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**Overview**

This standard is about interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components and equipment, setting up, operating and shutting down plant or machinery for lifting and transferring loads

This standard is for people working independently to operate plant or machinery that lifts and transfers loads and can be used by operatives, supervisors and managers

**Performance criteria**

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You must be able to:

- P1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- P2 organise with others the sequence in which the work is to be carried out
- P3 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe and healthy work practices
- P4 request resources to sustain plant or machinery operations to complete the programme of work
- P5 select plant or machinery resources for the methods of work and operations to be carried out
- P6 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P7 comply with the given contract information to carry out the work efficiently to the required specification
- P8 complete the work within the allocated time, in accordance with the programme of work

**Knowledge and understanding**

**Performance Criteria 1**

**Interpretation of information**

You need to know and understand:

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

**Performance Criteria 2**

**Organise with others**

You need to know and understand:

- K4 **communication** of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 the **skills** required to carry out the work

**Performance Criteria 3**

**Safe work practices**

You need to know and understand:

- K7 the level of understanding operatives must have of **information** for relevant, current **legislation, Approved Codes of Practice and official guidance** and how it is applied
- K8 how **emergencies** should be responded to and who should respond
- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings
- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why, when and how **health and safety control equipment** should be used
- K12 how to comply with environmentally responsible work practices to meet the requirements of current **legislation and official guidance**

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**Performance Criteria 4**

**Request resources**

You need to know and understand:

K13 the organisational procedures for requisitioning consumables and other **resources**

**Performance Criteria 5**

**Selection of resources**

You need to know and understand:

K14 the characteristics, quality, uses, sustainability, limitations and defects associated with plant **resources** and how defects should be rectified

K15 how the **resources** should be used and how any **problems** associated with the **resources** are reported

K16 the organisational procedures to select **resources**, why they have been developed and how they are used

K17 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

**Performance Criteria 6**

**Minimise the risk of damage**

You need to know and understand:

K18 how to **protect work** from damage and the purpose of protection

K19 why **disposal of waste** should be carried out safely and how it is achieved

**Performance Criteria 7**

**Meet the contract specification**

You need to know and understand:

- K20 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K21 how **maintenance** of plant and/or machinery, tools and equipment is carried out

**Performance Criteria 8**

**Allocated time**

You need to know and understand:

- K22 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

**Additional Information**

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**Scope/range related to performance criteria**

**Performance Criteria 1**

- 1 interpretation of drawings, specifications, schedules, method statements, lift plans, risk assessments and manufacturers' information related to the plant or machinery operations and the work to be carried out

**Performance Criteria 2**

- 2 organisation of own work
- 3 communication with team members and other associated occupations about the plant or machinery operation and the work to be carried out

**Performance Criteria 3**

- 4 avoidance of risk by complying with the given safety information relating to at least four of the following
  - 4.1 methods of work
  - 4.2 safe use of health and safety control equipment
  - 4.3 safe use and storage of plant or machinery
  - 4.4 safe use and storage of tools and equipment
  - 4.5 specific risks to health
  - 4.6 safe use and storage of lifting accessories

**Performance Criteria 4**

- 5 follow organisational procedures for the requisition of consumables, materials and other resources

**Performance Criteria 5**

- 6 selection of resources associated with own work
  - 6.1 tools and ancillary equipment and/or accessories

**Performance Criteria 6**

- 7 protection of the work and its surrounding area from damage
- 8 prevent damage and maintain a clean work space
- 9 disposal of waste in accordance with current legislation

# COSVR387 – SQA Unit Code – SQA Unit Code HN6E 04

## Operate plant or machinery to lift and transfer loads

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### **Performance Criteria 7**

10 demonstration of work skills to check, adjust, communicate, operate, manoeuvre, position, lift, transfer and set down

11 use and maintain hand tools, ancillary equipment and/or accessories

12 operate plant or machinery to lift and transfer loads to given working instructions relating to one of the following categories

12.1 lift trucks

12.2 cranes

12.3 knuckleboom cranes

12.4 excavator cranes

12.5 crawler tractor/side booms

12.6 skip handlers

12.7 hoists

12.8 container handlers

12.9 self-propelled motorised trailers

13 shut down and secure plant or machinery

### **Performance Criteria 8**

14 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

**Scope/range related to knowledge and understanding**

**Communication**

- 1 discussions, sketches, electronic data and briefings

**Disposal of waste**

- 2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

**Emergencies**

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

**Hazards**

- 4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information, statutory regulations and official guidance

**Health and safety control equipment**

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 local exhaust ventilation (LEV)
  - 5.3 personal protective equipment (PPE)
  - 5.4 respiratory protective equipment (RPE)

**Information**

- 6 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations governing the operation of plant and machinery to lift and transfer loads

**Legislation, Approved Codes of Practice and official guidance**

- 7 this relates to the operative's responsibilities regarding potential accidents, health hazards and the environment whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting



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**Maintenance**

- 8 operative care of plant and machinery, hand tools, ancillary equipment and accessories

**Methods of work**

- 9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to
  - 9.1 identify the characteristics of the plant or machinery for lifting and transferring operations
  - 9.2 identify valid certification for maintenance, inspection and thorough examination
  - 9.3 lift and transfer people
  - 9.4 carry out function checks for lifting and transferring loads
  - 9.5 carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
  - 9.6 identify characteristics, type, weight, position of loads for lifting and transferring
  - 9.7 recognise and determine when specific skills and knowledge are required and report accordingly
  - 9.8 secure and balance loads for lifting
  - 9.9 lift, remove and transfer loads
  - 9.10 position, place and set down loads
  - 9.11 confirm loads stability, security and release
  - 9.12 attach and remove guide ropes and aids
  - 9.13 travel on public highways
  - 9.14 shut down and secure plant and machinery
  - 9.15 use hand tools and ancillary equipment
  - 9.16 use, handle and store lifting accessories
- 10 team work and communication
- 11 needs of other occupations associated with operating plant and machinery for lifting and transferring loads

**Problems**

- 12 those arising from information, resources and methods of work
  - 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

**Programme**

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

**Protect work**

- 15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

**Resources**

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and specialist
  - 16.1 consumables, lubricants and fuels
  - 16.2 attachments and lifting accessories
  - 16.3 hand tools, ancillary equipment and accessories
- 17 identify weight, bearing, pressure, quantity, length and area associated with the method/procedure to operate plant and machinery used for lifting and transferring loads

**Security procedures**

- 18 site, workplace, company and operative

**Skills**

- 19 own occupation and occupations related to the work

**Glossary**

**Lift trucks:** (plant and machinery with forklift capabilities) rough terrain masted forklift, forklift side loader, industrial forklift truck, telescopic handler (industrial telescopic, up to 9 metres, all sizes excluding 360 slew and all sizes including 360 slew), reach truck

**Cranes:** mobile (blocked duties, static duties (free on wheels) pick and carry duties), pedestrian operated tower (up to 36 metres – 100m/te and inclined jib), compact (static-stabilisers, mobile industrial, luffing static duties and 360 pick and carry), crawler and tower (trolley jib and luffing jib)

**Knuckleboom crane**

the boom articulates at a 'knuckle', or a number of knuckles, letting it fold back like a finger, providing a compact size for storage and manoeuvring

**Lorry loader**

by definition, a lorry loader is a combination of a load carrying vehicle (lorry) or trailer and a loader crane, which is intended to facilitate the handling of goods, on and of the vehicle, off a vehicle, it's just a crane

**Hoists**

rack and pinion goods, passenger and goods combined, rope operated goods and transport platform

**Lifting accessories**

lifting accessories are pieces of equipment that are used to attach the load to lifting equipment, providing a link between the two; any lifting accessories used between lifting equipment and the load may need to be taken into account in determining the overall weight of the load, (examples of lifting accessories include: fibre or rope slings, chains [single or multiple leg], hooks, eyebolts, spreader beams, magnetic and vacuum devices)

# COSVR387 – SQA Unit Code – SQA Unit Code HN6E 04

## Operate plant or machinery to lift and transfer loads

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**Developed by** ConstructionSkills

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**Relevant occupations** Crane Drivers; Forklift Truck Drivers

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**Suite** Plant Operations (Construction); Demolition; Cladding Occupations (Construction); Piling Operations (Construction); Plant Installation (Construction); Site Logistics Operations (Construction); Sub-structure Work Occupations (Construction); Specialist Installation Occupations (Construction); Fencing; Treework

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**Key words** Lift-trucks; Cranes; Knuckle boom cranes; Excavator cranes; Crawler tractor/side booms; Skip handlers; Hoists; Container-handlers; Self-propelled motorised trailer