher training shall be conducted to ensure employees competency is maintained, including but not limited to:

- Where training certification has expired;
- Where identified as part of a training needs analysis;
- Where risk assessment findings identify training as a measure to control risks;
- Where there is a change in legal requirements;
- Where incident investigation findings recommend refresher training.

The entity must record and maintain accurate training records of OSH training provided to employees.

Further information on training can be found in OSHJ-GL-26: Training and Competence.

7 Emergency Preparedness and Response

The entity should be prepared for emergencies that may occur during the use and maintenance of work equipment.

The entity shall ensure the following, including but not limited to:

- Emergency response personnel are available, who can take charge and make decisions on behalf of the entity during an emergency and liaise with emergency services;
- Emergency response personnel are available, who are familiar with the work area ensuring the prompt evacuation of the workplace in the event of a fire;
- Adequate firefighting and first aid equipment is available for the type of work activities and the equipment present in the workplace;
- Employees are trained in emergency response, including information of first aid arrangements and where first-aiders, first aid equipment and facilities are located;
- Employees are appointed as first-aiders and available at each location and during each working shift when work is being conducted.

Further information on first aid can be found in OSHJ-CoP-16: First Aid at Work.

Further information on developing an emergency plan can be found in OSHJ-CoP-18: Emergency Preparedness and Response.



8 References

OSHJ-CoP-01: Risk Management and Control

OSHJ-CoP-16: First Aid at Work

OSHJ-CoP-18: Emergency Preparedness and Response

OSHJ-GL-26: Training and Competence

9 Document Amendment Record

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