FY41 04 – Operate Plant or Machinery to Excavate (Dragline)

COSVR389 (SQA Unit Code - FY41 04)
Operate plant or machinery to excavate

Overview

This standard is about

1 interpreting information
2 adopting safe and healthy working practices
3 selecting and/or using materials, components and equipment for plant or machinery operations
4 setting up, operating and shutting down plant or machinery for carrying out excavation work

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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 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

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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

Performance Criteria 4

Request resources

You need to know and understand:

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

Performance Criteria 5

Selection of resources

You need to know and understand:

K13 the characteristics, quality, uses, sustainability, 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

Performance Criteria 6

Minimise the risk of damage

You need to know and understand:

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

Performance Criteria 7

Meet the contract specification

You need to know and understand:

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

Performance Criteria 8

Allocated time

You need to know and understand:

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, 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 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, tools and equipment
- 4.4 specific risks to health

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 attachments, tools and ancillary equipment

Performance Criteria 6

7 protection of the work and its surrounding area from damage

8 minimise damage and maintain a clean work space

9 disposal of waste in accordance with current legislation

Performance Criteria 7

10 demonstration of work skills to check, check, adjust, communicate, operate, manoeuvre, position, excavate, measure and remove

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

12 operate plant or machinery to excavate ground and loose materials to given working instructions relating to one of the following categories of plant or machinery

- 12.1 excavators
- 12.2 trenchers
- 12.3 dozers

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

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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

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 personal protective equipment (PPE)
- 5.3 respiratory protective equipment (RPE)
- 5.4 local exhaust ventilation (LEV)

Information

6 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations governing the operation of plant or machinery for excavation work

Legislation, Approved Codes of Practice and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards 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

Maintenance

8 operative care of plant or machinery, hand tools, ancillary equipment and/or 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 and machinery appropriate to the excavating operation
   - 9.2 carry out performance checks for excavation work
   - 9.3 identify the area to be excavated
   - 9.4 carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
   - 9.5 check to avoid damage to structures and utilities service apparatus
   - 9.6 excavate accurately to line and level
   - 9.7 use equipment to gauge and measure
   - 9.8 excavate materials safely and securely
   - 9.9 shut down and secure plant or machinery
   - 9.10 use hand tools, ancillary equipment and accessories

10 team work and communication

11 needs of other occupations associated with operating plant or machinery to excavate ground and loose materials

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/or specialist:

16.1 consumables, lubricants, fuels

16.2 attachments and excavation aids

16.3 hand tools, ancillary equipment and/or accessories

17 methods of calculating weight, quantity, length and area associated with the method/procedure to operate plant or machinery to excavate ground and loose materials

Security procedures

18 site, workplace, company and operative

Skills

19 own occupation and occupations related to the work

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