



FY3E 04 – Operate Plant or Machinery to
Lift and Transfer Loads (Overhead crane)

COSVR387 (SQA Unit Code - FY3E 04)

Operate plant or machinery to lift and transfer loads



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting and/or using materials, components and equipment
- 4 setting up, operating and shutting down plant or machinery for lifting and transferring loads

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Performance criteria

- 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 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

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Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- 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 and when **personal protective equipment (PPE)** should be used

Performance Criteria 4

Request resources

You need to know and understand:

- K12 the organisational procedures for requisitioning consumables and other **resources**

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You need to know and understand:

Performance Criteria 5

Selection of resources

- K13 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K14 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K15 the organisational procedures to select **resources**, why they have been developed and how they are used
- K16 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

You need to know and understand:

Performance Criteria 6

Minimise the risk of damage

- K17 how to **protect work** from damage and the purpose of protection
- K18 why **disposal of waste** should be carried out safely and how it is achieved

You need to know and understand:

Performance Criteria 7

Meet the contract specification

- K19 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K20 how **maintenance** of plant and/or machinery, tools and equipment is carried out

You need to know and understand:

Performance Criteria 8

Allocated time

- K21 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

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Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, specifications, schedules, method statements 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 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- 5 safe use and storage of plant, machinery and tools

Performance Criteria 4

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

Performance Criteria 5

- 7 selection of resources associated with own work
 - 7.1 tools and ancillary equipment and/or accessories

Performance Criteria 6

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

Performance Criteria 7

- 11 demonstration of work skills to check, adjust, communicate, operate, manoeuvre, position, lift, transfer and set down
- 12 use and maintain hand tools, ancillary equipment and/or accessories
- 13 operate plant or machinery to lift and transfer loads to given working instructions relating to one of the following categories of plant or machinery
 - 13.1 lift trucks
 - 13.2 cranes
 - 13.3 knuckle boom cranes
 - 13.4 excavator cranes
 - 13.5 crawler tractor/side booms
 - 13.6 skip handlers
 - 13.7 hoists
 - 13.8 container handlers
 - 13.9 self-propelled motorised trailer
- 14 shut down and secure plant or machinery

Performance Criteria 8

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

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Scope/range related to knowledge and understanding

Communication

- 1 discussions, sketches 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

Information

- 5 drawings, specifications, schedules, method statements, manufacturers' information and regulations governing the operation of plant or machinery to lift and transfer loads

Legislation, Approved Codes of Practice and official guidance

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

Maintenance

- 7 operative care of plant or machinery, hand tools, ancillary equipment and/or accessories

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Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 8.1 identify the characteristics of the plant or machinery appropriate for the lifting operation
 - 8.2 carry out performance checks for lifting and transferring loads
 - 8.3 carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
 - 8.4 identify characteristics, type, weight, position of loads for lifting and transferring
 - 8.5 secure and balance loads for lifting
 - 8.6 lift, remove and transfer loads
 - 8.7 position, place and set down loads
 - 8.8 confirm loads stability and security and release
 - 8.9 shut down and secure plant or machinery
 - 8.10 use hand tools, ancillary equipment and accessories
- 9 team work and communication
- 10 needs of other occupations associated with operating plant or machinery for lifting and transferring loads

Personal protective equipment (PPE)

- 11 occupational use, types, purpose of each type and work situations

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

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Resources

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

Security procedures

- 18 site, workplace, company and operative

Skills

- 19 own occupation and occupations related to the work

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Validity Current

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Originating organisation ConstructionSkills

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Relevant occupations Crane Drivers; Forklift Truck Drivers

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)

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