Performing Engineering Operations

EOR202N
Credit Value: 5 QCF Level: 2 GLH: 33
Working safely in an engineering environment (lift safety)

Candidate Name: _____

Assessment Route Summary

This assessment route covers the skills and knowledge needed to prove the competences required to work safely in an engineering environment. It will prepare the learner for entry into the engineering or manufacturing sectors, creating a progression between education and employment, or it will act as a basis for the development of additional skills and occupational competences in the working environment. It covers carrying out the learner's work activities in accordance with instructions and by the use of safe working practices and procedures.

The learner will be required to comply with all relevant regulations that apply to their area of work, as well as their general responsibilities as defined in the Health and Safety at Work Act. The learner must be able to identify the relevant qualified first aiders or appointed person, and know the location of the first aid facilities. The learner will have an understanding of the procedures to be adopted in the case of accidents involving injury, and in situations where there are dangerous occurrences or hazardous malfunctions of equipment, processes or machinery. The learner will also need to be fully conversant with the organisation's procedures for fire alerts and for the evacuation of premises.

The learner will be required to identify hazardous situations, equipment, materials or conditions, and know how to take appropriate action to eliminate/minimise the risks to life, property and the environment within their immediate work surroundings. As part of hazard control, the learner will be required to recognise the hazards in the engineering environment in which they work, and to have an appreciation of the risk involved with those hazards and the precautions they can take to lower the risk of injury or damage to plant and equipment. Whilst working in the engineering environment, the learner will be required to note and report any changes in the work area or process that may affect their own safety or the safety of others.

The learner will be expected to dress, behave and maintain the workplace in a manner that is acceptable to the organisation in which they work and the type of activities being carried out. This will require the learner to observe all relevant statutory and organisation regulations, and to comply with codes of good practice and safe working procedures at all times.

The learner's responsibilities will require them to comply with organisational policy and procedures for the activities undertaken. The learner will need to take account of any potential difficulties or problems that may arise with the activities, and to seek appropriate help and advice in determining and implementing a suitable solution. The learner will work under a high level of supervision, whilst taking responsibility for their own actions and for the quality and accuracy of the work that they carry out.

The learner's knowledge will provide a good understanding of their work, and will provide an informed approach to working safely in an engineering environment. The learner will understand the safety requirements and their application, to the required depth to provide a sound basis for carrying out their activities safely and correctly.

Working safely in an engineering environment (lift safety)

Performance Learning outcomes – the learner will…
Work safely in an engineering environment

Assessment criteria - the learner can…

(Performance to be assessed and evidenced) **Reference**

1. Comply with their duties and obligations as defined in the Health and Safety at Work (etc.) Act (HASAWA)

2. Demonstrate their understanding of their duties and obligations to health and safety by:

   a) applying in principle their duties and responsibilities as an individual under the HASAWA and other relevant current legislation

   b) identifying, within their working environment, appropriate sources of information and guidance on health and safety issues, to include:

   - working at height
   - eye protection and personal protective equipment
   - COSHH regulations
   - risk assessments
   - electricity
   - moving machinery

   c) identifying the warning signs and labels of the main groups of hazardous or dangerous substances

   d) complying at all times with the appropriate statutory regulations and specific regulations relevant to their work

3. Apply safe working practices and procedures at all times

4. Apply safe working practices in an engineering environment, to include **all** of the following:

   a) present themselves in the workplace suitably dressed/prepared for the activities to be undertaken

   b) observe personal protection and hygiene procedures at all times

   c) act in a responsible manner at all times within the working environment

   d) maintain a tidy workplace, with exits and gangways free from obstructions

   e) use tools and equipment safely and only for the purpose intended

   f) carry out their work activities in accordance with legal requirements and the organisations safety policies

g) take measures to protect others from harm resulting from any work that they are carrying out

5. Follow organisational accident and emergency procedures

6. Comply with **all** emergency requirements, to include:

a) identifying the appropriate qualified first aiders or appointed person, and the location of first aid facilities

b) identifying the procedures to be followed in the event of injury to themselves or others

c) following organisational procedures in the event of fire/fire drills and for the evacuation of premises/work area

d) identifying and using the procedures to be followed in the event of dangerous occurrences or hazardous malfunctions of equipment, processes or machinery

7. Recognise and control hazards in the workplace to minimise risks

8. Identify the hazards and risks that are associated with **all** of the following:

a) their working environment (such as working at height, in confined spaces, hot work, electricity, moving machinery)

b) the tools and equipment that they use (such as machines, power tools, cutting tools)

c) materials and substances that they use (such as cutting fluids/oils, hydraulic fluids, fluxes)

d) using working practices that do not follow laid-down procedures

9. Use correct manual lifting and carrying techniques

10. Demonstrate the following methods of manual lifting and carrying techniques:

a) lifting alone

Plus **one** more of the following:

b) with assistance of others

c) with mechanical assistance

11. Safely operate lifts taking into account all **safety precautions/ practices** and following established procedures

Assess by work performed:

a) safely gain access to lift areas:

- machine room/ pulley rooms
- car top
- pits

b) carry out safe operation of lifts using:

- car top controls
- emergency electrical recall controls

c) carry out safe release of trapped passengers through the doors as applied to lift equipment.

i) At least ONE of the following:

traditional geared/ gearless traction lifts **OR**

Machine-room less Lift **OR**

Traditional electro-hydraulic lifts

ii) automatic doors

Plus optionally:

iii) manual doors

Working safely in an engineering environment (lift safety)

Knowledge Learning outcomes – the learner will…
Know how to work safely in an engineering environment

Assessment criteria - the learner can…
(Knowledge to be assessed and evidenced)

1. Describe the roles and responsibilities of themselves and others under the HASAWA and other current legislation (such as The Management of Health and Safety at Work Regulations; Workplace Health and Safety and Welfare Regulations; Personal Protective Equipment at Work Regulations; Manual Handling Operations Regulations; Provision and Use of Work Equipment Regulations; Display Screen at Work Regulations, Reporting of Injuries, Diseases and Dangerous Occurrences Regulations)
2. Describe the specific regulations and safe working practices and procedures that apply to their work activities (such as The Electricity at Work Regulations, Control of Asbestos Regulations, Lifting Operations and Lifting Equipment Regulations)
3. Describe the warning signs for the main groups of hazardous substances defined by European Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances
4. Explain how to locate relevant health and safety information for their tasks, and the sources of expert assistance when help is needed
5. Explain what constitutes a hazard in the workplace (such as moving parts of machinery, electricity, slippery and uneven surfaces, dust and fumes, handling and transporting, contaminants and irritants, material ejection, fire, working at height, environment, pressure/stored energy systems, volatile or toxic materials, unshielded processes)
6. Describe their responsibilities for dealing with hazards and reducing risks in the workplace (such as hazard spotting and safety inspections; the use of hazard check lists, carrying out risk assessments, COSHH assessments and safe systems of working)
7. Describe the risks associated with their working environment (such as the tools, materials and equipment that they use, spillages of oil and chemicals, not reporting accidental breakages of tools or equipment and not following laid-down working practices and procedures)
8. Describe the sources of information for safety (such as local work procedures, codes of practice or guidance, the severity of the accident or injury that the hazard may cause)
9. Describe the control measures that can be used to eliminate/reduce the hazard (such as lock-off and permit to work procedures, provision of safe access and egress, use of guards and fume extraction equipment, use of personal protective equipment)
10. Describe the first aid facilities that exist within their work area and within the organisation in general, and the procedures to be followed in the case of accidents involving injury
11. Explain what constitute dangerous occurrences and hazardous malfunctions, and why these must be reported even if no-one was injured

12. Describe the procedures for sounding the emergency alarms, evacuation procedures and escape routes to be used, and the need to report their presence at the appropriate assembly point
13. Describe the organisational policy with regard to firefighting procedures; the common causes of fire and what they can do to help prevent them
14. Describe the personal protective equipment (PPE) and protective clothing that is available for their areas of activity
15. Describe the need to observe personal protection and hygiene procedures at all times (such as skin care (barrier creams, gloves); eye protection (safety glasses, goggles, full face masks); hearing protection (ear plugs, ear defenders); respiratory protection (fume extraction, face masks, breathing apparatus; head protection (caps with hair restraints, protective helmets); foot protection (safety footwear); dangers of ingestion and the importance of washing hands)
16. Explain how to act responsibly within the working environment (such as observing restricted area notices, complying with warning signs, walking not running, using equipment only for its intended purpose, not interfering with equipment or process that are not within their job role, following approved safety procedures at all times)
17. Describe the risks to health from manual handling and methods of manually handling and moving loads (such as pushing, pulling, levering); how to lift and carry loads safely and correctly (such as from ground level, waist high, overhead, reaching over); and the manual and mechanical lifting and moving aids available
18. Describe good housekeeping arrangements (such as maintaining cleanliness of their work area; removal of waste materials; storage of materials, tools and equipment and products; maintenance of access and egress (such as clear walkways, emergency exits))
19. Explain when to act on their own initiative and when to seek help and advice from others
20. Explain to whom they should report in the event of problems that they cannot resolve